



BOARD OF COUNTY COMMISSIONERS

WARREN COUNTY, OHIO

406 Justice Drive, Lebanon, Ohio 45036

www.co.warren.oh.us

commissioners@co.warren.oh.us

Telephone (513) 695-1250

Facsimile (513) 695-2054

TOM GROSSMANN

SHANNON JONES

DAVID G. YOUNG

ENTER INTO CONTRACT WITH JNT EXCAVATING LLC FOR THE LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

WHEREAS, pursuant to Res. 18-1787, adopted November 20, 2018, this Board approved a Notice of Intent to Award Bid for the Lower Springboro Road Water Improvement Project, PHASE 3 to JNT Excavating, LLC, for a total bid price of \$593,278.68; and

WHEREAS, all documentation, including performance bonds, insurance certificates, etc., has been submitted by the contractor; and

NOW THEREFORE BE IT RESOLVED, to enter into contract with JNT Excavating LLC, 2088 Heartland Blvd., Independence, Kentucky, for a total contract price of \$593,278.68; as attached hereto and made a part hereof.

Mrs. Jones moved for adoption of the foregoing resolution being seconded by Mr. Grossmann. Upon call of the roll, the following vote resulted:

Mr. Young – absent

Mr. Grossmann – yea

Mrs. Jones – yea

Resolution adopted this 4th day of December 2018.

BOARD OF COUNTY COMMISSIONERS

Tina Osborne, Clerk

KH\

cc: c/a—JNT Excavating LLC
Water/Sewer (file)
OMB Bid file



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APPROVE NOTICE OF INTENT TO AWARD BID TO JNT EXCAVATING LLC. FOR LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

WHEREAS, bids were closed at 11:00 a.m., on November 15, 2018, and the bids received were opened and read aloud for the Lower Springboro Road Water Improvement Project, Phase 3, and the results are on file in the Commissioner's Office; and

WHEREAS, upon review of such bids by Chris Brausch, JNT Excavating LLC., has been determined to be the lowest and best bidder; and

NOW THEREFORE BE IT RESOLVED, upon recommendation of the Warren County Sanitary Engineer, that it is the intent of this Board to award the contract to JNT Excavating LLC., 2088 Hartland Blvd., Independence, Kentucky, for a total bid price of \$593,278.68; and

BE IT FURTHER RESOLVED, that the President of the Board is hereby authorized to execute a "Notice of Intent to Award."

Mrs. Jones moved for adoption of the foregoing resolution being seconded by Mr. Young. Upon call of the roll, the following vote resulted:

Mr. Grossmann – yea

Mr. Young – yea

Mrs. Jones – yea

Resolution adopted this 20th day of November 2018.

BOARD OF COUNTY COMMISSIONERS

Tina Osborne, Clerk

KH\

cc: Water/Sewer (file)
OMB Bid file



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SHANNON JONES

DAVID G. YOUNG

BID OPENING

November 15, 2018

BID OPENING – LOWER SPRINGBORO ROAD WATER LINE IMPROVEMENTS PROJECT, PHASE 3

Bids were closed at 11:00 a.m. this 15th day of November and the following bids were received, opened and read aloud for the Lower Springboro Road Water Line Improvements Project, Phase 3 for the Warren County Water and Sewer Department:

Adleta Construction Cincinnati, Ohio	\$ 730,441.00
Harrison Excavating Cincinnati, Ohio	\$ 845,752.00
JNT Excavating, LLC Independence, Kentucky	\$ 505,308.00
OHeil Site Solutions Dayton, Ohio	\$ 762,935.00
Rack and Ballauer Excavating Hamilton, Ohio	\$ 625,249.00
Rock River Construction LTD Lancaster, Ohio	\$ 710,619.00
Smithcorp. Cincinnati, Ohio	\$ 615,100.00
Tribute Contracting South Point, Ohio	\$ 640,166.00

Chris Brausch, Warren County Sanitary Engineer, will review bids for a recommendation at a later date.

cc: Bid File

OMB

W/S (file)

BID/CONTRACT DOCUMENTS

**LOWER SPRINGBORO ROAD
WATER IMPROVEMENT PROJECT
PHASE 3**

WARREN COUNTY WATER & SEWER
DEPARTMENT

WARREN COUNTY BOARD OF COMMISSIONERS
406 JUSTICE DRIVE
LEBANON, OHIO 45036
(513) 695-1250

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SECTION 00040 - INVITATION TO BIDDERS

Separate sealed bids for the Lower Springboro Road Water Improvement Project, Phase 3 will be received by the Warren County Board of Commissioners at the Office of the Warren County Commissioners, 406 Justice Drive, Lebanon, Ohio 45036, until November 15, 2018 @ 11:00 a.m. and then at said time publicly opened and read aloud.

Bid documents, drawings and specifications are available online at the Warren County's Website at <http://www.co.warren.oh.us/commissioners/Resources/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Chris Brausch at the Warren County Water and Sewer Department, (513) 695-1193.

The project description: Install 7,184 feet of 10 inch watermain along Corwin Road, Wayne Township, Warren County. The Engineer's opinion of probable construction cost is \$710,000.

A Bid guaranty, as required by Ohio Revised Code, Section 153.54, shall accompany each proposal submitted, as follows:

1. A Certified check, cashier's check, or letter of credit equal to ten (10) percent of the bid. A letter of credit may only be revocable by the Owner. Upon entering into a contract with the Owner, the contractor must file a performance bond for the amount of the contract, and the bid guaranty will then be returned to the successful and unsuccessful bidders upon contract execution. **OR**
2. A form of bid guaranty bond (attached) for the full amount of the bid. Such bond is retained for the successful bidder, but returned to unsuccessful bidders after the contract is executed.

Attention of bidders is called to all of the requirements contained in the bid packet. No bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof. All bids shall be properly signed by an authorized representative of the bidder. All bids shall be sealed and plainly marked:

BID OPENING-- LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3, NOVEMBER 15, 2018 @ 11:00 a.m.

Warren County reserves the right to reject any or all bids submitted, to waive any irregularities in bids, and enter into a contract with the Bidder who in Warren County's consideration offered the lowest and best bid.

By order of the Board of County Commissioner, County of Warren, State of Ohio.

Tina Osborne, Clerk

SECTION 00100 - BID PROPOSAL

The undersigned declares that the only persons or parties in this Bid are as stated; that the Bid in make without any collusion with other persons, firms, or corporations; that all the Contract Documents as prepared have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. The undersigned do hereby propose to furnish all labor, materials, tools, equipment, etc., necessary to complete the work starting from State Route 42 and extending along Corwin road to the Village of Corwin. The premiums for all Bonds required shall be paid by the Contractor and shall be included in the Contract Price. The undersigned Bidder further agrees that the Bid Security accompanying this Bid shall become the property of the County if the Bidder fails to execute the Agreement.

The undersigned hereby agrees that the Contract Time shall commence on the date stipulated in the Notice to Proceed and to complete the work in accordance with the terms as stated in the Contract Agreement, and in accordance with the following schedule milestones:

The Owner shall issue a "Notice to Proceed" within 14 days of contract execution. The start of the project shall be determined by the successful bidder and identified in a written project schedule submitted by the Bidder to the Owner within 14 days of executing the contract. The Bidder shall complete the work in accordance with the terms as stated in the Contract Agreement, and in accordance with the following schedule milestones:

- a. Substantial Completion including, flushing, pressure testing, disinfection, bacteriological testing, and start-up of the water main shall be completed by March 22, 2019
- b. Final completion, including grading, seeding, restoration, and project closeout shall be June 7, 2019.

The undersigned acknowledges receipt of the following Addenda:

No. _____, dated _____, 2018

No. _____, dated _____, 2018

No. _____, dated _____, 2018

Bids shall include all costs incurred for the Work including materials, equipment, supplies, labor, permit fees, taxes, insurance, miscellaneous costs, overhead, and profit. All Material must comply with the specifications shown on the contract drawings.

The written/typed Total Bid price is for the convenience of the Owner in comparing bids. Any discrepancy between the actual sum of the line item totals and the written/typed total bid price shall be resolved in favor of the actual sum of the correct individual line item.

The undersigned hereby certifies under the penalty of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person or entity. The bid proposals shall remain in full force and effect for ninety (90) days after the date of opening bids. The full name and address of all persons and parties interested in the foregoing bids as principals are as follows:

Individual, Partnership, or Corporation

Signature of Corporate Officer, President, or Owner

Notice of acceptance should be mail or delivered to the following:

(Contact Name)

(Contact Title)

(Company Name)

(Business Address)

(City and State)

(Contact Number)

Date: _____

Lower Springboro Road Water Improvement Project Phase 3 BID SHEET

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL COST
1	10-Inch C900 DR14 PVC Watermain, Unrestrained, Including Fittings, Plugs, Glands and Gaskets	4875	LF		
2	10-Inch C900 DR14 PVC Watermain, <u>Restrained</u> , Including Fittings, Plugs, Glands and Gaskets	1200	LF		
3	Horizontal Directional Drilling C900 DR 14 PVC, RJIB, Including Excavating Pits, Mud Trailer, Restoration, total LF as called for in plans complete in place.	1262	LF		
4	Installation of Pipe in Roadway (STA. 176+56 TO 176+69, 177+94 to 178+22, 184+04 to 185+59) Including Pavement Removal, Trenching, Pipe Bedding, and Self-Compacting Granular Backfill	206	LF		
5	Roadway Pavement Restoration (STA 176+56 to 176+69, 177+94 to 178+22, 184+04 to 185+59)	206	LF		
6	6-Inch Class 52 Ductile Iron Pipe for Hydrant Extensions	73	LF		
7	New Fire Hydrant Assemblies Including Glands, Gaskets, Restraints, 6" Class 52 DIP extensions, 6" Gate Valve, Box & Lid, Complete from Tee to Hydrant	10	EA		
8	Connect to Existing 8" Water Main, Including Couplings, Glands and Gaskets	1	EA		
9	Connect to Existing 10" Water Main, Including Couplings, Glands and Gaskets	1	EA		
10	10-Inch Gate Valves Including Valve Box, Stem & Lid	7	EA		
11	8-Inch Gate Valves Including Valve Box, Stem & Lid	1	EA		
12	Repair Gravel Driveways	3	EA		
13	Site Restoration, Including Grading, Top Soil, Seeding, Mulching, Fence Replacement, Reinstallation of Traffic Signs & Guardrail Removal & Replacement	9500	SY		
14	#10 AWG Tracer Wire (Section 02622, Paragraph 2.01.E)	7200	LF		
15	Mobilization & Demobilization	1	Lump Sum		
16	Construction Layout Staking	1	Lump Sum		
17	Traffic Maintenance	1	Lump Sum		
18	Flushing, Disinfecting and Pressure Testing	1	Lump Sum		
19	Meter Test Pit at Creek Crossing (Standard Detail W-23)	2	EA		
20	Removal & Disposal of Existing Vertical Wood Posts & Restoration (along bike path)	278	EA		
TOTAL					

(Bid in Words)

ITEM	ALTERNATE BID ITEM NO. 1	QUANTITY	UNITS	UNIT PRICE	ADD/DEDUCT
1	SHEET C1.27 - Horizontal Directional Drilling a Second Line under the Little Miami River - C900 DR 14 PVC, RJIB, Including Excavating Pits, Mud Trailer, Restoration.	469	LF		
2	10-Inch Gate Valves Including Valve Box, Stem & Lid	2	EA		
3	Meter Test Pit at Creek Crossing (Standard Detail W-23)	1	EA		
TOTAL					

SECTION 00120 - EXCEPTION SHEET

Exceptions: Exceptions to any bid specification must be clearly stated on this sheet. This sheet must be submitted with each bid. If there are no exceptions, please indicate "none" below.

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____

SECTION 00130 - BIDDER IDENTIFICATION

ATTENTION BIDDER: Please fill out this form and submit with your bid.

COMPANY NAME: _____

CHIEF EXECUTIVE OFFICER: _____

ADDRESS: _____

PHONE NUMBER: _____

FAX NUMBER: _____

PROJECT CONTACT PERSON: _____

PHONE NUMBER: _____

E-MAIL ADDRESS: _____

FEDERAL ID #: _____

WEBSITE ADDRESS: _____

SECTION 00200 - GENERAL INSTRUCTIONS TO BIDDERS

1. **Receipt and Opening of Bids:** The Warren County Board of Commissioners (herein referred to as "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Office of the Warren County Board of Commissioners until November 15, 2018 @ 11:00 a.m. and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Warren County Board of Commissioners at 406 Justice Drive, Lebanon, Ohio 45036, and shall be clearly marked

BID OPENING— LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3, NOVEMBER 15, 2018 @ 11:00 a.m.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for 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 60 days after the actual date of the opening thereof.

2. **Bid Documents:** Bid documents, drawings, addenda, plan holders list, and other information are available online, free of charge, at the Warren County's Website at <http://www.co.warren.oh.us/commissioners/Resources/Default.aspx>. Contact Chris Brausch at chris.brausch@co.warren.oh.us to be added to the plan holders list. All Addenda will be posted on the aforementioned website and shall not be mailed to the bidders. Bidders shall be responsible for checking the website prior to submitting their bids.

3. **Withdraw of Bid:** A Bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids, provided the bid was submitted in good faith and the reason for the price being substantially lower was a clerical mistake as opposed to a judgment mistake and was actually due to an unintentional omission of a substantial quantity of work, labor or material made directly in the compilation of the bid. Request to withdraw such bid must be made in writing and filed with the Owner within two business days after the opening of bids and prior to the acceptance thereof.

4. **Preparation of Bid:** Each bid must be submitted on the prescribed form and such documents as hereunder described. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing certifications must be fully completed and executed when submitted.

5. **Method of Bidding:** Bids shall be submitted at the time and place indicated in the Invitation to Bidder and shall be included in a sealed envelope, marked with the project title and name and address of the bidder and accompanied by the bid security and other required documents.

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.

The Owner invites unit price bids for the construction described in the plans and specifications. These unit prices shall be extended by estimated quantities to develop a total price for the project.

The estimate of quantities of work, if included in the Proposal, is approximate only, and will not become the basis for calculating final payment for the work. However, the estimated quantities shall be used by the Owner in calculating the total amount of the Proposal for comparison of bids.

If the total price received from the lowest and best bidder exceeds the amount of funds available to finance the contract, the Owner may:

- a. Reject all bids;
- b. Augment the funds available in an amount sufficient to enable award to the lowest and best bidder or bidders;
- c. Reduce the scope of work by eliminating certain items of work to produce a total bid which is within available funds;
- d. Reduce the scope of work by reducing the quantity of certain items of work to produce a total bid which is within available funds;
- e. Reduce the scope of work by a combination of adjustments as outlined in "c" and "d" above to produce a total bid which is within available funds.
- f. The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternates as produces a net amount which is within the available funds.
- g. The Owner may consider informal and may reject any bid not prepared and submitted in accordance with the provisions hereof. The Owner reserves the right to reject all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed lowest and best.

6. **Qualification of Bidder:** The Owner may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein; conditional bids will not be accepted.

7. **Bid Security:** Each bid must be accompanied by cash, cashier's check, certified check of the bidder, letter of credit equal to ten (10) percent of bid, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner. (See Invitation to Bidders for required amounts) Such cash, checks or bid bonds will be returned to bidders after the Owner has awarded the bid and has

executed the contract, or, if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.

8. **Liquidated Damages for Failure to Enter into Contract:** The successful bidder, upon his/her failure or refusal to execute and deliver the contract and bonds required within 10 days after he/she has received notice of the acceptance of his/her bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.

9. **Time of Completion and Liquidated Damages:** The Owner shall issue a "Notice to Proceed" within 14 days of contract execution. The start of the project shall be determined by the successful bidder and identified in a written project schedule submitted by the Bidder to the Owner within 14 days of executing the contract. The Bidder shall complete all work within the following requirements:

- a. Substantial Completion including, flushing, pressure testing, disinfection, bacteriological testing, and start-up of the water main shall be completed by March 22, 2019
- b. Final completion, including grading, seeding, restoration, and project closeout shall be June 7, 2019.

Bidder agrees to pay as liquidated damages the sum of \$500.00 per calendar day for each day the water main is not placed into service beyond the substantial completion date.

10. **No Damage for Delay:** No payment, compensation or adjustment of any kind shall be made to the contract price for damages incurred by the contractor because of hindrances or delays in the progress of the work from any cause that is not proximately caused by the Owner's action or failure to act. Whether such hindrances or delays are avoidable or unavoidable, the contractor agrees that he or she will make no claim for compensation, damages or mitigation of liquidated damages for any such delays. Examples of delays include (but are in no manner limited to) obtaining all necessary permission from any government agency or any private party, any act or failure to act by any other contractor, subcontractor and/or supplier, all foreseen and unforeseen events and any conditions or acts of God. It is understood and agreed that the contractor assumes all risks of delays in prosecuting or completing the work under the contract that are not proximately caused by the Owner's action or failure to act. The contractor will accept in full satisfaction for such delays, an extension of time, if any, agreed to by the Owner.

11. **Conditions of Work:** Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible the contractor, in carrying out the work, must employ such methods or means or will not cause any interruption of or interference with the work of any other contractor. No plea of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work as the result of failure to make such examination and investigation, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every respect, all the requirements of

the Contract, nor will the same be accepted as a basis for any claim whatsoever for extra compensation or for an extension of time.

12. **Addenda and Interpretations:** No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation must be in writing to Chris Brausch at chris.brausch@co.warren.oh.us and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. All such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted on the Warren County Commissioners website, no later than three days prior to the date fixed for the opening of bids. Failure of any bidder to monitor the website and download any such addendum or interpretations shall not relieve such bidder from any obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents.

13. **Security for Faithful Performance:** Simultaneously with his/her delivery of the executed contract, the Contractor shall furnish a performance (surety) bond as security for faithful performance of this contract and for the payment of all persons performing labor on the project under the contract and furnishing materials in connection with the contract. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner. Please note that upon execution of the Contract if a Bid Guaranty/Contract Bond was submitted with your original bid a Performance Bond will not be required.

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

15. **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.

16. **Method of Award:** The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternates, to the lowest and best bidder, as produces a net amount which is within the available funds.

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

18. **Safety Standards and Accident Prevention:** With respect to all work performed under this contract, the Contractor shall:

- a. Comply with the safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the

Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of title 29 of the code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, N. 75, Saturday, April 17, 1971.

- b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
 - c. Maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or doctor's care of persons (including employees) who may be injured at the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.
19. **Examination of Site:** Each bidder shall, and is hereby directed to inspect the entire site of the proposed work and judge for him/herself as to all the circumstances affecting the cost and progress of the work and shall assume all patent and latent risks in connection therewith.
20. **Water Supply:** All water for construction purposes, except for the expense of having water conveyed about the work, will be provided by the Owner.
21. **Working Facilities:** The plans show, in the general manner, the existing structures and the land available for construction purposes. The bidders must satisfy themselves of the conditions and difficulties that may be encountered in the execution of the work at this site.
22. **Permits:** Permits necessary for the project are contained in specification Section 00800.
23. **Signature of Bidders:** The firm, corporate or individual name of the bidder must be signed in ink in the space provided for the signatures on the proposed blanks. In the case of a corporation, the title of the officer signing must be stated and such officer must be thereunto duly authorized and the seal of said corporation duly affixed. In the case of a partnership, the signature of at least one of the partners must follow the firm name, using the term "member of the firm." In the case of an individual, use the terms "doing business as", or "sole owner." The bidder shall further state in his proposal the name and address of each person or corporation interested therein.
24. **Right to Accept or Reject Proposals:** The Owner may consider informal and may reject any bid not prepared and submitted in accordance with the provisions hereof. The Owner reserves the right to reject all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed lowest and best.
25. **Non-Collusion Affidavit:** The successful bidder will be required to submit a non-collusion affidavit on the form included in these Bid/Contract documents (SECTION 00220). This affidavit shall be dated and executed as part of this bid.
26. **EEO Compliance:** Bidders please see SECTION 00340 for EEO Compliance Requirements and Affidavit.

27. **Wage Rates:** In the event that the rate of wages paid for any trade or occupant in the locality where such work is being performed are under current collective agreements or understandings between bona fide organizations of labor and employer, then the wages to be paid shall be not less than such agreed wage rates, nor less than the minimum rates compiled by the Federal Labor Standard Act. Copies of these prevailing wage rates have been included in these specifications. Every Contractor and Subcontractor who is subject to Ohio Revised Code, Chapter 4115 shall, as soon as he begins performance under his contract with the Owner, supply the Prevailing Wage Coordinator for the Owner a schedule of the dates on which he is required to pay wages to employees. He shall also deliver to the Prevailing Wage Coordinator within three weeks after each pay date, a certified copy of his payroll which shall exhibit for each employee paid any wages, name, current address, social security number, number of hours worked each day of the pay period and the total for each week, hourly rate of pay, job classification, fringe payments, and deductions from wages. The certification of each payroll shall be executed by the Contractor, Subcontractor, or duly appointed agent thereof and shall recite that the payroll is correct and complete and that the wage rate shown is not less than those required by the contract.

In case the Owner orders the Contractor to perform extra or additional work which may make it necessary for the Contractor or any Subcontractor under this contract to employ a person not herein specified, the Owner will include in the contract change order for such extra or additional work, a minimum wage rate for such trade or occupation, and insofar as such extra or additional work is concerned, there shall be paid to each employee engaged in work of such trade or occupation, not less than the wage so included. Insofar as possible, local labor shall be employed on this work.

28. **Subletting of Contract:** The Contractor shall not sublet, sell, transfer or assign any portion of the contract without written consent of the Owner or his designated agent. When such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, work amounting to no less than fifty percent of the total contract cost, except that any time designated in the contract before computing the amount of work required to be performed by the Contractor with his own organization, no subcontract, or transfer of contract, shall in any way release the Contractor of his liability under the contract and bonds.

