

Professional

Engineering

Services

St. Martin's Pump Station Elimination

LFUCG Bid No.
53-2025

Project Manual

Lexington-Fayette Urban

County Government

Lexington, Kentucky

Issued for Bid

July 10, 2025



CONTRACT DOCUMENTS AND SPECIFICATIONS FOR

St. Martin's Pump Station Elimination

**Wastewater System Improvements
Division of Water Quality
Lexington Fayette Urban County Government**


Michael L. Davis
07/10/2025
LFUCG Bid No. 53-2025

Date: July 10, 2025

PREPARED BY:

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SECTION 00100 - ADVERTISEMENT FOR BIDS

1.01 INVITATION

Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) via Ion Wave (<https://lexingtonky.ionwave.net>) until 2:00 pm, local time, July 29, 2025 for furnishing all labor and/or materials and performing all work as set forth in the Contract Documents prepared by and for Lexington-Fayette Urban County Government, Division of Water Quality (OWNER). All forms and Contract Documents normally filled out and attached with bid submission may be downloaded from Lynn Imaging's Planroom and may be viewed on Ion Wave. All notary requirements are waived for this solicitation. A copy of bid bond must be included with submission. Immediately following the scheduled closing time for reception of Bids, all proposals which have been submitted in accordance with the above will be opened electronically and a bid tab sheet will be posted on Ion Wave within approximately 30 minutes.

LFUCG will only be accepting bids on-line through Ion Wave for this solicitation. Base bid and alternate totals (if required) should be provided on the appropriate line items tab on Ion Wave. Submissions without line item totals (if required) may be rejected and deemed non-responsive. THESE INSTRUCTIONS SUPERSEDE ALL OTHER BID SUBMISSION INSTRUCTIONS PROVIDED IN THIS PACKAGE. PLEASE SUBMIT ALL QUESTIONS VIA THE Q&A MODULE ON ION WAVE.

1.02 DESCRIPTION OF WORK

The project includes providing all construction supervision, labor, materials, tools, test equipment necessary for the St. Martin's Pump Station Elimination:

- Approximately 2,340 linear feet of sewer open excavation.
- 16 manholes.
- Demolition of 1 existing pump station.
- Miscellaneous related sewer construction.

1.03 OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Plans, Specifications, and Contract Documents shall be obtained from Lynn Imaging, 328 Old Vine Street, Lexington, KY 40507, (859) 255-1021 or (www.lynnimaging.com) and click on planroom for a non-refundable price of reproduction for each full set of plans and documents. Bids must be submitted through LFUCG's Ion Wave. Due to current environment and recommendations for social distancing, no Contract Documents may be examined in person.

1.04 METHOD OF RECEIVING BIDS

Bids will be received from Prime Contracting firms on a line item unit price basis. Bids shall be submitted in the manner and subject to the conditions as set forth and described in the Information Available to Bidders and Bid Form.

Bids should be submitted online via Ion Wave.

1.05 METHOD OF AWARD

Determination of the successful Bid will be based on the lowest responsive and responsible Bidder whose qualifications indicate the award will be in the best interest of the Owner and whose Bid/proposal complies with all the prescribed requirements. No Notice of Award will be given until the Owner has concluded such investigation as deemed necessary to establish the responsibility, qualifications and financial ability of Bidders to do the work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed. The Owner reserves the

right to reject the Bid of any Bidder who does not pass such investigation to the Owner's satisfaction. The Owner reserves the right to reject the Bid of any Bidder that is deemed to be unbalanced or front loaded. In analyzing Bids, the Owner may take into consideration alternate and unit prices, if requested by the Bid forms.

1.06 BID WITHDRAWAL

No Bidder may withdraw his Bid for a period of ninety (90) calendar days after the closing date for receipt of Bids. Errors and omissions will not be cause for withdrawal of Bid without forfeit of Bid Bond.

1.07 BID SECURITY

All Bids shall be accompanied by a Bid Bond of not less than five percent (5%) of the amount of the Bid executed by a Surety Company authorized to do business in the Commonwealth of Kentucky and countersigned by a licensed Kentucky Resident Agent, representing the Surety Company. Certified Check or Bid Bond shall be payable to Lexington-Fayette Urban County Government. Bid Bonds are not required for bids under \$50,000. A cashier's check or irrevocable letter of credit is an acceptable form of bid security.

A scanned copy of the bid bond is acceptable and must be uploaded with the bid through Ion Wave.

1.08 SUBMISSION OF BIDS

Contractors shall submit their Bids via Ion Wave not later than 2:00 p.m. (local time), July 29, 2025. Bids will remain sealed until 2:00 p.m. (local time), July 29, 2025, the official Bid closure time. Bids received after the scheduled closing time for receipt of Bids will not be considered.

1.09 RIGHT TO REJECT

The Owner reserves the right to reject any and all Bids and to waive all informalities and/or technicalities where the best interest of the Owner may be served.

1.10 NOTIFICATION TO THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT FOR AFFIRMATIVE ACTION PLAN AND CURRENT WORKFORCE

The successful bidder must submit the following to the OWNER:

1. Affirmative Action Plan for his/her firm.
2. Current Workforce Analysis Form

Failure to submit this as required herein may result in disqualification of the Bidder from the award of the contract.

1.11 NOTICE CONCERNING MWDBE and Veteran Goals

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Owner has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs, and set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to Veteran-Owned Small Businesses. The goals for the utilization of Disadvantaged Business Enterprises and Veteran-Owned Small Businesses as subcontractors are recommended goals. Contractor(s) who fail to meet such goals will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprise and Veteran-Owned Small Businesses as Subcontractors contact:

Sherita Miller, Division of Central Purchasing
LFUCG
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
859-258-3323
smiller@lexingtonky.gov

1.12 PRE-BID MEETING AND SITE VISIT

A non-mandatory pre-bid meeting will be held at **10:00 am local time, July 21, 2025** at Lexington-Fayette Urban County Government, Division of Water Quality, 125 Lisle Industrial Avenue, Suite 180, Lexington, Kentucky 40511.

END OF SECTION

SECTION 00300 – INFORMATION AVAILABLE TO BIDDERS

1.01 RECEIPT AND OPENING OF BIDS

The Lexington-Fayette Urban County Government (herein called the Owner) invites Bids from firms on the project described in the Advertisement for Bids. The Owner will receive Bids online through Ion Wave (<https://lexingtonky.ionwave.net>) at the time and in the manner set forth in the Advertisement for Bids, at which time the bids will be opened electronically. 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 scheduled time for the 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 within ninety (90) days after the actual time and date of the Bid opening, but Owner may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

The Owner assumes no responsibility for Bids that are not submitted electronically as indicated above. Bids that are not submitted online by the stated time and date will be rejected.

1.02 PREPARATION OF BID

Each Bid must be submitted on the prescribed digital Bid Form within Ion Wave. All blank spaces for the Bid prices must be filled in or the bid will be considered incomplete. Each Bid must be submitted online via Ion Wave.

1.03 SUBCONTRACTS

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. All proposed subcontractors must be identified on Bid Form. Prior to the award of Contract, the Owner or the Owner's representative will advise the Contractor of the acceptance and approval thereof or of any action necessary to be taken. Should any Subcontractor be rejected by the Owner, the Contractor shall present a new name and/or firm to the Owner at no change in the Contract Price.

1.04 QUALIFICATIONS OF BIDDER

The Owner may make such investigations as the Owner 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 Agreement (Contract) and to complete the Work contemplated therein. Conditional Bids will not be accepted.

In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternatives and unit or lump sum prices, as requested. Owner may consider maintenance requirements, performance data, and disruption or damage to private property. The contract, if awarded, will be awarded to the lowest, qualified, responsible Bidder based upon Owner's evaluation which indicates that the award will be in the best interest of Owner and the general public.

In the event there is any question as to the Bidder's qualifications and ability to complete the work, a final determination will be made in accordance with a fair evaluation by the Owner of the following listed elements.

- A. If the Owner requires filling out a detailed financial statement, the Bidder may provide its current certified financial statement(s) for the required time interval.

- B. Corporate firms are required to be registered and in good standing with the requirements and provisions of the Office of the Secretary of State, Commonwealth of Kentucky.
- C. Documents Required of Contractor - (1) A sworn statement signed by the President or owner of the Company regarding all current work in progress anywhere; (2) A document showing the percent of completion of each project and the total worth of each project; and (3) Documentation showing the percentage of the DBE employment levels on each project of the Bidder's current work force, and DBE participation levels for Subcontractors.
- D. Optional Owner Requirements - The Owner, at its discretion, may require the Bidder/Contractor to provide: (1) A current detailed financial statement for a period including up to 3 prior years. (2) Financial security or insurance in amounts and kinds acceptable to the Owner to meet the financial responsibility requirements for the Contractor to indemnify the Owner. (3) Additional information and/or DBE work force data, as well as DBE participation data.
- E. Each Bidder agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any Bid.

1.05 BID SECURITY

- A. Each Bid must be accompanied by a Bid bond prepared on a Form of Bid Bond and attached thereto, duly executed by the Bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the Bid. Such Bid bond will be returned to the unsuccessful Bidder(s) only upon written request to the Director of Central Purchasing within seven (7) days of opening of Bids. Bid bond shall be made payable to the Lexington-Fayette Urban County Government. Bid security is not required for projects under \$50,000.
- B. Bonds shall be placed with an agent licensed in Kentucky with surety authorized to do business within the state. When the premium is paid for such coverage, the full commission payable shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.
- C. Electronic, scanned Bid bond(s) will be accepted and shall be uploaded to Ion Wave prior to close of bids.

1.06 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 fifteen (15) days after he has received notice of the acceptance of his Bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his Bid.

1.07 TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" from the Owner and to fully complete the Project within the time as specified in the Contract Documents. Bidder must agree also to pay liquidated damages for each consecutive calendar day thereafter as specified in the Contract Documents.

1.08 EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, State and Local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.
- B. Bidders should examine the requirements of the General Conditions for information pertaining to subsurface conditions, underground structures, underground facilities, and availability of lands, easements, and rights-of-way. The completeness of data, presented in the Contract Documents, pertaining to subsurface conditions, underground structures, and underground facilities for the purposes of bidding or construction is not assured. The Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface and subsurface) which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. On request in advance, Owner will provide access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.
- C. The submission of a Bid will constitute an incontrovertible representation by the Bidder that Bidder has complied with every requirement of this Article; that without exception the Bid is premised upon furnishing and performing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

1.09 ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Contract Documents will be made to any Bidder orally. Every request for such interpretation should be submitted in writing via the Q&A module on Ion Wave. Addenda will be issued by the Owner through Lynn Imaging's Planroom posted to Ion Wave as needed. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Acknowledgement of the receipt of addenda must be included with all submitted 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.

1.10 SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with the delivery of the executed Contracts, the Contractor shall furnish Performance, Payment, and Erosion and Sediment Control Bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner and authorized to do business in the Commonwealth of Kentucky.
- B. The Contractor shall furnish the Warranty Bond upon completion of the Work, prior to the Owner's release of the final payment.
- C. All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverage's, the full commission

shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

- D. Contractor shall use standard Performance, Payment, Warranty, and Erosion and Sediment Control Bond forms such as documents provided with the Contract Documents or AIA form A312 (latest edition), for the Performance and Payment Bonds only.
- E. The Performance Bond shall be in the amount of one hundred percent (100%) of the Agreement (Contract) amount. The Payment Bond shall be in the amount of one hundred percent (100%) of the Agreement (Contract) amount. The Warranty Bond shall be in the amount of five percent (5%) of the final construction cost amount (based on contractor's final pay request). The Erosion and Sediment Control Performance Bond shall be in the amount of the Erosion and Sediment Control lump sum price in the Bid Form.

1.11 POWER OF ATTORNEY

Attorney-in-fact who signs Bid bonds or Contract bonds must file with each bond a certified and effectively dated copy of their Power of Attorney.

1.12 TAXES AND WORKMEN'S COMPENSATION

The Contractor and subcontractor will be required to accept liability for payment of all payroll taxes, sales and use tax, and all other taxes or deductions required by local, state or federal law, such as social security measured by wages. Each shall carry Workmen's Compensation Insurance to the full amounts as required by Statutes and shall include the cost of all foregoing items in the Bid. The Contractor will not otherwise be reimbursed or compensated for such tax payments. The Contractor is urged to ascertain at his own risk his actual tax liability in connection with the execution or performance of this Contract.

1.13 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.

1.14 EROSION AND SEDIMENT CONTROL AND PERMITS

The Contractor and Subcontractors performing Work on projects on behalf of the Owner shall also comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in specifications herein.

1.15 PREVAILING WAGE LAW AND MINIMUM HOURLY RATES

There are no Federal or State prevailing wage rates for this Project.

1.16 AFFIRMATIVE ACTION PLAN

The successful Bidder must submit with their bid the following items to the Urban County Government (see section 00410 – Bid Form):

- A. Affirmative Action Plan of the firm

- B. Current Work Force Analysis Form
- C. Good Faith Effort Documentation to meet the MWDBE goals.
- D. List of Disadvantaged Business Enterprise Subcontractors and the Dollar Value of each Subcontract

A Work Force Analysis on the prescribed form shall be submitted for each Contract. Failure to submit these items as required herein may result in disqualification of the Bidder from award of the Contract.

All submissions should be attached to the Bidder's bid submission on Ion Wave.

1.17 CONTRACT TIME

The number of calendar days within which the Work is to be substantially completed and ready for final payment (the Contract Time) is set forth in the Bid Form and the Agreement (Contract).

1.18 SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by the Contractor if acceptable to the Engineer and Owner, application for such acceptance will not be considered by the Engineer and Owner until after the effective date of the Agreement (Contract). The procedure for submission of any such application by the Contractor and consideration by the Engineer and Owner is set forth in the General Conditions.

1.19 ALTERNATE BIDS

Bidders shall submit alternate Bids/proposals only if and when such alternate Bids/proposals have been specifically requested in an Advertisement for Bids. If alternate Bids/proposals are requested in an Advertisement for Bids, the form of submission of such alternate Bid and the conditions under which such alternate Bids will be considered for award of a contract will be established in the Advertisement.

Any Bidder who submits a Bid incorporating an alternate proposal when alternate Bids/proposals have not been requested in the Advertisement for Bids shall have his/her Bid rejected as non-responsive.

Any Bidder who submits a Bid incorporating two (2) or more prices for an item or groups of items (unless such method of pricing is requested in the Advertisement for Bids), or which imposes conditions for acceptance other than those established in the Advertisement for Bids, shall have their Bid rejected as non-responsive.

1.20 SIGNING OF AGREEMENT (CONTRACT)

When Owner gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement (Contract) with all other written Contract Documents attached. Within ten days thereafter, Contractor shall sign and deliver the required number of counterparts of the Agreement (Contract) and attached documents to Owner with the required Bonds, Certificate of Insurance, and Power of Attorney. The Owner will deliver one fully signed counterpart to Contractor at such time as it has been signed by the Mayor.

1.21 ASSISTANCE TO BE OFFERED TO DISADVANTAGED BUSINESS ENTERPRISE (MWDBE) CONTRACTORS

A. Outreach for MWDBE(s)

The Lexington-Fayette Urban County Government (LFUCG) maintains a database of MWDBE contractors and organizations. When a LFUCG construction project is advertised for bidding, notices are sent to companies registered at <https://lexingtonky.ionwave.net>. The notices describe the project and indicate the deadline for submitting bids.

If you wish to be added to the LFUCG MWDBE contractor database, please contact:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
859-258-3323
smiller@lexingtonky.gov

B. Bid Bond Assistance for MWDBE(s)

For those MWDBE contractors who wish to bid on LFUCG project, bid bond assistance is available. This bid bond assistance is in the form of a "Letter of Certification" which is accepted by the LFUCG's Division of Purchasing, in lieu of a bid bond. The "Letter of Certification" must be included in the bid package when it is submitted to the Division of Purchasing electronically. The "Letter of Certification" will reference the specific project for which the bid is being submitted, and the time and date on which the bid is due. Bid bond assistance must be requested from the Lexington-Fayette Urban County Government's Division of Central Purchasing.

C. Eligibility for Bid Bond Assistance for MWDBE(s)

In order to be eligible for any Bid bonding assistance, a MWDBE construction company must be owned or controlled at the level of 51% or more by a member or members of a minority group or females. Prior to receiving assistance, a statement providing evidence of ownership and control of the company by a member or members of a minority group or females must be signed by the Owner or corporate officer and by an attorney or accountant submitted to:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
859-258-3323
smiller@lexingtonky.gov

D. MWDBE and Veteran Subcontractors

The LFUCG will, upon request, assist prime contractors in the procurement of eligible DBE and veteran subcontractors in an effort to achieve 17% minimum MWDBE goal and to achieve 3% minimum veteran goal.

For a list of eligible subcontractors, please contact:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
859-258-3323
smiller@lexingtonky.gov



1.22 MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller, MPA, CPSD
Minority Business Enterprise Liaison
Division of Procurement
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
smiller@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program (MBEP) is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long- term economic viability of Lexington-Fayette Urban County Government.

To that end the urban county council adopted and implemented Resolution 272-2024 – a Certified Minority and Women Business Enterprise seventeen percent (17%) minimum goal including minimum subgoals of five percent (5%) for Minority Business Enterprises (MBE) and a subgoal of twelve percent (12%) for Women Business Enterprises (WBE); a three (3%) minimum goal for Certified Veteran-Owned Small Businesses and/or Certified Service- Disabled Veteran Owned Businesses; and a goal of utilizing Disadvantaged Business Enterprises (DBE), where applicable, for government contracts.

The resolution states the following definitions shall be used for the purposes of reaching these goals:

Certified Disadvantaged Business Enterprise (DBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a person(s) who is socially and economically disadvantaged as define by 49 CFR subpart 26.

Certified Minority Business Enterprise (MBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by an ethnic minority (i.e. Black American, Asian American, Hispanic American, Native American)

Certified Women Business Enterprise (WBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a woman.

Certified Veteran-Owned Small Business (VOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

Certified Service -Disabled Veteran Owned Small Business (SDVOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a disabled veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

The term “Certified” shall mean the business is appropriately certified, licensed, verified, or validated by an organization or entity recognized by the Division of Procurement as having the appropriate credentials to make a determination as to the status of the business.

The following certifications are recognized and accepted by the MBEP:

Kentucky Transportation Cabinet (KYTC), Disadvantaged Business Enterprise (DBE)
Kentucky Minority and Women Business Enterprise (MWBE)
Women's Business Enterprise National Council (WBENC)
National Women Business Owners Corporation (NWBOC)
National Minority Supplier Development Council (NMSDC)
Tri-State Minority Supplier Development Council (TSMSSDC)
U.S. Small Business Administration Veteran Small Business Certification (VetCert)
Kentucky Service- Disabled Veteran Owned Small Business (SDVOSB)

To comply with Resolution 272-2024, prime contractors, minority and women business enterprises, veteran owned small businesses, and service-disabled veteran owned small businesses must complete monthly contract compliance audits in the Diverse Business Management Compliance system, <https://lexingtonky.diversitycompliance.com/>

A list of organizations that certify and/or maintain lists of certified businesses (i.e. DBE, MBE, WBE, VOSB and/or SDVOSB) is available upon request by emailing, Sherita Miller, smiller@lexingtonky.gov.



LEXINGTON

LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # _____

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to the Division of Procurement for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWBE Company, Name, Address, Phone, Email	DBE/MBE WBE/VOSB/SDVOSB	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.				
2.				
3.				
4.				

The undersigned company representative submits the above list of MWDBE and veteran firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # _____

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to the Division of Procurement for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project. **Note: Form required if a subcontractor is being substituted on a contract.**

SUBSTITUTED DBE/MBE/WBE/VOSB Company Name, Address, Phone, Email	DBE/MBE/WBE/VOSB/SDVOSB Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS AND OUTREACH PLANS

As affirmed in Resolution Number 272-2024, the Urban County Council has adopted an annual aspirational goal of utilizing at least seventeen percent (17%) of public funds spend from certain discretionary agreements with certified Minority Business Enterprises (MBEs) and certified Woman Business Enterprises (WBEs); utilizing at least three percent (3%) of public funds from certain discretionary agreements with Certified Veteran-Owned Small Business and Certified Service-Disabled Veteran-Owned Small Businesses (VOSBs); and utilizing Disadvantaged Business Enterprises (DBEs) where applicable. Bidders should make every effort to achieve these goals.

Therefore, as an element of the responsiveness of the bid, all Bidders are required to submit documentation of their good faith and outreach efforts to ensure all businesses, including small and disadvantaged businesses such as minority-, woman-, and veteran-owned businesses, have an equal opportunity to compete for and participate in the performance of any subcontracts resulting from this procurement. Examples of good faith and outreach efforts that satisfy this requirement to encourage the participation of, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs include:

1. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women, and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to participate.
2. Attended LFUCG Procurement Economic Inclusion Outreach event(s) within the past year to meet new small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to partner with on LFUCG contracts and procurements.
3. Attended pre-bid/pre-proposal meetings that were scheduled by LFUCG to inform small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs of subcontracting opportunities.
4. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs.
5. Requested a list of certified small, DBE, MBE, WBE, VOSB and/or SDVOSB subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).
6. Contacted organizations that work with small, DBE, MBE, WBE, and VOSB companies for assistance in finding certified DBEs, MBEs, WBEs, VOSB and/or SDVOSBs to work on this project. Those contacted and their responses must be a part of the bidder's outreach efforts documentation.
7. Sent written notices, by certified mail, email, or facsimile, to qualified, certified small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
8. Followed up initial solicitations by contacting small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs via tailored communications to determine their level of interest.

9. Provided the interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs with adequate and timely information about the plans, specifications, and requirements of the contract.
10. Selected portions of the work to be performed by small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs in order to increase the likelihood of subcontracting participation. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate small, DBE, MBE, WBE, VOSB and/or SDVOSB participation, even when the prime contractor may otherwise perform these work items with its own workforce.
11. Negotiated in good faith with interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection must be so noted in writing with a description as to why an agreement could not be reached.
12. Included documentation of quotations received from interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs that were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.
 - a. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a small business', DBE's MBE's, WBE's, VOSB's and/or SDVOSB's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy the participation goals.
13. Made an effort to offer assistance to or refer interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal.
14. Made efforts to expand the search for small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs beyond the usual geographic boundaries.
15. Other – any other evidence that the bidder submits that may demonstrate that the bidder has made reasonable efforts to include small, DBE, MBE, WBE, VOSB and/or SDVOSB participation.

Bidder must document, with specificity, each of the efforts it made to include small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs as subcontractors in the procurement, including the date on which each effort was made, the medium through which each effort was made, and the outcome of each effort.

Note: Failure to submit the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith and Outreach Efforts must be submitted with the Bid, regardless of the proposed level of small, DBE, MBE, WBE, VOSB and/or SDVOSB participation in the procurement. If the Good Faith and Outreach Effort documentation is not submitted with the bid response, the bid may be rejected.

OUTREACH EFFORTS EVALUATION

Outreach efforts demonstrated by the bidder or respondent will be evaluated on a pass/fail basis.

ATTACHMENT A – SMALL AND DISADVANTAGED, MINORITY-, WOMEN-, AND VETERAN-OWNED BUSINESS OUTREACH PLAN

Proposer Name: _____ Date: _____
Project Name: _____ Project Number: _____
Contact Name: _____ Telephone: _____
Email: _____

The mission of the Minority Business Enterprise Program is to facilitate the full participation of disadvantaged businesses, minority-, women-, veteran-, and service-disabled veteran-owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long-term economic viability of Lexington-Fayette Urban County Government.

To that end, small and disadvantaged businesses, including minority-, woman-, veteran-, and service-disabled veteran-owned businesses, must have an equal opportunity to be utilized in the performance of contracts with public funds spent from certain discretionary agreements. By submitting its offer, Bidder/Proposer certifies that it has taken, and if there are further opportunities will take, reasonable steps to ensure that small and disadvantaged businesses, including minority-, woman-, veteran-, and service-disabled veteran-owned businesses, are provided an equal opportunity to compete for and participate in the performance of any subcontracts resulting from this procurement.

The information submitted in response to this clause will not be considered in any scored evaluation. Failure to submit this form may cause the bid or proposal to be rejected.

Is the Bidder/ Proposer a certified firm? Yes ☐ No ☐

If yes, indicate all certification type(s):

DBE ☐ MBE ☐ WBE ☐ SBE ☐ VOSB/SDVOSB ☐

and supply a copy of the certificate and/or certification letter if not currently listed on the city's Minority Business Enterprise Program's (MBEP) certified list.

1. Include a list of firms that Bidder/ Proposer has had a contractual relationship with within the last two years that are minority-owned, woman-owned, veteran-owned or small businesses, regardless of their certification status.

 Click or tap here to enter text. 

2. Does Bidder/Proposer foresee any subcontracting opportunities for this procurement?

Yes ☐ No ☐

If no, please explain why in the field below. Do not complete the rest of this form and submit this first page with your bid and/or proposal.  Click or tap here to enter text. 

ATTACHMENT A – SMALL and DISADVANTAGED, MINORITY-, WOMEN-, and VETERAN-OWNED BUSINESS OUTREACH PLAN

If yes, please complete the following pages and submit all pages with your bid and/or proposal.

Describe the steps Bidder/Proposer took to solicit small and disadvantaged businesses, including MBEs, WBEs, VOSBs, and SDVOSBs, for subcontracting opportunities for this procurement.

3. Check the good faith and outreach efforts the Bidder/Proposer used to encourage the participation of small and disadvantaged businesses including, MBEs, WBEs, VOSBs and SDVOSBs:

- ☐ Bidder placed advertisements in search of prospective small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs for the solicitation.
- ☐ Bidder attended LFUCG Procurement Economic Inclusion Outreach event(s) within the past year.
- ☐ Bidder attended pre-bid and/or pre-proposal meetings for this solicitation.
- ☐ Bidder sponsored an Economic Inclusion Outreach event.
- ☐ Bidder requested a list of certified small, DBE, MBE, WBE, VOSB and/or SDVOSB subcontractors or suppliers from LFUCG.
- ☐ Bidder contacted organizations that work with small, DBE, MBE, WBE, VOSB and/or SDVOSB companies.
- ☐ Bidder sent written notices to certified small, DBE, MBE, WBE, VOSB and SDVOSB businesses.
- ☐ Bidder followed up to initial solicitations with interested small, DBE, MBE, WBE, VOSB and/or SDVOSB.
- ☐ Bidder provided small, DBE, MBE, WBE, VOSB and/or SDVOSB businesses interested in performing the solicited work with prompt access to the plans, specifications, scope of work, and requirements of the solicitation.
- ☐ Bidder made efforts to segment portions of the work to be performed by small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, including dividing sub-bid/partnership opportunities into economically feasible units/parcels, to facilitate participation.
- ☐ Bidder negotiated in good faith with interested small, DBE, MBE, WBE, VOSB and/or SDVOSB businesses.

- ☐ Bidder provided adequate rationale for rejecting any small business', DBEs, MBEs, WBEs, VOSBs or SDVOSBs for lack of qualifications.
- ☐ Bidder offered assistance in obtaining bonding, insurance, financial, equipment, or other resources to small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, in an effort to assist them in meeting project requirements.
- ☐ Bidder made efforts to expand the search for small businesses, DBEs MBEs, WBEs, VOSBs and/or SDVOSBs beyond the usual geographic boundaries.
- ☐ Bidder made other reasonable efforts to include small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs participation.

4. Bidder/Proposer must include documentation, including the date each effort was made, the medium through which each effort was made, and the outcome of each effort with this form, regardless of the level of small, DBE, MBE, WBE, VOSB and/or SDVOSB participation. Examples of required documentation include copies of email communications, copies of newspaper advertisements, or copies of quotations received from interested small businesses, DBEs, MBEs, WBEs, VOSBs or SDVOSBs.

 Click or tap here to enter text. 

For detailed information regarding outreach efforts that satisfy the MBE Program's requirements, please see "Documentation Required for Good Faith Efforts and Outreach Plans" page.

Note: The Bidder/Proposer must be willing to report the identity of each subcontractor and the value of each subcontract to MBEP if awarded a contract from this procurement.

Failure to submit the documentation requested may be cause for rejection of the bid. Bidders may include any other documentation deemed relevant to this requirement, which is subject to review by the MBE Liaison. Documentation of Good Faith and Outreach Efforts must be submitted with the bid, regardless of the proposed level of SBEs, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs participation in the procurement. If the Good Faith and Outreach Effort Form and associated documentation is not submitted with the bid response, the bid may be rejected.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Company

Company Representative

Date

Title

1.23 OWNER PERMITS

Bidder shall refer to Section 00890 regarding permits that have been obtained by the OWNER.

1.24 GEOTECHNICAL DATA

Bidder shall refer to Section 00320 regarding available geotechnical data for this Contract.

END OF SECTION

SECTION 00320 – GEOTECHNICAL DATA

END OF SECTION

**REPORT OF
ROCK SOUNDING EXPLORATION**

**ST. MARTINS PUMP STATION ELIMINATION
LEXINGTON, KENTUCKY**

PROJECT: 22050138SHE

NOVEMBER 10, 2022

**PREPARED FOR:
STRAND ASSOCIATES
651 PERIMETER DRIVE
LEXINGTON, KY 40517**

**BY:
VECTOR ENGINEERS, INC
A SUBSIDIARY OF CTL ENGINEERING, INC**



November 10, 2022

Mr. Mike Davis, PE
Strand Associates
651 Perimeter Drive
Lexington KY 40517

Subject: Report of Rock Sounding Exploration
St. Martins Pump Station Elimination
Lexington, Kentucky
Vector Project 22050138SHE

Dear Mr. Davis,

VECTOR Engineers, Inc., has completed the rock sounding exploration for the proposed gravity sewer. This exploration was in general accordance with our proposal No. 22050045SHEPPL, dated May 19, 2022, which was accepted by Mr. Joseph M. Bunker with Strand Associates. The purpose of this exploration was to collect rock depth information along the proposed alignment and to discuss other potential geological and/or geotechnical issues that may impact the construction cost. This report describes our understanding of the project, summarizes our findings, discusses the geotechnical concerns, and contains our engineering recommendations.

PROJECT INFORMATION

Project information was provided to us through conversations and email correspondence with Mr. Mike Davis with Strand Associates. We understand that Lexington Fayette Urban County Government (LFUCG) is considering replacing a section of the force main and pump station with a new gravity sewer on the north side of Lexington, Kentucky. The proposed gravity sewer line would be about 2,400 feet long, extending from near the end of St. Martins Avenue southwest to Fairdale Drive, then following Fairdale Drive Southeast to Betsy Lane, and finally extending southwest to the end of Betsy Lane.

FINDINGS

As part of our exploration and evaluation of the proposed alignment, we observed site conditions, reviewed regional geological maps, and performed bedrock soundings. The following sections report our findings.

Site Surface Conditions

Mr. Matt Slusser, PE, with Vector Engineers, observed the surface conditions on November 9, 2022, to aid in interpreting the subsurface data and to detect conditions that could affect the project. The following is a general description of the site.

The proposed gravity sewer line is located in a manufactured home community on the north side of Lexington, Kentucky. The majority of the area is residential, with some warehouses and industrial facilities located along the railroad to the west of the proposed alignment. The majority of the alignment will be located within the asphalt roadway, although the north and south ends will extend through grass-covered fields.



Photograph 1: The ground along Betsy Lane slopes down toward the road.

The alignment begins at a low-lying area between Lois Lane and Betsy Lane. The alignment extends northeast along Betsy Lane to Fairdale Drive, with the ground surface elevation increasing from west to east. Turning northwest, the sewer follows Fairdale Drive to just past Rustic Way before turning north toward the existing St. Martins pump station, which will be eliminated. The surface along Fairdale Drive crests near station

24+00, sloping down to the north and south on either side of this crest. The ground on either side of the roads slopes down toward the road, directing drainage along the curbs.



Photograph 2: There is a crest along Fairdale Drive, directing the groundwater north and south on either side of the crest.

Area Soil Conditions

Vector reviewed several sources for information on the prevalent soil conditions for the area, including the Natural Resource Conservation Service (NRCS) soil survey data, available Kentucky Geological Survey (KGS) water well records, nearby borings from previous Vector projects, and the information from Kentucky Transportation Cabinet (KYTC).

The NRCS indicates that the surface soils along the sewer consist primarily of silt loams, including Huntington silt loam, Bluegrass-Maury silt loam, Maury-Bluegrass silt loam, and Newark silt loam. Some areas were noted to be fill soil, classified as Urban land (Armour-Maury complex) and made land over clayey materials. The depth of bedrock is reportedly deeper than 80 inches and the groundwater table typically ranges between 6 inches to deeper than 80 inches.

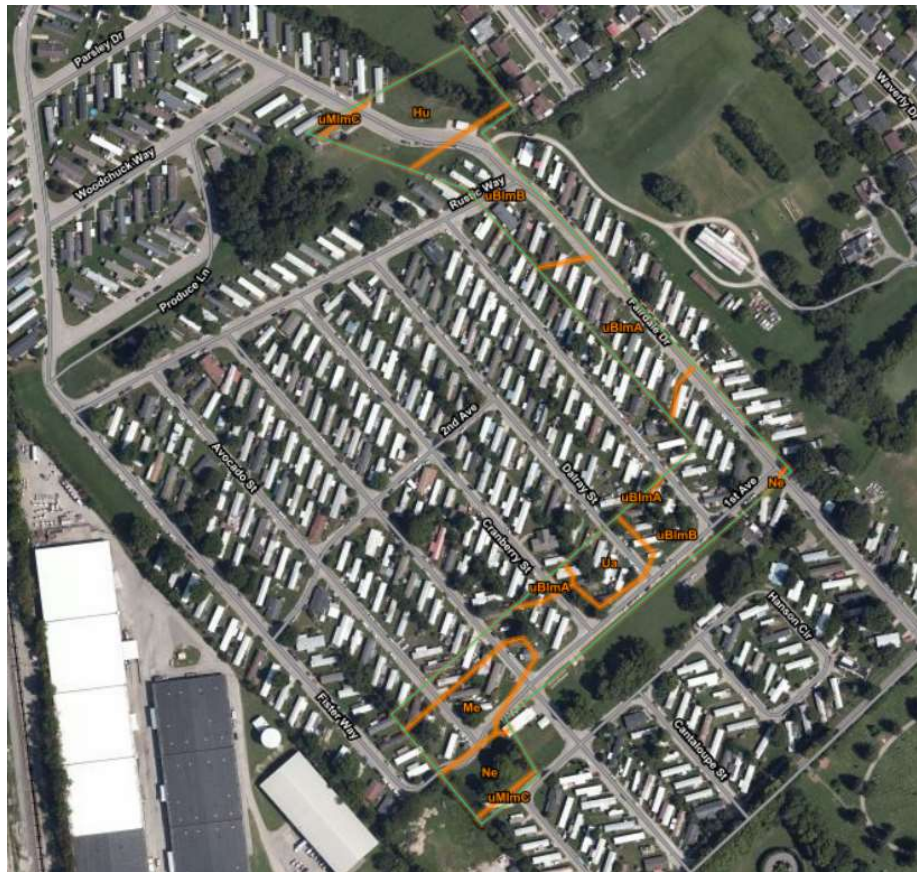


Figure 1: The NRCS indicates that the surface soils generally consist of silty loam with some filled areas classified as urban land and made land. The area within the green line indicates the proposed sewer alignment.

A review of the KGS water well inventory found several wells along Leestown Road and a few wells along Georgetown Street in the vicinity of the proposed alignment. Generally, the wells indicated bedrock depths of 2 to 19.5 feet with about half of the wells encountering water from 1 to 24.8 feet and the others having no recorded water depth. A review of the KYTC geotechnical database indicated that the depth to bedrock on several projects within about 1 mile of the proposed sewer line ranged between 2 to 20 feet.

Vector has two previous projects about 1 mile from the proposed alignment; one at the Town Branch wastewater treatment plant to the southwest and one located off Newtown Pike to the southeast. The KGS geologic mapping indicates that this exploration, performed in 2015, is underlain by similar bedrock geology. According to these explorations, the soil beneath the topsoil ranged from lean to fat clay. Refusal (assumed bedrock) was encountered between 5½ to 19 feet deep.

Area Geology

The Geologic Map of the Lexington West Quadrangle, Kentucky, (GQ-600), published by the U.S. Geological Survey indicates the site is underlain by the lower part of the Lexington Limestone, the Brannon Member, and the Tanglewood No.2 Limestone Member. The Lexington Limestone formation consists of several members and beds of light gray to light brownish gray limestone while the Brannon Member is a mixture of light gray to light brownish gray limestone and thin beds of medium dark gray shale. The Tanglewood No. 2 Limestone consists of medium-gray to medium brownish-gray, fine to medium-grained limestone.

A review of the Kentucky Water Well data in the vicinity indicates that bedrock is likely to be encountered at depths ranging from about 5 to 15 feet.

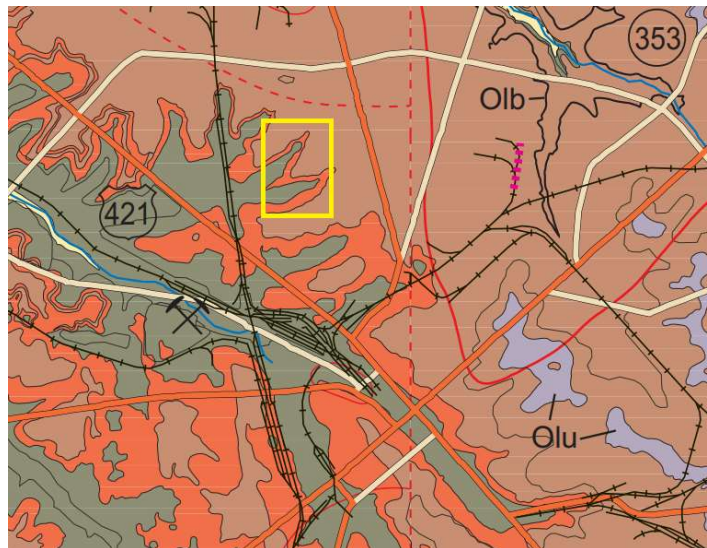


Figure 2: Geologic map of the site and surrounding area. The orange shading indicates the Brannon Member of Lexington Limestone, the brown shading indicates the Tanglewood No. 2 member, and the gray shading is the lower part of the Lexington Limestone.

We reviewed the Kentucky Geological Survey (KGS) for Karst potential and closed depressions. A closed depression (i.e. – sinkholes) is mapped near the north end of the proposed sewer alignment, along with several sinkholes noted within about 1 mile from the proposed site. We did not observe any obvious surface indications of sinkhole activity within the project boundaries; however, the site and surrounding areas have been developed and graded, thus covering signs of sinkhole activity. The KGS mapping

of the area indicates that the geology is intensely Karst with a very high potential for solutioning of the rock in the project areas.



Figure 2: The KGS mapping indicated a sinkhole (red outline) is located near the north end of the proposed alignment (yellow line).

Sinkholes are typical of Karst regions and occur due to the solutioning activity of the underlying limestone formation which is generally soluble in slightly acidic groundwater. Rainfall infiltration penetrates the surface vegetation and moves through fractures in the limestone. As water penetrates the rock joints, solutioning of the bedrock occurs over long periods, and cavities in the rock develop. As the cavity continues to grow, the cavity roof arch can no longer support the soil overburden load, the overlying soil begins to sag, and then collapses thus creating closed depressions (bowl-shaped areas).

Rock Sounding Exploration

We performed 25 bedrock soundings to explore the subsurface conditions along the alignment. Mr. Matt Slusser, PE, directed the exploration. Soundings were

performed approximately every 100 feet along the alignment. Soundings were performed using ½-inch diameter probe rods (both manual and high-pressure water) to a maximum depth of 13½ feet or shallower if refusal was encountered. The sounding locations were located in the field using a Garmin eTrex10 recreational grade GPS unit with a stated accuracy of about 10 feet. Sounding surface elevations were interpolated from the Kentucky Digital Elevation Model (DEM) LiDAR data. Because of the methods used, the sounding locations shown on the Sounding Location Plan and the surface elevations shown in Table 1 are approximate.

Table 1 lists the depth to auger refusal in our borings and the maximum depth of our rock soundings along the alignment for the proposed sewer line. The stations are approximated based on the closest station along the alignment. The invert elevations are approximate values based on the provided sewer profiles.

Table 1: Approximate Sounding Locations, Refusal Depths, and Elevations

Sounding/ Boring Number	Station/ Location	Offset (feet)	Refusal Depth# (feet)	Surface Elevation (feet)	Refusal Elevation (feet)	Sewer Invert Elevation (feet)
S-1	STA 10+00	85 SW	11.5	940	928.5	935.9
S-2	STA 10+95	95 SW	10.3	943	932.7	936.4
S-3	STA 11+18	36 SW	11.5	943	931.5	936.6
S-4	STA 12+08	12 NW	4.0	945	941	937.0
S-5	STA 13+18	20 NW	6.0	947	941	937.4
S-6	STA 14+06	15 NW	7.0	948	941	937.8
S-7	STA 15+09	14 NW	6.5	948	941.5	938.2
S-8	STA 16+10	14 NW	7.0	950	943	938.6
S-9	STA 17+08	15 NW	>13.5*	952	>938.5	939.0
S-10	STA 18+00	15 NW	6.0	952	946	939.3
S-11	STA 19+09	15 NW	5.5	952	946.5	939.8
S-12	STA 19+93	23 NW	4.0	953	949	940.1
S-13	STA 21+17	23 SW	5.0	956	951	940.6
S-14	STA 22+16	25 SW	11.5	961	949.5	941.0

Sounding/ Boring Number	Station/ Location	Offset (feet)	Refusal Depth# (feet)	Surface Elevation (feet)	Refusal Elevation (feet)	Sewer Invert Elevation (feet)
S-15	STA 23+14	25 SW	7.0	965	958	941.4
S-16	STA 24+10	25 SW	2.5	967	964.5	941.8
S-17	STA 25+08	25 SW	3.5	965	961.5	942.2
S-18	STA 26+13	25 SW	7.0	963	956	942.6
S-19	STA 27+15	18 SW	6.0	961	955	943.0
S-20	STA 28+18	12 SW	6.5	957	950.5	943.4
S-21	STA 29+28	32 SW	11.5	954	942.5	943.8
S-22	STA 29+93	36 SW	>13.5*	953	>939.5	944.1
S-23	STA 30+00	133 W	11.5	952	940.5	944.1
S-24	STA 30+90	68 W	>13.5*	948	>934.5	944.5
S-25	STA 31+31	27 E	>13.5*	951	>937.5	944.7

Notes:

1. Locations based on recreational grade GPS and elevations are based in the Kentucky Digital elevation model (KY DEM); therefore, they are approximate.
2. Refusal implies bedrock but refusal may be caused by cobbles, boulders, weather rock, or buried debris.
- * Sounding was terminated without refusal
- # Our experience with bedrock formations susceptible to Karst solutioning suggests that the bedrock surface along the alignment will likely be irregular and pinnacled in areas. Bedrock may be encountered at elevations both higher and lower than indicated by the sounding and borings refusal depths.

Groundwater

The soundings use water to advance the sounding rod; therefore, an accurate groundwater level reading cannot be obtained after coring; however, we did not observe obvious indications of groundwater in our soundings.

Groundwater levels fluctuate with seasonal and cyclical climatic variations in precipitation and may be either higher or lower at other times. Typically, water conditions affecting construction projects in the site area are related to trapped or perched water which occurs in irregular, discontinuous locations within the soil overburden, or near the soil/rock interface. When these water bearing strata are

exposed in excavations, such as cut slopes, utility, or footing trenches, they can produce widely varying seepage durations and rates depending on recent rainfall activity and other site-specific characteristics of the area. These perched water sources are often not linked to the more continuous relatively stable groundwater table that typically occurs at greater depths. In Karst areas, the static groundwater table is typically well below the rock surface.

DISCUSSION

Based on the results of our borings and our understanding of the proposed project, we believe the project site is suitable for the proposed sewer alignment. However, shallow bedrock and Karst conditions represent a significant geotechnical challenge and financial impact to the proposed development. The following subsections provide additional details and discuss other geotechnical concerns.

Depth to Bedrock

The depth of embedment for the proposed sewer line will vary between 2½ feet to about 24 feet below the ground surface at different locations. Conventional trenching is generally used to install sewer lines. Based on the data from our soundings (Table 1), the invert elevation of the sewer is deeper than the refusal depths encountered in our exploration for the majority of the sewer alignment between stations 11+50 and 29+00. In the areas where the sewer line alignment is underlain by weathered limestone, we anticipate the excavation should be able to be conducted with a track hoe or a trencher, provided excavation into the weathered limestone is no more than 2 to 3 feet.

Based on the provided profile, some areas may require excavations of nearly 23 feet below our refusal depths. We anticipate that excavations of greater than about 3 feet will likely encounter competent bedrock that is very hard and resistant to removal. The anticipate excavation of the limestone will require the use of a combination of tools: hoe ram, rock trencher, and/or blasting.

Karst Topography

The proposed alignment is underlain by bedrock formations that are prone to Karst activity (sinkholes). The Kentucky Geological Survey rated the site as intensely prone to sinkhole development based on the underlying rock formations. However, since the existing sewer line appears to have performed well over the years, the risk of sinkhole-related issues may be low with the exception of the north end (refer to Figure 2).

The trench excavation should be monitored by a technician working with a geotechnical engineer to look for signs of Karst activity, such as soft or organic soils at the bottom of the trench. If a solution feature is encountered during excavation, Vector Engineers should be contacted for treatment recommendations.

Soil Corrosivity

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of concrete or steel is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The risk of corrosion is expressed as "low," "moderate," or "high." Table 2 lists the risk of corrosion of concrete and steel for each soil type listed in the NRCS mapping along the alignment. Ratings are not provided for fill soils, as the makeup of these soils is unknown and can vary greatly between locations. However, as previously discussed, the majority of the proposed line will be located within bedrock.

Table 2 – Risk of Corrosion for the Soil Types Mapped along the Alignment

Mapped Unit Symbol	Mapped Unit Name	Rating for Corrosion of Concrete	Rating for Corrosion of Steel	Percent in Area of Interest along Alignment
Hu	Huntington silt loam, 0 to 4 percent slopes, occasionally flooded	Low	Moderate	15.0%
Me	Made land, over clayey materials	-	-	10.0%
Ne	Newark silt loam, 0 to 2 percent slopes, occasionally flooded	Low	High	6.0%
Ua	Urban land-Armour-Maury complex (Urban land)	-	-	6.0%
uBlmA	Bluegrass-Maury silt loams, 0 to 2 percent slopes	Moderate	Moderate	13.3%
uBlmB	Bluegrass-Maury silt loams, 2 to 6 percent slopes	Moderate	High	48.3%
uMlmC	Maury-Bluegrass silt loams, 6 to 12 percent slopes	Moderate	High	1.3%

LIMITATIONS OF RECOMMENDATIONS

This report has been prepared for the exclusive use of Strand Associates for specific application to the sewer alignment. Our recommendations have been prepared using generally accepted standards of geotechnical engineering practice in the Commonwealth of Kentucky. No other warranty is expressed or implied. This company is not responsible for the conclusions, opinions, or recommendations of others based on these data. Additionally, our conclusions and recommendations are based on the information provided to us, the data obtained from our subsurface exploration, and our experience. They do not reflect variations in the subsurface conditions which are likely to exist between soundings. These variations result from the geologic variability of the subsurface conditions. If conditions are different than those encountered in our exploration, it will be necessary for us to re-evaluate our conclusions and recommendations based upon on-site observation of the conditions. For more information on the use and limitations of this report, please read the GBA document included in the attachments.

If the sewer line invert elevations or alignment is changed, the recommendations contained in this report must not be considered valid unless our firm reviews the

changes and our recommendations are modified. We may recommend that a supplementary exploration be performed when significant design changes such as the movement of the project are incorporated into the final design after the geotechnical exploration has been completed. This supplementary exploration may include obtaining additional soil data along the new alignment to provide specific recommendations.

RECOMMENDATIONS

There will be areas that will encounter bedrock at the bottom of the trench excavation. The pipe should not be founded directly on the shale or limestone bedrock due to the risk of point loading which could eventually damage the pipe. We anticipate that uneven bearing surfaces (soil and bedrock) would be encountered due to shallow bedrock at some locations. We recommend that the sewer line be founded on crushed stone or sand bedding to reduce the chance of movements of the sewer line due to differential bearing conditions. The crushed stone can consist of number 9 or 11 gradation.

The excavated soils from the proposed sewer line may be used as backfill above the bedding sand/stone provided they are free of man-made or deleterious debris (bricks, roots, etc.) and rock fragments over 2 inches in diameter. The soil backfill can be placed around the sewer line in 4 to 6-inch loose lifts and compacted. Typically, the backfill should be placed to at least 95% of the standard Proctor compaction test; however, based on the limited space for compaction equipment, we do not believe testing of each lift will be practical. Therefore, we recommend close observation of the installation by a qualified geotechnical technician under the direction of the geotechnical engineer. The trench width should be wide enough to allow for proper installation and adequate compaction of the backfill. If bedrock excavation is required, the bedrock must be removed so that it will not be closer than 6 inches to the bottom and sides of the sewer line.

The alignment is located in an area that is highly prone to Karst activity; therefore, we have recommended the trench excavation be monitored by a technician working with a geotechnical engineer to look for signs of Karst activity, such as soft or organic soils at the bottom of the trench.

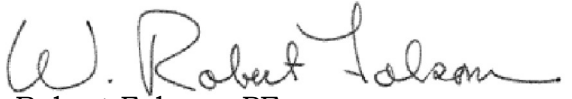
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Vector Engineers, Inc. appreciates the opportunity to provide you with these geotechnical services. Should you have questions or require any additional information, please contact us.

Respectfully submitted,
VECTOR ENGINEERS, INC.


Matthew J. Slusser, PE
Geotechnical Manager
Licensed Kentucky 32059




W. Robert Folsom, PE
Chief Engineer

Attachments:

- GBA - Important Information about This Geotechnical-Engineering Report
- Site Location Map
- Aerial Photograph
- Sounding Location Plans
- Field Testing Procedures

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



Telephone: 301/565-2733

e-mail: info@geoprofessional.org www.geoprofessional.org



Strand Associates



**St. Martins Gravity Sewer
Site Location Plan**
Lexington, Kentucky
Project 22050138SHE



Strand Associates



**St. Martins Gravity Sewer
Aerial Photograph**
Lexington, Kentucky
Project 22050138SHE



Strand Associates

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 GEOTECHNICAL • MATERIALS • GEOSCIENCES
 A SUBSIDIARY OF CTL ENGINEERING, INC

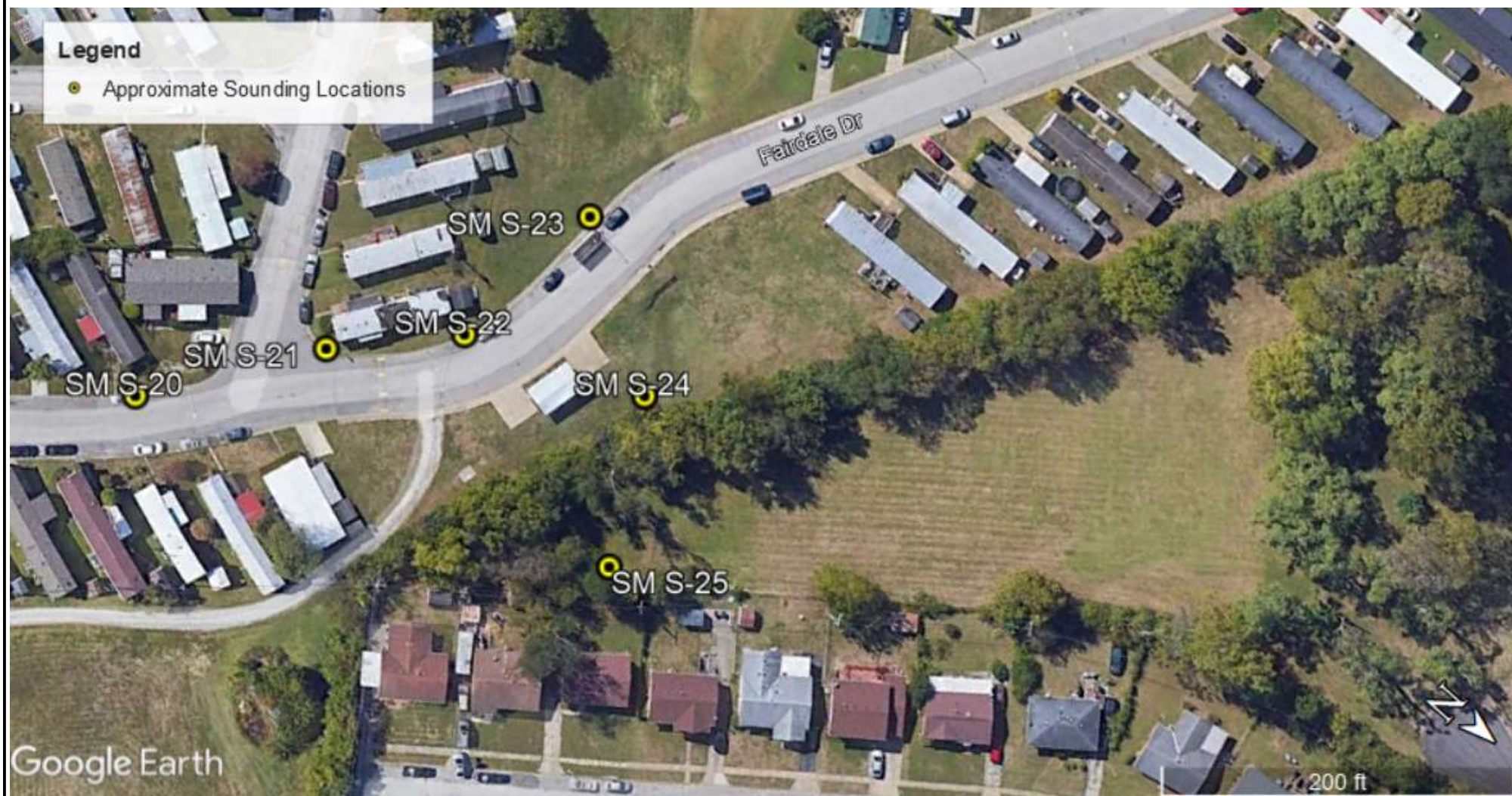
**St. Martins Gravity Sewer
 Stations 10+00 to 17+50
 Sounding Location Plan**
 Lexington, Kentucky
 Project 22050138SHE



Strand Associates



**St. Martins Gravity Sewer
 Stations 17+50 to 27+50
 Sounding Location Plan**
 Lexington, Kentucky
 Project 22050138SHE



Strand Associates



**St. Martins Gravity Sewer
Stations 27+50 to 31+74
Sounding Location Plan**
Lexington, Kentucky
Project 22050138SHE

FIELD TESTING PROCEDURES

Vector Engineers performs field tests in general accordance with the American Society for Testing and Materials (ASTM). These procedures are generally recognized as the basis for uniformity and consistency of test results in the geotechnical engineering profession. All work is initiated and supervised by qualified geotechnical professionals.

Subsequent portions of this attachment present briefly describe of our field testing procedures. Where applicable, we have referenced these procedures to ASTM standards which contain specific descriptions of apparatus, procedures, reporting, etc.

WATER ROD SOUNDINGS

Soundings were performed using a ½-inch hollow steel probe rod with pressure nozzle to evaluate the depth to refusal material along the sewer alignment. The rods were connected to a commercial-grade pressure washer to displace soil below the rod with high-pressure water. Probing was typically conducted in multiple locations around the surveyed sounding stake, with the deepest refusal depth being recorded.

May 15, 2025

Mr. Mike Davis, PE
Strand Associates
651 Perimeter Drive, Suite 220
Lexington, KY 40517

Subject: Addendum to Report of Rock Sounding Exploration
St. Martins Pump Station Elimination
Lexington, Kentucky
Vector Project 22050138SHE

Dear Mr. Davis,

VECTOR Engineers, Inc., completed a rock sounding exploration for the proposed gravity sewer in November 2022 . At the time of the November 2022 exploration, the proposed sewer alignment beyond station 20+23 extended northwest down the middle of Fairdale Drive before turning north at station 30+00 toward the St. Martins pump station. This portion of sewer had a maximum depth of about 24 feet below existing grade. However, we understand that the alignment has been shifted east based on the shallow bedrock encountered along this portion of sewer in our original exploration. Therefore, the purpose of this addendum is to document the findings of our additional sounding exploration along the revised portion of the alignment.

We have been provided with an updated plan and profile sheet entitled *St. Martin's Village Pump Elimination* prepared by Strand Associates, dated November 12, 2024. The revised alignment continues east from station 20+20 to the rear of the properties on the north side of Fairdale Drive. The alignment then turns north and northeast, extending on the north side of the properties along Fairdale Drive before intersecting the original alignment near station 32+50. See Figure 1 for a comparison of the two alignments.

Due to the proximity of the two alignments, the surficial and geologic information presented in our November 2022 report is applicable to the revised portion of the alignment. Additionally, based the findings of our supplemental exploration, the revised alignment will likely require less bedrock removal than the original alignment. However, installation of the sewer along

the revised alignment will still require bedrock removals of up to about 14 feet. Our recommendations for bedrock removal, Karst mitigation, and backfill of the trench excavations presented in our original report are applicable to the revised alignment.

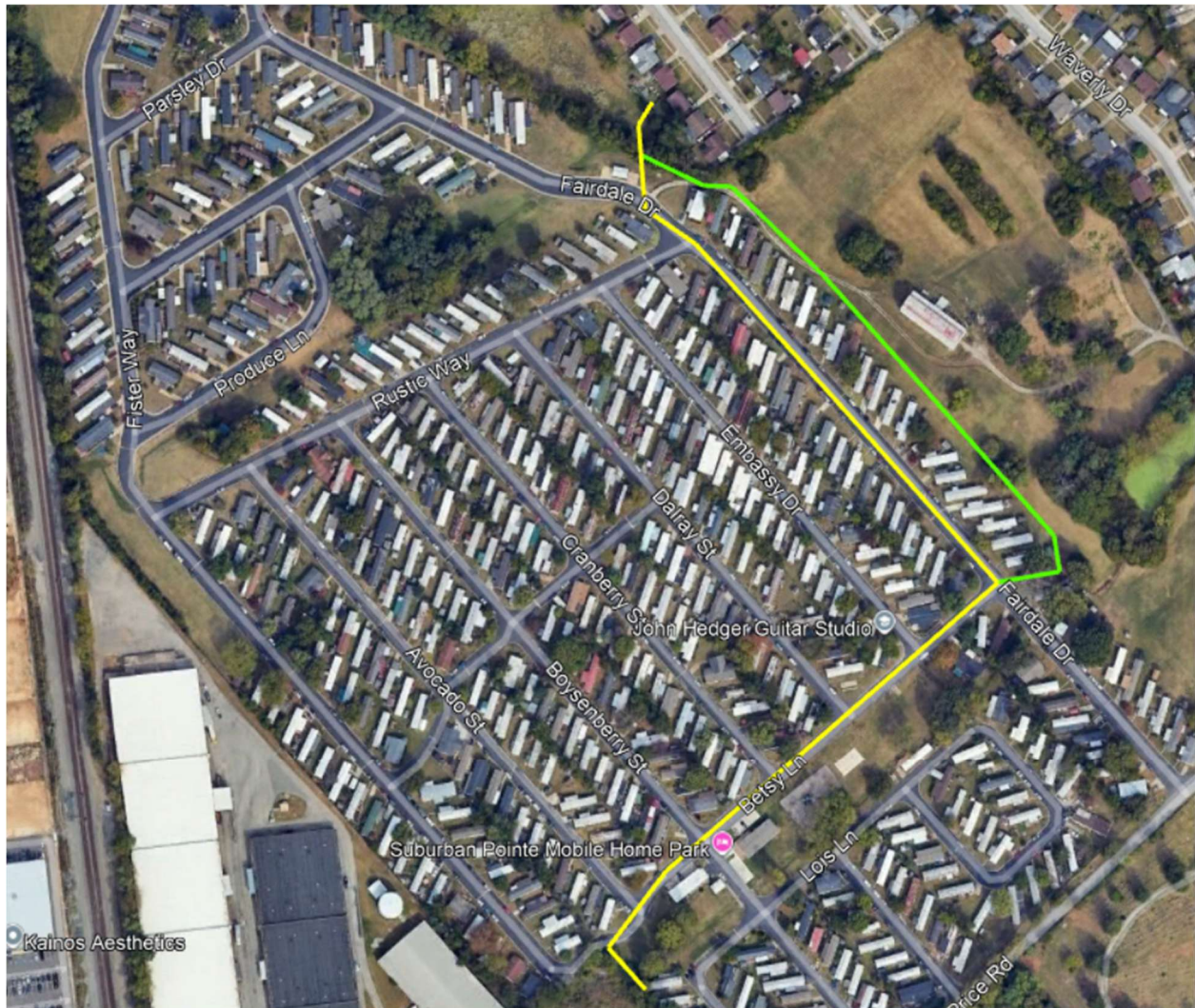


Figure 1: The original alignment is shown in yellow while the revised alignment is shown in green. The portions of the alignment before station 20+23 and after about station 30+50 appear relatively unchanged.

Rock Sounding Exploration

We performed five supplementary bedrock soundings to explore the subsurface conditions along the revised alignment. Mr. Conner Barnes, EIT, under the guidance of Mr. Matt Slusser, PE, directed the exploration. Soundings were performed approximately every 250 feet along the alignment. Soundings were performed using ½-inch diameter, high-pressure water probe rods to

refusal was encountered. The sounding locations were located in the field using a Garmin eTrex22x recreational grade GPS unit with a stated accuracy of about 10 feet. Sounding surface elevations were interpolated from the provided sewer profile drawings. Because of the methods used, the sounding locations shown on the Sounding Location Plan and the surface elevations shown in Table 1 are approximate.

Table 1 lists the depth to sounding refusal in our rock soundings along the revised alignment for the proposed sewer line. The stations are approximated based on the closest station along the alignment. The invert elevations are approximate values based on the provided sewer profiles. Based on the exploration and the invert elevations of the profile, we anticipate that bedrock will be encountered over the majority, if not all, of the revised alignment.

Table 1: Approximate Sounding Locations, Refusal Depths, and Elevations

Sounding/ Boring Number	Station/ Location	Offset (feet)	Refusal Depth [#] (feet)	Surface Elevation (feet)	Refusal Elevation (feet)	Sewer Invert Elevation (feet)
S-26	STA 22+00	-	7.8	954.5	946.7	940.5
S-27	STA 24+36	-	12.3	964	951.7	941.5
S-28	STA 26+40	-	11.4	967	955.6	942
S-29	STA 29+55	-	6.1	959	952.9	943.5
S-30	STA 31+15	7 N	6.4	954	947.6	944

Notes:

1. Locations based on recreational grade GPS and elevations are based on the provided profile drawings; therefore, they are approximate.
 2. Refusal implies bedrock but refusal may be caused by cobbles, boulders, weather rock, or buried debris.
- # Our experience with bedrock formations susceptible to Karst solutioning suggests that the bedrock surface along the alignment will likely be irregular and pinnacled in areas. Bedrock may be encountered at elevations both higher and lower than indicated by the sounding and borings refusal depths.



Figure 2: Sounding Location Aerial

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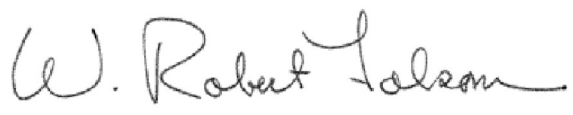
Vector Engineers, Inc. appreciates the opportunity to provide you with these geotechnical services. Should you have questions or require any additional information, please contact us.

Respectfully submitted,

VECTOR ENGINEERS – A CTL ENGINEERING COMPANY


Matthew J. Slusser, PE
Geotechnical Services Manager
Licensed Kentucky 32059




W. Robert Folsom, PE
Chief Engineer

SECTION 00410 – BID FORM

St. Martin's Pump Station Elimination

Division of Water Quality
Lexington-Fayette Urban County Government

LFUCG Bid No. 53-2025

1.01 GENERAL

Place: Lexington, Kentucky

Date: 7.29.25

The following Bid Form shall be followed exactly in submitting a Bid for this Work.

This Bid Form Submitted by

Sunesis Construction Co

2610 Crescentville Rd West Chester, OH 45069
(Name and Address of Bidder)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of Ohio, doing

business as

Corporation

"a corporation," "a partnership", or an "individual" as applicable

To:

Lexington-Fayette Urban County Government
(Hereinafter called "Owner")
Office of the Director of Central Purchasing
200 East Main Street, Room 338
Lexington, KY 40507

The Bidder, in compliance with your Advertisement for Bids for the **St. Martin's Pump Station Elimination**; Lexington, Kentucky, having examined the Contract Documents including the Plans and Specifications with related documents, having examined the site for proposed Work, and being familiar with all of the conditions and any and all addendums 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 unit prices stated hereinafter. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this Bid is a part.

The Bidder hereby agrees to commence Work under this Contract on a date to be specified in a written "Notice to Proceed" of the Owner and to substantially complete the Project within **270** days, consecutive calendar days. Bidder further agrees to pay liquidated damages, the sum of One Thousand Dollars and Zero Cents (\$1,000.00) for each consecutive day thereafter.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No. <u>1</u> Date <u>7.27.25</u>	Addendum No. <u>5</u> Date <u>8.4.25</u>
Addendum No. <u>2</u> Date <u>7.29.25</u>	Addendum No. <u> </u> Date <u> </u>
Addendum No. <u>3</u> Date <u>7.30.25</u>	Addendum No. <u> </u> Date <u> </u>
Addendum No. <u>4</u> Date <u>8.5.25</u>	Addendum No. <u> </u> Date <u> </u>

Insert above the number and the date of any Addendum issued and received. If none has been issued and received, the word "NONE" should be inserted.

1.02 LEGAL STATUS OF BIDDER

Bidder Sinesis Construction Co
Date 7.29.75

*A. A corporation duly organized and doing business under the laws of the State of

Ohio, for whom Jason Shan
bearing the official title of Vice President, whose
signature is affixed to this Bid is duly authorized to execute contracts.

*B. A Partnership, all of the members of which, with addresses are: (Designate general partners as such)

~~_____

_____~~

*C. An individual, whose signature is affixed to this Bid. (Print name)

~~_____

_____~~

* The Bidder shall fill out the appropriate form and strike out the other two.

1.03 BIDDERS AFFIDAVIT

Comes the Affiant, Jason Shaw, and after being first duly sworn, states under penalty of perjury as follows:

- A. His/her name is Jason Shaw and he/she is the individual submitting the Bid or is the authorized representative of Synesis Construction Co, the entity submitting the Bid (hereinafter referred to as "Bidder").
- B. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the Bid is submitted, prior to award of the Agreement and will maintain a "current" status in regard to those taxes and fees during the life of the Agreement.
- C. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the Agreement.
- D. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
- E. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of an Agreement to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
- F. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as the "Ethics Act."
- G. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his/her conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

[Signature]
Affiant Signature

STATE OF Ohio

COUNTY OF Columbus

The foregoing instrument was subscribed, sworn to and acknowledged before me by

Jason Shaw on this the 5 day of Aug, 2025



[Signature]
NOTARY PUBLIC, STATE AT LARGE

1.04 BID SCHEDULE

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following proposed lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the Contractor and any Subcontractor involved, within the time set forth herein. If unit prices are applicable, Bidder must make the extensions and additions showing the total amount of Bid. In all cases of discrepancies or math errors the amount written in for the unit price of an item shall govern.

If a discrepancy between the unit price and the item total exists, the unit price prevails except:

If the unit price is illegible, omitted, or the same as the item total, item total prevails and the unit price is the quotient of the item total and the quantity.

If the unit price and the item total are illegible or are omitted, the bid may be determined nonresponsive. If a lump sum total price is illegible or is omitted, the bid may be determined nonresponsive.

For a unit price based bid, the sum of the item totals is the bid amount the Owner uses for bid comparison.

The Bidder must indicate the base bid pipe material by circling the selected pipe material at the time of the submission of the Bid.

The Owner's decision on the bid amount is final.

BID SCHEDULE

Item	Description	Qty	Unit	Unit Price	Item Price
1.	Mobilization	1	EA	46,000.	46,000.
2.	Bonds and Insurance	1	EA	20,000.	20,000.
3.	General Requirements	1	EA	49,803. ⁷⁰	49,803. ⁷⁰
4.	Demobilization	1	EA	25,000.	25,000.
5.	Erosion and Sediment Control and Conformance with SWPP	1	EA	15,000.	15,000.
6.1.	6" (SDR 35) Gravity Sewer Lateral, All Depths	5	EA	8,265.	41,325.
6.2.	6" (SDR 26) Gravity Sewer Lateral, All Depths	9	EA	9,242.	83,178.
6.3.	6" (C900) Gravity Sewer Lateral, All Depths	20	EA	13,355.	267,100.
7.1.	12" (DI) Gravity Sewer Pipe, All Depths	121	LF	194.	23,474.
7.2.	12" (PVC SDR 35) Gravity Sewer Pipe, All Depths	77	LF	237. ²⁰	18,264.

