SPECIFICATIONS and CONTRACT DOCUMENTS
For

Sycamore Park River Overlook

CLERMONT COUNTY PARK DISTRICT
CLERMONT COUNTY, OHIO

BOARD OF PARK COMMISSIONERS
John Stowell
Andrew McAfee
David Anspach

Date: July 15, 2024

EXECUTIVE DIRECTOR
CLERMONT COUNTY PARK DISTRICT
Josh Torbeck

CLERMONT COUNTY PARK DISTRICT

2156 US HWY 50
Batavia, Ohio 45103
(513) 732-2977

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ADVERTISEMENT FOR BIDS

Separate sealed bids for the construction of the following **Sycamore Park River Overlook** within the **Clermont County Park District** will be received by the **Board of Park Commissioners of the Clermont County Park District, 2156 US HWY 50 Batavia, Ohio 45103**, until **11:00 AM** Local Time on **August 15, 2024** and then at said office publicly opened and read aloud.

Sycamore Park River Overlook

Work under this Project is generally defined as: Construction of a river overlook and site work. The Owner expects to proceed with the construction under the Project immediately after satisfactory acceptance and award of the construction bid and execution of the contract, with completion of all work within 290 calendar days from the date of the Notice to Proceed. The Engineer's Estimate for this Project is $ 215,386.00.

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 Locations:

Clermont County Park District
2156 US HWY 50
Batavia, Ohio 45103
(513) 732-2977

Emersion Design
310 Culvert Street
Cincinnati, Ohio 45202
Contact: Brett Macht, 513-841-9100

Or electronic versions of the drawings and bid manual are available at the Park District's web site at https://www.clermontparks.org/news/

A non-mandatory pre-bid meeting will be held July 30, 2024 at 11:30 AM at Sycamore Park, 4082 State Route 132, Batavia, Ohio 45103.

All questions related to this project shall be provided in writing through email to the following:

Brett Macht, Emersion Design
brett.macht@emersiondesign.com

This notice is also posted on the contracting authority's website site at the following URL link: www.clermontparks.org. In order to view the legal notice, click on the News Link located on the Clermont County Park District home page.

Clermont County Park District Board of Park Commissioners:

Andrew McAfee, Chairman

John Stowell

David Anspach,

GENERAL INSTRUCTIONS TO BIDDERS
FOR PUBLIC IMPROVEMENTS
CLERMONT COUNTY, OHIO

Item Bid: **Sycamore Park River Overlook**

Bid Opening Date: August 15, 2024 at 11:00 AM local time.

All bids submitted for consideration by the Board of Park Commissioners 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. 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.

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

4. 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.

5. 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 Clermont County Park District’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.

6. 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 Clermont County Park District 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.

7. 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.

8. 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 Clermont County Park District 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.

9. 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 the Clermont County Park District 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.

10. In case of default by the bidder or contractor, Clermont County Park District 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.

11. Clermont County Park District is exempt from payment of Federal Excise Tax, Transportation Tax, and Ohio State Tax. Prices shall not include these taxes.

12. The Board of Park Commissioners reserves the right to waive any informalities, to reject any or all bids, to accept any bid which may be deemed to be for the best interest of the Clermont

County Park District and to hold such bids for a period of sixty days before taking any action thereon.

13. The Board of Park Commissioners 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 the Clermont County Park District's satisfaction within the prescribed time limits.

14. Contractor hereby agrees to indemnify and hold the Clermont County Park District 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.

15. All materials and exhibits submitted in the bid response shall become the property of Clermont County Park District 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.**

INFORMATION AND INSTRUCTIONS FOR BIDDERS

1. Receipt and Opening of Bids

The Clermont County Park District Board of Park Commissioners, (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 the Park District until 11:00 AM local time on August 15, 2024 and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, bearing on the outside of the envelope the name of the Bidder, address, and the name of the Project: **Sycamore Park River Overlook.** The sealed envelopes shall be addressed to the Clermont County Park District Park Commissioners at 2156 US HWY 50, Batavia, Ohio 45103. If forwarded by mail, the sealed envelope containing the bid shall be enclosed in a separate envelope addressed as specified above.

The Owner 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 60 days after the actual date of the opening thereof.

2. 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.

3. Pre-Bid Meeting

A Non-Mandatory Pre-Bid Meeting will be held, at 11:30 AM local time on July 30, 2024 at Sycamore Park, 4082 State Route 132, Batavia, Ohio 45103.

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4. 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:

Sycamore Park River Overlook

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. Bid Security

Each bidder is required, pursuant with Ohio Revised Code Section 153.54, to file with his bid a bid guaranty in the form of either:

7.1 A bond, for the full amount of the bid, prepared on the form provided herein and duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner. The Surety on such bond shall be a duly authorized surety company satisfactory to the Owner and Bidder must supply Certificate stating that Surety executing the Bond is authorized to do business in the State of Ohio.

7.2 A certified check, cashier's check, or letter of credit pursuant to Chapter 1305 of the Ohio Revised Code. Any such letter of credit shall be revocable only at the option of the beneficiary state, political subdivision, district, institution, or agency. The amount of the certified check, cashier's check, or letter of credit shall be equal to ten percent (10%) of the bid.

Bid security filed pursuant with this Section shall be returned to all unsuccessful bidders immediately after the contract is executed, or if no award has been made within the 60 days after the date of opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid or extended the bid. The guaranty filed pursuant to this section shall be returned to the successful bidder upon filing of the bond required under Item 12 of this Section.

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 290 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 Woolpert Inc., and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be 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. Security for Faithful Performance

If the Contractor has furnished a cashier's check, letter of credit, or certified check as bid security, he shall furnish a surety bond or bonds in the amount of 100% of the bid simultaneously with his delivery of the executed contract, as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein.

If the Contractor has furnished a combination bid guaranty and contract bond, this bond shall become the security for faithful performance of this Contract and for payment of all persons performing labor on the project under this contract and for furnishing materials in connection with the Contract.

The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner and Bidder must supply Certificate stating that Surety executing the Bond is authorized to do business in the State of Ohio.

5. 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.

6. 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.

7. 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.

8. Non-Collusion Affidavit

The bidder shall execute the Non-Collusion Affidavit included in the specifications and submit with the bid proposal.

9. 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 Clermont County, Ohio. Affidavit form to be executed is included in the specifications and must be submitted with bid.

10. 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.

14. Workers' Compensation

The Contractor shall furnish 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.

15. 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.

16. 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.

17. 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 the Clermont County Park District, 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.

18. 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.

19. Right to Withhold Payment

The Clermont County Park District 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.

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BID PROPOSAL PACKAGE

The bid proposal for **Sycamore Park River Overlook** *must be completed and submitted on the required forms as listed under* ***"Bid Proposal Package".***

1) BID PROPOSAL:
Six (6) pages supplied by Clermont County Park District 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 Clermont County Park District), 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 Clermont County Park District 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 Clermont County Park District.

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

5) EXPERIENCE STATEMENT:
One (1) page supplied by Clermont County Park District.

6) SUBSTITUTION SHEET:
One (1) page supplied by Clermont County Park District.

7) LIST OF SUBCONTRACTORS:
One (1) page supplied by Clermont County Park District.

BID PROPOSAL RECAP FORM

Sycamore Park River Overlook

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:

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 the Clermont County Board of Park Commissioners 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

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: The Board of Park Commissioners, Clermont County Park District, (hereinafter called *"Owner"*)

Gentlemen:

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

Sycamore Park River Overlook

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 Sycamore Park River Overlook within 290 consecutive calendar days thereafter.

Bidder hereby acknowledges receipt of the following addenda:

Sycamore Park River Overlook

Addendum No. Date

Addendum No.Date

Addendum No. Date

	SCHEDULE OF VALUES – Sycamore Park River Overlook						
ITEM No.	DESCRIPTION	UNIT	# OF UNITS (U)	MATERIAL COSTS (M)	LABOR COSTS (L)	UNIT COST (M+L)	TOTAL COST U x (M+L)
1	Site Work	EACH	1				
2	Deck Foundation and Structure	EACH	1				
3							
4							
5							
6							
7							
8							
9							
10							
11							
29							
TOTAL PROJECT BID: $							

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.

ALTERNATE BID ITEM #1

No Alternates are requested

Summation of Bid Items

Total Base Bid in Figures $ _____

Total Base Bid in Words: _____

Total Alternate Bid Item#1 in Figures $ _____

Total Alternate Bid Item #1 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 Sycamore Park River Overlook 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;

(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 the **Board of Park Commissioners of the Clermont County Park District** 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:

Sycamore Park River Overlook

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: _____

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 the Board of Park Commissioners of the Clermont County Park District 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 the Clermont County Park District, 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 Clermont County, 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 Clermont 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: Sycamore Park River Overlook

Clermont County Park District

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 153:1-302 of the Ohio Administrative Code.

Work	Firm	Address	Phone	Representative

Document 00 52 14 - 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:	**çinsert numberè**
Project Name:	**çinsert nameè**
Site Address:	çinsert street addressè çinsert city, countyè
Contractor:	**çinsert nameè**
Contractorôs Principal Contact:	çinsert nameè
Address:	çinsert street addressè çinsert city, state zip codeè
Subcontractor:	**çinsert nameè**
Subcontractorôs Principal Contact:	çinsert nameè
Address:	çinsert street addressè çinsert city, state zip codeè
Public Authority:	**çinsert nameè**
Public Authority Contact:	çinsert nameè
Address:	çinsert street addressè çinsert city, state zip codeè

ARTICLE 1 - NATURE OF SUBCONTRACT

1.1 The Subcontractor shall perform the entire Subcontract Work as specified in Exhibit çNè 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 çinsert Subcontract Sumè, comprised of the following:

çinsert Subcontract Sum componentè..... $çinsert amountè

çinsert Subcontract Sum componentè..... $çinsert amountè

çinsert Subcontract Sum componentè..... $çinsert amountè

çinsert Subcontract Sum componentè..... $çinsert amountè

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 Contractor.

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 a 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 Ohio Revised Code ("ORC") Section 149.43 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 ORC Section 4113.61. 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.

6.7.1 Labor Payments.

6.7.1.1 Partial payments to the Subcontractor for labor performed shall be made at the rate of 92 percent of the amount invoiced through the Subcontractor's request for payment that shows the Work of the Subcontractor is 50 percent complete.

6.7.1.2 After the Work of the Subcontractor is 50 percent complete, as evidenced by payments of at least 50 percent of the total amount due under the Subcontract, no additional funds shall be retained from payments for labor.

6.7.2 Material Payments.

6.7.2.1 The Contractor shall pay the Subcontractor at the rate of 100 percent of the scheduled value for materials incorporated into the Project.

6.7.2.2 The Contractor shall pay the Subcontractor at the rate of 92 percent of the invoice cost, not to exceed the scheduled value, for materials delivered to the Site, or other off-site storage location approved by the A/E, provided the Subcontractor provides the following information with its request for payment:

- **.1** a list of the fabricated materials consigned to the Project, giving the place of storage, together with copies of invoices, in order to verify quantity and cost; and
- **.2** a certification of materials stored off-site, prepared by the Subcontractor and signed by the A/E to evidence that the materials are in conformity with the Specifications and have been tagged with the Project name and number for delivery to the Project. The Subcontractor shall reimburse the A/E, through the Contractor, for all costs incurred to visit a storage site, other than the areas adjacent to the Project.
- **.3** The Contractor shall pay the balance of the scheduled value when the materials are incorporated into and become a part of the Project.

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 Bond Rights. This Subcontract shall not prohibit a Subcontractor from exercising its rights under ORC Chapter 1311 or under any Contractor-provided payment bond.

6.10 Non-Discrimination. The Subcontractor agrees to fully comply with Applicable Law regarding equal opportunity, including ORC Section 153.59 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. The 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 Ohio 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 this Subcontract:

6.13.1 Exhibit A:

6.13.2 Exhibit B:

6.13.3 Exhibit C:

6.13.4 Exhibit D:

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

CONTRACT

THIS AGREEMENT, made this the _____ day of _____ , 20___ , by and between the Board of Park Commissioners of the Clermont County Park District, hereinafter called the "Owner"

and _____,_____
(name of contractor) (type of business organization)

organized under the laws of the State of _____ , hereinafter called "Contractor."

Witnessed: 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:

Sycamore Park River Overlook 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 (its 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 the Clermont County Park District 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 fully complete Project within 290 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 27, "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.

BOARD OF PARK COMMISSIONERS
OF THE CLERMONT COUNTY PARK DISTRICT

By _____
Josh Torbeck, Executive Director

CONTRACTOR

By _____
Name:_____
Title:_____

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:

Sycamore Park River Overlook

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

By _____(1)
Name:_____
Title:_____
Address:_____
_____

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

Surety

By _____(1)
Name:_____
Title:_____
Address:_____
_____

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 the Board of Park Commissioners of Clermont County Park District, and _____ _____ , Contractor, and find same to be in accordance with the provisions of law and hereby approve said contract and bond as to form.

_____
Assistant Prosecuting Attorney
Clermont County, Ohio

_____, 20___.

CERTIFICATE OF SUBSTANTIAL COMPLETION AND GUARANTY

The _____
(Name of Company)
hereinafter referred to as "Contractor" having heretofore entered into a contract with **the Board of Park Commissioners of the Clermont County Park District** dated _____for the Improvement, Repair, and/or Construction of:

Sycamore Park River Overlook

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 the **Board of Park Commissioners of the Clermont County Park District,** 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)
By _____
Title _____
Date

Clermont County Park District
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 the **Board of Park Commissioners of the Clermont County Park District,** dated _____ for the Improvement, Repair, and/or Construction of:

Sycamore Park River Overlook

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 the **Board of Park Commissioners of the Clermont County Park District,** 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)

By _____
(Secretary/Witness) Title _____
Date

Clermont County Park District

(Witness) By_____
Title _____
Date

PROJECT SCHEDULE

Activity	Date
1st Advertisement	7/18/2024
Pre-Bid Meeting	7/30/2024 at 11:30 AM
Last Day for Questions	8/9/2024 at 5:00 PM
Bid Opening	8/15/2024 at 11:00 AM
Bid Award	8/22/2024
Mobilization	8/28/2024
Substantial Completion	5/16/2025
Final Completion	6/13/2025

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": Clermont County Park District Board of Park Commissioners: 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 Engineering 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. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS:

The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

4. 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 such that one set is on mylar paper and one set is on paper.

5. 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) Clermont County Park District recognizes the following as Legal Holidays: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Juneteenth Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

6. 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 Clermont County General 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 Owner from existing outlets where available. Power requirements exceeding those which can be conveniently furnished from the existing service or power requirements at locations where outlets are not available shall be the responsibility of the Contractor. Cost of power from the Owner's service will be paid by the Owner.