29. **Required Insurance:** In accordance with the specifications, the Contractor, without restricting the obligations and liabilities assumed under the Contract Documents, shall at his own cost and expense purchase and maintain in force until final acceptance of his work, the forms of insurance coverage listed below.

Certificates from the insurance carrier stating the limits of liability and expiration date shall be filed with the Owner before operations are begun. Such certificates shall not merely name the types of policy provided, **but shall specifically refer to this Contract** and shall name the Board of Warren County Commissioners as additionally insured. However, the original policy for Owner's Protective Bodily Injury (Item F) and Property Damages (Item G) shall at this time be delivered to the Owner for its possession.

All policies as hereinafter required shall be so written that the Owner will be notified of cancellation or restrictive amendment at least ten days prior to the effective date of such cancellation or amendment.

Item A - Workmen's Compensation and/or Employer's liability Insurance as required or specified by State Law.

Item B – Comprehensive General Liability Insurance: In an amount not less than \$1,000,000.00 per occurrence for Bodily Injury and \$500,000 for explosion underground and collapse, commonly known as “XCU.” The following endorsement documents provided by Warren County:

- a. CG 20 10 10 01 – additional insured endorsement (or equivalent)
- b. CG 20 37 10 01 – additional insured endorsement (or equivalent)
- c. CG 25 03 03 97 – designated location aggregate (or equivalent)

General Liability needs to be written on Primary/Non-contributory basis for the benefit of the additional insured.

Item C – Umbrella: In an amount not less than \$1,000,000 occurrence and \$1,000,000 aggregate. Umbrella needs to attach to General Liability, Employers Liability, Auto Liability. Umbrella needs to be written on follow-form primary.

Item D - Bodily Injury Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item E - Property Damage Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item F - (If Applicable) - Such Protective (including Railroad Protective) and Contractual Bodily Injury Liability Insurance and such Protective (including Railroad Protective) and Contractual Property Damage Liability Insurance as shall be required by the railroad and other utility companies whose property, facilities or rights-of-way may be affected by the work to be done under this contract, in such amounts and in such form as each such utility company may require.

If any part of the work is sublet, insurance of the same types and limits as required by above items numbered A, B, C, D, E, F, and I shall be provided by or on behalf of the Subcontractors to cover that part

of the work they have contracted to perform including Property Damage Liability Special Hazards coverage if so required by this contract.

Protective and Contractual Bodily Injury Liability Insurance required by Item F (if applicable) shall be in an amount and form as each railroad or utility company may require.

Builders Risk Insurance: All Risk form, including subsidence and theft of materials from the job site. Such coverage shall be maintained until final acceptance of the Contract by the Owner and payable to the Owner for the benefit of the contractor. The limit for Builders Risk shall be the full value of construction.

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 20 10 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

<p>Name of Person or Organization:</p> <p>Board of Warren County Commissioners 406 Justice Drive, Lebanon, OH 45036</p>
--

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

A. Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

This insurance 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 site 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.

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 20 37 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization: Board of Warren County Commissioners 406 Justice Drive Lebanon, OH 45036
Location And Description of Completed Operations:
Additional Premium:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 25 03 03 97

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Construction Projects:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
 - 1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 - 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under COVERAGE A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under COVERAGE C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 - 3. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 - 4. The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
 - 1. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
 - 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of Limits Of Insurance (SECTION III) not otherwise modified by this endorsement shall continue to apply as stipulated.

30. **Maintenance of Property:** All work activities including storage and stockpiling of materials, is to be conducted within the right-of-way or designated easement shown on the construction drawings. It is the Contractor's responsibility to secure work agreements with neighboring property owners if additional area is needed for construction purposes. Copies of the work agreements shall be delivered to the Engineer and Owner prior to any work beginning on the affected property.

31. **Foreign Corporation and Contractors:** Definition: "Foreign Corporation" means a corporation incorporated under the laws of another state. No contract shall be entered into with a foreign corporation until the Secretary of State has certified that such corporation is authorized to do business in Ohio; and until, if the bidder so awarded the Contract is a person or partnership, it has filed with the Secretary of State a Power of Attorney designating the Secretary of State as its agent for the purpose of accepting service of summons in any action brought under Ohio Revised Code, Section 153.05 or under Sections 4123.01 to 4123.94, inclusive.

32. **Subcontracts:** Contractor shall provide upon request of the Owner an explanation of all subcontractors intended to be used in performance of the work. In the event the Owner does not object, Contractor may have such work performed by a subcontractor. Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of, the Agreement, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in the Agreement shall create any contractual relationship between any subcontractor and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.

33. **Real and/or Personal Property Tax Affidavit:** All bidders must complete the Real and/or Personal property tax affidavit (Section 00320) and submit with your bid. This section should be fully completed whether or not you as a vendor/contractor own property in Warren County, Ohio.

34. **Description of Project:**

The project description: Install 7,184 feet of 10-inch water main along Corwin Road, Wayne Township, Warren County. The Engineer's opinion of probable construction cost is \$710,000.

35. **Scope of Work:** Provide all work as described in the Specifications and Drawings herein as necessary to provide for project completion.

36. **Required Forms:** Each Bidder shall complete and submit the following forms with his/her bid:

- SECTION 00100 – Bid Proposal
- SECTION 00120 - Exception Sheet
- SECTION 00130 - Bidder Identification
- SECTION 00220 - Non-Collusion Affidavit
- SECTION 00260 - Bid Guaranty & contract Bond
- SECTION 00300 - Experience Statement
- SECTION 00320 - Affidavit of Non-Delinquency of Taxes

SECTION 00340 - Certificate of Compliance Non-Discrimination and Equal Employment
Opportunity Affidavit

SECTION 00360 - Findings for Recovery Affidavit

37. **Subcontractors:** The successful Contractor may be required, at the request of the Owner, to submit a list of sub-contractors and/or suppliers for said project.

38. **Additional Obligations Upon Contact Award:** Upon award of the bid but prior to execution of the final agreement and notice to proceed, the Contractor shall submit all of the following documents, completed as required:

- 1) Contract
- 2) Performance Bond
- 3) Certificates of Insurance

39. Entire bid packet must be completed (except SECTION 00400 - Contract) and returned with bid proposal, as the entire bid packet becomes part of the contract documents.

40. **Changes In Work:** Owner may find it necessary and desirable to make changes and/or alterations in the lines, plans, equipment, or materials from time to time, either before or after construction has begun.

The Owner shall notify the Contractor in writing about all changes in the work at any time, and it shall be completed according to the said changes without any alteration in the Contract Price except in those cases where the changes materially affect the amount of work to be done and the cost thereof. The decision of the Owner regarding changes in work shall be final in all cases where no alteration in price is involved. Changes in work which involve any alteration in the amount to be paid to the Contractor shall not be commenced until approved in writing by the Owner.

If the Contractor claims that any written instructions from the Owner, by drawings or otherwise, involved extra cost or an extension of time, he/she shall so notify the Owner in writing within seven (7) days after receipt of such instructions and before proceeding to execute the work.

41. **Partial Payments to Contractor:** The Owner will make partial payments to the Contractor during construction on the basis of an estimate of the value of work performed during the preceding calendar month under this Contract. The partial payment shall be made in accordance with the applicable sections of the Ohio Revised Code. Owner will furnish an estimate of the quantities of work. Owner will determine the value of work performed and prepare the monthly partial estimate.

All materials and work covered by partial payments made shall thereupon become the sole property of the Owner. This provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of work upon which payments have been made or the restoration of any damaged work. The payment of monthly partial estimates does not waive the right of the Owner to require the fulfillment of all the terms of the Contract Documents.

42. **Owner's Right to Withhold Certain Amounts and Make Applicable Thereof:** The Contractor may be required by the Owner to furnish from time to time, satisfactory evidence that all

persons who have done work or furnished materials under this Contract, or may have suffered and claimed damage on account of the Contractor's operation, have been fully paid or secured; and in case such evidence is not furnished as aforesaid, the Owner may in addition to the Portion of any estimate retained under the preceding provisions of these Contract Documents, also withhold sufficient amount of any payment otherwise due to the Contractor to cover:

- a. Payments that may be past due or payable for just claims for labor or materials furnished in an about the performance of the work or for damages sustained under this Contract;
- b. For defective work not remedied as hereinbefore provided, and;
- c. For failure of the Contractor to make proper payments to his Subcontractors.

If the Contractor fails to carry on the work within the time set out in his Proposal, the Owner may retain from the moneys that are, or which may become due said Contractor, the Owner's estimated daily cost of the completed work, for each and every calendar day the completion of the work be delayed beyond the time specified herein for such completion. The Contractor shall not be entitled to a bonus for early completion.

43. **The Right of Owner to Terminate Contract:** In the event that any of the provisions of these Contract Documents are violated by the Contractor or any of his/her Subcontractors, the Owner may serve written notice upon the Contractor and the Surety, of his intention to terminate such Contract, such notices to contain the reasons for such intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor such violation shall cease and satisfactory arrangements for corrections be made, the Contract shall, upon the expiration of said ten (10) days cease and terminate. In the event of any termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the Contract, provided, however, that if the Surety does not commence performance thereof within thirty (30) days from the date of the mailing of such Surety or Notice of Termination, the Owner may take over the work and prosecute same to completion by contract for the amount and at the expense of the Contractor, and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such appliances and shop drawings as may be on the site of the work and necessary therefore.

44. **Other Contacts:** The Owner reserves the right to allow other work or to enter into other Contracts for work to be constructed or placed in or about the work herein described, and to order the starting and progress of such other Contracts at any time prior to the completion of this Contract. The Contractor hereby waives any claims for damages or extra compensation by reason of any real or supposed interference with his work.

45. **Suspension of Work:** The Owner reserves the right to suspend the whole or any part of the work to be done hereunder if work is not proceeding in accordance with the Contract Documents, without compensation to the Contractor for such suspension other than extending the time for completing the work as much as it may have been delayed by such suspension. Such suspension shall be in the form of a written "Stop Order" issued by the Owner.

46. **Retainer:** In accordance with ORC Section 153.12 partial payments to the Contractor for labor performed under either a unit or lump sum price contract shall be made at the rate of ninety-two per cent of the estimates prepared by the Contractor and approved by the Engineer. All labor performed after the job is fifty per cent completed shall be paid for at the rate of one hundred per cent of the estimates submitted by the Contractor and approved by the Engineer.

When the major portion of the project is substantially completed and occupied, or in use, or otherwise accepted, and there exists no other reason to withhold retainage, the retained percentages held in connection with such portion shall be released and paid to the contractor, withholding only that amount necessary to assure completion.

47. **Final Inspection:** Owner shall make a final inspection upon completion of work; and if all the work required to be done under the Contract is found acceptable as required by the Contract Documents, he shall prepare and provide the Contractor a written statement indicating completion of all the work under the Contract.

48. **Final Estimate:** The Owner will pay to the Contractor the total earned compensation as stated in the Final Estimate, less all prior payments. All prior estimates and payments, including those relating to "Changes in Work" or "Ext a Work" shall be subject to correction by this Final Estimate for payment of the work included under these Contract Documents. The one (1) year guarantee period shall commence on the date of the Final Estimate. Final payment will not be released until a written waiver of liens is signed and submitted by all subcontractors and material suppliers.

49. The Engineer's Opinion of Probable Construction Cost is \$710,000.00.

50. **STATEMENT: Do not submit confidential documents or documents of any type that contain trade secrets. All materials submitted become public records once opened and may be copied upon request to anybody including competitive bidders.**

SECTION 00220 - NONCOLLUSION AFFIDAVIT

State of _____

BID Identification _____

CONTRACTOR _____, being first duly sworn, deposes and says that he is _____ (sole owner, a partner, president, secretary, etc.) of _____, the party making the foregoing BID; that such BID is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such BID is genuine and not collusive or sham; that said BIDDER has not directly or indirectly colluded, conspired, connived or agreed with any BIDDER or any one else to put in a sham BID, or that any one shall refrain from Bidding; that said BIDDER has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the BID price of said BIDDER or of any other BIDDER, or to fix any overhead, profit, or cost element of such BID price, or of that of any other BIDDER, or to secure any advantage against the OWNER awarding the contract or anyone interested in the proposed contract; that all statement contained in such BID are true; and, further, that said BIDDER has not, directly or indirectly, submitted his BID price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, BID depository, or to any member or agent thereof, or to any other individual except to such person or persons who have a partnership or other financial interest with said BIDDER in his general business.

Signed:

Subscribed and sworn to before
me this ___ day of _____, 2018.

Seal of Notary

SECTION 00240 - BONDING AND INSURANCE REQUIREMENTS

A state or local unit of government receiving a grant from the federal government which requires contracting for construction of facility improvement shall follow its own requirements relating to bid guarantees, performance bonds, and payment bonds, except for contracts or subcontracts exceeding \$100,000. For contracts or subcontracts exceeding \$100,000, the Federal agency may accept the bonding policy and requirements of the grantee provided the Federal agency has made a determination that the Government's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:

- a. A bid guaranty from each bidder. The "bid guaranty" shall consist of a firm commitment such as a bid bond in the amount of one hundred (100) percent of the bid price, or ten (10) percent of the bid price if certified check or other negotiable instrument accompanying a bid, as assurance the bidder will, upon acceptance of his/her bid, execute such contractual documents as may be required within the time specified.
- b. A performance bond on the part of the Contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

SECTION 00260 - BID GUARANTY AND CONTRACT BOND

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

(Insert full name or legal title of Contractor and Address)

as Principal and _____
(Insert full name or legal title of Surety)

as Surety, are hereby held and firmly bound unto the Warren County Board of Commissioners hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____ to undertake the project known as:

LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee, In no case shall the penal sum exceed the amount of _____ DOLLARS, \$ _____. If this item is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including alternates in dollars and cents. A percentage is not acceptable.

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

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

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

the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

IF THE SAID PRINCIPAL SHALL well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract: we agreeing and assenting that this undertaking shall be for benefit of any materialman or laborer having a just claim, as well as for the Obligee herein; THEN THIS OBLIGATION SHALL be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefor shall in any wise affect the obligations of said surety on its bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this _____ day of _____ 2018.

PRINCIPAL

SURETY

By: _____

By: _____
Attorney-in-fact

Title: _____

Surety Agent's Name and Address:

SECTION 00280 - PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

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

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

WARREN COUNTY OHIO, BOARD OF COMMISSIONERS
406 Justice Drive
Lebanon, OH 45036

hereinafter called OWNER, in the penal sum of _____ Dollars, \$(_____) in
lawful money of the United States, for the payment of which sum well and truly to be made, we
bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a
certain contract with the OWNER, dated the _____ day of _____,
2018, a copy of which is hereto attached and made a part hereof for the construction of:

LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the
undertakings, covenants, terms, conditions, and agreements of said contract during the original term
thereof, and any extensions thereof which may be granted by the OWNER, with or without notice
to the Surety and during the guaranty period(s), and if he shall satisfy all claims and demands
incurred under such contract, and shall fully indemnify and save harmless the OWNER from all
costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay
the OWNER all outlay and expense which the OWNER may incur in making good any default,
then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received, hereby stipulates and agrees that
no change, extension of time, alteration or addition of the terms of the contract or the WORK to be
performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its

obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

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

IN WITNESS WHEREOF, this instrument is executed in counterparts, each one of which shall be deemed an original, this the _____ day of _____ 2018.

ATTEST:

(Principal)

(SEAL)

By _____

ATTEST:

(SEAL)

(Surety)

IMPORTANT: Pursuant to Ohio Revised Code §122.87(A) defines surety company as, "... a company that is authorized by the department of insurance to issue bonds as a surety".

SECTION 00300 - EXPERIENCE STATEMENT

The Bidder is required to state in detail in the space provided below, what work he has done of a character similar to that included in the proposed contract, to give references and such other detailed information as will enable the Owner to judge of his responsibility, experience, skill and financial standing. Completion of this statement is required and must be submitted with the Bid in order to qualify for consideration for award of contract.

SUBMITTED FOR:

LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

SUBMITTED BY:

Name: _____

(Print or Type Name of Bidder)
(A Corporation/A Partnership/An Individual)
[Bidder to strike out inapplicable terms.]

Address: _____

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

(Note: Attach Separate Sheets as Required)

1.0 How many years has your organization been in business as a contractor?

2.0 How many years has your organization been in business under its present name?

3.0 Has any construction contracts to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", please furnish details of all such occurrences including name, address, phone number, and contact person of owner, architect or engineer, and surety, and name and date of project.

No _____ Yes _____, If yes, attach details described above.

10.0 List the states in which your organization is legally qualified to do business.

11.0 List name, address and telephone number of an individual who represents each of the following and whom OWNER may contact for a financial reference:

11.1 A surety:

Name _____

Contact _____

Address _____

_____ Phone No. _____

Financial Reference _____

11.2 A bank:

Name _____

Contact _____

Address _____

_____ Phone No. _____

Financial Reference _____

11.3 A major material supplier:

Name _____

Contact _____

Address _____

Phone No. _____

Financial Reference _____

12.0 Dated at _____, this ___ day of _____, 2018.

(Print or Type Name of Bidder)

By: _____

(Seal, if corporation)

------(Affidavit for Individual)-----

_____, being duly sworn, deposes and says that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Partnership)-----

_____, being duly sworn, deposes and says that he/she is a member of the partnership of _____ and that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Corporation)-----

_____, being duly sworn, deposes and says that he/she is _____ of _____, and that all of
(Full name of Corporation)

the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Joint Venture)-----

_____ and _____, being duly sworn, deposes and says that they are members of _____
(Full Name of Joint Venture)

, and that all of the foregoing qualification information is true, complete, and accurate.

------(Acknowledgment)-----

_____, being duly sworn, deposes and says that he/she is
of _____; that he/she is duly authorized to make the foregoing
(Name of Bidder)

affidavit and that he/she makes it on behalf of () himself/herself; () said partnership; () said
corporation.

Sworn to before me this _____ day of _____, 2018, in the County of _____
_____, State of _____.

(Notary Public)

My commission expires _____

(Seal)

END OF SECTION

Note to Fiscal Office: If any Real and/or Personal property taxes are delinquent, you must send a copy of this statement to the County Treasurer within 30 days of the date it is submitted.

WARNING: MAKING A FALSE STATEMENT ON THIS AFFIDAVIT MAY BE PUNISHABLE BY A FINE AND/OR IMPRISONMENT

**SECTION 00340 - EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS, BID
CONDITIONS, NON-DISCRIMINATION, AND EQUAL EMPLOYMENT OPPORTUNITY
AFFIDAVIT**

CERTIFICATE OF COMPLIANCE FOR EEO PURPOSES: (This section applies only to those projects that are funded by Federal and State monies)

All bidders on the project shall submit together with their bid, a copy of a valid Certificate of Compliance for Equal Employment Opportunity purposes contained herein.

A copy of the Certificate of Compliance is enclosed with this bid response?

_____ Yes _____ No

BIDDER'S EEO COVENANTS:

Throughout its performance of any contract awarded to it on this project, the bidder agrees to the following covenants:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry or sex. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry of sex. Such action shall include, but is not limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the prime contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry or sex.
3. The contractor agrees to fully cooperate with the County, the State Equal Employment Opportunity Coordinator and with any other official or agency, or the State or Federal government which seeks to eliminate unlawful employment discrimination, and with all other State and Federal efforts to assure equal employment practices under its contract and the contractor shall comply promptly with all requests and directions from the County, the State Equal Opportunity Coordinator and any of the State of Ohio officials and agencies in this regard, both before and during construction.

4. Full cooperation as expressed in clause (3), above, shall include, but not be limited to, being a witness and permitting employees to be witnesses and complainants in any proceedings involving questions of unlawful employment practices, furnishing all information requested by the County and the State Equal Employment Opportunity Coordinator, and permitting access to its books, records, and accounts by the County and the State Equal Employment Opportunity Coordinator for purposes of investigation to ascertain compliance with applicable rules, regulations and orders.
5. In the event of the contractor's noncompliance with the nondiscrimination clauses of its contract or with any of the said rules, regulations, or orders, its contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further County construction contracts.

In the event that is contract is terminated for a material breach of EEO requirements, the contractor shall become liable for any and all damages which shall accrue to the County as a result of said breach.

6. The contractor will require the inclusion of language reflecting these same six covenants within every subcontract or purchase order it executes in the performance of its contract unless exempted by rules, regulations or orders of the State Equal Employment Opportunity Coordinator so that these provisions will be binding upon each subcontractor or vendor. The contractor will take such as the County may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in any litigation with a subcontractor, vendor or other party as a result of such direction by the County, the contractor may be requested to protect the interests of the County.

The bidder hereby adopts the foregoing covenants?

_____ Yes _____ No

PLEASE NOTE: The bidder's failure to adopt the Bidder's EEO Covenants, and complete the foregoing certification will cause the bidder's proposal to be rejected as being non-responsive.

SECTION 00360 - FINDINGS FOR RECOVERY AFFIDAVIT

STATE OF _____
COUNTY OF _____, SS:

_____, upon being duly cautioned and sworn, hereby states the following based on personal knowledge:

- 1) That he/she is _____ (title), of _____ (name of bidder) and authorized to execute this affidavit; and,
- 2) That _____ (name of bidder) is not a person or entity against whom a finding for recovery has been issued by the Auditor of State, which finding for recovery is unresolved as defined in Ohio Revised Code [General Provisions] Section 9.24 (B); and,
- 3) That _____ (name of bidder) does not appear in the database of unresolved findings of recovery maintained by the Auditor of State pursuant to Ohio Revised Code [General Provisions] Section 9.24 (D).

Affiant

Sworn to and subscribed in my presence this ___ day of _____, 2018.