Item	Description	Qty	Unit	Unit Price	Item Price
7.3.	10" (PVC SDR 35) Gravity Sewer Pipe, All Depths	1,259	LF	214.	271,944.
7.4.	10" (PVC SDR 26) Gravity Sewer Pipe, All Depths	283	LF	380.30	107,624.90
7.5.	10" (PVC C900 DR 25) Gravity Sewer Pipe, All Depths	601	LF	357.	214,557.
7.6.	Stone Backfill and Concrete Bridge for Pipe Located in Roadway	950	LF	122.	115,900.
7.7.	Stone Backfill Station 21+89 to Station 31+17	928	LF	203.50	188,848.
8.	Connection to Existing 21" Sanitary Sewer	1	EA	8,237.	8,237.
9.	Manhole Abandonment	5	EA	1,122	5,611.
10.1.	Manhole, 4' Diameter, Depth <6.1'	2	EA	5,530.	11,060.
10.2.	Manhole, 4' Diameter, Depth 6.1' to 10'	4	EA	7,602.	30,408.
10.3.	Manhole, 4' Diameter, Depth 10.1' to 15'	8	EA	11,061.	88,488.
10.4.	Manhole, 4' Diameter, Depth >20.1'	2	EA	17,983.	35,966.
10.5.	Manhole Outside Drop, All Depths	2	EA	9,117.	18,234.
11.	Reconnect Existing 8" Gravity Sewer to New Manhole	1	EA	896.	896.
12.	Pipe Abandonment, Plug	1	EA	304.	304.
13.	Plug Manhole Inlet	4	EA	1,451.	5,804.
14.	Video Inspection of New Sewer Pipe	2,341	LF	12.	28,092.
15.	Tree Protection	200	LF	29.	5,800.
16.	Bituminous Concrete: Trench Construction Street	100	LF	122.30	12,230.
17.	Bituminous Concrete: Full Width, Street	3,300	SY	50.10	165,330.
18.	Bituminous Concrete: Private Parking Lots/Driveways	100	SY	85.40	8,540.
19.	Portland Cement Concrete Paving: Parking Lots/Driveways/Aprons	100	SY	116.	11,600.
20.	Asphalt Pavement Patch	100	SY	43.50	4,350.

Item	Description	Qty	Unit	Unit Price	Item Price
21.	Seeding, Temporary, Extra as Directed by Owner	500	SY	2.	1,000.
22.	Site Restoration, Method A	500	SY	31.	15,500.
23.	Site Restoration, Method B	6,000	SY	5.	30,000.
24.	Site Restoration, Method C	500	SY	15.30	7,650.
25.	Flowable (Controlled Density) Fill	200	CY	145.	29,000.
26.	Concrete Sidewalk	20	SY	102.	2,040.
27.	Bypass Pump and Setup	1	LS	42,264.	42,264.
28.	Maintenance of Traffic	1	LS	8,631.	8,631.
30.	Miscellaneous Site Improvements	1	LS	\$150,000.00	\$150,000.00
31.	Abandon Existing Pump Station	1	LS	7,391.	7,391.
32.	Lateral Cleanout	34	EA	1,809.	61,506.
33.	Stream Crossing	1	EA	1,149.	1,149.
TOTAL BID (Items 1. through 33.)				\$ 2,287,100. —	

Note that "29." is omitted.

TOTAL BID AMOUNT:

_____ Dollars (\$ 2,287,100. —)

Respectfully Submitted,

FIRM: Synesis Construction Co
ADDRESS: 2610 Crescentville Rd
CITY/STATE/ZIP: West Chester, OH 45069
DATE: 7.29.25
BY: [Signature]
(must be original signature)
TITLE: Vice President
PHONE: 513-326-6000 FAX: 513-326-6000
(area code, number & extension)
EMAIL ADDRESS: estimating@synesisllc.com

OFFICIAL ADDRESS AND PHONE:

513-326-6000
2610 Crescentville Rd
West Chester, OH 45069 (Seal if Bid is by Corporation)

By signing this form you agree to all of the terms and associated forms.

1.05 STATEMENT OF BIDDER'S QUALIFICATIONS

The following statement of the Bidder's qualifications is required to be filled in, executed, and submitted with the Bid.

- A. Name of Bidder: Sunexis Construction Co
- B. Permanent Place of Business: 2140 Crescentville Rd Wex / Chester, OH
- C. When Organized: 5-15-1991
- D. Where Incorporated: Ohio
- E. Financial Condition:

If specifically requested by the Owner, the apparent low Bidder is required to submit its latest three (3) years audited financial statements to the Owner's Division of Central Purchasing within seven (7) calendar days following the Bid opening.

- F. In the event the Agreement is awarded to the undersigned, Performance, Payment, Erosion and Sediment Control, and Warranty bonds will be furnished by

Great American Insurance Co. (Surety)

Signed Tiffany Gobich (Representative of Surety)
Tiffany Gobich, Attorney-In-Fact

- G. The following is a list of similar projects performed by the Bidder (Attach separate sheet if necessary).

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
<u>Attached</u>		

- H. The Bidder has now under contract and bonded the following projects

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>

1.20 BID BOND

BID BOND

Bond Number: N/A Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we Sunesis Construction Co., 2610 Crescentville Road, West Chester, OH 45069

as principal (the "Principal") and Great American Insurance Company

hereinto called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

as obligee (the "Obligee"), in the penal sum of Five Percent (5%) of the Total Bid Amount dollars for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

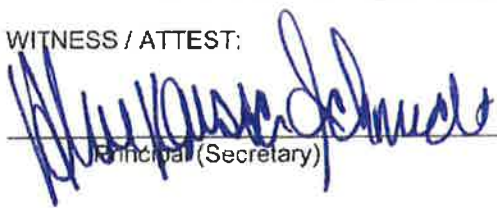
WHEREAS, the Principal has submitted a bid for
St. Martin's Pump Station Elimination

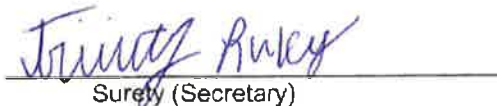
NOW, THEREFORE, if the Obligee shall accept the bid of the Principal within the period specified therein, or, if no period be specified, within ninety (90) days after opening, and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or contract documents, or in the event of the failure of the Principal to enter into such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference in money not to exceed the penal sum hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void; otherwise to remain in full force and effect. In no event shall the liability hereunder exceed the penal sum thereof.

PROVIDED AND SUBJECT TO THE CONDITION PRECEDENT, that any claim by Obligee under this bond must be submitted in writing by registered mail, to the attention of the Surety Law Department at the address above, within 120 days of the date of this bond. Any suit under this bond must be instituted before the expiration of one (1) year from the date of this bond. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall apply.

DATED as of this 5th day of August, 2025.

WITNESS / ATTEST:

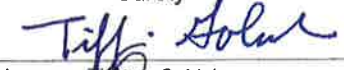

Principal (Secretary)


Surety (Secretary)

Sunesis Construction Co.
Principal

By:  (seal)
Name: Jason Shan
Title: Vice President

Great American Insurance Company
Surety

By:  (seal)
Name: Tiffany Gobich
Title: Attorney-in-Fact

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than **FOURTEEN**

No. 0 22684

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
MARK NELSON	ALL OF	ALL
TIFFANY GOBICH	CINCINNATI, OHIO	\$100,000,000
RANDAL T. NOAH		
SARAH KELSEY BECKER		
AUDRIA COLEMAN		
LIZ TALBOTT		
KATHRINE KREKELER		
G. DALE DERR		
TRINITY LUKENS		
GLADYS D. ROGERS		
NANCY NEMEC		
TAMMY L. MASTERTSON		
MEGHAN SCHRAER		
EVEN R. DERR		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 13TH day of MAY, 2025.

Attest

GREAT AMERICAN INSURANCE COMPANY



My L C. B.

Assistant Secretary

John K. Webster

Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

JOHN K. WEBSTER (877-377-2405)

On this 13TH day of MAY, 2025, before me personally appeared JOHN K. WEBSTER, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2030

Susan A Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 5th day of August, 2025.



My L C. B.

Assistant Secretary

I. List Key Bidder Personnel who will work on this Project.

<u>NAME</u>	<u>POSITION DESCRIPTION</u>	<u>NO. OF YEARS WITH BIDDER</u>
<i>Attached</i>		

J. MWDBE Participation on current bonded projects under contract:

<u>SUBCONTRACTORS (LIST)</u>	<u>PROJECT (SPECIFIC TYPE)</u>	<u>MWDBE</u>	<u>% of WORK</u>
<i>NONE</i>			

(USE ADDITIONAL SHEETS IF NECESSARY)

- K. We acknowledge that, if we are the apparent low Bidder, we may be required to submit to the Owner within seven (7) calendar days following the Bid Opening, a sworn statement regarding all office management and field management personnel. Additionally, if requested by the Owner, we will within seven (7) days following the request submit audited financial statements and loss history for insurance claims for the three (3) most recent years (or a lesser period if stipulated by the Owner)

1.06 LIST OF PROPOSED SUBCONTRACTORS

The following list of proposed subcontractors is required by the Owner to be executed, completed and submitted with the Bid Form. All subcontractors are subject to approval of the Lexington-Fayette Urban County Government. Failure to submit this list completely filled out may be cause for rejection of Bid.

BRANCH OF WORK** (List each major item)	SUBCONTRACTOR	MWDBE (yes/no)	% of WORK
1. <u>Asphalt Paving</u>	Name: <u>C + R Asphalt</u>	<u>NO</u>	<u>3.75%</u>
	Address: <u>415 Rebmann Lane</u> <u>Lexington, KY 40504</u>		
2. <u>Seeding + Erosion Control</u>	Name: <u>Cedar Valley Seeding</u>	<u>Yes</u>	<u>1.49%</u>
	Address: <u>851 Redmon Rd</u> <u>Parrs, KY 40361</u>		
3. _____	Name: _____	_____	_____
	Address: _____		
4. _____	Name: _____	_____	_____
	Address: _____		
5. _____	Name: _____	_____	_____
	Address: _____		
6. _____	Name: _____	_____	_____
	Address: _____		

** Such as: Grading, bituminous paving, concrete, seeding and protection, construction staking, etc.

1.07 AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing:

- A. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership), or an officer or employee of the Bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
- B. That the attached Bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding or planned common course of action, with any other contractor, vendor of materials, supplies, equipment or services described in the Advertisement for Bid, designed to limit independent bidding or competition;
- C. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished, with the Bid or Bids, and will not be communicated to any such person, prior to the official opening of the Bid or Bids;
- D. That the Bidder is legally entitled to enter into the contracts with the Lexington-Fayette Urban County Government, and is not in violation of any prohibited conflict of interest;
- E. (Applicable to corporation only) That as a foreign corporation, we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State Ohio or, that as a domestic corporation, we are in good standing with the Secretary of State, Commonwealth of Kentucky ✓. [Check the statement applicable.]
- F. This offer is for ninety (90) calendar days from the date this Bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Lexington-Fayette Urban County Government of any or all items Bid above, an Agreement shall thereby be created with respect to the items accepted.
- G. That I have fully informed myself regarding the accuracy of the statements made in this statement.
- H. That I certify that Subcontractors have not and will not be awarded to any firm(s) that have been debarred from noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

Synesis Construction Co
Company

7-29-25
Date

[Signature]
Representative

1.08 STATEMENT OF EXPERIENCE

NAME OF INDIVIDUAL:

Attached

POSITION/TITLE:

STATEMENT OF EXPERIENCE:

NAME OF INDIVIDUAL:

POSITION/TITLE:

STATEMENT OF EXPERIENCE:

NAME OF INDIVIDUAL:

POSITION/TITLE:

STATEMENT OF EXPERIENCE:

NAME OF INDIVIDUAL:

POSITION/TITLE:

STATEMENT OF EXPERIENCE:

* Include all officers, office management, Affirmative Action officials, and field management personnel.
Attach separate sheets if necessary.

1.09 EQUAL OPPORTUNITY AGREEMENT

The Law

- * Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- * Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and subcontractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- * Section 503 of the Rehabilitation Act of 1973 States:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- * Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal Contracts.
- * Section 206 (A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors, and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause an Agreement to be canceled and the contractor may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped, and aged persons.

Signature

Name of Business

Sumasis Construction Co

The Entity (regardless of whether construction Contractor, non-construction Contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any county, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) The contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities - Information required

- (1) For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.*

KRS 45.620. Action against contractor - Hiring of minority contractor or subcontractor

- (1) If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 to 45.640.*
- (3) The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

In the case of an Agreement exceeding \$250,000, the Contractor will be required within seven (7) days following the Bid Opening to furnish evidence that its work-force in Kentucky is representative of the available work-force in the area from which it draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the Contract.



LEXINGTON

MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller, MPA, CPSD
Minority Business Enterprise Liaison
Division of Procurement
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
smiller@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program (MBEP) is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long- term economic viability of Lexington-Fayette Urban County Government.

To that end the urban county council adopted and implemented Resolution 272-2024 – a Certified Minority and Women Business Enterprise seventeen percent (17%) minimum goal including minimum subgoals of five percent (5%) for Minority Business Enterprises (MBE) and a subgoal of twelve percent (12%) for Women Business Enterprises (WBE); a three (3%) minimum goal for Certified Veteran-Owned Small Businesses and/or Certified Service- Disabled Veteran Owned Businesses; and a goal of utilizing Disadvantaged Business Enterprises (DBE), where applicable, for government contracts.

The resolution states the following definitions shall be used for the purposes of reaching these goals:

Certified Disadvantaged Business Enterprise (DBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a person(s) who is socially and economically disadvantaged as define by 49 CFR subpart 26.

Certified Minority Business Enterprise (MBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by an ethnic minority (i.e. Black American, Asian American, Hispanic American, Native American)

Certified Women Business Enterprise (WBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a woman.

Certified Veteran-Owned Small Business (VOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

Certified Service -Disabled Veteran Owned Small Business (SDVOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a disabled veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

The term “Certified” shall mean the business is appropriately certified, licensed, verified, or validated by an organization or entity recognized by the Division of Procurement as having the appropriate credentials to make a

determination as to the status of the business.

The following certifications are recognized and accepted by the MBEP:

Kentucky Transportation Cabinet (KYTC), Disadvantaged Business Enterprise (DBE)
Kentucky Minority and Women Business Enterprise (MWBE)
Women's Business Enterprise National Council (WBENC)
National Women Business Owners Corporation (NWBOC)
National Minority Supplier Development Council (NMSDC)
Tri-State Minority Supplier Development Council (TSMSSDC)
U.S. Small Business Administration Veteran Small Business Certification (VetCert)
Kentucky Service- Disabled Veteran Owned Small Business (SDVOSB)

To comply with Resolution 272-2024, prime contractors, minority and women business enterprises, veteran owned small businesses, and service-disabled veteran owned small businesses must complete monthly contract compliance audits in the Diverse Business Management Compliance system, <https://lexingtonky.diversitycompliance.com/>

A list of organizations that certify and/or maintain lists of certified businesses (i.e. DBE, MBE, WBE, VOSB and/or SDVOSB) is available upon request by emailing, Sherita Miller, smiller@lexingtonky.gov.

1.11 LFUCG MWDBE PARTICIPATION FORM

**LEXINGTON****LFUCG MWDBE PARTICIPATION FORM**Bid/RFP/Quote Reference # 23-2025

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to the Division of Procurement for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWBE Company, Name, Address, Phone, Email	DBE/MBE WBE/VOSB/SDVOSB	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1 Cedar Valley Seeding Susan Redburn 859-7481-8006 cvseeding@outlook.com	WBE	seeding + erosion control	34,825.-	1.49%
2.				
3.				
4.				

The undersigned company representative submits the above list of MWDBE and veteran firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Sonata Construction
 Company

8/8/25
 Date

 Company Representative

VA construction
 Title



LEXINGTON

LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # _____

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to the Division of Procurement for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project. **Note: Form required if a subcontractor is being substituted on a contract.**

SUBSTITUTED DBE/MBE/WBE/VOSB Company Name, Address, Phone, Email	DBE/MBE/WBE/VOSB/SDVOSB Formerly Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title


LEXINGTON

DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS AND OUTREACH PLANS

As affirmed in Resolution Number 272-2024, the Urban County Council has adopted an annual aspirational goal of utilizing at least seventeen percent (17%) of public funds spend from certain discretionary agreements with certified Minority Business Enterprises (MBEs) and certified Woman Business Enterprises (WBEs); utilizing at least three percent (3%) of public funds from certain discretionary agreements with Certified Veteran-Owned Small Business and Certified Service-Disabled Veteran-Owned Small Businesses (VOSBs); and utilizing Disadvantaged Business Enterprises (DBEs) where applicable. Bidders should make every effort to achieve these goals.

Therefore, as an element of the responsiveness of the bid, all Bidders are required to submit documentation of their good faith and outreach efforts to ensure all businesses, including small and disadvantaged businesses such as minority-, woman-, and veteran-owned businesses, have an equal opportunity to compete for and participate in the performance of any subcontracts resulting from this procurement. Examples of good faith and outreach efforts that satisfy this requirement to encourage the participation of, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs include:

1. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women, and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to participate.
2. Attended LFUCG Procurement Economic Inclusion Outreach event(s) within the past year to meet new small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to partner with on LFUCG contracts and procurements.
3. Attended pre-bid/pre-proposal meetings that were scheduled by LFUCG to inform small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs of subcontracting opportunities.
4. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs.
5. Requested a list of certified small, DBE, MBE, WBE, VOSB and/or SDVOSB subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).
6. Contacted organizations that work with small, DBE, MBE, WBE, and VOSB companies for assistance in finding certified DBEs, MBEs, WBEs, VOSB and/or SDVOSBs to work on this project. Those contacted and their responses must be a part of the bidder's outreach efforts documentation.
7. Sent written notices, by certified mail, email, or facsimile, to qualified, certified small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

8. Followed up initial solicitations by contacting small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs via tailored communications to determine their level of interest.
9. Provided the interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs with adequate and timely information about the plans, specifications, and requirements of the contract.
10. Selected portions of the work to be performed by small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs in order to increase the likelihood of subcontracting participation. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate small, DBE, MBE, WBE, VOSB and/or SDVOSB participation, even when the prime contractor may otherwise perform these work items with its own workforce.
11. Negotiated in good faith with interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection must be so noted in writing with a description as to why an agreement could not be reached.
12. Included documentation of quotations received from interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs that were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.
 - a. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a small business', DBE's MBE's, WBE's, VOSB's and/or SDVOSB's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy the participation goals.
13. Made an effort to offer assistance to or refer interested small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal.
14. Made efforts to expand the search for small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs beyond the usual geographic boundaries.
15. Other – any other evidence that the bidder submits that may demonstrate that the bidder has made reasonable efforts to include small, DBE, MBE, WBE, VOSB and/or SDVOSB participation.

Bidder must document, with specificity, each of the efforts it made to include small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs as subcontractors in the procurement, including the date on which each effort was made, the medium through which each effort was made, and the outcome of each effort.

Note: Failure to submit the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith and Outreach Efforts must be submitted with the Bid, regardless of the proposed level of small, DBE, MBE, WBE, VOSB and/or SDVOSB participation in the procurement. If the Good Faith and Outreach Effort documentation is not submitted with the bid response, the bid may be rejected.

OUTREACH EFFORTS EVALUATION

Outreach efforts demonstrated by the bidder or respondent will be evaluated on a pass/fail basis.

ATTACHMENT A – SMALL AND DISADVANTAGED, MINORITY-, WOMEN-, AND VETERAN-OWNED BUSINESS OUTREACH PLAN

Proposer Name: Synesis Construction Co. Date: 8.11.25
Project Name: St. Martin's Pump Station Project Number: 53-2025
Contact Name: Jason Shaw Telephone: 513-326-6000
Email: estimating@synesiscc.com

The mission of the Minority Business Enterprise Program is to facilitate the full participation of disadvantaged businesses, minority-, women-, veteran-, and service-disabled veteran-owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long-term economic viability of Lexington-Fayette Urban County Government.

To that end, small and disadvantaged businesses, including minority-, woman-, veteran-, and service-disabled veteran-owned businesses, must have an equal opportunity to be utilized in the performance of contracts with public funds spent from certain discretionary agreements. By submitting its offer, Bidder/Proposer certifies that it has taken, and if there are further opportunities will take, reasonable steps to ensure that small and disadvantaged businesses, including minority-, woman-, veteran-, and service-disabled veteran-owned businesses, are provided an equal opportunity to compete for and participate in the performance of any subcontracts resulting from this procurement.

The information submitted in response to this clause will not be considered in any scored evaluation. Failure to submit this form may cause the bid or proposal to be rejected.

Is the Bidder/ Proposer a certified firm? Yes ☐ No ☒

If yes, indicate all certification type(s):

DBE ☐

MBE ☐

WBE ☐

SBE ☐

VOSB/SDVOSB ☐

and supply a copy of the certificate and/or certification letter if not currently listed on the city's Minority Business Enterprise Program's (MBEP) certified list.

1. Include a list of firms that Bidder/ Proposer has had a contractual relationship with within the last two years that are minority-owned, woman-owned, veteran-owned or small businesses, regardless of their certification status.

Click or tap here to enter text. upon request

2. Does Bidder/Proposer foresee any subcontracting opportunities for this procurement?

Yes ☒ No ☐

If no, please explain why in the field below. Do not complete the rest of this form and submit this first page with your bid and/or proposal. Click or tap here to enter text.

ATTACHMENT A – SMALL and DISADVANTAGED, MINORITY-, WOMEN-, and VETERAN-OWNED BUSINESS OUTREACH PLAN

If yes, please complete the following pages and submit all pages with your bid and/or proposal.

Describe the steps Bidder/Proposer took to solicit small and disadvantaged businesses, including MBEs, WBEs, VOSBs, and SDVOSBs, for subcontracting opportunities for this procurement.

3. Check the good faith and outreach efforts the Bidder/Proposer used to encourage the participation of small and disadvantaged businesses including, MBEs, WBEs, VOSBs and SDVOSBs:

- ☐ Bidder placed advertisements in search of prospective small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs for the solicitation.
- ☒ Bidder attended LFUCG Procurement Economic Inclusion Outreach event(s) within the past year.
- ☒ Bidder attended pre-bid and/or pre-proposal meetings for this solicitation.
- ☐ Bidder sponsored an Economic Inclusion Outreach event.
- ☒ Bidder requested a list of certified small, DBE, MBE, WBE, VOSB and/or SDVOSB subcontractors or suppliers from LFUCG.
- ☒ Bidder contacted organizations that work with small, DBE, MBE, WBE, VOSB and/or SDVOSB companies.
- ☒ Bidder sent written notices to certified small, DBE, MBE, WBE, VOSB and SDVOSB businesses.
- ☒ Bidder followed up to initial solicitations with interested small, DBE, MBE, WBE, VOSB and/or SDVOSB.
- ☒ Bidder provided small, DBE, MBE, WBE, VOSB and/or SDVOSB businesses interested in performing the solicited work with prompt access to the plans, specifications, scope of work, and requirements of the solicitation.
- ☒ Bidder made efforts to segment portions of the work to be performed by small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, including dividing sub-bid/partnership opportunities into economically feasible units/parcels, to facilitate participation.
- ☒ Bidder negotiated in good faith with interested small, DBE, MBE, WBE, VOSB and/or SDVOSB businesses.

- ☒ Bidder provided adequate rationale for rejecting any small business', DBEs, MBEs, WBEs, VOSBs or SDVOSBs for lack of qualifications.
- ☐ Bidder offered assistance in obtaining bonding, insurance, financial, equipment, or other resources to small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs, in an effort to assist them in meeting project requirements.
- ☒ Bidder made efforts to expand the search for small businesses, DBEs MBEs, WBEs, VOSBs and/or SDVOSBs beyond the usual geographic boundaries.
- ☒ Bidder made other reasonable efforts to include small businesses, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs participation.

4. Bidder/Proposer must include documentation, including the date each effort was made, the medium through which each effort was made, and the outcome of each effort with this form, regardless of the level of small, DBE, MBE, WBE, VOSB and/or SDVOSB participation. Examples of required documentation include copies of email communications, copies of newspaper advertisements, or copies of quotations received from interested small businesses, DBEs, MBEs, WBEs, VOSBs or SDVOSBs.

Click or tap here to enter text. **SEE ATTACHED**

For detailed information regarding outreach efforts that satisfy the MBE Program's requirements, please see "Documentation Required for Good Faith Efforts and Outreach Plans" page.

Note: The Bidder/Proposer must be willing to report the identity of each subcontractor and the value of each subcontract to MBEP if awarded a contract from this procurement.

Failure to submit the documentation requested may be cause for rejection of the bid. Bidders may include any other documentation deemed relevant to this requirement, which is subject to review by the MBE Liaison. Documentation of Good Faith and Outreach Efforts must be submitted with the bid, regardless of the proposed level of SBEs, DBEs, MBEs, WBEs, VOSBs and/or SDVOSBs participation in the procurement. If the Good Faith and Outreach Effort Form and associated documentation is not submitted with the bid response, the bid may be rejected.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Sonaxis Construction Co.
Company

8.8.25
Date

[Signature]
Company Representative
VP Construction
Title

1.14 EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY

It is the policy of Sunesis Construction Co
(Name of Bidder)

to assure that all applicants for employment and all employees are treated on a fair and equitable basis without regard to their race, religion, sex, color, handicap, natural origin or age.

Such action shall include employment, promotion, demotion, recruitment or recruitment advertising, layoff or termination, rates of pay and other forms of compensation, and selection for training, whether apprenticeship and/or on-the-job-training.

Furthermore, this company agrees to make special recruitment efforts to hire the protected class whenever feasible. This company also agrees to adhere to all applicable federal, state, and local laws relating to Equal Employment Opportunity for all individuals.

1.15 WORKFORCE ANALYSIS FORM

Name of Organization: Surety's Construction Co

Name of Organization:

Categories	Total		White (not Hispanic or Latino)		Hispanic or Latino		Black or African-American (not Hispanic or Latino)		Native Hawaiian and other Pacific Islander (not Hispanic or Latino)		Asian (not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (not Hispanic or Latino)		Total	
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators			4	3													6	3
Professionals			22	6													22	6
Superintendents			4														4	
Supervisors			8														8	
Foremen			24	1													24	1
Technicians																		
Protective Service																		
Para-Professionals																		
Office/Clerical			1	1													1	1
Skilled Craft			125	10														
Service/Maintenance			13															
Total																		

Prepared By: Kevin Gray

Date: 7/24/25

1.16 EVIDENCE OF INSURABILITY

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONSTRUCTION PROJECT
(Use separate form for each Agency or Brokerage agreeing to provide coverage)

Names Insured: Summis Construction Co
Address: 4100 Crescentville Rd West Chester, OH 45069
Project to be insured: St. Martin's Pump Station Elimination

In lieu of obtaining certificates of insurance at this time, the undersigned agrees to provide the above Named Insured with the minimum coverage listed below. These are outlined in the Insurance and Risk Management of Section 00600 - Bonds and Certifications, including all requirements, and conditions:

Article Items	Coverage	Minimum Limits and Policy Requirements	Limits Provided to Insured	Name of Insurer	A.M. Best's	
					Code	Rating
1.05.D.1	CGL	\$1,000,000/per occ., \$2,000,000/aggregate or \$2,000,000 combined single limit Requirements (a) through (e)	\$1,000,000 per occ \$2,000,000 aggregate	The Cincinnati Insurance Co.	10677	A+
1.05.D.1	Auto	Combined single \$1,000,000/per occ. aggregate Requirements (a) through (c)	\$1,000,000 CSL	The Cincinnati Insurance Co.	10677	A+
1.05.D.1	WC	\$ Statutory				XV
1.05.D.1	Employer's Liability	\$500,000	\$1,000,000	The Cincinnati Insurance Co.	10677	A+
						XV

Section 00600 includes required provisions, statements regarding insurance requirements, and the undersigned agrees to abide by all provisions for the coverage's checked above unless stated otherwise when submitting

USI Insurance Services, LLC
Agency or Brokerage
312 Elm St.
Street Address
Cincinnati, OH
City
(513)-452-6300
Telephone Number
Joseph St. John
Name of Authorized Representative
Senior Account Manager
Title
Joseph St. John
Authorized Signature
7-21-2025
Date

NOTE: Authorized signatures may be the agent's if agent has placed insurance through an agency agreement with the insurer. If insurance is brokered, authorized signature must be that of authorized representative of insurer.

IMPORTANT: CONTRACT MAY NOT BE AWARDED IF A COMPLETED AND SIGNED COPY OF THIS FORM FOR ALL COVERAGES LISTED ABOVE IS NOT PROVIDED.

1.17 DEBARRED FIRMS

PROJECT NAME: St. Martin's Pump Station Elimination

LFUCG BID NO.: 53-2025

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KY

All prime Contractors shall certify that Subcontractors have not and will not be awarded to any firms that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

All Bidders shall complete the Debarment Certification in duplicate and submit both copies to the Owner with the Bid Form. The Owner (grantee) shall transmit one copy to the Lexington-Fayette Urban County Government, Division of Community Development within fourteen (14) days after Bid opening.

The undersigned hereby certifies that the firm of Synesis Construction Co has not and will not award a subcontract, in connection with any Agreement award to it as the result of this bid, to any firm that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964, Executive Order 11246 As Amended or any Federal Law.

Synesis Construction Co

Name of Firm Submitting Bid

[Signature]

Signature of Authorized Official

Vice President

Title

7.29.25

Date

1.18 DEBARMENT CERTIFICATION

All Contractors/Subcontractors shall complete this certification.

The Contractor/Subcontractor certifies in accordance with Executive Order 12549 (Debarment and Suspension 2/18/86) that to the best of its knowledge and belief, that it and its principals:

- 1) Are not presently debarred, suspended, proposed for debarment, declared negligible, or voluntarily excluded from covered transactions or contract by any Federal department or agency for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.
 - a) Have not within a three year period preceding this Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
 - b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(a) of this certification; and
 - c) Have not within a three (3) year period preceding this Bid has one or more public (Federal, State or local) transactions or contracts terminated for cause or default.
- 2) Where the Contractor is unable to certify to any of the statements in this certification, such prospective contractors shall attach an explanation to this certification form.

Firm Name:

Sunesis Construction Co

Project:

St. Martins Pump Station Elimination

Printed Name:

Jason Shaw

Title of Authorized Representative:

Vice President

Signature:

Date:

7.29.25

1.19 CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty for not less than \$10,000 and not more than \$100,000 for each such failure.

Jason Shaw Vice President

Typed Name & Title of Authorized Representative

[Signature]

Signature of Authorized Representative

7-29-25

Date

 I am unable to certify to the above statements. My explanation is attached.



ADDENDUM No. 1

Bid Number: **#53-2025**

Date: July 22, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion Wave

Brian Marcum
brianm@lexingtonky.gov
(859) 258-3325

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid.

1. CLARIFICATIONS

A. None at this time.

2. DRAWINGS

A. None at this time.

3. SPECIFICATIONS

A. Section 00100 - ADVERTISEMENT FOR BIDS

1.01 INVITATION

REPLACE first sentence with the following:

"Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) via Ion Wave (<https://lexingtonky.ionwave.net>) until 2:00 pm, local time, August 5, 2025 for furnishing all labor and/or materials and performing all work as set forth in the Contract Documents prepared by and for Lexington-Fayette Urban County Government, Division of Water Quality (OWNER)."





1.03 OBTAINING PLANS, SPECIFICATIONS

REPLACE entire paragraph with the following:

"Plans, Specifications, and Contract Documents shall be obtained from LFUCG's Ion Wave (<https://lexingtonky.ionwave.net>) Bids must be submitted through LFUCG's Ion Wave."

1.08 SUBMISSION OF BIDS

REPLACE entire paragraph with the following:

"Contractors shall submit their Bids via Ion Wave not later than 2:00 p.m. (local time), August 5, 2025. Bids will remain sealed until 2:00 p.m. (local time) August 5, 2025, the official Bid closure time. Bids received after the scheduled closing time for receipt of Bids will not be considered."

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Sunexis Construction Co

ADDRESS: 2400 Crescentville Rd West Chester, OH

SIGNATURE OF BIDDER:



**ADDENDUM No. 2**Bid Number: **#53-2025**

Date: July 29, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion WaveBrian Marcum
brianm@lexingtonky.gov
(859) 258-3325**TO ALL PROSPECTIVE SUBMITTERS:**

Please be advised of the following clarifications to the above referenced Bid.

1. CLARIFICATIONS

Please be advised of the following clarifications to the above referenced Bid:

	Questions	Answers
1.	What type of pipe is existing 21" sewer?	Existing 21" sewer is vitrified clay pipe with cure-in-place interior liner.
2.	Page C-07 has a plan note 9 that reads "Note the new 10" pipe will not match crown of existing pipe." Please clarify what this means.	The note should read "Note the new 12" pipe will not match crown of existing pipe." This is a deviation to LFUCG's Standard Drawings 216, note #8. The new incoming pipe will match the invert of the existing 21" line.
3.	Can you please provide the invert elevation for the existing 21" sewer at manhole A-1?	An exact existing elevation is not available. Contractor will confirm when existing pipe is excavated.
4.	What is the Opinion of Probable Construction Cost for this project?	LFUCG does not publish cost opinions prior to opening bids.
5.	Is flow data available for the 21" pipe or the pump station?	Average daily flow for the pump station is 24,000 gpd. Peak pumping rate is 100 gpm.





6.	Is blasting allowed?	Blasting is not allowed.
7.	Were rock cores taken as part of the geotechnical investigation?	Available geotechnical information is provided in the specifications. No rock cores were taken.
8.	Does LFUCG want to salvage any equipment or materials from the pump station?	Contractor to provide five business day notice to LFUCG prior to starting demolition. LFUCG will remove any pump station equipment and materials selected for salvage.
9.	The drawings show two creek crossing details. Which detail should be used?	Use the detail on Sheet C-06, not the detail on Sheet SD-05.
10.	According to the bid specs for this project the owner will be responsible for quality control. Will there be a solicitation for these services?	No solicitation for quality control is planned.
11.	We respectfully ask your consideration for a 1-week bid deadline extension, to August 5, 2025.	Bid date is revised to August 5, 2025.
12.	Bid Form Item 16 is Bituminous Concrete: Trench Construction Street with Unit of "LF". Should this be "SY"?	The unit is "LF" and is based on linear foot of trench construction and asphalt repair.
13.	Spec section 01210, Allowances, 1.01, C-1, states there should be a \$150,000.00 allowance included. Will a bid item be created for this allowance? If not, what item should this allowance be included in?	This allowance is the "Miscellaneous Site Improvements" item in the bid form. Include \$150,000 for Bid Item 29. The Bid Form is revised to reflect the \$150,000 amount.
14.	Spec section 01025-5, 2.15, tree protection, states this will be paid for at the unit price per linear foot. Bid item	Payment will be per linear foot. The Bid Form is revised to reflect payment method.





	15, Tree Protection, the unit is lump sum. Please clarify which is correct?	
15.	Bid item 29, Miscellaneous Site Improvements. Should this item have a dollar amount to include in our bid? If not, please clarify what work is to be included in this item.	The Bid Form is revised to reflect the \$150,000 amount.
16.	Can the proposed manhole A-1 be a doghouse manhole? What type of pipe is the existing 21" sanitary sewer that this manhole will connect to?	Doghouse manhole substitution is not acceptable. Provide manhole in compliance with LFUCG standards including base and pipe entrance boots. Existing 21" pipe is vitrified clay with cured-in-place internal lining.
17.	Will a licensed plumber be required to extend the existing laterals to the new cleanouts?	Yes.
18.	What size are the existing laterals that will need to be extended and connected to the new cleanouts?	Existing lateral sizes are not known. Contractor to confirm size during construction. New laterals from sanitary sewer pipe to clean-out to be 6" diameter and comply with LFUCG standards. Pipe shall transition to existing size beyond the clean-out.
19.	The legend at the very bottom of the profile, stating pipe type (DIP, Sdr35, Sdr26), does not match what is shown in the profile where the lineal foot of pipe between each manhole is listed. Please clarify which is correct?	Pipe type is to be as noted at the bottom of the profile with types and quantities in the Bid Form.
20.	The proposed lateral that will connect the new office building to proposed manhole A-4 shows the cleanout being installed up close to the building. Is this correct or will the cleanout be installed at the easement line and extend the	Locate clean-out at the edge of easement.





	existing lateral to it like all the other ones are shown on the plans?	
21.	Bid item 7.7, Stone Backfill Station 21+89 to 31+17. Is this item for full depth stone backfill? If not, please clarify what it is for.	This bid item is for full depth stone backfill with earth and top soil cover.
22.	Should keynote #1 on plan sheet C-08 refer to MH A-14 not MH A-9?	Yes.
23.	Is bid item 11 for re-connecting the existing pipe to proposed MH A-14?	Yes.
24.	Bid item 9, Manhole Abandonment. Should this item be 5 each?	Yes. Bid Form is revised to reflect this quantity.
25.	Plan sheet C-07, keynote #3. Is this work incidental to the installation of the proposed manhole's or can a bid item be added?	Work included in Key Note 3 is incidental to the manhole bid price.
26.	Can you show, on the plans, where the work is located for the following bid items? Bid items 13, 16, 18, 19, 20, 25, & 26.	The quantities for these items are not shown on the Drawings, but are estimated quantities.
27.	Bid item 17. Can you show, on the plans, the limits of this work? Will the street need to be milled and resurfaced or resurfaced?	Bituminous full width paving is shown on Sheet C-07 on the profile from station 11+00 to station 20+30. The existing street will require milling and resurfacing.
28.	Is Xypex Bio-San an acceptable admixture for manhole construction?	Yes.
29.	Existing curb is located on Betsy Lane that will be impacted by lateral connections.	Replacement of curb damaged by construction is incidental to the pipe installation Pay Item.





30.	Existing fence and sheds located adjacent to trailer units that will be impacted by lateral connections.	Temporary removal of sheds is incidental to the pipe installation Pay Item. Re-installation of existing fence required by pipe and lateral installation is incidental to the pipe installation Pay Item.
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2. DRAWINGS

A. SHEET C-07 LINE A PLAN AND PROFILE SHEET STA 10+00 TO 19+00

REPLACE Key Note 2 with the following:

"INTERCEPT EXISTING 21" SEWER AND INSTALL PROPOSED MANHOLE MH A-1. CONTRACTOR SHALL OBTAIN ACTUAL ELEVATION OF PIPE INVERT PRIOR TO INITIATING MANHOLE INSTALLATION. EXISTING 21" SEWER IS VITRIFIED CLAY PIPE WITH CURED IN PLACE INTERIOR LINER."

REPLACE Key Note 9 with the following:

"NOTE THAT 12" PIPE CROWN DOES NOT MATCH CROWN OF EXISTING 21" PIPE."

B. SHEET C-08 LINE A PLAN AND PROFILE SHEET STA 19+00 TO 28+82

REPLACE Key Note 1 with the following:

"INTERCEPT EXISTING PRIVATE SEWER AND INSTALL PROPOSED MH A-14 TO COLLECTION WASTEWATER FROM EXISTING PRIVATE SYSTEM".

3. SPECIFICATIONS

A. Section 00100 - ADVERTISEMENT FOR BIDS

1.11 NOTICE CONCERNING MWDBE AND VETERAN GOALS

REPLACE with the following:

"Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).





The Owner has set a goal that not less than seventeen percent (17%) of the total value of this Contract be subcontracted to certified Minority Business Enterprises not less than five percent (5%) and to certified Women Business Enterprises not less than twelve (12%) and set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to certified Veteran-Owned Small Businesses (VOSBs). The goals for the utilization of Minority Business Enterprises, Women Business Enterprises and Veteran-Owned Small Businesses as subcontractors are recommended goals. Contractor(s) who fail to meet such goals will be expected to complete Attachment A, Documentation Required for Good Faith Efforts and Outreach Plans Forms with their bid submissions.

For assistance in locating Disadvantaged, Minority and Women Business Enterprises and Veteran-Owned Small Businesses as Subcontractors contact, Sherita Miller, MPA, Division of Procurement, smiller@lexingtonky.gov or at 859-258-3323.

B. Section 00410 - BID FORM

CHANGE Quantity for Pay Item 9. to "5".

CHANGE Quantity and Unit for Pay Item 15. to "200 LF".

DELETE Unit Price and Item Price for Pay Item 28.

CHANGE Unit Price and Item Price for Pay Item 29 to "\$150,000 \$150,000".

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Synesis Construction Co
ADDRESS: 2400 Crescentville Rd West Chester OH 43081
SIGNATURE OF BIDDER: [Signature]





ADDENDUM No. 3

Bid Number: **#53-2025**

Date: July 30, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion Wave

Brian Marcum
brianm@lexingtonky.gov
(859) 258-3325

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid.

1. **CLARIFICATIONS**
- 2.

A. See Below

SPECIFICATIONS SECTION 01025 - MEASUREMENT AND PAYMENT

2.17 BITUMINOUS CONCRETE: FULL WIDTH PAVING, STREET

REPLACE with the following:

"Payment for bituminous concrete relating to full width paving in streets shall be paid for at the Contract unit price per square yard, which shall include milling of existing surface, placement of bituminous concrete, proper grading, taper of new pavement into existing pavement, and all appurtenance necessary for a completion installation."

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Schess Construction Co.

ADDRESS: 2610 Crescentville Rd. West Chester, OH 45069

SIGNATURE OF BIDDER: [Handwritten Signature]



MAYOR LINDA GORTON



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM No. 3/4

Bid Number: **#53-2025**

Date: August 5, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion Wave

Brian Marcum
brianm@lexingtonky.gov
(859) 258-3325

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid.

1. **Item 28 Maintenance of Traffic added to line items**

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Sunesis Construction Co.

ADDRESS: 2610 Crescentville Rd. West Chester, OH 48069

SIGNATURE OF BIDDER: [Handwritten Signature]





ADDENDUM No. 5

Bid Number: **#53-2025**

Date: August 4, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion Wave

Brian Marcum
brianm@lexingtonky.gov
(859) 258-3325

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid.

1. CLARIFICATIONS

None.

2. DRAWINGS

None.

3. SPECIFICATIONS

A. Section 00100 - ADVERTISEMENT FOR BIDS

1.01 INVITATION

REPLACE first sentence with the following:

"Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) via Ion Wave (<https://lexingtonky.ionwave.net>) until 2:00 pm, local time, August 8, 2025 for furnishing all labor and/or materials and performing all work as set forth in the Contract Documents prepared by and for Lexington-Fayette Urban County Government, Division of Water Quality (OWNER)."





1.08 SUBMISSION OF BIDS

REPLACE entire paragraph with the following:

"Contractors shall submit their Bids via Ion Wave not later than 2:00 p.m. (local time), August 8, 2025. Bids will remain sealed until 2:00 p.m. (local time) August 8, 2025, the official Bid closure time. Bids received after the scheduled closing time for receipt of Bids will not be considered."

B. Section 00410 - BID FORM

REPLACE BID SCHEDULE with the attached Revised BID SCHEDULE.

CLARIFICATION Ion Wave is revised to show quantity of "2" for Bid Item 10.1.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Suncoir Construction Co.

ADDRESS: 2610 Crescentville Rd. West Chester, OH 41069

SIGNATURE OF BIDDER: [Handwritten Signature]





Equal Employment Opportunity Policy Statement

The employment policies and practices of Sunesis Construction Co are to recruit, hire and treat employees without discrimination because of a person's race, religion, color, sex, sexual orientation, gender identity, national origin, age or disability. Our company is committed to providing Equal Employment Opportunity with respect to hiring, termination, compensation, advancement, upgrading and promotion, and transfer.

This company seeks to ensure compliance with the Civil Rights Act of 1964 as amended, the Federal Highway Act of 1968, the Executive Orders 11246 and 11375 and other Federal and State laws and regulations pertaining to Equality of Opportunity and Affirmative Action policies.

Our company is committed to leadership within the community and to achieving full employment and utilization of capabilities and productivity of all qualified individuals without regard to race, religion, color, national origin, age or disability. Sunesis Construction Co will continue to make understood to the employment sources/agencies with which it deals, and in employment opportunity announcements/ads, the above mentioned EEO/AA Policy.

This company further recognizes that the effective application of a policy of Equal Employment Opportunity involves more than just a policy statement, and is committed to the promotion of Affirmative Action. Sunesis Construction Co will take affirmative action to ensure that the EEO/AA Policy is implemented with particular regard to: advertising, application procedures, compensation, demotion, employment, fringe benefits, job assignment, job classification, layoff, leave, promotion, recruitment, rehire, social activities, termination, transfer, upgrade, working conditions, rates of pay or other forms of compensation, and selection for training to include apprenticeship, pre-apprenticeship and on-the-job training.

Finally, it is the policy of Sunesis Construction Co to ensure and maintain a working environment free of coercion, harassment and intimidation at all job sites, and in all facilities at which employees are assigned to work. Any violation of the policy should be immediately reported to your supervisor or the Company EEO Officer, who is identified below.

**Karissa Schmidt
EEO Officer
2610 Crescentville Road
West Chester, OH 45069
513-326-6000**

EQUAL

OPPORTUNITY

EMPLOYER

MAYOR LINDA GORTON



LEXINGTON

TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM No. 1

Bid Number: **#53-2025**

Date: July 22, 2025

Subject: St. Martins Pump Station Elimination

Address inquiries to:
Q&A Module on Ion Wave

Brian Marcum
brianm@lexingtonky.gov
(859) 258-3325

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid.

1. CLARIFICATIONS

A. None at this time.

2. DRAWINGS

A. None at this time.

3. SPECIFICATIONS

A. Section 00100 - ADVERTISEMENT FOR BIDS

1.01 INVITATION

REPLACE first sentence with the following:

"Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) via Ion Wave (<https://lexingtonky.ionwave.net>) until 2:00 pm, local time, August 5, 2025 for furnishing all labor and/or materials and performing all work as set forth in the Contract Documents prepared by and for Lexington-Fayette Urban County Government, Division of Water Quality (OWNER)."



DIRECTOR AUTHORIZATION

SUNESIS CONSTRUCTION CO.

The undersigned, being the sole director of Sunesis Construction Co. authorizes the following action in lieu of holding an annual meeting of directors:

Electing the following as the corporation's officers:

Andrew Argo	Controller
Richard E. Jones Jr.	President
Jason Shaw	Vice President
Helene Karissa Schmidt	Secretary
Robert Doyle	Treasurer

Effective Date: August 1, 2022


Richard E. Jones Jr.



About

Rob Doyle joined Sunesis Construction Co. in 2005 as laborer in the field before graduating from the University of Toledo with a Bachelor of Science in Construction Engineering Technology. Upon graduation in December 2005, Rob joined the Project Management team with Sunesis Construction. Over the course of the next 9 years, Rob gained experience in both Project Management and Estimating of many different types of heavy civil construction projects. In 2015, Rob was promoted to Director of Operations overseeing the field operations, project management team, and logistics department. In 2021, Rob became the VP of Operations and Treasurer adding involvement with accounting, business development, estimating, recruiting, and other Sunesis entities. Rob resides on his farm in Williamsburg, Ohio with his wife and two children.

Skills

- Project Management
- Estimating
- Contract Negotiation
- Team Building
- Problem Solving
- Value Engineering
- Public Speaking
- Employee Talent Acquisition/Development
- Asset Purchasing/Management
- Business Development
- Business Acquisition
- Property Acquisition/Development

Contact

E: rdoyle@sunesiscc.com

P: 513-326-6000

W: www.sunesisconstruction.com



Robert M. Doyle

VP of Operations/Treasurer

Experience

Sunesis Construction Co., 2005 to Present

VP of Operations/Treasurer 2021 to Present

Involvement with financial accounting, business acquisition, property acquisition and development, business development, and talent acquisition for both field and office positions.

Director of Operations, 2015 to 2020

Oversee the daily operations of 200 employees that encompasses the field staff, project management team, and logistics department.

Senior Project Manager, 2011 to 2014

Manage large and complex projects ranging in size from \$5MM to \$33MM. Projects included cast-in place concrete structures, underground utility installations, dam rehabilitations, and flood control mitigation.

Estimator, 2009 – 2010

Estimate projects ranging in size from \$50K to \$3MM. Perform quantity takeoffs, solicit quotes, and compile crew utilization to formalize estimate. Projects were for both the public in private sectors and included roadways, earthen retention, and underground utility installation.

Project Manager, 2006 to 2008

Manage projects from \$5K to \$8MM including roadways, underground utility install, large concrete pavement pours, and flood control mitigation.

Laborer - Bridge Construction and Pipe Installation, 2005

Education

The University of Toledo

Bachelor of Science in Construction Engineering Technology, 2001-2005



About

Jason Shaw joined Sunesis Construction in 2003. He holds a Bachelor of Science degree from Sinclair University in Dayton, Ohio. Jason is married and has two daughters. When Jason is not working, he is active in his community in Dayton, Ohio.

Skills

- Management / Leadership
- Estimating
- Project Procurement
- Financial Forecasting
- Cost Savings
- Effective Communication
- Risk Management
- Time Management and Planning
- Quantity Takeoffs

Contact

E: jshaw@sunesiscc.com

P: 513-309-9983

W: www.sunesisconstruction.com



Jason Shaw

Vice President Civil Division

Experience

Jason has more than twenty years of Civil Construction experience that requires him to daily estimate job costs including labor hours, material and equipment requirements and subcontractor evaluations. He provides initial theory for construction of projects that take into consideration all job issues including sequence, schedule, safety issues, logistics, special engineering considerations and contract issues. He supports Project Managers with information on awarded jobs. He manages all aspects of construction projects including vendor buyout, subcontractor negotiations, project scheduling, budget control and reporting, expediting materials, remediation of field issues, customer relations and job site safety.

Education

Sinclair University, Dayton OHIO

Bachelor of Science, Construction Management

40 Hour OSHA Construction Safety and Health

50 Hour OSHA Construction Safety and Health

Basic First Aid and CPR Training



About

Jeremy Rayburn has dedicated 29 years to Sunesis Construction Co., progressing from an entry-level role to his current position as General Superintendent of the Structure Division. Throughout his many years with Sunesis he has steadily taken on additional responsibilities from welding, to crane operation to traveling wherever the company has needed him. Jeremy is a wealth of knowledge due to his extensive experience and range of expertise.

Skills

- Construction Expertise
- Problem Solving
- Communication
- Team Building
- Leadership
- Jobsite Safety Analysis
- Decision-making
- Quality Assurance
- Team Collaboration
- Budgeting
- Technical Proficiency

Contact

E: jrayburn@sunesiscc.com

P: 513-326-6000

W: www.sunesisconstruction.com



Jeremy Rayburn

General Superintendent- Structure Division

Experience

General Superintendent- Structure Division
Sunesis Construction Co., 1995 to Present

In 1995, Jeremy Rayburn joined Sunesis Construction Co as a carpenter on the structure side of our business. He brought with him experienced gained from his years working for Interbay Marine Construction in Tampa, Florida.

In early 2002, Jeremy transitioned to a structure foreman. In this position he was responsible for the day to day leadership; building bridges, earthen retention systems and marine infrastructure projects.

In 2015, Jeremy was promoted to the position of general superintendent for the structure division. His role involves problem solving, project planning, resource allocation and direct oversight over foreman who are building the individual projects.

Currently residing in Bethel , Ohio and Cherokee, North Carolina Jeremy shares his life with his family.

Education

OSHA 30 Hour -Trench Safety Competent Person-Certified
Rigging-Fall Protection Competent Person



About

Bill is an experienced Construction Project Manager with 10+ years' experience and a demonstrated history of overseeing concurrent multi-million dollar civil and environmental construction projects. Actively involved in all aspects of each project's life-cycle and can deliver high-valued projects where the highest standards are routinely demanded. He currently resides in Loveland Ohio with his wife and son.

Skills

- Project & Operations Management
- Talent Acquisition & Team Building
- Project Estimating & Contract Negotiation
- Value Engineering
- Construction Safety
- Project Controls & Scheduling
- Site Surveying
- Customer Service & Support

Contact

E:

P: 513-326-6000

W: www.sunesisconstruction.com



Bill Pond
Project Manager

Experience

Project Manager / Sr. Project Manager
Sunesis Construction Co.

November 2019 - Current

Bill has been a member of the Project Management team at Sunesis since November of 2019 and has successfully managed many heavy civil construction projects ranging in value from \$10,000 to \$45,000,000. These projects routinely consist of a variety of heavy civil work scopes such as deep utility pipe, roadways, structural concrete, bridges, trenching & shoring, paving, curb and gutters.

Sr. Operations Manager
Trans Ash, Inc.

March 2009 – November 2019

While working at Trans Ash, Bill started out in the Engineering and Surveying department and worked his way up through the Project Management Department, eventually overseeing a team of project managers in a multi-state region. The projects at Trans Ash were typically located on active coal fired power plants and consisted of new landfill construction, landfill expansion, mass earthwork, geomembrane liner installation, filter systems, pump stations, gravity and force main storm piping systems, and structural concrete.

Education

The Ohio State University

Bachelors of Science – Construction Systems Management

DAVID M. PONDER CSP, CHST

3427 Sunbrite Drive
Covington, KY 41015

Phone: 859-628-9876
Email: ponder06@gmail.com

Health and Safety Director

A top-performing Health and Safety Director credited with combining safety knowledge, project management, procedures expertise and leadership to deliver timely and thorough inspections and fatality and/or incident investigations. Ability to perform outreach training and regulations compliance to ensure proper guidelines of Federal and State Regulations.

Areas of Expertise

- | | | |
|---------------------------|----------------------------|-------------------------------|
| ▪ Federal Regulations | ▪ Project Management | ▪ Safety & Health Culture |
| ▪ Inspections | ▪ Documentation | ▪ OSHA Compliance |
| ▪ Incident Investigations | ▪ Training Development | ▪ Construction Best Practices |
| ▪ Training | ▪ Presentation Development | ▪ Estimation |

Key Skills Assessment

SAFETY COMPLIANCE – Performs safety inspections of job sites to ensure Federal Regulations and guidelines are being maintained. Performs complex fatality and incident investigations and performs outreach to organizations on OSHA updates.

SAFETY CULTURE – Work to instill a positive safety culture throughout the organization, from the top-down. Accomplish this through training, positive reinforcement and audits.

PROJECT MANAGEMENT – Managed construction of homes and commercial structures, planned and estimated large value projects and ensured safety and compliance measures were met.

Professional Experience

SUNESIS CONSTRUCTION CO., SUNESIS ENVIRONMENTAL LLC., CINCINNATI, OH 2016 – 2021/ 2023- present **HEALTH AND SAFETY DIRECTOR**

- Develop and initiate safety program for companies of 400 plus employees in heavy civil construction and environmental/demolition fields.
- Conduct companywide training; including OSHA 10 and 30-hour certification, excavation competent person, fall protection, aerial work platform and confined space training.
- Supervise a staff of safety and health professionals with the purpose of reducing incidents within the company to zero.
- Conduct on-site project audits to ensure company employees and subcontractors are performing work in a safe manner.
- Develop Company Safety and Health Manual and make updates as necessary as new laws and regulations are introduced.
- Develop Site Specific Safety and Health plans for each individual project.
- Participate on the Allied Construction Industries (ACI) Safety Committee, the Tri-State Safety Council and the Ohio Valley Associated Builders and Contractors (OVABC) safety committee.
- Conduct speeches and training sessions at industry safety conferences.

U.S. DEPARTMENT OF LABOR/OSHA, CINCINNATI, OH **COMPLIANCE SAFETY & HEALTH OFFICER**

2008-2013/2014 – 2016/ 2021-2023

- Perform inspections of work sites and companies to ensure compliance of Federal Regulations.

Training & Certifications

- CSP (Certified Safety Professional), Board of Certified Safety Professionals (BCSP)
- CHST (Construction Health & Safety Technician), BCSP
- OSHA Authorized Trainer for construction (OSHA 500)
- OSHA Authorized Trainer for construction update (OSHA 502)
- Mobile Crane Inspector from Crane Institute of America
- Electrical Standards from OSHA Training Institute (OTI)
- Machinery and Machine Guarding from OTI
- Principles of Scaffolding from OTI
- Trenching and excavating from OTI
- Incident Investigation from OTI
- Criminal Investigation from OTI
- Evaluation of Safety Management Systems from OTI
- Construction Standards from OTI
- Trenching and Excavating Competent Person from Terracon
- Traffic Control Technician from American Traffic Safety Services Association (ATSSA)
- Traffic Control Supervisor from ATSSA
- Incident Command Systems (ICS) 100 from FEMA
- ICS 200 from FEMA
- IS 700 from FEMA
- IS 800 from FEMA
- 32-hour Chemical Emergency Response (HAZWOPER) from ICWU

Presentations Conducted

- | | |
|---|-------------|
| ▪ Cranes in Construction, Allied Construction Industries | 2010 |
| ▪ Competent vs. Qualified Persons According to OSHA, Allied Construction Industries | 2013 |
| ▪ Trenching and excavating, Mid-America OSHA Training Center | 2017 |
| ▪ Trenching and excavating, Ohio Safety Congress | 2018 |
| ▪ Trenching and excavating, City of Fairfield Wastewater Department | 2018 |
| ▪ Case Study of Recent Trenching Fatalities, Ohio Safety Congress | 2019 |
| ▪ Fall Protection, Deer Park Roofing | 2022 |
| ▪ Trenching and excavating, Ohio Safety Congress | 2023 |
| ▪ Trenching and excavating, Neyer Plumbing | 2023 |

Training Conducted

- | | |
|---|------------------|
| ▪ OSHA Construction 10 Hour, Sunesis Construction Co | 2016-2021 |
| ▪ OSHA Construction 30 Hour, Sunesis Construction Co | 2016-2021 |
| ▪ Incident Investigation, OSHA #7505, Great Lakes OSHA Training Institute (OTI) | 2017-2021 |
| ▪ Fall Hazard Awareness, OSHA #7405, Great Lakes OTI | 2017-2021 |
| ▪ Safety and Health Management Systems, OSHA #7500, Great Lakes OTI | 2017-2021 |
| ▪ Fall Protection, OSHA #3115, Great Lakes OTI | 2017-2021 |
| ▪ Construction Standards, OSHA #510, Great Lakes OTI | 2017-2021 |
| ▪ Lockout/Tagout, OSHA #7115, Great Lakes OTI | 2017-2021 |
| ▪ Scaffolding Training, Ohio OSHA Consistency Meeting | 2022 |



Project Resume

Project Name : ENV Kirwan - Blanding Sidewalk and Tunnel Abandon
Owner : Sunesis Environmental
Owner Contact :
Contract Amount : \$237,422.00
Completion Date :
Project Description : Underground Infrastructure

Project Name : Blanchet Road Bridge - KYTC 191002
Owner : Kentucky Transportation Cabinet
Owner Contact : Jerry Keith
Contract Amount : \$2,219,067.00
Completion Date : 10/01/2019
Project Description : Bridge reconstruction over active railroad

Project Name : Mariemont High School Addition and Renovation
Owner : Turner Construction Company, Cincinnati
Owner Contact : Nick Aldemeyer
Contract Amount : \$912,481.00
Completion Date :
Project Description : Repurpose existing athletic field into parking lot including storm retention and drainage.

Project Name : Wasson Way Trail Phase 2A
Owner : City of Cincinnati, OH
Owner Contact : Brandon Lechrone
Contract Amount : \$2,200,387.00
Completion Date :
Project Description : Convert existing railroad bridges over I-71 to be used as pedestrian traffic

Project Name : Woodlands Backyard - Phase 1
Owner : Five Buddies, LLC
Owner Contact : Todd Henderly
Contract Amount : \$368,393.00
Completion Date :
Project Description : Site improvement for new volleyball facility

Project Name : Slope Reconstruction - Elda Landfill
Owner : Waste Management of OH
Owner Contact : Robin Jones
Contract Amount : \$140,536.00
Completion Date : 11/01/2019
Project Description : Slide remediation and drainage improvement

Project Name : Colonel Glenn Highway-Kauffman Ave. Widening Project (Part 2)
Owner : City of Fairborn, OH
Owner Contact : Lee Harris
Contract Amount : \$4,406,238.00
Completion Date : 06/14/2020
Project Description : Project consisted of construction of new roundabout, full depth concrete pavement repairs, storm and sanitary sewer, water main, asphalt pavement walking path, pavement markings, traffic signals

Project Name : Cafe Valley Bakery - Waste Water Treatment
Owner : Mehall Contracting, Inc.
Owner Contact : Todd Mehall
Contract Amount : \$132,556.00
Completion Date :
Project Description : Installation of Pump Station

Project Name : Antioch Road and Moore Road Intersection
Owner : Clinton Co. Engineer, OH
Owner Contact : Adam Fricke
Contract Amount : \$666,522.00
Completion Date : 11/15/2019
Project Description : Improvement of line of site by road construction

Project Name : Oxford Area Trails System Phase 2
Owner : City of Oxford, OH
Owner Contact : Scott Otto
Contract Amount : \$2,416,529.00
Completion Date : 10/16/2020
Project Description : 3.5 miles of bike path including new concrete retaining walls and two pedestrian bridges

Project Name : Renovation of Green River Lock and Dam No. 3
Owner : Rochester Dam Regional Water Commission
Owner Contact :
Contract Amount : \$2,977,645.00
Completion Date :
Project Description : Complete fortification of existing dam and lock structure (Rochester Green River Lock and Dam No.3), stabilizing the water pool elevation for the water district of the neighboring communities. Scope includes: installation of concrete weirs to cut off existing mill race, 200lf sheeting installation across the river, 16x16x4 grout bags (qty 16) placement along the crest of the dam, as well as bulkhead installation to secure and close off existing lock for historical preservation. To perform this work multiple approaches are needed not only from heavily restricted land access, but from in water and on water in order to complete all scopes. Causeway installation was required to redirect the flow of the river during weir installation, barge mounted excavators will be used for all the in river sheeting and grout bag installations, and divers to finalize the connection point to the lock. A very challenging project, with unforgiven river conditions make it fairly unpredictable and requires quick adaptation for whatever the conditions present.

Project Name : Dam Removal - East Fork Lake
Owner : Valley View Foundation
Owner Contact : Vanessa Hannah
Contract Amount : \$256,117.00
Completion Date : 09/30/2019
Project Description : Removal of existing low head dam and stream remediation

Project Name : Teays Valley High School - Security and Canopy Improvements
Owner : HCG Construction / Teays Valley School District
Owner Contact :
Contract Amount : \$48,128.00
Completion Date :
Project Description : Minor site grading, storm sewer and inlet installation, and installing pipe installation on existing underground utilities.

Project Name : Millikin Road Improvements
Owner : Butler County Engineers Office, OH
Owner Contact : Dave Quimby
Contract Amount : \$1,176,093.00
Completion Date : 11/08/2019
Project Description : Line of sight safety improvement and road construction

Project Name : Shawnee Run Slide Repair - ODOT 190418
Owner : Ohio Department of Transportation
Owner Contact : Josh Mrvelj
Contract Amount : \$296,299.00
Completion Date : 12/01/2019
Project Description : Slide repair by extending existing box culvert, unloading slope and regrading at 2.5:1

Project Name : (2) Small Structure Culvert Replacements Harrison-Brookville Rd. - INDOT 38620
Owner : Ohio Department of Transportation
Owner Contact : David McManaway
Contract Amount : \$612,219.00
Completion Date : 07/31/2020
Project Description : Four side box replacement

Project Name : Fayette County Airport Parallel Taxiway Phase 1
Owner : Fayette County Airport
Owner Contact : Bruce Brandstetter
Contract Amount : \$1,810,249.00
Completion Date : 06/20/2020
Project Description : Extension of taxiway, update storm and electrical components

Project Name : New London Road Beam Replacement
Owner : Butler County Engineers Office, OH
Owner Contact : Dave Quimby
Contract Amount : \$268,226.00
Completion Date : 12/13/2019
Project Description : Box beam bridge replacement

Project Name : Verizon Trench Restoration
Owner : Tim Holley Excavating and Directional Drilling, Inc.
Owner Contact :
Contract Amount : \$109,650.00
Completion Date :
Project Description : Restore roadway following excavation and conduit placement (by others).

Project Name : Elberon Ave. Slide Repair Design
Owner : TBD
Owner Contact : Rich Pohana
Contract Amount : \$693,288.00
Completion Date : 11/04/2019
Project Description : Construct Pile and Lagging Earthen Retention Wall with architectural cast in place concrete face

Project Name : Norfolk Southern - Trenton Road
Owner : Norfolk Southern
Owner Contact : Matt Cook
Contract Amount : \$13,310.00
Completion Date :
Project Description : Installation of ODOT Type 6 Curb to protect new Mechanical Arms.

Project Name : Elm Street Bridge Replacement
Owner : City of West Carrollton, OH
Owner Contact : John Vance
Contract Amount : \$1,101,697.00
Completion Date : 08/04/2020
Project Description : Existing bridge replacement including updateing utilities and channel widening

Project Name : GSI - Cedar Grove, IN
Owner : GeoStabilization International
Owner Contact : Eric Bledsoe
Contract Amount : \$73,073.00
Completion Date :
Project Description : Install Sheet Piling for GSI

Project Name : W. Airway Road - Montgomery County - ODOT 190545
Owner : Ohio Department of Transportation
Owner Contact : Joe Sapp
Contract Amount : \$2,336,057.00
Completion Date : 08/15/2020
Project Description : Road widening, new curb, sidewalks, ADA ramps, driveways, road milling and resurfacing, stripping, new traffic signals and signage.

Project Name : KYTC 195152-Grant-Asphalt Rehab with Bridge
Owner : Kentucky Transportation Cabinet
Owner Contact : Jerry Keith
Contract Amount : \$7,216,243.00
Completion Date :
Project Description : Multi bridge replacement including HSIP porition with soil nailing

Project Name : City of Hamilton - Champion Mill Complex Public St Improvements
Owner : Hamilton County Engineer's Office
Owner Contact : Pat Yingling
Contract Amount : \$16,821,330.00
Completion Date : 08/01/2022
Project Description : Roadway reconstruction, revitalizing North B Street including utility updates to accomidate the Spooky Nook Sports Facility

Project Name : ODOT 190599 - Clermont County - Bridge Repair
Owner : Ohio Department of Transportation
Owner Contact : Jason Haus
Contract Amount : \$1,946,514.00
Completion Date : 05/31/2021
Project Description : Box beam bridge replacement

Project Name : Emergency Well Field Raw Water Improvement
Owner : City of Dayton, OH
Owner Contact : Ben Botkin
Contract Amount : \$458,217.00
Completion Date : 06/06/2020
Project Description : Burial of 1600 LF of 24 inch HDPE and 100 LF of 8-10 inch Ductile Iron water main pipe for the city of Dayton well field. Installation of new gate valves, power actuated valves, and air check valves ranging from 8 to 24 inches in size. Installation of new precast structures for all the new valve assemblies.

Project Name : Tolbert Road Superstructure Replacement
Owner : Butler County Engineers Office, OH
Owner Contact : Dave Quimby
Contract Amount : \$440,114.00
Completion Date :
Project Description : Box beam bridge replacement

Project Name : Maintenance Building; Lift Station- OSU 180435
Owner : The Ohio State University
Owner Contact :
Contract Amount : \$99,031.00
Completion Date :
Project Description : Installation of new pump station and re-routing of existing sewer system into new station

Project Name : Intersection Improvement - Mail/Cereal/Haldimand/Western
Owner : City of Hamilton, OH
Owner Contact : Dan Synder
Contract Amount : \$3,515,899.00
Completion Date : 09/29/2021
Project Description : Conversion of multi road intersection to 4-way intersection, site utilities, storm, water, gas, undercutting and full depth replacement including signalization. Project being performed over 5 phases in order to maintain traffic while work is completed.

Project Name : Southeastern Correctional Institute Water Main & Pump Station
Owner : Ohio Department of Rehabilitation and Correction
Owner Contact : Larry Parker
Contract Amount : \$1,427,622.00
Completion Date :
Project Description : Work performed for SCI includes multiple scopes: 1) Watermain improvements, consisting of the installation of new (and abandonment of existing) combination HDPE and ductile waterline and booster pump station and hookup, tied into existing clear well station, to replenish water resources for the facility; most of the work performed on rock hill side with areas +30% slope, 2) slip remediation along exterior of the facility, consisting of excavation and embankment rework, drainage adjustment, and rip rap installation. 3) interior sink hole repair, involves boring above existing tunnels under roadway to reroute the onsite drainage from low spot in facility yard to rip rap outfall outside the facility.