7. PROJECT SIGN:

The Contractor shall supply, construct, erect, and maintain throughout the entire life of the contract at his cost one (1) single-sided 4' x 8' project sign. All signs shall be made of 3/4" exterior grade plywood, supported by two (2) 4"x 4" x 12' pressure-treated posts, with suitable exterior paint.

Each sign shall consist of a white background. Lettering shall be black.

Sizes of lettering, the approximate amount of lettering, and all layouts of the signs shall be as shown on Page B-4.

The location the Contractor proposes to erect the project sign shall be approved by the Owner's Representative.

Tentative lettering is as follows:

CLERMONT COUNTY PARK DISTRICT

Sycamore Park River Overlook

COST $ XXX,XXX.00

BOARD OF PARK COMMISSIONERS

John Stowell, Andrew McAfee, David Anspach

8. 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.

9. 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.

10. "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.

11. 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.

12. 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.

13. 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.

14. 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.

15. 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 19 of this section.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

If the Contractor shall neglect, fail, or refuse to 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 expiration of the Contract life required to complete the Contract.

The Contractor agrees that said work shall be performed 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.

22. 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.

23. 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 19 of this section.

24. 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.

25. 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.

26. 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.

27. 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 the Clermont County Park District'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.

28. 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 27 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-Mens 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.

29. 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 27 of this section, along with the following:

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

30. 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.

31. 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.

32. 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: Contractor shall carry commercial general liability insurance for bodily injury, personal injury, and property damage in an amount not less than $1,000,000 per occurrence and $2,000,000 in the aggregate while performing any services for the Owner in accordance with the terms of this Agreement. Contractor shall provide to the Owner a certificate of insurance listing the Board of Park Commissioners of the Clermont County Park District and all of their respective officials, employees, representatives, servants, volunteers, successors, assigns, and agents as additional insured as proof of compliance with this condition. Contractor shall also maintain liability insurance to cover all of its employees and agents for any liability arising out of their conduct while in the employ of the Contractor in connection with the services rendered pursuant to this Agreement. Contractor's insurance coverage shall be the primary insurance with respect to the Owner and its officials, employees, representatives, servants, volunteers, successors, assigns, and agents. Any insurance maintained by the Owner shall be excess of Contractor's insurance and shall not contribute to it. Contractor's insurance shall be provided by insurers with an AM Best rating of no less than A: VII.

(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 commercial general liability insurance for bodily injury, personal injury, and property damage in an amount not less than $1,000,000 per occurrence and $2,000,000 in the aggregate while performing any services. Subcontractor's insurance shall be provided by insurers with an AM Best rating of no less than A: VII.
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 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, or ten (10) days written notice in the event of non-payment of premiums." Such certificates shall be supplied with the submittal of the Contract Documents following Bid Award.

33. 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.

34. 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.

35. 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.

36. 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.

37. 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.

38. 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 19 of the General Conditions.

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

39. CLERMONT COUNTY PARK DISTRICT AUTHORITY:

The Clermont County Park District shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. The Clermont County Park District 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. The Clermont County Park District'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 the Clermont County Park District 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.

The Clermont County Park District 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 the Clermont County Park District.

40. 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 affect 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.

41. 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.

42. 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 19 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.

43. 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.

44. 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.

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

All permits from the Ohio Department of Transportation and the Clermont 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.

46. 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.

47. 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.

48. 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.

49. 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. The Contractor shall barricade all work zones including but not limited to underground work, site work, building work, material storage areas and construction vehicles. These areas and elements shall be protected from the public by a six-foot minimum chain-link fence or approved substitute. Access to these fenced areas shall be controlled by locks with keys provided to the owner for their use through out the life of the Project.

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.

50. 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.

51. 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.

52. 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

53. 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.

54. REQUIRED PROVISIONS DEEMED INSERTED:

Each and every provisions 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.

55. 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.

56. 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.

57. WAGE RATES:

See schedule attached to, or immediately following Page A-29.

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.

58. 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.

59. 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.

60. 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.

61. 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.

62. 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.

63. "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.

64. 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.

65. 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.

66. NO DISCRIMINATION IN EMPLOYMENT:

Contractor certifies and affirms it is an equal opportunity employer and shall remain in compliance with all state and federal civil rights and nondiscrimination laws, rules, regulations, and orders, including but not limited to those found under Ohio Revised Code Chapters 4112 and 153, during the term of this Agreement.

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

67. 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.

68. 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.

69. EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION

Contractor shall comply with all measures for erosion and sediment control in accordance with the current "Clermont County Water Management and Sediment Control Regulations" 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 Clermont County Building Inspections Department, the Office of the Clermont 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.

70. 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 Clermont County Park District and shall not be re-employed on the contract without the Clermont County Park District's consent.

71. CONSTRUCTION STILL PHOTOGRAPHY:

Prior to mobilization of any equipment or commencement of construction, the Contractor shall prepare preconstruction still photography which documents the condition of the project area. The Contractor shall also provide photographs of progress on a regular basis including, but not limited to, completed work, exposed work prior to cover, underground utilities, building utilities and framing.

72. 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.

Clermont County Park District

Batavia, Ohio

Sycamore Park River Overlook

4082 State Route 132, Batavia, Ohio 45103

Issued for Permit and Bidding

June 14, 2024

Specifications

Volume 1 of 1

eMERSION DESIGN

310 Culvert Street
Cincinnati, Ohio 45202
513/841-9100

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DOCUMENT 000101 - PROJECT TITLE PAGE

1.1 PROJECT MANUAL VOLUME 1

A. Project Information:
   1. Sycamore Park River Overlook.
   2. 4082 State Route 132
   3. Batavia, Ohio 45103

B. Owner Information:
   1. Clermont County Park District.
   2. 2156 US HWY 50
   3. Batavia, Ohio 45103.

C. Architect Information
   1. emersion DESIGN, LLC.
   2. 310 Culvert Street, Suite 100.
   3. Cincinnati, Ohio 45242.
   4. Phone: 513-841-9100.
   5. Web Site: www.emersiondesign.com

D. Architect Project No. 062305.

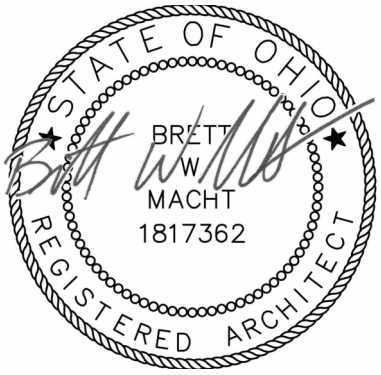
END OF DOCUMENT 000101

DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect: emersion DESIGN, LLC

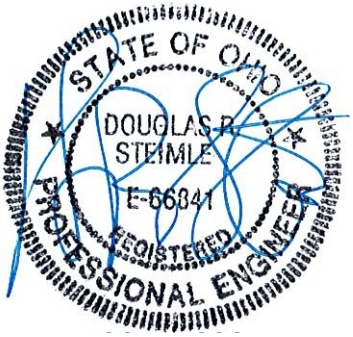
1. Brett W. Macht, RA, NCARB, LEED AP BD+C
2. #1817362.



EXPIRATION DATE: 12/31/2025

B. Structural Engineer: Schaefer

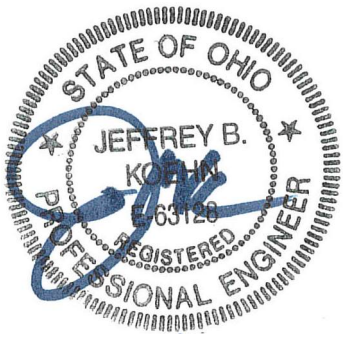
1. Douglas R. Steimle
2. E-66841



EXPIRATION DATE: 12/31/2025

C. Civil Engineer: ARCADIS

1. Jeffrey B. Koehn
2. E-63128



EXPIRATION DATE: 12/31/2025

END OF DOCUMENT 000107

DOCUMENT 00 01 10 - INDEX TO PROJECT MANUAL

END OF DOCUMENT

DOCUMENT 002600 - PROCUREMENT SUBSTITUTION PROCEDURES

1.1 DEFINITIONS

A. Procurement Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Procurement and Contracting Documents, submitted prior to receipt of bids.

B. Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Contract Documents, submitted following Contract award. See Section 012500 "Substitution Procedures" for conditions under which Substitution requests will be considered following Contract award.

1.2 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.3 PROCUREMENT SUBSTITUTIONS

A. Procurement Substitutions, General: By submitting a bid, the Bidder represents that its bid is based on materials and equipment described in the Procurement and Contracting Documents, including Addenda. Bidders are encouraged to request approval of qualifying substitute materials and equipment when the Specifications Sections list materials and equipment by product or manufacturer name.

B. Procurement Substitution Requests will be received and considered by Owner when the following conditions are satisfied, as determined by Architect; otherwise requests will be returned without action:

1. Extensive revisions to the Contract Documents are not required.
2. Proposed changes are in keeping with the general intent of the Contract Documents, including the level of quality of the Work represented by the requirements therein.
3. The request is fully documented and properly submitted.

1.4 SUBMITTALS

A. Procurement Substitution Request: Submit to Construction Manager. Procurement Substitution Request must be made in writing in compliance with the following requirements:

1. Requests for substitution of materials and equipment will be considered if received no later than 10 days prior to date of bid opening.
2. Submittal Format: Electronically Submit each written Procurement Substitution Request, using CSI Substitution Request Form 1.5C.

a. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specifications Sections and drawing numbers.
b. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:

1) Point-by-point comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
2) Copies of current, independent third-party test data of salient product or system characteristics.
3) Samples where applicable or when requested by Architect.
4) Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
5) Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
6) Research reports, where applicable, evidencing compliance with building code in effect for Project, from ICC-ES.
7) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.

c. Provide certification by manufacturer that the substitute proposed is equal to or superior to that required by the Procurement and Contracting Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated.
d. Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.

B. Architect's Action:

1. Architect may request additional information or documentation necessary for evaluation of the Procurement Substitution Request. Architect will notify all bidders of acceptance of the proposed substitute by means of an Addendum to the Procurement and Contracting Documents.

C. Architect's approval of a substitute during bidding does not relieve Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents.

END OF DOCUMENT 002600

DOCUMENT 003132 - GEOTECHNICAL DATA

1.1 GEOTECHNICAL DATA

A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information. This Document and its attachments are not part of the Contract Documents.

B. Because subsurface conditions indicated by the soil borings are a sampling in relation to the entire construction area, and for other reasons, the Owner, the Architect, the Architect's consultants, and the firm reporting the subsurface conditions do not warranty the conditions below the depths of the borings or that the strata logged from the borings are necessarily typical of the entire site. Any party using the information described in the soil borings and geotechnical report shall accept full responsibility for its use.

C. A geotechnical investigation report for Project, prepared by Terracon, dated July 28, 2023, is available for viewing as appended to this Document.

1. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from the data.
2. Any party using information described in the geotechnical report shall make additional test borings and conduct other exploratory operations that may be required to determine the character of subsurface materials that may be encountered.

END OF DOCUMENT 003132

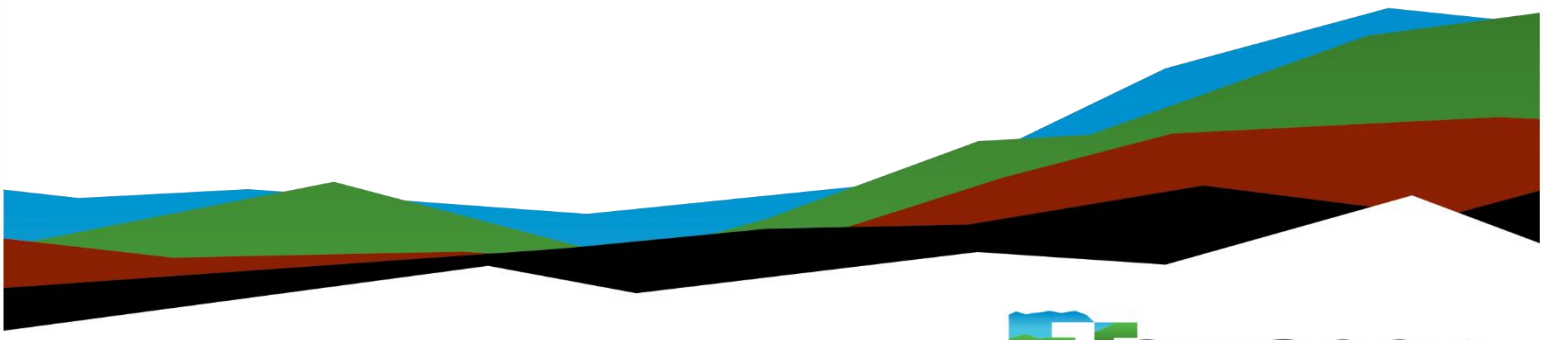
Sycamore Park Project

Geotechnical Engineering Report

July 28, 2023 | Terracon Project No. N1235100

Prepared for:

Clermont Park District
2156 Hwy 50
Batavia, Ohio 45103



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P (513) 321-5816
Terracon.com

July 28, 2023

Clermont Park District
2156 Hwy 50
Batavia, Ohio 45103

Attn: Mr. Josh Torbeck – Executive Director
P: (513) 732-2977
E: jtorbeck@clermontcountyohio.gov

Re: Geotechnical Engineering Report
Sycamore Park Project
4082 OH-132
Batavia, Clermont County, Ohio
Terracon Project No. N1235100

Dear Mr. Torbeck:

We have completed the scope of Geotechnical Engineering services for the above-referenced project in general accordance with Terracon Proposal No. PN1235100 dated March 24, 2023, and signed Master Services Agreement dated June 12, 2023. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations for the proposed pedestrian deck.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon

Munal Pandey, E.I.T.
Staff Engineer

Jeffrey D. Dunlap, P.E.
Group Manager/Senior Associate

Table of Contents

Figures

Attachments

Note: This report was originally delivered in a web-based format. **Blue Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks that direct the reader to that section and clicking on the Terracon logo will bring you back to this page. For more interactive features, please view your project online at **client.terracon.com**.

Refer to each individual Attachment for a listing of contents.

Introduction

This report presents the results of our subsurface exploration and Geotechnical Engineering services performed for the proposed pedestrian deck to be located at 4082 OH-132 in Batavia, Clermont County, Ohio. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil and rock conditions
- Short-term groundwater conditions
- Seismic site classification per IBC
- Site preparation and earthwork
- Foundation design and construction

The geotechnical engineering Scope of Services for this project included the advancement of three (3) test borings, laboratory testing, engineering analysis, and preparation of this report.

Drawings showing the site and boring locations are shown on the **Site Location** and **Exploration Plan**, respectively. The results of the laboratory testing performed on soil and rock samples obtained from the site during our field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

Project Description

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	An email request for a proposal was provided by Mr. Josh Torbeck with Clermont County Park District (CCPD) via email dated March 21, 2023, which included the project scope and general site layout.
Project Description	Details on the planned structure have not been provided at the time of this report. It is our understanding that a viewing deck extending from the existing parking lot towards the East Fork Little Miami River has been planned. The platform will likely be supported over concrete piers.