Notary Public

My Commission expires: _____

SECTION 00400 - CONTRACT

SECTION 00400 - CONTRACT

THIS AGREEMENT, made this _____ day of _____, 2018, with the Warren County Board of Commissioners, 406 Justice Drive, Lebanon, Ohio, hereinafter called "Owner" and **ENTER CONTRACTORS NAME AND ADDRESS HERE**, doing businesses as (an individual, partner, a corporation) hereinafter called "Contractor."

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

LOWER SPRINGBORO ROAD WATER IMPROVEMENT PROJECT, PHASE 3

hereinafter called the project, for the sum of **\$ENTER AMOUNT AND WRITE IT OUT HERE**, and all work in connection therewith, under the terms as stated in the Conditions of the Contract; and as his (its or their) own proper cost and expense furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, Conditions of the Contract, the Specifications and Contract Documents. "Contract Documents" means and includes the following:

- ADDENDUMS
- VOLUME I
- SECTION 00040 - INVITATION TO BIDDERS
- SECTION 00100 – BID PROPOSAL
- SECTION 00120 - EXCEPTION SHEET
- SECTION 00130 - BIDDER IDENTIFICATION
- SECTION 00200 - GENERAL INSTRUCTIONS TO BIDDERS
- SECTION 00220 - NONCOLLUSION AFFIDAVIT
- SECTION 00240 - BONDING AND INSURANCE REQUIREMENTS
- SECTION 00260 - BID GUARANTY AND CONTRACT BOND
- SECTION 00280 - PERFORMANCE BOND
- SECTION 00300 - EXPERIENCE STATEMENT
- SECTION 00320 - AFFIDAVIT OF NON-DELINQUENCY OF REAL AND/OR PERSONAL PROPERTY TAX
- SECTION 00340 - EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS, BID CONDITIONS, NON-DISCRIMINATION, AND EQUAL EMPLOYMENT OPPORTUNITY AFFIDAVIT
- SECTION 00360 - FINDINGS FOR RECOVERY AFFIDAVIT
- SECTION 00400 - CONTRACT
- SECTION 00500 - WAGE RATE DETERMINATION
- SECTION 00700 - GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT
- SECTION 00730 - TECHNICAL SPECIFICATIONS

CONTRACTOR hereby agrees to commence work under this contract on or before a date to be specified in a Written "Notice to Proceed" of the OWNER and shall complete all work within the following requirements:

- a. Substantial Completion including, flushing, pressure testing, disinfection, bacteriological testing, and start-up of the water main shall be completed by March 22, 2019
- b. Final completion, including grading, seeding, restoration, and project closeout shall be June 7, 2019.

Bidder agrees to pay as liquidated damages the sum of \$500.00 per calendar day for each day the water main is not placed into service beyond the substantial completion date.

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

OWNER may terminate or suspend performance of this Agreement for OWNER'S convenience upon written notice to the CONTRACTOR. CONTRACTOR shall terminate or suspend performance of the services/work on a schedule acceptable to the OWNER.

The CONTRACTOR will indemnify and save the OWNER, their officers and employees, harmless from loss, expenses, costs, reasonable attorneys fees, litigation expenses, suits at law or in equity, causes of action, actions, damages, and obligations arising from (a) negligent, reckless or willful and wanton acts, errors or omissions by CONTRACTOR, its agents, employees, licensees, consultants, or subconsultants; (b) the failure of the CONTRACTOR, its agents, employees, licensees, consultants or subconsultants to observe the applicable standard of care in providing services pursuant to this agreement; (c) the intentional misconduct of the CONTRACTOR, its agents, employees, licensees, consultants, or subconsultants that result in injury to persons or damage to property for which the OWNER may be held legally liable.

The CONTRACTOR does hereby agree to indemnify and hold the OWNER harmless for any and all sums for which the OWNER may be required to pay or for which the OWNER may be held responsible for failure of the CONTRACTOR or any subcontractors to pay the prevailing wage upon this project.

The OWNER agrees to pay the CONTRACTOR in the manner and at such times as set forth in the General Provisions such amounts as required by the Contract Documents.

This Contract shall be construed under the laws of the State of Ohio, and the parties hereby stipulate to the venue for any and all claims, disputes, interpretations, litigation of any kind arising out of this Contract being exclusively in the Warren County, Ohio Court of Common Pleas (unless both parties mutually agree in writing to alternate dispute resolution), as well as waiving any right to bring or remove such matters in or to any other state or federal court.

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of, this Agreement, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in two counterparts, each of which shall be deemed an original on the date first above written.

WARREN COUNTY BOARD OF COMMISSIONERS
(Owner)

Tom Grossmann, President

ATTEST:

David G. Young

Name

Shannon Jones

(Seal)
ATTEST:

ENTER CONTRACTOR HERE
(Contractor)

By: _____
Name

Title

Approved as to Form:

Assistant Prosecutor

SECTION 00500 - WAGE RATE DETERMINATION

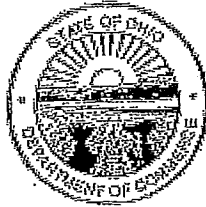
PART 1 GENERAL

1.01 PREVAILING WAGES

Prevailing wage rates for the State of Ohio apply to this project. Contractors and Subcontractor(s) shall conform to the State of Ohio Department of Labor requirements, guidelines, and laws. Included in this section is a list of the Ohio Prevailing Wage Rates available at the time of publication. It is the responsibility of the Contractor and Subcontractor(s) to verify the wage rates prior to bidding and throughout the project. A complete list of Ohio Prevailing Wage Rates is available at the Ohio Wage and Hour website or from the Ohio Department of Commerce Wage and Hour Bureau.

John R. Kasich
Governor

Jacqueline T. Williams
Director



The Ohio Department of Commerce
Division of Industrial Compliance and Labor
Bureau of Labor and Worker Safety
6606 Tussing Road, PO Box 4009
Reynoldsburg, Ohio 43068-9009
614-644-2223
<http://www.com.ohio.gov>

PREVAILING WAGE PACKET

This packet of information is provided as a summary of the Prevailing Wage guidelines and responsibilities. The Ohio Revised Code, Chapter 4115 should be referred to for the exact words of the law. Also included are references and forms which should be helpful in the compliance of the Prevailing Wage Law.

PACKET INFORMATION INDEX

- A. The Ohio Department of Commerce – Division of Industrial Compliance, Wage and Hour Administration
Investigators and their assigned counties
 - 1. The Wage and Hour Investigators for the State of Ohio are listed with their contact information
 - a. If you have questions or need assistance pertaining to Prevailing Wage, you can contact the Investigator in your area
- B. Prevailing Wage Guide for Public Authorities
 - 1. Notice of change of the Prevailing Wage Threshold Level
 - a. A notification will be sent to you when there is a change of the Prevailing Wage threshold level
 - 2. Outline of the Public Authority's responsibilities for Prevailing Wage
 - 3. Public Authority's Compliance Checklist form
 - a. A form for tracking the progress of a Prevailing Wage project
 - 4. Request form for Prevailing Wage Rates
 - a. PW Rates can be obtained on the website www.com.ohio.gov
 - 1. Prevailing Wage Determination Schedule of wages must be attached to and made part of the specifications for the project, and must be printed on the bidding blanks where the work is done by contact
 - 5. Bid Tabulation form
 - a. A form to be completed and returned to ODOC-DIC-Bureau of Wage and Hour Administration when the contract has been awarded
 - 6. Prevailing Wage Bonds form
 - a. Information needed to be kept on file by the PW Coordinator when bonds from the Public Authority are used for a project
- C. Prevailing Wage Guidelines for the Public Authority's Coordinator
 - 1. Guideline for the Prevailing Wage Coordinator
 - a. The Prevailing Wage complaint form and instructions can be obtained on the website www.com.ohio.gov
 - 2. Record of the Certified Payroll Reports Received form
 - a. Helpful form for recording the Certified Payroll Reports and the dates received from the contractors and subcontractors
 - 3. Employee Interview form
 - a. Helpful form for the use by the PW Coordinator when making on-site visits
 - 4. Employee vs. Independent Contractor
 - a. Helpful questions when determining if a person is an Employee or an Independent Contractor
- D. Prevailing Wage Guide for Contractors
(Incorporate this section in the Specs. or supply copies for the pre-construction meeting)
 - 1. Outline of responsibilities for the Prevailing Wage Contractor
 - 2. Notification form from the Contractor to the Employee
 - a. The contractor must submit to employees a completed and signed notification form
 - b. Some PW Coordinators may require a copy of the completed Notification to the Employee form be submitted with the Certified Payroll Reports
 - 3. Certified Payroll Report form
 - a. The contractor can use any form/format he chooses as long as ALL the information has been provided
 - 4. Certified Payroll Report form instruction sheet
 - 5. Corrected Certified Payroll Report Example
 - 6. Affidavit of Compliance form
 - a. No Public Authority shall make final payment unless the Final Affidavits have been filed by the contractors and subcontractors



John R. Kasich
Governor

Jacqueline T. Williams
Director

INVESTIGATORS CONTACT INFORMATION

OHIO DEPARTMENT OF COMMERCE
Division of Industrial Compliance
Bureau of Wage and Hour Administration
6606 Tussing Road, PO Box 4009
Reynoldsburg, Ohio 43068-9009
Phone: 614-644-2239
Fax: 614-728-8639
www.com.ohio.gov
TTY/TDD: 1-800-750-0750

The Ohio Department of Commerce is an Equal Opportunity Employer and Service Provider



**Department
of Commerce**

Division of Industrial Compliance

John R. Kasich, Governor
Jacqueline T. Williams, Director

Bureau of Wage and Hour Administration
6606 Tussing Road - PO Box 4009
Reynoldsburg, OH 43608-9009
Phone 614-644-2239 | Fax 614-728-8639
TTY/TDD 800-750-0750
com.ohio.gov

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PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$250,000 for new construction or \$75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$91,150 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or \$27,309 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

- a) Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration
- b) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census*, but may not increase or decrease more than 3% for any year

Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

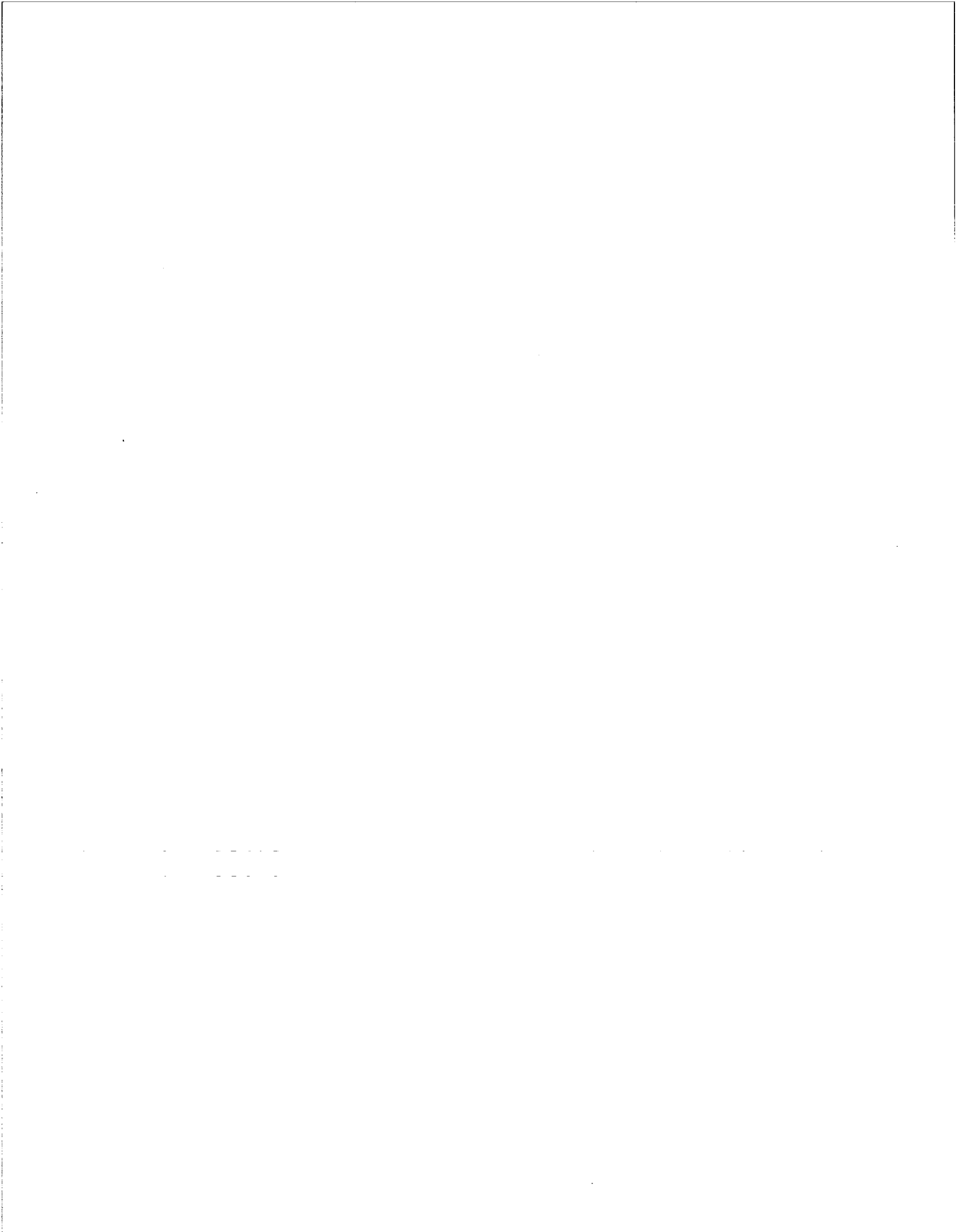
- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

- A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.
 1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.

2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
 3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.
- B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.
1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
 2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.
- C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
 2. Payroll ledger/journals and canceled checks/check register.
 3. Fringe benefit records must include program, address, account number, & canceled checks.
 4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
 5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.
- D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.
- E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.
- F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. **Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.**
- G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.
- H. Supply all subcontractors with the Prevailing Wage Rates and changes.
- I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
1. Employees' names, addresses, and social security numbers.
 - (a) Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
 2. Employees' work classification.
 - (a) Be specific about the laborers and/or operators (Group)
 - (b) For all apprentices, show level/year and percent of journeyman's rate
 3. Hours worked on the project for each employee.

- (a) The number of hours worked in each day and the total number of hours worked each week.
 4. Hourly rate for each employee.
 - (a) The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
 - (b) All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
 5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
 - (a) When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
 - (b) When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by **dividing the total yearly contribution by 2080**.
 6. Gross amount earned on all projects during the pay period.
 7. Total deductions from employee's wages.
 8. Net amount paid.
- J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.
- K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.



OHIO DEPARTMENT OF COMMERCE Division of Industrial Compliance Bureau of Wage and Hour Administration Chief, Stephen Clegg	6606 Tussing Road, PO Box 4009 Reynoldsburg, Ohio 43068-9009 614-644-2239 Fax: 614-728-8639 www.com.ohio.gov
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INVESTIGATORS and THEIR ASSIGNED COUNTIES

#48 Dave Horvath PO Box 1512 Lima, Ohio 45802-1512 Voice: (419)302-1200 Fax : (614) 728-8639 Dave.Horvath@com.state.oh.us	Allen *
#30 Mike McKee PO Box 1342 Cambridge, Ohio 43725-2247 Voice: (740) 432-1987 Michael.McKee@com.state.oh.us	Guernsey *
#56 Shawn Miles PO Box 2547 North Canton, Ohio 44720 Voice: (614) 496-9076 Shawn.Miles@com.state.oh.us	Stark *
#37 David Rice PO Box 291843 Kettering, Ohio 45429 Voice: (740) 502-0883, Fax: (614)995-7768 Dave.Rice@com.state.oh.us	Montgomery *
#35 Sean Seibert PO Box 422 Painesville, Ohio 44077-3938 Voice: (614) 557-8662 Fax: (614) 232-9541 Sean.Seibert@com.state.oh.us	Lake *

<p>#11 Kela D. Thompson 6606 Tussing Rd, PO Box 4009 Reynoldsburg, Ohio 43068-9009 Voice: (614) 728-5007 Fax: (614) 232-9537 Kela.Thompson@com.state.oh.us</p>	<p>Franklin *</p>
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* Headquarter County

<p>Stephen Clegg, Chief 6606 Tussing Rd, PO Box 4009 Reynoldsburg, Ohio 43068-9009 Voice: (614) 728-8686 Fax: (614) 728-8639 Stephen.Clegg@com.state.oh.us</p>	<p>#90 Jackie Clark, Supervisor 6606 Tussing Rd, PO Box 4009 Reynoldsburg, Ohio 43068-9009 Voice: (614) 728-5019 Fax: (614) 728-8639 Jackie.Clark@com.state.oh.us</p>
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John R. Kasich
Governor

Jacqueline T. Williams
Director

PREVAILING WAGE GUIDE
FOR
PUBLIC AUTHORITIES

OHIO DEPARTMENT OF COMMERCE
Division of Industrial Compliance
Bureau of Wage and Hour Administration
6606 Tussing Road, PO Box 4009
Reynoldsburg, Ohio 43068-9009
Phone: 614-644-2239
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TTY/TDD: 1-800-750-0750

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PREVAILING WAGE THRESHOLD LEVELS

IMPORTANT NOTICE

Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the Public Authority shall have the Ohio Department of Commerce-Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.

“New” construction threshold for <i>Building Construction</i>:	\$250,000
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“Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting” threshold level for <i>Building Construction</i>:	\$75,000
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As of January 1, 2018:	
“New” construction that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:	\$91,150

“Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting” that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:	\$27,309
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- A) Thresholds are to be adjusted biennially by the Director of the Ohio Department of Commerce.
- B) Biennial adjustments to threshold levels are made according to the Building Cost for Skilled Labor Index published by McGraw-Hill’s Engineering News-Record, but may not increase or decrease more than 3% for any year.

If there are questions concerning this notification, please contact:

Ohio Department of Commerce
 Division of Industrial Compliance
 Bureau of Wage and Hour Administration
 6606 Tussing Road, PO Box 4009
 Reynoldsburg, Ohio 43068-9009
 Phone: 614-644-2239
 Fax: 614-728-8639
www.com.ohio.gov

Public Authority Responsibilities
ORC Chapter 4115: Wages and Hours on Public Works
(Prevailing Wage Coordinator)

1. Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the public authority shall have the Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.
 - a) "New" construction has a threshold level of \$250,000.
 - b) "Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" has a threshold level of \$75,000.
 - c) "New" construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction has a threshold level of \$91,150.
 - d) "Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction has a threshold of \$27,309.
 - i.) Thresholds are to be adjusted biennially by the Director of Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration.
 - ii.) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census, but may not increase or decrease more than 3% for any year.
2. Every contract for public work shall contain a provision that each worker employed by the contractor or subcontractor, or other person about or upon the public work, must be paid the prevailing rate of wages.
3. If contracts are not awarded or construction undertaken within ninety days (90) from the date of the determination of the prevailing wage there shall be a re-determination of the wage rates before the contract is awarded.
4. Within seven (7) working days after the receipt of notification of a change in the prevailing wage rates, the public authority shall notify all affected contractors and subcontractors. If it is determined that a contractor or subcontractor has violated sections 4115.03 to 4115.16 of the Ohio Revised Code because they were not notified as required, **the public authority is liable** for any back wages, fines, damages, court costs and attorney's fees for the period of time covering the receipt of wage changes, until they give the required notice.
5. No public authority shall award a contract for a public improvement to any contractor or subcontractor whose name appears on the list of debarred contractors. This list is filed with the Secretary of State by the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration **The filing of the notice of conviction with the secretary of state constitutes notice to all public authorities.** These contractors are prohibited from working on public improvements for periods ranging from one to three years. The list of debarred contractors can be located on the website www.com.ohio.gov/laws
6. A public authority must designate and appoint **one of its own employees** to serve as the Prevailing Wage Coordinator during the life of the contract for constructing the public improvement. A Prevailing Wage Coordinator must be appointed no later than ten days before the first payment of wages by contractors to employees working on the public improvement.

PUBLIC AUTHORITY'S COMPLIANCE CHECKLIST FOR PREVAILING WAGE

Project:		Number:
Department:		Phone#:
PW Coordinator:		Phone#:
Architect/Engineer:		Phone#:
Contractor:		Phone#:
Contact Person:		Title:
General Contractor:		Prime Contractor:
		Construction Mgr:
Date Completed		Compliance Item Description
	1.	Request Prevailing Wage Determination Schedule from ODOC-DIC-Wage & Hour
	2.	Received Prevailing Wage Determination Schedule
	3.	Incorporate Determination Schedule in Specs./Bidding Blanks
	4.	Incorporate notice of Prevailing Wage requirements in Invitation for Bids/Notice to Bidders
	5.	Incorporate Prevailing Wage requirements in Contract
	6.	Submit complete Invitation for Bid to ODOC-DIC-Wage & Hour
	7.	Invitation for Bids
	8.	Bid Opening
	9.	Check Listing of Violators
	10.	Award of Contract. (see note)
	11.	Submit Bid Tabulation/Award to ODOC-DIC-WAGE & HOUR
	12.	Notice to Successful Bidder
	13.	Work Commenced...(see note)
	14.	Appoint Prevailing Wage Coordinator
	15.	Received list of Subcontractors' names, addresses, phone #'s & email's
	16.	Received Payroll Date Schedule
	17.	Received Registered Apprenticeship Agreement Certifications
	18.	Received Deduction Agreements
	19.	Received Payroll Reports with Certification...(see attachment)
	20.	Visited project site
	21.	Received Changes to Determination Schedule
	22.	Notice to Contractors of Determination Schedule change
	23.	Request Final Compliance Affidavit from contractors & subcontractors
	24.	Received Final Affidavits from all contractors & subcontractors
	25.	Certify Final Payment

Note: If contract is not awarded or construction undertaken within 90 days from the date of establishment of the Prevailing Wage Rates, a re-determination of the Prevailing Wage Rates is required.