Project Name : Highland Pike Sanitary Sewer Replacement
Owner : Sanitary District No. 1 KY
Owner Contact : Lydia Watkins
Contract Amount : \$2,431,733.00
Completion Date :
Project Description : Sunesis to perform a horizontal directional drill of approximately 2,092 linear feet of 20" HDPE IPS DR-9 HDPE pipe approx. 60' deep with 216 linear feet of 15" PVC sanitary sewer pipe. Work also consists of two (2) new 4' diameter manholes up to 60' deep, and one (1) 6' diameter manhole. Work is located along Highland Pike near Ft. Wright Nature Center in Kenton County, Kentucky.

Project Name : Scioto Co. Bridge Wall Refacing - ODOT 200307
Owner : Ohio Department of Transportation
Owner Contact : Eric McLaughlin
Contract Amount : \$420,433.00
Completion Date : 09/01/2020
Project Description : Stabilize existing stone abutment walls utilizing a single side concrete wall installation

Project Name : Muskington River McConnelsville Design Project
Owner : Ohio Department of Transportation
Owner Contact : James Hilovsky
Contract Amount : \$1,345,861.00
Completion Date :
Project Description : Design Phase for reconstruction of Lock & Dam #7 replacement

Project Name : Allied - Landen Lake Part 1
Owner : Allied Technical Services
Owner Contact : Sam Beyer
Contract Amount : \$67,925.00
Completion Date :
Project Description : The removal of the existing to drain aggregate with 8" pipe. Install new toe drain aggregate with 12" Perforated HDPE SCH-17 pipe. Minor regrading, installation concrete flex-a-mat with erosion control blankets. Concrete surface & repairs as shown and based on quantities provided.

Project Name : Brown Co. Bridge Replacement - ODOT 200309
Owner : Ohio Department of Transportation
Owner Contact : Brent Davis
Contract Amount : \$890,694.00
Completion Date : 10/15/2020
Project Description : Box beam bridge replacement

Project Name : Emergency A Project - Blue Creek Hill
Owner : Ohio Department of Transportation
Owner Contact : Jeremy Grooms
Contract Amount : \$1,032,897.00
Completion Date :
Project Description : Emergency project for the Ohio Department of Transportation along SR 125 in Adams County, Ohio. Drilled shaft piles were used to stabilize approximately 375' of roadway, comprising 36" shafts ranging from 32' to 55' in depth. The reinforced shafts were supported by W24x162 beams embedded into a minimum of 10' of rock and encased with concrete for added strength.

Project Name : COL - Blueprint Linden-Agler - Berrell
Owner : City of Columbus, Public Utilities, DOSD
Owner Contact : Nick Domenick
Contract Amount : \$3,540,031.00
Completion Date :
Project Description : The project consists of construction of Biorention basins within the ROW and on parcels owned by the City of Columbus. Project includes the modifications to the existing stormwater collection and conveyance system, addition of curb bump outs and regional green infrastructure facilities. Project involves removal and replacement of sidewalks, concrete curbs and asphalt pavement in select areas.

Project Name : Essity - GMR Storm Drain
Owner : Essity Operation Wausau, LLC
Owner Contact :
Contract Amount : \$80,511.00
Completion Date :
Project Description : Repair of two (2) areas of observed damage to the 24" diameter river drainage line that runs from within our property to the Great Miami River.

Project Name : OSU Hospital Fountain Repair
Owner : Elite Construction
Owner Contact : Tim Reeves
Contract Amount : \$33,648.00
Completion Date : 08/12/2020
Project Description : Selective demolition of existing concrete structure and addition of sump pump with new CIP extended channel

Project Name : Allied - MSDGC - Rapid Run PS Platform Foundation
Owner : Allied Technical Services
Owner Contact :
Contract Amount : \$33,041.00
Completion Date :
Project Description : Excavate, F&I subbase, form, place, finish 1ea. Concrete pad and 1ea. Stair footing. Includes concrete in steel cap at completion. Backfill pad & regrade site.

Project Name : Glens of Delhi - Landslide Repair
Owner : Glens of Delhi
Owner Contact : Kim Thornton
Contract Amount : \$28,690.00
Completion Date : 08/27/2020
Project Description : Repair of landslide behind apartment by excavation, benching, embankment in engineered compacted lifts followed by installation of erosion matting and seeding

Project Name : City of Dayton - Keowee St Emergency Water Line Repair
Owner : City of Dayton, OH
Owner Contact :
Contract Amount : \$316,397.00
Completion Date :
Project Description : Keowee St. Emergency Repair of 36" PCCP Watermain & 48" CIP Plug (Scope 1) & 48" CIP Re-route with Valves on Ottawa St and Misc. Ductile Pipe (Scope 2).

Project Name : COD - Successful Way Sanitary Lift Station Improvements
Owner : City of Dayton, OH
Owner Contact : Kenny Roy
Contract Amount : \$976,246.00
Completion Date : 06/30/2021
Project Description : This project consist of the replacement and relocation of an existing sanitary lift station, construction of new 10" sanitary sewer, and construction of a new 6" force main. Demolition of existing lift station and installation of new lift station. Forcemain install.

Project Name : Hillsboro - Moberly Branch Phase 1
Owner : City of Hillsboro, OH
Owner Contact : Kirby Ellison
Contract Amount : \$375,039.00
Completion Date : 05/01/2021
Project Description : The project work shall consist of a 90 foot Pedestrian Bridge, approximately 1200 foot of Walking Trail, ADA compliant attributes and erlated appurtenances and equipment, including all labor, materials and equipment. Install a new asphalt walking trail with a pedestrian bridge crossing. Minor earthwork and restoration included.

Project Name : Ulliman Schutte Const - Lakeside Force Main
Owner : Allied Technical Services
Owner Contact : David MacMannis
Contract Amount : \$3,728,948.00
Completion Date : 10/01/2021
Project Description : pstream sanitary redirection: Manchester, Webber, Illinois, and Tytus. CIPP Lining: Armco to Wildwood, Pump Station Site: Easement off 700 North University Blvd., Force Main: North from pump station, Atco, Jackson, Tytus, Germantown, and Erie to the terminus at the Hydraulic Canal.

Project Name : Wilmington-Clarksville Connector PH 1 Bridges (DB)
Owner : City of Wilmington, OH
Owner Contact : Brian Shidaker
Contract Amount : \$957,079.00
Completion Date : 06/30/2021
Project Description : Design Build project. Install 4 pedestrian bridges on a future trail for Wilmington. Minor abutment rehab work, minimal approach work, clearing-grubbing, and install bridges and possibly a bridge deck.(TBD)

Project Name : ODNR – Little Miami Trail Improvements
Owner : Ohio Department of Natural Resources (ODNR)
Owner Contact :
Contract Amount : \$288,684.00
Completion Date :
Project Description : Little Miami Trail Improvements and Bike Trail Bridge Decking Replacement o 1 Mobilization per site o Removal of existing decking o Railing to be stacked and stored onsite for pick up by owner o Replacing the wood decking and railing in kind o Asphalt replacement

Project Name : Brown Co - Smoky Row Pre-stress Box Beams
Owner : Brown County Commissioners
Owner Contact :
Contract Amount : \$137,578.00
Completion Date : 03/30/2021
Project Description : Construct and set in place 7 CB21-48-50L pre-stressed concrete box beams for composite deck and type 5 TST guardrail.

Project Name : INDOT B-38554-A - Dearborn - Bridge Replacement
Owner : Ohio Department of Transportation
Owner Contact : William Fortson
Contract Amount : \$2,540,367.00
Completion Date : 10/31/2021
Project Description : Replacement of 3 failed structures on SR 46 at various locations. One location gets a 3 sided box culvert & minor approach work. Structure 2 and 3 are replacement of existing structure with Concrete bulb beams and cast in place deck. Minor roadway work is included at the approaches.

Project Name : INDOT 39771 - Ripley - Bridge Deck, Small Structure
Owner : Ohio Department of Transportation
Owner Contact : Terry Summers
Contract Amount : \$551,683.00
Completion Date : 08/31/2021
Project Description : Project 1600684- Remove & replace deteriorated culvert. Minor roadway work included. Project 1593145-Repair failed bridge deck and remove & replace curb. Bridge deck to be overlaid with asphalt.

Project Name : ODOT 200608 Warren Co Minor Widening (WAR106981)
Owner : Ohio Department of Transportation
Owner Contact : ODOT
Contract Amount : \$1,483,737.00
Completion Date : 10/01/2022
Project Description : Left turn lane construction with traffic signal. Waterline installation.

Project Name : Fuyao - Pump Station Design
Owner : Fuyao Glass
Owner Contact : Yun Ye (Thomas)
Contract Amount :
Completion Date :
Project Description : New Lift Station/Process Piping/Sewer System

Project Name : Roberts Pipeline-Neville Aggregates
Owner : Roberts Pipeline Inc.
Owner Contact : Nick Deaton
Contract Amount : \$21,334.00
Completion Date :
Project Description : Finish driving the 60 LF of NZ 19 sheet piling.

Project Name : Wilmington-Burtonville Reservoirs Rehab
Owner : City of Wilmington, OH
Owner Contact : Daniel P. Mendel, PE
Contract Amount : \$967,149.00
Completion Date : 12/20/2021
Project Description : The Work includes demolition of Burtonville Reservoir No. 1 Inlet Structure, construction of a new Reservoir No. 1 Inlet, demolition of Burtonville Reservoir No. 1 Outlet Structure, construction of a new Reservoir No. 1 Outlet Structure, replacement of miscellaneous yard valves, replacement of sluice gates in the Reservoir No. 2 Outlet Structure, removal of emergency overflow pipes in Reservoir Nos. 1 and 2 berm restoration, and addition of an emergency shutoff to Cowan Creek Pump Station motor controls connected to new level sensors in both reservoirs.

Project Name : INDOT B-40972-A - OH County SR 262 over S Fork
Owner : Ohio Department of Transportation
Owner Contact : Karlei Metcalf
Contract Amount : \$629,416.00
Completion Date : 11/30/2021
Project Description : Rehabilitate structure by a partial bridge deck replacement and overlay. Includes minor substructure work, approach slabs and approach pavement.

Project Name : City of Mason - SR741-2.19 Widening Project
Owner : City of Mason, OH
Owner Contact : Steve Hartke
Contract Amount : \$10,132,563.00
Completion Date : 09/30/2022
Project Description : Major widening to 5 lanes on SR 741 from SpyGlass Hill to Welden Drive. Project includes raised medians, shared use path, sidewalk, closed drainage system, 2 new signals, lighting and widening of WAR-741-0226 bridge. The project also includes a shared used path along Bethany and widening for eastbound right turn at Bethany and SR 741 intersection

Project Name : Principle Real Estate Grp - Reserve at Scioto Bluff - Sewer Line Ext
Owner : Principle Real Estate Grp
Owner Contact : Ron Beitzel
Contract Amount : \$456,297.00
Completion Date : 06/30/2021
Project Description : Sewer line extension.

Project Name : Elk Creek Metropark Sebald Park Bridge Improvements-ReBid 2021
Owner : Board of MetroParks Commissioners
Owner Contact : Matt Latham
Contract Amount : \$132,155.00
Completion Date : 10/31/2021
Project Description : THE EAST HIGH STREET (US 27) SANITARY SEWER REPLACEMENT PROJECT CONSISTS OF THE CONSTRUCTION OF APPROXIMATELY 1,050 L.F. OF 8" SANITARY SEWER MAIN ALONG THE SOUTH SIDE OF EAST HIGH STREET (US 27) FROM EAST OF TALLAWANDA ROAD/ ROUDEBUSH HALL TO PATTERSON AVENUE, FROM STA. 14+74.48 TO STA. 25+00.35. THE PROJECT ALSO INCLUDES THE REMOVAL OR ABANDONMENT OF THE EXISTING SANITARY SEWER THAT IS BEING REPLACED

Project Name : East High Street - US 27 -Sanitary Sewer Replacement 2021
Owner : Miami University, Oxford, OH
Owner Contact : John Porchowsky
Contract Amount : \$364,383.00
Completion Date : 07/30/2021
Project Description : THE EAST HIGH STREET (US 27) SANITARY SEWER REPLACEMENT PROJECT CONSISTS OF THE CONSTRUCTION OF APPROXIMATELY 1,050 L.F. OF 8" SANITARY SEWER MAIN ALONG THE SOUTH SIDE OF EAST HIGH STREET (US 27) FROM EAST OF TALLAWANDA ROAD/ ROUDEBUSH HALL TO PATTERSON AVENUE, FROM STA. 14+74.48 TO STA. 25+00.35. THE PROJECT ALSO INCLUDES THE REMOVAL OR ABANDONMENT OF THE EXISTING SANITARY SEWER THAT IS BEING REPLACED.

Project Name : CSX - Franklin Street, Troy Ohio
Owner : CSX Transportation
Owner Contact : Ariel Delos-Reyes
Contract Amount : \$23,227.00
Completion Date :
Project Description : Installation of curb for protection of newly installed signal arms.

Project Name : Kenton Co - Dry Creek Bridge Rehabilitation Project
Owner : Sanitary District No. 1 KY
Owner Contact : Brandy Miller
Contract Amount : \$839,939.00
Completion Date : 11/19/2021
Project Description : Repair & rehab superstructure and abutment in 2 phases. Includes complete beam & deck replacement.

Project Name : PVS Nolwood Chemicals Erosion Repair
Owner : PVS Chemicals, Inc.
Owner Contact : Scott Durham
Contract Amount : \$23,460.00
Completion Date :
Project Description : Mobilization/Demobilization · Saw Cut Existing Pavement Edge for Clean Interface with New Curb (100') · Install 3x3 Standard Catch Basin with HS20 Rated Grate (4' deep) · Excavate, Form and Pour 12"x24" Barrier Curb (100') · Install 24" ADS, N-12 Drainage Pipe with 45 deg. End Condition (approx. 20') · Remove and Replace Existing Rip Rap · Install additional Type B Rip Rap in Eroded area · Supply and Grade Topsoil (approx. 15 CY) · Install Seed and Erosion Matting (approx. 850 SF) · Private Utility Location and Marking

Project Name : COD - Dayton Parallel Sewer Phases C & D (CT213065)
Owner : City of Dayton, OH
Owner Contact : Kenny Roy
Contract Amount : \$19,259,659.00
Completion Date : 08/24/2024
Project Description : This project consists of the construction of a water main relocation and construction of an interceptor sewer parallel to the existing interceptor sewer along the West side of the Great Miami River from Longworth Siphon (near Albany Street) to Deeds Point Junction Chamber (near Riverside Drive). Approximately 11,350 linear feet of 6-foot high by 8-foot wide box culvert with "V" channel and 1,420 lft of 36 inch PCCP watermain will be installed via open cut.

Project Name : UC - Siddal Storm Sewer Improvement 21223
Owner : University of Cincinnati
Owner Contact : Gina Dumford
Contract Amount : \$180,425.00
Completion Date :
Project Description : Install 10" & 8" storm piping.

Project Name : INDOT R-42114-A - Franklin Co Small Structure Pipe Lining
Owner : Ohio Department of Transportation
Owner Contact : Travis Mankin
Contract Amount : \$215,124.00
Completion Date : 07/29/2022
Project Description : Extend & repair by culvert paving-a deteriorated culvert. Pipe invert paving, new pipe, minor earthwork, pump around, and new erosion control measures.

Project Name : Hamilton Co. Structure Modifications RFQ
Owner : Hamilton County Purchasing Department
Owner Contact : William Hasty
Contract Amount : \$19,700.00
Completion Date : 12/12/2021
Project Description : Construction of two detention basin retrofits (retrofits) located approximately 2-miles apart (by road) in Blue Ash and Sycamore Township, Hamilton County, Ohio. Both retrofits will involve installation of modifications to the existing outflow structures, and one of the retrofits will also involve installation of new rock structures.

Project Name : KYTC 211349 Kenton Co - I75 & I71 JPC Pavement with Grade & Drain (Call 103)
Owner : KYTC Division of Purchases
Owner Contact : Ryan Griffith
Contract Amount : \$9,805,989.00
Completion Date : 12/01/2022
Project Description : I-75/I-71 TURNAROUND INCLUDING NORTH LANES AND ENTRANCE RAMPS, A DISTANCE OF 0.32 MILES. JPC PAVEMENT WITH GRADE & DRAIN SYP NO. 06-00082.00. Drilled shaft piles were used to stabilize approximately 403' of roadway, comprising 36" shafts ranging from 18' to 50' in depth. W24x176 Piles were utilized for reinforcement. After the piles were installed, hardwood timber lagging was constructed in a top-down manner. The retention wall was then finished with a cast-in-place concrete wall incorporating a geocomposite drain board.

Project Name : Rebid - SORTA - Repairs & Rehabilitation - Montgomery Road Bridge Revision
Owner : SORTA - Metro
Owner Contact : Brad Mook
Contract Amount : \$986,720.00
Completion Date : 06/01/2022
Project Description : Repairs and rehabilitation for the SORTA owned Montgomery Road bridge over the Indiana and Ohio Railway.

Project Name : ODOT 220124 - Hamilton - I-71 and Stewart Ramp
Owner : Ohio Department of Transportation
Owner Contact : Tom Brammell
Contract Amount : \$508,302.00
Completion Date : 09/30/2022
Project Description : Project entails repair of small culvert along the 171 ramp F at Stewart Road, Hamilton County. The repair includes replacement of approx. 200 feet of pipe along the ramp and sock lining remaining approx. 360 ft. heading to Stewart Rd.

Project Name : General Motors Westchester Sewer Project
Owner : Greenfield Exempted Village Schools
Owner Contact : Ross Bozman
Contract Amount : \$255,046.00
Completion Date : 04/11/2022
Project Description : Sanitary Sewer Replacement

Project Name : Properties - River View Bluffs Developement
Owner : Sunesis Development
Owner Contact : Andrew Argo
Contract Amount : \$1,757,522.00
Completion Date : 09/30/2022
Project Description : Sub-division: Clearing, Earthwork, Sanitary Sewer, Storm, Water, Electric Crossovers, Curb and Asphalt.

Project Name : Needmore & Wagoner Ford WM Repair
Owner : City of Dayton, OH
Owner Contact : Donita Garner
Contract Amount : \$183,900.00
Completion Date :
Project Description : Water System, Mains, and Service Line Construction to repair a 36" concrete raw water main.

Project Name : Messer - Berea College CMIT Building
Owner : Messer Construction Co.
Owner Contact : Reggie Smith
Contract Amount : \$1,142,938.00
Completion Date :
Project Description : Sitework and utilities, new concrete substructure and steel superstructure, exterior and interior finishes, and complete building systems.

Project Name : MSDGC - CSO 513 Partial Sewer Separation
Owner : Metropolitan Sewer District of Greater Cincinnati
Owner Contact : Sam Kloss
Contract Amount : \$8,682,328.00
Completion Date : 03/20/2024
Project Description : The project is intended to reduce combined sewer overflows as CSO 513 by diverting stormwater to a total of approximately 7100 linear feet (LF) of storm sewer in various diameters, 48 manholes, several catch basins and other inlets, two stormwater outfalls, and other sewer appurtenances in two separate alignments. In addition to storm sewer installation, the project will include asphalt and concrete pavement and removal, management of contaminated soils, removal and/or abandonment of existing sewer lines, and relocation of existing utilities.

Project Name : ENV - Winchester KY - Town Branch Building Demolition
Owner : Sunesis Environmental
Owner Contact : Chris Hertzell
Contract Amount : \$577,126.00
Completion Date :
Project Description : Demolition of the existing Building, located at 12-18 E. Broadway Street, and construction of a poured retaining wall to support surrounding fill once building is removed.

Project Name : Morelia Group - Crossings of Oakley
Owner : Morelia Group
Owner Contact : Christine Scavone
Contract Amount : \$243,600.00
Completion Date :
Project Description : Remove & replace existing superstructure and partial foundations on the bridge.

Project Name : Tower Park Development - Tylersville Rd. Widening
Owner : Turtle Creek Management, Inc
Owner Contact : Mike Townsend
Contract Amount : \$1,525,261.00
Completion Date : 12/15/2022
Project Description : Widening of Tylersville Road to the North to provide two Westbound right turn lanes for two new access drives and one Eastbound left turn lane for one of the new access drives. Waterline relocation on Snyder road was performed to accommodate added turn lane.

Project Name : Duke - AM07 - Natural Gas Repair
Owner : Duke Energy, Cincinnati
Owner Contact : Charles Griebeling
Contract Amount : \$1,519,650.00
Completion Date : 04/03/2023
Project Description : Gas line repair along Ohio River. Repair area was below river and required cofferdams, Armorflex articulating matting. The existing river bank was also repaired with coir fabric and ODOT type A stone

Project Name : Terrex - Hyde Park Flats
Owner : Terrex Construction, LLC
Owner Contact : Danny Curren
Contract Amount : \$354,257.00
Completion Date : 11/15/2022
Project Description : Site demolition of existing library parking lot to install new storm detention structure. Earthwork and construction of new parking lot

Project Name : Trade 31 - Lord of Life Lutheran Church
Owner : Trade 31
Owner Contact : Garrett Welsch
Contract Amount : \$44,000.00
Completion Date : 11/07/2022
Project Description : Earthwork to provide adequate grades for new building expansion

Project Name : INDOT B-40273-A Bridge Replacement (Dearborn)
Owner : Indiana Dept. of Transportation
Owner Contact : David McManaway
Contract Amount : \$2,989,313.00
Completion Date : 10/13/2023
Project Description : Bridge Replacement on Harrison-Brookville Road over Johnson Fork Creek removing existing box beam bridge and replacing with Prestressed Concrete Bulb – T Beams. Project consisted of 14 in. piles, storm, roadway, and erosion control

Project Name : Mariemont High School - Pipe Failure and Hillside Slope
Owner : Mariemont City School District Board of Education
Owner Contact : Lance Hollander
Contract Amount : \$160,000.00
Completion Date :
Project Description : Repair of existing 24 Inch pipe failure on hillside installing new 24 Inch pipe and benching recompacting hillside

Project Name : Terrex - Hyde Park Flats 2 (Utilities)
Owner : Terrex Construction, LLC
Owner Contact : Danny Curren
Contract Amount : \$136,900.00
Completion Date :
Project Description : Site work included removal of curb and sidewalk. Installation of new storm, sanitary, and water utilities

Project Name : ODOT-230049 Culvert Replacement IR 275 (PID116308) HAM
Owner : Ohio Department of Transportation
Owner Contact : ODOT
Contract Amount : \$187,882.00
Completion Date : 08/15/2023
Project Description : Fill and plug existing 30-inch culvert and regrade infield area at I-74 and I-275 interchange to direct flow to existing 21-inch culvert. Remove steep portion of broken back 21-inch and stabilize embankment to carry flow to existing rock channel protection

Project Name : Lasalle Group - GM West Chester 2
Owner : Lasalle Group, Inc
Owner Contact : Ross Bozman
Contract Amount : \$68,500.00
Completion Date :
Project Description : Remove and dispose of existing battery storage rack, battery hoist, angle iron, and guardrail.

Project Name : ODOT - 230120 - CR23-01.42 Bridge Repair (PID113712) HAM
Owner : Ohio Department of Transportation
Owner Contact : Eric Young
Contract Amount : \$2,534,809.00
Completion Date : 11/01/2023
Project Description : Installed street lighting and sidewalk on the North side of West Road in the city of Harrison. This work required the existing bridge over I-75 to be widened. Widened superstructure and abutments, construct new piers to accommodate a 7 foot pedestrian walkway.

Project Name : Roberts-Piling on Neville Island
Owner : Roberts Pipeline Inc.
Owner Contact : Robin Kriz
Contract Amount : \$18,830.00
Completion Date :
Project Description :

Project Name : City of Oxford - Oxford Area Trail System Phases III & IV
Owner : City of Oxford, OH
Owner Contact : Scott Otto
Contract Amount : \$4,589,670.00
Completion Date : 09/27/2024
Project Description : Constructed two segments of 10' wide off-road asphalt trail. The length of the coal ash segment is 1.24 miles, from Bonham Road to the Dewitt log home parking lot. Length of Peffer Park segment is 0.94 miles from Peffer Park to Talawanda High School.

Project Name : Kettering - Flesher Bridge Replacement
Owner : City of Kettering, OH
Owner Contact : Chad Ingle
Contract Amount : \$570,540.00
Completion Date : 11/01/2023
Project Description : Replacement of the existing bridge structure with a single-span pre-cast three side culvert. Additional work includes related roadway adjustments and restorations

Project Name : Warren County - I75 and SR73 Interchange Improvements
Owner : Warren County
Owner Contact : Dan Corey
Contract Amount : \$3,211,058.00
Completion Date : 12/15/2023
Project Description : Improvements at the I-75 and SR-73 interchange including dual left turn lanes to the SB entrance ramp, right turn lane on the NB exit ramp, side mounted signal heads on SF exit ramp, right turn lane to Sharts Dr. and multi-use path along the South side of SR-73 to Conover Drive.

Project Name : Structure-ODOT 230457 Clermont SR 32 (PID103957)
Owner : Ohio Department of Transportation
Owner Contact : Jason Haus
Contract Amount : \$29,478,067.00
Completion Date : 08/01/2026
Project Description : Part 1 – Create a new collector distribute or road from SR-32 and tie into the existing ramp from SR-32 to Eastgate N. Dr. In addition, a new ramp constructed from SR-32 to Glen Este-Withamsville Rd. Access from SR 32 at Glen Este-Withamsville Road was removed. Phase 8 of the Eastern Corridor segment Iva Project. Part 2 – Create a new partial service interchange along SR-32 by widening and extending Glen Este – Withamsville Road over SR-32. In addition, the off ramp connecting SR-32 to Glen Este-Withamsville Road was completed. At grade access to SR-32 at Glen Este-Withamsville Road was removed.

Project Name : Kettering - West Ave Bridge PID 116012
Owner : City of Kettering, OH
Owner Contact : Mike Zink
Contract Amount : \$339,294.00
Completion Date : 10/04/2024
Project Description : Replace existing single span box beams with new box beams and composite deck.

Project Name : COD - Great Miami River & Mad River Main
Owner : City of Dayton, OH
Owner Contact : Liz Zelinski
Contract Amount : \$2,093,522.00
Completion Date : 10/31/2024
Project Description : The Great Miami River Water Main Crossing consists of the installation of approximately 1200 linear feet of new 24" water main by Horizontal Directional Drilling (HDD) and Open-Cut. HDD will be used to cross under the Great Miami River. The Mad River Water Main Crossing consists of the installation of approximately 1,200 linear feet of new 12" water main by HDD and Open-Cut. HDD will be used to cross under the Mad River and Woodman Drive.

Project Name : Miami County - Tipp-Elizabeth Rd Bridge Replacement
Owner : County of Miami Board of County Commissioners
Owner Contact : Britt Havenar
Contract Amount : \$532,100.00
Completion Date : 11/03/2023
Project Description : Replaced a single span concrete T-Beam bridge on stone/concrete abutments with a four-sided concrete box culvert on a branch of Honey creek. Minor roadway and grading work to tie into existing site conditions

Project Name : Clermont Co Eng - O'Bannonville Rd Bridge Rehab
Owner : Clermont County Board of Commissioners
Owner Contact : Doug Royer
Contract Amount : \$657,025.00
Completion Date : 12/01/2023
Project Description : Replace existing superstore, pier cap and modify existing abutment seat with minimal roadway work.

Project Name : COD - Wagner Ford Rd Raw Water Main
Owner : City of Dayton, OH
Owner Contact : Liz Zelinski
Contract Amount : \$1,313,297.00
Completion Date : 08/30/2024
Project Description : Abandon 230 linear feet of existing 36" water main along Wagner Ford Rd. in the intersection of Wagner Ford Rd and Needmore Rd. Construct 233 linear feet of 36 inch PCCP water main

Project Name : UK Memorial Coliseum
Owner : Sunesis Environmental
Owner Contact : Chris Hertzell
Contract Amount : \$963,462.00
Completion Date : 10/30/2023
Project Description : Site work consisting of 4 inch to 24 inch storm sewer during building demolition. New sanitary lateral was installed

Project Name : SD1 - St. Nicholas Place Storm & Sanitary Sewer Improvements
Owner : Sanitation District 1
Owner Contact : Brandy Miller
Contract Amount : \$503,547.00
Completion Date : 02/15/2024
Project Description : Install 100 linear feet of 20" (O.D.) storm sewer via HDD and 90 linear feet of 6" storm sewer, 59 linear feet of 15" storm sewer, 53 linear feet of 18" storm sewer, 53 linear feet of 24" storm sewer, 87 linear feet of 8" sanitary sewer, and 106 linear feet of 6" sanitary sewer lateral via open cut

Project Name : Norfolk-Canton Railroad Sidewalk
Owner : Norfolk Southern
Owner Contact : Cayela Wimberly
Contract Amount : \$201,299.00
Completion Date :
Project Description :

Project Name : INDOT - B-40895-B JACKSON CTY BRIDGE REPLACEMENT
Owner : Indiana Dept. of Transportation
Owner Contact : Joseph Middeler
Contract Amount : \$1,604,647.00
Completion Date : 10/31/2024
Project Description : Bridge replacement utilizing continuous reinforced concrete slab over Rider Ditch. Project included driving steel H-piles, placing erosion control protection rip rap and minor roadway incidentals.

Project Name : ODOT- 230467 HAM IR 74 SLIDE REPAIR
Owner : Ohio Department of Transportation
Owner Contact : Eric Young
Contract Amount : \$2,225,407.00
Completion Date : 08/12/2024
Project Description : Landslide remediation along the South side of interstate 74 just West of North Bend Road exit ramp by use of temporary shoring, slope repair using special benching and improving drainage by extending 54" culvert and installing a new culvert to convey ditch flow

Project Name : Porras - Angels' Castle Bridge
Owner : Beatriz Porras
Owner Contact : Dr. Beatriz Porras
Contract Amount : \$847,240.00
Completion Date :
Project Description : Installation of 56' span x 11.5' rise Consplan structure on spread footings.

Project Name : Messer - UK Kirwan Blanding
Owner : Messer Construction Co.
Owner Contact : Mike Wedding
Contract Amount : \$3,054,234.00
Completion Date : 09/25/2024
Project Description : Site earthwork and utilities. Prepare subgrade for new building. Install site sanitary, site water, site storm.

Project Name : Keeneland Admin Building
Owner : Keeneland Association
Owner Contact : John Johnson
Contract Amount : \$6,043,935.00
Completion Date :
Project Description : Construction of new operations building in an existing parking lot. Construction of an addition to the existing chalet building. Temporary earth retention system is needed at both buildings. Mass earthwork for each building to bring each site to subgrade. Storm, Water Sanitary on each site. Construction of ramp walls that lead to the Chalet Building.

Project Name : Hamilton - Bilstein Blvd Bridge Deck Replacement
Owner : City of Hamilton, OH
Owner Contact : Grant Fields
Contract Amount : \$2,107,891.00
Completion Date : 12/01/2024
Project Description : Replace bridge deck, parapets, wingwall and approach slabs. Modify the abutments to semi-integral type, replace abutment bearings, straighten damage beam and paint structural steel. Minor approach roadway and guard rail work.

Project Name : ENV- OSU Buck Hoist Slab
Owner : Sunesis Environmental
Owner Contact : Chirs Hertzell
Contract Amount : \$8,917.00
Completion Date :
Project Description : Install reinforced buck hoist slab.

Project Name : Blue Ash - Kenwood Rd Bridge
Owner : City of Blue Ash, OH
Owner Contact : Will Davis
Contract Amount : \$814,888.00
Completion Date : 08/02/2024
Project Description : reconstruct the deteriorating bridge under Kenwood Road. The bridge is located approximately 937 FT south of Pfeiffer Road and supports a three-lane section of Kenwood Road over a local stream. The project involves replacing the concrete bridge deck, concrete bridge abutments, approach roadways, and adjacent pedestrian bridge.

Project Name : CSX 2024
Owner : CSX Transportation
Owner Contact : Ariel Delos-Reyes
Contract Amount : \$90,000.00
Completion Date :
Project Description : Moving curbs

Project Name : Montgomery Cty Wagner Ford Rd Over CSX Bridge
Owner : MONTGOMERY COUNTY, OH
Owner Contact : Matt Venable
Contract Amount : \$1,132,982.00
Completion Date : 09/30/2024
Project Description : Rehabilitation of the MOT-CR218-1.00 (Wagner Ford Road) by expansion joints and patching abutments for a bridge over a CSX railroad track.

Project Name : Tim Hortons Retaining Wall - MI
Owner : TBD
Owner Contact : Pierre Montgagna
Contract Amount : \$626,200.00
Completion Date :
Project Description : Designed, excavated, and installed Redi-Rock gravity retaining wall approximated 150' long by 10' tall and

Project Name : Franklin HS Pedestrian Deck
Owner : TBD
Owner Contact : Patrick McAfee
Contract Amount : \$69,475.00
Completion Date :
Project Description : Hydro an existing bridge deck and overlay with SDC.

Project Name : Warren Cty - Carlisle Area Lift Station Phase 3
Owner : Warren County
Owner Contact : Kathryn Gilbert
Contract Amount : \$165,307.00
Completion Date :
Project Description : The project generally consists of upgrades to two lift stations in the Carlisle area, including the Central Avenue Lift Station and the Castlebrook Lift Station. Project includes the demolition and replacement of valve vault piping, installation of a permanent bypass connection for each forcemain, demolition and replace of valve vault access hatches, and bypass pumping

Project Name : COC - McMillan St Walk Improvements
Owner : City of Cincinnati, OH
Owner Contact : Dave Krusling
Contract Amount : \$538,919.00
Completion Date : 06/29/2024
Project Description : Construction of approximately 850 LF of 8-foot wide sidewalk along the South side of McMillan Street and 530 LF of low height segmented retaining wall

Project Name : Metroparks - VOA Park Shared Use Path
Owner : Butler County MetroParks
Owner Contact : Joe Bruns
Contract Amount : \$303,232.00
Completion Date : 12/31/2024
Project Description : Construction of a multi-use asphalt trail through the Southern portion of the Voice of America Metroparks

Project Name : GROWMARK Rail
Owner : TBD
Owner Contact :
Contract Amount : \$575,628.00
Completion Date :
Project Description : Demolition of existing pavement and stairs instillation of a new rail receiving pit

Project Name : UK - AG Research Facility Site Enabling
Owner : University of Kentucky
Owner Contact : Angela Powell
Contract Amount : \$1,441,632.00
Completion Date : 10/15/2024
Project Description : Site enabling project for the Agriculture Research Building. Site storm, water and sanitary. Site Demolition.

Project Name : UK Ag Research - Utility Excavation
Owner : University of Kentucky
Owner Contact : Angela Powell
Contract Amount : \$3,149,845.00
Completion Date :
Project Description : Excavation for chilled water lines, steam lines, force main, vaults. Including rock excavation

Project Name : BCEO - Maud Hughes Rd Slip Repair
Owner : Butler County Engineers Office, OH
Owner Contact : Eric Ziegler
Contract Amount : \$500,291.00
Completion Date :
Project Description : Remediation of a failed embankment slope located on the east side of Mauds Hughes Road by means of a drilled shaft retaining wall

Project Name : ODOT 240393 Scioto County SR 335 Bridge
Owner : Ohio Department of Transportation
Owner Contact : Chris Capper
Contract Amount : \$1,930,657.00
Completion Date : 08/01/2025
Project Description : Project replaced the existing three-span continuous concrete slab bridge over Rocky Fork with a single span concrete I beam structure on semi-integral abutments. Project included approximately 600 feet of additional full depth approach work on S.R. 335. Improvements included grading, drainage, guardrail, traffic control and others. Total project length is 775 feet

Project Name : Norfolk Southern 2024
Owner : Norfolk Southern
Owner Contact :
Contract Amount : \$75,000.00
Completion Date :
Project Description :

Project Name : INDOT B-40995-A Dearborn Bridge over SR1
Owner : Indiana Dept. of Transportation
Owner Contact : David McManaway
Contract Amount : \$2,320,106.00
Completion Date : 07/25/2025
Project Description : Replacement of existing three span continuous steel beam bridge built in 1984 with new continuous steel beam bridge 3 spans:52', 73', 52' clear roadway. SR1 over Central Railroad, Dearborn County

Project Name : ODOT 240465 Anderson Pedestrian Crossing (PID116551)
Owner : Ohio Department of Transportation
Owner Contact : Chirs Tuminello
Contract Amount : \$220,462.00
Completion Date : 10/01/2025
Project Description : Construction of a new pedestrian crossing on Clough Pike just east of Endovalley Dr., controlled by a pedestrian hybrid beacon. The project also includes new curb ramps North of Cough Pike at the Endovalley intersection and the removal of the existing curb ramp South of Clough Pike and West of Juilfs Park entrance

Project Name : SD1 - 701 Horsebranch Rd Aerial Sanitary Sewer
Owner : Sanitation District 1
Owner Contact : David Gilligan
Contract Amount : \$304,630.00
Completion Date :
Project Description : The project generally consists of, but is not limited to providing all labor, equipment, materials, supplies, tools, and supervision necessary to complete the replacement of the existing aerial sewer with new drilled shaft walls and the replacement of the existing sanitary sewer as shown on the Contract Documents prepared by Mason Carr Civil Engineering, LLC.

Project Name : Design-HDEV - Publix Romany Rd Retention Wall
Owner : TBD
Owner Contact :
Contract Amount : \$40,000.00
Completion Date :
Project Description :

Project Name : Hi-Five Moxxy Hotel Streetcar Sidewalk
Owner : TBD
Owner Contact : Scott Gruber
Contract Amount : \$65,973.00
Completion Date :
Project Description : Streetcar Curb & Sidewalk Demo and replacement of curb and gutter

Project Name : ODNR - Wolfden Lake Dam
Owner : Ohio Department of Natural Resources (ODNR)
Owner Contact :
Contract Amount : \$215,260.00
Completion Date : 06/01/2025
Project Description : The project focuses on the rehabilitation of the right downstream retaining wall at the dam and improvements to access leading to the crest of the dam. Major work items include the installation of a steel stairway from State Forest Service Road 25 to the crest of the dam, as well as the construction of a swale and drainage improvements adjacent to the hillside of the downstream retaining wall. Additionally, riprap will be installed at the toe of the right downstream retaining wall to enhance stability and prevent erosion. A movement monitoring system will also be implemented on the right downstream retaining wall to track any shifts and ensure structural integrity.

Project Name : BCEO - Hamilton- New London-Nichols Rd Bridges
Owner : Butler County Engineers Office, OH
Owner Contact : Gregory Wilkens
Contract Amount : \$975,896.00
Completion Date : 07/18/2025
Project Description : Replacement of an existing deteriorating superstructure over tributary to Paddys Run. These improvements include upgrading the superstructure by removal of existing box beams with new box beams, pouring concrete deck and replacing the guardrail.

Project Name : Clermont Cty Parks - Wilson Preserve Bridge
Owner : Clermont County Board of Commissioners
Owner Contact : Josh Torbeck
Contract Amount : \$501,627.00
Completion Date : 09/01/2025
Project Description : The Wilson Preserve Suspension Bridge project in Clermont County Park District, Ohio, involves constructing a new suspension bridge over the East Fork of the Little Miami River. This project aims to improve the park's trail system by providing a safe and scenic crossing for pedestrians and cyclists. The construction includes earthwork, site preparation, and the installation of stay cable foundation footings and drilled shafts. The bridge will feature a superstructure made of structural steel members, weathering steel towers, and fiberglass reinforced polymer/plastic lumber. Wire ropes, turnbuckles, and handrails will be installed to ensure safety, and a non-epoxy concrete sealer will be applied for durability.

Project Name : Preble Cty - Beam Removal
Owner : Preble County Commissioners
Owner Contact :
Contract Amount : \$50,994.00
Completion Date : 08/29/2025
Project Description : Removal of existing box beam bridge including disposal

Project Name : ODOT - 240554 Hamilton US 50 Culverts
Owner : Ohio Department of Transportation
Owner Contact :
Contract Amount : \$2,034,134.00
Completion Date : 09/30/2025
Project Description :

Project Name : QUOTE - DRY CREEK WWTP
Owner : Sanitation District 1
Owner Contact :
Contract Amount :
Completion Date :
Project Description :

Project Name : Montgomery Cty - Stillwater Lift & Force Main
Owner : MONTGOMERY COUNTY, OH
Owner Contact :
Contract Amount : \$13,963,761.00
Completion Date :
Project Description :

Project Name : Hamilton-Safe Route to School(Wasserman Road Sidewalks)
Owner : City of Hamilton, OH
Owner Contact :
Contract Amount : \$310,441.00
Completion Date : 09/01/2025
Project Description : Install sidewalks on West side of Wasserman Road from Victor Court to just South of Imperial Drive. Storm structures and drive aprons were added and modified to accommodate new sidewalk

REPORTS-WORK ON HAND REMAINING 2YR

Number of records 66 ▼

Displaying records 1 - 66

Project Number	Project Name	Account Name	Owner Contact	Owner Contact Phone	Contract Amount	Contract Remaining	Self Performed Work Amount	Completion Date
22-14	MSDGC - CSO 513 Partial Sewer Separation	Metropolitan Sewer District of Greater Cincinnati	Sam Kloss	(513) 490-0199	\$8,682,328.00	\$274,052	\$6,527,170	3/20/2024
22-18	KYTC 221334 (Call 108) - Campbell - Alexandria Pike (US 27)	Kentucky Transportation Cabinet	Cory Wilson	(859) 341-2700	\$471,314.00	\$63,560	\$342,441	9/30/2023
22-21	INDOT B-40273-A Bridge Replacement (Dearborn)	Indiana Dept. of Transportation	David McManaway	(812) 525-8279	\$2,989,313.00	\$233,730	\$2,299,273	10/13/2023
22-22	MSDGC - CSO 402-406 Wet Weather Impr	Metropolitan Sewer District of Greater Cincinnati	LaShaun Marshall	513-352-5254	\$18,736,920.00	\$804,333	\$14,318,511	1/1/2024
22-31	Lasalle Group - GM West Chester 2	Lasalle Group, Inc	Ross Bozman	(513) 833-6910	\$68,500.00	\$68,500	\$52,200	
23-03	INDOT R-38636-A Slide Correction Switzerland Co	Indiana Dept. of Transportation	Brad Burke	(812) 525-9911	\$6,360,804.00	\$108,460	\$5,102,133	
23-08	Richmond Sanitary District - Short Creek Lift Station Imp	City of Richmond, IN	Elijah Welch	(765) 969-1590	\$6,013,885.00	\$406,760	\$4,651,047	
23-13	Warren County - I75 and SR73 Interchange Improvements	Warren County	Dan Corey	(513) 431-1229	\$3,211,058.00	\$25,388	\$2,066,876	12/15/2023
23-17	Victory Parkway Vistas	Victory Vistas, LLC	Daniel Buchenroth	(513) 903-7019	\$1,585,231.00	\$31,350	\$1,375,949	10/2/2023
23-21	UK Memorial Coliseum	Sunesis Environmental	Chris Hertzell	(513) 335-9095	\$963,462.00	\$176,587	\$900,610	10/30/2023
23-22	Warren County - SR 48 Widening	Warren County	David Mick	(513) 695-3308	\$13,944,703.00	\$17,933	\$7,888,467	12/31/2024
23-25	INDOT - B-40424-A SR 262 Superstructure	Indiana Dept. of Transportation	David McManaway	(812) 525-8279	\$2,142,791.00	\$60,477	\$1,673,412	11/10/2024
23-30	INDOT - B-40895-B JACKSON CTY BRIDGE REPLACEMENT	Indiana Dept. of Transportation	Joseph Mlddeler	(502) 599-4824	\$1,604,647.00	\$205,721	\$1,364,163	10/31/2024
23-32S	Structure-ODOT 230457 Clermont SR 32 (PID103957)	Ohio Department of Transportation	Jason Haus	(513) 933-6529	\$29,478,067.00	\$18,774,917	\$20,091,975	8/1/2026
23-33	Porras - Angels' Castle Bridge	Beatriz Porras	Dr. Beatriz Porras	(513) 404-2334	\$847,240.00	\$847,240	\$786,774	
23-34	INDOT - R-42291-B Dearborn Slide Correction	Indiana Dept. of Transportation	David McManaway	(812) 525-8279	\$2,221,818.00	\$30,661	\$1,625,473	12/21/2024
23-35	ODOT- 230467 HAM IR 74 SLIDE REPAIR	Ohio Department of Transportation	Eric Young	(513) 435-7629	\$2,225,407.00	\$19,079	\$1,969,226	8/12/2024
23-36	MSDGC - Stonebridge Relief Sewer	MSD Greater Cincinnati	Kelvin Huseman		\$2,602,125.00	\$246,885	\$2,324,949	
23-37	Franklin - Community Park Tank Booster Station	City of Franklin, OH	Nicole Diak	(937) 707-8863	\$4,117,522.00	\$1,510,605	\$2,245,616	3/31/2025
23-38	COD - Great Miami River & Mad River Main	City of Dayton, OH	Liz Zellnski	(937) 333-6134	\$2,093,522.00	\$990,651	\$1,229,630	10/31/2024
23-41	WPAFB - Fueling System Repair	Wright Patterson Airforce Base	Elizabeth Brown	(513) 739-9968	\$225,000.00	\$225,000	\$215,922	
23-42	Keeneland Admin Building	Keeneland Association	John Johnson	(859) 269-1385	\$6,043,935.00	\$1,176,332	\$5,420,376	
23-43	Hamilton - Blstein Blvd Bridge Deck Replacement	City of Hamilton, OH	Grant Fields	(513) 785-7090	\$2,107,891.00	\$989,875	\$1,278,589	12/1/2024

24-35	ODOT 240465 Anderson Pedestrian Crossing (PID116551)	Ohio Department of Transportation	Chirs Tuminello	(513) 615-5559	\$220,462.00	\$220,462	\$103,984 10/1/2025
24-36	BCEO - Hamilton- New London- Nichols Rd Bridges	Butler County Engineers Office, OH	Gregory Wilkins	(513) 867-5744	\$975,896.00	\$975,896	\$722,539 7/18/2025
24-37	ODNR - Wolfden Lake Dam	Ohio Department of Natural Resources (ODNR)			\$215,260.00	\$215,280	\$194,438 6/1/2025
24-38	SD1 - Waterworks Phase II (Wildcat Outfall)	Sanitary District No. 1 KY	Cap Kiser	(859) 250-5416	\$7,504,315.00	\$7,504,315	\$4,687,282 3/6/2026
24-39	INDOT - B-41931- A Dearborn - Sneakville Rd Bridge D(A)	Indiana Dept. of Transportation	David McManaway	(812) 525-8279	\$1,238,197.00	\$1,238,197	\$947,746 10/3/2025
24-40	KYTC 245368 Kenton Co Ernstbridge Call 103	Kentucky Transportation Cabinet			\$3,471,672.00	\$3,471,672	\$2,951,441 11/1/2025
24-41	Clermont Cty Parks - Wilson Preserve Bridge	Clermont County Board of Commissioners	Josh Torbeck	(513) 732-2977	\$501,627.00	\$501,627	\$477,148 9/1/2025
24-42	Mt Orab - Waste Water Treatment Plant Imp	Village of Mt. Orab, Ohio			\$6,065,000.00	\$6,065,000	
24-43	Preble Cty - Beam Removal	Preble County Commissioners			\$50,994.00	\$50,994	\$38,515 8/29/2025
24-44	Hamilton-Safe Route to School(Wasserman Road Sidewalks)	City of Hamilton, OH			\$310,441.00	\$310,441	9/1/2025
24-45	Montgomery CO - Cricket Woods Lift Station	Montgomery County Sanitary Engineers, OH			\$1,105,525.00	\$1,105,525	\$666,900
24-46	ODOT - 240554 Hamilton US 50 Culverts	Ohio Department of Transportation			\$2,034,134.00	\$2,034,134	\$1,215,814 9/30/2025
24-47	Sorta - Queensgate Fuel Facility	Southwest Ohio Regional Transit Authority			\$369,034.00	\$369,034	\$142,430 12/31/2025
24-48	School Road - Containers	TBD			\$145,414.00	\$145,414	\$113,963 3/13/2025
24-49	Sitex - WPAFB Shoring	TBD			\$311,300.00	\$311,300	\$291,633
25-01	Greenevill Farm 1A & 1B Sanitary	Sunesis Properties			\$4,618,232.00	\$4,618,232	\$4,125,454
25-02	OSU - Campbell Hall - Atrium Space Helical	TBD			\$245,600.00	\$245,600	\$115,620
25-03	Montgomery Cty - Stillwater Lift & Force Main	MONTGOMERY COUNTY, OH			\$13,963,761.00	\$13,963,761	\$11,003,396
25-06	Design-HDEVP - Publix Romany Rd Retention Wall	TBD			\$40,000.00	\$40,000	

POWER OF ATTORNEY

(Attach to Bid Bond)

END OF SECTION

SECTION 00510 – NOTICE OF AWARD

CONTRACTOR: **SUNESIS CONSTRUCTION COMPANY**
2610 CRESCENTVILLE ROAD
WEST CHESTER, OH 45069

OWNER: Lexington-Fayette Urban County Government
Division of Water Quality
Lexington, Kentucky

PROJECT: St. Martin's Pump Station Elimination
Lexington-Fayette Urban County Government

LFUCG Bid No. 53-2025

You are hereby notified that the Owner has considered the Bid submitted by you for the above-described project in response to its Advertisement for Bids dated July 10, 2025.

It appears that it is to the best interest of said Owner to accept your Bid in the amount of **TWO MILLION, TWO HUNDRED EIGHTY-SEVEN THOUSAND, ONE HUNDRED** dollars **AND NO/100 (\$2,287,100.00)**, and you are hereby notified that your Bid has been accepted for

St. Martin's Pump Station Elimination

LFUCG Bid No. 53-2025

The Contractor is required by these Contract Documents to execute and deliver the formal Agreement (Contract) with the undersigned Owner and to furnish the required Contractor's Performance, Payment, Warranty, and Erosion and Sediment Control Bonds within fifteen (15) days from the date of the delivery of this Notice.

If you fail to execute said Agreement (Contract) and to furnish said Bonds within fifteen (15) days from the date of delivery of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and to award the Work covered by your Bid to another, or to re-advertise the Work or otherwise dispose thereof as the Owner may deem appropriate.

Dated this _____ day of _____, 20____.

Lexington-Fayette Urban County Government

By: _____

Title: _____

NOTICE OF ACCEPTANCE

Receipt of the above Notice of Award is hereby acknowledged this _____ day of _____, 20____.

By: _____

Title: _____

END OF SECTION

SECTION 00520 – AGREEMENT (CONTRACT)

THIS AGREEMENT, made on the 8 day of October, 2025, by and between Lexington Fayette Urban County Government, acting herein called "OWNER" and SUNESIS CONSTRUCTION COMPANY doing business as a Corporation, located in the City of West Chester, County of Bullitt, State of Ohio, hereinafter called "CONTRACTOR".

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of TWO MILLION, TWO HUNDRED EIGHTY-SEVEN THOUSAND, ONE HUNDRED dollars AND NO/100 (\$2,287,100.00) quoted in the BID by the CONTRACTOR, dated AUGUST 5, 2025, hereby agree to commence and complete the construction described as follows:

1.01 SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, supervision, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the BID, the Contract Documents, and the Specifications prepared by the Engineer for the

St. Martin's Pump Station Elimination
LFUCG Bid No. 53-2025

1.02 TIME OF COMPLETION

The time period estimated and authorized by the OWNER for Substantial Completion of Work by the AGREEMENT, in full, is hereby fixed as **270 consecutive calendar days**. The time shall begin ten (10) calendar days after CONTRACTOR is issued the Notice to Proceed.

1.03 ISSUANCE OF NOTICE TO PROCEED

Notice to Proceed for Work will be issued in whole or in part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the Engineer after consultation with the CONTRACTOR and the OWNER.

1.04 AGREEMENT (CONTRACT) AMOUNT

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the AGREEMENT as quoted in the BID, subject to any additions and deductions, as provided therein.

1.05 PROGRESS PAYMENTS

The OWNER shall make payments on account of the AGREEMENT in accordance with the General Conditions, as recommended by the Engineer and authorized by the OWNER, less the aggregate of previous payments.

1.06 ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after Final Completion of the Work, provided the Work is deemed "Final Completion" and fully accepted by the OWNER.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the AGREEMENT (CONTRACT) has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the OWNER shall upon certificate of the ENGINEER, and without terminating the AGREEMENT (CONTRACT), make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

1.07 EXTRA WORK

The OWNER, without invalidating the AGREEMENT (CONTRACT) may order extra work or make changes by altering, adding to or deducting from the Work, the AGREEMENT (CONTRACT) amount being adjusted accordingly. All such work shall be executed and paid for in accordance with the General Conditions.

1.08 LIQUIDATED DAMAGES

If the CONTRACTOR shall fail or refuse to complete the Work within the AGREEMENT (CONTRACT) Time, or extension of time granted by the OWNER, then the CONTRACTOR agrees as a partial consideration for the awarding of this AGREEMENT (CONTRACT) that the OWNER may retain the compensation otherwise to be paid to the CONTRACTOR the amount of one thousand dollars (\$1,000) per consecutive calendar day that the CONTRACTOR shall be in default after the Final Completion time stipulated in the Contract Documents. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain.

1.09 RIGHT TO REVIEW, AUDIT, AND INSPECT

The CONTRACTOR shall provide to the OWNER or its duly authorized representative(s), at any time during the course of the contract and up to five (5) years thereafter, access to any books, documents, papers, emails, and/or other records or communications which are directly pertinent to this specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

1.10 CONTRACT DOCUMENTS

In general, the Advertisement for Bids, Information Available to Bidders, the Bid, the General Conditions, Performance, Payment, Erosion and Sediment Control and Warranty Bonds, AGREEMENT (CONTRACT), Supplementary Conditions, Supplemental General Conditions for SRF, Technical Specifications, any and all Addenda, and Plan Drawings form the AGREEMENT (CONTRACT) and they are fully a part of the AGREEMENT (CONTRACT) as if hereto attached or herein repeated.

A full listing of the Contract Documents consist of the following:

Specifications:	Per Table of Contents
Drawings (Plans):	Per Table of Contents

IN WITNESSETH WHEREOF, the parties hereto have executed this AGREEMENT (CONTRACT) as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government
Lexington, Kentucky

(Owner)

ATTEST:

Mackenzie Stock
Clerk of Urban County Council
Deputy

By: Linda Gorton
(Signature of Mayor)

Linda Gorton Mayor
(Name/Title)

(Seal)

SUNESIS CONSTRUCTION COMPANY
(Contractor)

Mike Hunschmidt
(Secretary)*
John Z...
(Witness)

By: [Signature]
(Contractor's Signature)

Jason Shaw Vice President
(Name/Title)

2610 Crescentville Rd
(Address)

West Chester, OH 45069

*IMPORTANT: Strike out any non-applicable terms:

Secretary of the OWNER should attest. If the CONTRACTOR is corporation,
Secretary should attest. Give proper title of each person-executing AGREEMENT
(CONTRACT).

END OF SECTION

SECTION 00520 – AGREEMENT (CONTRACT)

THIS AGREEMENT, made on the _____ day of _____, 20____, by and between Lexington Fayette Urban County Government, acting herein called "OWNER" and _____ doing business as a _____ located in the City of _____, County of _____, State of _____, hereinafter called "CONTRACTOR".

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of _____ dollars quoted in the BID by the CONTRACTOR, dated _____, 20____, hereby agree to commence and complete the construction described as follows:

1.01 SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, supervision, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the BID, the Contract Documents, and the Specifications prepared by the Engineer for the
St. Martin's Pump Station Elimination
LFUCG Bid No. 53-2025

1.02 TIME OF COMPLETION

The time period estimated and authorized by the OWNER for Substantial Completion of Work by the AGREEMENT, in full, is hereby fixed as **270 consecutive calendar days**. The time shall begin ten (10) calendar days after CONTRACTOR is issued the Notice to Proceed.

1.03 ISSUANCE OF NOTICE TO PROCEED

Notice to Proceed for Work will be issued in whole or in part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the Engineer after consultation with the CONTRACTOR and the OWNER.

1.04 AGREEMENT (CONTRACT) AMOUNT

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the AGREEMENT as quoted in the BID, subject to any additions and deductions, as provided therein.

1.05 PROGRESS PAYMENTS

The OWNER shall make payments on account of the AGREEMENT in accordance with the General Conditions, as recommended by the Engineer and authorized by the OWNER, less the aggregate of previous payments.

1.06 ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after Final Completion of the Work, provided the Work is deemed "Final Completion" and fully accepted by the OWNER.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the AGREEMENT (CONTRACT) has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the OWNER shall upon certificate of the ENGINEER, and without terminating the AGREEMENT (CONTRACT), make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

1.07 EXTRA WORK

The OWNER, without invalidating the AGREEMENT (CONTRACT) may order extra work or make changes by altering, adding to or deducting from the Work, the AGREEMENT (CONTRACT) amount being adjusted accordingly. All such work shall be executed and paid for in accordance with the General Conditions.

1.08 LIQUIDATED DAMAGES

If the CONTRACTOR shall fail or refuse to complete the Work within the AGREEMENT (CONTRACT) Time, or extension of time granted by the OWNER, then the CONTRACTOR agrees as a partial consideration for the awarding of this AGREEMENT (CONTRACT) that the OWNER may retain the compensation otherwise to be paid to the CONTRACTOR the amount of one thousand dollars (\$1,000) per consecutive calendar day that the CONTRACTOR shall be in default after the Final Completion time stipulated in the Contract Documents. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain.

1.09 RIGHT TO REVIEW, AUDIT, AND INSPECT

The CONTRACTOR shall provide to the OWNER or its duly authorized representative(s), at any time during the course of the contract and up to five (5) years thereafter, access to any books, documents, papers, emails, and/or other records or communications which are directly pertinent to this specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

1.10 CONTRACT DOCUMENTS

In general, the Advertisement for Bids, Information Available to Bidders, the Bid, the General Conditions, Performance, Payment, Erosion and Sediment Control and Warranty Bonds, AGREEMENT (CONTRACT), Supplementary Conditions, Supplemental General Conditions for SRF, Technical Specifications, any and all Addenda, and Plan Drawings form the AGREEMENT (CONTRACT) and they are fully a part of the AGREEMENT (CONTRACT) as if hereto attached or herein repeated.

A full listing of the Contract Documents consist of the following:

Specifications:	Per Table of Contents
Drawings (Plans):	Per Table of Contents

IN WITNESSETH WHEREOF, the parties hereto have executed this AGREEMENT (CONTRACT) as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government
Lexington, Kentucky

(Owner)

ATTEST:

Clerk of Urban County Council

By: _____
(Signature of Mayor)

_____, Mayor
(Name/Title)

(Seal)

(Contractor)

(Secretary)*

By: _____
(Contractor's Signature)

(Witness)

(Name/Title)

(Address)

*IMPORTANT: Strike out any non-applicable terms:

Secretary of the OWNER should attest. If the CONTRACTOR is corporation,
Secretary should attest. Give proper title of each person-executing AGREEMENT
(CONTRACT).

END OF SECTION

SECTION 00550 – NOTICE TO PROCEED

CONTRACTOR: _____

OWNER: Lexington-Fayette Urban County Government
Lexington, Kentucky

PROJECT: St. Martin's Pump Station Elimination
Lexington-Fayette Urban County Government
Lexington, Kentucky

LFUCG Bid No. 53-2025

Agreement (Contract) Amount: _____ dollars (\$_____)

This Notice to Proceed is issued on _____, 20____; therefore, Contractor is hereby notified to commence Work on the referenced Project on or before _____, 20____ and to substantially complete Work within 270 CONSECUTIVE CALENDAR DAYS thereafter. The Agreement (Contract) completion date is therefore _____, 20____.

The Agreement (Contract) provides for assessment of the sum of one thousand dollars (\$1,000) as liquidated damages for each consecutive calendar day after the above established Agreement (Contract) completion date that the Work remains incomplete.

Lexington-Fayette Urban County Government

By: _____

Title: _____

Date: _____

END OF SECTION

SECTION 00600 – BONDS AND CERTIFICATES

(This page is intentionally left blank.)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

Sunesis Construction Co.

(Name of CONTRACTOR)

2610 Crescentville Road, West Chester, OH 45069

(Address of CONTRACTOR)

a corporation, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and Great American Insurance Company
(Name of Surety)

301 E. 4th Street, Cincinnati, OH 45202

(Address of Surety)

hereinto called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called "OWNER" in the penal sum of:

Two Million Two Hundred Eighty Seven Thousand One Hundred Dollars & 00/100 dollars (\$ 2,287,100.00),
for the payment of whereof Principal and Surety bind themselves, their heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into an Agreement (Contract) with OWNER for the
St. Martin's Pump Station Elimination, LFUCG Bid No. 53-2025 in accordance with Contract Documents
prepared by Strand Associates, Inc.® and dated July 10, 2025, which Agreement (Contract) is by
reference made a part hereof, and is hereinafter referred to as the Agreement (Contract).

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly
and faithfully perform said Agreement (Contract), then this obligation shall be null and void; otherwise it
shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Agreement (Contract), the OWNER having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Agreement (Contract) in accordance with its terms and conditions or
2. Obtain a Bid or Bids for completing the Agreement (Contract) in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for an Agreement (Contract) between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Agreement (Contract) or Agreements (Contracts) of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Agreement (Contract) Amount; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Agreement (Contract) Amount", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Agreement (Contract) and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of one (1) year from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

IN WITNESS WHEREOF, this instrument is executed in one counterparts, each one of (number)

which shall be deemed an original, this the 8th day of October, 2025.

ATTEST:

[Signature]
(Principal) Secretary

Sunesis Construction Co.
Principal

By: [Signature] (s)
2610 Crescentville Road
Address

West Chester, OH 45069

[Signature]
Witness as to Principal
2610 Crescentville Road
Address

Cincinnati, OH 45236

ATTEST:

[Signature]
(Surety) Secretary

Great American Insurance Company
Surety

By: [Signature]
Attorney-in-Fact

301 E. 4th Street
Address

Cincinnati, OH 45202

(SEAL)

[Signature]
Witness to Surety

5905 E. Galbraith Road, Suite 5000
Address

Cincinnati, OH 45202

Title: Attorney-in-Fact
Surety

By: Tiffany Gobich

Title: Witness

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Agreement (Contract).

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that

Sunesis Construction Co.

(Name of CONTRACTOR)

2610 Crescentville Road, West Chester, OH 45069

(Address of CONTRACTOR)

a corporation, hereinafter

(Corporation, Partnership, or Individual)

called Principal, and Great American Insurance Company

(Name of Surety)

301 E. 4th Street, Cincinnati, OH 45202

(Address of Surety)

hereinto called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called "OWNER" in the penal sum of:

Two Million Two Hundred Eighty Seven Thousand One Hundred Dollars & 00/100 dollars (\$ 2,287,100.00),
for the payment of whereof Principal and Surety bind themselves, their heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into an Agreement (Contract) with OWNER for the St. Martin's Pump Station Elimination, LFUCG Bid No. 53-2025 in accordance with Contract Documents prepared by Strand Associates, Inc.® and dated July 10, 2025, which Agreement (Contract) is by reference made a part hereof, and is hereinafter referred to as the Agreement (Contract).

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Agreement (Contract), then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor material, or both, used or reasonably required for use in the performance of the Agreement (Contract), labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Agreement (Contract).
2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant,

prosecute the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Agreement (Contract), it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in one counterparts, each one of
(number)

which shall be deemed an original, this the 8th day of October, 2025.

ATTEST:


(Principal) Secretary

Sunesis Construction Co.
Principal

By:  (s)
2610 Crescentville Road
Address

West Chester, OH 45069


Witness as to Principal
2610 Crescentville Road
Address

West Chester, OH 45069

ATTEST:


(Surety) Secretary

Great American Insurance Company
Surety

By:  Attorney-in-Fact
301 E. 4th Street
Address

Cincinnati, OH 45202

(SEAL)


Witness to Surety

5905 E. Galbraith Road, Suite 5000
Address

Cincinnati, OH 45236

Title: Attorney-in-Fact
Surety

By: Tiffany Gobich

Title: Witness

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Agreement (Contract).

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than **FOURTEEN**

No. 0 22684

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
MARK NELSON	ALL OF	ALL
TIFFANY GOBICH	CINCINNATI, OHIO	\$100,000,000
RANDAL T. NOAH		
SARAH KELSEY BECKER		
AUDRIA COLEMAN		
LIZ TALBOTT		
KATHRINE KREKELER		
G. DALE DERR		
GLADYS D. ROGERS		
NANCY NEMEC		
TAMMY L. MASTERS		
MEGHAN SCHRAER		
EVEN R. DERR		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this **13TH** day of **MAY**, 2025

Attest

GREAT AMERICAN INSURANCE COMPANY



Assistant Secretary

My L C. B.

John K. Webster

Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this **13TH** day of **MAY**, 2025

JOHN K. WEBSTER (877-377-2405)

, before me personally appeared JOHN K. WEBSTER, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2030

Susan A Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this

8th

day of

October

2025



My L C. B.

Assistant Secretary



Great American Insurance Group Tower
301 E. Fourth St.
Cincinnati, OH 45202

GAIG.com

Financial Division

GREAT AMERICAN INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND CAPITAL & SURPLUS AS OF DECEMBER 31, 2024

ADMITTED ASSETS

Bonds.....	\$ 5,845,018,164
Stocks.....	1,274,791,631
Mortgage loans on real estate.....	786,549,193
Real estate (net of encumbrances).....	1,804,762
Cash and short-term investments.....	561,729,903
Other invested assets.....	2,564,685,626
Receivable for securities.....	239,165
Investment income due and accrued.....	76,052,024
Agents' and premium balances.....	932,184,155
Reinsurance recoverable on loss payments.....	164,362,713
Federal income taxes.....	-
Net deferred tax asset.....	38,762,419
Receivable from affiliates.....	30,071,335
Receivable from Federal Crop Insurance Corporation.....	838,503,799
Company owned life insurance.....	203,209,682
Funds held as collateral.....	42,556,181
Funded deductibles.....	40,346,543
Other admitted assets.....	<u>40,901,134</u>

Total..... \$ 13,441,770,429

LIABILITIES, CAPITAL AND SURPLUS

Unpaid losses and loss expenses.....	\$ 6,256,158,380
Reserve for underwriting expenses.....	436,483,155
Reserve for unearned premiums.....	2,103,265,814
Federal income taxes.....	12,223,324
Ceded reinsurance premiums payable.....	233,911,190
Funds held under reinsurance treaties.....	865,928,291
Provision for reinsurance.....	46,334,958
Retroactive reinsurance ceded.....	(55,645,110)
Other liabilities.....	<u>240,895,349</u>
Total liabilities.....	<u>10,139,555,351</u>

Capital stock.....	\$ 15,440,600
Paid in surplus.....	911,548,324
Special surplus funds.....	53,160,920
Unassigned funds.....	<u>2,322,065,234</u>
Policyholders' surplus.....	<u>3,302,215,078</u>

Total..... \$ 13,441,770,429

Securities have been valued on the basis prescribed by the National Association of Insurance Commissioners.

STATE OF OHIO

COUNTY OF HAMILTON

Judith E. Gill, Vice President and Controller, and Stephen Beraha, Assistant Vice President and Assistant Secretary, being duly sworn, each for himself deposes and says that they are the above described officers of the Great American Insurance Company of Cincinnati, Ohio; that said Company is a corporation duly organized, existing and engaged in business as a Surety by virtue of the laws of the State of Ohio and has duly complied with all the requirements of the laws of said state applicable to said Company and is duly qualified to act as Surety under such laws; that said Company has also complied with and is duly qualified to act as Surety under Public Law 97-258 enacted September 13, 1982 (96 Stat. 1047 as amended: 31 U.S.C. 9304-9308); that to the best of their knowledge and belief the above statement is a full, true and correct Statement of the Assets, Liabilities and Capital & Surplus of the said Company as of December 31, 2024.

Subscribed and sworn to before me

this 28th day of March, 2025.

Public Notary



VALERIE SMITH
Notary Public
State of Ohio
My Comm. Expires
October 17, 2026

Controller

Assistant Secretary

Office of Risk Assessment
50 West Town Street
Third Floor - Suite 300
Columbus, Ohio 43215
(614)644-2658
Fax(614)644-3256
www.insurance.ohio.gov

Ohio Department of Insurance

Mike DeWine - Governor

Judith French - Director



Certificate of Compliance

Issued 06/25/2025

Effective 07/01/2025

Expires 06/30/2026

I, Judith French, hereby certify that I am the Director of Insurance in the State of Ohio and have supervision of insurance business in said State and as such I hereby certify that

GREAT AMERICAN INSURANCE COMPANY

of Ohio is duly organized under the laws of this State and is authorized to transact the business of insurance under the following section(s) of the Ohio Revised Code:

Section 3929.01 (A)

Accident & Health

Aircraft

Allied Lines

Boiler & Machinery

Burglary & Theft

Collectively Renewable A & H

Commercial Auto - Liability

Commercial Auto - No Fault

Commercial Auto - Physical Damage

Credit

Credit Accident & Health

Earthquake

Fidelity

Financial Guaranty

Fire

Glass

Group Accident & Health

Guaranteed Renewable A & H

Inland Marine

Medical Malpractice

Multiple Peril - Commercial

Multiple Peril - Farmowners

Multiple Peril - Homeowners

Noncancellable A & H

Nonrenew-Stated Reasons (A&H)

Ocean Marine

Other

Other Accident only

Other Liability

Private Passenger Auto - Liability

Private Passenger Auto - No Fault

Private Passenger Auto - Physical Damage

Surety

Workers Compensation

GREAT AMERICAN INSURANCE COMPANY certified in its annual statement to this Department as of December 31, 2024 that it has admitted assets in the amount of \$13,441,770,429, liabilities in the amount of \$10,139,555,351, and surplus of at least \$3,302,215,078.