Item	Description
Maximum Loads (Must be confirmed by the project Structural Engineer)	Based on email correspondence by Mr. Josh Torbeck on July 20, 2023, anticipated load information has not been determined at this time. We anticipate the viewing deck to be primarily used by pedestrians, thus will be lightly loaded. Our load-settlement analyses assume a maximum column load in the order of 50 kips. If higher load is anticipated, please let Terracon know so that we can reassess the estimated settlement.
Grading/Slopes	The proposed grading plan has not been provided to Terracon at this time. Based on email correspondence by Mr. Josh Torbeck on July 20, 2023, there should not be much grading at the site. For the purposes of this report, we are anticipating less than 2 feet of cut and fill for the project, which needs to be confirmed by the project Civil Engineer.

Terracon should be notified if any of the above information is inconsistent with the planned construction, as modifications to our recommendations may be necessary.

Site Conditions

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	■ The project is located at 4082 OH-132 in Batavia, Clermont County, Ohio. ■ Latitude/Longitude (approx.): 39.0675, -84.1882 ■ See **Site Location**
Existing Conditions	The site is at the existing Sycamore Park within a grass-covered area with several trees. An existing asphalt parking lot is located to the west of the project site. The East Fork Little Miami River is located to the east and a creek to the south of this site. According to Clermont County GIS mapping, portions of the site closest to the river are mapped as a regulated floodway, while the portion adjacent to the existing parking area is mapped as a 1% annual chance flood hazard.
Current Ground Cover	Grass-covered area with several trees.

Item	Description
Existing Topography	Based on Clermont County GIS, the proposed site is gently sloping with elevations ranging from about Elevation 580 feet MSL at the existing parking lot to about Elevation 570 feet MSL at the west bank of the East Fork Little Miami River.
Geologic Conditions	According to the USDA soil survey, the surficial soils in the area are mapped as Genesee silt loam which consists of very deep, well-drained soils that formed in loamy alluvium on flood plains. According to USGS, the shale (~80%) and limestone (~20%) bedrock at the site maps as the Ordovician Age Kope Formation. Bedrock was encountered at depths ranging from 5.5 feet to 13.5 feet during our field exploration.

We also collected photographs at the time of our field exploration program. Representative photos are provided in our **Photography Log**.

Geotechnical Characterization

We have developed a general characterization of the subsurface conditions based on our review of the subsurface exploration, laboratory data, geologic setting, and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of the site. Conditions observed at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** and the GeoModel can be found in the **Figures** attachment of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	**Cohesive Soil**	Lean clay (CL), with sand and rock fragments, mottled brown and dark brown, stiff to very stiff
2	**Lakebed**	Silty clay (CL-ML), varved, with fat clay seams, gray, very stiff
3	**Bedrock**	Shale, trace interbedded limestone layers, gray, slightly weathered, weak

The lakebed soil layer encountered at 6.5 feet to 13.5 feet below existing site grades at Boring B-2 consisted of thinly interbedded clay and silt layers. An Atterberg limit test

was performed on a split spoon sample from a depth of 6 feet to 7.5 feet at this boring. Based on this test, the liquid limit was 20, and the plasticity index was 6 for this sample, thus classifying the sample as silty clay (CL-ML) per USGS Soil Classification.

Groundwater seepage was encountered only at Boring B-2 at 12 feet below existing site grades while drilling as shown in the boring logs in the **Exploration Results** section. No groundwater seepage was observed at the other borings during drilling or immediately after drilling.

Groundwater conditions may change because of seasonal variations in rainfall, runoff in the East Fork Little Miami River, during flood events in the East Fork Little Miami River, and other conditions not apparent at the time that the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

Seismic Site Class

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil/bedrock properties observed at the site and as described on the exploration logs and results, our professional opinion is that a **Seismic Site Classification of C** be considered for the project. Subsurface explorations at this site were extended to a maximum depth of 14 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of the geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

Geotechnical Overview

The site appears suitable for the proposed construction based on geotechnical conditions encountered in the test borings, provided that the recommendations provided in this report are implemented in the design and construction phases of this project.

The subsurface profile generally consisted of stiff to very stiff cohesive soil (GeoModel layer 1) with sand and rock fragments underlain by shale with interbedded limestone bedrock (GeoModel Layer 3). A very stiff silty clay lakebed soil (GeoModel Layer 2) was

encountered between the cohesive layer (GeoModel Layer 1) and bedrock (GeoModel Layer 3) at 6.5 feet to 13.5 feet below existing site grades at Boring B-2.

Based on the conditions encountered and estimated load-settlement relationships, the proposed pedestrian deck supported on concrete piers can be supported on spread footings bearing directly on stiff or better undisturbed native soil. The **Shallow Foundations** section addresses the support of the concrete piers on footings bearing on undisturbed native soil. Please note the footings could consist of round footings drilled into the stiff or better native soil. Since the project area is within a flood zone, further recommendations regarding footing bearing depth are provided in the **Shallow Foundations** section.

The near-surface, stiff to very stiff cohesive layer (GeoModel Layer 1) could become unstable with typical earthwork and construction traffic, especially after precipitation events. Effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the historically warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist. Additional site preparation recommendations, including subgrade improvement and fill placement, are provided in the **Earthwork** section.

As part of the laboratory program, a sample from a depth of 3.5 feet to 4.4 feet at Boring B-3 was tested for organic content by ignition. The organic content in the sample was found to be 4.5%. Any soils with organic content above 4% are not recommended for use as structural fill material. It is recommended that the on-site soils in the area currently covered with trees and vegetation be tested for organic content and thoroughly mixed with less organic soils to achieve a soil mixture with less than 4% organic prior to use as structural fill.

The recommendations contained in this report are based on the results of field and laboratory testing (presented in the **Exploration Results**), engineering analyses, and our current understanding of the proposed project. The **General Comments** section provides an understanding of the report's limitations.

Earthwork

Based on our discussions with the client, we understand that minimal earthwork will be performed as part of the proposed project. Earthwork, if performed, is anticipated to include clearing and grubbing, excavations, and engineered fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site

in the state considered in our geotechnical engineering evaluation for the foundations of the proposed pedestrian deck.

Site Preparation

Prior to placing any new fill, existing vegetation, topsoil, and root mats should be removed. Complete stripping of the topsoil should be performed in the proposed fill areas.

Mature trees are located within or near the footprint of the proposed pedestrian deck, which will require removal at the onset of construction. Tree root systems can remove substantial moisture from surrounding soils. Where trees are removed, the full root ball and all associated dry and desiccated soils should be removed. The soil materials which contain less than 4 percent organics can be reused as engineered fill provided the material is moisture conditioned and properly compacted. Holes resulting from the tree removal should be replaced with structural fill as recommended in this report.

Where fill is placed on existing slopes steeper than 5H:1V, benches should be cut into the existing slopes prior to fill placement. The benches should have a minimum vertical face height of 1 foot and a maximum vertical face height of 3 feet and should be cut wide enough to accommodate the compaction equipment. This benching will help provide a positive bond between the fill and natural soils and reduce the possibility of failure along the fill/natural soil interface.

Although no evidence of fill or underground facilities was observed during the exploration and site reconnaissance, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

Subgrade Preparation

Once the site preparation is complete, the subgrade should be proofrolled with an adequately loaded vehicle such as a fully loaded tandem-axle dump truck. The proofrolling should be performed under the observation of the Geotechnical Engineer or representative. Areas excessively deflecting under the proof roll should be delineated and subsequently addressed by the Geotechnical Engineer. Such areas should either be removed or modified by treating/applying/mixing with lime or cement. Excessively wet or dry material should either be removed, or moisture conditioned and recompacted.

All exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned as necessary, and compacted per the compaction requirements in this report. Compacted

structural fill soils should then be placed to the proposed design grade and the moisture content and compaction of subgrade soils should be maintained until foundation or pavement construction.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable; however, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

Excavation

We anticipate that excavations for the proposed construction can be accomplished with conventional earthmoving equipment. The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.

Bedrock was encountered at depths ranging from 5.5 feet to 13.5 feet below existing site grades. We do not anticipate excavations into the bedrock for this project. However, the interbedded shale and limestone bedrock in the area belong to the Kope Formation with shale comprising approximately 80% of the bedrock which can easily be excavated using a larger excavator. Our experience with this shale bedrock is that no blasting will be required.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 feet of structures, and constructed slopes. General fill is material used to achieve grades outside of these areas.

Reuse of On-Site Soil: Excavated on-site soil can be reused as structural or general fill, however, moisture conditioning of the on-site soils to near optimum conditions and possibly some removal of organic matters should be anticipated.

As part of the laboratory program, a sample from a depth of 3.5 feet to 4.4 feet at Boring B-3 was tested for organic content by ignition. The organic content in the sample was found to be 4.5%. Any soils with organic content above 4% are not recommended for use as structural fill material. It is recommended that the on-site soils in the area currently covered with trees and vegetation be tested for organic content and thoroughly mixed with less organic soils to achieve a soil mixture with less than 4% organic prior to use as structural fill.

Our field exploration encountered limestone fragments in the cohesive soil layer (GeoModel Layer 1). The limestone fragments with particle sizes larger than 3 inches

should not be used as a structural fill material. These larger particles can either be crushed to smaller sizes, removed from the fill, or be used in the non-structural areas.

Material property requirements for on-site soil for use as general fill and structural fill are noted in the table below:

Property	General Fill	Structural Fill
Composition	Free of deleterious material	
Maximum particle size	6 inches (or 2/3 of the lift thickness)	3 inches
Plasticity	Not limited	Maximum liquid limit of 40 and maximum plasticity index of 20
GeoModel Layer Expected to be Suitable[1]	1, 2, 3	1,2

1. Based on subsurface exploration. Actual material suitability should be determined in the field at time of construction.

Imported Fill Materials: Imported fill materials should meet the following material property requirements. Regardless of its source, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade.

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Low Plasticity Cohesive	CL, CL-ML	Liquid Limit less than 40 Plasticity index less than 20 Less than 25% retained on No. 200 sieve
Granular	GW, GM, SW, SM, GW-GM,	Less than 50% passing No. 200 sieve
Granular (Drainage Only)	GP, SP, SP-SM, GP-SM	Less than 10% fines Less than 5% fines to be considered free draining

1. Structural and general fill should consist of approved materials free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site. Additional geotechnical consultation should be provided prior to use of uniformly graded gravel on the site.

Fill Placement and Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness	■ 8 inches or less in loose thickness when heavy, self-propelled compaction equipment is used ■ 4 to 6 inches in loose thickness when hand-guided equipment (i.e., jumping jack or plate compactor) is used	Same as structural fill
Minimum Compaction Requirements [1,2,3]	98% of maximum dry density	95% of maximum dry density
Water Content Range [1]	■ Low plasticity cohesive: -2% to +3% of optimum ■ Granular: -3% to +3% of optimum	As required to achieve min. compaction requirements

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. If the granular material is coarse sand or gravel, of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, granular materials should be compacted to at least 70% relative density (ASTM D 4253 and D 4254). Materials not amenable to density testing should be placed and compacted to a stable condition observed by the Geotechnical Engineer or representative.

Grading and Drainage

All grades must provide effective drainage away from the structure during and after construction and should be maintained throughout the life of the structure. Water retained next to the foundation can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential foundation movements.

The exposed ground should be sloped and maintained at a minimum of 5% away from the structure for at least 10 feet beyond the perimeter of the foundation. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After construction and landscaping have been completed, final grades should be verified to document that effective drainage has been achieved. Grades around the structure should

also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Shallow excavations for the proposed structure are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of grade-supported improvements. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to construction.

The groundwater table could affect over excavation efforts, especially for over excavation and replacement of lower strength soils or during foundation excavation after precipitation events or during wet periods. A temporary dewatering system consisting of sumps with pumps may be necessary to achieve the recommended depth of over excavation depending on groundwater conditions at the time of construction.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be observed by the Geotechnical Engineer (or others under their direction). Observation should include documentation of adequate removal of surficial materials (vegetation, topsoil, and pavements), evaluation and remediation of existing fill materials, as well as proof rolling and mitigation of unsuitable areas delineated by the proof roll.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, as recommended by the Geotechnical Engineer prior to the placement of additional lifts. Each lift of fill should be tested for density and water content.

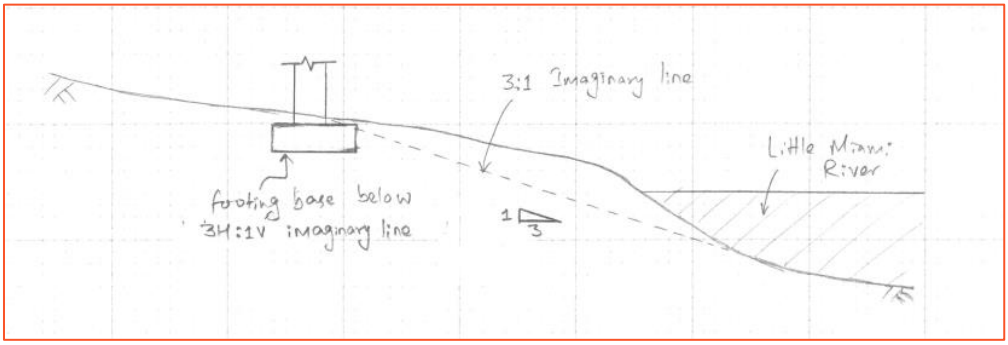
In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. If unanticipated conditions are observed, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

Shallow Foundations

Based on the information provided by Clermont Park District, the planned pedestrian deck will be supported on concrete piers. It is our recommendation that the concrete piers can be supported on a shallow foundation supported over an undisturbed native soil, or on a structural fill extending to native soil. Due to the project being in a floodway, deeper than normal footings will be required.

The minimum embedment of 48 inches has been recommended in the table below for flood considerations to reduce the impacts of temporary high groundwater and the potential for erosion around the footings. The structural engineer should check to see if additional embedment is required to ensure the base of the footing is below an imaginary 3H:1V slope line projected upslope from the west edge of the East Fork Little Miami River (see sketch below). Consideration for debris in floodwaters should also be anticipated that will possibly act as impact loads on the footings or add additional lateral forces to the footings. The civil engineer should also check to see if additional erosion control is necessary to limit the scour and erosion of the riverbank or around the footings during flood events.