REQUEST FOR STATE OF OHIO PREVAILING WAGE RATES

Date	(Mark (X) One) ~ Residential ~ Construction
------	---

Project Information (only one project and one county per request form please)

County of Project	Project Name	This form MUST be filled out COMPETELY & CORRECTLY for us to process your request. Forms not completed correctly will be RETURNED TO THE SENDER .
Site Address	City	

Owner/Public Authority	Prevailing Wage Rates can be obtained on the website www.com.ohio.gov
------------------------	---

Address	Telephone Number	ODOC-DIC-WAGE & HOUR DATE STAMP
City	Zip Code	
PW Coordinator	Telephone Number	
Issuing Authority of Bonds	Type of Financing	

Estimated Total Overall Project Cost ~ New Construction ~ "Old" Construction * A copy of this form will be returned to you with your wage rates. You must send that copy to us with your bid tabulations once the contract has been awarded.	PLEASE MAIL THIS REQUEST TO: Ohio Department of Commerce Division of Industrial Compliance Bureau of Wage & Hour Administration 6606 Tussing Road, PO Box 4009 Reynoldsburg, Ohio 43068-9009 PHONE: (614) 644-2239 FAX: (614) 728-8639
---	---

Expected Date of Contract Award	PHONE: (614) 644-2239 FAX: (614) 728-8639
Projected Completion Date	

Send Wage Rates to: (contractors are charged \$5.00 per county)	ODOC-DIC-W&H DATE STAMP (bid tab)
---	--

~ Mail ~ Pick Up ~ Federal Express Account Number	
---	--

Name	Company or Public Authority	
Address		

City	Zip	Telephone Number
------	-----	------------------

* "Old" construction is reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

INDUSTRIAL DEVELOPMENT BONDS

Bond Projects require the Public Authority to keep the following information on file			
1. Type of Bonds issued:	Amount:		
2. The total cost of the Project:			
3. The other type of financing involved in the project:			
4. Portion of the project being constructed with each type of financing:			
5. Are Prevailing Wage Rates being applied to all construction on the project: ~ Yes ~ No			
6. The name of the political subdivision who issued the bonds:			
7. When were the bonds issued:			
8. For what purpose were the bonds issued:			
9. Who handles the funds once the bonds are sold:			
10. Who is the lending institution that purchased the bonds:			
11. How are the funds to be paid out:			
12. When are the funds to be paid out:			
13. Who is the Bond Council:			
14. Who has been appointed as the Prevailing Coordinator:			
PWC Address:			
City:	OHIO	Zip:	Telephone #:
15. Obtain a copy of the inducement and other official documents for the issuance of the bonds.			



John R. Kasich
Governor

Jacqueline T. Williams
Director

PREVAILING WAGE GUIDELINES
FOR THE
PUBLIC AUTHORITIES
PW COORDINATOR

OHIO DEPARTMENT OF COMMERCE
Division of Industrial Compliance and Labor
Bureau of Wage and Hour Administration
6606 Tussing Road, PO Box 4009
Reynoldsburg, Ohio 43068-9009
Phone: 614-644-2239
Fax: 614-728-8639
www.com.ohio.gov
TTY/TDD: 1-800-750-0750

The Ohio Department of Commerce is an Equal Opportunity Employer and Service Provider

Prevailing Wage Coordinator Guidelines

For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

- A. Attend any pre-bid and/or pre-construction meetings.
 - 1. To explain the prevailing wage rate requirements.
 - 2. To explain the contractor's responsibilities.
- B. Set up and maintain files containing all contractors' and subcontractors' payroll reports, affidavits, and related documents. These files must be available for public inspection.
- C. Obtain from each contractor a list of their subcontractors' names, addresses, telephone numbers, and email addresses.
- D. Require each contractor and subcontractor to provide their project dates. This will be used to make a time schedule for receiving their certified payrolls.
- E. Obtain from each contractor, the name and address of their Bonding/Surety Company.
- F. Obtain from out-of-state corporations, the name and address of their Statutory Agent. (This agent must be located in the State of Ohio and registered with the Ohio Secretary of State.)
 - 1. Records made in connection with the public improvement must not be removed from the State of Ohio for the period of one year following the completion of the project.
- G. Supply contractors with any changes in the Prevailing Wage Rates.
- H. Within two weeks after the first pay, obtain a certified payroll report from each contractor. A certified report is one that is sworn to and signed by the contractor.
 - 1. If the job will exceed four months, all reports after the initial report can be filed once per month. (The initial report must be filed within two weeks.)
 - 2. If the job will last less than four months, all reports are to be filed weekly after the initial report.
- I. Establish and follow procedures to monitor compliance by contractors and subcontractors.
 - 1. Visit project to verify posting requirements and job classifications.
 - 2. Review certified payroll reports to ensure they are submitted in a timely fashion and complete with the following information for each employee:
 - a) Name, current address, and their social security number or last 4 when permitted
 - b) Classification (must be specific for laborers and operators, including level)
 - c) Hours worked on the project
 - d) Hourly rate
 - e) Fringe benefits, if applicable
 - f) Total hours worked for the week (all jobs)
 - g) Gross wages, all deductions, net pay
 - 3. Compare rates and fringes reported to rates in prevailing wage schedule.
- J. Upon completion of the project and prior to the final payment, require an affidavit of compliance from each contractor and subcontractor. **No public authority shall make final payment to any contractor or subcontractor unless the final affidavits have been filed by the respective contractor and subcontractor. (O.R.C. section 4115.07)**
- K. Report any non-compliance to Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage & Hour Administration. The PW complaint form and instructions can be obtained on the website www.com.ohio.gov.

RECORD OF THE CERTIFIED PAYROLL REPORTS RECEIVED

Project:		Number:
Contractor:		Phone #: Email:
General Contractor:	Prime Contractor:	Subcontractor:
Date work commenced:	Completed:	Final Affidavit:

Payroll	Payroll Date	Date Received		Payroll	Payroll Date	Date Received
1				33		
2				34		
3				35		
4				36		
5				37		
6				38		
7				39		
8				40		
9				41		
10				42		
11				43		
12				44		
13				45		
14				46		
15				47		
16				48		
17				49		
18				50		
19				51		
20				52		
21				53		
22				54		
23				55		
24				56		
25				57		
26				58		
27				59		
28				60		
29				61		
30				62		
31				63		
32				64		

EMPLOYEE VS. INDEPENDENT CONTRACTOR

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the employer have the right to control and direct worker?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the worker receive instructions about how and where the work is to be done instead of the employer merely specifying the desired result?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Is payment based on time spent rather than a set price for the work to be performed?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the worker devote virtually all his working time to the employer rather than offering services to the general public?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the worker performing services make their services available to the general public and/or other businesses?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Is there a continuing relationship between employer and worker?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Can the worker be discharged at will?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Did the employer train the worker for the job?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the employer have employees performing the same work as the independent contractor?

PREVAILING WAGE INVESTIGATION/EMPLOYEE INTERVIEW

Failure to complete this interview form may reduce our ability to recover back wages which may be owed to you.

Project:			Case #:	
Address:		City:		County:
Employee Name:		Last 4 digits of the SS#:		
Address:		City:	State:	Zip:
Telephone #: (Home)	(Work)	Email:	Best time to be reached:	
Another source by which we can contact you. (Someone not living at your address):				
Name:		Relationship:		Telephone #:
Contractor's Name:			Telephone #:	
Address:		City:	State:	Zip:
Date hired:	Date started on this project:		Approximate hours - Straight time:	Overtime:
Method of recording hours: ~ Time Card ~ Called into office		Recorded by: ~ Employee ~ Foreman		
Did you keep a personal record of your hours worked on this project? ~ Yes ~ No			Do you have check stubs? ~ Yes ~ No	
Did anyone else keep a personal record? ~ Yes ~ No		If yes, who:		
List your job classification(s):		~ Journeyman ~ Helper ~ Apprentice - Level		
List your specific job duties:		List tools/equipment used:		
Hourly rate of pay for this project:		Your regular rate of pay:		
Fringe benefits paid by contractor: ~ None ~ Health Insurance ~ Life Insurance ~ Pension ~ Bonus ~ Vacation - Amount _____ ~ Holidays - Amount _____ ~ Apprenticeship training ~ Profit Sharing ~ Other (list):				
Did you work overtime? ~ Yes ~ No		Were hours over 40 per week paid at time and one half? ~ Yes ~ No		
When is your pay day?		Method of payment: ~ Check ~ Cash ~ Direct Deposit		
List names of co-workers on this project:				
Comments:		Please provide a detailed list of the dates, times and hours worked within each classification that may apply to the work performed on a separate sheet.		
SIGNATURE AND NOTARY				
Affiant is further informed that Section 2921.13 of the Ohio Revised Code provides a penalty of a misdemeanor of the first degree and that prosecution will be pursued of those persons who "knowingly swear or affirm the truth of a false statement when ...the statement is sworn or affirmed before a notary public..." Sworn to before me and subscribed by the said:		I hereby certify that this is a true statement to the best of my knowledge and belief.		
_____		Signature _____ Date _____		
in my presence this _____ day of _____, 20_____		Return to: Ohio Department of Commerce Division of Industrial Compliance & Labor Bureau of Wage and Hour Administration 6606 Tussing Road P.O. Box 4009 Reynoldsburg, Ohio 43068-9009 (614) 644-2239 www.com.ohio.gov		
_____ Notary Public				
Signature of PW Coordinator:		Date:		

EMPLOYEE VS. INDEPENDENT CONTRACTOR-continued

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the worker perform services personally rather than delegating them to others?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the employer set a specific time when the individual services are to be performed?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Does the employer furnish the tools and materials used by the worker performing services?

EMPLOYEE ↔ YES NO ↔ INDEPENDENT CONTRACTOR

Is the employer assuming all the financial risk, rather than the worker making a significant financial investment in the job and having the opportunity to realize a profit or loss from the work?

EMPLOYEE ↔ NO YES ↔ INDEPENDENT CONTRACTOR

Does the individual performing the services publicly advertise these services in for example, the newspaper or yellow pages?

EMPLOYEE ↔ NO YES ↔ INDEPENDENT CONTRACTOR

Does the individual performing the services have a business license?

EMPLOYEE ↔ NO YES ↔ INDEPENDENT CONTRACTOR

Does the individual performing the services operate d.b.a. or under a trademark?



John R. Kasich
Governor

Jacqueline T. Williams
Director

PREVAILING WAGE GUIDE

FOR

CONTRACTORS

(Revised January 2016)

OHIO DEPARTMENT OF COMMERCE

Division of Industrial Compliance and Labor

Bureau of Wage and Hour Administration

6606 Tussing Road, PO Box 4009

Reynoldsburg, Ohio 43068-9009

Phone: 614-644-2239

Fax: 614-728-8639

www.com.ohio.gov

TTY/TDD: 1-800-750-0750

The Ohio Department of Commerce is an Equal Opportunity Employer and Service Provider

PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$250,000 for new construction or \$75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$88,495 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or \$26,514 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

- a) Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration
- b) Biennial adjustments to threshold levels are made according to the Construction Cost Index for Commercial Construction published by McGraw Hill's Engineering News Record.

Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- o Intentional failure to submit payroll reports as required or knowingly submitting false or erroneous reports.
- o Intentional misclassification of employees for the purpose of reducing wages.
- o Intentional misclassification of employees as independent contractors or as apprentices.
- o Intentional failure to pay the prevailing wage.
- o Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- o Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

- A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.
 1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.
 2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
 3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of

Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.

- B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.
1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
 2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.
- C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
 2. Payroll ledger/journals and canceled checks/check register.
 3. Fringe benefit records must include program, address, account number, & canceled checks.
 4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
 5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.
- D. Prevailing Wage Rate Schedule **must** be posted on the job site where it is accessible to all employees.
- E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.
- F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. **Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.**
- G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.
- H. Supply all subcontractors with the Prevailing Wage Rates and changes.
- I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
1. Employees' names, addresses, and social security numbers.
 - (a) Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
 2. Employees' work classification.
 - (a) Be specific about the laborers and/or operators (Group)
 - (b) For all apprentices, show level/year and percent of journeyman's rate
 3. Hours worked on the project for each employee.
 - (a) The number of hours worked in each day and the total number of hours worked each week.
 4. Hourly rate for each employee.
 - (a) The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.

(b) All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.

5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.

(a) When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.

(b) When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by **dividing the total yearly contribution by 2080.**

6. Gross amount earned on all projects during the pay period.

7. Total deductions from employee's wages.

8. Net amount paid.

J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.

K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

PREVAILING WAGE NOTIFICATION to EMPLOYEE

5.05...the contractor or subcontractor shall furnish each employee NOT covered by a collective bargaining agreement written notification of the job classification to which the employee is assigned, the prevailing wage determined to be applicable to that classification, separated into the hourly rate of pay and the fringe payments, and the identity of the prevailing wage coordinator appointed by the public authority. The contractor or subcontractor shall furnish the same notification to each affected employee any time the job classification of the employee is changed.

Project Name:		Job Number:
Contractor:		
Project Location:		
Prevailing Wage Coordinator	Employee	
Public Authority:	Name:	
Name of PWC:	Street:	
Street:	City:	
City:	State/Zip:	
State/Zip:	Phone:	Email:
Phone:	Last 4 Digits of SS #:	

You will be performing work on this project that falls under these classifications. You will be paid the appropriate rate for the type of work you are performing.

Classification:	Prevailing Wage Rate Total Package:	Minus your fringe benefits *:	Your hourly base rate and overtime:
			/
			/
			/
			/
			/
			/
			/

Hourly fringe benefits paid on your behalf by this company (Yearly amount the company pays divided by 2080):

Fringe	Amount	Fringe	Amount
Health Insurance		Vacation	
Life Insurance		Holiday	
Pension		Sick Pay	
Other (Specify)		Training	
Other (Specify)		Total Hourly Fringes *	

Contractor's Signature:	Date:
Employee's Signature:	Date:

INSTRUCTIONS FOR PREPARING CERTIFIED PAYROLL REPORTS

General:

Contractors and subcontractors are required by law to submit certified payroll reports for work on projects covered by Ohio's Prevailing Wage Law. This form meets the reporting requirements established by Ohio Revised Code Chapter 4115. The use of this form is not mandatory; employers may submit their own forms provided that all of the required information is included. This form may be reproduced, or additional copies obtained from:

Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Wage and Hour Administration
6606 Tussing Road, P.O. Box 4009
Reynoldsburg, Ohio 43068-9009
614-644-2239
www.com.ohio.gov

Certified Payroll Heading:

Employer name and address: Company's full name and address...Indicate if the company is a subcontractor.

Subcontractor: Check and list the name of the General Contractor or Prime.

Project: Name and location of the project, including county.

Contracting Public Authority: Name and address of the contracting public authority... (Owner of the project);

Week Ending: Month, day, and year for last day of reporting period.

Payroll #: Indicates first, second, third, etc. payroll filed by the company for the project.

Page indicator: number of pages included in the report.

Project Number: Determined by the public authority...If there is no number leave blank.

Payroll Information by column:

1. **Employee Name, Address and Social Security number:** This information must be provided for all employees that perform physical labor on the project. The Social Security number is required; the last four digits may be permitted by the public authority. Corporate officers, partners, and salaried employees are considered employees and must be paid the prevailing rate. Individual sole proprietors do not have to pay themselves prevailing rate but must report their hours on the project.
2. **Work Class:** List classification of work actually performed by employee. If unsure of work classification, consult the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration. Employees working more than one classification should have separate line entries for each classification. Indicate what year/level for Apprentices. Be specific when using laborer and operator classifications; for example, Backhoe Operator or Asphalt Laborer or by "Group".
3. **Hours Worked, Day & Date:** In the first row of column 3, enter days of the company's pay period for example; M T W TH F S S. The second row is for the date that corresponds with each day for the pay period. In the employee information section, enter the number of hours worked on the prevailing wage project and which day the hours were worked. Separate rows are labeled for (ST) straight time hours and (OT) overtime hours. All hours worked after 40, must be paid at the appropriate overtime rate.
4. **Project Total Hours:** Total the hours entered for pay period.
5. **Base Rate:** Enter actual rate per hour paid to the employee. The overtime hourly rate is time and one-half the base rate listed in the prevailing wage schedule plus fringe benefits at straight time rate. The prevailing wage schedule lists the base rate plus fringe benefit amounts. These amounts added together equal the total prevailing wage rate. Employers must pay this total amount in one of three ways.
 - 1) Total rate may be paid in entirety in the base rate to the employee; in which case, the cash designation will be checked for fringe benefits.
 - 2) Total rate may be paid as listed in prevailing wage rate schedule with total fringe amounts paid approved plans.
 - 3) Total rate may be paid with a combination of base rate and fringe payments to approved plans in amounts other than those listed in schedule.
6. **Project Gross:** Enter total gross wages earned on the project for straight time and overtime. Project hours "X" base rate should equal project gross.
7. **Fringes:** If fringe benefits are paid in the hourly base rate, indicate this by marking the Cash space. If fringes benefits are paid to approved plans as listed in the prevailing wage rate schedule, mark the space Approved Plans. If fringe benefits are paid partially in the base rate and partially to approved plans, mark the space Cash & Approved Plans. List the hourly amount paid to approved plans for each fringe. If payments are not made on a per hour basis, *calculate the hourly fringe credit by dividing the yearly employer contribution by the lesser of: hours actually worked in the year (these must be documented) or 2080.* Fringe benefits include: Employer's share of health insurance, life insurance, retirement plan, bonus/profit sharing, sick pay, holiday pay, personal leave, vacation, and education/training programs. If unsure of a possible fringe benefit, contact the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration.
8. **Total Hours All Jobs:** Total all hours worked during the pay period including non-prevailing wage jobs.
9. **Total Gross All Jobs:** Gross amount earned in the pay period for all hours worked.
10. Self explanatory.
11. Self explanatory.

**FINAL
AFFIDAVIT OF COMPLIANCE
PREVAILING WAGES**

I, _____ do hereby certify
(Name of person signing affidavit) (Title)

that the wages paid to all employees of : _____
(Company name)

for all hours worked on project: _____
(Project name)

(Project location)

During the period from _____ to _____ are in compliance with
(Project Dates)

Prevailing Wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

(Signature of Officer or Agent)

(Print Name of Officer or Agent)

Sworn to and subscribed in my presence this _____ day of _____, 20_____.

(Notary Public)

The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.

of a crew per Article VIII paragraph 65, will not be subject the apprenticeship ratios in this collective bargaining agreement.

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

**Apprentices will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if they are required to have CDL.

Class 1 - Air Compressors on Steel Erection; Barrier Moving Machine; Boiler Operators, on Compressors or Generators, when mounted on a rig; Cableways, Combination Concrete mixers & Towers; Concrete Pumps; Concrete Plants (over 4 yd capacity); Cranes (all types, including Boom Trucks, Cherry Pickers); Derricks; Draglines, Dredgers (dipper, clam or suction); Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls, Helicopter Crew (Operator- hoist or winch); Hoes (all types); Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial - Type Tractors; Jet Engine Dryers (D8 or D9), Diesel Tractors; Locomotives (standard gage); Maintenance Operators (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic lifting and aligning device); Refrigerating Machines (freezer operation); Side Booms; Slip Form Pavers; Tower Dericks; Tree Shredders; Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators. Rough Terrain Fork-lift with Winch/Hoist; Compact Cranes, track rubber over 4,000 pound capacity, self-erecting cranes; stationary, track or truck (all configurations) Bucket trench machines (over 24 inches wide).

Class 2 - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or skid steer loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Endloaders; Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Maintenance Operators, Class B (Portage and Summit Counties only); Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Trench Machines (24inch wide and under); Vermeer Type Concrete saw. Material Transfer Equipment (Shuttle buggy) Asphalt; All rotomills,grinders and planers of all types. Horizontal Directional Drill (Over 50,000 ft.lbs.thrust and over)

Class 3 - A-Frames; Air Compressors, on tunnel work (low Pressure); Asphalt Plant Engineers; Bobcat-type and/or skid steer loader with or without attachments; Power Boilers (15 lbs pressure and over); Highway Drills (all types); Rollers, asphalt; Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rotator (lime-soil Stabilizer), Switch & Tie Tampers (without lifting and aligning device); Locomotives (narrow gage); Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Utilities Operators, (small equipment); Welding Machines; Material hoist/elevators. Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

Class 4 -Ballast Re-locator; Backfillers, Batch Plants; Bar and Joint Installing Machines; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yd and under); Conveyors (highway); Concrete Saws (multiple); Crushers; Deckhands; Farm type tractors, with attachments (highway), except masonry; Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway); Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers; Plant Mixers; Post Drivers; Post Hole Diggers (power auger); Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Tractors, pulling sheepsfoot rollers or graders; Steam Firemen; Vibratory Compactors, with integral power.

Class 5 - Compressors (portable, Sewer, Heavy and Highway); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters; Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalmen; Drum Fireman (in Asphalt Plant); Oil Heaters (Asphalt Plant); Tire Repairmen; VAC/ALLS; Fueling and greasing (plus \$3.00), compact cranes: track or rubber under 4,000 pounds.