IN WITNESS WHEREOF, I have hereunto subscribed my name and caused my seal to be affixed at Columbus, Ohio, this day and date.

Judith L. French

Judith French, Director



EROSION AND SEDIMENT CONTROL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

Sunesis Construction Co.

(Name of CONTRACTOR)

2610 Crescentville Road, West Chester, OH 45069

(Address of CONTRACTOR)

a _____ corporation, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and Great American Insurance Company
(Name of Surety)

301 E. 4th Street, Cincinnati, OH 45202

(Address of Surety)

hereinto called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called "OWNER" in the penal sum of:

Twenty Two Thousand Eight Hundred Seventy One Dollars & 00/100 dollars (\$ \$22,871.00), for the payment of whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into an Agreement (Contract) with OWNER for the St. Martin's Pump Station Elimination, LFUCG Bid No. 53-2025 in accordance with Contract Documents prepared by Strand Associates, Inc.® and dated July 10, 2025, which Agreement (Contract) is by reference made a part hereof, and is hereinafter referred to as the Agreement (Contract).

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly and faithfully perform said Agreement (Contract), then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Agreement (Contract), the OWNER having performed OWNER's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the installation, maintenance, and removal of the soil erosion and sediment controls and final stabilization of the site in accordance with the Agreement (Contract), the LFUCG Land Disturbance Permit, Chapter 16 Article X Division 5 of the LFUCG Code of Ordinances, and the KPDES General Permit for Stormwater Discharges Associated with Construction Activities (KYR 10).

2. Obtain a Bid or Bids for completing the installation, maintenance, and removal of the soil erosion and sediment controls and final stabilization of the site in accordance with the Agreement's (Contract's) terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for an Agreement (Contract) between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Agreement (Contract) or Agreements (Contracts) of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Agreement (Contract) Amount; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Agreement (Contract) Amount", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Agreement (Contract) and any amendments hereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration one (1) year from the date on which final payment under the Agreement (Contract) falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

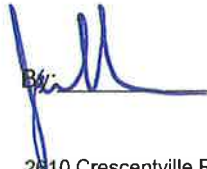
IN WITNESS WHEREOF, this instrument is executed in one counterparts, each one of
(number)

which shall be deemed an original, this the 8th day of October, 2025.

ATTEST:


(Principal) Secretary

Sunesis Construction Co.
Principal

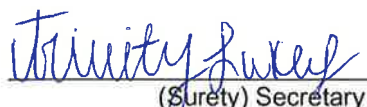
By:  (s)
2610 Crescentville Road
Address

West Chester, OH 45069


Witness as to Principal
2610 Crescentville Road
Address

Cincinnati, OH 45236

Great American Insurance Company
Surety

ATTEST:

(Surety) Secretary

By: 
Attorney-in-Fact

301 E. 4th Street
Address

Cincinnati, OH 45202

(SEAL)

Witness to Surety

5905 E. Galbraith Road, Suite 5000
Address

Cincinnati, OH 45202

Title: Attorney-in-Fact
Surety

By: Tiffany Gobich

Title: Witness

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Agreement (Contract).

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than **FOURTEEN**

No. 0 22684

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
MARK NELSON	ALL OF	ALL
TIFFIANY GOBICH	CINCINNATI, OHIO	\$100,000,000
RANDAL T. NOAH		
SARAH KELSEY BECKER		
AUDRIA COLEMAN		
LIZ TALBOTT		
KATHRINE KREKELER		
G. DALE DERR		
TRINITY LUKENS		
GLADYS D. ROGERS		
NANCY NEMEC		
TAMMY L. MASTERSON		
MEGHAN SCHRAER		
EVEN R. DERR		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 13TH day of MAY, 2025.

Attest

GREAT AMERICAN INSURANCE COMPANY



My L C. B.

Assistant Secretary

John K. Webster

JOHN K. WEBSTER (877-377-2405)
Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this 13TH day of MAY, 2025, before me personally appeared JOHN K. WEBSTER, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2030

Susan A Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 8th day of October

2025



My L C. B.

Assistant Secretary

1.04 WARRANTY BOND

Bond # F391523M

WARRANTY BOND

KNOW ALL MEN BY THESE PRESENTS, that

Sunesis Construction Co.

(Name of CONTRACTOR)

2610 Crescentville Road, West Chester, OH 45069

(Address of CONTRACTOR)

a corporation, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and Great American Insurance Company

(Name of Surety)

301 E. 4th Street, Cincinnati, OH 45202

(Address of Surety)

hereinto called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called "OWNER" in the penal sum of: _____

Two Million Two Hundred Eighty Seven Thousand One Hundred Dollars & 00/100 dollars (\$ 2,287,100.00),
for the payment of whereof Principal and Surety bind themselves, their heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents. The warranty bond shall be in
the amount of five percent (5%) of the final construction cost amount (based on contractor's final pay
request).

WHEREAS, Principal by written agreement is entering into an Agreement (Contract) with OWNER for the
St. Martin's Pump Station Elimination, LFUCG Bid No. 53-2025 in accordance with Contract Documents
prepared by Strand Associates, Inc.® and dated July 10, 2025, which Agreement (Contract) is by
reference made a part hereof, and is hereinafter referred to as the Agreement (Contract).

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, if the Principal
shall well and faithfully do and perform the required maintenance and shall indemnify and save harmless
the OWNER against all claims, loss or damage, and expenses of reconstruction or additional work
required to restore the Project to its acceptable condition within a period of one (1) year from the date of
acceptance by OWNER of the Project, then this obligation shall be void; otherwise, it shall remain in full
force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Any suit under this bond must be instituted before the expiration of one (1) year from the date on which
final payment under the Contract falls due.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the
OWNER named herein or the heirs, executors, administrators, successors, or assigns of the OWNER.

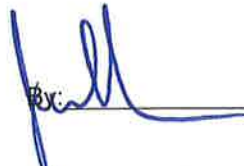
IN WITNESS WHEREOF, this instrument is executed in one counterparts, each one of
(number)

which shall be deemed an original, this the 8th day of October, 2025

ATTEST:


(Principal) Secretary

Sunesis Construction Co.
Principal

By:  (s)
2610 Crescentville Road
Address

West Chester, OH 45069


Witness as to Principal
2610 Crescentville Road
Address

Cincinnati, OH 45236

Great American Insurance Company
Surety

ATTEST:


(Surety) Secretary

By:  Attorney-in-Fact

301 E. 4th Street
Address

Cincinnati, OH 45202

(SEAL)


Witness to Surety

5905 E. Galbraith Road, Suite 5000
Address

Cincinnati, OH 45202

Title: Attorney-in-Fact
Surety

By: Tiffany Gobich

Title: Witness

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Agreement (Contract).

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than **FOURTEEN**

No. 0 22684

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
MARK NELSON	ALL OF	ALL
TIFFANY GOBICH	CINCINNATI, OHIO	\$100,000,000
RANDAL T. NOAH		
SARAH KELSEY BECKER		
AUDRIA COLEMAN		
LIZ TALBOTT		
KATHRINE KREKELER		
G. DALE DERR		
TRINITY LUKENS		
GLADYS D. ROGERS		
NANCY NEMEC		
TAMMY L. MASTERSON		
MEGHAN SCHRAER		
EVEN R. DERR		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 13TH day of MAY, 2025.

Attest

GREAT AMERICAN INSURANCE COMPANY



My L C. B.

Assistant Secretary

John K. Webster

Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

JOHN K. WEBSTER (877-377-2405)

On this 13TH day of MAY, 2025, before me personally appeared JOHN K. WEBSTER, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



SUSAN A KOHORST
Notary Public
State of Ohio
My Comm. Expires
May 18, 2030

Susan A Kohorst

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 8th day of October, 2025.



My L C. B.

Assistant Secretary



SUNECO-C01

MKESSINGER

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/7/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Houchens Insurance Group 505 Wellington Way Lexington, KY 40503	CONTACT NAME: Mary Kessinger, CRIS, KACSR	
	PHONE (A/C, No, Ext): (270) 982-2252 1252 FAX (A/C, No): (270) 843-8808	
	E-MAIL ADDRESS: mkessinger@higusa.com	
INSURED Sunesis Construction Co., Inc. 2610 Crescentville Rd West Chester, OH 45069	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Cincinnati Insurance Company	10677
	INSURER B: Allianz Global Corporate & Specialty, North America Group	7617
	INSURER C: Siriuspoint Specialty Insurance Corporation	16820
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☐ LOC OTHER:	X		EPP 0724787	9/1/2025	9/1/2026	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 OHIO STOP GAP \$ 1,000,000
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY	X		EPP 0724787	9/1/2025	9/1/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$ 0			EPP 0724787	9/1/2025	9/1/2026	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 aggregate \$ 5,000,000
A	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☒ If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	EWC 0724844	9/1/2025	9/1/2026	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
B	☒ Leased/Rent Equip	X		MZI93079910	9/1/2025	9/1/2026	Limit 20,000,000
C	☒ Pollution/Profession			CPPL D0001131	9/1/2025	9/1/2026	Poll/Professional 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

St. Martin's Pump Station Elimination, LFCCG Bid No. 53-2025,
St. Martin's Pump Station Elimination, LFCCG Bid No. 53-2025, Lexington-Fayette Urban County Government, Kentucky. LFUCG and Strand Associates, Inc. are additional insured with respect to General Liability, Auto Liability, Pollution Liability, and Excess/Umbrella Liability. LFUCG is an insured with respect to Builder's Risk policy. In addition, see attached additional insured endorsements for General Liability and Auto Liability policies.

CERTIFICATE HOLDER

CANCELLATION

Strand Associates, Inc 651 Perimeter Dr., STE 220 Lexington, KY 40517	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Houchens Insurance Group		NAMED INSURED Sunesis Construction Co., Inc. 2610 Crescentville Rd West Chester, OH 45069	
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Excess Liability

Insurance Carrier: Fair American Select Insurance Company (NAIC 35157)

Policy #: #CSX-8000595-01

Policy Term: 09/01/2025 - 09/01/2026

Policy Limits: \$5,000,000 Each Occurrence Limit / \$5,000,000 Aggregate Limit

Insurance Carrier: Endurance American Specialty Insurance Company (NAIC 41718)

Policy #: ELD30096177000

Policy Term: 09/01/2025 - 09/01/2026

Policy Limits: \$5,000,000 Each Occurrence Limit / \$5,000,000 Aggregate Limit

Insurance Carrier: Navigators Specialty Insurance Company (NAIC 36056)

Policy #: GA25EXCZ06640IC

Policy Term: 09/01/2025 - 09/01/2026

Policy Limits: \$10,000,000 Each Occurrence Limit / \$10,000,000 Aggregate Limit

Insurance Carrier: Everest Indemnity Insurance Company (NAIC 10851)

Policy #: GB3EX00028251

Policy Term: 09/01/2025 - 09/01/2026

Policy Limits: \$10,000,000 Each Occurrence Limit part of \$20,000,000 / \$10,000,000 Aggregate Limit part of \$20,000,000

Insurance Carrier: United Specialty Insurance Company (NAIC 12537)

Policy #: BTM2513301

Policy Term: 09/01/2025 - 09/01/2026

Policy Limits: \$10,000,000 Each Occurrence Limit part of \$20,000,000 / \$10,000,000 Aggregate Limit part of \$20,000,000

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**CONTRACTORS ADDITIONAL INSURED - AUTOMATIC STATUS
AND AUTOMATIC WAIVER OF SUBROGATION
WHEN REQUIRED IN WRITTEN CONTRACT, AGREEMENT,
PERMIT OR AUTHORIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Additional Insured - Owners, Lessees Or Contractors - Automatic Status For Other Parties When Required In Written Contract Or Agreement With You

1. **Section II - Who Is An Insured** is amended to include as an additional insured any person or organization you have agreed in writing in a contract or agreement to add as an additional insured on this Coverage Part. Such person(s) or organization(s) is an additional insured only with respect to liability for:

a. "Bodily injury", "property damage" or "personal and advertising injury" *caused, in whole or in part, by the performance of your ongoing operations by you or on your behalf, under that written contract or written agreement. Ongoing operations does not apply to "bodily injury" or "property damage" occurring after:*

(1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

(2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project; and

b. "Bodily injury" or "property damage" *caused, in whole or in part, by "your work" performed under that written contract or written agreement and in-*

cluded in the "products-completed operations hazard", but only if:

(1) The Coverage Part to which this endorsement is attached provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard"; and

(2) The written contract or written agreement requires you to provide additional insured coverage included within the "products-completed operations hazard" for that person or organization.

If the written contract or written agreement requires you to provide additional insured coverage included within the "products-completed operations hazard" for a specified length of time for that person or organization, the "bodily injury" or "property damage" must occur prior to the expiration of that period of time in order for this insurance to apply.

If the written contract or written agreement requires you to provide additional insured coverage for a person or organization per only ISO additional insured endorsement form number **CG 20 10**, without specifying an edition date, and without specifically requiring additional insured coverage included within the "products-completed operations hazard", this Paragraph **b.** does not apply to that person or organization.

2. If the written contract or written agreement described in Paragraph 1. above specifically requires you to provide additional insured coverage to that person or organization:

a. *Arising out of your ongoing operations or arising out of "your work"; or*

- b. By way of an edition of an ISO additional insured endorsement that includes *arising out of* your ongoing operations or *arising out of* "your work";

then the phrase *caused, in whole or in part, by* in Paragraph **A.1.a.** and/or Paragraph **A.1.b.** above, whichever applies, is replaced by the phrase *arising out of*.

3. With respect to the insurance afforded to the additional insureds described in Paragraph **A.1.**, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- a. The preparing, approving or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

4. This Paragraph **A.** does not apply to additional insureds described in Paragraph **B.**

B. Additional Insured - State Or Governmental Agency Or Subdivision Or Political Subdivision - Automatic Status When Required In Written Permits Or Authorizations

1. **Section II - Who Is An Insured** is amended to include as an additional insured any state or governmental agency or subdivision or political subdivision you have agreed in writing in a permit or authorization to add as an additional insured on this Coverage Part. Such state or governmental agency or subdivision or political subdivision is an additional insured only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued, in writing, a permit or authorization.

2. With respect to the insurance afforded to the additional insureds described in Paragraph **B.1.**, the following additional exclusions apply:

This insurance does not apply to:

- a. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or
- b. "Bodily injury" or "property damage" included within the "products-completed operations hazard."

- C. The insurance afforded to additional insureds described in Paragraphs **A.** and **B.**:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the written contract, written agreement, written permit or written authorization to provide for such additional insured; and
3. Does not apply to any person, organization, state, governmental agency or subdivision or political subdivision specifically named as an additional insured for the same project in the schedule of an endorsement added to this Coverage Part.

- D. With respect to the insurance afforded to the additional insureds described in Paragraphs **A.** and **B.**, the following is added to **Section III - Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract, written agreement, written permit or written authorization described in Paragraphs **A.** and **B.** For the purpose of determining the required amount of insurance only, we will include the minimum amount of any Umbrella Liability or Excess Liability coverage required for that additional insured in that written contract, written agreement, written permit or written authorization; or
2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

- E. **Section IV - Commercial General Liability Conditions** is amended to add the following:

Automatic Additional Insured Provision

This insurance applies only if the "bodily injury" or "property damage" occurs, or the "personal and advertising injury" offense is committed:

1. During the policy period; and
 2. Subsequent to your execution of the written contract or written agreement, or the issuance of a written permit or written authorization, described in Paragraphs **A.** and **B.**
- F. Except when **G.** below applies, the following is added to **Section IV - Commercial General Liability Conditions, Other Insurance**, and supersedes any provision to the contrary:

When Other Additional Insured Coverage Applies On An Excess Basis

This insurance is primary to other insurance available to the additional insured described in Paragraphs **A.** and **B.** except:

1. As otherwise provided in **Section IV - Commercial General Liability Conditions, Other Insurance, b. Excess Insurance**; or
 2. For any other valid and collectible insurance available to the additional insured as an additional insured on another insurance policy that is written on an excess basis. In such case, this insurance is also excess.
- G. The following is added to **Section IV - Commercial General Liability Conditions, Other Insurance**, and supersedes any provision to the contrary:

Primary Insurance When Required By Written Contract, Agreement, Permit Or Authorization

Except when wrap-up insurance applies to the claim or "suit" on behalf of the additional insured, this insurance is primary to any other insurance available to the additional insured described in Paragraphs **A.** and **B.** provided that:

1. The additional insured is a Named Insured under such other insurance; and
2. You have agreed in writing in a contract, agreement, permit or authorization de-

scribed in Paragraph **A.** or **B.** that this insurance would be primary to any other insurance available to the additional insured.

As used in this endorsement, wrap-up insurance means a centralized insurance program under which one party has secured either insurance or self-insurance covering some or all of the contractors or subcontractors performing work on one or more specific project(s).

Primary And Noncontributory Insurance When Required By Written Contract, Agreement, Permit Or Authorization

Except when wrap-up insurance applies to the claim or "suit" on behalf of the additional insured, this insurance is primary to and will not seek contribution from any other insurance available to the additional insured described in Paragraphs **A.** and **B.** provided that:

1. The additional insured is a Named Insured under such other insurance; and
2. You have agreed in writing in a contract, agreement, permit or authorization described in Paragraph **A.** or **B.** that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

As used in this endorsement, wrap-up insurance means a centralized insurance program under which one party has secured either insurance or self-insurance covering some or all of the contractors or subcontractors performing work on one or more specific project(s).

- H. **Section IV - Commercial General Liability Conditions, Transfer Of Rights Of Recovery Against Others To Us** is amended by the addition of the following:

Waiver of Subrogation

We waive any right of recovery against any additional insured under this endorsement, because of any payment we make under this endorsement, to whom the insured has waived its right of recovery in a written contract, written agreement, written permit or written authorization. Such waiver by us applies only to the extent that the insured has waived its right of recovery against such additional insured prior to loss.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED - DESIGNATED
PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective: 09/01/2024	Policy Number: EPP0724787
Named Insured: SUNESIS CONSTRUCTION CO	
Countersigned by:	

(Authorized Representative)

The person or organization named in the following schedule is an "insured" to the extent of their liability for the conduct of another "insured" as provided in **SECTION II - COVERED AUTOS LIABILITY COVERAGE, A. Coverage, 1. Who is an Insured**, Paragraph c.

Schedule

Additional Insured

ANY PERSON OR ORGANIZATION REQUIRED IN A CONTRACT TO BE NAMED AS ADDITIONAL INSURED

Address:



SUNECO-C01

MKESSINGER

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/7/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Houchens Insurance Group 505 Wellington Way Lexington, KY 40503	CONTACT NAME: Mary Kessinger, CRIS, KACSR PHONE (A/C, No, Ext): (270) 982-2252 1252 E-MAIL ADDRESS: mkessinger@higusa.com FAX (A/C, No): (270) 843-8808
INSURED Sunesis Construction Co., Inc. 2610 Crescentville Rd West Chester, OH 45069	INSURER(S) AFFORDING COVERAGE INSURER A : Cincinnati Insurance Company INSURER B : Siriuspoint Specialty Insurance Corporation INSURER C : INSURER D : INSURER E : INSURER F : NAIC # 10677 16820

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☐ LOC OTHER:	X		EPP 0724787	9/1/2025	9/1/2026	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 OHIO STOP GAP \$ 1,000,000
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY	X		EPP 0724787	9/1/2025	9/1/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	☒ UMBRELLA LIAB ☐ EXCESS LIAB DED ☒ RETENTION \$ 0			EPP 0724787	9/1/2025	9/1/2026	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 aggregate \$ 5,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	EWC 0724844	9/1/2025	9/1/2026	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
B	Commercial Umbrella	X		TSX-001077-25	9/1/2025	9/1/2026	Umbrella Excess 5,000,000
B	Pollution/Profession			CPPL D0001131	9/1/2025	9/1/2026	Poll/Professional 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

St. Martin's Pump Station Elimination
St. Martin's Pump Station Elimination, LFCCG Bid No. 53-2025, Lexington-Fayette Urban County Government, Kentucky. LFUCG and Strand Associates, Inc. are additional insured with respect to General Liability, Auto Liability, Pollution Liability, and Excess/Umbrella Liability. LFUCG is an insured with respect to Builder's Risk policy. In addition, see attached additional insured endorsements for General Liability and Auto Liability policies.

CERTIFICATE HOLDER

CANCELLATION

Lexington Fayette Urban Co. Government 200 East Main St. Lexington, KY 40507	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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ADDITIONAL REMARKS SCHEDULE

AGENCY Houchens Insurance Group		NAMED INSURED Sunesis Construction Co., Inc. 2610 Crescentville Rd West Chester, OH 45069	
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**Excess Liability****Insurance Carrier: Fair American Select Insurance Company (NAIC 35157)****Policy #: #CSX-8000595-01****Policy Term: 09/01/2025 - 09/01/2026****Policy Limits: \$5,000,000 Each Occurrence Limit / \$5,000,000 Aggregate Limit****Insurance Carrier: Endurance American Specialty Insurance Company (NAIC 41718)****Policy #: ELD30096177000****Policy Term: 09/01/2025 - 09/01/2026****Policy Limits: \$5,000,000 Each Occurrence Limit / \$5,000,000 Aggregate Limit****Insurance Carrier: Navigators Specialty Insurance Company (NAIC 36056)****Policy #: GA25EXCZ06640IC****Policy Term: 09/01/2025 - 09/01/2026****Policy Limits: \$10,000,000 Each Occurrence Limit / \$10,000,000 Aggregate Limit****Insurance Carrier: Everest Indemnity Insurance Company (NAIC 10851)****Policy #: GB3EX00028251****Policy Term: 09/01/2025 - 09/01/2026****Policy Limits: \$10,000,000 Each Occurrence Limit part of \$20,000,000 / \$10,000,000 Aggregate Limit part of \$20,000,000****Insurance Carrier: United Specialty Insurance Company (NAIC 12537)****Policy #: BTM2513301****Policy Term: 09/01/2025 - 09/01/2026****Policy Limits: \$10,000,000 Each Occurrence Limit part of \$20,000,000 / \$10,000,000 Aggregate Limit part of \$20,000,000**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED - DESIGNATED
PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective: 09/01/2024	Policy Number: EPP0724787
Named Insured: SUNESIS CONSTRUCTION CO	
Countersigned by:	

(Authorized Representative)

The person or organization named in the following schedule is an "insured" to the extent of their liability for the conduct of another "insured" as provided in **SECTION II - COVERED AUTOS LIABILITY COVERAGE, A. Coverage, 1. Who is an Insured**, Paragraph c.

Schedule

Additional Insured

ANY PERSON OR ORGANIZATION REQUIRED IN A CONTRACT TO BE NAMED AS ADDITIONAL INSURED

Address:

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**CONTRACTORS ADDITIONAL INSURED - AUTOMATIC STATUS
AND AUTOMATIC WAIVER OF SUBROGATION
WHEN REQUIRED IN WRITTEN CONTRACT, AGREEMENT,
PERMIT OR AUTHORIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Additional Insured - Owners, Lessees Or Contractors - Automatic Status For Other Parties When Required In Written Contract Or Agreement With You

1. Section II - Who Is An Insured is amended to include as an additional insured any person or organization you have agreed in writing in a contract or agreement to add as an additional insured on this Coverage Part. Such person(s) or organization(s) is an additional insured only with respect to liability for:

a. "Bodily injury", "property damage" or "personal and advertising injury" *caused, in whole or in part, by the performance of your ongoing operations by you or on your behalf, under that written contract or written agreement. Ongoing operations does not apply to "bodily injury" or "property damage" occurring after:*

(1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

(2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project; and

b. "Bodily injury" or "property damage" *caused, in whole or in part, by "your work" performed under that written contract or written agreement and in-*

cluded in the "products-completed operations hazard", but only if:

(1) The Coverage Part to which this endorsement is attached provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard"; and

(2) The written contract or written agreement requires you to provide additional insured coverage included within the "products-completed operations hazard" for that person or organization.

If the written contract or written agreement requires you to provide additional insured coverage included within the "products-completed operations hazard" for a specified length of time for that person or organization, the "bodily injury" or "property damage" must occur prior to the expiration of that period of time in order for this insurance to apply.

If the written contract or written agreement requires you to provide additional insured coverage for a person or organization per only ISO additional insured endorsement form number **CG 20 10**, without specifying an edition date, and without specifically requiring additional insured coverage included within the "products-completed operations hazard", this Paragraph b. does not apply to that person or organization.

2. If the written contract or written agreement described in Paragraph 1. above specifically requires you to provide additional insured coverage to that person or organization:

a. *Arising out of your ongoing operations or arising out of "your work"; or*

- b. By way of an edition of an ISO additional insured endorsement that includes *arising out of* your ongoing operations or *arising out of* "your work";

then the phrase *caused, in whole or in part, by* in Paragraph **A.1.a.** and/or Paragraph **A.1.b.** above, whichever applies, is replaced by the phrase *arising out of*.

3. With respect to the insurance afforded to the additional insureds described in Paragraph **A.1.**, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- a. The preparing, approving or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

4. This Paragraph **A.** does not apply to additional insureds described in Paragraph **B.**

B. Additional Insured - State Or Governmental Agency Or Subdivision Or Political Subdivision - Automatic Status When Required In Written Permits Or Authorizations

1. **Section II - Who Is An Insured** is amended to include as an additional insured any state or governmental agency or subdivision or political subdivision you have agreed in writing in a permit or authorization to add as an additional insured on this Coverage Part. Such state or governmental agency or subdivision or political subdivision is an additional insured only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued, in writing, a permit or authorization.

2. With respect to the insurance afforded to the additional insureds described in Paragraph **B.1.**, the following additional exclusions apply:

This insurance does not apply to:

- a. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or
- b. "Bodily injury" or "property damage" included within the "products-completed operations hazard."

- C. The insurance afforded to additional insureds described in Paragraphs **A.** and **B.**:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the written contract, written agreement, written permit or written authorization to provide for such additional insured; and
3. Does not apply to any person, organization, state, governmental agency or subdivision or political subdivision specifically named as an additional insured for the same project in the schedule of an endorsement added to this Coverage Part.

- D. With respect to the insurance afforded to the additional insureds described in Paragraphs **A.** and **B.**, the following is added to **Section III - Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract, written agreement, written permit or written authorization described in Paragraphs **A.** and **B.** For the purpose of determining the required amount of insurance only, we will include the minimum amount of any Umbrella Liability or Excess Liability coverage required for that additional insured in that written contract, written agreement, written permit or written authorization; or
2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

- E. **Section IV - Commercial General Liability Conditions** is amended to add the following:

Automatic Additional Insured Provision

This insurance applies only if the "bodily injury" or "property damage" occurs, or the "personal and advertising injury" offense is committed:

1. During the policy period; and
 2. Subsequent to your execution of the written contract or written agreement, or the issuance of a written permit or written authorization, described in Paragraphs **A.** and **B.**
- F. Except when **G.** below applies, the following is added to **Section IV - Commercial General Liability Conditions, Other Insurance**, and supersedes any provision to the contrary:

When Other Additional Insured Coverage Applies On An Excess Basis

This insurance is primary to other insurance available to the additional insured described in Paragraphs **A.** and **B.** except:

1. As otherwise provided in **Section IV - Commercial General Liability Conditions, Other Insurance, b. Excess Insurance**; or
 2. For any other valid and collectible insurance available to the additional insured as an additional insured on another insurance policy that is written on an excess basis. In such case, this insurance is also excess.
- G. The following is added to **Section IV - Commercial General Liability Conditions, Other Insurance**, and supersedes any provision to the contrary:

Primary Insurance When Required By Written Contract, Agreement, Permit Or Authorization

Except when wrap-up insurance applies to the claim or "suit" on behalf of the additional insured, this insurance is primary to any other insurance available to the additional insured described in Paragraphs **A.** and **B.** provided that:

1. The additional insured is a Named Insured under such other insurance; and
2. You have agreed in writing in a contract, agreement, permit or authorization de-

scribed in Paragraph **A.** or **B.** that this insurance would be primary to any other insurance available to the additional insured.

As used in this endorsement, wrap-up insurance means a centralized insurance program under which one party has secured either insurance or self-insurance covering some or all of the contractors or subcontractors performing work on one or more specific project(s).

Primary And Noncontributory Insurance When Required By Written Contract, Agreement, Permit Or Authorization

Except when wrap-up insurance applies to the claim or "suit" on behalf of the additional insured, this insurance is primary to and will not seek contribution from any other insurance available to the additional insured described in Paragraphs **A.** and **B.** provided that:

1. The additional insured is a Named Insured under such other insurance; and
2. You have agreed in writing in a contract, agreement, permit or authorization described in Paragraph **A.** or **B.** that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

As used in this endorsement, wrap-up insurance means a centralized insurance program under which one party has secured either insurance or self-insurance covering some or all of the contractors or subcontractors performing work on one or more specific project(s).

- H. **Section IV - Commercial General Liability Conditions, Transfer Of Rights Of Recovery Against Others To Us** is amended by the addition of the following:

Waiver of Subrogation

We waive any right of recovery against any additional insured under this endorsement, because of any payment we make under this endorsement, to whom the insured has waived its right of recovery in a written contract, written agreement, written permit or written authorization. Such waiver by us applies only to the extent that the insured has waived its right of recovery against such additional insured prior to loss.

1.05 RISK MANAGEMENT PROVISIONS INSURANCE AND INDEMNIFICATION

A. DEFINITIONS

The Contractor understands and agrees that the Risk Management Provisions of this Agreement (Contract) define the responsibilities of the Contractor to the Owner.

As used in these Risk Management Provisions, the terms "Contractor" and "Owner" shall be defined as follows:

1. "Contractor" means the contractor and its employees, agents, servants, owners, principals, licensees, assigns and subcontractors of any tier.
2. "Owner" means the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, boards, consultants, assigns, volunteers and successors in interest.
3. "Owner/Engineer's Consultant" means Strand Associates, Inc.[®] Strand Associates, Inc.[®] provided design services for the Project, which included preparation of Contract Documents, and will provide services during construction consisting of: responding to questions of Owner and Engineer about the Contract Documents, providing shop drawing review, and attending progress meetings. Strand Associates, Inc.[®] shall be provided with the same indemnification by Contractor as is provided for Owner in the Contract Documents and shall be listed as an additional insured as is provided for Owner in the Contract Documents. Excepting those noted above, no other duties or responsibilities shall be construed from the Contract Documents as being the obligation of Strand Associates, Inc.[®]

B. INDEMNIFICATION AND HOLD HARMLESS PROVISION

1. It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
2. Contractor shall indemnify, save, hold harmless and defend the Owner from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by Contractor's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the Contractor; and (b) not caused solely by the active negligence or willful misconduct of the Owner.
3. In the event the Owner is alleged to be liable based upon the above, Contractor shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by the Owner, which approval shall not be unreasonably withheld.
4. These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this Agreement (Contract).

5. The Work and services performed hereunder involve a Consent Decree as further explained in of Section 00100, provision 1.13 of these specifications. The provisions of that provision are incorporated herein by reference as if expressly stated.
6. Owner is a political subdivision of the Commonwealth of Kentucky. Contractor acknowledges and agrees that the Owner is unable to provide indemnity or otherwise save, hold harmless, or defend the Contractor in any manner.

C. FINANCIAL RESPONSIBILITY

The Contractor understands and agrees that it shall, prior to final acceptance of its Bid and the commencement of any Work, demonstrate the ability to assure compliance with the Indemnity Agreement and other provisions of this Agreement (Contract).

D. INSURANCE REQUIREMENTS

Bidders' attention is directed to the following insurance requirements, as Bidders must confer with their respective insurance agents, brokers, or carriers to determine in advance of Bid submission the availability of the insurance coverage's and endorsements required herein. If an apparent low Bidder fails to comply strictly with the insurance requirements below, that Bidder shall be disqualified from the award of the Agreement (Contract), at the Owner's discretion.

1. Required Insurance Coverage

Contractor shall procure and maintain for the duration of this Agreement (Contract) the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to Owner in order to protect Owner against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by Contractor. The cost of such insurance shall be included in any Bid.

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence \$2 million aggregate, or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	Combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). Owner shall be named as additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by Owner.
- c. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement unless it is deemed not to apply by Owner.

- d. The General Liability Policy shall include an Explosion-Collapse Underground (XCU) endorsement.
- e. The General Liability Policy shall include a Pollution Liability and/or Environmental Casualty endorsement unless it is deemed not to apply by Owner.
- f. Owner shall be provided at least thirty (30) days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- g. Said coverage shall be written by insurers acceptable to Owner and shall be in a form acceptable to Owner. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.
- h. Owner requests that the Bidder obtain an Umbrella Liability endorsement to the CGL policy for a limit of liability of \$2,000,000 and that this CGL policy endorsement be renewed for one (1) year after completion of this project.

2. Renewals

After insurance has been approved by Owner, evidence of renewal of an expiring policy must be submitted to Owner, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

3. Deductibles and Self-Insured Programs

IF CONTRACTOR INTENDS TO SUBMIT SELF-INSURANCE PLAN, IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO BID OPENING DATE. Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of Contractor's financial capacity to respond to claims. Any such programs or retentions must provide Owner with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If Contractor satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, Contractor agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of Bid and the commencement of work:

- a. Contractor's latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statement.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

4. Safety and Loss Control

Contractor shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take

necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and the Owner.

5. Verification of Coverage

Prior to award of bid, Contractor agrees to furnish Owner with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf. If requested, Contractor shall provide Owner copies of all insurance policies, including all endorsements.

6. Right to Review, Audit and Inspect

Contractor understands and agrees that Owner may review, audit and inspect any and all of Contractor's records and operations to insure compliance with these Insurance Requirements.

7. Contractor understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default under this Agreement (Contract). Contractor also agrees that Owner may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging Contractor for any such insurance premiums purchased, or suspending or terminating this Agreement (Contract).

(Insert Contractor's Certificate)

END OF SECTION

SECTION 00700 – GENERAL CONDITIONS

(This page is intentionally left blank).

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



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ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

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A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the

Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

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

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete

and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of

the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

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

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 - 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 - 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 - 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 - 5. allow for partial utilization of the Work by Owner;
 - 6. include testing and startup; and
 - 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

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

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

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

6.12 *Record Documents*

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

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are

required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any

disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the

extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and

tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

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

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

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

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing

in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

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

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

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

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and

testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

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

Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's

recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments:

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. Application for Payment:

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid

or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees

specified therein, or from Contractor's continuing obligations under the Contract Documents;
and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.

- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.

- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

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

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *Headings*

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

SECTION 00800 – SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700) (2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

1.01.A.12 Replace in its entirety with the following:

“12. Contract Documents – The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), Contractor’s Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and Engineer’s written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or Hardcopies of the items listed in this paragraph are Contract Documents. Files in electronic format of text, data, graphics, and the like that may be furnished by Owner to Contractor are not Contract Documents”.

1.01.A.44 First sentence, change: “in the opinion of the Engineer”, to “in the opinion of Engineer and Owner”.

1.02 Terminology

Delete 1.02.E and replace with the following:

1.02.E The words “furnish”, “furnish and install”, “install”, and “provide” or words with similar meaning shall be interpreted, unless otherwise specifically stated, to mean “furnish and install complete in place and ready for service”.

Add the following:

1.02.G The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (EJCDC C-700, (2007 Edition) have the meanings assigned to them in the General Conditions.

ARTICLE 2 – PRELIMINARY MATTERS

Add the following:

2.00 Execution of Agreement

2.00.A At least six (6) counterparts of the Agreement will be executed and delivered by the Contractor to the OWNER within fifteen (15) days of the Notice of Award and receipt of the Contract Documents by the Contractor for execution; and OWNER will execute and deliver one counterpart to Contractor within ten (10) days of receipt of the executed Agreement from Contractor.

2.01 Delivery of Bonds and Evidence of Insurance

- 2.01.B Replace "Before any Work at the Site is started, Contractor and Owner shall each deliver to the other" with "When Contractor delivers the executed counterparts of the Agreement to the Owner, Contractor shall deliver to the Owner", and replace "and Owner respectively are" with "is".
- 2.02 Copies of Documents
- 2.02A Revise as follows:
- Owner shall furnish to Contractor up to ~~ten~~ three printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.
- 2.03 Commencement of Contract Times; Notice to Proceed:
- 2.03.A Delete in its entirety and substitute the following:
- 2.03.A The Contract Time will commence to run on the day indicated in the Notice to Proceed; but in no event will the Contract Time commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the effective date of the Agreement. By mutual consent of the parties to the Contract, these time limits may be changed.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING AND REUSE

3.01 Intent

Add the following:

- 3.01.D It is the intent of the Specification and Contract Documents to obtain an operable Project. Equipment, components, systems, etc., therein shall be made operable by the Contractor.
- 3.01.E The Contract Drawings may be supplemented from time to time with additional Drawings by the Engineer as may be required to illustrate the work or, as the work progresses, with additional Drawings, by the Contractor, subject to the approval of the Engineer. Supplementary Drawings, when issued by the Engineer or by the Contractor, after approval by the Engineer, shall be furnished in sufficient quantity to all those who, in the opinion of the Engineer, are affected by such Drawings.

3.03 Reporting and Resolving Discrepancies

Add the following:

- 3.03.B.2 In resolving such conflicts, errors and discrepancies, the Contract Documents shall be given precedence in the following order:
- a. Agreement
 - b. Field and Change Orders
 - c. Addenda
 - d. Special Conditions
 - e. Instruction to Bidders
 - f. General Conditions
 - g. Project Specifications and Drawings
 - h. LFUCG standard specifications and standard details

Figure dimensions on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS.

4.02 Subsurface and Physical Conditions

4.02.A Delete: “the Supplementary Conditions”, and substitute “Section 00320 – Geotechnical Data”.

4.02.B Second sentence, delete: “Supplementary Conditions” and substitute “Specifications and Contract Drawings”.

4.04 Underground Facilities

Add the following:

4.04.B.3 The Owner, Engineer, and Engineer’s Consultants shall not be liable to Contractor for any claims, costs, losses or damages incurred or sustained by Contractor on or in connection with any other project or anticipated project.

4.06 Hazardous Environmental Condition at Site

4.06.A First sentence, delete “Supplementary Conditions” and substitute “Section 00300 – Information Available To Bidders.”

4.06.B Second sentence, delete “Supplementary Conditions: and substitute “Specifications and Contract Drawings.”

4.06.G First sentence, insert “Kentucky” between “by” and “Laws”.

Add the following at the end of this section: “The parties understand and acknowledge that no Kentucky case, statute, or Constitutional provision authorizes a local government to indemnify a contractor and that this contract provision may be unenforceable.

ARTICLE 5 – BONDS AND INSURANCE

Delete Article 5 in its entirety and substitute the following:

5.01 Performance and Payment Bonds

5.01A Concurrent with execution of the Agreement and within fifteen (15) days of the Notice of Award, the successful Contractor shall procure, execute and deliver to the OWNER and maintain, at his own cost and expense, the following bonds in the forms attached, of a surety company approved by the State of Kentucky as a Surety:

5.01.B Performance Bond – in an amount not less than 100% of the total amount payable to the Contractor by the terms of the Contract as security for the faithful performance of the work. Bond must be valid until one (1) year after the date of issuance of the Certificate of Substantial Completion.

5.01.C Payment Bond – in an amount not less than 100% of the total amount payable to the Contractor by the terms of the Contract as security for the payment of all persons performing labor and furnishing material in connection with the work. Bond must be valid until one (1) year after date of issuance of the Certificate of Substantial Completion.

5.01.D All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

- 5.01.E If the Surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business in the State of Kentucky is revoked, the Contractor shall within five (5) days thereafter substitute another Bond or Surety, both of which shall be acceptable to the OWNER.
- 5.02 Insurance Requirements
- See Section 00600 – Bonds and Certificates for Insurance Requirements.
- 5.03 Contractor's Liability Insurance
- See Section 00600 – Bonds and Certificates for Insurance Requirements.
- 5.04 Indemnification Agreement
- See Section 00600 – Bonds and Certificates for Indemnification.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

- 6.06 Concerning Subcontractors, Suppliers and Others
- 6.06.B First sentence, delete: "If the Supplementary Conditions", and substitute "The Bid Form". The seventh line, delete "Supplementary Conditions", and substitute "Bid Form".
- 6.06.G Delete in its entirety and substitute the following:
- 6.06.G All work performed for Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and Subcontractor. The Subcontractor shall not commence work until Contractor has obtained all insurance as required by Paragraphs 5.02 through 5.03 inclusive.
- 6.07 Patent Fees and Royalties
- 6.07 Delete 6.07.A, 6.07.B, and 6.07.C in their entirety and substitute the following:
- 6.07.A Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work of any invention, design, process, products or device which is the subject of patent rights or copyrights held by others. Contractor shall indemnify and hold harmless OWNER and Engineer, and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses, including attorney's fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or furnished by him in fulfillment of the requirements of this Contract. In the event of any claim or action by law on account of such patents or fees, it is agreed that the OWNER may retain out of the monies which are, or which may become due the Contractor under this Contract, a sum of money sufficient to protect itself against loss, and to retain the same until said claims are paid or are satisfactorily adjusted.
- 6.08 Permits
- 6.08.A Third sentence of paragraph delete, "or if there are no Bids.....to the Work.", and substitute "and the Contractor shall pay all charges of utility owners for connections to the Work."
- 6.09 Laws and Regulations
- 6.09.B Delete 6.09B in its entirety and substitute the following:
- 6.09.B If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, he shall give Engineer prompt written notice thereof. If Contractor performs

any Work knowing it to be contrary to such Laws or Regulations, and without such notice to Engineer, he shall bear all costs arising therefrom. The Contractor shall, at all times, observe and comply with and shall cause all his agents and employees and all his Subcontractors to observe and comply with all such existing Laws or Regulations, and shall protect and indemnify the OWNER and the Engineer and the municipalities in which work is being performed, and their officers and agents against any claim, civil penalty, fine or liability arising from or based on the violation of any such Law or Regulation, whether by himself or his employees or any of his Subcontractors.

6.13 Safety and Protection

6.13.B First sentence, after "CONTRACTOR" add the following:

" , subject to provisions 6.09.B,"

6.19 Contractor's General Warranty and Guarantee

6.19.A After the first sentence of Section 6.19.A add the following:

"All materials or equipment delivered to the site shall be accompanied by certificates, signed by an authorized officer of the supplier, and notarized guaranteeing that the materials or equipment conform to specification requirements, Such certificates shall be immediately turned over to the Engineer. Materials or equipment delivered to the site without such certificates will be subject to rejection. The warranty and guarantee period shall be for a period of one (1) year, or such longer period as may be prescribed by Law, from the date of Substantial Completion."

6.20 Indemnification

6.20.A First sentence, after "...claims, costs" add the following:

" , civil penalties, fines,"

6.20.C Add the following:

6.30.C.3 Nothing in the Contract Documents shall create or give to third parties any claim or right of action against the Contractor, the OWNER or the Engineer beyond such as may legally exist irrespective of the Contract.

ARTICLE 7 – OTHER WORK AT THE SITE

7.02 Coordination

Delete in its entirety.

7.03 Legal Relationships

7.03.B Delete "Owner and".

7.03.C Delete "Owner and".

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.02 Replacement of Engineer

8.02.A Delete in its entirety.

- 8.06 Insurance
- 8.06.A Delete in its entirety.
- 8.11 Evidence of Financial Arrangements
- 8.11.A Delete in its entirety.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

- 9.01 OWNER'S Representative
- 9.01.A Delete in its entirety and substitute the following:
- 9.01.A Engineer will be the OWNER'S representative during the construction period, and his instructions shall be carried into effect promptly and efficiently.
- 9.03 Project Representative

Add the following:

- 9.03.B The Resident Project Representative will serve as the Engineer's liaison with the Contractor, working principally through the Contractor's resident superintendent to assist him in understanding the intent of the Contract Documents.
- 9.03.C The Resident Project Representative shall conduct on-site observations of the work in progress to confirm that the work is proceeding in accordance with the Contract Documents. He will verify that tests, equipment and systems start-ups and operating maintenance instructions are conducted as required by the Contract Documents. He will have the authority to disapprove or reject defective work in accordance with Article 13.
- 9.09 Limitations on Engineer's Authority and Responsibilities

Add the following:

- 9.09.F Except upon written instructions of the Engineer, the Resident Project Representative:
 - 1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
 - 2. Shall not exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Shall not undertake any of the responsibilities of Contractor, Subcontractors, or Contractor's superintendent, or expedite the Work.
 - 4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract.
 - 5. Shall not advise on or issue directions as to safety precautions and programs in connection with the Work.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES, UNIT PRICE WORK

11.01 Cost of the Work

11.01.A Last sentence, following "...in Paragraph 11.01.B," insert the following:

"or claims for extra cost shall be considered based on an escalation of labor costs throughout the period of the Contract,"

11.01.A.2 Add the following at the end of the paragraph:

"No claims for extra cost shall be considered based on an escalation of material costs throughout the period of the Contract."

11.01.A.3 Delete second sentence "If required...be acceptable."

11.01.A.4 Delete in its entirety.

11.01.A.5.a Delete in its entirety.

11.01.A.5.c Add the following before last sentence of paragraph:

"These rates shall include all fuel, lubricants, insurance, etc. Equipment rental charges shall not exceed the prorated monthly rental rates listed in the current edition of the 'Compilation of Rental Rates for Construction Equipment' as published by the Associated Equipment Distributors. Charges per hour shall be determined by dividing the monthly rates by 176."

11.01.A.5.f Delete in its entirety.

11.01.A.5.g Delete in its entirety.

11.01.A.5.h Delete in its entirety.

11.03 Unit Price of Work:

11.03.D.1 Delete "materially and significantly", and insert "by more than plus or minus twenty percent (20%)".

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

12.01.A Add the following after the last sentence:

Section 01025 shall be given precedence over section 00700 regarding changes in contract price.

12.03 Delays

12.03.B Delete in its entirety and substitute the following:

12.03.B Delays beyond the control of the Contractor, as provided in paragraph 12.03.A, shall not entitle the Contractor to obtain additional project overhead costs unless such delays extend the Project as described below:

1. beyond the original Contract Times,

2. beyond the Contract Times for which the overhead costs have been previously approved, or
3. beyond Contract Times that are extended as a result of delays described in 12.03.C.

For the purpose of this paragraph, overhead costs shall be the supplemental costs defined in 11.01.A.5, paragraphs a, b, c, g, h and i. The Contractor's bid shall include all overhead costs as necessary to be on the Project for the original Contract Times.

12.03.C Add the following after the last sentence:

If the Contractor and the Owner cannot agree upon an equitable adjustment in the Contract Times, delays described in this Paragraph 12.03.C shall be determined as follows:

1. Contractor shall obtain weather history for the most recent five (5) years (minimum) preceding the Bid date. Weather history shall be obtained from the National Oceanic & Atmospheric Administration (NOAA) or other source approved by the Engineer. Historical weather shall be based on data from the weather reporting station closest to the project site.
2. For delays to be considered that are associated with an abnormal amount of rain, the Contractor shall use the weather history to calculate an average number of days that rainfall exceeded 0.1-inches for the period (month, quarter, year, etc.) in question. The average value calculated shall be rounded up to the next full day. A time extension may be considered equal to the number of days, above the calculated average, that the period in question experienced rainfall in excess of 0.1-inches. A Contract Time extension will not be considered for rain amounts less than 0.1-inches.
3. For daily rain amounts in excess of 1-inch, a time extension of one day beyond the number of days calculated as described above may be considered.
4. For delays associated with other abnormal weather events, the weather history shall be used to calculate an average number of days for the type of weather considered to be the cause of a delay. (Calculation of the average number of days shall be as described above.) Where the Contractor can demonstrate that the abnormal weather event has impaired his ability to perform work, beyond the day of the abnormal event, to perform site maintenance as necessary to restore the site to a workable condition may be considered.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.03 Tests and Inspections

13.03.B Delete in its entirety and substitute the following:

13.03.B Contractor shall employ and pay for inspections and testing services specifically noted as such in the Contract.

13.03.C Delete in its entirety and substitute the following:

13.03.C If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to be specifically inspected, tested, or approved by some public body, Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish Engineer the required certificates of inspection, testing or approval.

Add the following:

- 13.03.G The OWNER reserves the right to independently perform at its own expense, laboratory tests on random samples of material or performance tests on equipment delivered to the site. These tests if made will be conducted in accordance with the appropriate referenced standards or Specification requirements. The entire shipment represented by a given sample, samples or piece of equipment may be rejected based on the failure of samples or pieces of equipment to meet specified test requirements. All rejected materials or equipment shall be removed from the site, whether stored or installed in the Work, and the required replacement shall be made, all at no additional cost to the OWNER.
- 13.05 OWNER May Stop the Work:
- 13.05A First sentence, after "...conform to the Contract Documents", insert "or if the Work interferes with the operation of the existing facility".
- 13.06 Correction or Removal of Defective Work

Add the following:

- 13.06.C At any time during the progress of the Work and up to the date of final acceptance, the Engineer shall have the right to reject any work which does not conform to the requirements of the Contract Documents, even though such work has been previously inspected and paid for. Any omissions or failure on the part of the Engineer to disapprove or reject any Work or materials at the time of inspection shall not be construed as an acceptance of any defective work or materials.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

- 14.01 Schedule of Values

Add the following:

- 14.01.B The Contractor shall submit for the Engineer's approval, a complete breakdown of all Lump Sum Items in the Proposal. This breakdown, modified as directed by the Engineer, will be used as a basis for preparing estimates and establishing progress payments.
- 14.02 Progress Payments
- 14.02.A.3 Delete in its entirety and replace with the following:
- 14.02.A.3 Progress payment request shall include the percentage of the total amount of the Contract which has been completed from initiation of construction of the Project to and including the last day of the preceding month, or other mutually agreed upon day of the month accompanied by such data and supporting evidence as OWNER or Engineer may require.

Add the following:

- 14.02.A.4 Forms to be used shall be prepared by the Contractor and submitted to the Engineer for approval.
- 14.02.A.5 At the option of the OWNER, partial payment up to the estimated value, less retainage, may be allowed for any materials and equipment not incorporated in the Work, pursuant to the following conditions:
- a. Equipment or materials stored on the site shall be properly stored, protected and maintained.

- b. For any partial payment, the Contractor shall submit, with his monthly progress payment from each material or equipment manufacturer, bills or invoices indicating actual material cost.
 - c. Contractor shall submit evidence that he has paid for materials or equipment stored and for which the Engineer has authorized partial payment and previous progress payments, prior to submission to the next monthly payment request. (See example letter at the end of this Section 00800).
- 14.02.A.6 The OWNER will retain ten percent (10%) of the amount of each such estimate until Work covered by the Contract is fifty percent (50%) complete. After fifty percent (50%) of the Work of the original Contract has been completed as evidenced by approved Partial Payment Requests exclusive of stored materials and in the opinion of the OWNER, satisfactory progress is being made, the OWNER may adjust future partial payment so that five percent (5%) of the original Contract Price is retained.
- 14.02.A.7 If the OWNER determines it is appropriate to reduce retainage, the method used for such adjustment shall be to fix retainage at five percent (5%) of the original Contract amount (when the work is 50% complete) and to pay all subsequent Partial Payment Requests to the full approved amount. The intent of such an adjustment is to gradually reduce retainage to five percent (5%) of the original Contract amount when the work is one hundred percent (100%) complete.
- 14.02.A.8 The OWNER may reinstate up to ten percent (10%) retainage if it is determined that the Contractor is not making satisfactory progress or there is other specific cause for retainage.
- 14.02.B.1 Review of Applications:

First sentence delete "10 days", insert "30 days".
- 14.02.C.1 Payment Becomes Due:

First sentence delete "Ten days" and insert "Thirty Days".
- 14.02.D.3 Delete in its entirety.
- 14.04 Substantial Completion
- 14.04 Delete paragraphs A, B, C, and D in their entirety and substitute the following:
- 14.04.A Contractor may, in writing to OWNER and Engineer, certify that the entire Project is substantially complete and request that Engineer issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, Contractor and Engineer shall inspect the Project to determine the status of completion. If Engineer and OWNER do not consider the Project substantially complete, Engineer will notify Contractor in writing giving his reasons, therefore. If Engineer and OWNER consider the Project substantially complete, Engineer will prepare and deliver to OWNER a tentative certificate of Substantial Completion and the responsibilities between OWNER and Contractor for maintenance, heat and utilities. There shall be attached to the certificate a tentative list of items to be completed or corrected before Final Completion, and the certificate shall fix the time within which such items shall be completed or corrected, said time to be within Contract Time. No warranties associated with the Project shall start until issuance of the certificate of Substantial Completion.
- 14.04.B In accordance with KRS 371.410, Substantial Completion is the point at which, as certified in writing by OWNER, a project is at the level of completion, in strict compliance with the contract, where:
 - 1. Necessary approval by public regulatory authorities has been given.

2. The Owner has received all required warranties and documentation; and
3. The Owner may enjoy beneficial use or occupancy and may use, operate, and maintain the project in all respects, for its intended purpose.

14.05 Partial Utilization

14.05.A Delete in its entirety and substitute the following:

14.05.A Partial Utilization is also referred to as “Beneficial Occupancy” and “In Service Date”. Partial Utilization (Beneficial Occupancy) will occur before Substantial Completion of entire Project. Prior to Substantial Completion of the entire Project, OWNER may request Contractor to permit them to use a specified part of the Project which they believe they may use without significant interference with construction of the other parts of the Project. Prior to requesting Beneficial Occupancy all testing shall be complete and passed, all training shall be complete, and that part of the Project shall be operational for its functional design. If Contractor agrees, Contractor shall certify to OWNER and Engineer that said part of the Project has achieved Beneficial Occupancy and request the Engineer to issue a memorandum declaring Beneficial Occupancy for that part of the Project. Within a reasonable time thereafter, OWNER, Contractor, and Engineer shall inspect that part of the Project to determine its status of completion. If Engineer and OWNER do not consider that it has achieved Beneficial Occupancy, Engineer will notify Contractor in writing giving his reasons therefor. If Engineer and OWNER consider that part of the Project to have reached Beneficial Occupancy, Engineer will execute and deliver to OWNER and Contractor a memorandum to that effect, fixing the date of Beneficial Occupancy and the responsibility between OWNER and Contractor for maintenance, heat, and utilities, as it pertains to that part of the Project.

14.05.B Equipment Warranties will not begin until after successful start-up, training, and acceptance by Owner for Substantial Completion of the entire Project. Any manufacturer’s request to initiate warranty period earlier than Owner’s acceptance will not be valid.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

Add the following:

15.01.B Should the OWNER suspend Work due to repeated unsafe Work conducted by the Contractor, which is confirmed by subsequent inspection by OSHA, the Contractor shall not be allowed any adjustment in Contract Price or extension of Contract Time attributed to the delay.

15.02 Owner May Terminate for Cause

15.02.A.2 Add the following to the end of first sentence after “jurisdiction”:

“(including those governing employee safety)”

15.02D Delete in its entirety.

Add the following:

15.05 Assignment of Contract

15.05 Contractor shall not assign, transfer, convey or otherwise dispose of the Contract, or of his legal right, title, or interest in or to the same or to any part thereof, without the prior written consent of the OWNER. Contractor shall not assign by power of attorney or otherwise any monies due him and payable under this Contract without the prior written consent of the

OWNER. Such consent, if given, will in no way relieve the Contractor from any of the obligations of this Contract. OWNER shall not be bound to abide by or observe the requirements of any such assignment.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

16.01.A Replace the first sentence with the following:

“If required by applicable laws and regulations, and not specifically excluded elsewhere, either OWNER or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding.”

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

Add the following:

17.01.B No oral statement of any person whomsoever shall in any manner or degree modify or otherwise affect the terms of this Contract. Any notice to the Contractor, from OWNER and Engineer, relative to any part of this Contract shall be in writing.

Add the following:

17.07 Claims for Injury or Damage

17.07.A Should OWNER or Contractor suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

17.08 Non-Discrimination in Employment

17.08.A The Contractor shall comply with the following requirements prohibiting discrimination:

17.08.A.1 That no person (as defined in KRS 344.010) shall Bid on Lexington-Fayette Urban County Government Construction projects or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of Bids, said person shall have been found, by declaratory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declaratory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

17.08.A.2 That it is an unlawful practice for any employer:

- a. to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or
- b. to limit, segregate or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his

status as an employee because of such individual's sex, race, color, religion, age, or national origin.

- 17.08.A.3 That it is unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.
- 17.08.A.4 That a copy of the LFUCG Ordinance shall be available for viewing at the Lexington-Fayette Urban County Government offices.
- 17.09 Temporary Street Closing or Blockage
- 17.09.A The Contractor will notify the Engineer, Owner, and LFUCG Division of Traffic Engineering at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies.
- 17.10 Percentage of Work Performed by Prime Contractor
- 17.10.A The Contractor shall perform on site, and with its own organization, Work equivalent to at least fifty percent (50%) of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the Contractor requests a reduction, and the Engineer determines that the reduction would be to the advantage of the OWNER.
- 17.11 Clean-Up
- 17.11.A Clean-up shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage-ways shall be left unobstructed, and in such a condition that drift will not collect, or scour be induced.
- 17.12 General
- 17.12.A The duties and obligations imposed by the Contract Documents and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor, and all of the rights and remedies available to OWNER and Engineer, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.
- 17.13 Debris Disposal
- 17.13.A For all LFUCG projects any fill, trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be

responsible for payment of any fines associated with improper disposal of material removed from the project site.

17.14 Maintenance of Traffic

17.14.A Traffic shall be maintained on state and LFUCG highways and streets at all times during construction. For all work that impacts traffic, the Contractor shall obtain a traffic permit at least two (2) working days in advance from the Division of Traffic Engineering (859) 258-3489.

17.14.B It shall be the Contractor's responsibility to notify LFUCG Police Department's Safety Officer (859) 258-3600 prior to performing any construction work, which might interfere with traffic or compromise the public safety.

Add the following:

ARTICLE 18 – LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE WORK ON TIME

18.01 Liquidated Damages

18.01.A If the Contractor shall fail to complete the Work within the Contract Time, or extension of time granted by the OWNER in accordance with Article 12, then the Contractor will pay to the OWNER the amount for liquidated damages as specified in the Contract for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

*****PUT ON CONTRACTOR'S LETTERHEAD*****

DATE: _____

TO: OWNER: _____

ADDRESS: _____

RE: Project Title: _____
Lexington Fayette Urban County Government
Lexington, Kentucky
LFUCG Bid No.: _____

We hereby certify that the labor and materials listed on this request for payment have been used in the construction of this work, or that all materials included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location with proper insurance to protect these stored materials; and that all lawful charges for labor, materials etc., covered by previous Certificates of Payment have been paid and that all other lawful charges on which this request for payment is based have been paid for in full or will be paid for in full from the funds received in payment of this request within ten (10) calendar days from receipt of this partial payment from the OWNER.

CONTRACTOR: _____

BY: _____

TIME: _____

State of: _____

County of: _____

Sworn to and subscribed before me this _____ day of _____, 20____.

Notary Public (Seal)

My Commission Expires: _____

END OF SECTION

SECTION 00820 – WAGE DETERMINATION SCHEDULE

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. This Contract shall be based upon payment by the Contractor and his Subcontractors of wage rates not less than the prevailing hourly wage rate for each craft or type of workman engaged on the Work as determined by the US Department of Labor and the Davis-Bacon and Related Acts (DBRA).
- B. The Contractor and each Subcontractor shall keep accurate records indicating the hours worked each day by each employee in each classification of work and the amount paid each employee for his work in each classification. Such records shall be submitted weekly to the contracting agency.
- D. The Contractor and each Subcontractor shall post and keep posted in a conspicuous place or places at the construction site a copy or copies of federal prevailing rates of wages and working hours as prescribed in these Contract Documents.
- E. If, during the life of this Contract, the prevailing hourly rate of wages is changed by the US Department of Labor, such change shall not be the basis of any claim by the Contractor against the Owner, nor will deductions be made by the Owner against sums due the Contractor by reason of any such change.
- F. The federal prevailing wage law does not prohibit payment of more than the prevailing rate of wages.
- G. Pursuant to Kentucky Revised Statute 337.510, no laborer, workman, mechanic, helper, assistant, or apprentice shall be permitted to work more than 8 hours in one calendar day, nor more than 40 hours in one week, except in cases of emergency caused by fire, flood, or damage to life or property. Whenever work in excess of 8 hours per day or 40 hours per week is required, payment of overtime shall be at not less than one and one-half times the prevailing rate of wages.

1.02 PREVAILING WAGE REQUIREMENTS

- A. DBRA Prevailing Wage Requirements are not applicable to this Construction Contract.

END OF SECTION

Applicable Permits for Project

END OF SECTION



Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

June 15, 2024

Craig Prater
125 Lisle industrial Ave
Lexington, KY 40511

Re: St Martins PS Elimination Project
Fayette County, Kentucky
Lexington Town Branch WWTP
Activity ID #: 1073, APE20240004
Receiving Treatment Plant KPDES #: KY0021491

Dear Mr. Prater:

We have reviewed the plans and specifications for the above referenced project. The plans include the elimination of the St. Martins pump station, and the construction of approximately 2,205 linear feet (LF) of 10-inch PVC, and 93 LF of 12-inch PVC sanitary sewer line. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If we can be of any further assistance or should you wish to discuss this correspondence, please do not hesitate to contact Cassie Campbell at 502-782-6909.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH / CC

Enclosures

c: Fayette County Health Department
Strand Associates Inc
Division of Plumbing
LFUCG

Sewer Line Construction
Lexington Town Branch WWTP
Facility Requirements

Activity ID No.:APE20240004

Page 1 of 3

GACT0000000229 (St Martins PS Elimination Project) 2,205 linear feet (LF) of 10-inch PVC, and 93 LF of 12-inch PVC sanitary sewer line:

Submittal/Action Requirements:

Condition No.	Condition
S-1	When this project is completed, the applicant shall: submit written certification: Due 30 calendar days after Completion of Construction to the Division of Water that the facilities have been constructed and tested in accordance with the approved plans and specifications and the approval conditions. Such certification shall be signed by a registered professional engineer. Failure to certify may result in penalty assessment and/or future approvals being withheld. [401 KAR 5:005 Section 24(2)]

Narrative Requirements:

Condition No.	Condition
T-1	The plans and specifications submitted for the project are approved by the Department of Environmental Protection as to sanitary features, subject to the requirements contained within the permit. [401 KAR 5:005 Section 24(3)]
T-2	Authority to construct these sewers is hereby granted. This approval is issued under the provisions of KRS Chapter 224.10-100 (19) regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any permits or licenses required by this cabinet and other state, federal, and local agencies. [401 KAR 5:005 Section 24(3)(c)2]
T-3	A permit to construct a facility shall be effective and valid for twenty-four (24) months upon issuance unless otherwise conditioned. If construction has not commenced within twenty-four (24) months following a permit's issuance, a new permit shall be obtained before construction may begin. [401 KAR 5:005 Section 24(1)]
T-4	The permit is issued to the applicant, and the permittee shall remain the responsible party for compliance with all applicable statutes and administrative regulations until a notarized applicable change in ownership certification is submitted and the transfer of ownership is acknowledged by the cabinet. [401 KAR 5:005 Section 28(1)]
T-5	The issuance of a permit by the cabinet does not convey any property rights of any kind or any exclusive privilege. [401 KAR 5:005 Section 24(5)]
T-6	There shall be no deviations from the plans and specifications submitted with the application or the conditions specified, unless authorized in writing by the cabinet. [401 KAR 5:005 Section 24(3)(b)1]

Sewer Line Construction
Lexington Town Branch WWTP
Facility Requirements

Activity ID No.:APE20240004

Page 2 of 3

GACT0000000229 (St Martins PS Elimination Project) 2,205 linear feet (LF) of 10-inch PVC, and 93 LF of 12-inch PVC sanitary sewer line:

Narrative Requirements:

Condition No.	Condition
T-7	For subfluvial pipe crossings, a floodplain construction permit will not be required pursuant to KRS 151.250, if the following requirements of 401 KAR 4:050 Section 2 are met: 1) During the construction of the crossing, no material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc., unless prior approval has been obtained from the cabinet. 2) The trench shall be backfilled as closely as possible to the original contour. All excess material from construction of the trench shall be disposed of outside of the flood plain, unless the applicant has received prior approval from the cabinet to fill within the flood plain. 3) For subfluvial crossings of erodible channels, there shall be at least thirty (30) inches of clear cover above the top of the pipe or conduit at all points. 4) For subfluvial crossings of nonerodible channels, there shall be at least six (6) inches of clear cover above the top of the pipe or conduit at all points, and the pipe or conduit shall be encased on all sides by at least six (6) inches of concrete. 5) The weight of a pipe and its contents during normal operating conditions at all points must exceed that of an equal volume of water, or the applicant must provide the division with sufficient information to show that the pipe and joints have sufficient strength. Contact the Floodplain Management Section of the Surface Water Permits Branch at (502) 564-3410 with any question on these requirements. [KRS 151.250 & 401 KAR 4:060]
T-8	If any portion of the sewer project will be constructed in or along a stream or wetland, contact the Water Quality Certification Section, located within the Water Quality Branch, at 502-564-3410, to determine if a 401 certification will be required. [KRS 224.16-050]
T-9	Facilities shall be designed and constructed in accordance with the "Recommended Standards for Wastewater Facilities" of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers, commonly referred to as "Ten States' Standards", 2004 edition. [401 KAR 5:005 Section 7(1)(a)]
T-10	Gravity sewer lines and force mains shall be designed and constructed to give mean velocities, when flowing full, of not less than two (2) feet per second. Velocity calculations shall incorporate roughness coefficients pursuant to 401 KAR 5:005 Section 8(8). [401 KAR 5:005 Section 8(8)]
T-11	Sewer line pipe material, joints, fittings, and installation shall conform to the latest ASTM specifications. [Ten States (WW) 33.7-33.9]
T-12	Gravity sewer lines and force mains shall have a minimum of thirty (30) inches of cover or provide comparable protection. [401 KAR 5:005 Section 8(9)]

Sewer Line Construction
Lexington Town Branch WWTP
Facility Requirements

Activity ID No.:APE20240004

Page 3 of 3

GACT0000000229 (St Martins PS Elimination Project) 2,205 linear feet (LF) of 10-inch PVC, and 93 LF of 12-inch PVC sanitary sewer line:

Narrative Requirements:

Condition No.	Condition
T-13	Sewer lines crossing water mains shall be laid to provide a vertical distance of eighteen (18) inches between the outside of the water main and the outside of the sewer line. This shall be the case where the water main is either above or below the sewer line. The crossing shall be arranged so that the sewer line joints are equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer line to prevent damage to the water main. [Ten States (WW) 38.32]
T-14	Sewer lines shall be laid at least ten (10) feet horizontally from any existing or proposed water main. The distance shall be measured from edge to edge. [Ten States (WW) 38.31]
T-15	If gravity sewer lines and force mains are to be constructed in fill areas, the fill areas shall be compacted to ninety-five (95) percent density as determined by the Standard Proctor Density test or to a minimum of ninety (90) percent density as determined by the Modified Proctor Density test prior to the installation of the sewer lines. [401 KAR 5:005 Section 8(10)]
T-16	The integrity of a new gravity sewer line shall be verified by either the infiltration-exfiltration or low pressure air testing method, and a deflection test shall be performed, if using flexible pipe. The deflection test shall be performed after the final backfill has been in place for at least thirty (30) days with no pipe exceeding a deflection of five (5) percent. Additionally, each new manhole shall be tested for water tightness. [401 KAR 5:005 Section 8(6)(a)]
T-17	The entrance of groundwater into or loss of waste from a new gravity sewer line shall be limited to two-hundred (200) gpd per inch of diameter per mile of the gravity sewer line. This limitation includes manholes, gravity sewer lines, and appurtenances. [401 KAR 5:005 Section 8(5)]

SECTION 00910 - ADDENDA

(Insert Addenda as they are issued.)