If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing Pressure [1, 2]	4,000 psf
Required Bearing Stratum [3]	Undisturbed native soil
Minimum Foundation Dimensions	Per IBC 1809.7
Ultimate Passive Resistance [4] **(Equivalent fluid pressures)**	300 pcf (for native soil or new structural fill)
Sliding Resistance [5]	0.35 (native cohesive soil or structural fill)
Minimum Embedment below Finished Grade [6]	Exterior footings in unheated areas: 48 inches
Estimated Total Settlement from Structural Loads [2]	Less than about 1 inch
Estimated Differential Settlement [2, 7]	About 2/3 of total settlement

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum loads noted in **Project Description**. Additional geotechnical consultation will be necessary if higher loads are anticipated.
3. Unsuitable or soft soils should be over excavated and replaced per the recommendations presented in **Earthwork**.
4. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face. Assumes no hydrostatic pressure. Applicable to soil below the frost depth of 30 inches.
5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Frictional resistance for granular materials is dependent on the bearing pressure which may vary due to load combinations. For fine-grained materials, lateral resistance using cohesion should not exceed ½ the dead load.
6. Embedment necessary to minimize the effects of frost and/or seasonal water content variations due to flooding. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure.
7. Differential settlements are noted for equivalent-loaded foundations and bearing elevation as measured over a span of about 40 feet.

Design Parameters – Overturning and Uplift Loads

Shallow foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center third of the foundation (e.g., e < b/6, where b is the foundation width). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing may be required to satisfy this condition.

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils with consideration to the IBC basic load combinations.

Item	Description
Soil Moist Unit Weight	120 pcf
Soil Effective Unit Weight[1]	50 pcf
Soil weight included in uplift resistance	Soil included within the prism extending up from the top perimeter of the footing at an angle of 20 degrees from vertical to ground surface

1. Effective (or buoyant) unit weight should be used for soil above the foundation level and below a water level or during flood events. The high groundwater level should be used in uplift design as applicable.

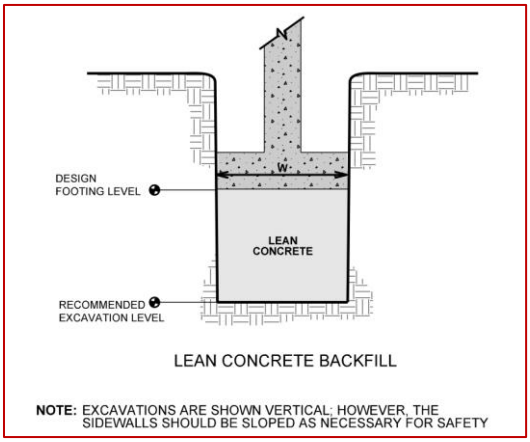
Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the observation of the Geotechnical Engineer. Round footings excavated with an auger could also be used for support of the concrete deck piers. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before the foundation concrete is placed.

Sensitive soils exposed at the surface of footing excavations may require surficial compaction with hand-held dynamic compaction equipment prior to placing structural fill, steel, and/or concrete. Should surficial compaction not be adequate, construction of a working surface consisting of either crushed stone or a lean concrete mud mat may be required prior to the placement of reinforcing steel and construction of foundations.

If unsuitable bearing soils are observed at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear

directly on these soils at the lower level or on lean concrete backfill placed in the excavations. The lean concrete replacement zone is illustrated on the sketch below.



General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials, or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third

parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

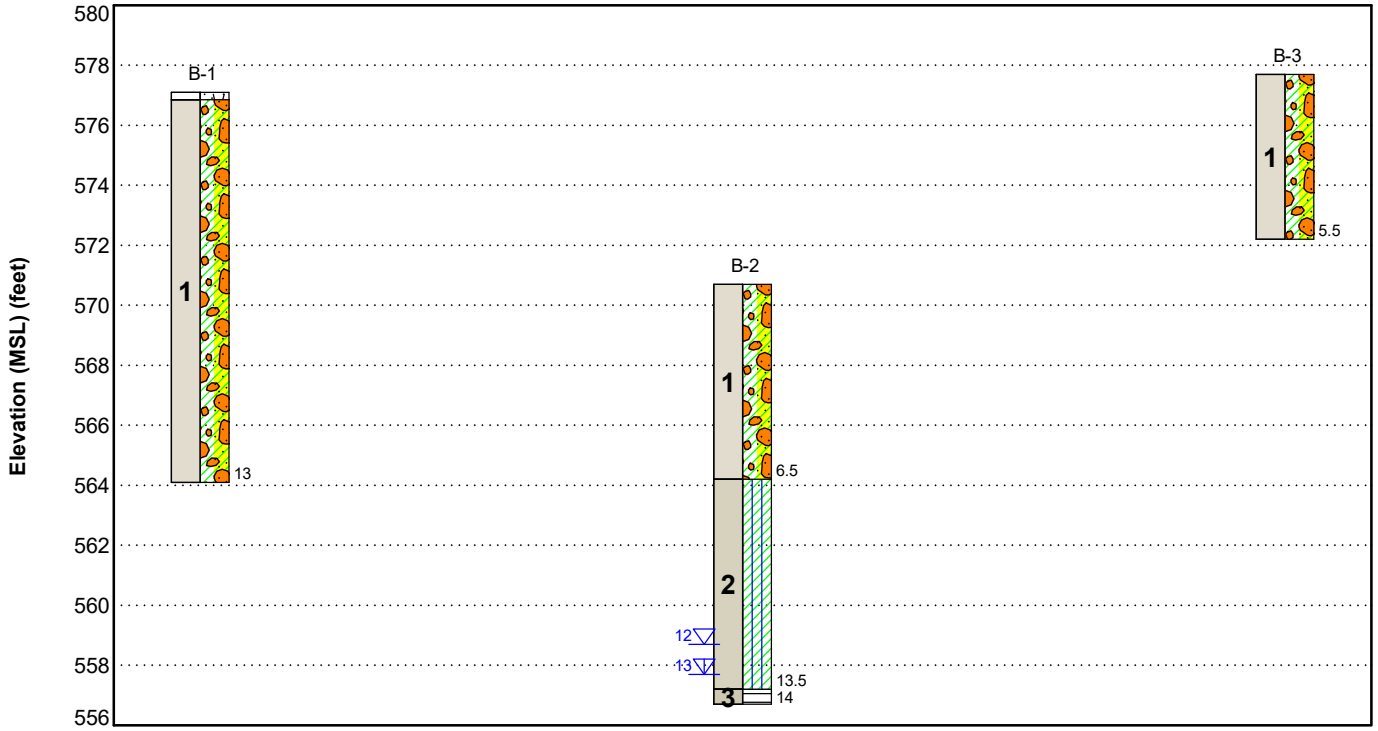
Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly affect excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others. Construction and site development have the potential to affect adjacent properties. Such impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties is commonly associated with contractor means and methods and is not addressed in this report. The owner and contractor should consider a preconstruction/precondition survey of the surrounding development. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

Figures

Contents:

Terracon
611 Lunken Park Dr
Cincinnati, OH

GeoModel



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	**Cohesive Soil**	Lean clay (CL), with sand and rock fragments, mottled brown and dark brown, stiff to very stiff
2	**Lakebed**	Silty clay (CL-ML), varved, with fat clay seams, gray, very stiff
3	**Bedrock**	Shale, trace interbedded limestone layers, gray, slightly weathered, weak

LEGEND

Topsoil
Shale
Gravelly Lean Clay with Sand
Silty Clay

First Water Observation
Second Water Observation

The groundwater levels shown are representative of the date and time of our exploration. Significant changes are possible over time.
Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

Attachments

Exploration and Testing Procedures

Field Exploration

Number of Borings	Approximate Boring Depth (feet)	Location
3	5.5 to 14	Planned overlook location

Boring Layout and Elevations: Terracon personnel provided the boring layout using handheld Leica Zeno20 GPS equipment to locate the borings and determine the ground surface elevation with an estimated accuracy of +/-2 feet. If more accurate elevations and a more precise boring layout are desired, we recommend borings be surveyed.

Subsurface Exploration Procedures: We advanced the borings with a track-mounted, rotary drill rig using continuous-flight hollow-stem augers. Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion.

Rock coring and rock sampling was beyond the scope of this project. The borings were terminated upon encountering bedrock conditions. The shale bedrock was confirmed by gray shale bedrock being observed on the auger cuttings as well as cutting teeth of the lead auger upon withdrawal.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials observed during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests. The laboratory testing program included the following types of tests:

- Moisture Content
- Atterberg Limits
- Organic Content

The laboratory testing program included the examination of collected soil samples by an engineer. Based on the results of our field and laboratory programs, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Rock classification was conducted using locally accepted practices for engineering purposes. Boring log rock classification was determined using the Description of Rock Properties.

Photography Log

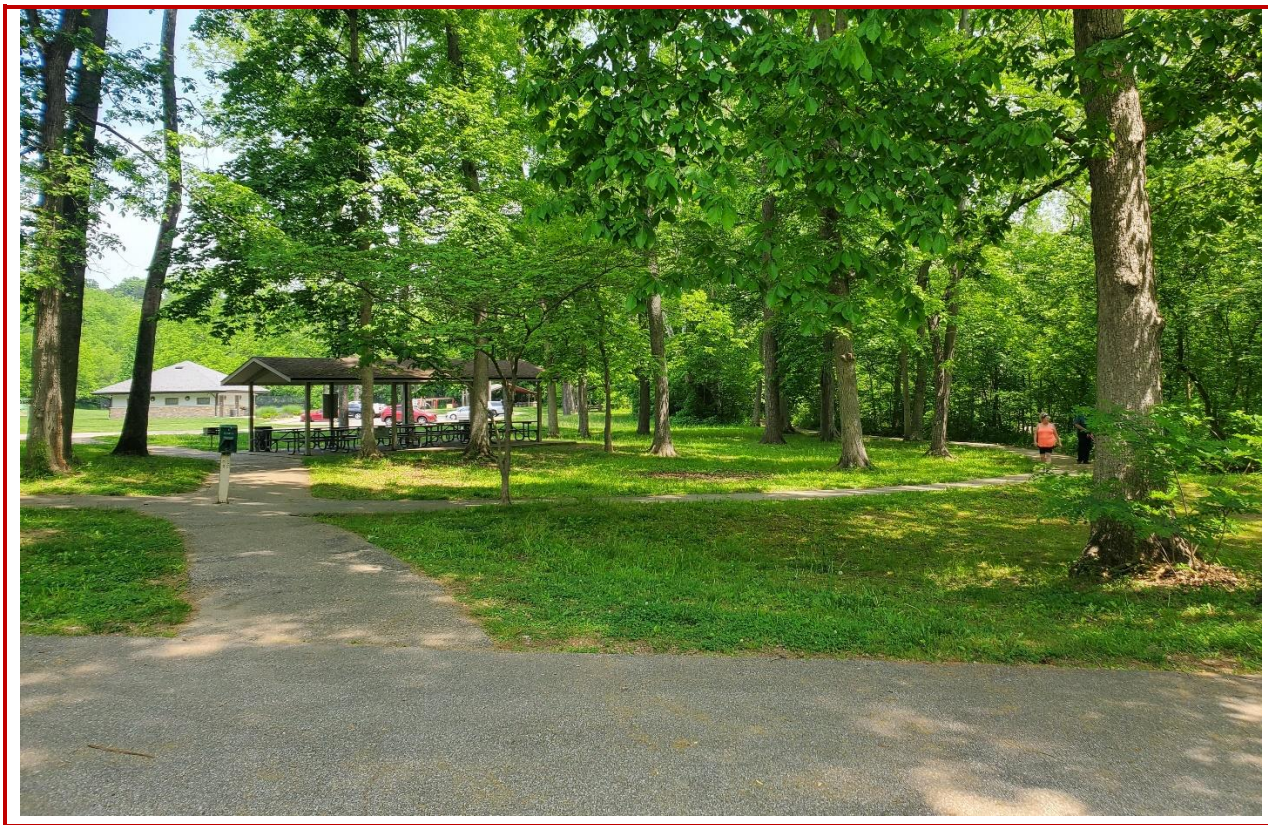


Figure 1: Existing Park Area, looking north from the project site

Figure 2: East Fork Little Miami River, looking east at Boring B-1

Figure 3: Project Site, looking northeast at Boring B-2

Figure 4: Project Site, looking east at Boring B-3

Site Location and Exploration Plans

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

Site Location

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

Exploration Plan

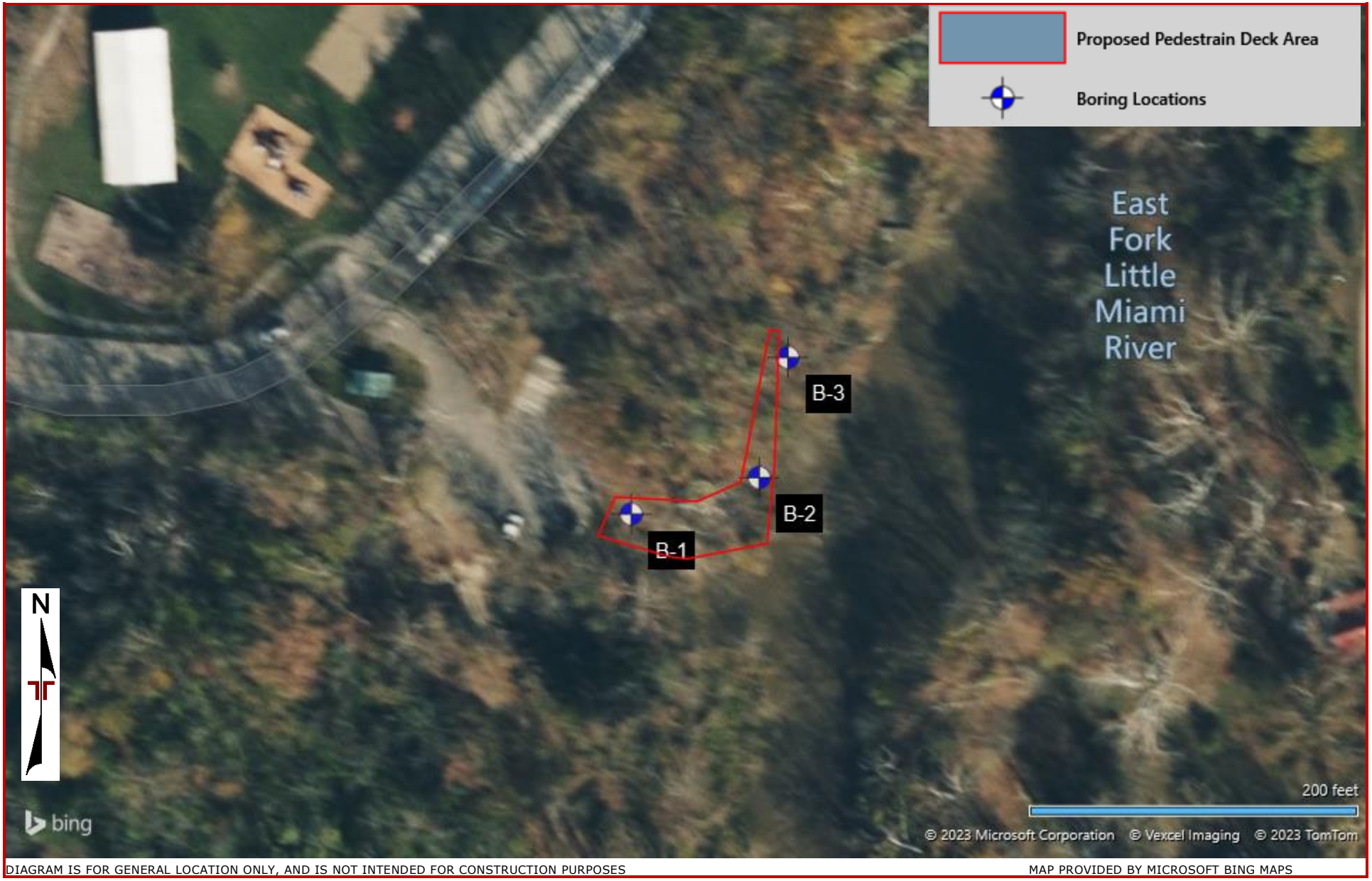


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

Exploration and Laboratory Results

Contents:

Boring Logs (B-1 through B-3)
Atterberg Limits

Note: All attachments are one page unless noted above.