Class 6 - Master Mechanic

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - Building Local 18 - Zone III

Change # : LCN01-2018fbLoc18zone3

Craft : Operating Engineer Effective Date : 07/05/2018 Last Posted : 07/05/2018

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Operator Class 1	\$35.89		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$51.04	\$68.98
Class 2	\$35.77		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$50.92	\$68.80
Class 3	\$34.73		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$49.88	\$67.24
Class 4	\$33.55		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.70	\$65.47
Class 5	\$28.09		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$43.24	\$57.28
Class 6	\$36.14		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$51.29	\$69.36
Class 7	\$36.39		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$51.54	\$69.73
Class 8	\$36.89		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$52.04	\$70.48
Class 9	\$37.14		\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$52.29	\$70.86
Apprentice	Percent											
1st Year	50.00	\$17.94	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$33.10	\$42.07
2nd Year	60.00	\$21.53	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$36.68	\$47.45
3rd Year	70.00	\$25.12	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$40.27	\$52.83
4th Year	80.00	\$28.71	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$43.86	\$58.22
Field Mechanic Trainee												
1st Year	50.00	\$17.94	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$33.10	\$42.07
2nd Year	60.00	\$21.53	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$36.68	\$47.45
3rd Year	70.00	\$25.12	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$40.27	\$52.83
4th Year	80.00	\$28.71	\$8.26	\$6.00	\$0.80	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$43.86	\$58.22

Special Calculation Note : Other: Education & Safety \$0.09

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

For every (3) Operating Engineer Journeymen employed by the company there may be employed ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER,

(1) Registered Apprentice or trainee Engineer through the referral when they are available. An apprentice, while employed as part of a crew per Article VIII, paragraph 77, will not be subject to the apprenticeship ratios in this collective bargaining agreement

CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note :

Details :

**Apprentices will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Class 1 - Barrier Moving Machine; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types) Derricks (all types); Draglines Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Gradalls; Helicopter Operators; hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Hydraulic Gantry (lift system); Laser Finishing Machines; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Engineers (Mechanic and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms, Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all) used on caissons for foundations and sub-structure work; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Tug Boats. Horizontal Directional Drill, Rough Terrain Fork-lift with Winch/Hoist, Laser Screed, and Like equipment; Compact Cranes, track or rubber over 4,000 pound capacity, self-erecting cranes; stationary, track or truck (all configurations) bucket trench machines (over 24 " wide).

Class 2 - Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs. Bulldozers; CMI type Equipment; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats; Vermeer Type Concrete Saw; All rotomills, grinders & planers of all types. Articulating/end dumps (minus \$4.00/hour from Class 2 rate)

Class 3 - A Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or skid steer loader with or without attachments; Boilers (15 lbs pressure and over); All

concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drillers - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled); Man lifts; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie Inserter/Remover; Rotator (Lime-Soil Stabilizer); Submersible Pumps (4 inches and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24 inches and under); Utility Operators; Material hoist/elevators.

Class 4 - Ballast Re-locator; Backfillers and Tampers; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Spreader; Conveyors, used for handling building materials; Concrete Mixers, one bag capacity (side loader); Concrete Mixers, capacity more than one bag; Crushers; Deck Hands; Drum Fireman (in Asphalt Plant); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators; Guniting Machines; Hydro-Seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2 inch discharge); Road Widening Trenchers; Rollers (except asphalt); All Concrete pumps (without Boom with 4 inch or smaller systems); Self-Propelled Power Spreaders; Concrete Spreaders; Self-Propelled Sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepfoot rollers or graders; VAC/ALLS; Vibratory Compactors, with integral power; Welder Operators.

Class 5 - Boilers (less than 15 lbs. pressure); Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalmen, Submersible Pumps (under 4 inch discharge). Directional Drill Locator and Allen Screed Concrete Paver. Fueling and greasing (plus \$3.00), compact cranes; track or rubber under 4,000 pounds.

Class 6 - Master Mechanic

Class 7 - Boom & Jib 150 - 180 feet

Class 8 - Boom & Jib 180 - 249 feet

Class 9 - Boom & Jib 250 - or over

DEFIANCE, DELAWARE, FAIRFIELD,
 FAYETTE, FRANKLIN, FULTON, GALLIA,
 GREENE, GUERNSEY, HAMILTON,
 HANCOCK, HARDIN, HARRISON, HENRY,
 HIGHLAND, HOCKING, HOLMES, JACKSON,
 JEFFERSON, KNOX, LAWRENCE, LICKING,
 LOGAN, MADISON, MARION, MEIGS,
 MERCER, MIAMI, MONROE,
 MONTGOMERY, MORGAN, MORROW,
 MUSKINGUM, NOBLE, PAULDING, PERRY,
 PICKAWAY, PIKE, PREBLE, PUTNAM,
 RICHLAND, ROSS, SCIOTO, SENECA,
 SHELBY, TUSCARAWAS, UNION, VAN
 WERT, VINTON, WARREN, WASHINGTON,
 WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note : Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

Details :

Group 1

Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, *Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

*Bridge Man will perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by members of the Laborers' International Union of North America."

Group 2

Asphalt Raker, Screwman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Striper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air), Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), ***Lead Abatement, Hazardous Waste (level C)

***Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

Group 3

Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarnner, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

Group 4

Miner, Welder, Gunite Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc.

The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

1 Journeyman to 1 Apprentice
3 Journeyman to 1 Apprentice

Special Jurisdictional Note :**Details :**

Note:

Group 1: Building & Common Laborer; All general laborers work including all forms of landscaping, Rough Rider - all pump's 4 inch or smaller, Small Pump Portable Generators-Bobcat to Cleanup, Firewatch and Monitor, (Safety Person)

Group 2: Asphalt Raker, Tamper, Smoother, Hand Air Pump, Hand air Tamper, Chisel, Power Tamper, Operator, Switch, Assemblies, Handling & Laying Precast Concrete Floors & Deck Tool Repairman.

Group 3: Concrete Specialist; Skid Steers (with attachments to perform Laborer's duties) Jack Hammer * Concrete Busterman, Barco Tamper Man, Power Georgia Buggy Man, Power Sweeper Man, Vibrator, Concrete Saw Man, Rail Spikers, Acetylene Burner, Pipelayers, Bos'n Cradleman, Bottom Man, Chipping Hammer Grade Checker, Radio Operator, Form Cleanout & blowout Man, Red Concrete Coloring Man (Electrical Safety)

Group 4: Mason Tender, Mortar Mixers & Scaffold Builders

Group 5: Fork Lift for Mason, all work involving Refractory Materials Including Demolition of Refractory Materials.
Asbestos Removal and Hazardous Waste Removal (handling, control, removal abatement, encapsulation or disposal of asbestos & hazardous waste),

Group 6: Gunnite Man, Sand Blaster, Concrete & Grout Pump & Hose Man, Blast Trac, Miners & Muckers, Free Air, Powderman or Blaster, Mortar or Gypsum Machineman, Welder, Scuba Diver.

Group 7: Watchman & Tool Checker/Toolroom Man

LOGAN, LORAIN, LUCAS, MADISON,
MAHONING, MARION, MEDINA, MEIGS,
MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM, RICHLAND,
ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, SUMMIT, TRUMBULL,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

HOLMES, HURON, JACKSON, JEFFERSON,
KNOX, LAKE, LAWRENCE, LICKING,
LOGAN, LORAIN, LUCAS, MADISON,
MAHONING, MARION, MEDINA, MEIGS,
MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM, RICHLAND,
ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, SUMMIT, TRUMBULL,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

1 Journeymen to 1 Apprentice
 2 Journeymen to 2 Apprentice
 10 Journeymen to 4 Apprentices

Jurisdiction (* denotes special jurisdictional note) :

ADAMS*, BROWN, BUTLER*, CLERMONT,
 CLINTON*, HAMILTON, HIGHLAND*,
 WARREN*

Special Jurisdictional Note : Adams County Twps included: Bratton, Scott, Winchester, Wayne. Butler County Twps included: Oxford, St. Clair, Fairfield, Morgan, Liberty, Union, Ross, Reily, Hanover. West Chester. In Clinton County, Manchester and South West Borrow. Highland County Twps included: Dotson, Salem, Clay, White Oak, Hamer, New Market, Concord, Jackson, Washington. Warren County Twps included: Harlan, Deerfield, Hamilton.

Details :

Structural Iron Work but not limited to:field fabrication, all loading to and including the erecting,rigging,assembly,dismantling, placing, temporary and permanent securing by any means of all structural iron,steel,ornamental lead,bronze,brass,copper,aluminum,glass all ferrous and non ferrous metal and composite material, precast prestressed and post-stressed concrete structures. Bridges and bridge rails,bridge viaducts,bucks bulkheads,bumper and bumper post,canopies and unistrut canopies,corrugated ferrous and non ferrous sheets when attached to steel frames,columns,beams,bar-joists,trusses,grinders,roof decking,electrical supports,elevator cars,elevator fronts and enclosures,erection of steel towers,flag poles, gymnasium equipment,stadium and arena seating,jail cell work,jail cell beds,benches,bunks,chairs,tables,mirrors,jail cell access doors,rigging and installation of machinery and equipment(erecting,aligning,anchoring and dismantling, erection and dismantling of tower cranes,derrick monorail systems, Chicago booms,overhead cranes,gantries,material and personnel hoists,tanks,hoppers and conveyors. All pre-engineered metal buildings and their entirety including siding,roofing, gutters, downspouts and erection of all.

Ornamental Iron Work but not limited to:all work in connection with field fabrication,handling including loading/off loading,sorting,cutting,fastening,anchoring,bending,hoisting,placing,burning,welding,and tying,dismantling of all materials used in miscellaneous iron or steel, for stairs,hand railings,rolling doors, rolling gates,rolling shutters,fence,windows,curtain wall,erection and welding of all metal, sash,architectural and ornamental treatments, but not necessarily limited to all sizes and types of ornamental,steel iron,lead,bronze,brass,copper,aluminum,all ferrous and non ferrous metals and composite materials

Fence Erector Iron Worker but not limited to: All work in connection with the field fabrication and erection of chain link fence,which includes but not limited to the loading and of the fence fabric and posts also the installation of the above.

MERCER*, MIAMI, MONTGOMERY,
PREBLE, SHELBY, VAN WERT*, WARREN*

Special Jurisdictional Note : Allen County Twps included are: Auglaize, Perry, Shawnee, Amanda, Spencer, Marion, Sugar Creek, American, Bath, Jackson. Butler County Twps included are: Milford, Wayne, Madison, Lemon. Champaign Cnty Twps included are: Union, Urbana, Jackson, Concord, Salem, Mad River, Johnson, Harrison, Adams. Fayette County Twps included are: Green, Jasper, Concord, Jefferson. Hardin County Twps included are: Round Head, Marion, Liberty. Highland County Twps included are: Fairfield, Penn, Union, Marshall, Liberty, Paint, Brush Creek. Logan County Twps included are: Richland, Stokes, Bloomfield, Washington, Harrison, McArthur, Lake, Liberty, Pleasant, Miami. Madison County Twps included are: Stokes. Mercer County Twps included are: Dublin, Washington, Jefferson, Recovery, Gibson, Union, Liberty, Butler, Granville, Center, Hopewell, Franklin, Marion. VanWert County Twps included are: Jennings. Warren County Twps included are: Franklin, Clear Creek, Turtle Creek, Wayne, Massie, Washington, Salem, Union.

Details :

Structural Iron Work but not limited to:field fabrication, all loading to and including the erecting,rigging,assembly,dismantling, placing, temporary and permanent securing by any means of all structural iron,steel,ornamental lead,bronze,brass,copper,aluminum,glass all ferrous and non ferrous metal and composite material, precast prestressed and post-stressed concrete structures. Bridges and bridge rails,bridge viaducts,bucks bulkheads,bumper and bumper post,canopies and unistrut canopies,corrugated ferrous and non ferrous sheets when attached to steel frames,columns,beams,bar-joists,trusses,grinders,roof decking,electrical supports,elevator cars,elevator fronts and enclosures,erection of steel towers,flag poles, gymnasium equipment,stadium and arena seating,jail cell work,jail cell beds,benches,bunks,chairs,tables,mirrors,jail cell access doors,rigging and installation of machinery and equipment(erecting,aligning,anchoring and dismantling, erection and dismantling of tower cranes,derrick monorail systems, Chicago booms,overhead cranes,gantries,material and personnel hoists,tanks,hoppers and conveyors. All pre-engineered metal buildings and their entirety including siding,roofing, gutters, downspouts and erection of all.

Ornamental Iron Work but not limited to:all work in connection with field fabrication,handling including loading/off loading,sorting,cutting,fastening,anchoring,bending,hoisting,placing,burning,welding,and tying,dismantling of all materials used in miscellaneous iron or steel, for stairs,hand railings,rolling doors, rolling gates,rolling shutters,fence, windows,curtain wall,erection and welding of all metal, sash,architectural and ornamental treatments, but not necessarily limited to all sizes and types of ornamental,steel iron,lead,bronze,brass,copper,aluminum,all ferrous and non ferrous metals and composite materials

Fence Erector Iron Worker but not limited to: All work in connection with the field fabrication and erection of chain link fence,which includes but not limited to the loading and of the fence fabric and posts also the installation of the above.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Millwright Local 1090 SW Zone I

Change # : LCN01-2018fbLoc1066

Craft : Carpenter Effective Date : 10/17/2018 Last Posted : 10/17/2018

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter Millwright	\$30.48		\$7.17	\$6.95	\$0.44	\$0.00	\$6.36	\$0.25	\$0.00	\$0.00	\$51.65	\$66.89
Apprentice	Percent											
1st 6 months	60.00	\$18.29	\$7.17	\$4.27	\$0.44	\$0.00	\$3.82	\$0.25	\$0.00	\$0.00	\$34.24	\$43.38
2nd 6 months	65.00	\$19.81	\$7.17	\$4.61	\$0.44	\$0.00	\$4.13	\$0.25	\$0.00	\$0.00	\$36.41	\$46.32
3rd 6 months	70.00	\$21.34	\$7.17	\$4.94	\$0.44	\$0.00	\$4.45	\$0.25	\$0.00	\$0.00	\$38.59	\$49.25
4th 6 months	75.00	\$22.86	\$7.17	\$5.28	\$0.44	\$0.00	\$4.77	\$0.25	\$0.00	\$0.00	\$40.77	\$52.20
5th 6 months	80.00	\$24.38	\$7.17	\$5.61	\$0.44	\$0.00	\$5.09	\$0.25	\$0.00	\$0.00	\$42.94	\$55.14
6th 6 months	85.00	\$25.91	\$7.17	\$5.95	\$0.44	\$0.00	\$5.41	\$0.25	\$0.00	\$0.00	\$45.13	\$58.08
7th 6 months	90.00	\$27.43	\$7.17	\$6.28	\$0.44	\$0.00	\$5.72	\$0.25	\$0.00	\$0.00	\$47.29	\$61.01
8th 6 months	95.00	\$28.96	\$7.17	\$6.62	\$0.44	\$0.00	\$6.04	\$0.25	\$0.00	\$0.00	\$49.48	\$63.95

Special Calculation Note : Other (\$0.25) \$0.10 National Fund, \$0.10. Drug Safety Program \$0.10 and National Millwright Fund \$0.05

Ratio :

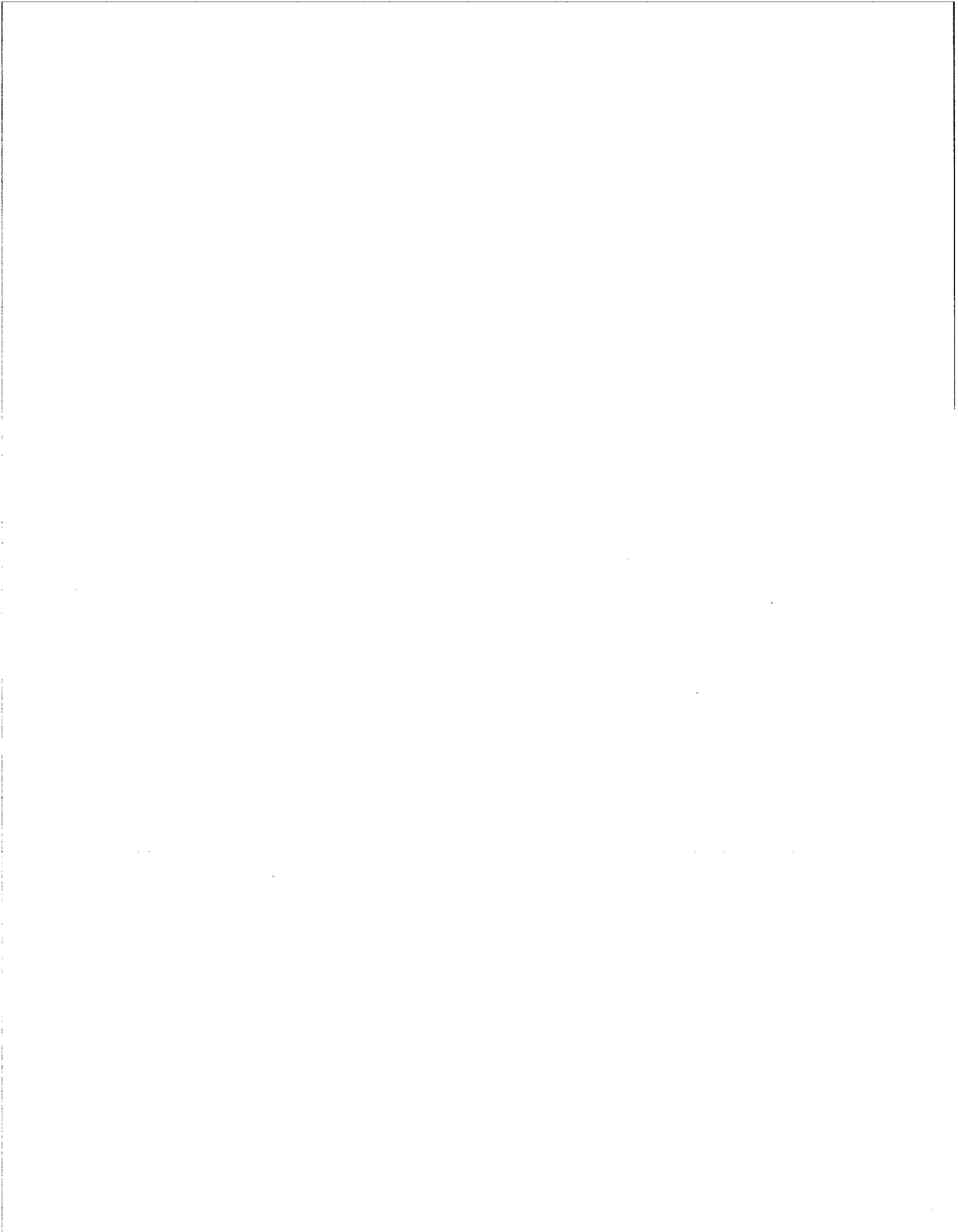
3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CLERMONT, CLINTON, HAMILTON, WARREN

Special Jurisdictional Note :

Details :



Special Jurisdictional Note :

Details :

1 Journeyman to 1 Apprentice
3 Journeyman to 1 Apprentice
5 Journeyman to 1 Apprentice

Special Jurisdictional Note :**Details :**

Carpenter duties shall include but not limited to: Pile driving, milling, fashioning, joining, assembling, erecting, fastening, or dismantling of all material of wood, plastic, metal, fiber, cork, and composition, and all other substitute materials: pile driving, cutting, fitting, and placing of lagging, and the handling, cleaning, erecting, installing, and dismantling of machinery, equipment, and erecting pre-engineered metal buildings.

Pile Drivers work but not limited to: unloading, assembling, erection, repairs, operation, signaling, dismantling, and reloading all equipment that is used for pile driving including pile butts. pile butts is defined as sheeting or scrap piling. Underwater work that may be required in connection with the installation of piling. The diver and his tender work as a team and shall arrive at their own financial arrangements with the contractor. Any configuration of wood, steel, concrete, or composite that is jetted, driven, or vibrated onto the ground by conventional pile driving equipment for the purpose of supporting a future load that may be permanent or temporary.

Driving bracing, plumbing, cutting off and capping of all piling whether wood, metal, pipe piling or composite. loading, unloading, erecting, framing, dismantling, moving, and handling of pile driving equipment. piling used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, and the erection of all sea walls and breakwaters. All underwater and marine work on bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed.

Rate shall include carpenters, acoustic, and ceiling installers, drywall installers, pile drivers, and floorlayers.



Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Floorlayer SW District G

Change # : LCR01-2018fbLocSWDayton

Craft : Carpenter Effective Date : 10/10/2018 Last Posted : 10/10/2018

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter Floorlayer	\$25.16		\$7.11	\$6.95	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$40.63	\$53.21
Apprentice	Percent											
1st 3 months	50.00	\$12.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.58	\$18.87
2nd 3 months	50.00	\$12.58	\$6.65	\$0.00	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$20.64	\$26.93
2nd 6 months	55.00	\$13.84	\$6.65	\$0.00	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$21.90	\$28.82
3rd 6 months	60.00	\$15.10	\$6.65	\$0.00	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$23.16	\$30.70
4th 6 months	65.00	\$16.35	\$6.65	\$0.00	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$24.41	\$32.59
5th 6 months	70.00	\$17.61	\$6.65	\$6.95	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$32.62	\$41.43
6th 6 months	75.00	\$18.87	\$6.65	\$6.95	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$33.88	\$43.32
7th 6 months	80.00	\$20.13	\$6.65	\$6.95	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$35.14	\$45.20
8th 6 months	85.00	\$21.39	\$6.65	\$6.95	\$0.29	\$0.00	\$1.00	\$0.12	\$0.00	\$0.00	\$36.40	\$47.09

Special Calculation Note : Other for \$0.12 is for UBC National Fund.

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY, WARREN

Special Jurisdictional Note :

Details :

Scope of work shall include, but not be limited to: receiving,unloading,handling,distribution and installation of all carpeting materials,carpet padding or matting materials and all resilient materials whether for use on walls,

floors, counter, sink, table and all preparation work necessary in connection therewith, including sanding work. the installation of nonstructural under-layment and the work of removing, cleaning waxing of any of the above. Carpeting shall include any floor covering composed of either natural or synthetic fibers that are made in breadths to be sewed, fastened or directly glued to floors or over cushioning sound-proofing materials. Resilient Floors shall consist of and include the laying of all special designs of wood, wood block, wood composition, cork, linoleum, asphalt, mastic, plastic, rubber tile, whether nailed or glued.