END OF SECTION

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Work to be done under this Contract and in accordance with these Specifications consists of furnishing all equipment, supervision, labor, skill, material and all other items necessary for the construction of the St. Martin's Pump Station Elimination.
- B. The Contractor shall perform all work required for such construction in accordance with the Contract Documents and subject to the terms and conditions of the Contract, complete and ready for use.
- B. The principal features of the Work to be performed under this Contract includes, but is not limited to:
 - 1. Installation of gravity sanitary sewers and/or force mains, reinforced concrete manholes, and appurtenances.
 - 2. Connections to existing sanitary sewers and service laterals, as necessary.
 - 3. Maintenance of existing sanitary sewer flows during construction
- D. The foregoing description(s) shall not be construed as a complete description of all work required.

1.02 CONTRACT DOCUMENTS

- A. Work to be done is shown on the set of Drawings entitled: St. Martin's Pump Station Elimination. The numbers and titles of all Drawings appear on the index sheet of the Drawings. All drawings so enumerated shall be considered an integral part of the Contract Documents as defined herein.

1.03 GENERAL ARRANGEMENT

- A. Drawings indicate the extent and general arrangement of the work. If any departures from the Drawings are deemed necessary by the Contractor to accommodate the materials and equipment he proposes to furnish, details of such departures and reasons therefore shall be submitted as soon as practicable to the Engineer for approval. No such departures shall be made without the prior written approval of the Engineer. Approved changes shall be made without additional cost to the Owner for this work or related work under other Contracts of the Project.

1.04 CONSTRUCTION PERMITS, EASEMENTS AND ENCROACHMENTS

- A. The Owner shall obtain or cause to be obtained all permanent and temporary construction easements as shown on the Drawings or required for completion of the Work. The Contractor shall verify that these easements have been obtained and shall comply with the conditions set forth in each easement.
- B. The Contractor shall obtain, keep current and pay all fees for any necessary construction permits from those authorities, agencies, or municipalities having jurisdiction over land areas, utilities, or structures which are located within the Contract limits and which will be occupied,

encountered, used, or temporarily interrupted by the Contractor's operations unless otherwise stated. Record copies of all permits shall be furnished to the Engineer.

- C. When construction permits are accompanied by regulations or requirements issued by a particular authority, agency or municipality, it shall be the Contractor's responsibility to familiarize himself and comply with such regulations or requirements as they apply to his operations on this Project.

1.05 ADDITIONAL ENGINEERING SERVICES

- A. In the event that the Engineer is required to provide additional engineering services as a result of substitution of materials or equipment by the Contractor which are not "or equal", or changes by the Contractor in dimension, weight, power requirements, etc., of the equipment and accessories furnished, or if the Engineer is required to examine and evaluate any changes proposed by the Contractor for the convenience of the Contractor, then the Engineer's charges in connection with such additional services shall be charged to the Contractor by the Owner.
- B. In the event that the Engineer is required to provide additional engineering services as a result of Contractor's errors, omissions, or failure to conform to the requirements of the Contract Documents, or if the Engineer is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, then the Engineer's charges in connection with such additional services shall be charged to the Contractor by the Owner.

1.06 ADDITIONAL OWNER'S EXPENSES

- A. In the event the Work of this Contract is not completed within the time set forth in the Contract or within the time to which such completion may have been extended in accordance with the Contract Documents, the additional engineering or inspection charges incurred by the Owner may be charged to the Contractor and deducted from the monies due him. Extra work or supplemental Contract work added to the original Contract, as well as extenuating circumstances beyond the control of the Contractor, will be given due consideration by the Owner before assessing engineering and inspection charges against the Contractor.
- B. Unless otherwise specifically permitted, the normal time of work under this Contract is limited to 40 hours per week, Monday through Friday. Work beyond these hours will result in additional expense to the Owner. Any expenses and/or damages, including the cost of the Engineer's on site personnel, arising from the Contractor's operations beyond the hours and days specified above shall be borne by the Contractor.
- C. Charges assessed to the Contractor for additional engineering and inspection costs will be determined based on actual hours charged to the job by the Engineer. Daily rates will depend on the number and classifications of employees involved, but in no case shall such charges exceed \$500 per day for field personnel based on an eight hour workday. Additional charges will apply if multiple personnel are needed or if engineering time is required as part of the work outside the contract times.
- D. Charges for additional Owner's expenses shall be in addition to any liquidated damages assessed in accordance with the Contract.

1.07 TIME OF WORK

- A. The normal time of work for this Contract is limited to 40 hours per week and shall generally be between the hours of **7:00 a.m. and 6:00 p.m., Monday through Friday**. The Contractor may work beyond these hours or on weekends with written approval from the Owner provided

that all costs incurred by the Owner for any additional engineering shall be borne by the Contractor. The Owner shall deduct the cost of additional engineering from monies due the Contractor.

- B. If it shall become imperative to perform work outside of the normal working hours the Owner and Engineer shall be informed a reasonable time in advance of the beginning of such work. Temporary lighting and all other necessary facilities for performing and inspecting the work shall be provided and maintained by the Contractor.

1.08 SURVEYS AND LAYOUT

- A. All work under this Contract shall be constructed in accordance with the lines and grades shown on the Drawings or as directed by the Engineer. Elevations of existing ground and appurtenances are believed to be reasonably correct but are not guaranteed to be absolute and therefore are presented only as an approximation. Any error or apparent discrepancy in the data shown or omissions of data required for accurately accomplishing the stake out survey shall be referred immediately to the Engineer for interpretation or correction.
- B. All survey work for construction control purposes shall be made by the Contractor at his expense. The Contractor shall provide a Licensed Surveyor as Chief of Party, competently qualified survey party, all necessary instruments, stakes, and other material to perform the work.
- C. Contractor shall establish all baselines for the location of the principal component parts of the work together with a suitable number of bench marks adjacent to the work. Based upon the information provided by the Contract Drawings, the Contractor shall develop and make all detail surveys necessary for construction, including stakes for all working points, lines and elevations.
- D. Contractor shall have the responsibility to carefully preserve the bench marks, reference points and stakes, and in the case of destruction thereof by the Contractor or resulting from his negligence, the Contractor shall be charged with the expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the unnecessary loss or disturbance of such bench marks, reference points and stakes.
- E. Existing or new control points, property markers and monuments that will be or are destroyed during the normal causes of construction shall be reestablished by the Contractor and all reference ties recorded therefore shall be furnished to the Engineer. All computations necessary to establish the exact position of the work shall be made and preserved by the Contractor.
- F. The Engineer may check all or any portion of the work and the Contractor shall afford all necessary assistance to the Engineer in carrying out such checks. Any necessary corrections to the work shall be immediately made by the Contractor. Such checking by the Engineer shall not relieve the Contractor of any responsibilities for the accuracy or completeness of his work.
- G. At completion of the work, the Contractor shall furnish Record Drawings indicating the final layout of all constructed piping and manholes and finished grades constructed or changed as part of this work.

1.09 FIRE PROTECTION

- A. Contractor shall take all necessary precautions to prevent fires at or adjacent to the work and shall provide adequate facilities for extinguishing fires which do occur. Burning shall not be permitted on site.

- B. When fire or explosion hazards are created in the vicinity of the work as a result of the locations of fuel tanks or similar hazardous utilities or devices, the Contractor shall immediately alert the local Fire Marshal, the Engineer, and the Owner of such tank or device. The Contractor shall exercise all safety precautions and shall comply with all instructions issued by the Fire Marshal and shall cooperate with the Owner of the tank or device to prevent the occurrence of fire or explosion.

1.10 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, or reactant of other classification, must show approval of either the EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with all applicable rules and regulations.

1.11 FIRST AID FACILITIES AND ACCIDENTS

A. First Aid Facilities

- 1. The Contractor shall provide at the site such equipment and facilities as are necessary to supply first aid to any of his personnel who may be injured in connection with the work.

B. Accidents

- 1. The Contractor shall promptly report, in writing, to the Engineer and Owner all accidents whatsoever out of, or in connection with, the performance of the work, whether on or adjacent to the site, which cause death, personal injury or property damage, giving full details and statements of witnesses.
- 2. If death, serious injuries, or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Owner and the Engineer.
- 3. If any claim is made by anyone against the Contractor or a Subcontractor on account of any accidents, the Contractor shall promptly report the facts, in writing, to the Engineer and Owner, giving full details of the claim.

1.12 ULTIMATE DISPOSITION OF CLAIMS BY ONE CONTRACTOR ARISING FROM ALLEGED DAMAGE BY ANOTHER CONTRACTOR

- A. During the progress of the Work, other Contractors may be engaged in performing other work or may be awarded other Contracts for additional work on this project. In that event, the Contractor shall coordinate the work to be done hereunder with the work of such other Contractors and the Contractor shall fully cooperate with such other Contractors and carefully fit its own work to that provided under other Contracts as may be directed by the Engineer. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor.
- B. If the Engineer shall determine that the Contractor is failing to coordinate his work with the work of the other Contractors as the Engineer directed, then the Owner shall have the right to withhold any payments otherwise due hereunder until the Contractor completely complies with the Engineer's directions.
- C. If the Contractor notifies the Engineer in writing that another Contractor is failing to coordinate his work with the work of this Contract as directed, the Engineer will promptly investigate the charge. If the Engineer finds it to be true, he will promptly issue such directions to the other Contractor with respect thereto as the situation may require. The Owner, the Engineer, nor any of their agents shall not, however, be liable for any damages suffered by the Contractor

by reason of the other Contractor's failure to promptly comply with the directions so issued by the Engineer, or by reason of another Contractor's default in performance, it being understood that the Owner does not guarantee the responsibility or continued efficiency of any Contractor.

- D. The Contractor shall indemnify and hold the Owner and the Engineer harmless from any and all claims of judgments for damages and from costs and expenses to which the Owner may be subjected or which it may suffer or incur by reason of the Contractor's failure to promptly comply with the Engineer's directions.
- E. Should the Contractor sustain any damage through any act or omission of any other Contractor having a Contract with the Owner for the performance of work upon the site or of work which may be necessary to be performed for the proper execution of the work to be performed hereunder, or through any act or omission of a Subcontractor of such Contract, the Contractor shall have no claim against the Owner or the Engineer for such damage, but shall have a right to recover such damage from the other Contractor under the provision similar to the following provisions which have been or will be inserted in the Contracts with such other Contractors.
- F. Should any other Contractor having or who shall hereafter have a Contract with the Owner for the performance of work upon the site sustain any damage through any act or omission of the Contractor hereunder or through any act or omission of any Subcontractor of the Contractor, the Contractor agrees to reimburse such other Contractor for all such damages and to defend at his own expense any suit based upon such claim and if any judgment or claims against the Owner shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and shall indemnify and hold the Owner harmless from all such claims.
- G. The Owner's right to indemnification hereunder shall in no way be diminished, waived or discharged, by its recourse to assessment of liquidated damages as provided in the Contract, or by the exercise of any other remedy provided for by Contract Documents or by law.

1.13 BLASTING AND EXPLOSIVES

- A. Blasting is prohibited.

1.14 LIMITS OF WORK AREA

- A. The Contractor shall confine his construction operations within the Contract limits shown on the Drawings and/or property lines and/or fence lines. Storage of equipment and materials, or erection and use of sheds outside of the Contract limits, if such areas are the property of the Owner, shall be used only with the Owner's approval. Such storage or temporary structures, even within the Contract's limits, shall not be placed on properties designated as easements or rights-of-way unless specifically permitted elsewhere in the Contract Documents.
- B. The Contractor shall secure, insure, maintain, rent/lease, and restore staging area.
- C. The Contractor shall provide Engineer and Owner copy of agreement with landowner of staging areas.

1.15 WEATHER CONDITIONS

- A. The Contractor shall take necessary precautions (in the event of impending storms) to protect all work, materials, or equipment from damage or deterioration due to floods, driving rain, or wind, and snow storms. The Owner reserves the right, through the opinion of the Engineer,

to order that additional protection measures over and beyond those proposed by the Contractor, be taken to safeguard all components of the Project. The Contractor shall not claim any compensation for such precautionary measures so ordered, nor claim any compensation from the Owner for damage to the work from weather elements.

1.16 PERIODIC CLEANUP: BASIC SITE RESTORATION

- A. During construction, the Contractor shall regularly remove from the site of the work all accumulated debris and surplus materials of any kind which result from his operations. Unused equipment and tools shall be stored at the Contractor's staging area for the Project.
- B. As the work involves installation of sewers, drains, manholes, underground structures, or other disturbance of existing features in or across streets, rights-of-way, easements, or private property, the Contractor shall (as the work progresses) promptly backfill, compact, grade, and otherwise restore the disturbed area to the basic condition which will permit resumption of pedestrian or vehicular traffic and any other critical activity or functions consistent with the original use of the land. The requirements for temporary paving of streets, walks, and driveways are specified elsewhere. Unsightly mounds of earth, large stones, boulders, and debris shall be removed so that the site presents a neat appearance.
- C. The Contractor shall perform the cleanup work on a regular basis and as frequently as ordered by the Engineer. Basic site restoration in a particular area shall be accomplished immediately following the installation or completion of the required facilities in that area. Furthermore, such work shall also be accomplished, when ordered by the Engineer, if partially completed facilities must remain incomplete for some time period due to unforeseen circumstances.
- D. Upon failure of the Contractor to perform periodic cleanup and basic restoration of the site to the Engineer's satisfaction, the Owner may, upon five (5) days prior written notice to the Contractor, without prejudice to any other rights or remedies of the Owner, cause such work for which the Contractor is responsible to be accomplished to the extent deemed necessary by the Engineer, and all costs resulting therefrom shall be charged to the Contractor and deducted from the amounts of money that may be due him.

1.17 USE OF FACILITIES BEFORE COMPLETION

- A. The Owner reserves the right to enter the site and use any portion of the constructed facilities before final completion of the whole work to be done under this Contract. However, only those portions of the facilities which have been completed to the Engineer's satisfaction, as evidenced by his issuing a Certificate of Substantial Completion covering that part of the work, shall be placed in service.
- B. It shall be the Owner's responsibility to prevent premature connections to or use of any portion of the installed facilities by private or public parties, persons or groups of persons, before the Engineer issues his Certificate of Substantial Completion covering that portion of the work to be placed in service.
- C. Consistent with the approved progress schedule, the Contractor shall cooperate with the Owner, his agents, and the Engineer to accelerate completion of those facilities, or portions thereof, which have been designated for early use by the Owner.

1.18 CONSTRUCTION VIDEO

- A. The Contractor shall video the entire project site including all concrete and asphalt pavements, curb and gutter, fencing to remain, structures to be demolished, and existing structures that are to remain or be modified. The original video image shall be turned over to

the Engineer prior to beginning construction activities. The video shall be provided as an Audio Video Interleave File (.avi) and shall be provided on a jump/flash drive compatible media only. The video shall clearly identify existing site and structural conditions prior to construction.

PART 2 – PRODUCT (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 WORK INCLUDED

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, equipment, materials, equipment, service, other necessary supplies and perform all work including all excavation and backfilling (without additional compensation, except where specifically set out in these specifications) at the contract unit prices bid for the work described in Part 2 of this Section.

1.02 PROGRESS AND PAYMENTS SCHEDULES

- A. Within fifteen (15) days after the date of formal execution of the Agreement (Contract), the Contractor shall prepare and submit to the Engineer, for approval, a construction schedule of the Critical Path Method (CPM) type which depicts the Contractor's plan for completing the contract requirements and show work placement in dollars versus contract time. The Contractor's construction schedule must be approved by the Engineer before any payments shall be made on this contract.
- B. Within fifteen (15) days after the date of formal execution of the Agreement (Contract), the Contractor shall prepare and submit to the Engineer, for approval, a periodic estimate which depicts the Contractor's cost for completing the contract requirements and show by major unit of the project work, the Contractor's dollar value for the material and the labor (two separate amounts) to be used as a basis for the periodic payments. The Contractor's periodic estimate must be approved by the Engineer before any payments shall be made on this contract.
- C. The Engineer's decision as to sufficiency and completeness of the Contractor's construction schedule and periodic estimate shall be final.
- D. The Contractor must make current, to the satisfaction of the Engineer, the construction schedule and periodic estimate each time the Contractor requests a payment on this contract.
- E. The Contractor's construction schedule and periodic estimate must be maintained at the construction site available for inspection and shall be revised to incorporate approved change orders as they occur.
- F. When the Contractor requests a payment on this contract, it must be on the approved periodic estimate and be current. Further, the current periodic estimate and construction schedule (both updated and revised) shall be submitted for review and approval by the Engineer before monthly payments shall be made by the Owner. The Contractor shall submit as stored materials for pay purposes provided proper documentation is provided.
 - a. Documentation for stored materials includes at a minimum, an approved Shop Drawing, materials to be on site, etc. See Specification Section 00800-14.02.A.5 for additional information.
- G. Refer to Section 00800, Articles 14.02.A.6-8 for retainage requirements.

1.04 CLAIMS FOR EXTRA WORK

- A. If the Contractor claims that any instructions by Drawings or otherwise involve extra cost, the Contractor shall give the Engineer written notice of said claim within seven (7) days after the receipt of such instructions, and in any event before proceeding to execute the work, stating clearly and in detail the basis of its claim or claims. No such claim shall be valid unless so made.

- B. Claims for additional compensation for extra work, due to alleged errors in spot elevations, contour lines, or bench marks, shall not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work than would reasonably be estimated from the Drawings and topographical maps issued.
- C. Any discrepancies which may be discovered between actual conditions and those represented by the topographical maps and Drawings shall at once be reported to the Engineer, and work shall not proceed, except at the Contractor's risk, until written instructions have been received by the Contractor from the Engineer.
- D. If, on the basis of the available evidence, the Engineer determines that an adjustment of the Contract Price or time is justifiable, the procedure shall then be as provided herein for "Changes in the Work".
- E. By execution of this Contract, the Contractor warrants that it has visited the site of the proposed work and fully acquainted himself with the conditions there existing relating to construction and labor, and that it fully understands the facilities, difficulties, and restrictions attending the execution of the work under this Contract. The Contractor further warrants that it has thoroughly examined and is familiar with the Drawings, Specifications and all other documents comprising the Contract. The Contractor further warrants that by execution of this Contract its failure when it was bidding on this Contract to receive or examine any form, instrument or document, or to visit the site and acquaint himself with conditions there existing, in no way relieves the Contractor from any obligation under the Contract, and the Contractor agrees that the Owner shall be justified in rejecting any claim based on facts regarding which it should have been on notice as a result thereof.

1.05 DETERMINATION OF THE VALUE OF EXTRA (ADDITIONAL) OR OMITTED WORK

- A. The value of extra (additional) or omitted work shall be determined in one or more of the following ways:
 - 1. On the basis of the actual cost of all the items of labor (including on-the-job supervision), materials, and use of equipment, plus a maximum 15 percent for added work or a minimum 15 percent for deleted work which shall cover the Contractor's general supervision, overhead and profit.
 - a. Labor may include on-site supervision, on-site project management, in addition to field personal associated with the work.
 - b. In case of subcontracts, the 15 percent (maximum for added work and minimum for deleted work) is interpreted to mean the subcontractor's supervision, overhead and profit, and an additional 5 percent (maximum for added work and minimum for deleted work) may then be added to such costs to cover the General Contractor's supervision, overhead and profit.
 - c. The cost of labor shall include required insurance, taxes and fringe benefits.
 - d. Equipment costs shall be based on current rental rates in Lexington, KY.
 - 2. By estimate and acceptance in a lump sum.
 - 3. By unit prices named in the Contract or subsequently agreed upon.
- B. Provided, however, that the cost or estimated cost of all extra (additional) work shall be determined in advance of authorization by the Engineer and approved by the Owner.

- C. All extra (additional) work shall be executed under the conditions of the original Contract. Any claim for extension of time shall be adjusted according to the proportionate increase or decrease in the final total cost of the work unless negotiated on another basis.
- D. Except for over-runs in contract unit price items, no extra (additional) work shall be done except upon a written Change Order from the Engineer, and no claim on the part of the Contractor for pay for extra (additional) work shall be recognized unless so ordered in writing by the Engineer.

PART 2 - PRODUCTS

2.1 MOBILIZATION

Payment for the Contractor's mobilization shall be made at the Contract lump sum price and shall include all costs incurred for moving equipment onto the project area, staging, security fencing, and any pertinent costs related thereto, for the duration of the contract term. Mobilization unit price shall not exceed two percent (2%) of the total Bid Amount.

2.2 BONDS AND INSURANCE

Payment for bonds and insurance shall be made at the Contract lump sum price, and shall include the costs of all bonds provided under the Contract, and the premiums for insurance required under the Contract, for the duration of the contract term. Unit price shall be based on actual invoices and payment shall be made upon receipt of invoices attached to a monthly progress payment request.

2.3 GENERAL REQUIREMENTS

Payment for general requirements shall be made at the Contract lump sum price and shall include field supervision and support staff, office supervision and support staff, costs associated with maintaining the field operation, and other items required by the general requirements and conditions of the Contract. Payment for General Requirements shall be made on an equal distribution across the Contract term on a monthly basis.

2.4 DEMOBILIZATION

Payment for the Contractor's demobilization upon completion of the project shall be made at the Contract lump sum price and shall include all costs incurred for removing equipment and materials from the project area and any pertinent costs related thereto, for the duration of the Contract term. Demobilization unit price shall not exceed one percent (1%) of the total Bid Amount.

2.5 EROSION AND SEDIMENT CONTROL AND CONFORMANCE WITH SWPPP

Payment is for furnishing, installing, maintaining and removing erosion and sediment control devices. This is to be paid at the contract lump sum price, complete in place, which shall include compensation for materials, placing, cleaning, and maintaining the sediment and erosion control devices throughout the construction period and removal of the of the sediment and erosion control devices once vegetation is established. Payment shall be distributed as follows: 25% when all ESC measures are in place and operating correctly; 50% equally distributed across the Contract term; and 25% for the removal of the ESC measures and final stabilization/restoration.

2.6 PVC (SDR 35) GRAVITY SEWER LATERAL

Payment is for furnishing and installing gravity sewer laterals at the contract unit price per each lateral connection based on depth as indicated on the Bid Schedule. This is to be paid at the contract unit price, complete in place, which shall include compensation for pipe, reducers, spool pieces, fittings (excluding items included in cleanout pay item), materials, hauling, excavation

(including rock excavation), shoring, sheeting, removal of existing lateral, bedding, backfilling, cleanup, restoration, testing, and all other items necessary for a complete installation.

2.7 GRAVITY SEWER PIPE

Payment is for furnishing and installing Gravity Sewer Pipe at the contract unit price per linear foot, based on the line size and pipe type as indicated on the Bid Schedule. The quantity of sewer to be paid for shall be the actual length of installed in trench and into boot of manhole. Fittings and tees shall be included in the unit price for the length of pipe. Gravity sewer pipe is to be paid at the contract unit price, complete in place, which shall include compensation for pipe, materials, hauling, clearing and grubbing, excavation (including rock excavation), shoring, sheeting, removal of existing pipe, bedding, backfilling, cleanup, restoration (excluding permanent seeding), testing, and all other items necessary for a complete installation.

2.8 CONNECTION TO EXISTING SEWER

For pipes 12" and larger, payment shall be made for furnishing and installing a Connection to Existing Sewer. This is to be paid at the contract unit price, based on the line size as indicated on the Bid Schedule, complete in place, which shall include compensation for coupling, one full length of pipe, materials, hauling, tapping, excavation (including rock excavation), shoring, sheeting, bedding, forming and placing (constructing) concrete cradle, backfilling, cleanup, testing, and all other items necessary for a complete installation.

2.9 MANHOLE ABANDONMENT

Payment is for Manhole Abandonment at the contract unit price each. This is to be paid at the contract unit price, complete in place, which shall include compensation for excavation (including rock excavation), demolition, disposal, concrete, crushed stone fill, backfilling, cleanup, restoration, and all other items necessary for a complete installation.

2.10 MANHOLE

Payment is for furnishing and installing a Manhole, based on the size and depth as indicated on the Bid Schedule. This is to be paid at the contract unit price each, complete in place, which shall include compensation for the manhole casting, cementitious crystalline admixture (see Specification Section 02608 for required admixtures), boots, steps, gaskets, exterior joint wraps with stainless steel bands, crushed stone, SS frame anchors, infiltration pans, frame and cover, grout, materials, removal of existing manhole, hauling, excavation (including rock excavation), bedding, backfilling, testing, cleanup, and all other items necessary for a complete installation on new or existing sewer lines.

2.11 RECONNECT EXISTING GRAVITY SEWER OR SERVICE LATERAL TO NEW MANHOLE

Payment is for furnishing and installing a new manhole connection to an existing gravity sewer or service lateral based on the size as indicated on the bid schedule. This is to be paid at the contract unit price each, complete in place, which shall include compensation for gasket, Fernco Strongback coupling, full length of pipe, grout, materials, furnishing, excavation (including rock excavation), bedding, backfilling, cleanup, coring, and all other items necessary for a complete installation.

2.12 PIPE ABANDONMENT, PLUG

Payment is for abandoning an existing sewer using a plug, based on the size as indicated on the Bid Schedule. This is to be paid at the contract unit price each, complete in place, which shall include compensation for concrete, cutting pipe, materials, equipment, excavation (including rock excavation), backfilling, cleanup, restoration, and all other items necessary for a complete installation.

2.13 PLUG MANHOLE INLET

Payment is for installing plug on spool section of pipe entering manhole, based on the size as indicated on the Bid Schedule. This is to be paid at the contract unit price each, complete in place, which shall include compensation for concrete, grout, cutting pipe, materials, equipment, excavation (including rock excavation), backfilling, cleanup, restoration, and all other items necessary for a complete capping.

2.14 VIDEO INSPECTION OF NEW SEWER PIPE

Payment for video inspection shall be made at the contract price per linear foot, including dewatering of pipe, bypass pumping, maintenance of traffic, hydraulic jet cleaning, disposal of debris, furnishing all labor, materials, tools, equipment, and incidentals, and doing all the work involved to perform sewer video inspections, including delivery of DVDs and written logs of the sewer videos to the Owner.

2.15 TREE PROTECTION

Payment for tree protection shall be paid for at the Contract unit price, per linear foot of fencing. Unit price shall include furnishing, installation, maintenance and removal of 4' tall orange plastic fencing attached to metal "tee" posts, securely driven into the ground. The Tree Protection unit price shall also include attaching tree protection signage (12"x 18" aluminum sign, provided by LFUCG DWQ) to the Tee posts at 25'+/- intervals. Zip ties or tie wire may be used. Signage shall be returned to LFUCG DWQ at the conclusion of the project. Maintenance of the fence shall cover repairs to fence, posts or signs, and grass and weed cutting, as required, for the duration of the project.

Coordination with LFUCG Division of Environmental Services, so they may cut tree roots, *prior to construction traffic/excavation* under or near significant trees shall be included. The Division of Environmental Services shall be notified 2 weeks before their services are required. The Contractor will not be allowed to proceed with their work if the roots have not been properly cut by DES. Failure to notify DES, 2 weeks prior to work in the area, shall not be grounds for additional contract time.

Tree protection fencing shall be installed at the direction of the Engineer and shall be placed a minimum of 3 weeks before any construction traffic occurs under or near significant trees.

2.16 BITUMINOUS CONCRETE: TRENCH CONSTRUCTION, STREET

Payment for bituminous concrete relating to trench construction in streets shall be paid for at the Contract unit price per square yard, which shall include placement of aggregate, concrete bridge, compaction, bituminous concrete, removal of existing surface, placement of bituminous concrete, taper of new pavement into existing pavement, and all appurtenances necessary for a complete installation.

2.17 BITUMINOUS CONCRETE: FULL WIDTH PAVING, STREET

Payment for bituminous concrete relating to full width paving in streets shall be paid for at the Contract unit price per square yard, which shall include placement of aggregate, compaction, bituminous concrete, concrete bridge, milling of existing surface, placement of bituminous concrete, proper grading, taper of new pavement into existing pavement, and all appurtenances necessary for a complete installation.

2.18 BITUMINOUS CONCRETE: PRIVATE PARKING LOTS/DRIVEWAYS

Payment for bituminous concrete relating to construction in private parking lots and driveways shall be paid for at the Contract unit price per square yard, which shall include placement of aggregate, compaction, bituminous concrete, removal of existing surface, placement of bituminous concrete, proper grading, taper of new pavement into existing pavement, and all appurtenances necessary for a complete installation.

2.19 PORTLAND CEMENT CONCRETE PAVING: PRIVATE PARKING LOTS/DRIVEWAYS/APRONS

Payment for Portland cement concrete relating to private parking lots, driveways, and aprons shall be paid for at the Contract unit price per square yard, which shall include placement of aggregate, compaction, Portland cement concrete, removal of existing surface, placement of Portland cement concrete, proper grading, taper of new surface into existing surface, and all appurtenances necessary for a complete installation.

2.20 ASPHALT PAVEMENT PATCH

Payment for asphalt pavement patch shall be paid for at the Contract unit price per square yard, which shall include saw cutting and removal of existing pavement, placement of new asphalt pavement (depth to match existing), compaction, all maintenance of traffic, including flaggers, arrow board, message board, etc., and all appurtenances and manpower necessary for a complete installation.

2.21 SEEDING, TEMPORARY, EXTRA AS DIRECTED BY ENGINEER

Payment for temporary seeding shall be paid for at the Contract unit price per square yard, which shall include seed, fertilizer, lime, mulch/straw/netting, placement, watering and maintenance throughout the duration of the contract, and all appurtenances necessary for a complete installation.

2.22 SITE RESTORATION, METHOD A

Payment for site restoration method A (as defined in the General Notes), shall be paid for at the Contract unit price per square yard, which shall include sod, fertilizer, lime, placement, watering and maintenance throughout the duration of the contract, and all appurtenances necessary for a complete installation.

2.23 SITE RESTORATION, METHOD B

Payment for site restoration, method B (as defined in the General Notes), shall be paid for at the Contract unit price per square yard, which shall include seed, fertilizer, lime, straw, placement, watering and maintenance throughout the duration of the contract, and all appurtenances necessary for a complete installation.

2.24 SITE RESTORATION, METHOD C

Payment for site restoration, method C (as defined in the General Notes), shall be paid for at the Contract unit price per square yard, which shall include seed, fertilizer, lime, mulch/straw/netting, placement, watering and maintenance throughout the duration of the contract, and all appurtenances necessary for a complete installation.

2.25 FLOWABLE (CONTROLLED DENSITY) FILL

Payment for flowable fill shall be paid for at the Contract unit price per cubic yard measured in-place, which shall include placement of flowable fill, maintenance of traffic, and all appurtenances necessary for a complete installation.

2.26 CONCRETE SIDEWALK

Payment for concrete sidewalk removal and replacement shall be paid for at the Contract unit price per square yard, which shall include excavation, crushed stone, formwork, compaction, placement of concrete sidewalk, expansion joints, curing compound, and all appurtenances necessary for a complete installation.

2.27 BYPASS PUMPING AND SETUP

Payment is for operation and setup of bypass pumping required for installation of all items shown in Contract Documents. This is to be paid for at the Contract lump sum as indicated on the Bid Schedule. Work shall be complete in place, which shall include compensation for all mobilizations, set ups, testings (per section 01520), takedowns, relocations, and demobilization for the pumps, hoses, line plugs, generator, rental fees, fuel, monitoring, piping, duty and backup pumps, check valve, adapters, hose, labor, maintenance, and all appurtenances necessary for the continued setup and operation of the bypass pumping system throughout the project. Provision of redundant pumping capability per Section 01520 is incidental to the cost of bypass pumping and shall be included in this pay item.

2.28 MAINTENANCE OF TRAFFIC

Payment is maintenance of traffic. This is to be paid at the contract lump sum price, complete in place, which shall include compensation for flaggers, arrow board, message board, etc., removal of equipment after work is completed, and all appurtenances and manpower necessary.

2.29 MISCELLANEOUS SITE IMPROVEMENTS

An allocation has been established for Miscellaneous Site Improvements or other work not included in the Contract Documents but deemed necessary for the project during construction. Miscellaneous Site Improvements will be as directed by the Engineer in a Field Order which will document costs associated with the directed Miscellaneous Site Improvement(s). Costs shall include all labor, equipment, materials, and other incidental costs required to perform the directed work. Funds from the Miscellaneous Site Improvements allocation not encumbered by a Field Order will be credited to the final contract amount in a Final Adjusting Change Order.

2.30 ABANDON EXISTING PUMP STATION, ST. MARTIN'S PUMP STATION

Payment is for Pump Station Abandonment at the contract unit price per lump sum, based on the Existing Pump Station Demolition Notes. This is to be paid at the contract unit price, complete in place, which shall include compensation for excavation (including rock excavation), demolition, disposal, concrete, crushed stone fill, backfilling, cleanup, restoration, and all other items necessary for a complete installation.

2.31 CLEANOUT

Payment is for furnishing and installing a six inch cleanout, complete as required by cleanout standard details, including all excavation, materials, labor and equipment

PART 3 - EXECUTION

3.01 PAY ITEMS

A. The pay items listed hereinbefore refer to the items listed in the Bid Schedule and are the only pay items for this contract.

- B. Any and all other items of work listed in the specifications or shown on the Contract Drawings for this contract shall be considered incidental to and included in the associated pay items.

END OF SECTION

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall allow the Owner or his agents, and other project Contractors or their agents, to enter upon the work for the purpose of constructing, operating, maintaining, removing, repairing, altering, or replacing such pipes, sewers, conduits, manholes, wires, poles, or other structures and appliances which may be required to be installed at or in the work. The Contractor shall cooperate with all aforesaid parties and shall allow reasonable provisions for the prosecution of any other work by the Owner, or others, to be done in connection with his work, or in connection with normal use of the facilities.
- B. Each Contractor shall cooperate fully with the Owner, the Engineer, and all other Contractors employed on the Work, to effect proper coordination and progress to complete the project on schedule and in proper sequence. Insofar as possible, decisions of all kinds required from the Engineer shall be anticipated by the Contractor to provide ample time for inspection, or the preparation of instructions.
- C. Each Contractor shall assume full responsibility for the correlation of all parts of his work with that of other Contractors. Each Contractor's superintendent shall correlate all work with other Contractors in the laying out of work. Each Contractor shall lay out his own work in accordance with the Drawings, Specifications, and instructions of latest issue and with due regard to the work of other Contractors.
- D. Monthly general progress coordination meetings will be held at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as special pre-installation meetings. Representation at each meeting by every part currently involved in coordination or planning for the work of the entire project is requested. Meetings shall be conducted in a manner that will resolve coordination problems. Results of the meetings shall be recorded and copies distributed to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.02 COORDINATION OF CRAFTS, TRADES, AND SUBCONTRACTORS

- A. The Contractor shall coordinate the work of all crafts, trades and subcontractors engaged on the Work, and he shall have final responsibility as regards the schedule, workmanship and completeness of each and all parts of the work.
- B. Each Subcontractor is expected to be familiar with the General requirements and all sections of the detailed Specifications for all other trades and to study all Drawings applicable to his work to the end that complete coordination between trades will be effected. Consult the Engineer if conflicts exist on the Drawings.
- C. Contractor's Superintendent, or his designee who is employed by Contractor, must be on site at all times when work is being performed, except for periods which will not exceed 1 hour.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.01 PRECONSTRUCTION MEETING

- A. A preconstruction meeting will be held after Award of Contract, but prior to starting work at the site. Contractor's Project Manager and Site Superintendent are required to attend, as are representatives of all major subcontractors. Progress schedule update shall be submitted in advance of each meeting.

1.02 PROGRESS MEETINGS

- A. Progress meetings will be held monthly at the Division of Water Quality offices during the performance of the Work. Additional progress meetings may be called as progress of work dictates. Prior to each progress meeting, Contractor shall submit a progress report summarizing the work completed over the past month and providing a look ahead at the work to be done over the next month.
- B. Minimum Agenda for meeting shall include:
 - 1. Review and approve minutes of previous meetings.
 - 2. Review progress of Work since last meeting.
 - 3. Review proposed 30 day construction schedule.
 - 4. Note and identify problems which impede planned progress.
 - 5. Develop corrective measures and procedures to regain planned schedule.
 - 6. Revise construction schedule as indicated and plan progress during next work period.
 - 7. Maintaining of quality and work standards.
 - 8. Complete other current business.
 - 9. Schedule next progress meeting.

1.03 SPECIAL MEETINGS

- A. Owner or Engineer may schedule special meetings at the site or at Division of Water Quality offices to resolve construction issues. Contractor and when appropriate, subcontractors, shall attend upon request. No additional compensation shall be paid for meeting attendance.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This Section includes administrative and procedural requirements governing allowances. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Defined allowances. Defined allowances include equipment, systems, or services that have been selected by the Owner from a designated supplier. These will be handled in accordance with paragraph 1.06 of this specification.
 - 2. Undefined allowances. Undefined allowances are intended for work which has an unknown scope at the time of bidding. These will be handled in accordance with paragraph 1.07 of this specification.
- C. The following allowances shall be included in the Contractor's bid:
 - 1. Miscellaneous Site Improvements (defined allowance) - \$150,000 has been established for owner selected miscellaneous site improvements. An allocation has been established for Miscellaneous Site Improvements or other work not included in the Contract Documents but deemed necessary for the project during construction. Miscellaneous Site Improvements will be as directed by the Engineer in a Field Order which will document costs associated with the directed Miscellaneous Site Improvement(s). Costs shall include all labor, equipment, materials, and other incidental costs required to perform the directed work. Funds from the Miscellaneous Site Improvements allocation not encumbered by a Field Order will be credited to the final contract amount in a Final Adjusting Change Order.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.03 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, Contractor shall advise Engineer of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Engineer's request, obtain proposals for each allowance for use in making final selections and include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by the Engineer from the designated supplier.

1.04 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.05 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.06 DEFINED ALLOWANCES

- A. Defined allowances shall include cost to Contractor of specific products and materials ordered by Contractor under allowance and shall include taxes, freight, and delivery to the project site. Defined allowances are the same as Cash Allowances as defined in Article 11.02 of the General Conditions.
- B. Contractor's costs at the Project site for labor, installation, overhead and profit, and similar costs related to the equipment ordered under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Contractor shall not be allowed any markup of subcontractors work or materials under the allowances. Markup shall be included as part of the Contract sum and not part of the allowance.

1.07 UNDEFINED ALLOWANCES

- A. Undefined allowances shall include work for which the scope is not yet determined. The allowance amount is not guaranteed and is solely for the purpose of determining an initial Contract Price. Undefined allowances are the same as Contingency Allowances as defined in Article 11.02 of the General Conditions.
- B. Once the scope of work is defined, the Contractor shall present cost and schedule as listed in 1.04.A above.

1.08 UNUSED MATERIALS

- A. Contractor shall be responsible for returning unused materials purchased under an allowance to the manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
- B. When it is not economically practical to return material for credit, Contractor shall be responsible for preparing and delivering unused material to Owner's designated storage location. Otherwise, disposal of unused material shall be Contractor's responsibility.

PART 2 - PRODUCTS

(NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.02 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. Progress Schedule

1. Within thirty (30) days after execution of the Agreement, but at least 20 days prior to submitting the first application for a progress payment, the Contractor shall prepare and submit three (3) copies of his proposed progress schedule to the Engineer for review and approval.
2. If so required, the schedule shall be revised until it is approved by the Engineer.
3. The schedule shall be updated monthly, depicting progress to the last day of the month and three (3) copies submitted to the Engineer not later than the fifth day of the month with the application for progress payment.
4. The schedule shall be prepared in the form of a horizontal bar chart showing in detail the proposed sequence of the work and identifying construction activities for each structure and for each portion of work.
5. The schedule shall be time scaled, identifying the first day of each week. The Schedule shall be provided with estimated dates for Early Start, Early Finish, Late Start and Late Finish as applicable. The work shall be scheduled to complete the Project within the Contract time. The Late Finish date shall equal the Contract Completion Date.
6. The schedule shall show duration (number of days) and float for each activity. Float shall be defined as the measure of leeway in starting or completing a scheduled activity without adversely affecting the project completion date established by the Contract Documents.
7. The updated schedule shall show all changes since the previous submittal.
8. All revisions to the schedule must have the prior approval of the Engineer.

B. Equipment and Material Orders Schedule

1. Contractor shall prepare and submit three (3) copies of his schedule of principal items of equipment and materials to be purchased to the Engineer for review and approval.
2. If so required, the schedule shall be revised until it is approved by the Engineer.
3. The schedule shall be updated monthly and three (3) copies submitted to the Engineer not later than the fifth day of every month with the application for progress payment.
4. The updated schedule shall be based on the Progress Schedule developed under the requirements of Paragraph 1.01(A) of this Section.
5. The schedule shall be in tabular form with appropriate spaces to insert the following information for principal items of equipment and materials:
 - a. Dates on which Shop Drawings are requested and received from the manufacturer.
 - b. Dates on which certification is received from the manufacturer and transmitted to the Engineer.

- c. Dates on which Shop Drawings are submitted to the Engineer and returned by the Engineer for revision.
- d. Dates on which Shop Drawings are revised by manufacturer and resubmitted to the Engineer.
- e. Date on which Shop Drawings are returned by Engineer annotated either "Furnish as Submitted" or "Furnish as Corrected".
- f. Date on which accepted Shop Drawings are transmitted to manufacturer.
- g. Date of manufacturer's scheduled delivery.
- h. Date on which delivery is actually made.

C. Working Drawings

- 1. Within thirty (30) days after the Notice to Proceed, each prime Contractor shall prepare and submit three (3) copies of his preliminary schedule of Working Drawing submittals to the Engineer for review and approval. If so required, the schedule shall be revised until it is approved by the Engineer.
- 2. Working Drawings include, but are not limited to, Shop Drawings, layout drawings in plan and elevation, installation drawings, etc. Contractor shall be responsible for securing all of the information, details, dimensions, Drawings, etc., necessary to prepare the Working Drawings required and necessary under this Contract and to fulfill all other requirements of his Contract. Contractor shall secure such information, details, Drawings, etc., from all possible sources including the Drawings, Working Drawings prepared by subcontractors, Engineers, suppliers, etc.
- 3. In the event that the Engineer is required to provide additional engineering services as a result of a substitution of materials or equipment by the Contractor, the additional services will be provided in accordance with Section 01010 - Summary of Work, and will be covered in supplementary or revised Drawings which will be issued to the Contractor. All changes indicated that are necessary to accommodate the equipment and appurtenances shall be incorporated into the Working Drawings submitted to the Engineer.
- 4. Shop Drawings
 - a. Contractor shall submit for review by the Engineer Shop Drawings for all fabricated work and for all manufactured items required to be furnished by the Contract Documents.
 - b. Structural and all other layout Drawings prepared specifically for the Project shall have a plan scale of not less than 1/4-inch = 1 foot.
 - c. The submitted documents shall provide information indicating that the materials are in conformance with the Technical Specifications and Contract Documents.
 - d. Where manufacturer's publications in the form of catalogs, brochures, illustrations or other data sheets are submitted in lieu of prepared Shop Drawings, such submittals shall specifically indicate the item for which approval is requested. Identification of items shall be made in ink, and submittals showing only general information are not acceptable.

5. Contractor Responsibilities

- a. All submittals from subcontractors, manufacturers or suppliers shall be sent directly to the Contractor for checking. Contractor shall thoroughly check all Drawings for accuracy and conformance to the intent of the Contract Documents. Drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors, manufacturers, or suppliers by the Contractor for correction before submitting them to the Engineer.
- b. All submittals shall be bound, dated, properly labeled and consecutively numbered. Information on the label shall indicate Specification Section, Drawing number, subcontractors', manufacturer's or supplier's name and the name or type of item the submittal covers. Each part of a submittal shall be marked and tabulated.
- c. Working Drawings shall be submitted as a single complete package including all associated drawings relating to a complete assembly of the various parts necessary for a complete unit or system.
- d. Shop Drawings shall be submitted as a single complete package for any operating system and shall include all items of equipment and any mechanical units involved or necessary for the functioning of such system.
- e. ALL SUBMITTALS SHALL BE THOROUGHLY CHECKED BY THE CONTRACTOR FOR ACCURACY AND CONFORMANCE TO THE INTENT OF THE CONTRACT DOCUMENTS BEFORE BEING SUBMITTED TO THE ENGINEER AND SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL CERTIFYING THAT THEY HAVE BEEN SO CHECKED. SUBMITTALS WITHOUT THE CONTRACTOR'S STAMP OF APPROVAL WILL NOT BE REVIEWED BY THE ENGINEER AND WILL BE RETURNED TO THE CONTRACTOR. Any comments added to the drawings by the Contractor shall be done in green ink so as to denote any Contractor notes.
- f. If the submittals contain any departures from the Contract Documents, specific mention thereof shall be made in the Contractor's letter of transmittal. Otherwise, the review of such submittals shall not constitute approval of the departure.
- g. No materials shall be ordered, fabricated or shipped or any work performed until the Engineer returns to the Contractor the submittals, herein required, annotated either "Furnish as Submitted" or "Furnish as Corrected".
- h. Where errors, deviations, and/or omissions are discovered at a later date in any of the submittals, the Engineer's prior review of the submittals does not relieve the Contractor of the responsibility for correcting all errors, deviations, and/or omissions.

6. Procedure for Review

- a. Submittals shall be transmitted in sufficient time to allow the Engineer at least thirty (30) working days for review and processing.
- b. Engineer prefers initial submittals be in electronic media for review. Once the submittal is reviewed, Contractor to provide two (2) paper hardcopies.
- c. If Contractor does not have capability to submit electronic submittals, then Contractor shall transmit two (2) prints of each submittal to the Engineer for review for all Drawings greater than 11-inches by 17-inches in size, as well as six (6) copies of all other material. If electronic submittals are used, the Contractor shall transmit two (2) hardcopies of each submittal to the Engineer once the submittal has been reviewed.

- d. Submittal shall be accompanied by a letter of transmittal, in duplicate, containing date, project title, Contractor's name, number and titles of submittals, notification of departures and any other pertinent data to facilitate review.
 - e. Submittals will be annotated by the Engineer in one of the following ways:
 - "Furnish as Submitted" - no exceptions are taken.
 - "Furnish as Corrected" - minor corrections are noted and shall be made.
 - "Revise and Resubmit" - major corrections are noted and a resubmittal is required.
 - "Rejected" - Based on the information submitted, the submission is not in conformance with the Contract Documents. The deviations from the Contract Documents are too numerous to list and a completely revised submission of the proposed equipment or a submission of other equipment is required.
 - f. If a submittal is satisfactory to the Engineer, the Engineer will annotate the submittal "Furnish as Submitted" or "Furnish as Corrected", retain four (4) copies and return remaining copies to the Contractor.
 - g. If a resubmittal is required, the Engineer will annotate the submittal "Revise and Resubmit" and transmit five (5) copies to the Contractor for appropriate action.
 - h. Contractor shall revise and resubmit submittals as required by the Engineer until submittals are acceptable to the Engineer. It is understood by the Contractor that Owner may charge the Contractor the Engineer's charges for review in the event a submittal is not approved (either "Furnish as Submitted" or "Furnish as Corrected") by the third submittal for a system or piece of equipment. These charges shall be for all costs associated with engineering review, meetings with the Contractor or manufacturer, etc., commencing with the fourth submittal of a system or type of equipment submitted for a particular Specification Section.
 - i. Acceptance of a Working Drawing by the Engineer will constitute acceptance of the subject matter for which the Drawing was submitted and not for any other structure, material, equipment or appurtenances indicated or shown.
7. Engineer's Review
- a. Engineer's review of the Contractor's submittals shall in no way relieve the Contractor of any of his responsibilities under the Contract. An acceptance of a submittal shall be interpreted to mean that the Engineer has no specific objections to the submitted material, subject to conformance with the Contract Drawings and Specifications. The Engineer will denote any notes in red ink so as to record his comments.
 - b. Engineer's review will be confined to general arrangement and compliance with the Contract Drawings and Specifications only, and will not be for the purpose of checking dimensions, weights, clearances, fittings, tolerances, interferences, coordination of trades, etc.
8. Record Working Drawings
- a. Prior to final payment, the Contractor shall furnish the Engineer one complete set of all accepted Working Drawings, including Shop Drawings, for equipment, piping, electrical work, heating system, ventilating system, air conditioning system, instrumentation system, plumbing system, structural, interconnection wiring diagrams, etc.

- b. Manufacturer's publications, submitted in lieu of prepared Shop Drawings, will not be required in reproducible form. However, three (3) sets of such material shall be furnished by the Contractor to the Engineer.
- c. Working Drawings furnished shall be corrected to include any departures from previously accepted Drawings.

D. Construction Photographs

1. The General Contractor shall take photographs at the locations and at such stages of the construction as directed by the Engineer. Digital format shall be used. Provide all pictures for a given period on a CD or DVD.
2. Provide the equivalent of 36 different exposures per month for the duration of the Contract time. When directed by the Engineer, frequency of photographs may be increased to weekly sessions provided that the equivalent number of exposures is not exceeded. Engineer may waive requirements for photographs during inactive construction periods in favor of increased photographs during active construction sequences.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01320 - PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

A. Scheduling Responsibilities:

1. In order to provide a definitive basis for determining job progress, a construction schedule of a type approved by the Owner will be used to monitor the project.
2. Each week the Contractor shall be responsible for preparing the schedule and updating it based on a tentative two week basis. It shall at all times remain the Contractor's responsibility to schedule and direct his forces in a manner that will allow for the completion of the work within the contractual period.

B. Construction Hours: see Section 01010 – Summary of Work – for construction working hours requirements.

C. Progress of the Work:

1. The work shall be started within ten (10) days following the Notice to Proceed and shall be executed with such progress as may be required to prevent delay to other Contractors or to the general completion of the project. The work shall be executed at such times and in or on such parts of the project, and with such forces, material and equipment, to assure completion of the work in the time established by the Contract.
2. The Contractor agrees that whenever it becomes apparent from the current monthly schedule update that delays have resulted and, hence, that the Contract completion date will not be met or when so directed by the Owner, he will take some or all of the following actions at no additional cost to the Owner:
 - a. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of work.
 - b. Increase the number of working hours per shift, shifts per working day or days per week, the amount of construction equipment, or any combination of the foregoing to substantially eliminate the backlog of work.
 - c. Reschedule activities to achieve maximum practical concurrency of accomplishment of activities, and comply with the revised schedule.
 - d. The Contractor shall submit to the Owner or the Owner's representative for review a written statement of the steps he intends to take to remove or arrest the delay to the critical path in the accepted schedule.

1.02 CONSTRUCTION SCHEDULE

- A.** Within ten (10) calendar days of the Notice to Proceed, the Contractor shall submit to the Engineer five (5) copies of his proposed schedule. The schedule will be the subject of a schedule review meeting with the Contractor, the Engineer and the Owner or the Owner's representative within one (1) week of its submission. The Contractor will revise and resubmit the schedule until it is acceptable and accepted by the Owner or the Owner's representative.

1.03 CONTRACT COMPLETION TIME

A. Causes for Extensions:

The Contract completion time will be adjusted only for causes specified in this Contract. In the event the Contractor requests an extension of any Contract completion date, he shall furnish such justification and supporting evidence as the Owner or the Owner's representative may deem necessary for a determination as to whether the Contractor is entitled to an extension of time under the provisions of this Contract. The Owner, with the assistance of the Engineer, will, after receipt of such justification and supporting evidence, make findings of fact and will advise the Contractor in writing thereof.

B. Requests for Time Extension:

Each request for change in any Contract completion date shall be initially submitted to the Owner within the time frame stated in the General Conditions. All information known to the Contractor at that time concerning the nature and extent of the delay shall be transmitted to the Owner at that time. Within the time frame stated in the General Conditions but before the date of final payment under this Contract, all information as required above concerning the delay must be submitted to the Owner. No time extension will be granted for requests which are not submitted within the foregoing time limits.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01323
THIRD PARTY PROFESSIONAL PRE-CONSTRUCTION PHOTOGRAPHIC
DOCUMENTATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Procurement and Contracting Requirements, and General Requirements.

1.02 SUMMARY

- A. Section Includes:
 - 1. Photographic documentation.

1.03 PRICE AND PAYMENT PROCEDURES

- A. Refer to Division 1 for general requirements for Allowances, Unit Prices, and Alternates.

1.04 PHOTOGRAPHIC AND VIDEO DOCUMENTATION VENDORS

- A. Provide services from the following, or OWNER approved equal:
 - 1. Multivista, Website: www.multivista.com, Email: m.rolfe@multivista.com, (614) 352-0555, 1001 Eastwind Drive, Suite 110, Westerville, Ohio 43081.
 - 2. Self-performed pre-construction photographic documentation will not be accepted.

1.05 QUALITY ASSURANCE

- A. Vendor Qualifications, General: Specialist (not the General Contractor or Construction Manager), experienced in construction photographic and video documentation for each type of equipment, technology, and service specified, carrying OSHA certifications, related insurance coverage(s), and other certification and clearances required for operations on the Project site, having a minimum of five years' experience engaged as a professional photographer/videographer of construction projects while using an advanced software platform, indexing system, and navigation interface, and having examples of at least 5 construction projects in the past 2 years of similar type, size, duration and complexity to this Project. Demonstrate the ability to contract through the project schedule. Must have a local office within 100 miles of the project site and be able to respond to site visit requests with qualified personnel within 24 hours of notice. Must respond to service and support requests/inquiries within 24 hours. Submit qualifications upon request.

1. In-House Software Programming And Development Team: Photographic and Video Documenter directly employs in-house software programming and development team to support, maintain, and when needed customize the software platform, online interface, mobile application, and BIM model integration services.
2. Attend Project meetings as required. Participate in any required project safety training.

1.06 PROJECT CONDITIONS

A. Verification for Photographic and Video Documentation, General:

1. Verify site conditions are acceptable for documentation work to proceed.
2. Notify Client of obstructions that impede documentation progress.
3. Verify necessity for access to neighboring properties and/or buildings, if any.
 - a. Notify Client of required access to neighboring property 7 calendar days prior to proceeding with field work.

1.07 PHOTOGRAPHIC AND VIDEO DOCUMENTATION, GENERAL

- A. Single Source: Perform each type of documentation specified in this Section under a single Photographic and Video Documenter's responsibility, who meets the Vendor Qualifications specified in this Section's Quality Assurance Article.
- B. Provide factual presentation. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- C. Use overlapping photographic techniques to ensure maximum coverage, including 360 degrees of exterior and interior features, where applicable.
- D. Identification for Each Photograph and Video:
 1. Project name.
 2. Orientation in Key Plan.
 3. Date taken.

- E. Milestone Documentation: Document conditions prior to each construction milestone, including but not limited to each of the following:
1. Site Existing Conditions:
 - a. Document site to limits of the Work as indicated on Contract Drawings, and immediately surrounding area.
 - b. Document access roads/properties, a minimum of 250' from the construction limits, and immediately surrounding areas.
- F. Permanent Record: Provide offline, digital media copies of final standard photographic, video, and webcam documentation ("The Permanent Record") upon completion of the contract.
1. Permanent Record shall include the underlying software platform, indexing and navigation system, typically as a DVD flash drive or external hard drive. Include one multiple-user license for the underlying software, indexing and navigation for accessing the digital media.
 2. Online access shall terminate upon delivery of the final documentation copies or as otherwise agreed by the Client.
 3. Intellectual property rights associated with the documentation prepared in direct service of the Project shall transfer to the Client, along with the digital media itself.
- G. Additional Types of Documentation: If requested by Client or Client's agent in writing, make proposal for additional documentation not covered in the scope of this Section. Provide such additional documentation if approved by written Change Order.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. Testing Laboratory Services

1. Laboratory testing and checking required by the Specifications, including the cost of transporting all samples and test specimens, shall be provided and paid for by the Owner unless otherwise indicated in the Specifications.
2. Materials to be tested include, but are not necessarily limited to the following: cement, concrete aggregate, concrete, and reinforcing steel.
3. Tests required by the Owner shall not relieve the Contractor from the responsibility of supplying test results and certificates from manufacturers or suppliers to demonstrate conformance with the Specifications.
4. In place testing of compacted materials will be conducted as specified or recommended by Engineer.
5. Procedure
 - a. The Contractor shall plan and conduct his operations to permit taking of field samples and test specimens, as required, and to allow adequate time for laboratory tests.
 - b. The collection, field preparation and storage of field samples and test specimens shall be as directed by the Engineer with the cooperation of the Contractor.
6. Significance of Tests
 - a. Test results shall be binding on both the Contractor and the Owner, and shall be considered irrefutable evidence of compliance or noncompliance with the Specification requirements, unless supplementary testing shall prove, to the satisfaction of the Owner, that the initial samples were not representative of actual conditions.
7. Supplementary and Other Testing
 - a. Nothing shall restrict the Contractor from conducting tests he may require. Should the Contractor at any time request the Owner to consider such test results, the test reports shall be certified by an independent testing laboratory acceptable to the Owner. Testing of this nature shall be conducted at the Contractor's expense.

1.02 IMPERFECT WORK OR MATERIALS

- A. Any defective or imperfect work or materials furnished by the Contractor which is discovered before the final acceptance of the work, as established by the Certificate of Substantial Completion, or during the subsequent guarantee period, shall be removed immediately even though it may have been overlooked by the Engineer and estimated for payment. Any materials condemned or rejected by the Engineer shall be tagged as such and shall be immediately removed from the site. Satisfactory work or materials shall be substituted for that rejected.
- B. The Engineer may order tests of imperfect or damaged work or materials to determine the required functional capability for possible acceptance, if there is no other reason for rejection.

The cost of such tests shall be borne by the Contractor; and the nature, tester, extent and supervision of the tests will be as determined by the Engineer. If the results of the tests indicate that the required functional capability of the work or material was not impaired, consistent with the final general appearance of same, the work or materials may be deemed acceptable. If the results of such tests reveal that the required functional capability of the questionable work or materials has been impaired, then such work or materials shall be deemed imperfect and shall be replaced. The Contractor may elect to replace the imperfect work or material in lieu of performing the tests.

1.03 INSPECTION AND TESTS

- A. The Contractor shall allow the Engineer ample time and opportunity for testing materials to be used in the work. He shall advise the Engineer promptly upon placing orders for material so that arrangements may be made, if desired, for inspection before shipment from the place of manufacture. The Contractor shall at all times furnish the Engineer and his representatives, facilities including labor, and allow proper time for inspecting and testing materials and workmanship. The Contractor must anticipate possible delays that may be caused in the execution of his work due to the necessity of materials being inspected and accepted for use. The Contractor shall furnish, at his own expense, all samples of materials required by the Engineer for testing, and shall make his own arrangements for providing water, electric power, or fuel for the various inspections and tests of structures and material.
- B. Where other tests or analyses are specifically required in other Sections of these Specifications, the cost thereof shall be borne by the party (Owner or Contractor) so designated in such Sections. The Owner will bear the cost of all tests, inspections, or investigations undertaken by the order of the Engineer for the purpose of determining conformance with the Contract Documents if such tests, inspection, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever nonconformance is determined by the Engineer as a result of such tests, inspections, or investigations, the Contractor shall bear the full cost thereof or shall reimburse the Owner for said cost. In this connection, the cost of any additional tests and investigations, which are ordered by the Engineer to ascertain subsequent conformance with the Contract Documents, shall be borne by the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01510 - TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. The General Contractor shall provide temporary sanitary facilities for the construction operations of this Contract. The temporary services shall be provided for use throughout the construction period.

B. Temporary Sanitary Service

Sanitary conveniences, in sufficient numbers, for the use of all persons employed on the work and properly screened from public observation, shall be provided and maintained at suitable locations by the General Contractor, all as prescribed by State Labor Regulations and local ordinances. The contents of same shall be removed and disposed of in a manner consistent with local and state regulations, as the occasion requires. Sanitary facilities shall be removed from the site when no longer required.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01520 - MAINTENANCE OF UTILITY OPERATIONS DURING CONSTRUCTION

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The sanitary sewer system shall be maintained in continuous operation during the entire construction period of all Contracts as hereinafter specified. The intent of this section is to outline the minimum requirements necessary to provide continuous transference of wastewater throughout the construction period.
- B. Work under each Contract shall be scheduled and conducted by each Contractor so as to not reduce the quality of near-by water streams or cause odor or other nuisance except as explicitly permitted hereinafter. In performing the work shown and specified, the Contractor shall plan and schedule his work to meet the plant and collection system operating requirements, and the constraints and construction requirements as outlined in this Section. No discharge of raw or inadequately treated wastewater shall be allowed. The Contractor shall pay all civil penalties, costs, and assessments associated with any discharge of raw or inadequately treated wastewater associated with the Contractor's work.
- C. The General Contractor shall be responsible for coordinating the general construction and for ensuring that permanent or temporary power is available for all existing, proposed, and temporary facilities that are required to be on line at any given time.
- D. The Contractor has the option of providing additional temporary facilities that can eliminate a constraint, provided it is done without cost to the Owner and provided that all requirements of these Specifications are fulfilled and approved by the Engineer.

1.02 TEMPORARY BYPASS PUMPING

- A. Requirements for this section shall apply to all pumping required for Contractor to perform tie-ins, shutdowns, etc. for construction of the work. Temporary bypass pumping shall be performed in accordance with this section unless noted otherwise herein. Temporary pumping system design calculations and equipment information shall be submitted for review by Engineer per Section 01300. Calculations shall be stamped by a professional engineer registered in the Commonwealth of Kentucky.
- B. Contractor shall furnish, install, maintain, and operate temporary bypass pumping facilities as required to complete the Work. Contractor shall be responsible for all construction necessary to accommodate pumps and piping including but not limited to structure modifications, pump base construction, pipe supports, etc.
- C. The Contractor shall perform a test run of the bypass pumping set-up before being allowed to continue with the full scale bypass pumping.
- D. Contractor shall design the temporary bypass pumping facilities to convey flows from the upstream manholes where existing manhole or sewer tie-ins, replacement, or modifications will be conducted in a manner that will prevent backup of the existing system.
- E. All tie-ins, replacement, or modifications shall be performed during low flow conditions.
- F. All tie-ins, replacement, or modifications Work shall be accomplished as quickly as possible. If Work required extends beyond 8-hours or weather causes higher flows in the existing system during the Work, the new Work shall be stopped and the existing system shall be placed back into service. The new Work shall be properly protected from damage. Any damage to the new Work or damage to surrounding areas caused by the new Work shall be

repaired or replaced at the Owner's decision by the Contractor at the Contractor's sole expense.

- G. Contractor shall provide all power, fuel, maintenance materials, parts, and other expendables in order to maintain temporary pumping through the duration of the Work.
- H. Contractor shall provide one standby pump equal in capacity to the largest pump installed. If temporary pumping requires non-identical pumps in series, a standby pump of each type shall be provided. Temporary control system shall start standby pump on high level and dial-out to local contact who will respond and be on-site within an hour to check and address problem. High-high level shall also alarm and dial-out indicating that standby pump is not maintaining level. Temporary pumping system shall be provided by company that has spare pumps ready to be delivered and installed locally if problems occur.
- I. Contractor shall provide standby power or 48-hour on-site fuel storage capacity for diesel engine type pumps to ensure continuous operation at all times.
- J. Contractor shall provide sound attenuation for temporary pumping facilities to limit noise levels to no more than 85 dBA at a distance of 21 feet from the noise source.
- K. Temporary pumping system shall remain fully operational until all modifications are complete and approved by Owner or Engineer.
- L. Following successful completion of the new Work, Contractor shall remove all temporary pumps, piping and appurtenances and restore area and/or structures to original condition prior to start of work.
- M. Contractor shall prepare Temporary Bypass Plan and submit to Owner and Engineer at pre-construction conference for review and approval.
- N. Contractor shall reconnect to existing gravity sewer at the end of each day, weather delay, or completion of Work so that bypass pumping does not occur when not on jobsite. Overnight bypass pumping will only be allowed when directed by Engineer and Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01530 - PROTECTION OF EXISTING FACILITIES

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. Contractor shall be responsible for the preservation and protection of property adjacent to the work site against damage or injury as a result of his operations under this Contract. Any damage or injury occurring on account of any act, omission or neglect on the part of the Contractor shall be restored in a proper and satisfactory manner or replaced by and at the expense of the Contractor to an equal or superior condition than previously existed.
- B. Contractor shall comply promptly with such safety regulations as may be prescribed by the Owner or the local authorities having jurisdiction and shall, when so directed, properly correct any unsafe conditions created by, or unsafe practices on the part of, his employees. In the event of the Contractor's failure to comply, the Owner may take the necessary measures to correct the conditions or practices complained of, and all costs thereof will be deducted from any monies due the Contractor. Failure of the Engineer to direct the correction of unsafe conditions or practices shall not relieve the Contractor of his responsibility hereunder.
- C. In the event of any claims for damage or alleged damage to property as a result of work under this Contract, the Contractor shall be responsible for all costs in connection with the settlement of or defense against such claims. Prior to commencement of work in the vicinity of property adjacent to the work site, the Contractor, at his own expense, shall take such surveys as may be necessary to establish the existing condition of the property. Before final payment can be made, the Contractor shall furnish satisfactory evidence that all claims for damage have been legally settled or sufficient funds to cover such claims have been placed in escrow, or that an adequate bond to cover such claims has been obtained.

1.02 PROTECTION OF WORK AND MATERIAL

- A. During the progress of the work and up to the date of final payment, the Contractor shall be solely responsible for the care and protection of all work and materials covered by the Contract.
- B. All work and materials shall be protected against damage, injury or loss from any cause whatsoever, and the Contractor shall make good any such damage or loss at his own expense. Protection measures shall be subject to the approval of the Engineer.

1.03 EXISTING UTILITIES AND APPURTENANT STRUCTURES

- A. The term existing utilities shall be deemed to refer to both publicly-owned and privately-owned utilities such as electric power and lighting, telephone, water, gas, storm drains, sanitary sewers and all appurtenant structures.
- B. Where existing utilities and structures are indicated on the Drawings, it shall be understood that all of the existing utilities and structures affecting the work may not be shown and that the locations of those shown are approximate only. It shall be the responsibility of the Contractor to ascertain the actual extent and exact location of existing utilities and structures. In every instance, the Contractor shall notify the proper authority having jurisdiction and obtain all necessary directions and approvals before performing any work in the vicinity of existing utilities.
- C. Prior to beginning any excavation work, the Contractor shall, through field investigations, determine any conflicts or interferences between existing utilities and new utilities to be constructed under this project. This determination shall be based on the actual locations,

elevations, slopes, etc., of existing utilities as determined in the field investigations, and locations, elevation, slope, or other information of new utilities as shown on the Drawings. If an interference exists, the Contractor shall bring it to the attention of the Engineer as soon as possible. If the Engineer agrees that an interference exists, he shall develop a plan to address the interference as required, and obtain the Owner's approval. Additional costs to the Contractor for this change shall be processed through a Change Order as detailed elsewhere in these Contract Documents. In the event the Contractor fails to bring a potential conflict or interference to the attention of the Engineer prior to beginning excavation work, any actual conflict or interference which does arise during the Project shall be corrected by the Contractor, as directed by the Engineer, at no additional expense to the Owner.

- D. The work shall be carried out in a manner to prevent disruption of existing services and to avoid damage to the existing utilities. Temporary connections shall be provided, as required, to insure uninterrupted of existing services. Any damage resulting from the work of this Contract shall be promptly repaired by the Contractor at his own expense in a manner approved by the Engineer and further subject to the requirements of any authority having jurisdiction. Where it is required by the authority having jurisdiction that they perform their own repairs or have them done by others, the Contractor shall be responsible for all costs thereof.
- E. Where excavations by the Contractor require any utility lines or appurtenant structures to be temporarily supported and otherwise protected during the construction work, such support and protection shall be provided by the Contractor. All such work shall be performed in a manner satisfactory to the Engineer and the respective authority having jurisdiction over such work. In the event the Contractor fails to provide proper support or protection to any existing utility, the Engineer may, at his discretion, have the respective authority to provide such support or protection as may be necessary to insure the safety of such utility, and the costs of such measures shall be paid by the Contractor. This is not a pay item.

1.04 DOCUMENTATION OF EXISTING STRUCTURES

- A. The term existing structures shall be deemed to refer to both publicly-owned and privately-owned buildings, structures, and other facilities on the ground surface and any foundations or extensions below the ground surface.
- B. Prior to beginning any excavation work in close proximity to existing structures, the Contractor shall complete a Pre-Construction Survey to assess the condition of existing structures surrounding the work site. The survey must be performed a maximum of 7 days prior to excavation and submitted to the Engineer.
- C. Documentation for the Pre-Construction Survey shall be provided as photographs, videos, and report forms to document each structure. Prior to the Pre-Construction Survey, the construction limits must be flagged. Take photographs and video to show existing conditions adjacent to property and to show existing buildings either on or adjoining property to accurately record physical conditions. Include video and photographs of the visible foundation and wall of the buildings, both inside and outside of each structure. Any existing deformities or cracks must be clearly documented in the video and photographs, and shall be documented from different vantage points.
- E. All photographs and videos shall be digital and provided on compact disc (CD), digital video disc (DVD), or flash drive. Digital photographs and videos shall be time and date stamped. See Section 01010 for additional video requirements.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01540 - DEMOLITION AND REMOVAL OF EXISTING STRUCTURES AND EQUIPMENT

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. This Section covers the demolition, removal, and disposal of structures, pavement, curbs, sidewalk, and any existing equipment. The Contractor shall furnish all labor, materials and equipment to demolish and remove structures and equipment designated to be removed on Drawings.