Sycamore Park Project
4082 OH-132 | Batavia, OH
Terracon Project No. N1235100

Terracon
611 Lunken Park Dr
Cincinnati, OH

Boring Log No. B-1

Location: See Exploration Plan

Latitude: 39.067320° Longitude: -84.187663°

Depth (Ft.) Elevation.: 577.1 (Ft.)

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
		0.3 **TOPSOIL (3 INCHES)** 576.85							
1		**LEAN CLAY (CL)**, with sand and rock fragments, trace gravel, mottled dark brown and brown, stiff to very stiff			100	5-6-10 N=16	3.0 (HP)	24.2	45-27-18
					100	8-7-14 N=21		12.8	
		5			100	5-7-18 N=25		5.6	
					100	5-11-6 N=17		18.6	
		10							
		13.0 564.1							
		Auger Refusal at 13 Feet -refusal encountered in gray shale with interbedded limestone layers							

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations

Groundwater was not encountered while drilling

Groundwater was not encountered after drilling

Notes

Elevation Reference: Elevations and coordinates were measured by using Leica Zeno GPS Unit

Drill Rig Energy Transfer Ratio= 92.7%

Advancement Method
2 1/4-Inch Continuous-Flight Hollow-Stem Augers
2-Inch Split Spoon Sampler

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
Geoprobe #628

Hammer Type
Automatic

Driller
A. Moore

Logged by
J. Nwosu

Boring Started
06-26-2023

Boring Completed
06-26-2023

Sycamore Park Project
4082 OH-132 | Batavia, OH
Terracon Project No. N1235100

Terracon
611 Lunken Park Dr
Cincinnati, OH

Boring Log No. B-2

Location: See Exploration Plan

Latitude: 39.067381° Longitude: -84.187387°

Depth (Ft.) Elevation.: 570.7 (Ft.)

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
1		**LEAN CLAY (CL)**, with sand and rock fragments, mottled dark brown and brown, stiff to very stiff							
					100	4-4-5 N=9	1.5 (HP)	11.6	
					100	3-12-19 N=31		8.0	
		6.5 564.2							
2		**SILTY CLAY (CL-ML)**, varved, gray, very stiff, (LAKEBED)			100	3-18-20 N=38	3.0 (HP)	8.0	20-14-6
		-with fat clay seams at 8.5 feet			13	7-8-7 N=15		19.4	
		13.5 557.2							
3		14.0 **SHALE**, trace interbedded limestone layers, gray, slightly weathered, weak 556.7			100	50		13.7	
		Auger Refusal at 14 Feet							

5
10

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations

Groundwater was encountered at 12' while drilling

Groundwater was encountered at 13' after drilling

Notes

Elevation Reference: Elevations and coordinates were measured by using Leica Zeno GPS Unit

Drill Rig Energy Transfer Ratio= 92.7%

Advancement Method
2 1/4-Inch Continuous-Flight Hollow-Stem Augers
2-Inch Split Spoon Sampler

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
Geoprobe #628

Hammer Type
Automatic

Driller
A. Moore

Logged by
J. Nwosu

Boring Started
06-26-2023

Boring Completed
06-26-2023

Sycamore Park Project
4082 OH-132 | Batavia, OH
Terracon Project No. N1235100

Terracon
611 Lunken Park Dr
Cincinnati, OH

Boring Log No. B-3

Location: See Exploration Plan

Latitude: 39.067582° Longitude: -84.187325°

Depth (Ft.) Elevation.: 577.7 (Ft.)

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI
1		0							
				X	100	6-7-5 N=12	3.0 (HP)	16.5	
				X	100	13-50/5"		4.4	
		5							

LEAN CLAY (CL), with sand and rock fragments, mottled dark brown and brown, very stiff

-trace roots and wood fragments at 3.5 feet

-spoon refusal on limestone floater at 4.4 feet

5.5 572.2

Auger Refusal at 5.5 Feet

-refusal encountered in gray shale with interbedded limestone layers (based on gray shale fragments seen on lead auger teeth)

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations

Groundwater was not encountered while drilling

Groundwater was not encountered after drilling

Drill Rig
Geoprobe #628

Hammer Type
Automatic

Driller
A. Moore

Logged by
J. Nwosu

Boring Started
06-26-2023

Boring Completed
06-26-2023

Notes

Elevation Reference: Elevations and coordinates were measured by using Leica Zeno GPS Unit

Drill Rig Energy Transfer Ratio= 92.7%

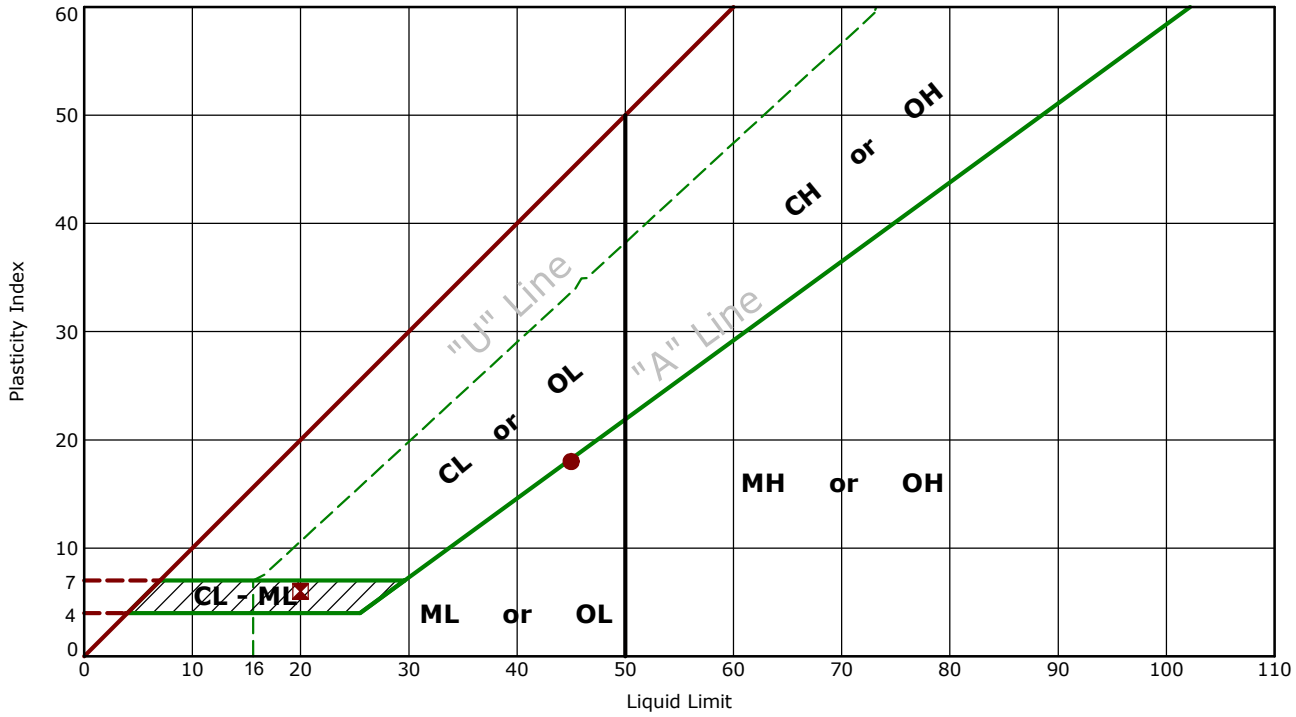
Advancement Method
2 1/4-Inch Continuous-Flight Hollow-Stem Augers
2-Inch Split Spoon Sampler

Abandonment Method
Boring backfilled with auger cuttings upon completion.

611 Lunken Park Dr
Cincinnati, OH

Atterberg Limit Results

ASTM D4318



	Boring ID	Depth (Ft)	LL	PL	PI	Fines	USCS	Description
●	B-1	1 - 2.5	45	27	18		CL	LEAN CLAY
⊠	B-2	6 - 7.5	20	14	6		CL-ML	SILTY CLAY

Supporting Information

Contents:

Note: All attachments are one page unless noted above.

611 Lunken Park Dr
Cincinnati, OH

General Notes

Sampling	Water Level	Field Tests
Split Spoon	Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

Descriptive Soil Classification

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

Location And Elevation Notes

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

Strength Terms

Relative Density of Coarse-Grained Soils (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		Consistency of Fine-Grained Soils (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Relative Density	**Standard Penetration or N-Value (Blows/Ft.)**	**Consistency**	**Unconfined Compressive Strength Qu (tsf)**	**Standard Penetration or N-Value (Blows/Ft.)**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

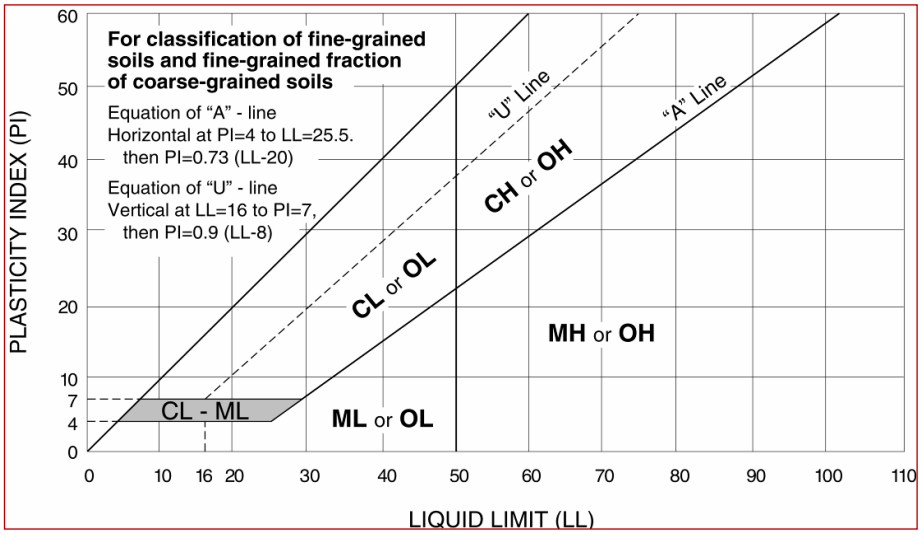
Relevance of Exploration and Laboratory Test Results

Exploration/field results and/or laboratory test data contained within this document are intended for application to the project as described in this document. Use of such exploration/field results and/or laboratory test data should not be used independently of this document.

Unified Soil Classification System

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]				Soil Classification	
				Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 4 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	Cu≥4 and 1≤Cc≤3 [E]	GW	Well-graded gravel [F]
			Cu<4 and/or [Cc<1 or Cc>3.0] [E]	GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH	GM	Silty gravel [F, G, H]
			Fines classify as CL or CH	GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	Cu≥6 and 1≤Cc≤3 [E]	SW	Well-graded sand [I]
			Cu<6 and/or [Cc<1 or Cc>3.0] [E]	SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH	SM	Silty sand [G, H, I]
			Fines classify as CL or CH	SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots above "A" line [J]	CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]	ML	Silt [K, L, M]
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OL	Organic clay [K, L, M, N]
					Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line	CH	Fat clay [K, L, M]
			PI plots below "A" line	MH	Elastic silt [K, L, M]
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OH	Organic clay [K, L, M, P]
					Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.
[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.
[E] $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
[F] If soil contains ≥ 15% sand, add "with sand" to group name.
[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.
[H] If fines are organic, add "with organic fines" to group name.
[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.
[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
[N] PI ≥ 4 and plots on or above "A" line.
[O] PI < 4 or plots below "A" line.
[P] PI plots on or above "A" line.
[Q] PI plots below "A" line.



Rock Classification Notes

WEATHERING	
Term	**Description**
Fresh	Mineral crystals appear bright; show no discoloration. Features show little or now staining on surfaces. Discoloration does not extend into intact rock.
Slightly weathered	Rock generally fresh except along fractures. Some fractures stained and discoloration may extend <0.5 inches into rock.
Moderately weathered	Significant portions of rock are dull and discolored. Rock may be significantly weaker than in fresh state near fractures. Soil zones of limited extent may occur along some fractures.
Highly weathered	Rock dull and discolored throughout. Majority of rock mass is significantly weaker and has decomposed and/or disintegrated; isolated zones of stronger rock and/or soil may occur throughout.
Completely weathered	All rock material is decomposed and/or disintegrated to soil. The rock mass or fabric is still evident and largely intact. Isolated zones of stronger rock may occur locally.