MONTGOMERY, PREBLE, SHELBY,
WARREN**Special Jurisdictional Note :****Details :**

Scope of work shall include, but not be limited to: receiving,unloading,handling,distribution and installation of all carpeting materials,carpet padding or matting materials and all resilient materials whether for use on walls, floors,counter, sink,table and all preparation work necessary in connection therewith, including sanding work. the installation of nonstructural under-layment and the work of removing, cleaning waxing of any of the above. Carpeting shall include any floor covering composed of either natural or synthetic fibers that are made in breadths to be sewed, fastened or directly glued to floors or over cushioning sound-proofing materials.Resilient Floors shall consist of and include the laying of all special designs of wood,wood block, wood composition, cork, linoleum, asphalt, mastic, plastic, rubber tile,whether nailed or glued.

1 Journeymen to 1 Apprentice

BROWN, BUTLER, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, DARKE, GREENE,
HAMILTON, LOGAN, MIAMI,
MONTGOMERY, PREBLE, SHELBY,
WARREN

An employer shall have the right to employ one (1) Apprentice for one (1) Journeyman Carpenter in its employment for the first Apprentice employed, and 1 (1) Apprentice for two (2) Journeyman Carpenter for additional Apprentices employed.

Thereafter, every third additional carpenter hired shall be an apprentice, if available, and if practical for the type of work being performed.

Special Jurisdictional Note :**Details :**

Highway Construction, Airport Construction, Heavy Construction but not limited to: (tunnels,subways,drainage projects,flood control,reservoirs). Railroad Construction,Sewer Waterworks & Utility Construction but not limited to: (storm sewers, waterlines, gaslines). Industrial & Building Site, Power Plant, Amusement Park, Athletic Stadium Site, Sewer and Water Plants. When the Contractor furnishes the necessary underwater gear for the Diver, the Diver shall be paid one and one half (1&1/2) times the journeyman rate for the time spent in the water.

3 Journeymen to 1 Apprentice
per company/project

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

Apprentice	Percent											
First 6 months	80.00	\$21.53	\$7.00	\$7.30	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.03	\$46.79
7-12 months	85.00	\$22.87	\$7.00	\$7.30	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.37	\$48.81
13-18 months	90.00	\$24.22	\$7.00	\$7.30	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.72	\$50.83
19-24 months	95.00	\$25.56	\$7.00	\$7.30	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.06	\$52.85
25-30 months	100.00	\$26.91	\$7.00	\$7.30	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.41	\$54.87

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice
per company/project

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

**SECTION 00700 – STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION
CONTRACT**

PART 1 GENERAL

1.01 GENERAL CONDITIONS

The Warren County Water and Sewer Department has adopted the *Standard General Conditions of the Construction Contract* prepared by the Engineers Joint Contract Documents Committee and issued and published jointly by the American Consulting Engineers Council, the National Society of Professional Engineers, and the American Society of Civil Engineers. This document, contained herein, shall be made part of the Contract and shall be used during the performance of the work.

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 Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

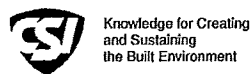
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The Associated General Contractors of America



Construction Specifications Institute

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American Society of Civil Engineers
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 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 EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

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's 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.A 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. The General Requirements pertain to all sections 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 in connection with the Work.

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. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *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.

39. *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.

40. *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.

41. *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.

42. *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.

43. *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.

44. *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.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *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 any Subcontractor.

49. *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.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *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.

52. *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 following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 which 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*

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.

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 may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended 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, or Engineer, or any of, their Related Entities, 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 may discover 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 any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 knew or reasonably should have known 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, code, or instruction (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 or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer's consultants, including electronic media editions; or

2. reuse any of 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 adaption by Engineer.

B. The prohibition 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. Copies of data furnished by Owner or Engineer to Contractor or 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 of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities 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 at or contiguous to the Site 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, Owner and Engineer, and any of their Related Entities 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.

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; 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: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general 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 Related Entities 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.

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 to Contractor written notice:

(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, 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 4.06G 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, 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 current 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 must be accompanied by a certified copy of the agent's authority to act.

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 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 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.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other 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, include as additional insured (subject to any customary exclu-

sion 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, 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 completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. 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);

6. 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

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. 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, 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 an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, 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 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 additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery 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, 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 an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with 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 additional insured 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 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 to be listed as insureds or additional insureds (and the officers, directors, 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 additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, 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 to be listed as insured or additional insured (and the officers, directors, 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, 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, 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 insureds, 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. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

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,

3) it has a proven record of performance and availability of responsive service; and

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 that 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 in 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 or not 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 or not 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;

4) and 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 either a Change Order for a substitute or 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

item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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 anything in the Contract Documents 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 an additional insured 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, and Engineer,, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 primary 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, 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. 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. 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 , 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).

D. 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 acceptable 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*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

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 determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have 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.

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 Drawing's 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 Related Entities 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, 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 respective consultants, agents, officers, directors, partners, or employees 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, 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 via 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, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall 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 their work and will only cut or alter their 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 actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's 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 in respect of 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 in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in 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 in 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. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

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 and will not be changed without written consent of Owner and Engineer.

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 believe 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.

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.B.

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.

A. If notice 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) is required by the provisions of any bond to be given to a surety, 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 Time 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 include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. 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, 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, expresses, 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 and 11.01.B.

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 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 Paragraph 12.01.C.2.a 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 the Related Entities of each of them 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. All 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, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site 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 said 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, it must, if requested by Engineer, be uncovered 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 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 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 on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to 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. that 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 corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined 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.

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 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 will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue

a certificate of Substantial Completion 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.7;

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 or Owner's property might in any way be responsible 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 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 their 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 -- PERMITS



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

August 8, 2018

Regulatory Division
North Branch
LRH-2018-393-LMR-Little Miami River

PROVISIONAL NATIONWIDE PERMIT 12 VERIFICATION

Mr. Chris Brausch
Warren County Water and Sewer Department
PO Box 530
406 Justice Drive
Lebanon, Ohio 45036

Dear Mr. Brausch:

I refer to your Pre-Construction Notification (PCN) received in this office on May 11, 2018, with supplemental information provided on June 25, 2018, concerning the proposal to discharge dredged and/or fill material into approximately 154 linear feet (0.01 acre) of four (4) streams and conduct work under a section of the Little Miami River, in association with the installation of the Lower Springboro Road Water Main Project. The proposed 3.5 mile long project corridor is located along the existing road right-of-way (ROW), beginning in the Village of Corwin (39.525426, -84.078685) and ending east of the intersection of East Lower Springboro Road and Township Line Road (39.523729, -84.136624), in Wayne Township, Warren County, Ohio. The Little Miami River is a navigable water (TNW) of the United States (U.S.). Your PCN has been assigned the following file number: LRH-2018-393-LMR-Little Miami River. Please reference this number on all future correspondence related to this project.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a Department of the Army (DA) permit be obtained prior to discharging dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The proposed activities, as described in your DA application and supplemental information, have been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, and other information available to us, it has been determined that this project will involve the discharge of dredged and/or fill material into waters of the United States at four (4) separate and distant locations and is subject to the requirements of Section 404. In addition, this project will involve work under a navigable water (Stream 2, Little Miami River) and is subject to the requirements of Section 10.

In the submitted PCN materials received in this office on May 11, 2018, with supplemental information provided on June 25, 2018, you have requested a DA authorization for the discharge of dredged and/or fill material into approximately 154 linear feet (0.01 acre) of four (4) streams (Streams 3-6) and work under a section of the Little Miami River (Stream 2) in order to install a 10-inch waterline to provide potable water from Warren County's Franklin Clearcreek Water Treatment Plant to the Villages of Corwin, and Harveysburg, Wayne Township, Massie Township, and Caesar Creek Lake. Each regulated activity is described in the enclosed Table 1. All work will be conducted in accordance with the drawings titled *East Lower Springboro Road Water Main Extension Warren County Water & Sewer Department Plan and Profile*, prepared by Jones Warner Consultants, Inc., and submitted with the PCN materials.

It has been determined that each single and complete project meets the criteria for Nationwide Permit (NWP) No. 12 (enclosed) under the January 6, 2017 Federal Register, Issuance and Reissuance of NWPs (82 FR 1860) provided you comply with all terms and conditions of the enclosed material and the enclosed special conditions.

An individual Section 401 Water Quality Certification (401 WQC) or a waiver must be obtained from the Ohio Environmental Protection Agency (Ohio EPA) to validate this NWP verification. **No work in waters of the United States in association with this project may commence until you receive the required 401 WQC (or waiver) from the Ohio EPA.** The Ohio EPA may be contacted at:

Ohio EPA, Division of Surface Water
Lazarus Government Center
50 West Town Street, Suite 700
Columbus, Ohio 43215

Once you have successfully completed the 401 WQC process, you must forward a copy of the project specific 401 WQC or waiver to this office (the Corps office address is provided in the top margin of the first page of this correspondence). If your project is modified during the Ohio EPA's 401 WQC process, you must contact this office to determine if the modified project is still authorized by the enclosed NWP or if a new PCN must be submitted to this office. If the project remains unchanged it is not necessary to contact this office for re-verification of your project and you may commence work.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. All of the existing NWPs are scheduled to be modified, reissued, or revoked on March 18, 2022. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 18, 2022, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWP and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Laurie Moore at 513-825-1901, by mail at the above address, or by email at laurie.a.moore@usace.army.mil.

Sincerely,

Teresa D. Spagna
Chief, North Branch

Enclosures

cc:

Jeffrey Boyles, Ohio Environmental Protection Agency – via email

Table 1. Authorized Activities associated with the Construction of the Lower Springboro Road Water Main Project (LRH-2018-393-LMR).					
Single and Complete Crossing	Stream	Latitude, Longitude	Crossing Type	Flow Regime	Fill Length (feet)
Crossing 1	Stream 2 (Little Miami River)	39.516231, -84.093261	Temporary Horizontal Directional Drilling (HDD)	Perennial	0
Crossing 2	Stream 3 (UT Newmans Run)	39.517993, -84.099565	Temporary Open Cut	Intermittent	31
Crossing 3	Stream 4 (UT Newmans Run)	39.521470, -84.115228	Temporary Open Cut	Ephemeral	54
Crossing 4	Stream 5 (Rattail Branch)	39.522539, -84.125393	Temporary Open Cut	Intermittent	31
Crossing 5	Stream 6 (Cooks Run)	39.522797, -84.127637	Temporary Open Cut	Intermittent	38

**SPECIAL CONDITIONS FOR THE NATIONWIDE PERMIT NO. 12 VERIFICATION
LOWER SPRINGBORO ROAD WATER MAIN PROJECT
WAYNE TOWNSHIP, WARREN COUNTY, OHIO
LRH- 2018-393-LMR-LITTLE MIAMI RIVER**

PAGE 1 OF 3

1. All work would be conducted in accordance with the drawings titled *East Lower Springboro Road Water Main Extention Warren County Water & Sewer Department Plan and Profile*, prepared by Jones Warner Consultants, Inc., and submitted with the PCN materials.
2. The permittee must obtain individual water quality certification (or a waiver) from the Ohio Environmental Protection Agency for the project. No work in waters of the United States in association with this project may commence until the required certification (or waiver) is obtained. All conditions attached to or contained within the certification are hereby incorporated by reference as being special conditions of the Corps Nationwide Permit 12 verification.
3. Enclosed is a copy of Nationwide Permit 12, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.
4. Upon completion of the activity authorized by this nationwide permit verification, the enclosed certification must be signed and returned to this office along with as-built drawings showing the location and configuration, as well as all pertinent dimensions and elevations of the activity authorized under this nationwide permit verification.
5. Construction activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities at the site.
6. No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.
7. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee must submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.

**SPECIAL CONDITIONS FOR THE NATIONWIDE PERMIT NO. 12 VERIFICATION
LOWER SPRINGBORO ROAD WATER MAIN PROJECT
WAYNE TOWNSHIP, WARREN COUNTY, OHIO
LRH- 2018-393-LMR-LITTLE MIAMI RIVER**

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8. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the activity authorized by this nationwide permit authorization, the permittee must cease all work in waters of the United States immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at 304-399-5210 and Ohio State Historic Preservation Office at 614-298-2000. The Corps will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultation is required under Executive Order 13175 and 36 CFR Part 800.
9. The project site lies within the range of the Indiana bat (*Myotis sodalis*), a federally-listed endangered species and the northern long-eared bat (*Myotis septentrionalis*), a federally-listed threatened species. Several factors have contributed to the two species decline, including habitat loss, fragmentation of habitat and the disease White Nose Syndrome. During winter, the two bat species hibernate in caves and abandoned mines. Suitable summer habitat for the Indiana bats and the northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. The permittee will preserve wooded/forested habitats exhibiting any of the characteristics listed above wherever possible. Should suitable habitat be present that cannot be saved during construction activities, any trees ≥ 3 inches dbh will only be cut between October 1 – March 31.
10. Section 7 obligations under Endangered Species Act must be reconsidered if new information reveals impacts of the project that may affect federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the United States Fish and Wildlife Service, or new species are listed or critical habitat designated that might be affected by the subject project.

**SPECIAL CONDITIONS FOR THE NATIONWIDE PERMIT NO. 12 VERIFICATION
LOWER SPRINGBORO ROAD WATER MAIN PROJECT
WAYNE TOWNSHIP, WARREN COUNTY, OHIO
LRH- 2018-393-LMR-LITTLE MIAMI RIVER**

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11. The water main will cross the Little Miami River, a National Wild and Scenic River, at Crossing 1. No work in association with the construction of Crossing 1 may commence until the permittee receives the required final Section 7(a) approval from the National Park Service.

Permit Number: LRH-2018-393-LMR-Little Miami River

Name of Permittee: Warren County Water and Sewer Department

Date of Issuance: August 8, 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Huntington District
U. S. Army Corps of Engineers
502 8th Street
Huntington, West Virginia 25701-2070
Attn: RD-N

Please note that your permitted activity is subject to a compliance inspection by an U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

PM: Laurie Moore

NATIONWIDE PERMITS FOR THE STATE OF OHIO

U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM REISSUANCE AND ISSUANCE OF NATIONWIDE PERMITS WITH OHIO EPA 401 WATER QUALITY CERTIFICATION AND OHIO DEPARTMENT OF NATURAL RESOURCES CONSISTENCY DETERMINATION UNDER THE COASTAL ZONE MANAGEMENT ACT

NWP 12

12. Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and

separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the

United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 6: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 7: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 8: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than

minimal individual and cumulative adverse environmental effects (see general condition 23).

Corps NWP 12 Specific Regional Conditions:

- a. PCN in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6 is required for all permanent conversion to scrub/shrub and forested wetlands and for greater than 1/10 acre of temporary discharge of dredged or fill material into all wetlands.
- b. The PCN must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
- c. Anti-seep collars or clay plugs must be utilized for trenching activities conducted in a wetland.
- d. This nationwide permit does not authorize the placement of manholes in wetlands.
- e. Excess material must be removed to upland areas immediately upon completion of construction.

Ohio 401 Certification Special Limitations and Conditions:

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Except for maintenance activities authorized under this nationwide permit, individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 1 or 2 wetlands when impacts exceed 0.50 acres;
 - b. streams located in ineligible areas as depicted in the GIS NWPs Stream Eligibility Map, Appendix C;
 - c. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - d. state wild and scenic rivers;
 - e. national wild and scenic rivers; and
 - f. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. Temporary or permanent impacts to category 3 wetlands are limited to less than 0.1 acres for activities involving the repair, maintenance, replacement, or safety upgrades to existing

infrastructure that meets the definition of public need. Ohio EPA will make the determination if a project meets public need during the ORAM verification process.

4. Temporary or permanent impacts as a result of stream crossings shall not exceed a total of three per stream mile per stream.
5. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.
6. All hydric soils up to 12 inches in depth within wetlands shall be stockpiled and replaced as the topmost backfill layer. Best management practices, such as silt fencing and soil stabilization, shall be implemented to reduce erosion and sediment run-off into adjacent wetlands.
7. Buried utility lines shall be installed at a 90-degree angle to the stream bank to the maximum extent practicable. When a 90-degree angle is not possible, the length of any buried utility line within any single water body shall not exceed twice the width of that water body at the location of the crossing.
8. The total width of any excavation, grading or mechanized clearing of vegetation and soil shall not exceed a maximum of 50 feet.

Ohio CZMA Federal Consistency Determination Condition:

For all activities located within or along the shore of Ohio's portion of Lake Erie, including Maumee Bay and Sandusky bay, all applicable authorizations under the Ohio Coastal Management Program must be obtained.

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for a NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity,

including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the

proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NHPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NHPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NHPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for

providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP

verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to

validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that

requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

- (3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
- (4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive,

site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that

the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Nationwide Permits Regional General Conditions

1. Nationwide Permits shall not authorize any activity which negatively impacts bogs and/or fens.
2. No nationwide permit may be used in Lake Erie for purposes of diverting water from the Great Lakes.
3. Nationwide Permits shall not authorize any activity which has an adverse impact on littoral transport within Lake Erie.
4. **In-Water Work Exclusion Dates:** Any regulated work associated with a nationwide permit cannot take place during the restricted period of the following Ohio Department of Natural Resources (ODNR) In-Water Work Restrictions, unless the applicant receives advanced written

approval from the ODNR and notifies the district engineer in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6 and receives written approval from the Corps:

Location	Restricted Period
Percid streams a	3/15 - 6/30
Salmonid streams b	9/15 - 6/30
Other streams c	4/15 - 6/30

a. **Great Miami River** (dam south of New Baltimore to mouth), **Hocking River** (falls at White's Mill to mouth), **Little Miami River** (dam at Waynesville to mouth), **Maumee River** (split dam at Grand Rapids to mouth), **Maumee Bay**, **Muskingum River** (Devola Dam No.2 north of Marietta to mouth), **Ohio Brush Creek** (S.R. 32 bridge to mouth), **Ohio River** (entire reach), **Portage River** (entire reach), **Sandusky River** (first dam to mouth), **Sandusky Bay**, **Scioto River** (S.R. 207 bridge north of Chillicothe to mouth), **Toussaint River** (entire reach).

b. **Arcola Creek** (entire reach), **Ashtabula River** (Hadlock Rd. to mouth), **Ashtabula Harbor**, **Aurora Branch** (Chagrin River (RM 0.38 to mouth)), **Big Creek** (Grand River (Girdled Road to mouth)); **Black River** (entire reach), **Chagrin River** (Chagrin Falls to mouth), **Cold Creek** (entire reach), **Conneaut Creek** (entire reach), **Conneaut Harbor**, **Corporation Creek** (Chagrin River (entire reach)), **Cowles Creek** (entire reach), **Ellison Creek** (Grand River (entire reach)), **Euclid Creek** (entire reach), **Grand River** (dam at Harpersfield Covered Bridge Park to mouth), **Fairport Harbor**, **Gulley Brook** (Chagrin River (entire reach)), **Huron River** (East Branch-West Branch confluence to mouth) **Indian Creek** (entire reach), **Kellogg Creek** (Grand River (entire reach)), **Mill Creek** (Grand River (entire reach)), **Paine Creek** (Grand River (Paine Falls to mouth)), **Rocky River** (East Branch-West Branch confluence to mouth), **Smokey Run** (Conneaut Creek (entire reach)), **Turkey Creek** (entire reach), **Vermilion River** (dam at Wakeman upstream of the US 20 & SR 60 bridge to mouth), **Ward Creek** (Chagrin River (entire reach)), **Wheeler Creek** (entire reach), **Whitman Creek** (entire reach).

c. **Exceptional Warmwater Habitat, Cold Water Habitat, Warmwater Habitat**, or streams with known occurrences of threatened and/or endangered (T&E) species. Includes **Lake Erie & bays** not listed above. Special conditions (such as occurrence of T & E species) may mandate local variation of restrictions.

Note 1: To determine the defined Aquatic Life Habitat designation for a stream and project segment, refer to: www.epa.ohio.gov/dsw/rules/3745_1.aspx

Note 2: This condition does not apply to Ohio Department of Transportation projects that are covered under the "Memorandum of Agreement Between The Ohio Department of Transportation, The Ohio Department of Natural Resources, and The United States Fish and Wildlife Service For Interagency Coordination For Projects Which Require Consultation Under the Endangered Species Act, Impact State Listed Species, and/or Modify Jurisdictional Waters 2016 Agreement Number: 19394".

5. **Waters of Special Concern:** PCN in accordance with Nationwide Permit General

Condition 32 and Regional General Condition 6 is required for regulated activities in the following resources:

- a. **Endangered Species and Threatened Species:** Due to the potential presence of federally threatened or endangered species or their habitats, Notification in accordance with Nationwide Permit General Condition 32, Regional General Condition 6 and General Condition 18 is required for any regulated activity in jurisdictional waters of the United States in Ohio that includes:
- the removal of trees providing suitable roosting, foraging, or traveling habitat for the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat. Suitable roosting, foraging, and traveling habitat is defined as forests, woodlots, fencerows comprised of trees, riparian forests, or other wooded corridors containing live trees and/or snags ≥ 3 inches diameter at breast height (dbh). Individual trees may be considered suitable habitat when they are ≥ 3 inches diameter at breast height (dbh) and have any exfoliating bark, cracks, crevices, hollows and/or cavities and are located within 1,000 feet (305 meters) of other forested/wooded habitat; or
 - regulated work in the waterway or township of the corresponding counties listed in Appendix 1.

***Note 1:** Applicants must ensure they are referencing the latest version of Appendix 1 by contacting their nearest Corps district office and visiting the online resources identified in General Condition 18(f) of these NWP's, since federally-listed species are continuously listed, proposed for listing, and/or de-listed.