1.02 TITLE TO EQUIPMENT AND MATERIALS

- A. Contractor shall have no right or title to any of the equipment, materials or other items to be removed from the existing structures unless authorized by Owner.

1.03 CONDITION OF STRUCTURES AND EQUIPMENT

- A. The Owner does not assume responsibility for the actual condition of structures and equipment to be demolished and removed.

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 DEMOLITION AND REMOVALS

- A. The removal of all equipment and piping, and all materials from the demolition of structures shall, when released by the Owner and Engineer, be done by the Contractor and become the Contractor's property, unless otherwise noted, for disposition in any manner not contrary to the Contract requirements and shall be removed from the site to the Contractor's own place of disposal.
- B. Any equipment piping and appurtenances removed without proper authorization, which are necessary for the operation of the existing facilities shall be replaced to the satisfaction of the Engineer at no cost to the Owner.
- C. Excavation caused by demolitions shall be backfilled with fill free from rubbish and debris.
- D. All materials removed by demolition or excavation shall be lawfully and properly handled and disposed according to applicable local, state, and federal laws. Where materials shall be disposed at landfill, manifests and documentation shall be provided to Owner showing / documenting that materials have been properly handled and disposed.
- E. Manhole frames and covers that have been removed shall become the property of the Contractor and shall be disposed on in a legal manner.

END OF SECTION

SECTION 01550 - SITE ACCESS AND STORAGE

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. Access Roads

1. The General Contractor shall construct and maintain such temporary access roads as required to perform the work of this Contract.
2. Access roads shall be located within the property lines of the Owner unless the Contractor independently secures easements for his use and convenience. Contractor shall submit written documentation to the Engineer for any Contractor secured easements across privately held property. Easement agreement shall specify terms and conditions of use and provisions for site restoration. A written release from the property owner certifying that all terms of the easement agreement have been complied by the Contractor shall be furnished to the Engineer prior to final payment.
3. Existing access roads used by the Contractor shall be suitably maintained by the Contractor at his expense during construction. Contractor shall not be permitted to restrict Owner access to existing facilities. Engineer may direct Contractor to perform maintenance of existing access roads when Engineer determines that such work is required to insure all weather access by the Owner.
4. The Contractor will maintain the primary roads to be free of mud and dirt. All mud and dirt carried from the access roads to the primary roads shall be washed and cleaned.
5. The Contractor shall obtain and pay all cost associated with any bonds required by the Kentucky Department of Transportation for the use of State maintained roads.

B. Parking Areas

1. Each Contractor shall construct and maintain suitable parking areas for his construction personnel on the project site where approved by the Engineer and the Owner.

C. Restoration

1. At the completion of the Work, the surfaces of land used for access roads and parking areas shall be restored by the Contractor to its original condition and to the satisfaction of the Engineer.

D. Traffic Regulations

1. Contractor shall obey all traffic laws and comply with all the requirements, rules and regulations of the Kentucky Transportation Cabinet, LFUCG, and other local authorities having jurisdiction to maintain adequate warning signs, lights, barriers, etc., for the protection of traffic on public roadways.

E. Storage of Equipment and Materials

1. Contractor shall store his equipment and materials at the job site in accordance with the requirements of the Contract Documents, and as hereinafter specified. All equipment and materials shall be stored in accordance with manufacturer's recommendations and as directed by the Owner or Engineer, and in conformity to applicable statutes, ordinances, regulations and rulings of the public authority having jurisdiction.

2. Contractor shall secure a site for staging area and material storage, including portable restroom facilities. Contractor shall not store materials or encroach upon private property without the written consent of the owners of such private property. Use of public lands must be with the written approval of the Owner.
3. Contractor shall not store unnecessary materials or equipment on the job site, and shall take care to prevent any structure from being loaded with a weight which will endanger its security or the safety of persons.
4. Materials shall not be placed within ten (10) feet of fire hydrants. Gutters, drainage channels and inlets shall be kept unobstructed at all times.
5. Contractor shall provide adequate temporary storage buildings/facilities, if required, to protect materials or equipment on the job site.
6. Contractor shall provide Engineer with copy of agreement with property owner of staging area. Contractor will be responsible for all restoration. Agreement between Contractor and property owner shall include language holding the Owner harmless from responsibility and liability.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01560 - TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 GENERAL

- A. Provide and maintain equipment and temporary construction, as necessary to provide controls over environmental and safety conditions at the construction site and adjacent areas. Remove physical evidence of temporary facilities at completion of Work.
- B. Prohibited Construction Activities:
 - 1. Dumping/disposing of excess or unsuitable excavated material in wetlands or floodplains, even with the permission of the property owner.
 - 2. Locating stockpile storage areas in environmentally sensitive areas.
 - 3. Indiscriminate, arbitrary, or capricious operation of equipment in any stream corridors, any wetlands, any surface waters, or outside the construction limits.
 - 4. Pumping of sediment-laden water from trenches or other excavations directly into any surface waters, any stream corridors, any wetlands, or storm sewers; all such water will be properly filtered or settled to remove silt prior to release.
 - 5. Discharging pollutants such as chemicals, fuels, lubricants, bituminous materials, raw sewage and other harmful waste into or alongside of rivers, streams, impoundments, or into natural or manmade channels leading thereto.
 - 6. Permanent or unspecified alteration of the flow line of any stream.
 - 7. Damaging vegetation outside of the construction area.
 - 8. Disposal of trees, brush, and other debris in any stream corridors, any wetlands, any surface waters, or at unspecified locations.
 - 9. Open burning of project debris without a permit.
 - 10. Discharging injurious silica dust concentrations into the atmosphere resulting from breaking, cutting, chipping, drilling, buffing, grinding, polishing, shaping or surfacing closer than 200 feet to places of residences or commercial, professional, quasi-public or public places of human occupation.
 - 11. Storing construction equipment and vehicles and/or stockpiling construction materials on property, public or private, not previously authorized for such purposes as noted in Section 01550.
 - 12. Running well point or pump discharge lines through private property or public property and rights-of-way without an easement or the written permission of the property owner and the consent of the ENGINEER.
 - 13. Non-compliance with the Contractor's, OSHA's, or the Owner's safety requirements.
 - 14. Operations entailing the use of vibratory hammers or compactors outside the hours listed in Section 01010 - Summary of Work, or outside the hours allowed for construction by local ordinances or regulations.

1.02 SAFETY ADVISORY

- A. Scope: Sewer Installation
 - 1. Maintaining jobsite safety
 - 2. Maintaining traffic safety
- B. LFUCG-funded projects have a contractual and legal obligation for performance and breach of contract in regard to the safety of all exposed personnel. Reference the Occupational Safety Health Administration (OSHA) Multi Employer Citation Policy: Multi-employer Worksites, The Creating Employer, The Exposing Employer, The Correcting Employer, The Controlling Employer, Multiple Roles.
- C. The Contractor shall at all times conduct the work safely in order to assure a safe work site. The Contractor shall be responsible for the safety of the Contractor's employees, agents and subcontractors, Owner's personnel and all other personnel or persons at the work site. The Contractor shall be responsible for the adequacy and safety of all construction methods or procedures and the safe prosecution of the work.
- D. The Contractor shall be responsible at all times to conduct the work and keep the work site in compliance with federal, state, and local safety Laws and Regulations, including but not limited to Occupational Safety and Health (OSHA) requirements. This includes shaft drilling operations, concrete moving and placement, confined space entry requirements for trench construction, including use of a trench box or other shoring to support trench walls and proper means of exit from an excavation.
- E. The Contractor shall have an authorized and competent safety representative as defined above on the work site at frequent and regular intervals, or more often, as conditions require. Failure to have such a person at the site as specified herein constitutes an unsafe practice.
- F. The Contractor shall be responsible to suspend Work whenever a Work method or procedure or condition at work site is unsafe.
- G. The Contractor shall submit a written notification to the Owner of any accident or injury. Such notification shall include the Contractor's investigation and what measures are appropriate to avoid such accidents. Payment applications will not be authorized until such notice is provided.
- H. Failure of the Contractor to comply with any provision of this Specification section or the Owner's safety requirements or any federal, state or local safety Laws and Regulations constitute just cause for the Owner to order suspension of Work.
- I. None of the provisions of the section are intended to, nor shall be construed to, create any duty or responsibility on the Owner or Engineer to provide or enforce safety requirements of the Contractor. The duty, responsibility, and liability for safety shall remain with the Contractor.

1.03 AIR POLLUTION AND NOISE CONTROL

- A. Contractor's vehicles and equipment shall be such as to minimize noise to the greatest degree practicable. Noise levels shall conform to the latest OSHA standards and in no case will noise levels be permitted which interfere with the work of the Owner or others.
 - 1. Construction activities will be limited to hours specified in Section 01010 – Summary of Work.

2. Construction equipment will be provided with intake silencers and mufflers, as required by safety standards.
3. All construction vehicles should be equipped with proper emissions control equipment.
4. Periodically check equipment and machinery for proper tuning to minimize exhaust emissions and noise.

1.04 DUST CONTROL

- A. Contractor shall be responsible for controlling objectionable dust caused by his operation of vehicles and equipment, clearing or for any reason whatever. Contractor shall apply water or use other methods subject to the Engineer's approval which will keep dust in the air to a minimum. Dust control measures shall be implemented multiple times throughout each working day if necessary.

1.05 PEST AND RODENT CONTROL

- A. Provide rodent and pest control as necessary to prevent infestation of construction or storage area.
 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.

1.06 WATER CONTROL

- A. Contractor shall comply with the Storm Water Pollution Prevention Plan (SWPPP) approved by LFUCG.
- B. Provide methods to control surface water and water from excavations and structures to prevent damage to the Work, the site, or adjoining properties.
- C. Provide, operate and maintain equipment and facilities of adequate size to control surface water.
- D. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas and in conformance with all environmental requirements.

1.07 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide equipment and personnel, perform emergency measures required to contain any spillages, and to remove contaminated soils or liquids.
 1. Excavate and dispose of any contaminated earth offsite, and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.
 1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary or storm sewers.

- D. Provide systems for control of atmospheric pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.
- E. All Contractor's equipment used during construction shall conform to all current federal, state and local laws and regulations.

1.08 EROSION AND SEDIMENT CONTROL

- A. See Section 02372 for erosion and sediment control requirements.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01631 - PRODUCTS AND SUBSTITUTIONS

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. General: Substitution of materials and/or equipment is defined in the General Conditions and more fully hereinafter.
- B. Substitutions: The Contractor's requests for changes in the products, materials, equipment and methods of construction required by the Contract Documents are considered requests for "substitutions", and are subject to the requirements specified herein. The following are not considered as substitutions:
 - 1. Revisions to the Contract Documents, where requested by the Owner and Engineer are considered as "changes" not substitutions.
 - 2. Substitutions requested during the bidding period, which have been accepted prior to the Contract Date, are included in the Contract Documents and are not subject to the requirements for substitutions as herein specified.
 - 3. Specified Contractor options on products and construction methods included in the Contract Documents are choices available to the Contractor and are not subject to the requirements for substitutions as herein specified.
 - 4. Except as otherwise provided in the Contract Documents, the Contractor's determination of and compliance with governing regulations and orders as issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders.

1.02 SUBMITTALS

- A. The information required to be furnished for evaluation of product substitution will be as follows:
 - 1. Performance capabilities, and materials and construction details will be evaluated based upon conformance with the Specifications. Products that do not conform with the Specification shall not be accepted.
 - 2. Manufacturer's production and service capabilities, and evidence of proven reliability will be acceptable if the following is furnished.
 - a. Written evidence that the manufacturer has not less than (3) years' experience in the design and manufacture of the substitute product.
 - b. Written evidence of at least one application, of a type and size similar to the proposed substitute product, in successful operation in a wastewater treatment plant or collection system for a period of at least one year.
 - c. In lieu of furnishing evidence of a manufacturer's Experience and successful operation of an application of the product to be substituted, the Contractor has the option of furnishing a cash deposit or bond which will guarantee replacement if the product the furnished does not satisfy the other requirements specified in this section. The amount of each deposit or bond will be subject to the approval.
 - 3. Specific reference to characteristics either superior or inferior to specified requirements will be evaluated based on their net effect on the project. Products with any

characteristics inferior to those specified will not be acceptable unless offset by characteristics that, in the opinion of the Engineer, will cause the overall effect of the product on the project to be at least equal to that of those specified.

1.03 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same generic kind, from a single source, for each unit of work.
- B. Compatibility of Options: Compatibility of products is a basic requirement of product selection. When the Contractor is given the option of selecting between two or more products for use on the project, the product selected must be compatible with other products previously selected, even if the products previously selected were also Contractor options. The complete compatibility between the various choices available to the Contractor is not assured by the various requirements of the Contract Documents, but must be provided by the Contractor.
- C. The detailed estimate of operating and maintenance costs will be evaluated based on comparison with similar data on the specified products. Proposed substitute products which have an operating and maintenance cost that, in the opinion of the Engineer, exceeds that of the specified products will not be considered equal and will not be acceptable.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Deliver, store, and handle products in accordance with manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft. Control delivery schedules to minimize long-term storage at the site and to prevent overcrowding of construction spaces. In particular coordinate delivery and installation to ensure minimum holding or storage times for items known or recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.
 - 1. Deliver products to the site in the manufacturer's sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
 - 2. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 - 3. Store heavy materials away from the project construction in a manner that will not endanger the supporting construction.

PART 2 - PRODUCTS

2.01 GENERAL PRODUCT COMPLIANCE

- A. General: Requirements for individual products are indicated in the Contract Documents; compliance with these requirements is in itself a Contract Requirement. These requirements may be specified in any one of several different specifying methods, or in any combination of these methods. These methods include the following:
 - 1. Proprietary
 - 2. Descriptive
 - 3. Performance

4. Compliance with Reference Standards

Compliance with codes, compliance with graphic details and similar provisions of the Contract Documents also have a bearing on the review and approval outcome.

- B. Procedures for Selecting Products: Contractor's options in selecting products are limited by requirements of the Contract Documents and governing regulations. They are not controlled by industry traditions or procedures experienced by the Contractor on previous construction projects.

2.02 SUBSTITUTIONS

- A. Conditions: Contractor's request for substitution will be received and considered when extensive revisions to the Contract Documents are not required, when the proposed changes are in keeping with the general intent of the Contract Documents, when the request is timely, fully documented and properly submitted, and when one or more of the following conditions is satisfied, all as judged by the Engineer; otherwise the requests will be returned without action except to record non-compliance with these requirements.
 - 1. The Engineer will consider a request for substitution where the request is directly related to an "or equal" clause or similar language in the Contract Documents.
 - 2. The Engineer will consider a request for substitution where the specified product or method cannot be provided within the Contract Time. However, the request will not be considered if the product or method cannot be provided as a result of the Contractor's failure to pursue the work promptly or to coordinate the various activities properly.
 - 3. The Engineer will consider a request for substitution where the specified product or method cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - 4. The Engineer will consider a request for a substitution where a substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. These additional responsibilities may include such considerations as additional compensation to the Engineer for redesign and evaluation services, the increased cost of other work by the Owner or separate contractors, and similar considerations.
 - 5. The Engineer will consider a request for substitution when the specified product or method cannot be provided in a manner which is compatible with other materials of the work, and where the Contractor certifies that the substitution will overcome the incompatibility.
 - 6. The Engineer will consider a request for substitution when the specified product or method cannot be properly coordinated with other materials in the work, and where the Contractor certifies that the proposed substitution can be properly coordinated.
 - 7. The Engineer will consider a request for substitution when the specified product or method cannot receive a warranty as required by the Contract Documents and where the Contractor certifies that the proposed substitution receive the required warranty.
 - 8. The Contractor shall reimburse the Owner any costs for review by the Engineer of proposed product substitutions which require major design changes, as determined by the Owner, to related or adjacent work made necessary by the proposed substitutions.
- B. Work-Related Submittals: Contractor's submittal of and the Engineer's acceptance of shop drawings, product data or samples which relate to work not complying with requirements of

the Contract Documents, does not constitute an acceptable or valid request for a substitution, nor approval thereof.

2.03 GENERAL PRODUCT REQUIREMENTS

- A. General: Provide products that comply with the requirements of the Contract Documents and that are undamaged and, unless otherwise indicated, unused at the time of installation. Provide products that are complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
 - 1. Standard Products: Where they are available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 2. Continued Availability: Where, because of the nature of its application, the Owner is likely to need replacement parts or additional amounts of a product at a later date, either for maintenance and repair or replacement, provide standard, domestically produced products for which the manufacturer has published assurances that the products and its parts are likely to be available to the Owner at a later date.

PART 3 - EXECUTION

3.01 INSTALLATION OF PRODUCTS

- A. General: Except as otherwise indicated in individual sections of these Specifications, comply with the manufacturer's instructions and recommendations for installation of the products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work. Clean exposed surfaces and protect surfaces as necessary to ensure freedom from damage and deterioration at Time of Acceptance.

END OF SECTION

SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the work or to make its parts fit together properly.
- C. The Contractor shall not damage or endanger any portion of the Work or the Work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation.
- D. Any cutting of existing structures or facilities shall be approved in advance by Owner or Engineer. Approval shall not impact Contractor's full liability for any damage caused.

1.02 QUALITY ASSURANCE

- A. 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 result in increased maintenance or decreased operational life or safety.

1.03 WARRANTY

- A. Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials, to the extent practicable.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the functional performance of existing materials.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.

- B. Protection: Protect existing 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.

3.03 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

END OF SECTION

SECTION 01740 - CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. Maintain premises free from accumulations of waste, debris, and rubbish.
- B. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces. Leave project clean and ready for occupancy.

1.02 RELATED DOCUMENTS

- A. Cutting and Patching: Section 01731.
- B. Project Closeout: Section 01770.
- C. Cleaning for Specific Products of Work: Specification Section for that work.

1.03 SAFETY REQUIREMENTS

- A. Hazards Control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute cleaning to ensure that building, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.

- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of work, clean site and public properties, and dispose of waste materials, debris and rubbish.
- D. Provide on-site containers for collection of waste materials, debris and rubbish.
- E. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- G. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

3.02 FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning.
- B. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from sight-exposed interior or exterior finished surfaces; polish surfaces so designated to shine finish.
- D. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- E. Broom clean paved surfaces; rake clean other surfaces of grounds.
- F. Maintain cleaning until project, or portion thereof, is occupied by Owner.
- G. Complete final cleaning of and televising of gravity sewer installation.

END OF SECTION

SECTION 01770 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Liquidated Damages: Supplemental General Conditions
- B. Cleaning: Section 01740.
- C. Project Record Documents: Section 01785.

1.02 SUBSTANTIAL COMPLETION

- A. In order to initiate project closeout procedures, the Contractor shall submit the following:
 - 1. Written certification to Engineer that project is Substantially Complete.
 - 2. List of major items to be completed or corrected.
- B. Engineer will make an inspection within seven (7) days after receipt of certification, together with Owner's Representative.
- C. Should Engineer consider that work is Substantially Complete:
 - 1. Contractor shall prepare, and submit to Engineer, a list of items to be completed or corrected, as determined by the inspection.
 - 2. Engineer will prepare and issue a Certificate of Substantial Completion, containing:
 - a. Date of Substantial Completion.
 - b. Contractor's list of items to be completed or corrected, verified and amended by Engineer.
 - c. The time within which Contractor shall complete or correct work of listed items.
 - d. Time and date Owner will assume possession of work or designated portion thereof.
 - e. Responsibilities of Owner and Contractor for:
 - 1) Insurance
 - 2) Utilities
 - 3) Operation of Mechanical, Electrical, and Other Systems.
 - 4) Maintenance and Cleaning.
 - 5) Security.
 - f. Signatures of:
 - 1) Engineer
 - 2) Contractor

- 3) Owner
3. Owner occupancy of Project or Designated Portion of Project:
 - a. Contractor shall:
 - 1) Obtain certificate of occupancy.
 - 2) Perform final cleaning in accordance with Section 01740.
 - b. Owner will occupy Project, under provisions stated in Certificates of Substantial Completion.
4. Contractor: Complete work listed for completion or correction, within designated time.
- D. Should Engineer consider that work is not Substantially Complete:
 1. Engineer shall immediately notify Contractor, in writing, stating reasons.
 2. Contractor: Complete work, and send second written certification to Engineer, certifying that Project or designated portion of Project is substantially complete.
 3. Engineer will reinspect work.
- E. Should Engineer consider that work is still not finally complete:
 1. Engineer shall notify Contractor, in writing, stating reasons.
 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send third written notice to the Engineer certifying that the work is complete.
 3. Engineer and Owner will reinspect work at Contractor's expense.

1.03 FINAL INSPECTION

- A. Contractor shall submit written certification that:
 1. Contract Documents have been reviewed.
 2. Project has been inspected for compliance with Contract Documents.
 3. Work has been completed in accordance with Contract Documents.
 4. Equipment and systems have been tested in presence of Owner's Representative and are operational.
 5. Project is completed, and ready for final inspection.
- B. Engineer will make final inspection within seven (7) days after receipt of certification.
- C. Should Engineer consider that work is finally complete in accordance with requirements of Contract Documents, he shall request Contractor to make Project Closeout submittals.
- D. Should Engineer consider that work is not finally complete:
 1. Engineer shall notify Contractor in writing, stating reasons.
 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send

second written notice to Engineer certifying that work is complete.

3. Engineer will reinspect work.

1.04 CLOSEOUT SUBMITTALS

- A. Project Record Documents: To requirements of Section 01785.
- B. Guarantees, Warranties and Bonds: To requirements of particular technical Specifications and Section 01782.
- C. Project Closeout Checklist: Contractor shall submit all required items to the Engineer and/or Owner with their responsibility identified. See Project Closeout Checklist included in this section.

1.05 INSTRUCTION

- A. Instruct Owner's personnel in operation of all systems, mechanical, electrical, and other equipment.

1.06 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit final applications in accordance with requirements of General Conditions.

1.07 FINAL CERTIFICATE FOR PAYMENT

- A. Engineer will issue final certificate in accordance with provisions of general conditions.
- B. Should final completion be materially delayed through no fault of Contractor, Engineer may issue a Semi-Final Certificate for Payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PROJECT CLOSEOUT CHECKLIST

- A. See attached Project Closeout Checklist.



RMP Project Closeout Checklist

DWO Project Manager (DWO PM): Bob Peterson, PE
RMP Project Manager (RMP PM):
Engineer of Record (EOR):
Contractor:
File Manager: Diann Williams
Project Name:



Task	From	To	CC	Complete/ Submitted	Approved	Closeout Requirement
Contract Administration Closeout Checklist						
1 Plan of Operation (Pump Station and Wet Weather Storage Projects Only)	EOR	DWO PM				Copy of plan to file (plan will include description of facility, how it was design to work, etc) DWO PM will provide copy to Pump Station Maintenance or Plant Staff
2 Manufacturer's Startup (Pump Station and Wet Weather Storage Projects Only)	EOR	DWO PM				Report from EOR/Manufacturer with date of startup
3 Training (Pump Station and Wet Weather Storage Projects Only)	Contractor	LFUCG Staff				Letter or email from EOR with attendees to file
4 Startup with LFUCG (Pump Station and Wet Weather Storage Projects Only)	Contractor	EOR / LFUCG Staff				Letter or email from EOR with attendees to file
5 Deliver copies of CCTV Logs	Contractor	EOR/DWO PM				Hard Copies in File
6 Declaration of Beneficial Occupancy (Consent Decree Compliance)	EOR	DWO PM	File Manager			Memo from EOR to file
7 Request for Substantial Completion and Punchlist	Contractor	EOR	File Manager			Memo from Contractor to file
8 Verify all assessments requirements (as listed in the MOU) have been satisfied	EOR	DWO PM	Contractor			EOR Memo to File
9 Obtain Property Owner signatures when needed (if requirements have been satisfied)	EOR	DWO PM		N/A		Copies of all releases to file
10 EOR coordinates final inspection and prepares Punchlist	EOR	Contractor	DWO PM			Punchlist to file
11 Recommendation of release of retentions (less 20% of remaining work estimate)	EOR	DWO PM	File Manager			Memo from EOR to file
12 Release of retentions less 20% of remaining work estimate	DWO PM	Contractor	EOR			Pay app to file
13 Prepare Final Adjusting Change Order	EOR	DWO PM	RMP PM			EOR Memo to File
14 Distribution of final adjusting Change Order for signature	EOR	Contractor				Copy of signed final change order
15 (Upon completion of punchlist) Letter requesting final pay and release of all retainages. Must include:	Contractor	RMP PM	DWO PM			Letter to file
16 DSE Utilization Report	Contractor	EOR	DWO PM			EOR Document to File
17 Release of Retentions, Claims, and Liens	Contractor	EOR	DWO PM			EOR Document to File
18 Warranty Bond	Contractor	EOR	DWO PM			EOR Document to File
19 Recommendation for final pay and release of all retainage	EOR	DWO PM	DWO PM			EOR Memo to file
20 Final Pay Application	Contractor	EOR	DWO PM			Final Pay App to file
21 Recommendation for project acceptance and initiation of warranty period	EOR	DWO PM	RMP PM			EOR Memo to file
22 Release of EAC Bonds	DWO PM	Contractor	EOR			Copy to file
23 Release of Performance Bond	DWO PM	Contractor	EOR			Copy to file
24 Release of Payment Bond	DWO PM	Contractor	EOR			Copy to file

Notes

END OF SECTION

SECTION 01782 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to Engineer for review and transmittal to Owner.

1.02 RELATED DOCUMENTS

- A. Bid Bond: Instructions to Bidders.
- B. Performance and Payment Bonds: General Conditions and Supplemental General Conditions.
- C. Guaranty: General Conditions and Supplemental General Conditions.
- D. General Warranty of Construction: General Conditions.
- E. Project Closeout: Section 01770.
- F. Warranties and Bonds required for specific products: As listed herein.
- G. Provisions of Warranties and Bonds, Duration: Respective specification sections for particular products.

1.03 SUBMITTALS REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
- B. Furnish two (2) original signed copies.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product, equipment or work item.
 - 2. Firm name, address and telephone number.
 - 3. Scope
 - 4. Date of beginning of warranty, bond or service and maintenance contract.
 - 5. Duration of warranty, bond or service and maintenance contract.
 - 6. Provide information for Owner's personnel:

- a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
7. Contractor name, address and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2 in. x 11 in., punch sheets for 3-ring binder.
 - a. Fold larger sheets to fit into binders.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of Project
 - b. Name of Contractor
- C. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

1.05 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during progress of construction:
 - 1. Submit documents within 10 days after inspection and acceptance.
- B. Otherwise make submittals within 10 days after date of substantial completion, prior to final request for payment.
- C. For items of work, where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing the date of acceptance as the start of the warranty period.

1.06 SUBMITTALS REQUIRED

- A. Submit warranties, bonds (see section 00600), service and maintenance contracts as specified in the respective sections of the Specifications.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01785 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 MAINTENANCE OF DOCUMENTS

- A. Maintain at job site, one copy of:
 - 1. Contract Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Reviewed Shop Drawings
 - 5. Change Orders
 - 6. Other Modifications to Contract
- B. Store documents in approved location, apart from documents used for construction.
- C. Provide files and racks for storage of documents.
- D. Maintain documents in clean, dry, legible condition.
- E. Do not use record documents for construction purposes.
- F. Make documents available at all times for inspection by Engineer and Owner.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Submittals: Section 01300.

1.03 MARKING DEVICES

- A. Provide colored pencil or felt-tip marking pen for all marking.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in 2-inch high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Contract Drawings: Legibly mark to record actual construction:
 - 1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 3. Field changes of dimension and detail.

4. Changes made by Change Order or Field Order.
 5. Details not on original Contract Drawings.
- E. Specifications and Addenda: Legibly mark up each section to record:
1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 2. Changes made by Change Order or Field Order.
 3. Other matters not originally specified.
- F. Shop Drawings: Maintain as record documents; legibly annotate shop drawings to record changes made after review.

1.05 SUBMITTALS

- A. At completion of project, deliver two hard copies and one CD with pdf of all record documents to Engineer.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
1. Date.
 2. Project Title and Number.
 3. Contractor's Name and Address.
 4. Title and Number of each Record Document.
 5. Certification that each Document as Submitted is Complete and Accurate.
 6. Signature of Contractor, or His Authorized Representative.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 02223 - STRUCTURAL FILL AND EMBANKMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Structural Fill
- B. Embankment
- C. Compaction Requirements

1.02 RELATED SECTIONS

- A. Excavation for Tunnel Shafts: Section 02222
- B. Excavating, Backfilling, and Compacting for Utilities: Section 02225
- C. Stream Restoration: Section 02373

1.03 QUALITY ASSURANCES

- A. The Owner to perform soil testing and inspection service for quality control testing during earthwork operations.

1.04 REFERENCES

- A. Commonwealth of Kentucky, Standard Specifications for Road and Bridge Construction, latest edition.
- B. ANSI/ASTM D698 – Standard Test Method for Laboratory Compaction characteristics of Soil Using Standard Effort.
- C. ANSI/ASTM D1556 – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Core Method.
- D. ASTM D2922 – Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. ASTM D3017 – Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.05 TESTS

- A. Contractor must provide laboratory tests and analysis of fill materials in accordance with applicable referenced standards and under provisions of Section 01400. The laboratory test shall be conducted by a third party independent Laboratory acceptable to the Owner. The cost of the Laboratory testing shall be paid by the Contractor. Tests shall include, but not be limited to, gradation analysis, classification, liquid limit, plastic limit, plasticity index, and moisture/density relationships.

- B. The Owner will pay all cost associated with field compaction testing that will be performed in accordance with applicable referenced standards and under provisions of Section 01400.
- C. When ASTM D2922 is used, the calibration curves shall be checked and adjusted if necessary by the procedure described in ASTM D2922, paragraph ADJUSTING CALIBRATION CURVE. ASTM D2922 results in wet unit weight of soil; and when using this method, ASTM D3017 shall be used to determine the moisture content of the soil. The calibration checks of both the density and moisture gages shall be made at the beginning of a job on each different type of material encountered and at intervals as directed by the testing laboratory.
- D. Testing as required for verification of design bearing capacities.
- E. If tests indicate work does not meet specified requirements, remove work, replace and retest at no cost to Owner.

1.06 SUBMITTALS

- A. The Owner's testing agency shall submit reports directly to the Engineer in accordance with Section 01400, and copies to the Contractor. As a minimum, reports shall consist of the following:
 - 1. Verification of each foundation subgrade.
 - 2. Field density test reports.
- B. The Contractor's testing agency shall submit reports directly to the Engineer in accordance with Section 01400, and copies to the Contractor. As a minimum, reports shall consist of the following:
 - 1. Test reports on borrow material and structure excavation to be use for compacted fill.
 - 2. One optimum moisture-maximum density curve for each type of soil encountered.
 - 3. Report of actual unconfined compressive strength and/or results of bearing tests on each strata tested.

PART 2 - PRODUCTS

2.01 COMPACTED FILL MATERIALS

- A. Soils (onsite or offsite) used for compacted structural fill, backfill, and embankment shall be inorganic clayey soils free of deleterious debris or rocks whose largest dimension is no larger than four (4) inches in any direction.
- B. Crushed stone used for compacted structural fill shall be Kentucky Dense Graded Aggregate per Kentucky Transportation Cabinet Standard Specifications for Road and Bridge Construction, current edition, unless otherwise shown on the Drawings. All crushed stone backfill around structures will be DGA, unless otherwise noted on the drawings.
- C. Open graded stone used for compacted backfill shall be Kentucky No. 57 size aggregate per Kentucky Transportation Cabinet Standard Specifications for Road and Bridge Construction, current edition, unless otherwise shown on the Drawings.

- D. Frozen material shall not be placed in compacted fills.
- E. All material, whether from the excavations or from borrow, shall be of such nature that after it has been placed and properly compacted, it will make a dense suitable fill. It shall not contain vegetation, masses of roots, individual roots more than 18 inches long or more than 1/2-inch diameter, stones over four (4) inches in diameter, or porous matter.
- F. All structures bearing on rock that are undercut to rock shall be backfilled from competent rock bearing to bottom of foundation with lean concrete. The undercut area shall be equal to the dimensions of the structure plus an additional one (1) foot of width on each side of the structure for every one (1) foot of undercut below the design finished subgrade elevation. The lean concrete is to extend vertically, from the outmost edge of the zone of influence to the bottom of foundation elevation from the rock bearing surface.
- G. All old undocumented fill shall be removed to stiff or better residual soil under any soil bearing structure, including the roadway or embankment for the roadway.
- H. For structures which are backfilled from competent rock bearing with DGA, the undercut area shall be equal to the dimensions of the structure plus an additional one (1) foot width on each side of the structure for every one (1) foot of undercut below the design finished subgrade elevation. The dense grade structural fill is to extend vertically, from the outmost edge of the zone of influence to the subgrade elevation from the rock bearing surface. Backfill from competent rock with DGA must be approved by the Project Engineer and the Design Geotechnical Engineer.

2.02 TOPSOIL

- A. All topsoil and organic materials shall be stripped from the construction area and all structural fill areas.
- B. Topsoil shall be as specified in Section 02373 – Stream Restoration.

PART 3 – EXECUTION

3.01 GENERAL

- A. Granular and soil fill shall be placed in maximum 8-inch thick loose lifts and compacted to 95 percent of maximum dry density (ASTM D 698) and within three (3) percent of optimum moisture content as determined by the standard Proctor moisture density test. Any fill to be compacted with small compaction equipment (such as a plate compactor, trench compactor, or similar means) should be placed in maximum four (4) inch loose lifts. Minimal vibration should be used in compaction equipment on silty and clayey soils existing on the site.
- B. If field conditions warrant, dry DGA may be placed at the direction of the Owner's Geotechnical Engineer. If dry DGA is placed, a "roller pattern" shall be performed to determine a target density.
- C. Any area of the subgrade deemed to be soft, unsuitable material, or not readily capable of in-situ compaction, shall be removed. These areas shall be over-excavated to suitable material as approved by the Owner's Geotechnical Engineer or his representative. The over-excavated area shall be brought up to the desired grade using concrete, crushed stone fill, or compacted soil fill as required by the Owner's Geotechnical Engineer or his representative, and the Contract Documents. The fill material for the over-excavated area shall meet all compaction or strength requirements as specified herein. The Contractor shall be responsible for this work in areas where the Contractor has previously placed fill.

- D. Maintain optimum moisture content of backfill material to attain required compaction density as specified. Material deposited on the fill that is too wet shall be removed or spread and permitted to dry, assisted by disking or blading, if necessary, until the moisture content is reduced to the specified limits.
- E. Backfill areas to contours and elevations. Use unfrozen materials. The Contractor shall keep the foundation and subgrade free from water or unacceptable materials after the fill operations have started.
- F. Backfill systematically, as early as possible, to allow time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.
- G. Verify areas to be backfilled are free of debris, snow, ice, or water, and ground surfaces are not frozen. Previously frozen material shall be removed or otherwise treated as required before new backfill is placed.
- H. Employ a placement method so as not to disturb or damage foundation drainage and piping.
- I. Where backfilling behind walls and other locations, as shown on the Drawings, provide filter fabric at the interface between crushed stone and soil backfilling.
- J. Backfill shall not be placed against or on structures until they have attained sufficient strength to support all loads to which subjected without distortion, cracking, or damage. Deposit soil evenly around the structure.
- K. For structures with concrete top slabs, there shall be no backfilling operations until the top slab is in place and cured for a minimum of 7 days and has reached 70% of its 28 day design strength, unless noted otherwise on the plans or approved by the Engineer.
- L. Slope grade away from structures minimum two (2) inches in ten (10) feet, unless noted otherwise.
- M. Make changes in grade gradual. Blend slopes into level areas.
- N. Remove surplus excavation materials to designated areas.
- O. Rough grading above compacted fill areas shall have been completed to approximately six (6) inches below finished grade and brought back up to grade with six (6) inches of topsoil.
- P. Tolerance for top surface of fill shall be plus or minus one (1) inch.
- Q. Plow, strip, or break up existing sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
- R. Maintain site grading during construction so that positive drainage of soils is promoted at all times.
- S. Maintain a subgrade free of standing or ponding water.
- T. For soils, underneath soil bearing structures, that will remain exposed overnight or for an extended period of time, place a lean concrete mudmat over the bearing areas. The concrete shall be at least four (4) inches thick.

3.02 STRUCTURAL FILL

A. Compacted Fill Under Structures

1. All fill under indirect rock-bearing structures shall be lean concrete unless otherwise shown on the Drawings.
2. Where compacted soil or compacted dense grade aggregate is shown on the Drawings to be under structures, compact soil or DGA fill to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content. On-site and off-site soils shall have a plasticity index of less than 30 percent. Fill shall be placed in maximum eight (8) inch lifts. Maximum particle size shall be four (4) inches in any one direction.
3. Where soil fill is shown on the drawings, compact the top 12 inches of soil subgrades to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content.
4. Structures bearing on rock shall bear directly on benched leveled solid bedrock or lean concrete backfill. Loose, weathered, and uneven rock shall be removed to reach a level, solid, bedrock. Provide concrete fill for the additional depth as required.
5. Structures shall not be supported on a combination of crushed stone or soil and bedrock. If rock is encountered above the soil subgrade level when excavating for structures bearing on soil, excavate bedrock to a point two (2) feet below the foundation level and fill with compacted crushed stone or soil, as required.
6. If field conditions warrant, dry DGA may be placed. If the DGA will be placed dry, field density testing will yield distorted results. A "roller pattern" may be performed to determined target dry density.
7. Any backfill required due to over blasting shall be placed in accordance with the Specifications at no additional cost to the Owner.

B. Compacted Fill Under Piping

1. Compact to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content.
2. Compact fill to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content. Soils shall have a plasticity index of less than 30 percent. Fill shall be placed in maximum eight (8) inch lifts. Maximum particle size shall be four (4) inches in any one direction.
3. For crushed stone or aggregate backfills in trenches or wall backfill and when using smaller compaction equipment the lift thickness should not exceed four (4) inches.

C. Compacted Backfill Around Structures

1. Compact to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content.
2. Soil backfill shall be used in accordance with 2.01(A) and shall be placed in maximum 8-inch loose lifts and compacted 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content as determined by the standard Proctor moisture density test. Any fill to be compacted with small compaction equipment (such as a plate compactor, trench compactor, or similar means) should be placed in

maximum four (4) inch loose lifts. Minimal vibration should be used in compaction equipment on silty soils existing on the site.

D. Compacted Fill Under Roads, Drives, and Walks

1. Compact structural fill under roads, drives, and walks to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content.
2. Prior to stone base placement, the subgrade area shall be proofrolled (GVW with at least 80,000 pounds) to verify subgrade conditions. Undercutting or repair may be required, as directed by the geotechnical engineer.
3. Structural fill will be required under the roadway within the zone of influence. The zone of influence is defined as a 1:1 (one to one) slope from the proposed grade to the existing grade. The zone of influence must be proofrolled as previously stated. If pumping occurs, materials must be removed along the 1:1 (one to one) zone of influence.

3.03 EMBANKMENT

- A. Embankment is considered to be fill areas of the site that do not support structures, piping, drives, or walks. This includes areas above piping elevations.
- B. All compacted embankment areas shall be compacted to a minimum of 95 percent of maximum dry density and within plus or minus three (3) percent of optimum moisture content.
- C. Fill placed on side slopes must be placed in horizontal lifts starting at the toe of the slope while securely benching the new fill material into the existing slope. Continue to place the fill in horizontal lifts until final proposed grade is reached.

3.04 TOPSOIL

- A. Topsoil shall be spread and lightly compacted.

3.05 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction
 1. Contractor to allow Owner's testing service to inspect structure subgrades and each compacted soil fill layer under structures, report to the Engineer on findings, and approve subgrades and fill layers before further construction work is performed. Inspection to be performed by a qualified soils engineering technician working under the direct supervision of a professional geotechnical engineer.
 2. Testing service to perform field density tests in accordance with ASTM D698, ASTM D1556 (Sand Cone Method) or ASTM D2992 (Nuclear Density Method), as applicable.
 - a. Building Slab and Foundations: Make at least one compaction/moisture percentage and field density test for every 100 square feet of subgrade and lift of compacted fill.
 - b. Foundation Wall Backfill: Make at least one field density test for every 100 square feet per lift of compacted fill, but not less than one test per lift.

- c. Piping: Make at least one field density test for every 100 square feet of lift of compacted fill.
 - d. Road, Drives, Walks: Make at least one field density test for every 100 square feet of subgrade or lift of compacted fill.
 - e. Embankment: Make at least one field density test for every 2000 square feet of each lift of compacted fill.
- 3. Foundation Subgrade: For each strata of soil at each structure on which foundations will be placed, conduct at least one test to verify required design bearing capacities by means of portable dynamic cone penetration (DCP) testing.
- B. If testing service reports and inspection show subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no additional cost to the Owner if requested by the Owner or Engineer.
- C. Where settling is measurable or observable at filled areas during the general project warranty period, remove surface (pavement, sod, etc.), add and compact backfill material, and replace surface.

END OF SECTION

SECTION 02225 - EXCAVATING, BACKFILLING, AND COMPACTING FOR SEWERS

PART 1 - GENERAL

1.01 SUMMARY

- A. Excavating of trenches.
- B. Bedding of pipe.
- C. Backfilling trenches.
- D. Installing identification tape.

PART 2 - PRODUCTS

2.01 BEDDING AND BACKFILLING STONE

- A. Crushed Stone material shall conform to the Kentucky Transportation Cabinet's Standard Specifications for Road and Bridge Construction, Current Edition, latest revision.
- B. Bedding Stone: No. 9 Crushed Limestone
- C. Backfill Stone: No. 9 Crushed Limestone or No. 57 Crushed Stone

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Trenching may be accomplished by means of a backhoe, trenching machine, hydro-excavation or by hand depending on the construction area. At the Contractor's option, trenching by a trenching machine or by backhoe is acceptable.
- B. Clearing - All trees, stumps, bushes, shrubbery, and abandoned concrete or masonry structures within the limits of the trench shall be removed by the Contractor and disposed of in a manner in accordance with federal, state and local regulations. All clearing work shall be considered as incidental to the cost of laying pipe.
- C. Bracing and Sheet piling - Bracing and sheet piling shall be provided to adequately protect the workers during pipe line installation.
 - 1. All requirements of the Occupational Safety and Health Act (OSHA) shall be met during trenching and backfill operations.
 - 2. As backfill is placed, the sheet piling shall be withdrawn in increments not exceeding one (1) foot and the void left by the withdrawn sheet piling shall be filled and with #9 stone.
 - 3. The Engineer will not be responsible for determining requirements for bracing or sheet piling.

3.02 TRENCHING

A. General:

1. The Contractor shall perform all excavation of every description and of whatever substances encountered, including clearing over the pipeline route. All excavations for the pipeline shall be open cut except where noted for bore and jack.
2. All material excavated, regardless of its nature or composition, shall be classified as UNCLASSIFIED EXCAVATION. Excavation shall include the removal of all soil, rock, weathered rock, rocks of all types, boulders, conduits, pipe, and all other obstacles encountered and shown to be removed within the limits of excavation shown on the Drawings or specified herein. The cost of excavation shall be included in the Unit Price for the pay item requiring excavation to be installed. Excavation for installation of the pipe shall comply with the approved pipe envelope in terms of trench width and bedding depth. No additional payment will be made for the removal of obstacles encountered within the excavation limits shown on the Drawings and specified herein.

B. Trench Width:

1. Trench widths shall be in accordance with LFUCG RMP Standard Drawings.
2. Contractor shall submit a shop drawing that includes a certification from the pipe manufacturer stating the recommended trench width for each pipe size and material being used.

C. Trench Depth:

1. The trench shall be excavated to a minimum of six (6) inches below pipe grade as noted on LFUCG RMP Standard Drawings.

3.03 GRAVITY SEWER PIPE BEDDING

- A. Refer to LFUCG Standard Drawings.

3.04 GRAVITY SEWER PIPE BACKFILLING

- A. Refer to LFUCG Standard Drawings.

3.05 INSTALLING IDENTIFICATION TAPE

- A. Detectable underground marking tape shall be installed over pipes (gravity sewers and force mains). Care shall be taken to ensure that the buried marking tape is not broken when installed and shall be Lineguard brand or equal encased aluminum foil, Type III. The identification tape is manufactured by Lineguard, Inc., P.O. Box 426, Wheaton, IL 60187 or equal.
- B. The identification tape shall bear the printed identification of the plastic utility line below it, such as "Caution – Buried Below". Tape shall be reverse printed; surface printing will not be acceptable. The tape shall be visible in all types and colors of soil and provide maximum color contrast to the soil. The tape shall meet the APWA color code and shall be two (2) inches in width. Colors are green for sewer and brown for force main.

END OF SECTION

SECTION 02240 - DEWATERING

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor and equipment required to dewater all excavations.
- B. Dewatering of all excavations shall be the responsibility of the Contractor, and no additional compensation will be allowed for same.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

- A. Dewatering equipment shall be of adequate size and quantity to assure maintaining proper conditions for installing pipe, concrete, backfill or other material or structure in the excavation.
- B. Dewatering shall include proper removal of any and all liquid, regardless of its source, from the excavation.
- C. The site shall be kept free of surface water at all times. The Contractor shall install drainage ditches, dikes and shall perform all pumping and other work necessary to divert or remove rainfall and all other accumulations of surface water from the excavations. The diversion and removal of surface water shall be performed in a manner that will prevent flooding and/or damage to other locations within the construction area where it may be detrimental.
- D. The Contractor shall provide, install and operate sufficient trenches, sumps, pumps, hose piping, well points, deep wells, etc., necessary to depress and maintain the ground water level below the base of the excavation during all stages of construction operations.
- E. No groundwater from the excavated area shall be discharged into the sanitary sewer system.
- F. Dewatering shall be in accordance with all state and local regulations/permits/plans.
- G. Trench shall be dewatered as required and never shall the trench accumulate groundwater to a depth that will cause pipe to float.

END OF SECTION

SECTION 02260 - EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This Section includes, but is not limited to, the following:
 - 1. Shoring and bracing necessary to protect existing buildings, streets, walkways, utilities, and other improvements and excavation against loss of ground or caving embankments.
 - 2. Maintenance of shoring and bracing.
 - 3. Removal of shoring and bracing, as required.
- B. Types of shoring and bracing systems include, but are not limited to, the following:
 - 1. Steel H-section (soldier) piles.
 - 2. Timber lagging.
 - 3. Steel sheet piles.
 - 4. Portable steel trench box.
- C. Building excavation is specified in another Division 2 Section.

1.02 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.03 QUALITY ASSURANCE

- A. Engineer Qualifications: A professional engineer legally authorized to practice in jurisdiction where Project is located, and experienced in providing successful engineering services for excavation support systems similar in extent required for this Project.
- B. Supervision: Engage and assign supervision of excavation support system to a qualified professional engineer foundation consultant.
- C. Regulations: Comply with codes and ordinances of governing authorities having jurisdiction.
- D. Layout drawings for excavation support system shall be prepared by, or under the supervision of, a qualified professional engineer. System design and calculations must be acceptable to local authorities having jurisdiction.

1.04 JOB CONDITIONS

- A. Before starting work, verify governing dimensions and elevations. Verify condition of adjoining properties. Take photographs to record any existing settlement or cracking of structures, pavements, and other improvements. Prepare a list of such damages, verified by dated photographs, and signed by Contractor and others conducting investigation.

- B. Survey adjacent structures and improvements, employing qualified professional engineer, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.
- C. During excavation, resurvey benchmarks weekly, maintaining accurate log of surveyed elevations for comparison with original elevations. Promptly notify Engineer if changes in elevations occur or if cracks, sags, or other damage is evident.

1.05 EXISTING UTILITIES

- A. Protect existing active sewer, water, gas, electricity and other utility services and structures.
- B. Notify municipal agencies and service utility companies having jurisdiction. Comply with requirements of governing authorities and agencies for protection, relocation, removal, and discontinuing of services.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide adequate shoring and bracing materials which will support loads imposed. Materials need not be new, but should be in serviceable condition.
- B. Structural Steel: ASTM A 36.
- C. Steel Sheet Piles: ASTM A 328.
- D. Timber Lagging: Any species, rough-cut, mixed hardwood, nominal 3 inches thick, unless otherwise indicated.
- E. Portable Steel Trench Box shall be OSHA approved.

PART 3 - EXECUTION

3.01 SHORING

- A. Wherever shoring is required, locate the system to clear permanent construction and to permit forming and finishing of concrete surfaces. Provide shoring system adequately anchored and braced to resist earth and hydrostatic pressures.
- B. Shoring systems retaining earth on which the support or stability of existing structures is dependent must be left in place at completion of work.

3.02 BRACING

- A. Locate bracing to clear columns, floor framing construction, and other permanent work. If necessary to move a brace, install new bracing prior to removal of original brace.
- B. Do not place bracing where it will be cast into or included in permanent concrete work, except as otherwise acceptable to Engineer.
- C. Install internal bracing, if required, to prevent spreading or distortion of braced frames.

- D. Maintain bracing until structural elements are supported by other bracing or until permanent construction is able to withstand lateral earth and hydrostatic pressures.
- E. Remove sheeting, shoring, and bracing in stages to avoid disturbance to underlying soils and damage to structures, pavements, facilities, and utilities.
- F. Repair or replace, as acceptable to Engineer, adjacent work damaged or displaced through installation or removal of shoring and bracing work.

END OF SECTION

SECTION 02370 - EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, and equipment required for installing, maintaining, amending, and removing temporary soil erosion, sediment, and pollutant controls as shown in the Erosion and Sediment Control Plan or Stormwater Pollution Prevention Plan (hereinafter referred to generally as the SWPPP) and as specified herein and as required by the LFUCG Land Disturbance Permit, Chapter 16-Article X, Division 5 of the LFUCG Code of Ordinances, and the KPDES General Permit for Stormwater Discharges Associated with Construction Activities (KYR10).
- B. The Contractor shall take all site management measures necessary to minimize erosion and contain sediment, construction materials (including excavation and backfill), and pollutants (such as chemicals, fuels, lubricants, bitumen, raw sewage, and other harmful waste) on the site, and prevent them from being discharged offsite or into or alongside any body of water or into natural or man-made conveyances leading thereto.
- C. The Contractor shall at all times minimize land disturbance and the period of time that the disturbed area is exposed without stabilization practices. In "critical areas" (within 25 feet of a perennial or intermittent stream, wetland, sinkhole, inlet or other waterbody) erosion prevention measures such as working during dry periods, use of sediment controls, and use of erosion control mats/blankets, mulch, or straw blown in and stabilized with tackifiers or by treading, etc. shall be implemented on disturbed areas within 24 hours or "as soon as practical" after completion of disturbance/grading or following cessation of activities.
- D. Temporary erosion controls include, but are not limited to sodding, mulching, seeding, providing erosion control blankets and turf reinforcement mats on all disturbed surfaces including waste area surfaces and stockpile and borrow area surfaces; covering small disturbed areas with tarps or other materials; scheduling work to minimize erosion; and providing diversion or interceptor ditches to minimize the discharge of sediment.
- E. Temporary sedimentation controls include, but are not limited to, silt fences, rock check dams, berms, traps, barriers, fiber logs, storm drain inlet filters, and appurtenances on sloped surfaces to minimize the discharge of sediment.
- F. Contractor is responsible for providing and maintaining effective temporary erosion and sediment control measures prior to and during construction or until final controls become effective and the site is stabilized in accordance with state and local requirements.
- G. Prior to construction, the Contractor shall obtain an LFUCG Land Disturbance Permit and shall obtain coverage under the KPDES General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) (see Article 3.24 in this Section) if required. The Contractor shall be responsible for placement of pollutant, erosion, and sedimentation controls as shown in the Stormwater Pollution Prevention Plan (SWPPP) prior to excavation, fill, or grade work. If during the course of construction, the state and/or LFUCG determine additional controls are required, the Contractor shall furnish, install, and maintain additional seeding, mulch, blankets, sediment barriers, diversion or other ditches, and/or other controls as necessary to control pollution, erosion, and sedimentation to the satisfaction of the regulatory agency.
- H. The Contractor shall inspect and repair all erosion and sedimentation controls as follows:
 - 1. *At least once every seven (7) calendar days, and*
 - 2. *Within 24 hours after any rainfall event of 0.5 inch or greater (or 4 inches of snow or greater).*

- I. Final stabilization practices on those portions of the project where land disturbance activities have permanently ceased shall be initiated within fourteen (14) days of the date of cessation of land disturbance activities. Temporary stabilization for those portions of the project where land disturbance has temporarily ceased (e.g., temporary seeding, mulching, etc.) shall be initiated within fourteen (14) days of the date of cessation of land disturbance activities.
- J. **Erosion and Sediment Control prevention measures shall be installed prior to removal of vegetation, grading, and/or stripping of topsoil.** The Contractor is responsible for preparing and submitting the Kentucky Division of Water Notice of Intent and attachments and obtaining state permit approval, if applicable, prior to the beginning of any construction activities.

1.02 PERMITS AND NOTIFICATION REQUIREMENTS

- A. The Contractor is responsible to submit a Stormwater Pollution Prevention Plan (SWPPP) for inclusion with permit applications. The Contractor may elect one of the following options to meet this requirement:
 - 1. *Utilize the SWPPP (which includes the Erosion and Sediment Control Plan) provided in the Construction Drawings and prepared by the Owner's Engineer as a basis for an updated SWPPP, and take sole responsibility for updating and implementing the SWPPP, or*
 - 2. *Provide a SWPPP, including an Erosion and Sediment Control Plan, prepared by a professional engineer licensed in the Commonwealth of Kentucky, meeting all of the requirements of KYR10, Chapter 11 of the LFUCG Stormwater Manual, and Chapter 16-Article X, Division 5 of the LFUCG Code of Ordinances.*
- B. If applicable (i.e., for projects with a disturbed area of one acre or more), the Contractor shall submit a KPDES Notice of Intent specifically for Construction Activities (NOI-SWCA) and receive notification of coverage before beginning any site disturbance, and shall implement erosion, sediment, and pollution control measures as may be required by state, local and federal agencies. Contractor shall submit a signed Notice of Intent form and required attachments to the Division of Water at least seven (7) days prior to beginning of construction activity. See Article 3.24 in this Section for detailed requirements.
- C. A Land Disturbance Permit shall be obtained from the Lexington-Fayette Urban County Government Division of Engineering. See Article 3.25 in this Section for detailed requirements.
- D. The Contractor shall comply with all additional requirements of LFUCG. It is the Contractor's responsibility to provide evidence to the Owner that all permits, including those associated with construction across or along a stream channel, if applicable, have been obtained prior to initiation of construction. Some permits are obtained during the design phase of the project. Typically, they should be included in the contract documents.

1.03 RELATED WORK

- A. Section 02371 – Stormwater Pollution Prevention Plan (SWPPP)
- B. Section 02373 – Stream Restoration

PART 2 – PRODUCTS

2.01 MULCH

- A. Mulch or erosion control blankets / turf reinforcement mats (see Section 2.08) shall be used

as a soil stabilization measure for any disturbed area inactive (i.e., not undergoing grading or excavation) for 14 days or longer. Areas requiring stabilization during December through February shall receive only mulch held in place with bituminous material. Mulching, blankets, or mats shall be used whenever permanent or temporary seeding is used. The anchoring of mulch, blankets, and mats shall be in accordance with the Construction Drawings except all mulch placed in December through February shall be anchored with bituminous materials regardless of the slope. Permanent mulches or mats shall be used in conjunction with planting trees, shrubs, and other ground covers that do not provide adequate soil stabilization.

- B. Straw shall come from wheat, rye, or barley and may be spread by hand or machine. Straw shall be anchored. Straw shall be applied at two tons per acre or 90 pounds per 1,000 square feet. Straw shall be free from weeds and coarse matter.
- C. Wood chips are appropriate for areas with less than five percent slopes, and do not require tacking. Wood chips shall be applied at 270 cubic yards per acre or 6 cubic yards per 1,000 square feet and approximately 2 inches deep. Wood chips shall be treated with 20 pounds of nitrogen per acre or shall be treated with 12 pounds slow-release nitrogen per ton to prevent nutrient deficiency in plants.
- D. Bark chips or shredded bark are appropriate for areas with less than five percent slopes, and shall be applied at 70 cubic yards per acre or 1.5 to 2 cubic yards per 1,000 square feet and about one-half inch thick. Bark does not require additional nitrogen fertilizer.
- E. Manufacturer's recommendations shall be followed during application of manufactured wood fiber and recycled paper sold as mulch materials applied in a hydroseeder slurry with binders/tackifiers. Recycled paper (newsprint) or wood fiber shall be mixed at 50 pounds per 100 gallons of water and applied according to manufacturer's recommendations and model of hydroseeder in use.
- F. Liquid mulch binders/tackifiers shall be applied according to manufacturer's recommendations. Chemical soil stabilizers or soil binders/tackifiers/emulsions shall not be used alone. Recommended buffer distances between applied products and waterbodies shall be strictly followed.
- G. Gravel or stone aggregate may be used in relatively small areas when incorporated into an overall landscaping plan. Before the gravel or crushed stone is applied, it shall be washed.

2.02 TEMPORARY SEED

- A. Temporary seeding shall be used for soil stabilization when grades are not ready for permanent seeding, except during December through February. The seed shall be applied within 14 days after grading has stopped. Only rye grain or annual rye grass seed shall be used for temporary seeding.

2.03 PERMANENT SEED

- A. Permanent seeding shall be applied within 14 days after final grade has been reached, except during December through February. Permanent seeding shall also be applied on any areas that will not be disturbed again for a year even if final grades have not been reached. The use of mulch and erosion control blanket or turf reinforcement matting with permanent seeding shall be in accordance with applicable sections of this Specification. "Seed mats" may be used for permanent seeding in accordance with manufacturers' recommendations.
- B. Permanent seeding shall be used on disturbed areas where permanent, long-lived vegetative cover is needed to stabilize the soil and on rough graded areas that will not be brought to final grade for one year or more.

- C. The area to be seeded shall be protected from excess run-on and runoff as necessary with diversions, grassed waterways, terraces, or sediment ponds.
- D. Contractor shall use the following Permanent Seed Mix, with the following exceptions:
 - a. *If a property owner landscaping agreement differs from this specification, the property owner landscaping agreement shall be followed on that property, or*
 - b. *The Construction Drawings identify a different seed mix.*

The Permanent Seed Mix shall consist of the following mix spread at a rate of 12.5 pounds/1,000 square feet:

Common Name	%	lbs per 1,000 sq. ft.
Tall Fescue (turf type)	75	9.38
Annual Rye	15	1.88
Bluegrass	10	1.25
TOTAL	100%	12.5

- E. Vegetative cover alone shall not be used to provide erosion control cover and prevent soil slippage on a soil that is not stable due to its structure, water movement, or excessive slope.
- F. Permanent seeding may be done at any time except December through February.
- G. Soil material shall be capable of supporting permanent vegetation and have at least 25 percent silt and clay to provide an adequate amount of moisture holding capacity. An excessive amount of sand will not consistently provide sufficient moisture for good growth regardless of other soil factors.
- H. Fertilizer shall be applied at a rate determined by a soil test obtained by the Contractor. Fertilizer shall not be applied within 50 feet of a stream or other waterbody. Lime shall be applied at a rate of 100 pounds per 1,000 square feet or two tons per acre of agricultural ground limestone, unless soil test results indicate differently.

2.04 SOD

- A. Sod shall be used for disturbed areas that require immediate vegetative cover, e.g., the area surrounding a drop inlet in a grassed waterway, the design flow perimeter of a grassed waterway that will convey flow before vegetation can be established, and the inlet of a culvert. Sod may be installed throughout the year. "Seed mats" and seed with geotextiles may be used in place of sod when done in accordance with manufacturers' recommendations.
- B. Contractor shall use tall fescue sod, unless another species is specified in the Construction Drawings or unless the property owner landscaping agreement differs from this specification.
- C. Sod shall not be used to provide erosion control and prevent soil slippage on a soil that is not stable due to its structure, water movement, or excessive slope.
- D. Sod shall be installed within 48 hours of digging and removal from the field. Sod should not be used on slopes steeper than 2H:1V. If it is to be mowed, installation should be on slopes no greater than 3H:1V.
- E. Soil material shall be capable of supporting permanent vegetation and shall consist of at least 25 percent silt and clay to provide an adequate amount of moisture holding capacity. An excessive amount of sand will not consistently provide sufficient moisture for the sod

regardless of other soil factors.

- F. Fertilizer shall be applied at a rate determined by a soil test obtained by the Contractor. Fertilizer shall not be applied within 50 feet of a stream or other waterbody. Lime shall be applied at a rate of 100 pounds per 1,000 square feet or two tons per acre of agricultural ground limestone, unless soil test results indicate differently.
- G. The sod shall consist of strips of live, vigorously growing grasses. The sod shall be free of noxious and secondary noxious weeds and shall be obtained from good, solid, thick-growing stands. The sod shall be cut and transferred to the job in the largest continuous pieces that will hold together and are practical to handle.
- H. The sod shall be cut with smooth clean edges and square ends to facilitate laying and fitting. The sod shall be cut to a uniform thickness of not less than three-fourth inch measured from the crown of the plants to the bottom of the sod strips for all grasses except bluegrass. Bluegrass sod shall be cut to a uniform thickness of not less than one and one-half inches.
- I. The sod shall be mowed to a height of not less than two inches and no more than four inches prior to cutting.
- J. The sod shall be kept moist and covered during hauling and preparation for placement on the sod bed.
- K. Sod shall be kept watered after installation until the project is considered substantially complete.

2.05 ROAD/PARKING STABILIZATION

- A. Gravel or paved material shall be used to stabilize permanent roads or parking areas or roads or parking areas used repeatedly by construction traffic. Stabilization shall be accomplished within 14 days of grading or initiation of use for construction traffic. Unstabilized roads are not acceptable except in instances where the road will be used less than one month.
- B. Road/parking stabilization shall be used wherever roads or parking areas are constructed, whether permanent or temporary, for use by construction traffic.
- C. Stabilization shall be accomplished with a minimum depth of six inches of crushed stone. Stabilized construction roadbeds shall be at least 14 feet wide for one-way traffic and at least 20 feet wide for two-way traffic.
- D. Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes shall not exceed 10 percent.
- E. Temporary parking areas shall be located on naturally flat areas to minimize grading. Grades shall be sufficient to provide drainage but shall not exceed 4 percent.
- F. All cuts and fills shall be 2H:1V or flatter.
- G. Drainage ditches shall be provided as needed.
- H. Crushed stone shall be KYTC aggregate No. 2 (1.5 to 3 inches in diameter), or equivalent.

2.06 CONSTRUCTION ENTRANCE

- A. A stabilized construction entrance shall be constructed wherever vehicles are leaving a construction site to enter a public road or at any unpaved entrance/exit location where there is a risk of transporting mud or sediment onto paved roads. A construction entrance shall be constructed at the beginning of the project before construction traffic begins to enter and exit

the site.

- B. A stabilized construction entrance shall be constructed of crushed stone a minimum of 6 inches thick laid over geotextile (filter fabric).
- C. The width shall be at least 20 feet. At sites where traffic volume is high, the entrance shall be wide enough for two vehicles to pass safely. The length shall be at least 50 feet, and where practical, shall be extended to 100 feet. The entrance shall be flared where it meets the existing road to provide a turning radius.
- D. Stormwater and wash water runoff from a stabilized construction entrance shall drain to a sediment trap or sediment pond. If conditions on the site are such that the majority of the mud is not removed by the vehicles traveling over the gravel, then the tires of the vehicles shall be washed before entering a public road.
- E. Pipe placed under the entrance to handle runoff shall be protected with a mountable berm.
- F. Dust control shall be provided in accordance with the applicable sections of this Specification.
- G. Crushed stone shall be KYTC aggregate No. 2 (1.5 to 3 inches in diameter), or equivalent.
- H. Geotextile filter fabric shall be KYTC Type III.

2.07 DUST CONTROL

- A. Dust control measures shall be implemented on the site.
- B. Construction activities shall be phased to minimize the total area unstabilized at any given time, thereby reducing erosion due to air and water movement.
- C. Construction roads shall be watered as needed to minimize dust.
- D. Existing trees, shrubs, and ground cover shall be retained as long as possible during the construction. Initial land clearing should be conducted only in those areas to be regraded or where construction is to occur. Areas to be cleared only for new vegetation or landscaping shall be stabilized with seed and mulch immediately following clearing.
- E. Vegetative cover is the most effective means of dust and erosion control, when appropriate. See sections on Temporary Seed, Permanent Seed, Mulch, and Sod of this Specification.
- F. When areas have been regraded and brought to final grade, they shall be stabilized using temporary or permanent seed and mulch or other measures.
- G. Mulch with mulch binders may be used as an interim dust control measure in areas where vegetation may not be appropriate.
- H. See sections on Temporary Seed, Permanent Seed, Sod, Mulch, Road/Parking Stabilization, and Construction Entrance of this Specification.

2.08 EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

- A. Mulch netting, erosion control blankets (ECBs), or turf reinforcement matting (TRM) shall be used on sloping areas as indicated in the Construction Drawings. Mats or nets and permanent seeding may be used as an alternate to sod for culvert entrances and grassed waterways when selected and installed in accordance with manufacturer's recommendations. TRMs shall be used at the water line to control toe erosion along stream banks and wave action in wet ponds. Erosion control blankets may be used to stabilize small ditches and swales and on recently planted slopes to protect seedlings until they become established.

- B. Effective ECB and TRM installation shall require firm, continuous contact between the materials and the soil. If there is no contact, the material will not hold the soil and erosion will occur underneath the material.
- C. ECBs or TRMs shall be used in critical areas such as banks along waterways where concentrated flows are expected. Manufacturer's specifications shall be followed.
- D. ECBs, TRMs, and netting shall be suitable for their intended purpose and shall be used as indicated in the Construction Drawings.
- E. The ECB shall have a minimum useful life span of two (2) years. The material shall consist of interlocking, curled wood fibers and be capable of withstanding shear stresses up to 2.25 pounds per square foot and a velocity of nine (9) feet per second. The acceptable ECB shall be Curlex II as manufactured by American Excelsior Company or approved equal.

F. Product Documentation

The manufacturer shall provide the Engineer or other designated party with the QA/QC certifications for each shipment of ECB/TRM. The certification shall be signed by a responsible party employed by the manufacturer such as the QA/QC Manager, Production Manager, or Technical Services Manager. The QA/QC certifications shall include:

- a. *ECB/TRM lot and roll numbers (with corresponding shipping information).*
- b. *Manufacturer's test data for raw materials used in the production.*
- c. *Manufacturer's test data for finished production.*

G. Product Labeling

- a. *Prior to shipment, the Manufacturer shall affix a label to each roll identifying the following characteristics:*
- b. *Product identification information (manufacturer name and address, brand name, product code)*
- c. *Lot number and roll number*
- d. *Roll length and width*
- e. *Total roll weight.*

H. Packaging

- a. *The ECB/TRM shall be wound around a cardboard core to facilitate handling. The core is not intended to support the roll for lifting but should be sufficiently strong to prevent collapse during transit.*
- b. *All rolls shall be labeled and bagged in packaging that is resistant to photodegradation by ultraviolet light.*

I. The Contractor shall furnish the following to the Engineer:

- a. *Manufacturer's quality assurance/quality control certifications for each shipment to verify that the materials supplied for the project are in accordance with the requirements of this specification.*
- b. *Manufacturer's warranty covering materials and workmanship.*

2.09 TEMPORARY DIVERSION DITCH

- A. Temporary diversion ditches shall be used to collect sediment-laden runoff from disturbed areas and direct it to a sediment pond where applicable. Temporary ditches are those expected to be in use for less than one year. Temporary diversion and/or other ditches require stabilization, with seed, blankets, mats, or mulch.
- B. Temporary diversion ditches shall have stable outlets. The combination of conditions of site, slopes, and soils should be so that the ditch can be maintained throughout its planned life.
- C. Temporary diversion ditches shall not be constructed below high sediment-producing areas unless land treatment practices or structural measures, designed to prevent damaging accumulations of sediment in the channels, are installed with or before the diversion.
- D. A typical diversion cross section consists of a channel and a supporting ridge. In the case of an excavated-type diversion, the natural ground serves as the diversion ridge. Diversion cross sections shall be adapted to the equipment that will be used for their construction and maintenance.
- E. The channel may be parabolic or trapezoidal in shape. V-shaped ditches shall not be constructed.
- F. Diversions shall be located so that water will empty onto an established area such as a stable watercourse, waterway, or structure.
- G. Any high sediment-producing area above a diversion shall be controlled by good land use management or by structural measures to prevent excessive sediment accumulation in the diversion channel.
- H. Temporary diversions above steep slopes or across graded rights-of-way shall have a berm with a minimum top width of 2 feet, side slopes of 2:1 or flatter and a minimum height of 18 inches measured from the channel bottom.
- I. Diversions installed to intercept flow on graded rights-of-way shall be spaced 200 to 300 feet apart.
- J. A level lip spreader shall be used at diversion outlets discharging onto areas already stabilized by vegetation.