STRENGTH OR HARDNESS		
Description	**Field Identification**	**Uniaxial Compressive Strength, psi**
Extremely strong	Can only be chipped with geological hammer. Rock rings on hammer blows. Cannot be scratched with a sharp pick. Hand specimens require several hard hammer blows to break.	>36,000
Very strong	Several blows of a geological hammer to fracture. Cannot be scratched with a 20d common steel nail. Can be scratched with a geologist's pick only with difficulty.	15,000-36,000
Strong	More than one blow of a geological hammer needed to fracture. Can be scratched with a 20d nail or geologist's pick. Gouges or grooves to ¼ inch deep can be excavated by a hard blow of a geologist's pick. Hand specimens can be detached by a moderate blow.	7,500-15,000
Medium strong	One blow of geological hammer needed to fracture. Can be distinctly scratched with 20d nail. Can be grooved or gouged 1/16 in. deep by firm pressure with a geologist's pick point. Can be fractured with single firm blow of geological hammer. Can be excavated in small chips (about 1-in. maximum size) by hard blows of the point of a geologist's pick;	3,500-7,500
Weak	Shallow indent by firm blow with geological hammer point. Can be gouged or grooved readily with geologist's pick point. Can be excavated in pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.	700-3,500
Very weak	Crumbles under firm blow with geological hammer point. Can be excavated readily with the point of a geologist's pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.	150-700

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		**Bedding Spacing (May Include Foliation or Banding)**	
Description	**Spacing**	**Description**	**Spacing**
Intensely fractured	< 2.5 inches	**Laminated**	< ½-inch
Highly fractured	2.5 – 8 inches	**Very thin**	½ – 2 inches
Moderately fractured	8 inches to 2 feet	**Thin**	2 inches – 1 foot
Slightly fractured	2 to 6.5 feet	**Medium**	1 – 3 feet
Very slightly fractured	> 6.5 feet	**Thick**	3 – 10 feet
		Massive	> 10 feet

ROCK QUALITY DESIGNATION (RQD) [1]	
Description	**RQD Value (%)**
Very Poor	0 - 25
Poor	25 – 50
Fair	50 – 75
Good	75 – 90
Excellent	90 - 100

1. The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
2. Section 012300 "Alternates" for products selected under an alternate.
3. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use form provided in Project Manual.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.

b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within ten days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    b. Requested substitution provides sustainable design characteristics that specified product provided.
    c. Substitution request is fully documented and properly submitted.
    d. Requested substitution will not adversely affect Contractor's construction schedule.
    e. Requested substitution has received necessary approvals of authorities having jurisdiction.
    f. Requested substitution is compatible with other portions of the Work.
    g. Requested substitution has been coordinated with other portions of the Work.
    h. Requested substitution provides specified warranty.
    i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

    a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    b. Requested substitution does not require extensive revisions to the Contract Documents.
    c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    d. Requested substitution provides sustainable design characteristics that specified product provided.

e. Substitution request is fully documented and properly submitted.
f. Requested substitution will not adversely affect Contractor's construction schedule.
g. Requested substitution has received necessary approvals of authorities having jurisdiction.
h. Requested substitution is compatible with other portions of the Work.
i. Requested substitution has been coordinated with other portions of the Work.
j. Requested substitution provides specified warranty.
k. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SUBSTITUTION REQUEST

(After the Bidding Phase)

Project: _____

_____

To: _____

_____

Re: _____

From: _____

Date: _____

A/E Project Number: _____

Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

_____

_____

☐ Point-by-point comparative data attached

Reason for not providing specified item: _____

_____

Similar Installation:

Project: _____ Architect: _____

Address: _____ Owner: _____

_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

_____

Savings to Owner for accepting substitution: _____ ($ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST
(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: _____

_____

_____

_____

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____
(Project Manager)

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

_____

_____

_____

_____

_____

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request or 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
    e. Quotation Form: Use forms acceptable to Owner.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Owner.

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.

C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.

D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Architect and Owner.

E. Schedule and conduct progress meetings at Project site at regular intervals. Notify Owner and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.

1. Record minutes and distribute to everyone concerned, including Owner and Architect.

1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
2. Submit digital copies of each action submittal and informational submittal. Architect will return digital copies.
3. Submit two copies of each physical sample submittal. Architect will return one copy.
4. Architect will discard submittals received from sources other than Contractor.

B. Paper Submittals: Place a permanent label or title block on each submittal for identification. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect. Include the following information on the label:

1. Project name.
2. Date.
3. Name and address of Contractor.
4. Name and address of subcontractor or supplier.
5. Number and title of appropriate Specification Section.

C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with unique identifier, including project identifier, Specification Section number, and revision identifier.
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

D. Identify options requiring selection by Architect.

E. Identify deviations from the Contract Documents on submittals.

F. Contractor's Construction Schedule Submittal Procedure:

1. Submit required submittals in the following format:

a. Working electronic copy of schedule file, where indicated.
b. PDF electronic file.

2. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

a. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.

3. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.

1. Post electronic submittals as PDF electronic files directly to Project Web site specifically established for Project.

    a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Submit electronic submittals via email as PDF electronic files.

    a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2.2 ACTION SUBMITTALS

A. Submit digital copies of each submittal unless otherwise indicated. Architect will return digital copies.

B. Product Data: Mark each copy to show applicable products and options. Include the following:

1. Manufacturer's written recommendations, product specifications, and installation instructions.
2. Wiring diagrams showing factory-installed wiring.
3. Printed performance curves and operational range diagrams.
4. Testing by recognized testing agency.
5. Compliance with specified standards and requirements.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (762 by 1067 mm). Include the following:

1. Dimensions and identification of products.
2. Fabrication and installation drawings and roughing-in and setting diagrams.
3. Wiring diagrams showing field-installed wiring.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.

D. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

1. If variation is inherent in material or product, submit at least three sets of paired units that show variations.

2.3 INFORMATIONAL SUBMITTALS

A. Informational Submittals: Submit digital copies of each submittal unless otherwise indicated. Architect will not return copies.

B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.4 DELEGATED DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit digital copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

2.5 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type schedule within 30 days of date established for the Notice to Proceed.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

C. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.

D. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and indicate date by which recovery will be accomplished.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribute copies of approved schedule to Owner, Architect, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility. When revisions are made, distribute updated schedules to the same parties.

END OF SECTION 013000

SECTION 01 31 26 – AGREEMENT FOR TRANFER OF DIGITAL DATA

AGREEMENT FOR TRANSFER OF BUILDING INFORMATION MODEL
(or other digital data)

RECEIVING PARTY		**TRANSMITTING PARTY - Emersion DESIGN**	
To:		From:	
Company:		Date:	
Address:		Project Name:	Sycamore Park River Overlook
City, ST ZIP		EMERSION DESIGN project No.	062305
Phone:			
Fax:			

A Building Information Model is a digital representation of the Project, or a portion of the Project. Business Information Modeling is the process used to create the Model. The Model is comprised of Elements representing a component, system or assembly within a building or building site. This Transfer concerns transfer of the Model and Model Elements only, and does not include EMERSION DESIGN's confidential and proprietary Modeling.

Revit ® software is being used as a three-dimensional tool by EMERSION DESIGN to communicate the interior spatial geometry and relationships of the design in a coordinated manner. Two dimensional and three dimensional families will be utilized in the Model in order to improve coordination of the design intent and project goals with the space needs for equipment and furnishings. However, these families will not carry with them the specific intelligence such as manufacturer-model information, specific capacities, or specific finish.

DIGITAL DATA FILE RECIPIENT IS THE:

☐ Property Owner ☐ Property Manager ☐ Owner's Consultant ☐ Subcontractor ☐ Supplier ☐ Other

FILES REQUESTED:

File / Drawing Name	Description	File / Drawing Date	File Type (.dwg/.dwf/.ifc/.rvt)

EMERSION DESIGN WILL TRANSFER THE MODEL FILE(S) VIA THE FOLLOWING MANNER:

☐ CD ROM (Regular Mail) ☐ Email (Include Recipient Email Address) _____

☐ FTTP Site Download ☐ CD ROM Overnight (Include Recipient Shipping Acct. No.) _____

AGREEMENT FOR TRANSFER OF BUILDING INFORMATION MODEL
TERMS and CONDITIONS

FILE COMPATIBILITY
EMERSION DESIGN makes no representation as to the compatibility of the Model files with any hardware or software.

OWNERSHIP of FILE
All information in the Model files is considered an "instrument of service" of EMERSION DESIGN and shall not be used for other projects, for additions to this project, or completion of this project by others. Such files shall remain property of EMERSION DESIGN, and in no case shall the transfer of these files be considered a sale. Since the information set forth on the Model files can be modified unintentionally or otherwise, EMERSION DESIGN reserves the right to remove all indication of its ownership and/or involvement from each electronic display.

TRANSMISSION of DATA
EMERSION DESIGN retains its rights in the Model and Model Elements. By transmitting the Model, EMERSION DESIGN does not grant to the Receiving Party an assignment of those rights; nor does EMERSION DESIGN convey to the Receiving Party any right in the software used to generate the Model.

CONFLICT with CONTRACT DOCUMENTS
EMERSION DESIGN makes no representation regarding the accuracy, completeness or permanence of the Model files or for their merchantability or fitness for a particular purpose. Addenda information or revisions made after the date indicated on the Model files may not have been incorporated. In the event of a conflict between EMERSION DESIGN's sealed contract drawings and the Model files, the sealed contract drawings shall govern. It is the Receiving Party's responsibility to determine if any conflicts exist. The Model files shall not be considered to be Contract Documents, as defined by the General Conditions of the Contract for Construction.

SCALE
The Model files do not always show information to scale.

CHECKING and COORDINATION
The use of the Model files prepared by EMERSION DESIGN shall not in any way obviate the Architect of Record or Contractor's responsibility for the proper checking and coordination of dimensions, details, member sizes and gauge, and quantities of materials as required to facilitate complete and accurate fabrication and erection.

INDEMNIFICATION
The Recipient shall, to the fullest extent permitted by law, indemnify, defend and hold harmless EMERSION DESIGN and its consultant's and sub-consultants, if any, from all claims, damages, losses, expenses, penalties and liabilities of any kind, including attorney's fees arising out of or resulting from the use of the Model files by the Receiving Party, or by third party recipients of the files from the Receiving Party.

LICENSING FEES
EMERSION DESIGN believes that no licensing or copyright fees are due to others on account of the transfer of the Model files, to the extent any are, the Receiving Party will pay the appropriate fees and hold EMERSION DESIGN harmless from such claims. EMERSION DESIGN grants the Receiving Party a nonexclusive limited license to use the Model solely and exclusively to perform services or construction for the Project only. The transmission of this Model file constitutes a certification by EMERSION DESIGN to the Receiving Party only that EMERSION DESIGN (1) is the copyright owner of the Data; (2) has permission from the copyright owner to transmit the Data and grant a license for its use on the Project; or (3) is authorized to transmit Confidential Information.

CONFIDENTIALITY
The Receiving Party agrees to keep Confidential Information strictly confidential and do not disclose it to any other person except to (1) its employees, (2) those who need to know the content of the Confidential Information in order to perform services or construction solely and exclusively for the Project, or (3) its consultants and contractors whose contracts include similar restrictions on the use of Confidential Information.

PURCHASE ORDER
Any purchase order number provided by the Receiving Party is for the Receiving Party's accounting purposes only. Purchase order terms and conditions are void and are not part of this agreement.

PAYMENT
After Receiving Party submits payment, the Model files will be transferred as requested.

APPLICABLE LAW
This Agreement is to be governed by and construed in accordance with the laws of Ohio, without regard to its conflict of law principles. Any action brought under this Agreement shall be brought only in a court of competent jurisdiction located in Hamilton County, Ohio. The parties consent to the exclusive jurisdiction of such courts, and agree to accept service of process by mail.

RECEIVING PARTY:

Name: _____ **Title:** _____

Signature: _____ **Date:** _____

Company: _____

END OF SECTION 013126

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.

C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.

D. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.

E. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

F. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

G. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

H. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.

I. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

J. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
3. Do not perform any duties of Contractor.

K. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Security and protection for samples and for testing and inspecting equipment.

L. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

M. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms, including "requested," "authorized," "selected," "required," and "permitted," have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms, including "shown," "noted," "scheduled," and "specified," have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Use Charges: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.

B. Water and Electric Power: Available from Owner's existing system without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Erosion- and Sedimentation-Control Plan: Submit plan showing compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

D. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

E. Accessible Temporary Egress: Comply with applicable provisions in ICC A117.1.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts and top and bottom rails.

B. Wood Enclosure Fence: Plywood, 6 feet (1.8 m) high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

2.2 TEMPORARY FACILITIES

A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.

C. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.2 SUPPORT FACILITIES INSTALLATION

A. Install project identification and other signs in locations approved by Owner to inform the public and persons seeking entrance to Project.

B. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

B. Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings.

C. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

D. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

F. Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

G. Install and maintain temporary fire-protection facilities. Comply with NFPA 241.

3.4 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion.

C. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

END OF SECTION 015000

SECTION 015723 - TEMPORARY STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Temporary stormwater pollution controls.

1.3 STORMWATER POLLUTION PREVENTION PLAN

A. The Stormwater Pollution Prevention Plan (SWPPP) is part of the Contract Documents and is bound into this Project Manual.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, and earthwork subcontractor.
2. Review requirements of the SWPPP, including permitting process, worker training, and inspection and maintenance requirements.

1.5 INFORMATIONAL SUBMITTALS

A. Stormwater Pollution Prevention Plan (SWPP): Within 15 days of date established for commencement of the Work, submit completed SWPPP.

B. EPA authorization under the EPA's "2017 Construction General Permit (CGP)."

C. Stormwater Pollution Prevention (SWPP) Training Log: For each individual performing Work under the SWPPP.

D. Inspection reports.

1.6 QUALITY ASSURANCE

A. Stormwater Pollution Prevention Plan (SWPPP) Coordinator: Experienced individual or firm with a record of successful water pollution control management coordination of projects with similar requirements.

1. SWPPP Coordinator shall complete and finalize the SWPPP form.
2. SWPPP Coordinator shall be responsible for inspections and maintaining of all requirements of the SWPPP.

B. Installers: Trained as indicated in the SWPPP.

PART 2 - PRODUCTS

2.1 TEMPORARY STORMWATER POLLUTION CONTROLS

A. Provide temporary stormwater pollution controls as required by the SWPPP.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with all best management practices, general requirements, performance requirements, reporting requirements, and all other requirements included in the SWPPP.

B. Locate stormwater pollution controls in accordance with the SWPPP.

C. Conduct construction as required to comply with the SWPPP and that minimize possible contamination or pollution or other undesirable effects.

1. Inspect, repair, and maintain SWPPP controls during construction.

a. Inspect all SWPPP controls not less than every seven days, and after each occurrence of a storm event, as outlined in the SWPPP.

D. Remove SWPPP controls at completion of construction and restore and stabilize areas disturbed during construction.

END OF SECTION 015723

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.

1. Show compliance with requirements for comparable product requests.
2. Architect will review the proposed product and notify Contractor of its acceptance or rejection.

C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.

D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.

E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
4. Store materials in a manner that will not endanger Project structure.
5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.

1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
2. Where products are accompanied by the term "as selected," Architect will make selection.
3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:

1. Products:

a. Where requirements include "one of the following," provide one of the products listed that complies with requirements.
b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.

2. Manufacturers:

a. Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.
b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.

3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.

C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
3. List of similar installations for completed projects, if requested.
4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 EXECUTION REQUIREMENTS

A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.

B. Cutting and Patching:

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching.
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.2 CLOSEOUT SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Final Completion.

C. Operation and Maintenance Data: Submit one copy of manual.

D. PDF Electronic File: Assemble manual into a composite electronically indexed file. Submit on digital media.

E. Record Drawings: Submit one set(s) of marked-up record prints.

F. Record Digital Data Files: Submit data file and one set(s) of plots.

G. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.

B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, property surveys, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect.
4. Submit test/adjust/balance records.
5. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Advise Owner of changeover in heat and other utilities.
6. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
7. Remove temporary facilities and controls.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:

1. Submit a final Application for Payment.
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 OPERATION AND MAINTENANCE DOCUMENTATION

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.