***Note 2:** As mentioned in General Condition 18-Endangered Species, Federal Agencies should follow their own procedures for complying with the requirements of the ESA. Federal applicants, including applicants that have received federal funding, must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

***Note 3:** Suitable summer habitat for the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat.

***Note 4:** Appendix 1 is not applicable to the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat as both of these mammal species are known to occur throughout the State of Ohio. Appendix 1 column 1 is specific to federally-listed

endangered, threatened, or proposed federally-listed endangered or threatened aquatic species (i.e. mussels and fish). Appendix 1 column 2 is specific to federally-listed endangered, threatened, or proposed federally-listed endangered or threatened semi-aquatic and terrestrial species (i.e. insects, birds, reptiles, amphibians).

b. Critical Resource Waters:

- In Ohio, two areas have been designated critical habitat for the piping plover (*Charadrius melodus*) and are defined as lands 0.62 mile inland from normal high water line. Unit OH-1 extends from the mouth of Sawmill Creek to the western property boundary of Sheldon Marsh State Natural Area, Erie County, encompassing approximately 2.0 miles. Unit OH-2 extends from the eastern boundary line of Headland Dunes Nature Preserve to the western boundary of the Nature Preserve and Headland Dunes State Park, Lake County, encompassing approximately 0.5 mile.
- In Ohio, three areas have been designated critical habitat for the rabbitsfoot mussel (*Quadrula cylindrica cylindrica*). Unit RF26 includes 17.5 rkm (10.9 rmi) of the Walhonding River from the convergence of the Kokosing and Mohican Rivers downstream to Ohio Highway 60 near Warsaw, Coshocton County, Ohio. Unit RF27 includes 33.3 rkm (20.7 rmi) of Little Darby Creek from Ohio Highway 161 near Chuckery, Union County, Ohio, downstream to U.S. Highway 40 near West Jefferson, Madison County, Ohio. Unit RF29 includes 7.7 rkm (4.8 rmi) of Fish Creek from the Indiana and Ohio State line northwest of Edgerton, Ohio, downstream to its confluence with the St. Joseph's River north of Edgerton, Williams County, Ohio.
- Old Woman Creek National Estuarine Research Preserve.

c. **Oak Openings:** Wetland activities conducted in the Oak Openings Region of Northwest Ohio located in Lucas, Henry, and Fulton counties. For a map of the Oak Openings Region, visit <http://metroparkstoledo.com/media/2340/oak-openings-metropark.pdf>

6. **PCN Submittals:** In addition to the information required under Nationwide Permit General Condition 32, the following information must be provided with the PCN:

- a. **Illustrations/Drawings:** The illustrations/drawings must clearly depict the project boundaries and include all elements and phases of the proposed work, latitude and longitude of the project site, and the county where the proposed work would occur. Three types of illustrations or drawings are required to properly depict the work proposed to be undertaken. These illustrations or drawings are identified as a Vicinity Map (i.e. a location map such as a USGS topographical map), a Plan View and a Typical Cross-Section. Each illustration or drawing should identify the project, the applicant, and the type of illustration (vicinity map, plan view or cross-section). In addition, each illustration or drawing should be identified with a figure or attachment number.
- b. **United States Fish & Wildlife Service (USFWS):** Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General

Condition 18. Prior to submitting PCN, it is recommended that the applicant contact the USFWS, Ohio Ecological Services Field Office by phone at (614) 416-8993, by e-mail at ohio@fws.gov, or by writing to 4625 Morse Road, Suite 104, Columbus, Ohio 43230. The USFWS can provide information to assist in complying with Nationwide Permit General Condition 18 pertaining to endangered species and Nationwide Permit General Condition 19 pertaining to migratory birds and bald and golden eagles. The USFWS can also provide project recommendations specific to Federal Candidate species. Federal Candidate species are those for which the USFWS has sufficient information to propose them as endangered or threatened under the Endangered Species Act, but for which a listing proposal is precluded by other higher priority listing activities. All relevant information obtained from the USFWS should be submitted with the Notification.

- c. **Cultural Resources:** Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 20. The PCN should provide justified conclusions concerning whether or not the proposed activity could affect any historic properties listed, determined to be eligible, or which you have reason to believe may be eligible, for listing on the National Register of Historic Places (NRHP). This data will be used by the Corps to determine if the proposed activity has the potential to affect historic properties. Be advised that further effort may be required to take into account the effects the proposed activity may have on historic properties, as required by the National Historic Preservation Act of 1966. To ensure compliance with Nationwide Permit General Condition 20, the following basic project information is needed:

- A detailed description of the project site in its current condition (i.e. prior to construction activities) including information on the terrain and topography of the project site, the acreage of the project site, the proximity of the project site to major waterways, and any known disturbances within the project site. Photographs, keyed to mapping, are also needed which show the site conditions and all buildings or structures both within the project site and on adjacent parcels;
- A detailed description of past land uses in the project site. Particular attention should be given to past activities pertinent to the potential for historic properties to exist in the project area. Photographs and maps supporting past land uses should be provided as available;
- A detailed description of the construction activities proposed to take place on the project site and a comparison of how the site will look after completion of the project compared to how it looked before the project;
- Information regarding any past cultural resource studies or coordination pertinent to the project area, if available; and
- Any other data the applicant deems pertinent.

The applicant is encouraged to consult with the Ohio State Historic Preservation Office (OSHP) staff and professionals meeting the Professional Qualification Standards as set

forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) during this data gathering process. These professionals can assist with compiling the basic project information discussed above and should provide recommendations as to whether or not the proposed project has the potential to affect historic properties and if further effort is required or not required to identify historic properties or assess potential effects to historic properties. These professionals can also compile basic preliminary review information to submit to the district engineer. A preliminary resource review encompasses a search radius of two (2) miles, centered on the project area, and consists of the following resources:

- OSHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- Ohio Archaeological Inventory (OAI) files;
- Ohio Historic Inventory files (OHI);
- OSHPO Cultural Resources Management (CRM)/contract archaeology files;
- NRHP files including Historic Districts; and
- County atlases, histories and historic USGS 15' series topographic map(s).

As an alternative to submitting the information described above, the applicant may choose to complete the OSHPO Section 106 Review Project Summary Form or request comments from the OSHPO and the District Engineer on specific requirements appropriate to the particular circumstances of the project. Similarly, the applicant may choose to hire someone meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) to conduct what they recommend to be appropriate historic property identification efforts (e.g. archaeological survey and/or historic structure inventories) to expedite the review process. Be advised, undertaking identification efforts prior to consideration of the potential of the proposed activity to affect historic properties by the Corps is not without risk. It is possible that previous efforts could be determined insufficient or even potentially unnecessary once reviewed by the Corps and other consulting parties.

Upon receipt and review of the information listed above, the Corps will evaluate the submittal. If Corps determines the proposed activity has the potential to cause effects to a historic property, the Corps will seek consulting parties. In consultation with those parties, the Corps will scope appropriate historic property identification efforts and take into account the effect of the proposed activity on historic properties.

- d. **National Wild and Scenic Rivers:** Prior to submitting a PCN for work in a National Wild and Scenic River System, it is recommended that the applicant contact the National Park Service Regional Wild and Scenic Rivers Specialist, at the Midwest Regional Office, 601 Riverfront Drive, Omaha, Nebraska 68102, for assistance in complying with Nationwide Permit General Condition 17. Any determination provided by the National Park Service

should be submitted with the PCN. The following are components of the National Wild and Scenic River System and require PCN to the Corps:

Big and Little Darby Creeks (National Wild and Scenic River System):

- Big Darby Creek from Champaign-Union County line downstream to the Conrail railroad trestle and from the confluence with the Little Darby Creek downstream to the Scioto River.
- Little Darby Creek from the Lafayette-Plain City Road bridge downstream to within 0.8 mile from the confluence with Big Darby Creek.
- Total designation is approximately 82 miles.

Little Beaver Creek (National Wild and Scenic River System):

- Little Beaver Creek main stem, from the confluence of West Fork with Middle Fork near Williamsport to mouth.
- North Fork from confluence of Brush Run and North Fork to confluence of North Fork with main stem at Fredericktown.
- Middle Fork from vicinity of Co. Rd. 901 (Elkton Road) bridge crossing to confluence of Middle Fork with West Fork near Williamsport.
- West Fork from vicinity of Co. Rd. 914 (Y-Camp Road) bridge crossing east to confluence of West Fork with Middle Fork near Williamsport.
- Total designation is 33 miles.

Little Miami (National Wild and Scenic River System)

- Little Miami River - St. Rt. 72 at Clifton to the Ohio River
- Caesar Creek: lower two miles of Caesars Creek.
- Total designation is 94 miles.

- e. **Agency Coordination:** To assist in agency coordination, a complete compact disc (CD) copy shall be submitted for any PCN Package greater than 15 pages and/or includes maps, drawings, spreadsheets or other similar materials which are larger than 8.5 inches by 11 inches. All files saved on the CD shall be in .pdf format. A hard copy of any oversized maps, drawings, spreadsheets etc. in the PCN package shall be submitted and accompany the complete CD. An index or table of contents shall be provided and correspond with each file saved on the CD and/or within the PCN hard copy.

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	Waterway (aquatic species)	Township (semi-aquatic and terrestrial species)
Adams	Ohio River, Scioto Brush Creek, South Fork Scioto Brush Creek	Sprigg
Ashtabula	Grand River, Pymatuning Creek	All townships
Athens	Ohio River	Alexander, Ames, Athens, Bern, Dover, Lee, Trimble, Waterloo, York

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
Brown	East Fork Little Miami River, Ohio River	Huntington
Butler	Great Miami River	
Champaign		Mad River, Salem, Urbana
Clark	Little Miami River	All townships
Clermont	East Fork Little Miami River, Little Miami River, Ohio	Miami, Pierce, Union
Clinton		Chester
Columbiana		Butler, Hanover
Coshocton	Killbuck Creek, Muskingum River, Walhonding River	
Crawford		Auburn, Bucyrus, Cranberry
Cuyahoga		Within 3 miles of the shore of Lake Erie in Brooklyn, Cleveland, Dover, East Cleveland, Euclid, Newburgh, Rockport, West Park
Darke	Stillwater River	
Defiance	St. Joseph River	Milford
Delaware	Mill Creek, Olentangy River	
Erie		Margaretta; within 3 miles of the shore of Lake Erie in Berlin, Huron, Perkins, Sandusky, and Vermillion
Fairfield		Walnut
Fayette		Concord, Green, Jasper, Jefferson
Franklin	Big Darby Creek, Little Darby Creek, Scioto River	
Fulton	Swan Creek	
Gallia	Ohio River	
Greene	Little Miami River	Bath, Spring Valley
Hamilton	Great Miami River, Little Miami River, Ohio River	Colerain, Columbia, Crosby, Miami, Spencer, Sycamore, Symmes, Whitewater
Hancock	Blanchard River	
Hardin	Blanchard River	Blanchard, Hale, Jackson, Roundhead
Hocking		Benton, Green, Laurel, Marion, Starr, Ward, Washington
Holmes		All townships
Huron		New Haven, Richmond
Jackson		Liberty

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)

Lake	Grand River	Within 3 miles of the shore of Lake Erie in Madison, Mentor, Painesville, Willoughby
Lawrence	Ohio River	Decatur, Rome, Union
Licking		Union
Logan	Great Miami River	Perry, Stokes, Zane
Lorain		Within 3 miles of the shore of Lake Erie in Amherst, Avon, Black River, Brownhelm, and Sheffield
Lucas	Swan Creek	All townships
Madison	Big Darby Creek, Little Darby Creek	
Mahoning		All townships
Marion	Tymochtee Creek	Big Island, Bowling Green, Grand, Montgomery, Salt Rock
Meigs	Ohio River	
Miami	Great Miami River, Stillwater River	
Montgomery	Great Miami River, Stillwater River	Mad River
Morgan	Muskingum River	Deerfield, Homer, Malta, Marion, Penn, Union
Muskingum	Muskingum River	
Ottawa		All townships
Perry		Bearfield, Coal, Monroe, Pike, Pleasant, Salt Lick
Pickaway	Big Darby Creek, Scioto River	
Pike	Scioto River	
Portage		All townships
Preble		Gasper, Somers
Richland		Plymouth
Ross	Salt Creek, Scioto River	Colerain
Sandusky		All townships
Scioto	Ohio River, Scioto Brush Creek, Scioto River, South Fork Scioto Brush Creek	Nile, Rush, Union
Shelby	Great Miami River	
Summit		Tallmadge
Trumbull	Pymatuning Creek	All townships

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
Union	Big Darby Creek, Little Darby Creek, Mill Creek, Treacle Creek	
Vinton		Brown, Elk, Knox, Madison, Swan
Warren	Great Miami River, Little Miami River	Salem, Turtle Creek, Wayne
Washington	Muskingum River, Ohio River	
Wayne		All townships
Williams	Fish Creek, St. Joseph River	Bridgewater, Center, Florence, Jefferson, Madison, Northwest, St. Joseph, Superior
Wyandot	Tymochtee Creek	Marseilles, Mifflin, Pitt

General Limitations and Conditions for all Ohio EPA 401 Certified Nationwide Permits

A. CULVERTS

For intermittent and perennial streams:

1. When practicable, bottomless or buried culverts are required when culvert size is greater than 36" in diameter. This condition does not apply if the culverts have a gradient of greater than 1% grade or installed on bedrock. A buried culvert means that the bottom 10% by dimension shall be buried below the existing stream bed elevation.
2. The culvert shall be designed and sized to accommodate bankfull discharge and match the existing depth of flow to facilitate the passage of aquatic organisms.
3. When practicable, culverts shall be installed at the existing streambed slope, to allow for the natural movement of bedload and aquatic organisms.

B. BEST MANAGEMENT PRACTICES

1. Unless subject to a more specific storm water National Pollutant Discharge Elimination System (NPDES) permit, all best management practices for storm water management shall be designed and implemented in accordance with the most current edition of the NPDES construction general permit available at: <http://www.epa.ohio.gov/dsw/storm/index.aspx>, or any watershed specific construction general permit.
2. Sediment and erosion control measures and best management practices must be designed, installed, and maintained in effective operating condition at all times during construction activities as required by applicable NPDES permits. Proper maintenance ensures corrective measures will be implemented for failed controls within 48 hours of discovery.
3. For perennial and intermittent streams, in-stream sediment control measures shall

not be utilized, with the exception of turbidity curtains parallel to the stream bank, for the purpose of sediment collection. All sediment and erosion control measures shall be entirely removed and the natural grade of the site restored once construction is completed.

4. All avoided water resources and associated buffers/riparian areas shall be demarcated in the field and protected with suitable materials (e.g., silt fencing, snow fencing, signage, etc.) prior to site disturbance. These materials shall remain in place and be maintained throughout the construction process and shall be entirely removed once construction is completed.

5. Disturbance and removal of vegetation from the project construction area is to be avoided where possible and minimized to the maximum extent practicable. Entry to surface waters shall be through a single point of access to the maximum extent practicable to minimize disturbance to riparian habitat. Unavoidable temporary impacts to forested riparian habitat shall be restored as soon as practicable after in-water work is complete using tree and shrub species native to the specific ecoregion where the project is located.

6. All dredged material placed at an upland site shall be controlled so that sediment runoff to adjacent surface waters is minimized to the maximum extent practicable.

7. Straw bales shall not be used as a form of sediment control unless used in conjunction with another structural control such as silt fencing. Straw bales may be utilized for purposes of erosion control such as ditch checks.

8. Heavy equipment shall not be placed below the ordinary high water mark of any surface water, except when no other alternative is practicable.

9. Temporary fill for purposes of access or staging shall consist of suitable non-erodible material and shall be maintained to minimize erosion.

10. Chromated copper arsenate (CCA) and creosote treated lumber shall not be used in structures that come into contact with waters of the state.

11. All dewatering activities must be conducted in such a manner that does NOT result in a violation of water quality standards.

12. All areas of final grade must be protected from erosion within seven days.

13. All disturbed areas which remain dormant in excess of fourteen days must be protected from erosion within seven days from the last earth disturbing activity.

14. In the event of authorized in-stream activities, provisions must be established to redirect the stream flow around or through active areas of construction in a stabilized, non-erosive manner to the maximum extent possible.

C. MITIGATION

1. Compensatory mitigation is required for the discharge of dredged or fill material into wetlands for permanent impacts exceeding 0.10 acres.

2. When required, compensatory mitigation shall be provided in accordance with chapters 3745-1 and 3745-32 of the Ohio Administrative Code.

3. When compensatory mitigation will be provided wholly or in part at a mitigation bank or through an in-lieu fee program, credit purchase shall only be authorized at those banks or in-lieu fee programs approved by the Interagency Review Team (IRT) and have an active instrument signed by the director of Ohio EPA.

4. Compensatory mitigation for stream impacts, if required, shall be conducted in accordance with the requirements in the applicable Nationwide Permit.

D. DIRECTOR'S AUTHORIZATION

1. In accordance with the procedures outlined in Appendix A, Ohio EPA may grant coverage under this certification for any project that does not meet one or more of the terms and conditions for eligibility of this certification or where the district engineer has been granted authority to waive certain requirements. Coverage may be granted when Ohio EPA determines, consistent with the special limitations and conditions for each certification, and after considering comments received on the requested director's authorization, that a project will have such a minimal impact on water quality that an individual 401 WQC is not necessary provided all other terms and conditions of this certification have been met. If a director's authorization is not granted, an individual 401 WQC must be obtained. In no case may a director's authorization issued under this certification exceed an impact threshold authorized by the Corps' Nationwide Permit.

E. NOTIFICATION TO OHIO EPA

1. For any activity proposed to be authorized under NWPs 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 27, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 45, 49, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to the following resources:

- a. category 3 wetlands;
- b. ≥ 0.10 acres of wetland.

2. Notifications required by E.1 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix B.

3. For any activity proposed to be authorized under NWPs 4, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 29, 30, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 45, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map.

4. Notifications required by E.3 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix C.

5. When notification to Ohio EPA is required by conditions E.1 and E.3 above, the applicant shall not begin the activity until either:

a. He or she is notified in writing by Ohio EPA that the activity may proceed under the 401 WQC for the NWP; or

b. 45 calendar days have passed from Ohio EPA's receipt of the notification and the applicant has not received written notice from Ohio EPA that additional information is necessary or that an individual 401 WQC is required.

F. MISCELLANEOUS

1. Authorization under this certification does not relieve the certification holder from the responsibility of obtaining any other federal, state or local permits, approvals or authorizations.

2. For purposes of this certification the Corps' definition of single and complete linear and non-linear projects shall be applied to all conditions regarding impacts, mitigation, and director's authorizations. If a project includes impacts that are ineligible under this certification, an applicant must apply for an individual 401 WQC or a director's authorization for those impacts to resources that do not meet one or more of the terms and conditions within this certification.

3. For purposes of this certification temporary impact means temporary activities which facilitate the nature of the activity or aid in the access, staging, or development of construction that are short term in nature and which are expected, upon removal of the temporary impact, to result in the surface water returning to conditions which support pre-impact biological function with minimal or no human intervention within 12 months following the completion of the temporary impact. Examples of temporary impacts include, but are not limited to access roads, work pads, staging areas, and stream crossings, including utility corridors. Activities that result in a wetland conversion (e.g. forested to non-forested) are not considered temporary impacts.

4. In the event that the issuance of a nationwide permit by the Corps requires individual 401 WQC for an activity that constitutes an emergency as defined in 33 CFR 325.2(e)(4), the limitation and/or condition requiring the individual 401 WQC is not applicable and the project may proceed upon approval by the Corps provided all other terms of this certification, including mitigation, are met.

5. Representatives from Ohio EPA, Division of Surface Water will be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this certification. This includes, but is not limited to, access to and copies of any records that must be kept under the conditions of this certification; and, authorization to sample and/or monitor any discharge activity or mitigation site.

Ohio EPA will make a reasonable attempt to notify the applicant of its intention to inspect the site in advance of that inspection.

6. Impacts as referenced in this certification consist of waters of the state directly impacted by the placement of fill or dredged material.

7. In accordance with the procedures outlined in Appendix B, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to impact a wetland shall perform a wetland characterization analysis consistent with the Ohio Rapid Assessment Method (ORAM) to demonstrate wetland category for all projects requiring a PCN to the Corps or notification to Ohio EPA.

8. In accordance with the procedures outlined in Appendix C, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to impact a stream shall determine the eligibility of the stream proposed for impact for all projects requiring a PCN to the Corps or notification to Ohio EPA.

Appendix A Director's Authorization Process

1. To apply for a director's authorization for coverage under this certification, the applicant must provide to Ohio EPA the following:
 - a. A completed Director's Authorization Request Form available on the "Director's Authorization" tab located at: <http://www.epa.ohio.gov/dsw/401/permitting.aspx>;
 - b. A copy of the pre-construction notification submitted to the Corps including all attachments;
 - c. A copy of the provisional nationwide permit authorization letter issued by the Corps including all attachments and special conditions, if any;
 - d. A copy of the mitigation plan as approved by the Corps, if applicable;
 - e. A detailed description of the conditions within this certification that are not being met;
 - f. A detailed description of any NWP terms and conditions, including impact limits that the Corps district engineer has waived for the project, if applicable;
 - g. A rationale of how the applicant believes the project will minimally impact water quality for those impacts to resources that do not meet one or more of the terms and conditions within this certification, including reason(s) why the resources are unable to be avoided;
 - h. Comments received from the Ohio Department of Natural Resources and United States Fish and Wildlife Service regarding threatened and endangered species or comments from

an applicant that has been authorized by these entities to make threatened and endangered species determinations;

- i. A one-time review fee of \$2000 for the project;
 - j. A detailed description of how the project meets public need, as defined in OAC 3745-1-50, for impacts to category 3 wetlands;
 - k. Documentation as required under Appendix B and C;
 - l. Any other documentation as may be required under this certification.
2. Upon receipt of the director's authorization request containing items a. through o. outlined above, excluding item c., the director will post the materials on the Ohio EPA, DSW webpage and invite public comment on the request for 15 days. The director will review and consider the comments received during the public comment period before making a decision on the director's authorization.