2.10 LEVEL SPREADER

- A. Level spreaders shall be constructed at the outlets of temporary diversion ditches if they discharge to landscaped areas. Level spreaders shall also be constructed at outlets of permanent constructed waterways where they terminate on undisturbed areas.
- B. The length of the level spreader shall be constructed as shown on the Construction Drawings.

2.11 PERMANENT CONSTRUCTED WATERWAY

- A. Permanent constructed waterways shall be used to divert stormwater runoff from upland undisturbed areas around or away from areas to be disturbed during construction. A waterway expected to be in place for at least one year shall be considered permanent. Permanent waterways shall be lined with sod or permanent seeding and nets, ECBs, or TRMs.

2.12 PIPE SLOPE DRAIN

- A. Pipe slope drains shall be used whenever it is necessary to convey water down a steep slope, which is not stabilized or which is prone to erosion, unless a paved ditch (flume) is installed.
- B. Contractor shall use a 10-inch diameter pipe or larger to convey runoff from areas up to one-third acre; 12-inch or larger pipe for up to half-acre drainage areas; and 18-inch pipe for areas up to one acre, unless otherwise specified in the Construction Drawings. Multiple pipes shall be required for large areas, spaced as shown on the Construction Drawings.
- C. The pipe shall be heavy duty flexible tubing designed for this purpose, *e.g.*, non-perforated, corrugated plastic pipe, or specially designed flexible tubing.
- D. A standard flared end section or a standard T-section fitting secured with a watertight fitting shall be used for the inlet.
- E. Extension collars shall be 12-inch long sections of corrugated pipe. All fittings shall be watertight.

2.13 IMPACT STILLING BASIN

- A. Impact stilling basins or armoring shall be used at the outlet of culverts and storm sewers with calculated exit velocities greater than 15 feet per second when flowing full.

2.14 CHECK DAM

- A. Check dams shall be limited to use in small, open channels that drain 10 acres or less.
- B. Check dams shall not be used in streams.
- C. Check dams can be constructed of stones, coir logs, or wood fiber logs.
- D. If used, check dams shall be constructed prior to the establishment of vegetation.
- E. The maximum height at the center of a check dam shall be three feet above the ground on which the rock is placed.
- F. The center of the portion of the check dam above the flat portion of the channel shall be at least 1 foot lower than the outer edges. The outer edges of the check dam shall extend up the side slopes of the channel to a point 3 feet in elevation above the center portion of the check dam or to the top of the side slopes.
- G. The maximum spacing between rock check dams in a ditch should be such that the toe of the upstream dam is at the same elevation as the top of the next downstream dam.
- H. The spacing of coir and wood fiber check dams is one log every 100 feet for velocities of 5 fps, 50 feet for velocities between 5 and 7.5 fps, and 25 feet for velocities greater than 10 fps, unless otherwise shown in the Construction Documents.
- I. Stone check dams shall be constructed of KYTC Class II channel lining.
- J. Coir log or wood fiber log check dams shall be constructed of a single log with a diameter of at least 20 inches.

2.15 SEDIMENT TRAP

- A. Sediment traps shall be installed below all disturbed areas of less than 5 acres that do not

drain to a sediment pond.

- B. Erosion control practices such as seeding, mulching, sodding, diversion dikes, etc., shall be used in conjunction with sediment traps to reduce the amount of sediment flowing into the trap. The amount of sediment entering a trap can be reduced by the use of stabilized diversion dikes and ditches.
- C. The trap shall not be located in a stream. It shall be located to trap sediment-laden runoff before it enters the stream.
- D. Trap depth shall be at least 2 feet at the inlet and 4 feet at the outlet. Effective trap width shall be at least 10 feet and trap length shall be at least 30 feet. Containment berms of earth or rock may be used. High velocity areas (e.g., overflows) shall be armored with rock, TRMs, or other suitable material.
- E. The Construction Drawings shall indicate the final disposition of the sediment trap after the upstream drainage area is stabilized. The Construction Drawings shall indicate methods for the removal of excess water lying over the sediment, stabilization of the pond site, and the disposal of any excess material.

2.16 SEDIMENT POND

- A. A sediment pond shall be installed at the outlet of a disturbed area of 5 acres or more. The maximum drainage area for a single pond is 100 acres.
- B. Design and construction shall comply with all federal, state, and local laws, ordinances, rules, and regulations regarding dams.
- C. Erosion control practices such as seeding, mulching, sodding, diversion dikes, etc., shall be used in conjunction with sediment ponds to reduce the amount of sediment flowing into the pond.
- D. The pond shall not be located in a stream. It shall be located to trap sediment-laden runoff before it enters the stream.
- E. Contractor shall construct the sediment pond as shown on the Construction Drawings.
- F. Permanent ponds designed for stormwater detention or water quality treatment may serve as temporary sediment ponds if site conditions make the use of these structures desirable. At the time of conversion from a sediment pond to a permanent stormwater management pond, excess sediment shall be cleaned from the pond. If the pond is converted to a water quality basin, the sand in the sand filter outlet shall be replaced with clean sand unless it is shown to be clean.
- G. The Construction Drawings shall indicate the final disposition of the sediment pond after the upstream drainage area is stabilized. The Construction Drawings shall indicate methods for the removal of excess water lying over the sediment, stabilization of the pond site, and the disposal of any excess material.
- H. Vegetation shall be established upon completion of construction of the embankment, emergency spillway and other areas disturbed by construction.

2.17 SILT FENCE

- A. Silt fence shall be installed down-slope of areas to be disturbed prior to clearing and grading. Silt fence shall be situated such that the total area draining to the fence is not greater than one-fourth acre per 100 feet of fence. Silt fence shall be used for storm drain drop inlet protection and around soil stockpiles.

- B. Under no circumstances shall silt fences be constructed in streams or in swales or ditch lines or any area of concentrated flow.
- C. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, and polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

PHYSICAL PROPERTY	REQUIREMENTS
Filtering Efficiency	80% (minimum)
Tensile Strength at 20%	50 pounds/linear inch (minimum)
Flow Rate	0.3 gallons/square foot/minute (minimum)

- D. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0°F to 120°F.
- E. Posts for synthetic fabric silt fences shall be either 2-inch by 2-inch wood or 1.33 pounds per linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire to them. Posts shall be no more than 6 feet apart.
- F. Wire fence reinforcement for silt fences shall be a minimum of 36 inches in height, a minimum of 14 gauge and shall have a mesh spacing of no greater than 6 inches.

2.18 STORM DRAIN INLET PROTECTION

- A. Storm drain inlet protection shall be utilized on drop inlets and curb inlets that receive sediment-laden runoff from disturbed areas.
- B. Storm drain inlet protection shall only be used around drop inlets when the up-slope area draining to the inlet has no other or inadequate sediment control.
- C. The drainage area shall be no greater than 1 acre.
- D. The inlet protection device shall be constructed in a manner that will facilitate cleanout and disposal of trapped sediment and minimize interference with construction activities.
- E. Inlet protection devices shall be constructed in such a manner that any resultant ponding of stormwater will not cause flooding or excessive inconvenience or damage to adjacent areas, roadways, properties, or structures.
- F. Inlet protection devices are low flow filter devices, and as such shall be constructed in such a manner as to allow for higher flows to bypass into the storm drain system to prevent flooding of the roadway or downstream properties.

2.19 FILTER STRIP

- A. Filter strips shall be used on each side of permanent constructed channels.
- B. Filter strips shall only be used to remove sediment from overland flow. Filter strips are not effective in removing sediment from concentrated flows.
- C. If vegetative filters are proposed as a sediment control device and they do not already exist, they shall be planted and established prior to initiating land disturbing activities.
- D. The minimum filter strip width shall be 50 feet for streams, wetlands, and sinkholes. The minimum filter strip width shall be ten feet for constructed waterways.
- E. Where a post development floodplain or wet weather conveyance is being protected, filter strips shall be provided on each side. When a wetland or sinkhole is being protected, filter

strips shall be provided around the perimeter.

- F. Contractor shall construct the filter strips as shown on the Construction Drawings.
- G. Existing grass or grass/legume mixtures used as filter strips shall be dense and well established, with no bare spots. When establishing new seeding, consideration shall be given to wildlife needs and soil conditions on the site. The following chart provides a list of alternative grass and grass/legume mixtures:

SEEDING MIXTURE AND SITE SUITABILITY CHART

Seeding Mixture	Rate lbs/acre	Soil Suitability
Alfalfa <i>Or</i> Red Clover <i>Plus</i> Timothy <i>Or</i> Orchardgrass <i>Or</i> Bromegrass	10 10 4 6 6	Well-Drained
Ladino <i>Plus</i> Timothy <i>Or</i> Orchardgrass <i>Or</i> Bromegrass	0.5 4 6 8	Wet or Well-Drained

Notes:

- 1. All seeding shall be in accordance with the seeding sections of this Specification.
- 2. Well-drained sites include sites that are drained with tile as well as naturally well-drained and droughty sites. Wet sites include sites that are excessively wet only a portion of the growing season.

2.20 CONSTRUCTION DEWATERING

- A. Sediment-laden water shall be pumped to a dewatering structure before it is discharged.

PART 3 – EXECUTION

3.01 GENERAL

- A. Erosion and sediment control practices shall be consistent with the requirements of Chapter 11 of the LFUCG Stormwater Manual and other state and local regulatory agencies and in any case shall be adequate to minimize erosion of disturbed and/or regraded areas and discharge of sediment from the site.
- B. Contractor is responsible for notifying and obtaining coverage from the Kentucky Division of Water concerning inclusion under the KPDES General Permit for Stormwater Discharges Associated with Construction Activities.

- C. Gravity sewer lines, force mains, and water lines that cross streams shall be constructed by methods that maintain normal stream flow and allow for a dry excavation. Water pumped from the excavation shall be contained and allowed to settle prior to reentering the stream, or filtered through a sediment removal device. Excavation equipment and vehicles shall operate outside of the flowing portion of the stream. Spoil material from the line excavation shall not be allowed to enter the flowing portion of the stream. Clean Water Act Section 401 and 402 requirements enforced by the US Army Corps of Engineers and the Kentucky Division of Water and the provisions of this condition shall apply to all types of utility line stream crossings.
- D. Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access. Effective erosion and sedimentation control measures shall be employed at all times during the project to prevent degradation of Waters of the Commonwealth. Site regrading and reseeding shall be accomplished with 14 days after disturbance.

3.02 MULCH

- A. Seed shall be applied prior to mulching except where seed is to be applied as part of a hydroseeder slurry containing mulch.
- B. Lime and fertilizer (where needed) shall be incorporated and surface roughening accomplished as needed prior to mulching in accordance with applicable sections of this Specification.
- C. Mulch materials shall be spread uniformly by hand or mechanically so the soil surface is covered. During or immediately following application, the mulch shall be anchored or otherwise secured to the ground according to one of the following methods:
 1. *Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil.*
 2. *Mulch Tackifiers/Nettings/Emulsions – Use according to the manufacturer's recommendations. This is a superior method in areas of water concentration to hold mulch in place.*
 3. *Wood Fiber – Wood fiber hydroseeder slurries may be used to tack straw mulch. This combination treatment is well suited to steep slopes and critical areas, and severe climate conditions.*
- D. Mulch shall be anchored using a mulch anchoring tool, a liquid binder/tackifier, or mulch nettings. Nets and mats shall be installed to obtain firm, continuous contact between the material and the soil. Without such contact, the material is useless and erosion occurs.
- E. A mulch anchoring tool is a tractor-drawn implement that is typically used for anchoring straw and is designed to punch mulch approximately two inches into the soil surface. Machinery shall be operated on the contour and shall not be used on slopes steeper than 3H:1V.
- F. When using liquid mulch binders and tackifiers, application shall be heaviest around edges of areas and at crests of ridges and banks to prevent wind blow. Remainder of area shall have binders/tackifiers spread uniformly in accordance with manufacturer's recommendations.
- G. When using a mulch net, it shall be used in conjunction with an organic mulch and shall be installed immediately after the application and spreading of the mulch
- H. Erosion control blankets and turf reinforcement mats are considered protective mulches and may be used alone on erodible soils and during all times of year. Blankets and mats shall be installed in accordance with manufacturer's recommendations.
- I. Mulched areas shall be inspected at least weekly and after each rainfall of one-half inch or

more. When mulch material is found to be loosened or removed, the mulch cover shall be replaced within 48 hours.

3.03 TEMPORARY SEED

- A. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and anchoring.
- B. The needed erosion control practices, such as diversions, temporary waterways for diversion outlets, and sediment ponds, shall be installed prior to seeding.
- C. Prior to seeding, lime and fertilizer (if needed) shall be worked into the soil with a disk harrow, springtooth harrow, or similar tools to a depth of two inches. On sloping areas, the final operation shall be on the contour.
- D. The seed shall be applied uniformly with a cyclone seeder, drill, cultipacker, seeder, or hydroseeder (slurry may include seed and fertilizer) preferably on a firm, moist seedbed. Seed shall be sown no deeper than one-fourth inch to one-half inch.
- E. The seedbed shall be firmed following seeding operations with a cultipacker, roller, or light drag.
- F. On sloping land, seeding operations shall be on the contour wherever possible.
- G. Mulch shall be applied, in the amounts described in the mulch section of this Specification, to protect the soil and provide a better environment for plant growth.
- H. New seed shall have adequate water for growth, through either natural means or irrigation, until plants are firmly established.
- I. Seeded areas shall be inspected at least weekly after planting and after each rainfall of one-half inch or more. Areas requiring additional seed and mulch shall be repaired within 48 hours.
- J. If vegetative cover is not established within 21 days, the area shall be reseeded.

3.04 PERMANENT SEED

- A. During site preparation, topsoil shall be stockpiled for use in establishing permanent vegetation.
- B. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and anchoring.
- C. The needed erosion control practices, such as diversions, temporary waterways for diversion outlets, and sediment ponds, shall be installed prior to seeding.
- D. Prior to seeding, lime and fertilizer shall be worked into the soil with a disk harrow, springtooth harrow, or similar tools to a depth of four inches. On sloping areas, the final operation shall be on the contour.
- E. Where compacted soils occur, they shall be broken up sufficiently to create a favorable rooting depth of six to eight inches.
- F. The seed shall be applied uniformly with a cyclone seeder, drill, cultipacker, seeder, or hydroseeder (slurry may include seed and fertilizer) preferably on a firm, moist seedbed. Seed shall be sown no deeper than one-fourth inch to one-half inch.

- G. The seedbed shall be firmed following seeding operations with a cultipacker, roller, or light drag.
- H. On sloping land, seeding operations shall be on the contour wherever possible.
- I. Mulch shall be applied, in the amounts described in the mulch section of this Specification, to protect the soil and provide a better environment for plant growth.
- J. New seed shall have adequate water for growth, through either natural means or irrigation, until plants are firmly established.
- K. Seeded areas shall be inspected at least weekly after planting and after each rainfall of 0.5 inches or more. Areas requiring additional seed and mulch shall be repaired within 48 hours.
- L. If vegetative cover is not established (>70%) within 21 days, the area shall be reseeded. If 40 to 70 percent groundcover is established, overseed and fertilize, using half of rates originally applied, and mulch. If less than 40 percent groundcover is established, follow original seedbed preparation methods, seeding and mulching specifications, and apply lime and fertilizer if needed according to soil tests.

3.05 SOD

- A. The area to be sodded shall be protected from excess runoff, as necessary, with appropriate BMPs.
- B. Prior to sodding, the soil surface shall be cleared of all trash, debris, and stones larger than one inch in diameter, and of all roots, brush, wire, and other objects that would interfere with the placing of the sod.
- C. Compacted soils shall be broken up sufficiently to create a favorable rooting depth of six to eight inches.
- D. Lime and fertilizer (if needed) shall be worked into the soil with a disk harrow, springtooth harrow, or other suitable field equipment to a depth of four inches.
- E. After the lime and fertilizer have been applied and just prior to the laying of the sod, the soil in the area to be sodded shall be loosened to a depth of one inch. The soil shall be thoroughly dampened immediately after the sod is laid if it is not already in a moist condition.
- F. No sod shall be placed when the temperature is below 32°F. No frozen sod shall be placed nor shall any sod be placed on frozen soil.
- G. When sod is placed during the periods of June 15 to September 1 or October 15 to March 1, it shall be covered immediately with a uniform layer of straw mulch approximately one-half inch thick or so the green sod is barely visible through the mulch.
- H. Sod shall be carefully placed and pressed together so it will be continuous without any voids between the pieces. Joints between the ends of strips shall be staggered.
- I. On gutter and channel sodding, the sod should be carefully placed on rows or strips at right angles to the centerline of the channel (*i.e.*, at right angles to the direction of flow). The edge of the sod at the outer edges of all gutters shall be sufficiently deep so that surface water will flow over onto the top of the sod.
- J. On steep graded channels, each strip of sod shall be staked with at least two stakes not more than 18 inches apart.
- K. On slopes 3H:1V or steeper, or where drainage into a sod gutter or channel is one-half acre or larger, the sod shall be rolled or tamped and then chicken wire, jute, or other netting shall

be pegged over the sod for protection in the critical areas. The netting and sod shall be staked with at least two stakes not more than 18 inches apart. The netting shall be stapled on the side of each stake within two inches of the top of the stake. The stake should then be driven flush with the top of the sod.

- L. When stakes are required, the stakes shall be wood and shall be approximately $\frac{1}{2}$ inch by $\frac{3}{4}$ inch by 12 inches. They shall be driven flush with the top of the sod with the flat side against the slope and on an angle toward the slope.
- M. Sod shall be tamped or rolled after placing and then watered. Watering shall consist of a thorough soaking of the sod and of the sod bed to a depth of at least 4 inches. The sod should be maintained in a moist condition by watering for a period of 30 days.
- N. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week to maintain moist soil to a depth of 4 inches. Watering shall be done during the heat of the day to prevent wilting. After the first week, sod shall be watered as necessary to maintain adequate moisture content.
- O. The first mowing of sod shall not be attempted until the sod is firmly rooted. No more than one-third of the grass leaf shall be removed by the initial and subsequent cuttings. Grass height shall be maintained between 2 inches and 3 inches.
- P. Where sod does not establish properly, the sod should be replaced immediately. Areas requiring resodding should be prepared in the same manner as the original installation.

3.06 ROAD/PARKING STABILIZATION

- A. The roadbed or parking surface shall be cleared of all vegetation, roots, and other objectionable material.
- B. All roadside ditches, cuts, fills, and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable sections of this Specification.
- C. Geotextile filter fabric shall be applied beneath the stone for additional stability in accordance with fabric manufacturer's specifications.
- D. Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. Seeded areas adjacent to the roads and parking areas shall be checked regularly to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures shall be checked once each week to ensure that they do not have silt or other debris that reduces their effectiveness.

3.07 CONSTRUCTION ENTRANCE

- A. Vegetation, roots, and all other obstructions shall be cleared in preparation for grading. Prior to placing geotextile (filter fabric), the entrance shall be graded and compacted to 80% of standard proctor density.
- B. To reduce maintenance and loss of aggregate, the geotextile shall be placed over the existing ground before placing the stone for the entrance. Stone shall be placed to depth of 6 inches or greater for the entire width and length of the stabilized construction entrance.
- C. If wash racks are used, they shall be installed according to manufacturer's specifications.
- D. The stabilized construction entrance shall be inspected once each week and after there has been a high volume of traffic or a storm event greater than 0.2 inches.

- E. The entrance shall be maintained in a condition that will prevent tracking or flow of sediments onto public rights-of-way. This may require periodic top dressing with additional stone, as conditions demand, and repair and/or cleanout of any structures used to trap sediment.
- F. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains shall be removed immediately.

3.08 DUST CONTROL

- A. See Articles on Temporary Seed, Permanent Seed, Sod, Mulch, Road/Parking Stabilization, and Construction Entrance of this Specification Section.
- B. When construction is active on the site, dust control shall be implemented as needed.
- C. When using tillage as a dust control measure, Contractor shall begin plowing on windward side of area. Chisel-type plows spaced about 12 inches apart, spring-toothed harrow, and similar plows are examples of equipment that may produce the desired effect.
- D. The site shall be observed daily for evidence of windblown dust and reasonable steps shall be taken to reduce dust whenever possible. When construction on a site is inactive for a period, the site shall be inspected at least weekly for evidence of dust emissions or previously windblown sediments. Dust control measures shall be implemented or upgraded if the site inspection shows evidence of wind erosion.

3.09 EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

- A. Blankets and mats shall be installed according to the manufacturer's recommendations. In the event that the manufacturer's recommendations conflict with any requirement of this Specification, the most conservative requirement, in terms of protection of public health and the environment, shall govern.
- B. Placement
 - a. *The blankets and mats shall be unrolled in the direction of surface water flow.*
 - b. *When using two blankets or mats side by side, the seams shall not be placed in the center of a channel but shall be offset by a minimum of one (1) foot.*
 - c. *Blankets and mats shall be stapled in place using U-shaped staples of the size, and at the prescribed intervals and arrangement, specified by the manufacturer.*
 - d. *When blankets or mats are laid side by side, they shall be stapled so as to anchor the edge of each roll.*
 - e. *The overlap of blankets and mats shall be in accordance with the manufacturer's recommendations.*
 - f. *If blanket/mat is unrolled along (parallel) to the contour installation must begin at the lower elevation and progress up slope with the upper blanket overlapping the lower as with roofing shingles.*
- C. Damage Repair
 - a. *The patch material used for the repair of a hole or tear shall be the same type of material as the damaged blanket/mat.*
 - b. *The patch shall extend at least 12 inches beyond any portion of the damaged blanket/mat.*

c. *The repair patch shall be stapled in place as per manufacturer's recommendations.*

3.10 TEMPORARY DIVERSION DITCH

- A. All dead furrows, ditches or other depressions to be crossed shall be filled before construction begins, or as part of construction, and the earth fill used to fill the depressions shall be compacted using the treads of the construction equipment. All old terraces, fencerows, or other obstructions that will interfere with the successful operation of the diversion shall be removed.
- B. The base for the diversion ridge shall be prepared so that a good bond is obtained between the original ground and the fill material. Vegetation shall be removed and the base shall be thoroughly disked prior to placement of fill.
- C. The earth materials used to construct the earth fill portions of the diversions shall be obtained from the diversion channel or other approved source.
- D. The earth fill materials used to construct diversions shall be compacted by running the construction equipment over the fill in such a manner that the entire surface of the fill will be traversed by not less than one tread track of the equipment.
- E. When an excess of earth material results from cutting the channel cross section and grade, it shall be deposited adjacent to the supporting ridge unless otherwise directed.
- F. The completed diversion shall conform to the cross section and grade shown on the Construction Drawings.
- G. Temporary or permanent seeding and mulch (or blanket/mat) shall be applied to the berm or ditch immediately following its construction. Contractor shall triple-seed areas below the flow line, and shall use erosion control blankets or turf reinforcement mats as needed.
- H. Bare and vegetated diversion channels shall be inspected regularly to check for points of scour or bank failure; rubbish or channel obstruction; rodent holes, breaching, or settling of the ridge; and excessive wear from pedestrian or construction traffic.
- I. Damaged channels or ridges shall be repaired at the time damage is detected. Sediment deposits shall be removed from diversion channels and adjoining vegetative filter strips regularly.
- J. Diversions shall be reseeded as needed to establish vegetative cover.

3.11 LEVEL SPREADER

- A. The minimum acceptable width shall be 6 feet. The depth of the level spreader as measured from the lip shall be at least 6 inches and the depth shall be uniform across the entire length of the measure.
- B. The grade of the channel for the last 15 feet entering the level spreader shall be less than or equal to 1%.
- C. The level lip of the spreader shall be constructed on zero percent grade to ensure uniform conversion of channel flow to sheet flow.
- D. Level spreaders shall be constructed on undisturbed soil.
- E. The entrance to the spreader shall be graded in a manner to ensure that runoff enters directly onto the zero percent graded channel.
- F. Storm runoff converted to sheet flow shall discharge onto undisturbed areas stabilized with

vegetation.

- G. All disturbed areas shall be stabilized immediately after construction is completed in accordance with the mulching and vegetation requirements of this Specification.
- H. The level spreader shall be inspected after each storm event and at least once each week. Any observed damage shall be repaired immediately.

3.12 PERMANENT CONSTRUCTED WATERWAY

- A. All ditches or other depressions to be crossed shall be filled before construction begins or as part of construction, and the earth fill used to fill the depressions shall be compacted using the treads of the construction equipment. All old terraces, fence rows, or other obstructions that will interfere with the successful operation of the channel shall be removed.
- B. The earth materials used to construct the earth fill portions of the channel shall be obtained from the excavated portion of the channel or other approved source.
- C. The earth fill materials used to construct the channel shall be compacted by running the construction equipment over the fill in such a manner that the entire surface of the fill will be traversed by at least one tread track of the equipment.
- D. The completed channel shall conform to the cross section and grade shown on the Construction Drawings.
- E. Channels shall be inspected regularly to check for points of scour or bank failure; rubbish or channel obstruction; rodent holes; breaching; and excessive wear from pedestrian or construction traffic.
- F. Channels shall be repaired at the time damage is detected. Sediment deposits shall be removed from adjoining vegetative filter strips when they are visible.
- G. Channels shall be seeded and mulched as needed to establish vegetative cover. Blankets or mats may be used instead of mulch, according to manufacturer's specifications.
- H. The subgrade of paved channels shall be constructed to the required elevations. All soft sections and unsuitable material shall be removed and replaced with suitable material. The subgrade shall be thoroughly compacted and shaped to a smooth, uniform surface. The subgrade shall be moist when pouring concrete.
- I. Before permanent stabilization of the slope, the structure shall be inspected after each rainfall. Any damages to the paved channel or slope shall be repaired immediately.

3.13 PIPE SLOPE DRAIN

- A. The pipe slope drain shall be placed on undisturbed or well-compacted soil.
- B. Soil around and under the entrance section shall be hand-tamped in 4-inch to 8-inch lifts to the top of the dike to prevent piping failure around the inlet.
- C. Filter fabric shall be placed under the inlet and extended 5 feet in front of the inlet and be keyed in 6 inches on all sides to prevent erosion.
- D. Backfilling around and under the pipe with stable soil material hand compacted in lifts of 4 inches to 8 inches shall be done to ensure firm contact between the pipe and the soil at all points.
- E. The pipe slope drain shall be secured to the slope using stakes at intervals of 10 feet or less.

- F. All slope drain sections shall be securely fastened together and have watertight fittings.
- G. The pipe shall be extended beyond the toe of the slope and discharged at a non-erosive velocity into a stabilized area or to a sediment trap or pond.
- H. The pipe slope drain shall have a minimum slope of 3 percent or steeper.
- I. The height at the centerline of the earth dike shall range from a minimum of 1.0 foot over the pipe to twice the diameter of the pipe measured from the invert of the pipe. It shall also be at least 6 inches higher than the adjoining ridge on either side. At no point along the dike will the elevation of the top of the dike be less than 6 inches higher than the top of the pipe.
- J. All areas disturbed by installation or removal of the pipe slope drain shall be immediately stabilized.
- K. The pipe slope drain shall be inspected after every rainfall and at least weekly. Any necessary repairs shall be made immediately.
- L. Contractor shall check to see that water is not bypassing the inlet and undercutting the inlet or pipe. If necessary, Contractor shall install headwall or sandbags.
- M. Contractor shall check for erosion at the outlet point and shall check the pipe for breaks or clogs. Contractor shall install additional outlet protection if needed and immediately repair the breaks and clean any clogs.
- N. Contractor shall not allow construction traffic to cross the pipe slope drain and shall not place any material on it.
- O. If a sediment trap has been provided, it shall be cleaned out when the sediment level reaches 1/3 the design volume.
- P. The pipe slope drain shall remain in place until the slope has been completely stabilized or up to 30 days after permanent slope stabilization.

3.14 IMPACT STILLING BASIN

- A. Construction specifications for impact stilling basins are provided in the Construction Drawings.

3.15 CHECK DAM

- A. Stone shall be placed by hand or mechanically as necessary to achieve complete coverage of the ditch and to ensure that the center of the dam is at least 1 foot lower than the outer edges. Stone shall also be placed to extend 3 feet in elevation above the center portion of the check dam or to the top of the channel side slopes.
- B. Coir and wood fiber logs shall be laid on the channel bottom.
- C. Check dams shall be removed when their useful life has been completed. In temporary ditches and swales, check dams shall be removed and the ditch filled in when it is no longer needed. In permanent channels, check dams shall be removed when a permanent lining can be installed. In the case of grass-lined ditches, check dams shall be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the check dams shall be seeded and mulched or sodded (depending upon velocity) immediately after check dams are removed.
- D. If stone check dams are used in grass-lined channels that will be mowed, care shall be taken to remove all stone from the channel when the dam is removed. This shall include any stone that has washed downstream.

- E. Regular inspections shall be made to ensure that the check dam is in good working order and the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam shall be corrected immediately, and the dam shall be extended beyond the repaired area.
- F. Check dams shall be checked for sediment accumulation after each rainfall. Sediment shall be removed before or when it reaches one-third of the original height.
- G. Check dams shall remain in place and operational until the drainage area and channel are completely stabilized, or up to 30 days after the permanent site stabilization is achieved.

3.16 SEDIMENT TRAP

- A. The area to be excavated shall be cleared of all trees, stumps, roots, brush boulders, sod, and debris. All channel banks and sharp breaks shall be sloped to no steeper than 1:1. All topsoil containing excessive amounts of organic matter shall be removed.
- B. Seeding and mulching of the sediment trap berm and any material taken from the excavation shall comply with the applicable soil stabilization sections of this Specification.
- C. Construction specifications for sediment traps are provided in the Construction Drawings.
- D. Any material excavated from the trap shall be placed in one of the following ways so that it will not be washed back into the trap by rainfall:
 - 1. *uniformly spread to a depth not exceeding 3 feet and graded to a continuous slope away from the trap*
 - 2. *uniformly placed or shaped reasonably well with side slopes assuming the natural angle of repose for the excavated material behind a berm width not less than 12 feet.*
- E. Sediment shall be removed from the trap when the capacity is reduced to one third of the design volume. Contractor shall follow the methods for disposing of sediment removed from the trap as shown in the Construction Drawings.

3.17 SEDIMENT POND

- A. The foundation area shall be cleared of all trees, stumps, roots, brush boulders, sod, and debris. All channel banks and sharp breaks shall be sloped to no steeper than 1:1. All topsoil containing excessive amounts of organic matter shall be removed. The surface of the foundation area shall be thoroughly scarified before placement of the embankment material.
- B. A cutoff trench shall be backfilled with suitable material. The trench shall be kept free of standing water during backfill operations.
- C. The pipe conduit barrel shall be placed on a firm foundation. Selected backfill material shall be placed around the conduit in layers, and each layer shall be compacted to at least the same density as the adjacent embankment. All compaction within 2 feet of the pipe spillway shall be accomplished with hand-operated tamping equipment.
- D. All borrow areas outside the pond and in the drainage area shall be graded and left in such a manner that water will not be ponded.
- E. The material placed in the fill shall be free of all sod, roots, frozen soil, stones more than 6 inches in diameter, and other objectionable material. The placing and spreading of the fill material shall occur in approximately 6-inch horizontal layers or of such thickness that the required compaction can be obtained with the equipment used. Each layer shall be compacted in a way that will result in achieving 95 percent of the maximum standard dry density.

- F. The distribution and gradation of materials throughout the fill shall be such that there will be no lenses, pockets, stakes, or layers of material differing substantially in texture or gradation from the surrounding material. Where it is necessary to use materials of varying texture and gradation, the more impervious material shall be placed in the upstream and center portions of the fill.
- G. The moisture content of fill material shall be such that the required degree of compaction can be obtained with the equipment used.
- H. Fill shall not be placed on frozen, slick, or saturated soil.
- I. The topsoil material saved in the site preparation shall be placed as a top dressing on the surface of the emergency spillways, embankments, and borrow areas. It shall be evenly spread.
- J. A protective cover of herbaceous vegetation shall be established on all exposed surfaces of the embankment, spillway, and borrow areas to the extent practical under prevailing soil and climatic conditions.
- K. Seedbed preparation, seeding, fertilizing, and mulching shall comply with the applicable sections of this Specification.
- L. Any material excavated from the pond shall be placed in one of the following ways so that its weight will not endanger the stability of the side slopes and where it will not be washed back into the pond by rainfall:
 - 1. *uniformly spread to a depth not exceeding 3 feet and graded to a continuous slope away from the pond.*
 - 2. *uniformly placed or shaped reasonably well with side slopes assuming the natural angle of repose for the excavated material behind a berm width not less than 12 feet.*
- M. Sediment shall be removed from the pond when the capacity is reduced to one third of the design volume. Contractor shall follow the methods for disposing of sediment removed from the pond as shown in the Construction Drawings.

3.18 SILT FENCE

- A. This Article provides construction specifications for silt fences using synthetic fabric. See the Construction Drawings for additional detail.
- B. Posts shall be spaced a maximum of 6 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When necessary because of rapid runoff, post spacing shall not exceed 6 feet.
- C. A trench shall be excavated at least 6 inches wide and 6 inches deep along the line of posts and upslope from the barrier.
- D. Where used, the wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy-duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.
- E. The filter fabric shall be stapled or wired to the fence, and 12 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
- F. At joints, filter fabric shall be lapped with terminating posts with a minimum overlap of 3 feet.
- G. The trench shall be backfilled and soil compacted over the filter fabric.

- H. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
- I. Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately. Knocked down fences shall be repaired at the end of each day.
- J. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and if the barrier is still necessary, the fabric shall be replaced promptly.
- K. Sediment deposits shall be removed after each storm event or when deposits reach approximately one-third the height of the barrier.
- L. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded.
- M. Silt fences shall be replaced every 6 months.
- N. Silt fence shall terminate in a "J" hook to prevent bypassing at the end of a row.

3.19 STORM DRAIN INLET PROTECTION

- A. All storm drains receiving sediment-laden flows from disturbed areas shall be protected. Approved inlet protection methods include net or sand bags filled 2/3 with rock, geotextile filtration products, and Contractor-fabricated structures.
- B. For a silt fence drop inlet protection structure, the following specifications apply:
 - 1. *For stakes, Contractor shall use 2 x 4-inch wood (preferred) or equivalent metal with a minimum length of 3 feet.*
 - 2. *Stakes shall be evenly spaced around the perimeter of the inlet a maximum of 3 feet apart and securely driven into the ground, approximately 18 inches deep.*
 - 3. *To provide needed stability to the installation, Contractor shall frame with 2 x 4-inch wood strips around the crest of the overflow area at a maximum of 1.5 feet above the drop inlet crest and shall brace diagonally.*
 - 4. *Contractor shall place the bottom 12 inches of the fabric in a trench and backfill the trench with at least 4 inches of crushed stone or 12 inches of compacted soil.*
 - 5. *Contractor shall fasten fabric securely to the stakes and frame. Joints shall be overlapped to the next stake.*
- C. For sod drop inlet protection, sod shall be placed to form a turf mat covering the soil for a distance of 4 feet from each side of the inlet structure. Soil preparation and sod placement shall be in accordance with the section entitled Sod.
- D. For gravel curb inlet protection, the following specifications apply:
 - 1. *Wire mesh with ½-inch openings shall be placed over the curb inlet opening so that at least 12 inches of wire extends across the concrete gutter from the inlet opening.*
 - 2. *KYTC No. 2 Coarse Aggregate shall be piled against the wire so as to anchor it against the gutter and inlet cover and to cover the inlet opening completely.*
 - 3. *This type of device shall never be used where overflow may endanger an exposed fill slope. Consideration shall also be given to the possible effects of ponding on traffic movement, nearby structures, working areas, and adjacent property.*

- E. For block and gravel curb inlet protection, the following specifications apply:
1. *Two concrete blocks shall be placed on their sides abutting the curb at either side of the inlet opening to act as spacer blocks.*
 2. *A 2-inch by 4-inch stud shall be cut and placed through the outer holes of each spacer block to help keep the front blocks in place.*
 3. *Concrete blocks shall be placed on their sides across the front of the inlet and abutting the spacer blocks.*
 4. *Wire mesh shall be placed over the outside of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire with ½-inch openings shall be used.*
 5. *KYTC No. 2 Coarse Aggregate shall be piled against the wire to the top of the barrier.*
- F. For stone-filled corrugated pipe curb inlet protection, the following specifications apply:
1. *Two concrete "L" blocks shall be placed on their sides, with one leg fitting into the mouth of the curb opening.*
 2. *A 6-inch corrugated pipe shall be filled with stone and covered with a filter sock.*
 3. *The stone-filled pipe will be placed in front of the two concrete "L" blocks, and extend a minimum of the width of the curb inlet opening on either side. The total length of the stone filled pipe shall be three times the width of the curb inlet opening.*
- G. The inlet protection structure shall be inspected after each rain, and repairs made as needed.
- H. Sediment shall be removed and the device restored to its original dimensions when sediment has accumulated to one-third the design depth of the filter. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- I. If a stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone shall be pulled away from the blocks, cleaned, and replaced.
- J. Structures shall be removed after the area draining to the inlet protection structure has been properly stabilized.

3.20 FILTER STRIP

- A. When planting filter strips, Contractor shall prepare seedbed, incorporate fertilizer based on a soil test, and apply mulch consistent with the seeding sections of this Specification. Fertilizer shall not be applied within 50 feet of a stream or other waterbody. Filter strips using areas of existing vegetation shall be over seeded, as necessary, with the specified mixtures to obtain an equivalent density of vegetation. The over seeding shall be accomplished prior to any land disturbing activities.
- B. Filter strips shall be inspected regularly to ensure that a healthy vegetative growth is maintained. Any bare spots or spots where sediment deposition could lead to the destruction of vegetation shall be repaired.
- C. Filter strips shall be fertilized once each year in the fall.
- D. Irrigation shall be used as necessary to maintain the growth of the vegetation in the filter strip.
- E. Sediment shall be removed when it becomes visible in the filter.
- F. Construction traffic shall not be driven on or over filter strips.

3.21 CONSTRUCTION DEWATERING

- A. All dewatering discharges shall pass through a sediment removal device. Contractor shall follow the specifications for sediment traps and basins. The manufacturer's recommendations shall be followed for commercial products.
- B. The dewatering structure shall be inspected frequently to ensure it is functioning properly and not overtopping. Accumulated sediment shall be spread out on site and stabilized or disposed of offsite.

3.22 KPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

- A. The Contractor is responsible for electronically filing the appropriate state Notice of Intent (NOI-SWCA) letter at least seven (7) days prior to start of construction activity. The Notice of Intent (NOI) is a Kentucky Pollution Discharge Elimination System (KPDES) permit application as provided by the Kentucky Revised Statutes, Chapter 224. This application is required to be submitted for construction projects that disturb one or more acres of land.
- B. The NOI requires the inclusion of the descriptions of (but is not limited to) the following items:
 - a. *Names and designated uses of any receiving waters*
 - b. *Anticipated number and locations of discharge points*
 - c. *Identification of planned construction in or along a waterbody*
- C. A topographic map showing project boundaries, areas to be disturbed, locations of anticipated discharge points and receiving waters is also required to be submitted with the NOI.
- D. If the construction site is near a designated "High Quality/Impaired Waters" or a "Cold Water Aquatic Habitat Waters, Exceptional Waters, Outstanding National/State Resource Waters," additional items and/or individual permits will be required.
- E. The NOI form requires an SIC code. The link to the SIC codes is <http://www.osha.gov/pls/imis/sicsearch.html>. The following are the typical construction SIC codes utilized:
 - 1542 – Building Construction, nonresidential, except industrial and warehouses
 - 1623 – Water Main Construction, Sewer Construction
 - 1629 – Water and Wastewater Treatment Plant Construction
 - 1711 – Water Pump Installation
 - 1781 – Drilling Water Wells
- F. The Contractor is responsible for implementing the approved Stormwater Pollution Prevention Plan (SWPPP) prior to commencement of site disturbance. The SWPPP shall include erosion prevention measures and sediment and pollutant control measures which are installed and maintained to minimize discharges of sediments and other pollutants from a 2-year, 24-hour storm event. The SWPPP shall be kept at the site and available for review by LFUCG and state officials.
- G. The Contractor is responsible for the description of procedures to maintain erosion and sediment control measures during the period of construction.
- H. The Contractor is responsible for identifying each Contractor and Subcontractor who will install each SWPPP erosion and sediment control measure.
- I. Each Contractor and Subcontractor shall sign a statement certifying the awareness of the

requirements of the SWPPP-related documents. Certification is attached at the end of this section.

- J. The Contractor shall not start land disturbing activities until written permit coverage is obtained from the Kentucky Division of Water.
- K. The inspection by qualified personnel, provided by the Contractor, of the site as follows:
 - a. at least once every seven (7) calendar days, and
 - b. within 24 hours after any storm event of 0.5 inch or greater
- L. The Contractor is responsible for completing and maintaining the required Self-Inspection Forms. A sample is included in this specification Section.
- M. Amendments to the approved SWPPP shall be made and implemented as necessary through the course of the construction project if inspections or investigations by the Contractor's inspector, site staff, or by local, state, or federal officials determine that the existing sediment control measures, erosion control measures, or other site management practices are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site. All plan amendments shall be noted on the copy of the SWPPP maintained at the project site. Plan amendments that involve engineering design shall be prepared by an engineer licensed in Kentucky.
- N. The Contractor shall submit the Notice of Termination (NOT) form to the Kentucky Division of Water, the LFUCG Division of Water Quality, and the LFUCG Division of Engineering when final stabilization has been achieved on all portions of the site and the erosion/sediment controls have been removed.
- O. All subcontractors shall be required to comply with the requirements of the state permit and the Stormwater Pollution Prevention Plan (SWPPP).
- P. Where to submit:
 - a. *Complete KPDES FORM NOI-SW at the following website:*

<https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7>
 - b. *Do not initiate work until receiving approval from the Kentucky Division of Water.*
 - c. *A complete copy of the NOI submittal shall also be provided to the following for approval/coverage verification:*

Division of Water Quality
125 Lisle Industrial Avenue, Suite 180
Lexington, KY 40511

Division of Engineering
Lexington-Fayette Urban County Government
101 E. Vine St.
4th Floor
Lexington, KY 40507

3.23 LFUCG Land Disturbance Permit

- A. The Contractor shall obtain a Land Disturbance Permit from the LFUCG Division of Engineering, after the LFUCG Division of Water Quality inspects the installation of the best management practices as required by the Stormwater Pollution Prevention Plan (SWPPP). The site grading plan shall show the original and finish grade contours. The grading plan shall

be in conformance with the SWPPP and shall clearly show the initial phase of best management practices to be installed.

- B. The Land Disturbance Permit checklist appears on the following page. It can be obtained from:

Division of Engineering
Lexington-Fayette Urban County Government
101 E. Vine St.
4th Floor
Lexington, KY 40507
(859) 258-3410
Attn: Land Disturbance Permit Section
<https://www.lexingtonky.gov/new-development>

- C. All excess earthen/rock materials hauled off the site to a location in Fayette County shall be hauled to a site permitted by the Kentucky Division of Water and the LFUCG. The haul site shall be permitted in accordance with these specifications.

LFUCG Land Disturbance Permit Application & Erosion and Sediment Control Plan Checklist

v23Feb2018

Permittee (Owner or Contractor):	Date:
Contact Person:	Contact Phone:
Site Address:	Zone:
Contractor Name:	Reg #:
Mailing Address:	Contractor Phone:
	Email:

Permitting Information and ESC Plan Narrative	Yes	No	N/A	Page#	Notes
KY DOW Construction NOI / KYR10 Permit					Required for disturbance ≥ 1 acre
US ACE Section 404 Permit					Required for stream crossings, wetland fills
KY DOW Stream Construction Permit / WQ Certif.					Required for stream crossings / encroachment
FEMA LOMR or CLOMR					If applicable
Project description and purpose					Brief summary
Land cover, soils, percent impervious area					Pre and post construction
Land cover / land use of adjacent property					Can designate on plan sheets
Work schedule with start/end dates					Sequencing, clearing, grading, revegetation
Phasing plan for large projects					25 acre limit on total disturbed area
BMP installation schedule					Can be included on plan sheets (see below)
Inspection and BMP maintenance schedule					Every 7 days, or every 14 days and after $\frac{1}{2}$ " rain
Material storage, waste & litter pollution prevention					Covered, away from drainage system, etc.
Fueling / vehicle maintenance pollution prevention					Conducted away from drainage system, etc.
Spill prevention, control, and countermeasures					If reportable quantities present at the site
Dust control plan					Consider if neighbors are present
Stabilized site exit inspection plan					For keeping offsite pavement clear of soil/debris
Stabilization plan and schedule for site areas					Seed/mulch/etc. within 14 days of inactivity
ESC Plan Site Map and Drawing Detail (See LFUCG Stormwater Manual for BMP Design and Installation Information)					
Plans stamped by a licensed professional					Required for engineered plan components
Location of the project; property lines					Include small locational map; street address
Limits of construction, disturbed area location/size					Flag off "no disturbance" areas
Topography and drainage patterns (pre and post)					1" = 50 ft; 2 ft contours
Buildings, utilities, paved areas, ditches, culverts					Show stormwater inlets within 100 ft of site
Retention ponds, detention basins, sediment traps					Stabilize immediately after construction
Access and haul roads					Consider dust control where neighbors present
Stabilized exit (50 ft #2 rock pad, shaker rack, etc.)					Must drain to a sediment control BMP
Silt fence or etc. at downslope perimeters					Super silt fence along critical areas
Diversion ditches/berms above disturbed areas					Stabilize immediately after construction
Protection for post-construction BMPs					Keep sediment out of post-construction BMPs
Slope stabilization (seed with mulch/blanket/mat)					See Figure 11-1 in Stormwater Manual
Inlet protection measures					Specify type(s) and location(s)
Outlet erosion protection measures					Specify type(s) and location(s)
Ditch stabilization (sod, or seed with blanket/mat)					Stabilize immediately after construction
Sediment basins (> 5 ac) and traps (< 5 ac)					Stabilize immediately after construction
Dewatering sites and methods					Must use sediment controls
50 ft natural vegetated buffer for all critical areas					Applies to streams, wetlands, sinkholes
Stream crossings					Crossing type, detail; USACE 404 permit req'd
Stockpile areas, equipment storage/fueling areas					Keep away from drainage system if possible
Waste and concrete wash water storage/disposal					Show initial area; can be moved as needed
LFUCG Use Only: Review Date: _____ Status – In Compliance: Yes No Additional Info Needed: Yes No					
Reviewed By: _____					Department: DOE DWQ DES
Comments / Missing Items: _____					

Kentucky Best Management Practices Plan • Construction Site Inspection Report

Company:	Site:	County:
Site Operator:		Date:
Receiving Water:	Total Site Area (acres):	# Disturbed Acres:
Inspector Name:	Inspector Qualifications:	
Inspection Type: Weekly or ½ Inch Rain	Days Since Last Rainfall _____	# Inches of Last Rainfall: _____

Field Inspection Observations

BMP Category	Compliance			Field Indicators for Compliance
	Yes	No	N/A	
Project Operations				Notice of Intent (KPDES permit) and other local/state permits on file BMP Plan on site and available for review Project timing/schedule and activities following BMP Plan Weekly inspection and rain-event reports on BMPs available for review Diversions, silt checks/traps/basins, and silt fences/barriers installed prior to clearing Grading and clearing conducted in phases to minimize exposed soil areas No vegetation removal or operations in stream or sinkhole buffer area (25-50 ft min) Rock pad in place on all construction site exits leading to paved roads No sediment, mud, or rock on paved public roads in project area Dust control if needed when working in residential areas during dry conditions
Drainage Management				Upland runoff diverted around bare soil areas with vegetated/lined ditches/berms Drainage channels exiting the site are lined with grass/blanket/rock and stabilized Discharges from dewatering operations cleaned in silt fence enclosure or other filter No muddy runoff leaving site after rains up to 1½ inches
Erosion Protection				Exposed soil seeded/mulched after 2 weeks if no work is planned for the next 7 days Soils on steep slopes seeded/mulched/blanketed as needed to prevent rutting
Sediment Barriers				Silt fence, rock filter, or other sediment barrier below all bare soil areas on slopes Barrier installed across slope on the contour, trenched in, posts on downhill side Multiple sediment barriers at least 125 ft apart on unseeded slopes steeper than 4:1 J-hook interceptors along silt fence where heavy muddy flows run along fencing No visible undercutting or bypassing or blowout of sediment barrier Accumulated sediment is less than halfway to the top of sediment barrier
Slope Protection				Slopes tracked, disked, or conditioned after final grade is established Slopes seeded, mulched, or blanketed within 21 days, no unmanaged rills or gullyng Heavy downslope flows controlled by lined downdrain channels or slope drain pipes No muddy runoff from slopes into streams, rivers, lakes, or wetlands
Inlet Protection				Inlet dam/device or filtration unit placed at all inlets receiving muddy flows No visible undercutting, bypassing, or blowout of inlet protection dam or device Accumulated sediment is less than halfway to the top of the inlet protection dam/device
Outlet Protection				High flow discharges have rock or other flow dissipaters of adequate sizing at outlet Culvert outlets show no visible signs of erosion/scour, bank failure, or collapse
Ditch and Channel Stabilization				No unmanaged channel bank erosion or bottom scouring visible within or below site Ditches with slopes more than 3% have check dams spaced as needed, if not grassed Ditch check dams tied in to banks, with center 4" lower than sides, and no bypassing Ditches with slopes of up to 5% are thickly seeded with grass (minimum requirement) Ditches 5% to 15% are lined with thick grass and erosion control blankets as needed Ditches 15% to 33% are lined with thick grass and matting or other approved product Ditches exceeding 33% are paved or lined with rock or other approved product

Sediment Traps and Basins				Storage volume is at least 134 cubic yards for each acre of bare soil area drained Trap or basin is seeded/mulched and stabilized; no collapsing sidewalls or banks Outlet structure is stable and consists of rock-lined notched overflow or outlet riser Rock overflow is 6" lower in center to control overflow discharge Outlet riser pipe has concrete & rock base, ½ inch holes every 3" to 6", and trash rack Area near pipe outlet or overflow is stable, with no scour or erosion Sediment removed before trap or basin is halfway full; disposal is away from ditches
Maintenance of EPSC Management Practices				Sediment behind silt fence and other filters does not reach halfway to top Sediment traps and basins are less than half full of sediment Gullies repaired, silt fences and other controls inspected and repaired/replaced Written documentation of controls installed, inspection results, and repairs performed All controls removed and areas graded, seeded, and stabilized before leaving site
Materials Storage, Handling, and Cleanup				Materials that may leach pollutants stored under cover and out of the weather Fuel tanks located in protected area with double containment system Fuel and/or other spills cleaned up promptly; no evidence of unmanaged spills No evidence of paint, concrete, or other material washouts near drain inlets No storage of hazardous or toxic materials near ditches or water bodies
Waste Disposal				Trash, litter, and other debris in proper containers or properly managed No litter or trash scattered around on the construction site Provisions made for restroom facilities and/or other sanitary waste management Sanitary waste facilities clean and serviced according to schedule No disposal of any wastes into curb or other inlets, ditches, streams, or water bodies

Inspection Notes and Key Observations

[illegible]

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System (KPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature of Inspector: _____

Contractor and Subcontractor Certifications

SWPPP Files, Updates, and Amendments

This SWPP Plan and related documents (e.g., NOI, inspection reports, US ACE permits, etc.) will be kept on file at the construction site by _____ (name and title). The SWPPP will be updated by the Owner and/or Site Manager to reflect any and all significant changes in site conditions, selection of BMPs, the presence of any unlisted potential pollutants on site, or changes in the Site Manager, contractor, subcontractors, or other key information. Updates and amendments will be made in writing within 7 days and will be appended to the original BMP Plan and available for review.

Stormwater Pollution Prevention Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Date: _____

Title: _____

I certify under penalty of law that I understand the terms and conditions of the general KPDES permit that authorizes the storm water discharges associated with the construction site activity identified as part of this certification.

Subcontractor Certification

The subcontractors below certify under penalty of law that they understand the terms and conditions of the general KPDES permit that authorizes the storm water discharges associated with the construction site activity identified as part of this certification.

Signed: _____

Date: _____

Title: _____

Signed: _____

Date: _____

Title: _____

Signed: _____

Date: _____

Title: _____

END OF SECTION

SECTION 02371 – STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PART 1 - GENERAL

1.01 GENERAL

- A. The Contract Documents include a SWPPP that has been reviewed by LFUCG Division of Water Quality. This SWPPP shall be used for establishing quantities and a lump sum price for providing the Erosion and Sediment Control Measures. The included SWPPP is largely complete but will require additional information from the contractor such as concrete washout locations, inlet protection types, etc. prior to being approved by LFUCG Division of Water Quality.
- B. The Contractor may use this SWPPP, with necessary additions, to obtain the required permits, i.e. Land Disturbance Permit. If Contractor chooses to use this SWPPP, the Contractor takes sole responsibility for the content of the SWPPP and the implementation of the SWPPP during construction. If Contractor chooses to use this SWPPP, the contractor will be required to submit the SWPPP with necessary additions to LFUCG Division of Water Quality for approval.
- C. Contractor may also choose to prepare its own SWPPP and submit to LFUCG Division of Water Quality for approval. No additional payment will be allowed for the Erosion and Sediment Control and conformance with SWPPP pay item.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02374 – ESC PERMITTING, INSPECTION, AND PERMITTING PROCEDURES

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Permitting, Inspection, and Enforcement Procedures
for
Erosion and Sediment Control on Capital Projects

Division of Water Quality

**Lexington-Fayette
Urban County Government**



September 2024

**Permitting, Inspection, and Enforcement Procedures
for Erosion and Sediment Control on Capital Projects**

Division of Water Quality

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This publication was developed by the Tetra Tech / Third Rock Consultants Stormwater Program Management Team under contract to LFUCG for purposes of implementing the stormwater provisions of its Clean Water Act Consent Decree and/or its Kentucky Division of Water (KDOW) Municipal Separate Storm Sewer System (MS4) Permit.

Permitting, Inspection, and Enforcement Procedures for Erosion, Sediment, and Stormwater Control on Division of Water Quality Capital Construction Projects

DWQ Remedial Measures Plan Projects

DWQ RMP Program Manager: Bob Peterson

DWQ Program Management Consultant: Hazen and Sawyer

Construction Contract Administrators (CA): DWQ Consultants

Resident Project Representative (RPR): DWQ Consultants

ESC Plan Reviewer: DWQ Stormwater Section – Amad Al-Humadi

Land Disturbance Permit (LDP) Issuer: DOE New Development

LFUCG Erosion and Sediment Control Compliance Inspector: RPR

Accela Data Entry: DWQ Compliance & Monitoring (C&M) – Kevin Lyne

Land Disturbance Permit (LDP) Permittee: Contractor

DWQ Wastewater Treatment Plant Capital Projects

DWQ Plant Engineer: Tiffany Rank

DWQ Project Manager: Varies

Construction Contract Administrators (CA): Rick Day, Rick Bowman

Resident Project Representatives (RPR): DWQ Consultant or DWQ Construction Management
(Rick Day, Bill Warren, Phoebe Belew)

ESC Plan Reviewer: DWQ Stormwater Section – Amad Al-Humadi

Land Disturbance Permit (LDP) Issuer: DOE New Development

LFUCG Erosion and Sediment Control Compliance Inspector: RPR

Accela Data Entry: DWQ Construction Management – Brenda Whittington

Land Disturbance Permit (LDP) Permittee: Contractor

DWQ Stormwater and Sanitary Sewer Projects:

DWQ Section Managers: Mark Sanders, Chris Dent, Tiffany Rank, Bailee Young

Construction Contract Administrator (CA): Rick Day

Resident Project Representatives (RPR): DWQ Construction Management (Rick Day, Bill
Warren, Phoebe Belew)

ESC Plan Reviewer: DWQ Stormwater Section – Rick Day or Amad Al-Humadi

Land Disturbance Permit (LDP) Issuer: DOE New Development

LFUCG Erosion and Sediment Control Compliance Inspector: RPR

Accela Data Entry: DWQ Construction Management – Brenda Whittington

Land Disturbance Permit (LDP) Permittee: Contractor

Permitting Procedures

1. Contractor shall develop a Stormwater Pollution Prevention Plan/Erosion and Sediment Control Plan (SWPPP/ESC Plan). A SWPPP/ESC Plan template is on the LFUCG website at <https://www.lexingtonky.gov/new-development>. On some projects, the construction contract documents may contain a SWPPP/ESC Plan prepared by LFUCG's consultant for purposes of establishing bid quantities. If the Contractor chooses to use this SWPPP/ESC Plan to obtain the required permits, the Contractor takes sole responsibility for the content of the SWPPP/ESC Plan and the implementation of the plan during construction.
2. Contractor must submit an application for a Land Disturbance Permit to the LFUCG Division of Engineering before beginning project construction. The permit application is available at <https://aca3.accela.com/lexky/>.
3. For projects with a disturbed area of ≥ 1 acre, the contractor must submit a Notice of Intent (NOI) to the KY Division of Water (KDOW) and obtain KYR10 Permit coverage before beginning construction of any kind on the site. The NOI can be submitted electronically at <http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf>.
4. Contractor cannot start project work until they have obtained the LFUCG Land Disturbance Permit and KYR10 Permit coverage (if applicable – see above).
5. DWQ will review the SWPPP/ESC Plan, confirm that the Contractor has obtained KYR10 Permit coverage (if applicable – see above), and authorize the Contractor to install the initial BMPs.
6. Contractor then installs the initial BMPs, prior to project work (general excavation, grading, etc.).
7. DWQ inspects the installation of the initial BMPs and authorizes DOE New Development to issue the Land Disturbance Permit. Contractor then begins the project.

Contractor Responsibilities

Contractor shall:

1. Develop a SWPPP/ESC Plan, or review and agree to use the SWPPP/ESC Plan prepared by LFUCG's consultant, or amend it as needed.
2. Attend a pre-construction conference with LFUCG.
3. Post the LFUCG Land Disturbance Permit and KYR10 Permit (if applicable) on the project sign at the site, and keep a copy of the SWPPP/ESC Plan on site and available for review.
4. Follow the SWPPP/ESC Plan; revise and redline it as conditions change on the site.
5. Install and maintain BMPs to prevent sediment from washing into streets, storm sewers, and streams. All runoff from disturbed areas must pass through a BMP before leaving the site.
6. Maintain a 50-foot vegetative buffer strip along perennial and intermittent streams (including impounded streams), wetlands, sinkholes, and inlets.
7. If work must be done within 50 feet of a perennial or intermittent stream, wetland, sinkhole, or inlet, complete work as soon as possible and stabilize the area within 24 hours after completing work.
8. Conduct an ESC inspection at least once every 7 calendar days and within 24 hours after each rainfall of 0.5 inches or greater (or 4 inches of snow or greater).
9. Complete and sign the inspection form after each inspection. Keep the completed inspection forms on site and available for review. Keep a backup record of inspection forms (photos or scans).
10. Stabilize inactive portions of the site with straw, blanket, seed, or other cover within 14 days of no activity, and provide permanent stabilization within 14 days of reaching final grade.
11. If the project has a KYR10 Permit, file a Notice of Termination with the KY Division of Water and forward to the LFUCG Division of Engineering and LFUCG Division of Water Quality when construction has been completed and the site is stabilized. Final stabilization is defined as follows from KYR10: "All soil disturbing activities at the site have been completed and either of the two following criteria are met – a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed."
12. Respond promptly to Verbal Warnings and Notices of Violation from LFUCG regarding correcting ESC problems.

Inspection Procedures for the Resident Project Representative

Weekly Field Inspections

1. Inspect the site each week and the next working day after a storm event of 0.5 inches or greater
2. Ensure the LFUCG Land Disturbance Permit and KYR10 Permit are posted at the site
3. Ensure SWPPP/ESC Plan is available for review
4. Ensure that the weekly and rain event completed inspection forms are available for review
5. Walk the perimeter of the entire site
6. Note downgradient controls:
 - Inspect ditches and sheet flow areas
 - Silt fences working?
 - Ditches vegetated / stabilized?
 - Significant sediment discharges?
7. Walk around internal disturbed areas
 - Idle for more than 14 days . . . stabilized?
8. Inspect all inlets and ditches
 - Inlets protected, ditches stabilized?
9. Check out material / fuel storage areas
 - Spills? Leaks? Leaching pollutants? Litter / waste managed?
10. Inspect concrete washout(s)
11. Inspect the construction entrance / exit
12. Inspect the 50-foot vegetative buffer strip adjacent to waterways. The buffer strip must be stabilized within 24 hours of any approved construction activity in the buffer strip.
13. Communicate inspection findings to Contractor, note issues that need attention
14. Complete the LFUCG inspection checklist
15. Submit an electronic copy of the completed checklist to the Project Manager and the Accela Data Entry Contact person on page 1 **the week of the inspection.**

Important Items for the Permittee / Contractor / RPR to Verify:

- Posted permits, plans, and inspection reports
- Graded / inactive areas stabilized with seed, mulch, blankets, mats, etc.
- Stabilized, non-eroding ditches
- Maintained silt fences and protected curb / drop inlets
- No mud on the street
- Trash and litter managed
- No disturbance in the 50-foot buffer zone adjacent to streams, wetlands, sinkholes, and inlets, unless approved; areas within the 50-foot buffer must be stabilized within 24 hours

Enforcement Procedures

1. The Contractor will be paid for erosion and sediment control based upon a schedule of values established within the Measurement and Payment section of the specifications (e.g., 25% paid once initial ESCs have been installed and LDP obtained, 50% paid in equal monthly payments for maintenance over the construction period, 25% paid for removal of ESCs and final stabilization). The intent of this provision is to pay the Contractor for ESC maintenance for each month that the BMPs are maintained and functioning properly.
2. The RPR shall follow the attached ***Compliance Assistance Guidance for DWQ Capital Project RPRs*** and implement the **Escalating Enforcement Process** described below.

Table 1 – ESC Escalating Enforcement Process

DWQ Capital Project	Escalating Enforcement Process
Remedial Measures Program	The RPR shall escalate the issue to the RMP Program Manager and RMP Program Management Consultant's Project Manager
Wastewater Treatment Plants Stormwater Section MS4/Water Quality Section Sanitary Sewers Capacity Assurance Program	The RPR shall escalate the issue to the DWQ Section Manager and the DWQ Construction Contract Administrator

3. DWQ will use all available means in the contract to obtain compliance, including:
 - a. withholding payment
 - b. notifying the Contractor that LFUCG intends to initiate the process for declaring that the Contractor is in default of the contract and specifying a deadline for addressing the ESC deficiencies
 - c. initiating the process for calling the ESC Performance Bond
 - d. issuing Notices of Violation (NOVs)
 - e. stopping work

Compliance Assistance Guidance for DWQ Capital Project RPRs

Observed Condition	Verbal Warning to Correct within 3-5 days (See Note 1)	Verbal Warning to Correct within 24 hours (See Note 1)	Escalate the Issue Immediately in Accordance with Table 1
Construction Entrance to Public Road	Rock pad poorly installed/maintained	Rock pad not installed	
	Small amount of sediment on road	Rock pad completely covered with soil	
		Significant amount of sediment on road	
Unstabilized Areas	Flat inactive disturbed areas not stabilized in 14 days	Ditches not stabilized immediately after construction	
		Disturbed, inactive slopes not stabilized within 14 days	Disturbed, inactive slopes above waterways, wetlands, floodplains, critical areas ² not stabilized within 24 hours
Inlet Protection	Sediment needs to be removed around inlet protection	Curb inlet protection not in place or improperly installed	Discharge of concrete wash water, chemicals, other pollutants into inlets, streams, wetlands, etc.
Silt Fencing	Does not match SWPPP/ESC Plan but critical areas ² and roads are protected	Silt fence not installed per plan and critical areas ² and roads are not protected	
	Does not comply with Stormwater Manual but is functional	Blowouts have occurred with discharge of sediment to critical areas ²	Large quantities of sediment in critical areas ²
	Needs maintenance/repair, but is not near an inlet or surface water	Not trenched in, is not functional	
		Silt fence needs repairs in critical areas ²	
Soil Stockpiles	No perimeter controls, downstream BMPs in place	No perimeter controls, downstream BMPs not in place	
Permit Violations		Permit expired	Site not permitted (No LDP or KDOW NOI)
		Permit not posted or available on site	
		Contact name/phone not posted	
		No self-inspection reports; reports not on site	
		Self-inspection reports not current	
		SWPPP/ESC Plan not on site	
			Unapproved construction activities in 50-foot buffer zone around sinkholes, streams, wetlands, etc.
			Construction has started, BMPs not installed

1. Escalate the issue in accordance with Table 1 after the 2nd Verbal Warning.
2. Critical areas are areas within 25 feet of a stream, wetland, sinkhole, or inlet.

SECTION 02532 – SEWAGE COLLECTION LINES

PART 1 – GENERAL

1.01 SUMMARY

- A. The Contractor shall furnish all labor, material, and equipment necessary to install gravity sewer piping together with all appurtenances as shown and detailed on the Drawings and specified herein.

PART 2 – PRODUCTS

2.01 DUCTILE IRON (DI) PIPE

- A. Ductile iron pipe shall be furnished cement lined in accordance with ANSI/AWWA C104/A21.4 with bituminous seal coat unless otherwise noted on the drawings or in Bid Form. Ductile iron pipe shall be furnished with rubber gasket push-on joints except as may otherwise be noted on the drawings or in difficult working areas and with approval of the Engineer. All pipe inside of casing pipe shall have restraining gaskets as specified in this Section. **All DI pipe and fittings within 2,000 LF downstream or to nearest manhole beyond 2,000 LF of a force main discharge shall be lined with Protecto 401 coating, or approved equal as specified hereinafter.**
- B. Thickness design of ductile iron shall conform in all aspects to the requirements of ANSI/AWWA C150/A 21.50 latest revision.
- C. Manufacture and testing of ductile iron pipe shall conform in all aspects to the requirements of ANSI/AWWA C151/A 21.51 latest revision.

- D. Pipe Coatings

- 1. Interior Lining

- a. Condition of Ductile Iron Prior to Surface Preparation

All ductile pipe and fittings shall be delivered to the application facility without asphalt, cement lining, or any other lining on the interior surface. Because removal of old linings may not be possible, the intent of this specification is that the entire interior of the ductile iron pipe and fittings shall not have been lined with any substance prior to the application of the specified lining material and no coating shall have been applied to the first six (6) inches of the exterior of the spigot ends.

- b. Lining Material

The standard of quality is Protecto 401 Ceramic Epoxy. The material shall be an amine cured novalic epoxy containing at least 20% by volume of ceramic quartz pigment. Any request for substitution must be accompanied by a successful history of lining pipe and fittings for sewer service, a test report verifying the following properties, and a certification of the test results.

(1) A permeability rating of 0.00 when tested according to Method A of ASTM E-96-66, Procedure A with a test duration of 30 days.

(2) The following test must be run on coupons from factory lined ductile iron pipe:

(a) ASTM B-117 Salt Spray (scribed panel) – Results to equal 0.0 undercutting after two years.

(b) ASTM G-95 Cathodic Disbondment 1.5 volts @ 77°F. Results to equal no more than 0.5 mm undercutting after 30 days.

(c) Immersion Testing rated using ASTM D-714-87.

- i. 20% Sulfuric Acid – No effect after two years.
- ii. 25% Sodium Hydroxide – No effect after two years.
- iii. 160°F Distilled Water – No effect after two years.
- iv. 120°F Tap Water (scribed panel) – 0.0 undercutting after two years with no effect.

(3) An abrasion resistance of no more than 4 mils (.10mm) loss after one million cycles – European Standard EN 598: 1994 section 7.8 Abrasion resistance.

c. Application

(1) Applicator

The lining shall be applied by a competent firm with a successful history of applying linings to the interior of ductile iron pipe and fittings.

(2) Surface Preparation

Prior to abrasive blasting, the entire area to receive the protective compound shall be inspected for oil, grease, etc. Any areas where oil, grease, or any substance which can be removed by solvent is present, shall be solvent cleaned using the guidelines outlined in DIPRA-1. After the surface has been made free of grease, oil, or other substances, all areas to receive the protective compounds shall be abrasively blasted using compressed air nozzles with sand or grit abrasive media. The entire surface to be lined shall be struck with the blast media so that all rust, loose oxides, etc., are removed from the surface. Only slight stains and tightly adhering annealing oxide may be left on the surface. Any area where rust reappears before lining must be reblasted.