B. Organization: Unless otherwise indicated, organize manual into separate sections for each system and subsystem, and separate sections for each piece of equipment not part of a system.

C. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:

1. Manufacturer's operation and maintenance documentation.
2. Maintenance and service schedules.
3. Maintenance service contracts. Include name and telephone number of service agent.
4. Emergency instructions.
5. Spare parts list and local sources of maintenance materials.
6. Wiring diagrams.
7. Copies of warranties. Include procedures to follow and required notifications for warranty claims

2.3 RECORD DRAWINGS

A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.

1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings.

1. Format: Annotated PDF electronic file.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Verify compatibility with and suitability of substrates.
2. Examine roughing-in for mechanical and electrical systems.
3. Examine walls, floors, and roofs for suitable conditions.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.

E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

F. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

B. Engage a land surveyor to lay out the Work using accepted surveying practices.

3.3 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
3. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations.

C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.

F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Provide temporary support of work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.

1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
2. Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance.
3. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
3. Remove debris from concealed spaces before enclosing the space.

B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
3. Remove labels that are not permanent.
4. Clean transparent materials, including mirrors. Remove excess glazing compounds.
5. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
6. Vacuum carpeted surfaces and wax resilient flooring.
7. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
8. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

3.6 OPERATION AND MAINTENANCE MANUAL PREPARATION

A. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format,

identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are unavailable and where the information is necessary for proper operation and maintenance of equipment or systems.

C. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.

3.7 DEMONSTRATION AND TRAINING

A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:

1. Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

END OF SECTION 017000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Action Submittals:

1. Waste Management Plan: Submit plan within 30 days of date established for commencement of the Work.

B. Informational Submittals:

1. Waste Reduction Progress Reports: Submit concurrent with each Application for Payment. Include total quantity of waste, total quantity of waste salvaged and recycled, and percentage of total waste salvaged and recycled.
2. Records of Donations and Sales: Receipts for salvageable waste donated or sold to individuals and organizations. . Indicate whether organization is tax exempt.
3. Recycling and Processing Facility Records: Manifests, weight tickets, receipts, and invoices.
4. Landfill and Incinerator Disposal Records: Manifests, weight tickets, receipts, and invoices.
5. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations.

C. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

D. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 013000 "Administrative Requirements." Review methods and procedures related to waste management.

E. Waste Management Plan: Develop a waste management plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

1. Salvaged Materials for Reuse: Identify materials that will be salvaged and reused.
2. Salvaged Materials for Sale: Identify materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: Identify materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Achieve end-of-Project rates for salvage/recycling of **50** percent by weight of total nonhazardous solid waste generated by the Work.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 RECYCLING WASTE

A. General: Recycle paper and beverage containers used by on-site workers.

B. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

C. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.

D. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

1. Pulverize concrete to maximum 1-1/2-inch (38-mm) size.

E. Wood Materials:

1. Sort and stack reusable members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
2. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
3. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

F. Metals: Separate metals by type.

3.3 DISPOSAL OF WASTE

A. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

B. Do not burn waste materials.

END OF SECTION 017419

SECTION 055213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Stainless steel pipe handrailings.

B. Furnished but installed under other Sections:
1. Furnish sleeves and anchors to be cast in concrete to Division 03 Section “Cast-in-Place Concrete”.

C. Related Requirements:

1. Structural drawings for guard railing assembly.

1.2 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Fasteners.
2. Post-installed anchors.
3. Handrail brackets.
4. Shop primer.
5. Intermediate coats and topcoats.
6. Bituminous paint.
7. Nonshrink, nonmetallic grout.
8. Anchoring cement.
9. Metal finishes.
10. Paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Verification: For each type of exposed finish required.

1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters, including finish.
2. Fittings and brackets.
3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and infill. Sample need not be full height.

    a. Show method of connecting and finishing members at intersections.

D. Delegated Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For delegated design professional engineer.

B. Welding certificates.

C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.

D. Product Test Reports: For tests on railings performed by a qualified testing agency, in accordance with ASTM E894 and ASTM E935.

E. Research Reports: For post-installed anchors, from ICC-ES or other qualified testing agency acceptable to authorities having jurisdiction.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with the following:

1. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect mechanical finishes on exposed surfaces of railings from damage by applying a strippable, temporary protective covering before shipping.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design railings, including attachment to building construction.

B. Structural Performance: Railings, including attachment to building construction, withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails:

a. Uniform load of 50 lbf/ ft. applied in any direction.
b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.3 STAINLESS STEEL RAILINGS

A. Source Limitations: Obtain each type of railing from single source from single manufacturer.

B. Fabricate handrails to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of member, post spacings, wall bracket spacing, and anchorage, but not less than that needed to withstand indicated loads.

1. Handrails: Unless noted otherwise, 1-1/2 inch round tubing at guardrail and at walls. Mechanically fasten to guardrail at each welded steel bracket. Attach handrail to wall using fabricated steel 90 degree brackets of ½ inch round steel bar or similar to match those welded to guardrail.

C. Pipe: ASTM A312/A312M, Grade TP 304.

2.4 FASTENERS

A. Fastener Materials:

1. Ungalvanized-Steel Railing Components: Plated steel fasteners complying with ASTM F1941/F1941M, Class Fe/Zn 5 for zinc coating.

2. Hot-Dip Galvanized Railing Components: Type 304 stainless steel or hot-dip zinc-coated steel fasteners complying with ASTM A153/A153M or ASTM F2329/F2329M for zinc coating.
3. Stainless Steel Railing Components: Type 304 stainless steel fasteners.
4. Finish exposed fasteners to match appearance, including color and texture, of railings.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction and capable of withstanding design loads.

C. Fasteners for Interconnecting Railing Components:

1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.

D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193.

1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.

2.5 MISCELLANEOUS MATERIALS

A. Handrail Brackets: 90 degree brackets fabricated of ½ inch round steel bar or similar at guardrail and wall attachments. Weld brackets to guardrail at each post as needed to withstand indicated loads. Attach brackets to wall using exposed fasteners that provide 1-1/2-inch clearance from inside face of handrail to finished wall surface.

B. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.

1. For stainless steel railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

C. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

D. Galvanizing Repair Paint: High-zinc-dust-content paint, complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

E. Bituminous Paint: Cold-applied asphalt emulsion, complying with ASTM D1187/D1187M.

F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout, complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

G. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

2.6 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.

1. Clearly mark units for reassembly and coordinated installation.
2. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately.

1. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated.
2. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that are exposed to weather in a manner that excludes water.

1. Provide weep holes where water may accumulate.
2. Locate weep holes in inconspicuous locations.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with welded connections unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Finish #1 welds; ornamental quality with no evidence of a welded joint.

I. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

J. Form changes in direction as follows:
1. By flush bends or by inserting prefabricated flush-elbow fittings.

K. Bend members in jigs to produce uniform curvature for each configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

L. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.

M. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

N. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

2.7 STEEL FINISHES

A. For nongalvanized-steel railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves; however, hot-dip galvanize anchors to be embedded in exterior concrete or masonry.

B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3.

C. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1 for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

1. Shop prime uncoated railings with universal shop primer unless zinc-rich primer is indicated.
2. Do not apply primer to galvanized surfaces.

D. Shop-Painted Finish: Comply with Section 099123 "Interior Painting."

1. Color: As selected by Architect from manufacturer's full range.

2.8 STAINLESS STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

1. Run grain with long dimension of each piece.
2. When polishing is completed, passivate and rinse surfaces.
3. Remove embedded foreign matter and leave surfaces chemically clean.

C. Stainless Steel Pipe and Tubing Finishes:

1. 180-Grit Polished Finish: Uniform, directionally textured finish.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Perform cutting, drilling, and fitting required for installing railings.

1. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
2. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
3. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
4. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

C. Adjust railings before anchoring to ensure matching alignment at abutting joints.

D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.2 RAILING CONNECTIONS

A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article, whether welding is performed in the shop or in the field.

B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve, extending 2 inches beyond joint on either side; fasten internal sleeve securely to one side; and locate joint within 6 inches of post.

3.3 ANCHORING POSTS

A. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

B. Leave anchorage joint exposed with anchoring material flush with adjacent surface.

3.4 ATTACHING RAILINGS

A. Anchor railing ends with brackets on underside of rails connected to railing ends and anchored to guard rail construction with anchors and bolts.

B. Attach handrails to guard rails with brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.

1. Use type of bracket with predrilled hole for exposed bolt anchorage.
2. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.

C. Secure wall brackets to building construction as follows:

1. For anchorage, use drilled-in expansion shields and hanger or lag bolts.

3.5 REPAIR

A. Touchup Painting:

1. Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

a. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

3.6 CLEANING

A. Clean **stainless steel** by washing thoroughly with clean water and soap and rinsing with clean water.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.

3.7 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period, so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 055213

SECTION 067300 - COMPOSITE DECKING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Composite decking.
2. Decking fastening system.
3. Accessories.

B. Related Requirements:

1. Section 061000: Rough carpentry.

1.2 REFERENCES

A. ASTM D-7031: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products.

B. ASTM D-7032: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).

C. ASTM E-84: Test Method for Surface Burning Characteristics of Building Materials.

D. ASTM D 570: Water Absorption of Plastics

E. ASTM D 1761: Mechanical Fasteners in Wood.

F. ASTM D1413: Test method for Wood Preservatives by Laboratory Soil-block Cultures.

G. ASTM C177: Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination Procedures:

1. Coordinate composite decking with load bearing structural support locations.

B. Preinstallation Meeting Attendees and Procedures:

1. Conduct meeting one week, minimum, before starting Work of this Section.

1.4 ACTION SUBMITTALS

A. Product Data: For composite decking and metal framing anchors.

1. For composite decking and metal framing anchors. Include installation instructions.

B. Samples: For each composite decking specified, not less than 24 inches (600 mm) long, provide one sample representing actual product color, size, and finish..

1.5 INFORMATIONAL SUBMITTALS

A. Test and Evaluation Reports: Manufacturer test reports showing:

1. Composite decking.
2. Decking fastener System.

B. Manufacturers instructions.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For composite decking.

B. Warranty Documentation: For composite decking.

1.7 QUALITY ASSURANCE

A. Mockups: Construct mockup. Demonstrate composite decking interfaces, intersections, and terminations.

1. Mockups Location: Architect selected.

1.8 FIELD CONDITIONS

A. Ambient Conditions: Perform work within following limitations:

1. Temperature: 100 degrees F, maximum.

B. Existing Conditions: Verify field measurements before fabrication. Show field measurements on Shop Drawings.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Handle and store composite decking to comply with manufacturer's written instructions.

1.10 WARRANTY

A. Composite Decking: Warrant against product failure.

1. Failure includes the following:

a. Manufacturing defects of decking material or fabrication.

2. Commercial warranty period: 10 years

3. Installation warranty period: 5 years

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Product: Subject to compliance with requirements, provide Trex Company, Inc., 160 Exeter Dr., Winchester, VA 22603 or a comparable product by one of the following:

1. Envision Outdoor Living Products
2. Deckorators Inc.
3. Fiberon
4. MoistureShield

2.2 APPLICATIONS/SCOPE

A. Wood-Plastic Composite Lumber;

1. Material Description: Composite Decking consisting of recycled Linear Low Density Polyethylene (LLDPE) and recycled wood. The product is extruded into shapes and sizes as follows:

a. Trex Enhance Decking Boards; 1 x 5.5".
b. Lengths: 12, 16, and 20 feet
c. Color – To be specified by architect from Trex' standard list of colors.

2. Physical and Mechanical Properties as follows:

a. Flame Spread Index (ASTM E84), Class C
b. Thermal Expansion (ASTM D1037), 1.9 x 10^{-5} inch/inch/degreeF.
c. Moisture Absorption (ASTM D1037), < 1%.
d. Screw Head Pull-Through (ASTM D1761), 161 lbf per screw.

i. Fastener used in testing: #8 x 2.5 in. approved Stainless Steel Screw.

e. Fungus Resistance (ASTM D1413), Rating - no decay
f. Termite Resistance (AWPA E1-72), Rating = 9.6.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated, acceptable to authorities having jurisdiction, and that comply with requirements specified in this article for material and manufacture. Provide fasteners, in sufficient length, to penetrate not less than 1-1/2 inches (38 mm) into composite deck substrate.

1. Deck Fastening: Trex Universal Hideaway Hidden Fasteners
2. Fascia Fastening: Cortex Hidden Fastening System

B. Power-Driven Fasteners: ICC-ES AC70.

C. Carbon-Steel Bolts: ASTM A307 (ASTM F568M) with ASTM A563 (ASTM A563M) hex nuts and, where indicated, flat washers all hot-dip zinc coated.

D. Stainless Steel Bolts: ASTM F593, Alloy Group 1 or 2 (ASTM F738M, Grade A1 or Grade A4); with ASTM F594, Alloy Group 1 or 2 (ASTM F836M, Grade A1 or Grade A4) hex nuts and, where indicated, flat washers.

E. Post-installed Anchors: Stainless steel, chemical or torque-controlled expansion anchors with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing in accordance with ASTM E488 conducted by a qualified independent testing and inspecting agency.

1. Stainless steel bolts and nuts complying with ASTM F593 and ASTM F594, Alloy Group 1 or 2 (ASTM F738M and ASTM F836M, Grade A1 or Grade A4).

2.4 METAL FRAMING ANCHORS

A. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated on Drawings. Manufacturer's published values are to be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

B. Joist Hangers: U-shaped, with 2-inch- (50-mm-) long seat and 1-1/4-inch- (32-mm-) wide nailing flanges at least 85 percent of joist depth.

1. Thickness: 0.050 inch (1.3 mm).

C. Top Flange Hangers: U-shaped joist hangers, full depth of joist, formed from metal strap with tabs bent to extend over and be fastened to supporting member.

1. Strap Width: 1-1/2 inches (38 mm).
2. Thickness: 0.050 inch (1.3 mm).

D. Post Bases: Adjustable-socket type for bolting in place with standoff plate to raise post 1 inch (25 mm) above base and with 2-inch- (50-mm-) minimum side cover, socket 0.062 inch (1.6 mm) thick, and standoff and adjustment plates 0.108 inch (2.8 mm) thick.

E. Joist Ties: Flat straps, with holes for fasteners, for tying joists together over supports.

1. Width: 3/4 inch (19 mm).
2. Thickness: 0.050 inch (1.3 mm).
3. Length: 16 inches (400 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION, GENERAL

A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit work to other construction; scribe and cope as needed for accurate fit.

B. Framing Standard: Comply with AF&PA WCD1 unless otherwise indicated.

C. Install composite lumber to comply with manufacturer's written instructions.

D. Install metal framing anchors to comply with manufacturer's written instructions.

E. Do not splice structural members between supports unless otherwise indicated.

F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

G. Securely attach exterior rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. "Fastening Schedule" in ICC's International Building Code.

H. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced and with adjacent rows staggered.

3.4 INSTALLATION OF ELEVATED DECK JOIST FRAMING

A. General: Install joists with crown edge up and support ends of each member with not less than 1-1/2 inches (38 mm) of bearing on wood or metal, or 3 inches (76 mm) on masonry. Attach

floor joists where framed into wood supporting members by using wood ledgers as indicated or, if not indicated, by using metal joist hangers. Do not notch joists.

B. Frame openings with headers and trimmers supported by metal joist hangers; double headers and trimmers where span of header exceeds 48 inches (1200 mm).

C. Lap members framing from opposite sides of beams or girders not less than 4 inches (102 mm,) or securely tie opposing members together. Provide solid blocking of 2-inch nominal (38-mm actual) thickness by depth of joist over supports.

D. Provide solid blocking of 2-inch nominal (38-mm actual) thickness by depth of joist at intervals of 96 inches (2438 mm) o.c., between joists.

3.5 INSTALLATION OF STAIRS

A. Provide stair framing members of size, space, and configuration indicated or, if not indicated, to comply with the following requirements:

1. Stringer Size: 2 by 12 inches nominal (38 by 286 mm actual), minimum.
2. Notching: Notch stringers to receive treads, risers, and supports; leave at least 3-1/2 inches (89 mm) of effective depth.
3. Stringer Spacing: At least three stringers for each 36-inch (914-mm) clear width of stair.

B. Provide stair framing with no more than 3/16-inch (4.7-mm) variation between adjacent treads and risers and no more than 3/8-inch (9.5-mm) variation between largest and smallest treads and risers within each flight.

C. Treads and Risers: Secure by gluing and screwing to carriages. Countersink fastener heads, fill flush, and sand filler. Extend treads over carriages and finish with bullnose edge.

3.6 INSTALLATION OF RAILINGS

A. Balusters: Fit to railings, glue, and screw in place. Countersink fastener heads, fill flush, and sand filler.

B. Newel Posts: Secure to stringers and risers with through bolts lag screws or countersunk-head wood screws and glue.

C. Railings: Secure wall rails with metal brackets. Fasten freestanding railings to newel posts and to trim at walls with countersunk-head wood screws or rail bolts and glue.

END OF SECTION 067300

SECTION 079200 – JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for the applications indicated in the Joint-Sealant Schedule at the end of Part 3.
   1. Joint sealants, general.
      a. Silicone joint sealants
      b. Urethane joint sealants

1.3 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

D. Joint-Sealant Schedule: Include the following information:
   1. Joint-sealant application, joint location, and designation.
   2. Joint-sealant manufacturer and product name.
   3. Joint-sealant formulation.
   4. Joint-sealant color.

1.4 INFORMATIONAL/QUALITY ASSURANCE/CONTROL SUBMITTALS

A. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
   1. Certify materials brought on site contain less than 1 percent asbestos as determined by polarized light microscopy (PLM) analysis.

B. Qualification Data: For Installer.

C. Product Test Reports: Based on evaluation of comprehensive test performed by a qualified testing agency, indicating that sealants comply with requirements.

D. Sample Warranties: For special warranties. Sample warranties or certification letters from manufacture shall indicate manufactures conditions and willingness to provide special warranties requested by “Warranty” article hereinafter.

E. Sustainable Design Submittals:

1. Regional Materials and Innovation in Design Credit for an additional ten percent (10%) of Regional Materials:
   a. Indicate location of extraction, harvesting, and/or recovery, as well as manufacturing.
   b. Indicate distance between extraction, harvesting, and/or recovery, as well as manufacturing.
2. Product Data: For sealants and sealant primers used inside the weatherproofing system, documentation including printed statement of VOC content.
3. Laboratory Test Reports for Low-Emitting Materials – Adhesives and Sealants: For sealants and sealant primers used inside the weatherproofing system, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

1.5 CLOSEOUT SUBMITTALS:

A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals.
   1. Warranties: Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's recognized and recommended installer for installation of elastomeric sealants required for this Project, as required by terms of warranty.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.
   1. Refer to Division 04 Section "Unit Masonry" for additional mockup requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multiple-component materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

C. Waste Management and Disposal: As specified in Division 01 Section "Construction Waste Management and Disposal" and as follows:
   1. Close and seal tightly all partly used sealant containers and store protected in well-ventilated, fire-safe area at moderate temperature.
   2. Place used sealant tubes and containers in areas designated for hazardous materials.

1.8 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:
   1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
   2. When joint substrates are wet.
   3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
   4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

B. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this section.

1.9 WARRANTY

A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: 2 years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer's standard form in which silicone sealant manufacturer agrees to furnish silicone joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: 5 years from date of Substantial Completion.

C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
   1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
   2. Disintegration of joint substrates from natural causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. The “Substitution Request Form” and complete technical data for evaluation must accompany requests for A/E’s approval. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

C. 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.2 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

2.3 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B. Liquid-Applied Sealants: Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
   1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

C. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C1248 and have not stained porous joint substrates indicated for Project.

D. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

E. Additional Movement Capability: Where additional movement capability is specified, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C920 for uses indicated.

F. Colors of Exposed Joint Sealants: As selected by A/E from manufacturer's full range, unless otherwise noted.
   1. Provide tintable silicones where custom silicones are indicated.

2.4 SILICONE JOINT SEALANTS

A. Single-Component, Nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, for Use NT.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Dow Corning Corporation; 790 or NS Parking Structure Sealant.
      b. GE Advanced Materials - Silicones; SilPruf LM SCS2700.
      c. Pecora Corporation; 301 NS, 311 NS, 890NST, or 890FTS.
      d. Sika Corporation; Sikasil WS-290 or Sikasil 728 NS.
      e. Tremco Incorporated; Spectrem 1 or Spectrem 800.

B. Single-Component, Nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 50, for Use NT.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Dow Corning Corporation; 756 SMS, 791, 795, or 995.
   b. GE Advanced Materials - Silicones; SilGlaze II SCS2800, SilPruf NB SCS9000, or SilPruf SCS2000.
   c. Pecora Corporation; PCS.
   d. Polymeric Systems, Inc., Whitford Worldwide; PSI-641.
   e. Sika Corporation; Sikasil WS-295 or Sikasil N+.
   f. Tremco Incorporated; Spectrem 2 or 3.

C. Multiple-Component, Nonsag, Silicone Joint Sealant: ASTM C920, Type M, Grade NS, Class 50, for Use NT.
1. Products: Subject to compliance with requirements, provide one of the following:
   a. Pecora Corporation; 890FTS-TXTR.
   b. Sika Corporation; Sikasil WS-295 FPS.
   c. Tremco Incorporated; Spectrem 4-TS.

D. Single-Component, Nonsag, Traffic-Grade, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, for Use T.
1. Products: Subject to compliance with requirements, provide one of the following:
   a. Dow Corning Corporation; 790 or NS Parking Structure Sealant.
   b. Pecora Corporation; 301 NS or 311 NS.
   c. Tremco Incorporated; Spectrem 800.
   d. Sika Corporation; SikaSil 728 NS.

E. Single-Component, Pourable, Traffic-Grade, Silicone Joint Sealant: ASTM C920, Type S, Grade P, Class 100/50, for Use T.
1. Products: Subject to compliance with requirements, provide one of the following:
   a. Dow Corning Corporation; 890-SL or SL Parking Structure Sealant.
   b. Pecora Corporation; 300 SL or 310 SL.
   c. Tremco Incorporated; Spectrem 900 SL.
   d. Sika Corporation; SikaSil 728 SL.

F. Mildew-Resistant, Single-Component, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, for Use NT.
1. Products: Subject to compliance with requirements, provide one of the following:
   a. Dow Corning Corporation; 786 Mildew Resistant.
   b. GE Advanced Materials - Silicones; Sanitary SCS1700.
   c. Tremco Incorporated; Tremsil 200 Sanitary.
   d. Pecora Corporation; 898.
   e. Sherwin-Williams; White Lightning Silicone Ultra Low Odor All Purpose Sealant.
   f. Sika; Sikail-GP.

2.5 URETHANE JOINT SEALANTS

A. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25 or 35, for Use NT.
1. Products: Subject to compliance with requirements, provide one of the following:
   a. BASF Building Systems; Sonolastic NP1, Sonalastic TX1, or Sonolastic Ultra.
   b. Bostik, Inc.; Chem-Calk GPS1, 900, 915, or 916 Textured.
   c. Pacific Polymers Division, ITW; Elasto-Thane 230.
   d. Pecora Corporation; Dynatrol I-XL.

e. Polymeric Systems, Inc., Whitford Worldwide; Flexiprene 1000.
f. Sika Corporation, Construction Products Division; Sikaflex – 1A+ or Sikaflex Textured.
g. Tremco Incorporated; Dymonic, Dymonic FC, or Vulkem 116.
h. Henkel (fka OSI); EP-1000.
i. Sherwin-Williams; Stampede 1 Polyurethane Sealant.

B. Single-Component, Nonsag, Traffic-Grade, Urethane Joint Sealant: ASTM C920. Type S, Grade NS, Class 25, for Use T.
1. Products: Subject to compliance with requirements, provide one of the following:
a. BASF Building Systems; Sonolastic NP1 or Sonolastic Ultra.
b. Pacific Polymers Division, ITW; Elasto-Thane 230.
c. Sika Corporation, Construction Products Division; Sikaflex – 1A+.
d. Tremco Incorporated; Vulkem 116.
e. Sherwin-Williams; Stampede 1 Polyurethane Sealant.

C. Single-Component, Pourable, Traffic-Grade, Urethane Joint Sealant: ASTM C920, Type S, Grade P, Class 25, for Use T.
1. Products: Subject to compliance with requirements, provide one of the following:
a. BASF Building Systems; Sonolastic SL 1.
b. Bostik, Inc.; Chem-Calk 950.
c. Pecora Corporation; NR-201.
d. Polymeric Systems, Inc., Whitford Worldwide; Flexiprene PSI- 952.
e. Sika Corporation. Construction Products Division; Sikaflex-1CSL.
f. Tremco Incorporated; Vulkem 45.
g. Sherwin-Williams; Stampede 1SL Polyurethane Sealant.

D. Multi-component, Nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, for Use T.
1. Products: Subject to compliance with requiremnents.
a. Pecora Corporation; Dynatrol II
1) For traffic-grade applications, install per guidelines in manufacturer's technical bulletin.
b. Tremco Incorporated; Dymeric 240 or Dymeric 240 FC.

E. Multi-component, Nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, for Use NT.
1. Products: Subject to compliance with requirements, provide one of the following:
a. BASF Building Systems; Sonolastic NP 2.
b. Bostik, Inc.; Chem-Calk 500.
c. Pacific Polymers Division, ITW; Elasto-Thane 227 High Shore Type II, Elasto-Thane 227 R Type II or Elasto-Thane 227 Type II.
d. Pecora Corporation; Dynatred.
e. Sika Corporation, Construction Products Division; Sikaflex – 2c NS or Sikaflex – 2c NS EZ Mix.
f. Tremco Incorporated; Vulkem 227.

F. Multi-component, Nonsag, Traffic-Grade, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, for Use T.
1. Products: Subject to compliance with requirements, provide one of the following:
a. BASF Building Systems; Sonolastic NP 2.

b. LymTal International, Inc.; Iso-Flex 885 SG.
c. Pacific Polymers Division, ITW; Elasto-Thane 227 High Shore Type II or Elasto-Thane 227 Type II.
d. Pecora Corporation; Dynatred.
e. Sika Corporation, Construction Products Division; Sikaflex – 2c NS or Sikaflex – 2c NS EZ TG.
f. Tremco Incorporated; Vulkem 227.

2.6 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

C. herwise contribute to producing optimum sealant performance:

D. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.

E. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.7 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. of sealants to joint substrates.

D. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. r, surface dirt, and frost.
   3. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
   4. Remove laitance and form-release agents from concrete.
   5. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

D. damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
   1. Mix and apply multi-component sealants in accordance with manufacturer's printed instructions.
   2. Apply joint sealants prior to applying penetrating water repellents. Joint sealants need to cure 7 days prior to application of penetrating masonry sealers.

B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
   1. Joints or gaps that require sealant are to be filled with one of the specified sealants even though the note may read "Caulked".
   2. Joints to be filled shall be thoroughly dry and free from dust, dirt, oil, and grease at the time of application of sealants.
   3. Expansion and control joints in exterior walls shall have the joint filler material built into the wall, or between wall and slab, at the time of construction.
   4. Masking: Metal shall be masked with masking tape, as well as other surfaces where it's required to prevent the sealant smearing the adjacent surface. Upon completion of the sealants, remove the tape.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.
   3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces. Avoid "over-tooling" or "stretching" sealant material during application.
   3. Dry tool only, no wet tooling permitted.
   4. Provide concave joint profile per Figure 8A in ASTM C1193, unless otherwise indicated.
   5. Provide flush joint profile where indicated per Figure 8B in ASTM C1193.
   6. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C1193.
      a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and non-traffic horizontal surfaces.
   1. Joint locations such as, but not limited to:
      a. Construction joints in cast-in-place concrete.
      b. Exterior joints between dissimilar materials where the joining of the two surfaces leaves a gap between the meeting materials or components as may be dictated by various methods of construction to make building watertight.
      c. Other joints as indicated on Drawings.
   2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated:
      a. Neutral-Curing Silicone Joint Sealant:
         1) Single-Component, Nonsag: ASTM C920, Type S, Grade NS, Class 100/50, for Use NT.
         2) Single-Component, Nonsag: ASTM C920, Type S, Grade NS, Class 50, for Use NT.
         3) Multi-Component, Nonsag: ASTM C920, Type S, Grade NS, Class 50, for Use NT.
   3. Color: Custom color to match A/E's sample of adjacent materials.

B. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
   1. Joint locations such as, but not limited to:
      a. Isolation and contraction joints in cast-in-place concrete slabs.
      b. Joints between different materials listed above.
      c. Other joints as indicated on Drawings.
   2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated:
      a. Neutral-Curing Silicone Joint Sealant:
         1) Single-Component, Nonsag, Traffic-Grade: ASTM C920, Type S, Grade NS, Class 100/50, for Use T.
         2) Single-Component, Pourable, Traffic-Grade: ASTM C920, Type S, Grade P, Class 100/50, for Use T.
      b. Urethane Sealant:
         1) Single-Component, Pourable, Traffic-Grade: ASTM C920, Type S, Grade P, Class 25, for Use T.
         2) Multi-Component, Nonsag, Traffic-Grade: ASTM C920, Type S, Grade P, Class 50, for Use T.
         3) Multi-Component, Nonsag, Traffic-Grade: ASTM C920, Type S, Grade P, Class 25, for Use T.
   3. Color: As selected by A/E from manufacturer's full range of colors.

END OF SECTION 079200