(3) Lining

After the surface preparation and within eight (8) hours of surface preparation, the interior of the pipe shall receive 40 mils nominal dry film thickness of epoxy. No lining shall take place when the substrate or ambient temperature is below 40 degrees Fahrenheit. The surface also must be dry and dust free. If flange pipe or fittings are included in the project, the lining shall not be used on the face of the flange.

(4) Coating of Bell Sockets and Spigot Ends

Due to the tolerances involved, the gasket area and spigot end up to six (6) inches back from the end of the spigot end must be coated with 6 mils nominal, 10 mils maximum joint compound. The joint compound shall be applied by brush to ensure coverage. Care should be taken that the joint compound is smooth without excess buildup in the gasket seat or on the spigot ends. Coating of the gasket seat and spigot ends shall be done after the application of the lining.

(5) Number of Coats

The number of coats of lining material applied shall be as recommended by the lining manufacturer. However, in no case shall this material be applied above the dry thickness per coat recommended by the lining manufacturer in printed literature. The maximum or minimum time between coats shall be that time recommended by the lining material manufacturer. **No material shall be used**

for lining which is not indefinitely recoatable with itself without roughening of the surface.

(6) Touch-Up and Repair

Protecto Joint Compound shall be used for touch-up or repair in accordance with manufacturer's recommendations.

d. Inspection and Certification

(1) Inspection

- (a) All ductile iron pipe and fitting linings shall be checked for thickness using a magnetic film thickness gauge. The thickness testing shall be done using the method outlined in SSPC-PA-2 Film Thickness Rating.
- (b) The interior lining of all pipe barrels and fittings shall be tested for pinholes with a non-destructive 2,500-volt test. Any defects found shall be repaired prior to shipment.
- (c) Each pipe joint and fitting shall be marked with the date of application of the lining system along with its numerical sequence of application on that date and records maintained by the applicator of his work.

(2) Certification

The pipe or fitting manufacturer must supply a certificate attesting to the fact that the applicator met the requirements of this specification, and that the material used was as specified.

e. Handling

Protecto 401-lined pipe and fittings must be handled only from the outside of the pipe and fittings. No forks, chains, straps, hooks, etc., shall be placed inside the pipe and fittings for lifting, positioning, or laying.

2. Exterior Coating

Bituminous outside coating shall be in accordance with ANSI/AWWA C151/A 21.51 for pipe and ANSI/AWWA C110/A 21.10 for fittings.

- E. Fittings and gaskets for mechanical and push-on joint ductile and cast iron pipe shall conform to the latest revisions of ANSI/AWWA C110/A 21.10 for mechanical and push-on joint fittings, ANSI/AWWA C111/A 21.11 for gaskets, and ANSI/AWWA C153/A 21.53 for mechanical and push-on joint compact fittings.
- F. All ductile and cast iron fittings shall be ductile iron grade 70-50-05, 65-45-12, or 60-42-10 in compliance with AWWA C153 and AWWA C110.
- G. Restrained joint pipe and fittings shall be a boltless system equal to "Field-Lok" restraining gaskets or "TRFLEX Joint" as manufactured by U.S. Pipe & Foundry Company.
- H. Pipe shall be as manufactured by U.S. Pipe & Foundry Company, McWane Ductile, American Pipe Company, or equal.
- I. Pipe or fitting shall have the ANSI/AWWA standard, pressure (or thickness) class, diameter, DI or ductile noted, manufacturer, and country and year where cast on the outside of the body.

2.02 POLYVINYL CHLORIDE (PVC) PIPE (SOLID WALL)

- A. Bury depth 20 feet or less or encased in steel pipe: PVC pipe and fittings less than 15 inches in diameter shall conform to the requirements of ASTM Standard Specifications for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, Designation D 3034. Pipe and fittings shall have a minimum cell classification of 12454B or 12454C as defined in ASTM D-1784. For depths 15 feet and less, pipe shall have a pipe diameter to wall thickness ratio (SDR) of 35. For depths greater than 15 feet up to 20 feet maximum, pipe shall be SDR 26. If the PVC pipe is encased in a steel pipe, PVC pipe shall be SDR 35 regardless of buried depth.
- B. Bury depth 20 feet or less or encased in steel pipe: PVC pipe and fitting with diameters 18-inch and larger shall conform to the requirements of ASTM D-17845 and ASTM F-679. Pipe and fittings shall have a minimum cell classification of 14545C. The minimum wall thickness shall conform to T-1 as specified in ASTM F-679. For depths 15 feet and less, pipe shall have pipe stiffness 46 (SDR 35). For depths greater than 15 feet up to 20 feet maximum, pipe shall have pipe stiffness of 115 (SDR 26). If the PVC pipe is encased in a steel pipe, PVC pipe shall be SDR 35 regardless of buried depth.
- C. Bury depth greater than 20 feet: PVC pipe 8 inches through 12-inch PVC plastic pipe shall conform to ANSI/AWWA C900. Pipe 14-inch through 36-inch PVC plastic pipe shall conform to ANSI/AWWA C905. Pipe shall be pressure Class 165, DR 25. PVC pipe shall have bell end and elastomeric gasket, and with plain end for cast-iron or ductile-iron fittings. Elastomeric gasket shall conform with the requirements of ASTM F-477. The seal of the National Sanitation Foundation Testing Laboratory must appear on each pipe.
- D. Joints shall be push-on bell and spigot type using elastomeric ring gaskets conforming to ASTM D 3212 and F 477. The gaskets shall be securely fixed into place in the bells so that they cannot be dislodged during joint assembly. The gaskets shall be of a composition and texture which is resistant to common ingredients of sewage and industrial wastes, including oils and groundwater, and which will endure permanently under the conditions of the proposed use.
- E. Pipe shall be furnished in lengths of at least 12 feet. The centerline of each pipe section shall not deviate from a straight line drawn between the centers of the openings at the ends by more than 1/16 inch per foot of length.
- F. PVC pipe shall not have a filler content greater than ten percent (10%) by weight relative to PVC resin in the compound.
- G. PVC pipe shall be clearly marked at intervals of 5 feet or less with the manufacturer's name or trademark, nominal pipe size, PVC cell classification, the legend "Type PSM SDR 35 PVC Sewer Pipe" and the designation "ASTM D 3034", or "ASTM F-679". Fittings shall be clearly marked with the manufacturer's name or trademark, nominal size, the material designation "PVC", "PSM" and the designation "ASTM D 3034", or "ASTM F-679".
- H. PVC pipe installation shall conform to ASTM D-2321 latest revision.
- I. Pipe shall be as manufactured by JM Eagle, H & W Pipe Company, Diamond Plastics, or equal.

2.03 CONNECTION TO EXISTING GRAVITY PIPE

- A. Connections between new and existing gravity pipe shall use a Fernco Strong Back, Straub-Flex coupling, Arpol or approved equal.
- B. Connections between like sizes of PVC pipe shall use a PVC GXG Repair Coupling.

- C. Connections between ductile iron and ductile iron, a Maxifit Mechanical Ductile Iron coupling as manufactured by Viking Johnson, or approved equal, may be used.
- D. For pipes 12 inches in diameter and larger, concrete cradle shall be poured under each coupling. The length of the cradle (longitudinally along the pipe) shall be at least one pipe diameter and centered on the coupling. The depth of the cradle shall be half a pipe diameter (measured from the bottom of the cradle to the invert of the pipe). Cradles shall be formed and poured in place and reach from springline to springline.

2.04 UNDERGROUND WARNING TAPE

- A. All pipe shall include detectable underground warning tape. Tape wire. Tracer wire shall have a thickness of 5 mils, constructed of a minimum 0.003" aluminum foil laminated between polyester and polyethylene sheeting, color coded to sewer, and suitable for direct bury.

PART 3 – EXECUTION

3.01 PIPE LAYING

- A. Excavation, trenching, backfilling, and bedding requirements are set forth in Section 02225.
- B. All pipe shall be laid with ends abutting and true to the lines and grades indicated on the Drawings. The pipe shall be laid straight between changes in alignment and at uniform grade between changes in grade. Pipe shall be fitted and matched so that when laid in the trench, it will provide a smooth and uniform invert.
- C. Before each piece of pipe is lowered into the trench, it shall be thoroughly swabbed out to insure its being clean. Any piece of pipe or fitting which is known to be defective shall not be laid or placed in the lines. If any defective pipe or fitting shall be discovered after the pipe is laid, it shall be removed and replaced with a satisfactory pipe or fitting without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe and beveled to match the factory bevel for insertion into gasketed joints. Bevel can be made with hand or power tools.
- D. The interior of the pipe, as work progresses, shall be cleaned of dirt, jointing materials, and superfluous materials of every description. When laying of pipe is stopped for any reason, the exposed end of such pipe shall be closed with a plywood plug fitted into the pipe bell so as to exclude earth or other material and precautions taken to prevent flotation of pipe by runoff into trench.
- E. All pipe shall be laid starting at the lowest point and installed so that the spigot ends point in the direction of flow.

3.02 JOINTING

- A. All joint surfaces shall be cleaned immediately before jointing the pipe. The bell or groove shall be lubricated in accordance with the manufacturer's recommendation. Each pipe unit shall then be carefully pushed into place without damage to pipe or gasket. All pipe shall be provided with home marks to insure proper gasket seating. Details of gasket installation and joint assembly shall follow the direction of the manufacturer's of the joint material and of the pipe. The resulting joints shall be watertight and flexible. **No solvent cement joints shall be allowed.**

3.03 UTILITY CROSSING CONCRETE ENCASEMENT

- A. At locations shown on the Drawings, required by the Specifications, or as directed by the Engineer, concrete encasement shall be used when the clearance between the proposed sanitary sewer pipe and any existing utility pipe is 18 inches or less. Utility pipe includes underground water, gas, telephone and electrical conduit, storm sewers, and any other pipe as determined by the Engineer.
- B. There are two cases of utility crossing encasement. Case I is applicable when the proposed sanitary sewer line is below the existing utility line. Case II is applicable when the proposed sanitary sewer line is laid above the utility line. In either case, the concrete shall extend to at least the spring line of each pipe involved.
- C. Concrete shall be Class A and shall be mixed sufficiently wet to permit it to flow between the pipes to form a continuous bridge. In tamping the concrete, care shall be taken not to disturb the grade or line of either pipe or damage the joints.

3.04 TESTING OF GRAVITY SEWER LINES

- A. After the gravity piping system has been brought to completion, and prior to final inspection, the Contractor shall rod out the entire system by pushing through each individual line in the system, from manhole to manhole, appropriate tools for the removal from the line of any and all dirt, debris, and trash. If necessary during the process of rodding the system, water shall be turned into the system in such quantities to carry off the dirt, debris, and trash.
- B. During the final inspection the Engineer will require all flexible sanitary sewer pipe (PVC and DI) to be mandrel deflection tested after installation.
 - 1. The mandrel (go/no-go) device shall be cylindrical in shape and constructed with nine (9) evenly spaced arms of prongs. The mandrel dimension shall be 95 percent of the flexible pipe's published ASTM average inside diameter. Allowances for pipe wall thickness tolerances of ovality (from shipment, heat, shipping loads, poor production, etc.) shall not be deducted from the ASTM average inside diameter, but shall be counted as part of the 5 percent allowance. The contact length of the mandrel's arms shall equal or exceed the nominal diameter of the sewer to be inspected. Critical mandrel dimensions shall carry a tolerance ± 0.001 inch.
 - 2. The mandrel inspection shall be conducted no earlier than 30 days after reaching final trench backfill grade provided, in the opinion of the Engineer, sufficient water densification or rainfall has occurred to thoroughly settle the soil throughout the entire trench depth. Short-term (tested 30 days after installation) deflection shall not exceed 5 percent of the pipe's average inside diameter. The mandrel shall be hand pulled by the contractor through all sewer lines. Any sections of the sewer not passing the mandrel test shall be uncovered and the Contractor shall replace and recompact the embedment backfill material to the satisfaction of the Engineer. These repaired sections shall be retested with the go/no-go mandrel until passing.
 - 3. The Engineer shall be responsible for approving the mandrel. Proving rings may be used to assist in this. Drawings of the mandrel with complete dimensioning shall be furnished by the Contractor to the Engineer for each diameter and type of flexible pipe.
- C. Low-pressure air tests shall be performed on all gravity sanitary sewers to verify water tightness of pipe joints and connections. The Contractor shall perform testing on each manhole-to-manhole section of sewer line after placement of backfill.
 - 1. Testing of Polyvinyl Chloride (PVC) and Ductile Iron (DI) pipe sewer lines shall be performed in accordance with the current editions of ASTM F1417, "Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure

Air,” and UNI-B-6, “Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe,” respectively.

2. All testing equipment shall be inspected by the Engineer to ensure that equipment is functioning properly.
3. The rate of air loss in the section under test shall be determined by the time-pressure drop method. The time required in minutes for the pressure in the section under test to decrease from 3.5 to 2.5 psig shall be not less than that indicated in the referenced standards.
4. Immediately following the low-pressure air test, the Contractor shall notify the Engineer of the test results. A Low-Pressure Air Test Report shall be completed by the Contractor during testing. The report shall be completed according to the procedures outlined in LFUCG’s Construction Inspection Manual, current edition. A copy of the completed Low-Pressure Air Test Report shall be provided to the Engineer and LFUCG-Division of Water Quality for each test.
5. Pipes failing the pressure test will not be accepted and shall be repaired or replaced until a successful test is achieved.
6. When conducting a low-pressure air test, the Contractor shall securely install and brace all plugs prior to pressurizing the pipe. Personnel shall not be permitted to enter manholes when the sewer pipe is pressurized.

D. TV Survey

1. TV survey and cleaning shall be performed on all gravity sewers.
2. Hydraulic cleaning and vacuum must be done prior to TV survey.
3. TV survey must be of dry pipe.
4. TV survey shall be Pipe Assessment Certification Program (PACP) level of quality and TV equipment must include a slope-inclinometer.
5. Acceptance of TV survey, completed sewers, and the repairs needed are to be determined at sole discretion of LFUCG.
6. TV survey shall include:
 - a. Video file and shall be re-named to LFUCG’s assets.
 - b. PACP database must be in Microsoft Access format, version 4.4.2 which includes photos embedded in database.
 - c. Report shall be provided in electronic version in PDF format.

- E. The Contractor shall furnish suitable test plugs, water pumps, and appurtenances, and all labor required to properly conduct the tests. Suitable bulkheads shall be installed, as required, to permit the test of the sewer. The Contractor shall construct weirs or other means of measurements as may be necessary.
- F. Should the sections under test fail to meet the requirements, the Contractor shall do all work of locating and repairing the leaks and retesting as the Engineer may require without additional compensation.

END OF SECTION

SECTION 02540 – PIPE ABANDONMENT

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. This Section covers pipe abandonment procedures. The Contractor shall furnish all labor, materials and equipment to abandon pipe as described here or as shown on the Drawings.
- B. Unless otherwise indicated, pipes 18-inches and larger which are located under pavement with public access shall be safeloaded. All other abandoned sewer pipe shall be plugged.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02225 – Excavating, Backfilling, and Compacting
- B. Section 02240 - Dewatering

PART 2 – PRODUCTS

2.01 LEAN CONCRETE

- A. Fill shall be a flowable, lean mix of concrete and sand, by the mix given as follows, per cubic yard batch:

Cement	30 pounds
Fly Ash, Class F	300 pounds
Natural Sand (S.S.D.)	3,000 pounds
Water (Maximum)	550 pounds

PART 3 - EXECUTION

3.01 SAFELOAD

- A. The Contractor shall safeload the pipe by utilizing the lean concrete mix as described in paragraph 2.01 of this specification.

3.02 PLUG

- A. The Contractor shall expose and cut the pipeline where shown or directed and construct a minimum 9-inch thick 3,000 psi concrete plug at the pipe openings. Approved mechanical plug may be used in lieu of the concrete plug.

END OF SECTION

SECTION 02608 – MANHOLES

PART 1 - GENERAL

1.01 SUMMARY

- A. The Contractor shall furnish all labor, material, and equipment necessary to construct manholes for sanitary storm sewers, including steps, frames, and covers, together with all appurtenances as shown and detailed on the Drawings and specified herein. Manhole materials shall be precast concrete.

1.02 DEFINITIONS

- A. Standard Manhole: A standard manhole is defined as any manhole that is greater than 5 feet in depth, as measured from the invert of the manhole base at its center to the top (rim) of the manhole cover.
- B. Shallow Manhole: A shallow manhole is defined as any manhole that is 5 feet or less in depth, as measured in the preceding sentence.

PART 2 - PRODUCTS

2.01 CONCRETE MANHOLES - GENERAL

- A. Manholes shall conform in shape, size, dimensions, materials, and other respects as shown on the Drawings or specified herein.
- B. All concrete manholes shall have precast reinforced concrete developed bases. No other type of base will be allowed. Invert channels shall be factory constructed when the base is made. Sloping invert channels shall be constructed whenever the difference between the inlet and outlet elevation is 2 feet or less.
- C. The concrete manhole walls (barrels and cones) and base shall be precast concrete sections manufactured with **cementitious crystalline admixture at dosage of 3.5% by weight of cement**. The cementitious crystalline admixture shall be **Xypex C-1000 RED, KIM K-301, or Crystal-X Admix-R**. The top of the cone shall be built of reinforced concrete to allow adjustment rings to be added for adjustment of the frame to meet the finished surface. Minimum strength of the concrete for the precast sections shall be 4,000 psi at the time of shipment.
- D. **Manholes that receive sewage from a force main discharge, and within 2,000 LF downstream or to the nearest manhole beyond the 2,000 LF, shall have concrete admixture ConShield (in addition to the cementitious crystalline admixture listed in paragraph 2.01.C above), or approved equal.**
- E. Manholes located in the 100-year floodplain shall have a concrete base that includes an anti-floatation collar. The collar shall have a radius 6-inches larger than the exterior wall of the base section. Contractor shall submit buoyancy calculations for all manholes within the 100-year floodplain to determine the actual width of the anti-floatation collar. Contractor shall assume buoyance of the manhole to an elevation equal to the 100-year flood elevation. Buoyance calculations shall have a factor of safety of 2.
- F. For concrete manholes, the inverts of the developed bases shall conform accurately to the size of the adjoining pipes. Side inverts shall be curved and main inverts (where direction changes) shall be laid out in smooth curves of the longest possible radius which is tangent, within the manhole, to the centerlines of adjoining pipelines.

- G. For concrete manholes, the cast iron frames and covers shall be the standard frame and cover as indicated on the LFUCG Standard Drawings.
- H. Manholes shall be manufactured by Sherman Dixie, Oldcastle Precast or approved equal.

2.02 PRECAST CONCRETE SECTIONS

- A. Precast concrete sections and appurtenances shall conform to the ASTM Standard Specifications for Precast Reinforced Concrete Manhole Sections, Designation C478, latest revision, with the following exceptions and additional requirements.
- B. The base section shall be monolithic for 4-foot and 5-foot diameter manholes. Manholes with diameter of 6 feet or larger shall have a monolithic base or base slab.
- C. The wall sections shall be not less than 5 inches thick.
- D. Type II or type III cement shall be used except as otherwise permitted.

2.03 CONCRETE MANHOLE - FRAMES AND COVERS

- A. The Contractor shall furnish all cast iron manhole frames and covers as shown in LFUCG Standard Drawings.
- B. Castings shall be designed for H-20 traffic loading.
- C. The castings shall be of good quality, strong, tough, evengrained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of every nature which would render them unfit for the service for which they are intended. Contact surfaces of covers and frame seats shall be machined to prevent rocking of covers.
- D. Frames shall be set in mastic and bolted down in non-traffic areas with four ¾" SS Hilti anchor bolts and washers. Hilti anchor bolts shall be embedded a minimum of 4-inches into precast concrete cone section. In traffic areas, the frame shall be set in mastic and Class A concrete donut poured around frame to the top of concrete cone section. The concrete donut shall be 12-inches in width and in depth up to within 1 ½-inches of surface for bituminous asphalt pavement.
- E. All casting shall be thoroughly cleaned and subject to a careful hammer inspection.
- F. Castings shall be at least Class 25 conforming to the ASTM Standard Specifications for Gray Iron Casting, Designation A48, latest revision.
- G. Unless otherwise specified, manhole covers shall be 22-¾ inches in diameter, weighing not less than 305 pounds per frame and cover. Manhole covers shall set neatly in the rings, with contact edges machined for even bearings and tops flush with ring edge. They shall have sufficient corrugations to prevent slipperiness. The covers shall have two (2) pick holes about 1-¼ inches wide and ½ inch deep with ⅜-inch undercut all around. Covers shall not be perforated. Frames and covers shall be J.R. Hoe and Sons Mc-350, or approved equal.
- H. All covers shall be marked in large letters "LEXINGTON KENTUCKY SANITARY SEWER" as shown in LFUCG Standard Drawings.

2.04 MANHOLE STEPS (CONCRETE MANHOLES)

- A. Manholes steps shall be the polypropylene plastic type reinforced with a 1/2 inch diameter deformed steel rod. The step shall be 10-3/4 inches wide and extend 5-3/4 inches from the manhole wall. Steps shall line up over the downstream invert of the manhole. The steps shall be embedded into the manhole wall a minimum of 3-3/8 inches. Steps shall be uniformly spaced at 12-inch to 16-inch intervals.
- B. Manhole steps shall be in accordance with LFUCG Standard Drawings.

2.05 PREMOLDED ELASTOMERIC-SEALED JOINTS

- A. All holes for pipe connections in concrete barrels and bases shall have a factory-installed flexible rubber gasket to prevent infiltration. The manhole boots shall conform to the latest revision of ASTM-C923. The boots shall be A-Lok Manhole Pipe Seal A-Lok Premium manufactured by A-Lok Corporation, Trenton, NJ; or an approved equal.

2.06 MANHOLE DIAPHRAGM

- A. Diaphragm manhole inserts shall be provided for all manholes with pipe connection diameters of 12-inches and greater.
- B. Diaphragm manhole inserts shall be manufactured from corrosion-proof material suitable for atmospheres containing hydrogen sulfide and diluted sulfuric acid. Diaphragm shall be installed in all manholes per the General Notes.
- C. The body of the manhole insert shall be made of high density ethylene hexene-1 copolymer material meeting ASTM Specification D 1248, Class A, Category 5 (the insert shall have a minimum impact brittleness temperature of -180 degrees Fahrenheit). The thickness shall be uniform 1/8 inch or greater. The manhole insert shall be manufactured to dimensions as shown on the Drawings to allow easy installation within the manhole frame.
- D. Gaskets shall be made of closed cell neoprene. The gasket shall have a pressure sensitive adhesive on one side and shall be placed under the weight bearing surface of the insert by the manufacturer. The adhesive shall be compatible with the manhole insert material so as to form a long lasting bond in either wet or dry conditions.
- E. Lift strap shall be attached to the rising edge of the bowl insert. The lift strap shall be made of 1 inch wide woven polypropylene web and shall be seared on all cut ends to prevent unraveling. The lift strap shall be attached to the manhole insert by means of a stainless steel rivet. Location of the lift strap shall provide easy visual location.
- F. Standard ventilation shall be by means of a valve or vent hole. Vent holes shall be on the side wall of the manhole insert approximately 3/4 inch below the lip. The valve or vent hole will allow a maximum release of 5 gallons per 24 hours when the insert is full.
- G. The manhole insert shall be manufactured to fit the manhole frame rim upon which the manhole cover rests. The Contractor is responsible for obtaining specific measurements of each manhole cover to insure a proper fit. The manhole frame shall be cleaned of all dirt, scale and debris before placing the manhole insert on the rim.
- H. Diaphragm shall be Rainstopper manufactured by Rainstopper, Inc. in color white, or approved equal.

2.07 CLEANOUTS

- A. Cleanouts shall be cast iron and extend to the finish grade and capped with a clean-out plug in accordance with details and at locations shown on the Drawings. Pipe shall be the same size as the gravity sewer line in which the cleanout is located. A 4-inch thick concrete pad, with 6" x 6", 1.9 x 1.9 wire mesh, 24 inches square, with the valve box lid section, shall be provided around each cleanout.
- B. Cleanouts shall be in accordance with LFUCG Standard Drawings.

2.08 DROP CONNECTIONS

- A. Drop connections shall be installed on exterior of manhole as shown on the LFUCG Standard Drawings. The pipe material inside the drop manhole shall be of the same material as the sanitary sewer line.
- B. All outside drop manholes are to be precast. No field casting of drop manholes shall be allowed unless directed by the Engineer.
- C. Drop invert shall be at the springline of the mainline pipe.

2.09 EXTERNAL SEALS

- A. All manhole section joints shall receive an external seal. The external seal shall be installed per the manufacturer's recommendations and shall meet ASTM C 877 (Type II). External seals for standard manholes shall have Type 316 stainless steel ratcheting straps and be MARMAC MacWrap with straps. External seals for external drop manholes shall be ConWrap CS-212.

PART 3 - EXECUTION

3.01 FABRICATION - PRECAST SECTIONS

- A. Manhole sections shall contain manhole steps accurately positioned and embedded in the concrete when the section is cast.
- B. All precast concrete manhole sections shall be cured in a manner to assure the highest quality:
 - 1. Results of initial set tests (per ASTM C 403) shall be provided upon request. New test will be run in the event of change of cement supplier, mix design, or as otherwise necessary to maintain a quality product.
 - 2. Forms on wet-cast concrete shall not be removed until the concrete attains compressive strength equal to 2500 psi based upon field-cured cylinders, cured under conditions which equal the most severe conditions to which the product is exposed.
 - 3. Test cylinders for determining "shipping strength" shall be cured with similar methods as the product that they represent. In lieu of actual curing with the product, cylinders may be cured in curing chambers correlated in temperature and humidity with the product conditions.
 - 4. Any precast concrete manhole section which freezes before attaining 500 psi compressive strength will be rejected.
- C. No more than two (2) lifting hooks may be cast or drilled in each section.

- D. Flat slab tops shall have a minimum thickness of 6 inches and reinforcement in accordance with ASTM C478.
- E. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the precast sections.
- F. Acceptance of the sections will be on the basis of material tests and inspection of the completed product and test cylinders if requested by the Engineer.
- G. Cones shall be precast sections of similar construction.
- H. It shall be the responsibility of the precast manufacturer to handle all materials in such a manner as to avoid all damage to the product before and during delivery. This damage is defined as, but is not limited to, structural or spiderweb cracking, chips, spalls, pop-outs, or other damage.
- I. All precast concrete manhole sections shall be stored in a manner that will maintain product quality, as well as provide damage protection from yard traffic. All concrete pipe greater than 36" in diameter shall be "stulled" with a minimum of two each, 4" x 4" wood posts providing vertical support during storage. This requirement shall apply both at the manufacturer's storage yard and on the jobsite.
- J. No precast concrete manhole sections shall be delivered to a jobsite or transported from the facility of origin until adequate quality and maturity has been attained, as described in these specifications.
 - 1. All precast concrete manhole sections shall be a minimum age of 3 days.
 - 2. All precast concrete manhole sections shall attain compressive strength equal to 4000 psi.
 - 3. No precast concrete manhole sections shall be delivered without Certification. Any product delivered without acceptable Certification will be subject to rejection.

3.02 SETTING PRECAST MANHOLE SECTIONS

- A. Precast-reinforced concrete manhole sections shall be set so as to be vertical and with sections and steps in true alignment.
- B. Butyl mastic sealant shall be installed in all manhole joints in accordance with the manufacturer's recommendations and as shown in LFUCG Standard Drawings. Butyl mastic sealant shall meet Federal Spec SS-S-210A, AASHTO M-19875I, and ASTM C990. Butyl mastic sealant shall be NPC Bidco C-56 as manufactured by Trelleborg Engineered Systems, or approved equal. Sealant shall be a minimum bead of 1 inch in rope configuration.
- C. All manhole section joints shall receive an external seal. The external seal shall be installed per the manufacturer recommendations and shall meet ASTM C 877 (Type II) and have Type 316 stainless steel ratcheting straps. External seals shall be MARMAC MacWrap for manholes with straps.
- D. All holes in sections used for their handling shall be thoroughly plugged with rubber plugs made specifically for this purpose.

3.03 ADJUSTING MANHOLE FRAMES AND COVERS TO GRADE

- A. Except where shown on the Drawings, the top of the precast concrete eccentric cone of a standard manhole or the top of the flat slab of a shallow manhole shall terminate 6 inches below existing grade in an unpaved non-traffic area except in a residential yard and 13 inches

below existing grade in a paved or unpaved traffic area and in a residential yard. The remainder of the manhole shall be adjusted to the required grade.

- B. When a manhole is located in an unpaved non-traffic area other than in a residential yard, the frame and cover shall be adjusted to an elevation 1 inch above the existing grade at the center of the cover. If field changes have resulted in the installed manhole invert elevation to be lower than the invert elevation shown on the Drawings, the adjustment to an elevation of 1 inch above existing grade shall be accomplished by the use of precast concrete or cast iron adjusting rings. The area around the adjusted frame and cover shall be filled with the required material, sloping it away from the cover at a grade of 1 inch per foot.
- C. When a manhole is located in a bituminous, concrete, or crushed stone traffic area, or in a residential yard, the frame and cover shall be adjusted to the grade of the surrounding area by the use of precast concrete or cast iron adjusting rings. The adjusted cover shall conform to the elevation and slope of the surrounding area.
 - 1. The Contractor shall coordinate elevations of manhole covers in paved streets with the local public works department. If resurfacing of the street in which sewers are laid is expected within twelve (12) months, covers shall be set 1-1/2 inches above the existing pavement surface in anticipation of the resurfacing operations.

3.04 ADJUSTING SECTIONS

- A. Only clean adjusting sections shall be used. Each adjusting section shall be laid in a bead of butyl mastic sealant and shall be thoroughly bonded.

3.05 SETTING MANHOLE FRAMES AND COVERS

- A. Manhole frames shall be set with the tops conforming to the required elevations set forth hereinbefore. Frames shall be set concentric with the top of the concrete and in a full bead (1") of butyl mastic sealant so that the space between the top of the masonry and the bottom flange of the frame shall be completely watertight.
- B. Manhole covers shall be left in place in the frames on completion of other work at the manholes.

3.06 VACUUM TESTING (ASTM C1244)

- A. Scope
 - 1. This test method covers procedures for testing precast concrete manhole sections and precast and cast in place drop manholes, when using the vacuum test method to demonstrate the integrity of the installed materials and the construction procedures. This test method is used for testing concrete manhole sections utilizing mortar, mastic, or gasketed joints.
- B. References, ASTM Standards:
 - 1. C 822 Terminology Relating to Concrete Pipe and Related Products.
 - 2. C 924 Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method.
 - 3. C 969 Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.

C. Summary of Practice

1. All lift holes and any pipes entering the manhole are to be plugged. All drop piping (precast or cast in place) shall be tested and included in the pressure testing zone). A vacuum will be drawn and the vacuum drop over a specified time period is used to determine the acceptability of the manhole.

D. Significance and Use

1. This is not a routine test. The values recorded are applicable only to the manhole being tested and at the time of testing.

E. Preparation of the Manhole

1. All lift holes shall be plugged.
2. All pipes entering the manhole shall be temporarily plugged, taking care to securely brace the pipes and plugs to prevent them from being drawn into the manhole.
3. All drop piping (precast or cast in place) shall be tested and included in the pressure testing zone).

F. Procedure

1. The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.
2. A vacuum of 10 inches of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches of mercury.
3. The manhole shall pass if the **minimum time** for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury **exceeds 60 seconds (one minute)**.
4. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.
5. Use or failure of this vacuum test shall not preclude acceptance by appropriate water infiltration or exfiltration testing, (see Practice C 969), or other means.

G. Precision and Bias

1. No justifiable statement can be made either on the precision or bias of this procedure, since the test result merely states whether there is conformance to the criteria for the success specified.

END OF SECTION

SECTION 02650 - SEWER LINE CLEANING

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required to clean all sewer pipe, laterals and fittings installed and/or rehabilitated, as specified herein.
- B. Cleaning shall include the proper high pressure water jetting, rodding, snaking, bucketing, brushing and flushing of sewers, laterals, and manholes prior to inspection by closed circuit television, pipeline rehabilitation or replacement, point repairs, manhole preparation, and testing operations.
- C. Cleaning shall dislodge, transport and remove all sludge, mud, sand, gravel, rocks, bricks, grease, roots, sticks, and all other debris from the interior of the sewer pipe and manholes as required for pipeline rehabilitation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Hydraulically propelled Sewer Cleaning Equipment
 - 1. Hydraulically propelled sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.
 - 2. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.
 - 3. Contractor shall take precautions against flooding prior to using sewer cleaning balls or other such equipment that cannot be collapsed instantly.
- B. High Velocity Hydro-Cleaning Equipment shall have the following:
 - 1. A minimum of 500-ft of high pressure hose.
 - 2. Two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees in all size lines to be cleaned.
 - 3. A high velocity gun for washing and scouring manhole walls and floor.
 - 4. Capability of producing flows from a fine spray to a long distance solid stream.
 - 5. A water tank, auxiliary engines and pumps and a hydraulically driven hose reel.
 - 6. Equipment operating controls located above ground.
- C. Mechanical cleaning equipment for sewer mains shall be either power buckets or power rodders by the Sewer Equipment Company of America or equal.
 - 1. Bucket machines
 - a. Be furnished with buckets in pairs

- b. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
 - c. Be equipped with a take up drum and a minimum of 500-ft of cable.
 - d. Have sufficient dragging power to perform the work efficiently.
- 2. Power rodding machine
 - a. Either sectional or continuous.
 - b. Hold a minimum of 750-ft of rod.
 - c. The machine shall have a positive rod drive to produce 2000 pounds of rod pull.

PART 3 - EXECUTION

3.01 PERFORMANCE

- A. Selection of cleaning equipment shall be based on the conditions of the manholes and lines at the time the work commences based on the pre-construction CCTV inspection to be conducted by the Contractor under this Contract.
- B. Use properly selected equipment to remove all dirt, grease, rock and other deleterious materials and obstructions.
- C. Protect existing sewer lines from damage caused by improper use of cleaning equipment.
- D. Take precautions to avoid damage or flooding to public or private property being served by the line being cleaned.
- E. Use sewage flow in the sewer lines to provide necessary pressures for hydraulic cleaning devices whenever possible.
- F. Removal of Materials
 - 1. Remove all solids and semi-solids at the downstream manhole of the section being cleaned.
 - 2. Passing material from one section of a line to another will not be permitted.
- G. Remove from the site and properly dispose of all solids or semi-solids recovered during the cleaning operation.
- H. No sewer cleaning shall take place in a particular sewer segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

3.02 FIELD QUALITY CONTROL

- A. Acceptance of this portion of the work shall be dependent upon the results of the television inspection. Lines not acceptably clean as to permit television inspection and rehabilitation shall be re-cleaned and re-inspected at no additional cost to the Owner.

3.03 FINAL SEWER CLEANING

- A. Prior to final inspection and acceptance of each manhole-to-manhole section of the sewer system by the Engineer, the sewer shall be cleaned. Remove all accumulated construction debris, rocks, gravel, sand, silt and other foreign material from the sewer system. Once the large debris is removed, the sewer shall be flushed.
- B. Following final cleaning, the Contractor shall inspect each manhole-to-manhole section in accordance with Specifications Section 2651 – Television Inspection.
- C. Upon the Engineer's final manhole-to-manhole inspection of the sewer system, if any foreign matter is still present in the system, clean the sections and portions of the lines as required.
- D. Place the new line in service as soon as is practical after acceptance by the Engineer.

END OF SECTION

SECTION 02651 - TELEVISION INSPECTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all necessary labor, materials, equipment, services and incidentals required to visually inspect by means of closed-circuit television (CCTV) designated sewer line sections and sewer laterals, including, but not limited to, recording and playback equipment, materials and supplies.
- B. The inspection shall be performed on one sewer line section (i.e. manhole to manhole) or one sewer lateral (i.e. sewer main toward property) at a time. The section being inspected shall be suitably isolated from the remainder of the sewer system.
- C. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Owner.
- D. Contractor may have to perform point repairs, remove obstructions or remove protruding service connections to complete pre-rehabilitation TV inspection.

PART 2 - PRODUCTS

2.01 EQUIPMENT

- A. The television camera used for sewer main inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, inspection shall be performed again with the appropriate changes made as designated by the Engineer at no additional cost to the Owner. The television inspection equipment shall have an accurate footage counter that shall display on the monitor, the exact distance of the camera from the centerline of the starting manhole.

PART 3 - EXECUTION

3.01 PROCEDURE

- A. The camera shall be moved through the sewer main in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the sewer's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire sewer line section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite manhole. All set-up costs for the inspection shall be included in the unit prices bid. If, again, the camera fails to pass through the entire section, the Contractor shall perform point repairs as required on the Drawings, remove or cut protruding service connections, or re-clean or further remove roots or blockage at no additional cost to the Owner.
- B. Whenever non-remote powered and controlled winches are used to pull the television camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two manholes of the sewer line being inspected to ensure that good communications exist between members of the crew.

- C. Measurement for location of defects shall be above ground by means of a meter device. Marking on cable, or the like, which would require interpolation for depth of manhole, shall not be allowed. Measurement meters shall be accurate to two-tenths of a foot over the length of the sewer line section being inspected. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll-a-tape, or other suitable device, and the accuracy shall be satisfactory to the Owner's representative.
- D. The camera height shall be adjusted such that the camera lens is always centered (1/2 I.D. or higher) in the pipe being televised. Flow shall be controlled such that depth of flow shall not exceed 20% of pipe's diameter.
- E. Lighting system shall be adequate for quality pictures.

3.02 RECORDING OF FIELD OBSERVATIONS

A. Television Inspection logs

1. Printed location records shall be kept which shall clearly show the location, in relation to adjacent manholes, of each source of infiltration discovered. In addition, other data of significance including the locations of building and house service connections, along with an estimation of infiltration from such services, joints, unusual conditions, roots, storm sewer connections, cracked or collapsed sections, presence of scale and corrosion, sewer line sections that the camera failed to pass through and reasons for the failure and other discernible features shall be recorded and annotated using the PACP system and a copy of such records shall be supplied to both the Owner and the Engineer.

B. Digital Recordings

1. The purpose of digital recording shall be to supply a visual and audio record of areas of interests of the pipe segments that may be replayed by the Owner. Digital recording playback shall be at the same speed that it was recorded and shall be made in color. The Contractor shall be required to have all digital media and necessary playback equipment readily accessible for review by the Owner/Engineer during the project.
2. The Contractor shall perform CCTV inspection of each newly installed or rehabilitated pipe segment (manhole to manhole) after testing and before re-introducing any sewage flow into the pipe. Each test shall be witnessed by the Engineer and/or Owner.
3. The Contractor shall record each CCTV inspection on a DVD and submit such recordings to the Engineer as a prerequisite for Partial Utilization/Substantial Completion.
4. CCTV inspections shall be performed after all backfill has been placed and final grades have been established, and after all manhole and pipe testing has been performed and approved by the Engineer.
5. CCTV inspections shall be performed by a PACP certified and trained person.
6. Inspections shall include narration that notes the location and type of defects, if any.
7. At the completion of the project, the Contractor shall furnish all of the original digital recordings to the Owner. Each disc shall be labeled as to its contents. Labels shall include the disc number, date televised, sewer segment reach designation, street location, and manhole numbers on the disc. The Contractor shall keep a copy of the discs for 30 days after the final payment for the project, at which time the discs may be erased at the Contractor's option.

END OF SECTION

SECTION 02700 - ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The asphalt concrete paving replacement work includes the construction of an aggregate base course, asphalt binder and wearing courses to match existing courses and as specified herein. This work is to replace paving disturbed by the construction and any damages to paving by Contractor's operations, as well as new pavement and driveways, within the limits shown on the plans.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. The general provisions of the Contract apply to the Work specified in this Section.
- B. Section 02225 – Excavating, Backfilling and Compacting for Sewers

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All roads in Fayette County shall be constructed in accordance with the following sections of the Kentucky Transportation Cabinet's (KTC) Standard Specifications for Road and Bridge Construction. Items not covered by the KTC specifications shall require a special design by the Engineer and shall be approved by LFUCG.

1. Embankment	Division 200
2. Excavation	Division 200
3. Subgrade	Division 200
4. Chemical Stabilization	Division 200
5. Dense Graded Aggregate	Division 300
6. Bituminous Concrete	Division 400
7. Concrete Paving	Division 500

2.02 SUBGRADE

- A. The subgrade shall be free from ruts, large stones, and excessive dust. The subgrade shall be subjected to a subgrade proof-roll test so that soft, wet, or pumping areas may be identified. The minimum total weight of the loaded dump truck shall be 37 tons. The truck shall be operated at walking speed over the entire subgrade. Any excessive deflections such as rutting or pumping shall be stabilized as directed by the Engineer.
- B. Typical treatments of soft or wet areas of the pavement subgrade include removal and replacement (undercutting), "working-in" No. 2 stone, or installation of a geogrid/geotextile system and crushed stone. The extent and performance requirements of such improvements shall be set forth in the Contract Documents or as directed by the Engineer. Other means to stabilize the subgrade such as lime stabilization or cement modification as described in KTC Section 304, may be necessary.

- C. The pavement subgrade shall be compacted to a uniform density throughout according to the requirements of the Contract Documents. If the density of the subgrade has been diminished by exposure or weather, after having been previously compacted, it shall be recompact to the required density and moisture content.
- D. Subgrade drainage systems or perforated pipe underdrains shall be installed in accordance with LFUCG Standard Drawings where indicated on the Improvement Plans.

2.03 GRANULAR BASE COURSE

- A. The granular base course shall consist of compacted dense-graded aggregate (DGA) meeting the requirements set forth in Kentucky Transportation Cabinet's (KTC) Standard Specifications for Road and Bridge Construction. The Contractor shall submit to the Engineer the results of physical tests performed on the material to verify that it meets the requirements referenced above.
- B. The DGA (Zone 3 per LFUCG-RMP Standard Drawing 201-1) shall be applied in thicknesses of no less than 6 inches in thickness. Each lift of DGA shall be compacted to a density no less than 84 percent of the solid volume density based on the oven-dry bulk specific gravity as determined by KM 64-607. A field density test of DGA placement may be required if deemed necessary by Engineer. The tests shall be conducted at a frequency of one test per 2,000 square feet with a minimum of one test per shift during which DGA is placed. The DGA shall be compacted using a vibratory roller or vibratory plate. The DGA shall be placed to achieve a moisture content less than 5%, and shall be stable with no rutting or pumping.
- C. Before arriving at the site, the DGA shall be adequately mixed with water in a pugmill. During transportation and storage on site, the DGA shall be covered to prevent loss of moisture. If drying of the DGA occurs, the Contractor shall add water to the DGA and shall thoroughly mix the material before its placement.

2.04 ASPHALT BASE AND SURFACE COURSES

- A. The materials and methods for construction for the asphalt base course and surface course shall meet the requirement of Kentucky Transportation Cabinet's (KTC) Standard Specifications for Road and Bridge Construction. The Contractor shall submit test results of the aggregate gradation and asphalt content to the Engineer.
- B. The pavement course thicknesses and construction tolerances shall be specified in the Contract Documents. The surface of each course shall be checked with templates, straightedges, and/or stringlines for uniformity. All irregularities exceeding the allowable tolerances must be repaired as required by the Contract Documents or as directed by the Engineer.

2.05 TACK COAT

- A. The tack coat shall be type SS-1h. Before applying the tack coat the area to receive pavement shall be cleaned. The tack coat shall be applied well in advance of the paving operation to allow all water to evaporate before the surface course is placed. Work shall be planned so that no more tack coat than is necessary for the day's operation is placed on the surface.

END OF SECTION

SECTION 02775 - SIDEWALKS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and services required for constructing concrete sidewalks where shown on the Drawings and as specified herein.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Sidewalks shall be in accordance with LFUCG Standard Drawings.

2.02 CRUSHED STONE

- A. Stone for sidewalk base shall be dense grade aggregate (DGA).

2.03 CONCRETE

- A. Concrete for sidewalks shall be Class A concrete per Section 03300.

2.04 PREMOLDED EXPANSION JOINT FILLER

- A. Premolded expansion joint filler shall be closed cell polyethylene foam type, Sonneborn Sonoflex F, Williams Products Expand-O-Foam, or equal. Seal joint with one-part self-leveling polyurethane sealant, Sonneborn Sonolastic SL 1, or equal, maximum 3/8 inches deep. Prepare and prime joints per manufacturer's instructions.

2.05 CURING COMPOUND

- A. A white pigmented curing compound is required on all sidewalks per LFUCG Standard Drawings.

PART 3 - EXECUTION

3.01 BASE

- A. Following finished grading, a base course of DGA shall be placed to a compacted thickness of four (4) inches. Immediately prior to placing concrete, DGA base shall be thoroughly wetted.

3.02 SURFACE

- A. Concrete shall be in thickness shown on LFUCG Standard Drawings, struck off and worked with a float until mortar appears on the top. After surface has been thoroughly floated, it shall be brushed to leave markings of a uniform type, providing non-slip finish. No dusting or plastering will be allowed. Water shall not be added to the surface of the concrete at any time during the finishing procedure.

3.03 FINISHING

- A. All joints and edges shall be finished with an edging tool. Dummy joints shall be formed about five (5) feet apart to form rectangular blocks. Expansion joints of 1/2 inch premolded expansion joint material shall be provided at the intersection of all vertical surfaces with the sidewalks slabs and at approximately 32 foot intervals along the walks.

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. Provide all labor, equipment, materials and services necessary for the manufacture, transportation and placement of all plain and reinforced concrete work, as shown on the Drawings or as ordered by the Engineer.
- B. Concrete shall be in accordance with the latest edition of Standard Specifications for Road and Bridge Construction issued by the Kentucky Transportation Cabinet.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03600 - Grout

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the Specifications, all work herein shall conform to or exceed the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.
 - 1. Kentucky Dept. of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.
 - 2. Kentucky Building Code
 - 3. ACI 214 Recommended Practice for Evaluation of Strength Test Results of Concrete
 - 4. ACI 304 Guide for Measuring, Mixing, Transporting, and Placing Concrete
 - 5. ACI 305 Hot Weather Concreting
 - 6. ACI 306 Cold Weather Concreting
 - 7. ACI 318 Building Code Requirements for Structural Concrete
 - 8. ACI 350 Code Requirements for Environmental Engineering Concrete Structures
 - 9. ASTM C 31 Standard Methods of Making and Curing Concrete Test Specimens in the Field
 - 10. ASTM C 39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
 - 11. ASTM C 42 Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 - 12. ASTM C 94 Standard Specification for Ready-Mixed Concrete
 - 13. ASTM C 143 Standard Test Method for Slump of Portland Cement Concrete
 - 14. ASTM C 172 Standard Method of Sampling Fresh Concrete
 - 15. ASTM C 260 Standard Specification for Air-Entraining Admixtures for Concrete

16. ASTM C 457 Standard Recommended Practice for Microscopical Determination of Air-Void Content and Parameters of the Air-Void System in Hardened Concrete
17. ASTM C 1567 Standard Test Method for Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)

1.04 SUBMITTALS

- A. Submit the following in accordance with Section 01300, Submittals.
 1. Sources of all materials and certifications of compliance with specifications for all materials.
 2. Certified current (less than 1 year old) chemical analysis of the Portland Cement or Blended Cement to be used.
 3. Certified current (less than 1 year old) chemical analysis of fly ash or ground granulated blast furnace slag to be used.
 4. Aggregate test results showing compliance with required standards, i.e., sieve analysis, aggregate soundness tests, petrographic analysis, mortar bar expansion testing per ASTM C 1567, etc.
 5. Manufacturer's data on all admixtures stating compliance with required standards.
 6. Concrete mix design for each class of concrete specified herein.
 7. Field experience records and/or trial mix data for the proposed concrete mixes for each class of concrete specified herein.

PART 2 - PRODUCTS

2.01 CONCRETE

- A. Sidewalks, entrance pavements, concrete pavement subbase for asphaltic surface course, concrete pavement, curb gutter, and thrust blocking shall be Class A.
- B. Concrete shall be as specified in the following table excerpted from Standard Specifications for Road and Bridge Construction, Edition of 2012, Kentucky Transportation Cabinet:

CONCRETE PROPORTIONIZING AND REQUIREMENTS KYDOT 601.03.03

INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE

Class of Concrete	Approximate Percent Fine to Total Aggregate		Maximum Free Water by W/C Ratio (lb/lb)	28-Day Compressive Strength ⁽¹⁾ (psi)	Slump ⁽⁴⁾ (inches)	Minimum Cement Factor (lb/yd ³)	Air Content (%)
	Gravel	Stone					
A ⁽⁵⁾	36	40	0.49	3,500	2-4 ⁽⁷⁾	564	6 ± 2
A Mod	36	40	0.47	3,500	4-7	658	6 ± 2
AA ⁽²⁾	36	40	0.42	4,000	2-4 ⁽¹²⁾	620	6 ± 2 ⁽¹¹⁾
AAA ⁽⁸⁾	36	40	0.40	5,500	3-7	686	6 ± 2 ⁽¹¹⁾
B	40	44	0.66	2,500	3-5	451	6 ± 2
D ⁽³⁾	35	39	0.44	4,000	3-5 ⁽⁶⁾	639	6 ± 2
D Mod ⁽³⁾	35	39	0.42	5,000	3-5 ⁽⁶⁾	733	6 ± 2
M1 ⁽⁸⁾ w/Type I Cement	36	40	0.33	4,000 ⁽⁹⁾	7 max.	800	6 ± 2
M2 ⁽⁸⁾ w/Type III Cement	36	40	0.38	4,000 ⁽⁹⁾	7 max.	705	6 ± 2
P ⁽⁵⁾	35	38	0.49	3,500	--- ⁽¹³⁾	564 ⁽¹⁰⁾	6 ± 2 ⁽¹¹⁾

- (1) The Department may direct non-payment, additional construction, or removal and replacement for concrete which test cylinders indicate low compressive strength and follow-up investigations indicate inadequate strength. The Department may require some classes to attain the required compressive strength in less than 28 hours.
- (2) When the ambient air temperature while placing slab concrete is 71°F or more, add to the concrete a water-reducing and retarding admixture. The Engineer may require or allow, water-reducing and retarding admixture in slab concrete for ambient air temperatures of less than 71°F. Only use one type of admixture for concrete placed during any individual contiguous pour.
- (3) The Department will require a compressive strength of 5,000 psi or greater when specified in the Contract, at or before 28 days of prestressed members.
- (4) The Engineer will allow slumps less than the minimum provided concrete is workable.
- (5) The Department will allow the use of JPC pavement mixture for non-structural construction.
- (6) At the option of the prestressed product fabricator, the Department will allow the slump of Class D or Class D Modified concrete to be increased to a maximum of 8 inches for all items, except products with voids. For products with voids, the slump may be increased to 7 inches. Provide a high range water reducer (Type F or G) in an amount not to exceed the following water/cement ratios:
 Summer mix designs – 0.39
 Spring and Fall mix designs – 0.37
 Winter mix designs – 0.34
- (7) The precast fabricator may increase the slump of Class A concrete to a maximum of 7 inches provided the fabricator uses a high range water reducer (Type F or G) and maximum water/cement ratio of 0.46.
- (8) Use a high range water reducer (Type F or G).
- (9) The Department will require 3,000 psi compressive strength before opening to traffic and 4,000 psi at 28 days.
- (10) 611 lb/yd³ when using coarse aggregate sizes No. 8, 78, or 9-M.
- (11) 7 ± 2% when using coarse aggregate sizes No. 8, 78 or 9-M.
- (12) The Department may allow the slump of AA concrete to be increased up to a 6 inch maximum, provided the W/C ratio does not exceed 0.40 and a high range water reducer (Type F or G) is used. Trial Batches will be required if producer has not previously supplied.

(13) The Department does not have slump requirements for Class P concrete mixes except for the edge slump requirements of Section 501.03.19.

2.02 FLOWABLE FILL

- A. Flowable fill shall conform to Section 601 of the Standard Specifications for Road and Bridge Construction, Edition of 2012.
- B. Flowable fill shall consist of a mixture of cement, sand, fly ash, and water. The loss on ignition for Class F fly ash shall not exceed 12 percent. Ensure that the concrete producer certifies mix proportions for flowable fill as follows:

Flowable Fill for Pipe Backfill. Proportion as follows, per cubic yard batch:

Cement	30 pounds
Fly Ash, Class F	300 pounds
Natural Sand (S.S.D.)	3,000 pounds
Water (Maximum)	550 pounds

- C. Flowable fill shall obtain an average compressive strength of 50 to 100 psi at 28 days for application as pipe backfill. For applications requiring early opening to traffic or placement of pavement as soon as possible, the mixture shall conform to the following general guidelines:
 - 1. Mixture bleeds freely within 10 minutes
 - 2. Mixture supports a 150-pound person within three hours.

PART 3 – EXECUTION

3.01 PRODUCTION OF CONCRETE

- A. All concrete shall be machine mixed. Hand mixing of concrete will not be permitted. The Contractor shall supply concrete from a ready mix plant. In selecting the source for concrete production the Contractor shall carefully consider its capability for providing quality concrete at a rate commensurate with the requirements of the placements so that well bonded, homogenous concrete, free of cold joints, is assured. Ready mixed concrete shall be in accordance with ASTM C94.
- B. Each and every concrete delivery shall be accompanied by a delivery ticket containing at least the following information:
 - 1. Date and truck number
 - 2. Ticket number
 - 3. Mix designation of concrete
 - 4. Cubic yards of concrete
 - 5. Cement brand, type and weight in pounds
 - 6. Weight in pounds of fine aggregate (sand)
 - 7. Weight in pounds of coarse aggregate (stone)

8. Air entraining agent, brand, and weight in pounds and ounces
 9. Other admixtures, brand, and weight in pounds and ounces
 10. Water, in gallons, stored in attached tank
 11. Water, in gallons, maximum that can be added without exceeding design water/cement ratio
 12. Water, in gallons, actually used (by truck driver)
 13. Time of loading
 14. Time of delivery to job (by truck driver)
- C. Any truck delivering concrete to the job site, which is not accompanied by a delivery ticket showing the above information will be rejected and such truck shall immediately depart from the job site.

3.02 CONCRETE PLACEMENT

- A. No concrete shall be placed prior to approval of the concrete mix design. Concrete placement shall conform to the recommendations of ACI 304.

3.03 CONCRETE WORK IN COLD WEATHER

- A. Cold weather concreting procedures shall conform to the requirements of ACI 306.
- B. The Engineer may prohibit the placing of concrete at any time when air temperature is 40°F. or lower. If concrete work is permitted, the concrete shall have a minimum temperature, as placed, of 55°F. for placements less than 12" thick, 50°F. for placements 12" to 36" thick, and 45°F. for placements greater than 36" thick. The temperature of the concrete as placed shall not exceed the aforementioned minimum values by more than 20°F, unless otherwise approved by the Engineer.
- C. The addition of admixtures to the concrete to prevent freezing is not permitted. All reinforcement, forms, and concrete accessories with which the concrete is to come in contact shall be defrosted by an approved method. No concrete shall be placed on frozen ground.

3.04 CONCRETE WORK IN HOT WEATHER

- A. Hot weather concreting procedures shall conform to the requirements of ACI 305.
- B. When air temperatures exceed 85°F, or when extremely dry conditions exist even at lower temperatures, particularly if accompanied by high winds, the Contractor and his/her concrete supplier shall exercise special and precautionary measures in preparing, delivering, placing, finishing, curing and protecting the concrete mix. The Contractor shall consult with the Engineer regarding such measures prior to each day's placing operation and the Engineer reserves the right to modify the proposed measures consistent with the requirements of this Section of the Specifications. All necessary materials and equipment shall be on hand and in position prior to each placing operation.
- C. Preparatory work at the job site shall include thorough wetting of all forms, reinforcing steel and, in the case of slab pours on ground or subgrade, spraying the ground surface on the preceding evening and again just prior to placing. No standing puddles of water shall be permitted in those areas which are to receive the concrete.

- D. The temperature of the concrete mix when placed shall not exceed 90°F.
- E. Delivery schedules shall be carefully planned in advance so that concrete is placed as soon as practical after it is properly mixed. For hot weather concrete work (air temperature greater than 85°F), discharge of the concrete to its point of deposit shall be completed within 60 minutes from the time the concrete is batched.
- F. The Contractor shall arrange for an ample work force to be on hand to accomplish transporting, vibrating, finishing, and covering of the fresh concrete as rapidly as possible.

3.05 QUALITY CONTROL

A. Field Testing of Concrete

- 1. The Contractor shall coordinate with the Owner's testing firm personnel as required for concrete testing.
- 2. Concrete for testing shall be supplied by the Contractor at no additional cost to the Owner, and the Contractor shall provide assistance to the testing laboratory in obtaining samples. The Contractor shall dispose of and clean up all excess material.
- 3. For every placement of concrete that is 10 cubic yards or less, the following tests shall be performed (as described in paragraphs B through E below):
 - a. Consistency
 - b. Unit Weight
 - c. Air content
 - d. Compressive Strength
 - e. Temperature
- 4. For every placement of concrete that is larger than 10 cubic yards, the following tests shall be performed for every 50 cubic yards (as described in paragraphs B through E below):
 - a. Consistency – test the first truck and one additional truck randomly selected by the Owner's Resident Project Representative (RPR).
 - b. Unit Weight – test one truck randomly selected by the RPR
 - c. Air content - test the first truck and one additional truck randomly selected by the RPR.
 - d. Compressive Strength - test one truck randomly selected by the RPR
 - e. Temperature - test one truck randomly selected by the RPR

The sampling of concrete is approved at the truck discharge. If a concrete pump is employed, the Contractor is advised that 1.5-3.0% air is lost in pumping and such should be accounted for at the point of testing. Therefore, the air content should be adjusted to ensure that the air content meets the specification at the point of placement.

The first truck is defined as the first truck as accepted by the RPR. The RPR shall have the authority of the Owner to accept or reject all concrete.

1. Sampling is at the discretion of the RPR.
2. Additional testing may be required as deemed necessary by the Owner.

B. Consistency

1. The consistency of the concrete will be checked by the Owner's testing firm by standard slump cone tests. The Contractor shall make any necessary adjustments in the mix as the Owner or Engineer may direct and shall upon written order suspend all placing operations in the event the consistency does not meet the intent of the specifications. No payment shall be made for any delays, material or labor costs due to such eventualities.
2. Slump tests shall be made in accordance with ASTM C 143.
3. Concrete with a specified nominal slump shall be placed having a slump within 1" (higher or lower) of the specified slump. Concrete with a specified maximum slump shall be placed having a slump less than the specified slump.

C. Unit Weight

1. Samples of freshly mixed concrete shall be tested for unit weight by the Owner's testing firm in accordance with ASTM C 138.

D. Air Content

1. Samples of freshly mixed concrete will be tested for entrained air content by the Owner's testing firm in accordance with ASTM C 231.
2. In the event test results are outside the limits specified, additional testing shall occur. Upon discovery of incorrect air entrainment, the concrete shall be removed from the jobsite.

E. Compressive Strength

1. Samples of freshly mixed concrete will be taken by the Owner's testing firm and tested for compressive strength in accordance with ASTM C 172, C 31 and C 39, except as modified herein.
2. Each sampling shall consist of at least five (5) 6x12 cylinders or eight (8) 4x8 cylinders. Each cylinder shall be identified by a tag, which shall be hooked or wired to the side of the container. The Owner's testing firm will fill out the required information on the tag, and the Contractor shall satisfy himself that such information shown is correct.
3. The Contractor shall be required to furnish labor to the Owner for assisting in preparing test cylinders for testing. The Contractor shall provide approved curing boxes for storage of cylinders on site. The insulated curing box shall be of sufficient size and strength to contain all the specimens made in any four consecutive working days and to protect the specimens from falling over, being jarred or otherwise disturbed during the period of initial curing. The box shall be erected, furnished and maintained by the Contractor. Such box shall be equipped to provide the moisture and to regulate the temperature necessary to maintain the proper curing conditions required by ASTM C 31. Such box shall be located in an area free from vibration such as pile driving and traffic of all kinds and such that all specimen are shielded from direct sunlight and/or radiant heating sources. No concrete requiring inspection shall be delivered to the site until such storage curing box has been

provided. Specimens shall remain undisturbed in the curing box until ready for delivery to the testing laboratory but not less than sixteen hours.

4. The Contractor shall be responsible for maintaining the temperatures of the curing box during the initial curing of test specimens with the temperature preserved between 60°F and 80°F as measured by a maximum-minimum thermometer. The Contractor shall maintain a written record of curing box temperatures for each day curing box contains test specimens. Temperature shall be recorded a minimum of three times a day with one recording at the start of the workday and one recording at the end of the work day.
5. When transported, the cylinders shall not be thrown, dropped, allowed to roll, or be damaged in any way.

F. Evaluation and Acceptance of Concrete

1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 214, ACI 318, and ACI 350.
2. The strength level of concrete will be considered satisfactory if all of the following conditions are satisfied.
 - a. Every arithmetic average of any three consecutive strength tests equals or exceeds the minimum specified 28-day compressive strength for the mix (see Article 2.07).
 - b. No individual compressive strength test results fall below the minimum specified strength by more than 500 psi.
 - c. No more than 10% of the compressive tests have strengths greater than the maximum strength specified.
3. In the event any of the conditions listed above are not met, the mix proportions shall be corrected for the next concrete placing operation.
4. In the event that condition 2B is not met, additional tests in accordance with Article 3.10, paragraph H shall be performed.
5. When a ratio between 7-day and 28-day strengths has been established by these tests, the 7-day strengths shall subsequently be taken as a preliminary indication of the 28-day strengths. Should the 7-day test strength from any sampling be more than 10% below the established minimum strength, the Contractor shall:
 - a. Immediately provide additional periods of curing in the affected area from which the deficient test cylinders were taken.
 - b. Maintain or add temporary structural support as required.
 - c. Correct the mix for the next concrete placement operation, if required to remedy the situation.
6. All concrete which fails to meet the ACI requirements and these specifications is subject to removal and replacement at no additional cost to the Owner.

H. Additional Tests

1. In the event the 28-day test cylinders fail to meet the minimum strength requirements as outlined in Article 3.10, paragraph F, the Contractor shall have concrete core specimens obtained and tested from the affected area immediately.

- a. Three cores shall be taken by the Owner's testing firm for each sample in which the strength requirements were not met.
 - b. The concrete in question will be considered acceptable if the average compressive strength of a minimum of three test core specimens taken from a given area equal or exceed 85% of the specified 28-day strength and if the lowest core strength is greater than 75% of the specified 28-day strength.
2. Concrete placed with compressive strengths greater than the maximum strength specified shall be removed and replaced or repaired as deemed necessary by the Engineer.

3.06 CARE AND REPAIR OF CONCRETE

- A. The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Care shall be exercised to avoid jarring forms or placing any strain on the ends of projecting reinforcing bars. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at no additional cost to the Owner.
- B. Areas of honeycomb shall be chipped back to sound concrete and repaired as directed by the Engineer.
- C. Concrete formwork blowouts or unacceptable deviations in tolerances for formed surfaces due to improperly constructed or misaligned formwork shall be repaired as directed by the Engineer. Bulging or protruding areas, which result from slipping or deflecting forms shall be ground flush or chipped out and redressed as directed by the Engineer.
- D. Areas of concrete in which cracking, spalling, or other signs of deterioration develop prior to final acceptance shall be removed and replaced or repaired as directed by the Engineer. This stipulation includes concrete that has experienced cracking due to drying or thermal shrinkage of the concrete. Structural cracks shall be repaired using an epoxy injection system approved by the Engineer. Non-structural cracks shall be repaired using a hydrophilic resin pressure injected grout system approved by the Engineer, unless other means of repair are deemed necessary and approved by the Engineer. Extensive repair or replacement will be considered for concrete placed having compressive strengths greater than maximum strength specified. All repair work shall be performed at no additional cost to the Owner.

END OF SECTION

SECTION 03600 - GROUT

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. Furnish all materials, labor, and equipment required to provide all grout used in concrete work in accordance with the Contract Documents.

1.02 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

- | | |
|----------------|---|
| 1. CRD-C 621 | Corps of Engineers Specification for Non-shrink Grout |
| 2. ASTM C 109 | Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2 inch or 50 mm cube Specimens) |
| 3. ASTM C 531 | Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts and Monolithic Surfacing |
| 4. ASTM C 579 | Test Method for Compressive Strength of Chemical-Resistant Mortars and Monolithic Surfacing |
| 5. ASTM C 827 | Standard Test Method for Early Volume Change of Cementitious Mixtures |
| 6. ASTM C 144 | Standard Specification for Aggregate for Masonry Mortar |
| 7. ASTM C 1107 | Standard Specification for Packaged Dry, Hydraulic Cement Grout (Nonshrink) |

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01300 - Submittals.
 - 1. Certified test results verifying the compressive strength and shrinkage and expansion requirements specified herein.
 - 2. Manufacturer's literature containing instructions and recommendations on the mixing, handling, placement and appropriate uses for each type of grout used in the work.

1.04 QUALITY ASSURANCE

- A. Field Tests (required for pump station and storage tank projects)
 - 1. Compression test specimens will be taken during construction from the first placement of each type of grout and at intervals thereafter as selected by the Engineer to insure continued compliance with these Specifications. The specimens will be made by the Contractor and observed by Engineer.

- a. Compression tests and fabrication of specimens for cement grout and non-shrink grout will be performed as specified in ASTM C 109 at intervals during construction as selected by the Engineer. A set of three specimens will be made for testing at seven days, 28 days and any additional time period as appropriate.
 - b. Compression tests and fabrication of specimens for epoxy grout will be performed as specified in ASTM C 579, Method B, at intervals during construction as selected by the Engineer. A set of three specimens will be made for testing at seven days and any other time period as appropriate.
2. The cost of all laboratory tests on grout will be borne by the Owner, but the Contractor shall assist the Engineer in obtaining specimens for testing. The Contractor shall be charged for the cost of any additional tests and investigation on work performed which does not meet the specifications. The Contractor shall supply all materials necessary for fabricating the test specimens, at no additional cost to the Owner.
3. All grout, already placed, which fails to meet the requirements of these Specifications, is subject to removal and replacement at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Non-Shrink Cement Grout (Applicable for projects with Gravity Sewers and Force Mains)

1. Non-shrink grout shall conform to CRD-C 621 and ASTM C 1107, Grade B or C when tested at a max. fluid consistency of 30 seconds per CDC 611/ASTM C939 at temperature extremes of 45°F and 90°F and an extended working time of 15 minutes. Grout shall be non-metallic, non-stain, and non-shrink and color similar to concrete. Grout shall have a min. 28-day strength of 7,000 psi. Non-shrink grout shall be, "Euco N-S" by the Euclid Chemical Company, "SikagROUT 212" by Sika Corporation, Conspec 100 Non-Shrink Non-Metallic Grout by Conspec, Masterflow 555 Grout by BASF Construction Chemicals.

B. Epoxy Grout (Applicable for projects with Structures)

1. Epoxy grout shall be "Sikadur 32 Hi-Mod" by Sika Corporation, "Duralcrete LV" by Tamms Industries, or "Euco #452 Series" by Euclid Chemical, Concrevic 1090 by BASF Construction Chemicals.
2. Epoxy grout shall be modified as required for each particular application with aggregate per manufacturer's instructions.

C. Epoxy Base Plate Grout (Applicable for projects with Structures)

1. Epoxy base plate grout shall be Sikadur 42, Grout-Pak by Sika Corporation, or Masterflow MP by BASF Construction Chemicals.

PART 3 - EXECUTION

3.01 GENERAL

- A. Concrete surfaces shall be cleaned of all dirt, grease and oil-like films. Additionally, concrete surfaces shall be free of debris, including chipping or roughening the surface if a laitance or poor concrete is evident. The finish of the grout surface shall match that of the adjacent concrete.

- B. All mixing, surface preparation, handling, placing, consolidation, and other means of execution for prepackaged grouts shall be done according to the instructions and recommendations of the manufacturer.
- C. The Contractor, through the manufacturer of a non-shrink grout and epoxy grout, shall provide on-site technical assistance upon request, at no additional cost to the Owner.

3.02 CONSISTENCY

- A. The consistency of grouts shall such that it is able to completely fill the space to be grouted. Dry pack consistency is such that the grout is plastic and moldable but will not flow.

3.03 MEASUREMENT OF INGREDIENTS

- A. Measurements for cement grout shall be made accurately by volume using containers. Shovel measurement shall not be allowed.
- B. Prepackaged grouts shall have ingredients measured by means recommended by the manufacturer.

3.04 GROUT INSTALLATION

- A. Grout shall be placed quickly and continuously, shall completely fill the space to be grouted and be thoroughly compacted and free of air pockets. The grout may be poured in place, pressure grouted by gravity, or pumped. The use of pneumatic pressure or dry-packed grouting requires approval of the Engineer. For grouting beneath base plates, grout shall be poured from one side only and thence flow across to the open side to avoid air-entrapment.

END OF SECTION

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