Appendix B ORAM Verification Process



The ORAM results shall be included with the pre-construction notification (PCN) or notification to Ohio EPA if a PCN is not required by the Corps.

For each wetland proposed for impact the applicant must provide the following information for review in accordance with the ORAM verification procedure:

- a. Complete ORAM forms prepared in accordance with the current ORAM manual;
- b. Wetland delineation prepared in accordance with the current method required by the Corps;
- c. A minimum of four high resolution color photographs taken while facing each of the four cardinal directions of each wetland proposed for impact. Photographs must accurately depict the quality of the wetland and may not include a majority of dying or dead vegetation or excessive cover due to seasonal conditions that vegetation and substrates cannot be observed, such as leaf litter, snow, or ice. Photographs deemed to be insufficient of representing the wetland will be required to be retaken once seasonal conditions are appropriate. Photographs shall be clearly labeled with the wetland name, direction, and date;
- d. USGS topographical map, National Wetlands Inventory map, Soil Survey map and aerial images (both historical and current) which clearly outline the entire wetland boundary; and
- e. Coordination letter from the Ohio Department of Natural Resources (ODNR), Natural Heritage Database indicating the presence or absence of state listed threatened or

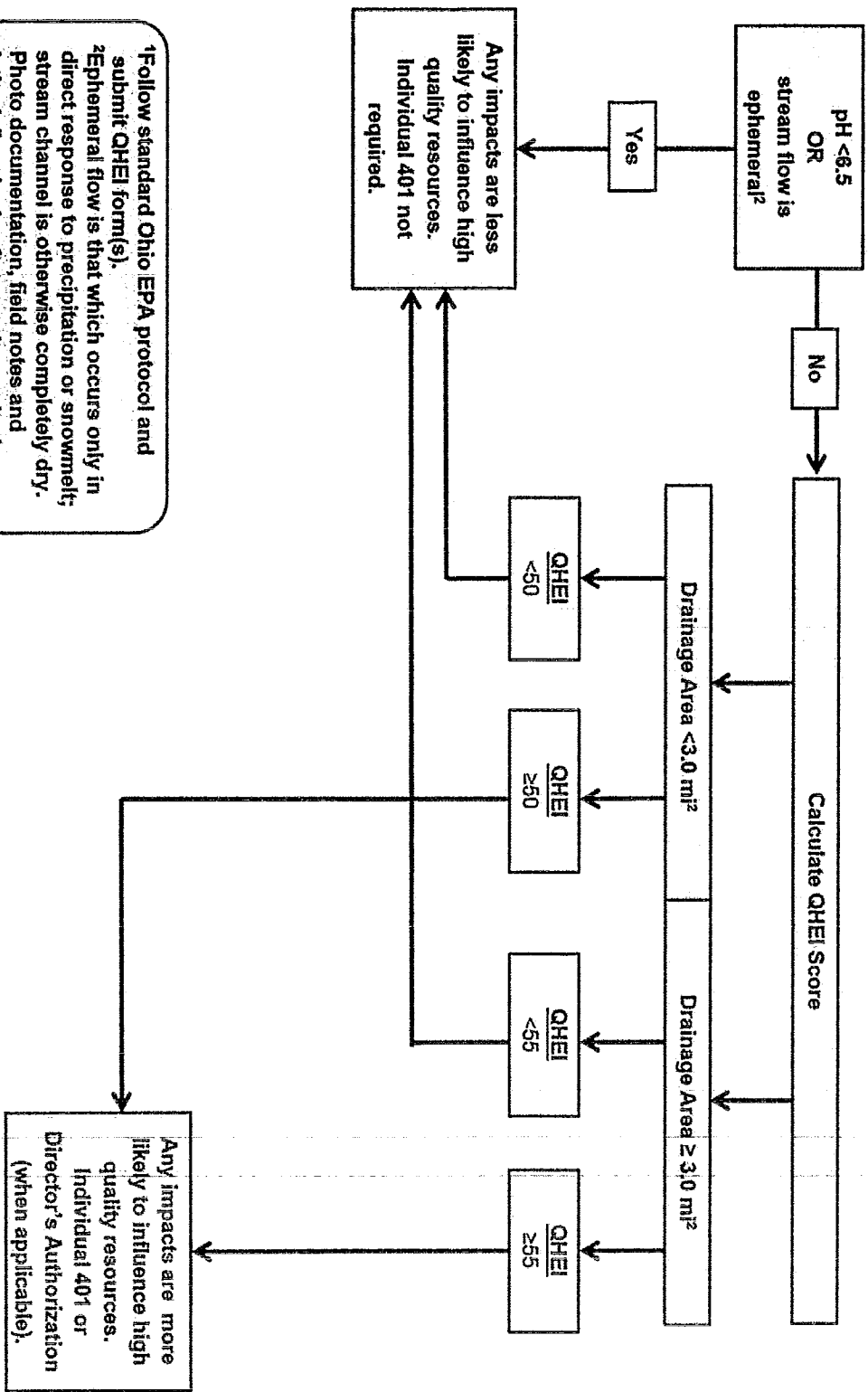
endangered species or comments from an applicant that has been authorized by ODNR to make threatened and endangered species determinations.

Appendix C Stream Eligibility Determination Process

1. The stream eligibility results shall be included with the PCN or notification to Ohio EPA if a PCN is not required by the Corps. For each single and complete project with potential impacts to streams, where it is specifically required in the special limitations and conditions of this certification, the applicant shall determine if the streams proposed for impact are eligible for coverage under the 401 WQC for the Nationwide Permits using the following procedure:
 - a. Navigate to the Ohio EPA 401 website at:
<http://www.epa.ohio.gov/dsw/401/permitting.aspx>
 - b. Click on the "Nationwide Permits" tab and then click on the "Stream Eligibility Web Map" link. To download the shapefile from the web map, click on the  in the upper right hand corner of the webpage and select download. To draw project boundaries directly on the web map, click on the  in the upper left hand corner of the webpage.
 - c. Using a GIS program, overlay the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility layer. If the applicant does not have access to a GIS program, the project boundary should be drawn on the web map and a copy of the map can be printed from the webpage;
 - i. If any stream proposed for impact within the project area falls within an ineligible area, impacts to that stream are not eligible for coverage under the 401 WQC for the Nationwide Permits, and the applicant shall apply for an individual 401 WQC or a director's authorization.
 - ii. If any stream proposed for impact within the project area falls within a possibly eligible area, the applicant shall take pH values, when applicable, and perform a Qualitative Assessment Habitat Evaluation Index (QHAI) or Headwater Habitat Evaluation Index (HHEI) assessment for the stream. Using the flow charts provided below, the applicant shall determine if impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC is required.
 - iii. If all streams proposed for impact within the project area are located within the eligible area, impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits and no further assessment is necessary.
 - d. The applicant shall submit the following information with the PCN or notification to Ohio EPA:

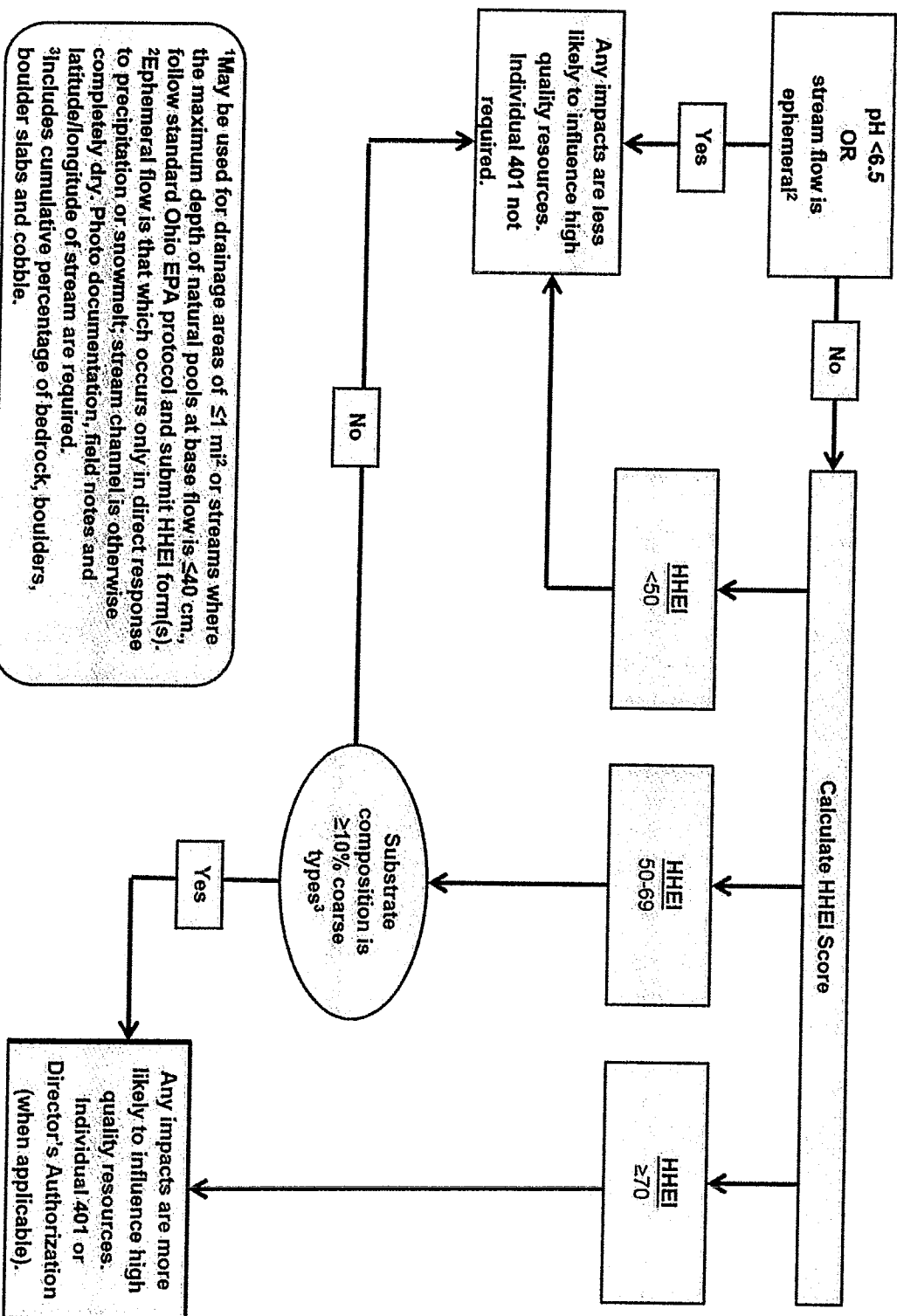
- i. Color map(s), no smaller than 8"x10", which clearly shows the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility GIS layer;
- ii. For each stream located in possibly eligible areas;
 - (1) A minimum of three high resolution color photographs taken of the proposed impact area, including one facing upstream, one facing downstream, and a close up which clearly depicts the substrate composition and size for each stream proposed for impact. Photographs must accurately depict the quality of the stream and may not include excessive cover due to seasonal conditions that substrates cannot be observed such as snow or ice. Photographs deemed to be insufficient of representing the stream will be required to be retaken once seasonal conditions are appropriate. Photographs shall be clearly labeled with the stream name, direction, and date;
 - (2) pH values for each stream proposed for impact taken within the proposed project area, where applicable;
 - (3) Complete QHEI or HHEI sheets prepared in accordance with the current manuals; and
 - (4) Statement of whether the streams proposed for impact within the project area are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC or a director's authorization is required.

NWP Eligibility Flow Chart Using the QHEI¹



¹Follow standard Ohio EPA protocol and submit QHEI form(s). Ephemeral flow is that which occurs only in direct response to precipitation or snowmelt; stream channel is otherwise completely dry. Photo documentation, field notes and latitude/longitude of stream is required.

NWP Eligibility Flow Chart Using the HHEI¹



¹May be used for drainage areas of ≤1 mi² or streams where the maximum depth of natural pools at base flow is ≤40 cm.
²Ephemeral flow is that which occurs only in direct response to precipitation or snowmelt; stream channel is otherwise completely dry. Photo documentation, field notes and latitude/longitude of stream are required.
³Includes cumulative percentage of bedrock, boulders, boulder slabs and cobble.

H. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell

or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWP, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one

owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

Brausch, Chris G.

From: Santiago, Hector [hector_santiago@nps.gov]
Sent: Friday, October 19, 2018 12:08 PM
To: Brausch, Chris G.
Cc: cara.hardesty@epa.ohio.gov; Moore, Laurie A LRH; Gable, Bob; Clark, Melissa
Subject: Re: [EXTERNAL] NPS Coordination LRH-2018-393-LMR, Proposed Lower Springboro Road Waterline

Chris,

Provided that the water main installation under the Little Miami River Scenic River (River) and Beezer's Creek uses the horizontal directional drilling (HDD) method as described in your plans - including no disturbance of the existing riparian corridor, no section 7(a) determination is required under the "Direct and Adverse Effect" evaluation standard that applies to water resources projects within the ordinary high watermark of the River. Additionally, the NPS has determined that the open cut crossing of Unnamed tributary to Newman Run (Stream 3), Unnamed Tributary to Newman Run (Stream4), Rattail Branch, and Cooks Run will not require further section 7(a) review under the "invade the area or unreasonably diminish the scenic, recreation, or fish and wildlife" evaluation standard provided that the following conditions are met.

1. Horizontal Directional Drilling Method is required for crossings below the Little Miami River and Beezer's Creek with sufficient depth to prevent fracout/illicit discharge of drilling fluids to the River; HDD is recommended for any other affected perennial streams.
2. A Frac-out contingency plan is required and containment equipment must be kept on site.
2. All appropriate stormwater and sediment control best management practices are in place prior to commencement of any in channel work; all trenching along the Little Miami Bike trail must occur on the side opposite to the river to the greatest extent possible with no adverse impacts to streambank conditions.
3. NPS must be contacted in the event of a fracout or other major practice failure.
4. Any additional changes to the scope of the project will require NPS approval.

Should you have any questions or concerns, please contact me at your earliest convenience.

Sincerely,

Hector Santiago
Regional Rivers Coordinator
NPS Midwest Region
402-661-1848.

On Mon, Oct 8, 2018 at 9:17 AM Brausch, Chris G. <Chris.Brausch@co.warren.oh.us> wrote:

Hector,

Warren County urgently needs a Section 7(a) response from your office for our Lower Springboro Road Waterline project. Warren County needs to be under construction with this project by the first week of

January and we cannot proceed until we receive NPS approval. More specifically Ohio EPA, Section 401 Permitting Division, will not act on Warren County's application until they receive your feedback.

Water service to our customers is dependent upon the construction of this waterline. Warren County's contract with the Village of Waynesville for the purchase of wholesale water expires on April 6, 2019. At this point the Village refuses to negotiate an extension to the existing contract or enter into a new agreement. **We fear that the Village will terminate our wholesale water connection on April 6, 2019 leaving us without water for our customers in the Village of Corwin, Harveysburg, the Caesar Creek USACE and ODNR facilities. This impacts your office as it includes water service to the restroom facilities and amenities along the Little Miami bike trail.**

Enclosed is the NPS coordination submittal prepared by Laurie Moore and submitted to your office earlier this year. Please let me know if you need additional information or have questions.

Thanks,

Chris G. Brausch, P.E., BCEE

Warren County Sanitary Engineer

Water & Sewer Department Director

Warren County Water & Sewer Department

Ph. (513) 695-1193 (direct line)

Ph. (513) 267-2484 (cell)

--

Hector R. Santiago
Regional Rivers Coordinator

NPS Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102-4226

402-661-1848
402-661-1849 (fax)



OHIO DEPARTMENT OF TRANSPORTATION
John R. Kasich, Governor

Jerry Wray, Director

District 8
505 S. State Route 741, Lebanon, OH 45036
513-933-6568
transportation.ohio.gov

March 26, 2018

Re: Permit # 08-142-18

Email: chris.brausch@co.warren.oh.us

Dear Permit Holder:

Thank you for your application for the above referenced permit which is hereby approved.

Please be advised that before any work is started under this permit contact Dustin Williams at the District 8 Permit Office at 513-933-6576 or 513-615-4033 between the hours of 7:30 a.m. - 4:00 p.m., Monday - Friday to inform us concerning the date and time work will begin. We suggest two working days as sufficient notice. However, if a lane closure or night time work is necessary a three working day notice is required.

When you call, please have your permit number, county and state route number available to facilitate service. Failure to inform us before commencement of work or may force our Permit Inspectors to suspend the work.

Please be advised this permit needs to be onsite when the work is being performed. If there isn't proof of the permit on the job site, the permit Inspector will suspend the work.

We appreciate your cooperation and interest in these matters of mutual concern. Should you have any further questions or comments, please do not hesitate to contact the District 8 Permit Office.

Respectfully,

A handwritten signature in black ink, appearing to read "Dustin Williams", written over a large, loopy flourish.

Dustin Williams
District 8 Permits



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
PERMIT

Office Use Only			
County or Jurisdiction	Warren		
Log Pt:	19.75	to Log Pt:	19.75
Rte:	42	AccCat:	

[1] Subject to all terms, conditions, and restrictions printed, written below or attached,

Name Warren County Water & Sewer Department
Address 406 Justice Drive
 Lebanon, OH 45036

is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform necessary work in the manner described and at the location indicated in the following or as attached to this permit. To install water main extension project from the an existing FH loacted along E. Lower Springboro Rd. beginning approx. 650' east of th Int. with township Line Rd. Running east to S.R 42, crossing S.R 42 by horizontal directional drilling methods and continuing northeast along the south R/W of S.R 42 for approx. 150' then turning southeast towards the little Miami River as shown on plan submitted with application and stamped by the Ohio Department of Transportation dated March 26, 2018.

All work covered under this permit shall be performed only during the State Working hours, unless prior Approval is granted by the District Office.

WORK REQUIRING A LANE CLOSURE MUST BE PERFORMED DURING THE HOURS OF 9:00 AM TO 3:00 PM. IT IS ALSO REQUIRED THAT THE PERMIT OFFICE BE NOTIFIED THREE WORKING DAYS PRIOR TO THE START OF THE WORK

CONTINUED ON ATTACHED PAGES.

[2] This permit shall be in the possession of employees on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from

ODOT District 8 Permits Office

Phone: 513-933-6577

NOTE: Any work performed by the permittee may be stopped if the above requirements are not met.

[4] To the extent applicable, this permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed 3/26/2019

[5] All work requiring persons or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Uniform Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[6] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of this permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation, if applicable, at the permittee's expense.

Permit dated: 3/26/2018

Surety Company _____

Effective Date _____ Expiration Date _____ Amount \$ _____

A call to OGPUPS at 1-800-925-0988 is required by the O.R.C.

2-WORKING DAYS

BEFORE YOU DIG

CALL TOLL FREE 800-362-2764

OHIO UTILITIES PROTECTION SERVICES

The ODOT Intelligent Transportation System (ITS) Infrastructure and devices are not currently listed in the Ohio Utility Protection Services (OUPS) program. Please send a copy of the OUPS ticket or locate request to the ODOT ITS Section via email to CEN.ITS.LAB@dot.ohio.gov, in order to get the ITS utility infrastructure marked.

Director: _____

Date: _____

John W. ...
3/27/18

Rev 09/06/2011

Name: Warren County Water & Sewer Department

Dated: 3/26/2018

Permit Number: 08 - 142 - 18

General Provisions Applicable to All Permits

(Sections 5515.01 and 5515.02 of O.R.C)

- [1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest
- [2] The granting of this permit does not convey to the permittee or to the property served any rights, title or interest in state highway rights of way or in the design or operation of the state highway: or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permittee and be made as directed by the Director of Transportation. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of the state highway.
- [3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.
- [4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct such work and the permittee shall reimburse the Department for the costs.
- [5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, his employees, or assigns as a result of the issuance of this permit.
- [6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's action and its causes, and given an opportunity to correct the problem.
- [7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.
- [8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.
- [9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage.
- [10] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate Form No. MR678 certifying that the permittee has complied with the terms of the permit.
- [11] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.
- [12] All pole lines are to be built in accordance with Rule 4901:3-1-08 of the Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

Name: Warren County Water & Sewer Department

Dated: 3/26/2018

Permit Number: 08 - 142 - 18

[13] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[14] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and his/her successors in interest. No change in ownership of the underlying property or of the facility owned by the permittee shall in any way alter the permittee's obligations under this permit.

[15] The permittee(s) for herself/himself/themselves/itself, her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does covenant and agree that:

(1) No person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the above described property.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(4) In the event that this instrument grants a lease, license, or permit and any of the above nondiscrimination covenants is breached, the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and reposses the above-described property and hold the same as if said lease, license, or permit had never been made or issued.

(5) In the event that this instrument grants a fee or easement interest and any of the above nondiscrimination covenants is breached, the State of Ohio Department of Transportation shall have the unfettered right to re-enter the above described property, and said property will thereupon revert to and vest in and become the absolute property of the State of Ohio and its successors and assigns for the use and benefit of the Department of Transportation.

(6) In the event that this instrument grants a lease, fee, or easement interest, all of the foregoing nondiscrimination covenants shall be and are covenants running with the land.

Name: Warren County Water & Sewer Department

Dated: 3/26/2018

Permit Number: 08 - 142 - 18

All work shall be performed at no cost to the State of Ohio or the Federal Highway Administration.

Loading or unloading of equipment and material from the roadway pavement will not be permitted.

Storage of pipe and material on the pavement, berms, median and/or State right-of-way will not be permitted without prior approval from the District Permit Office.

Equipment and personnel operating from the pavement shall be kept to a minimum; and, with adequate flagmen (Flagmen's Guide) and to a minimum; traffic warning devices maintained at all times.

Restoration of all areas disturbed shall be completed immediately after installation is completed.

All areas disturbed by this operation shall be restored comparable to that of the surrounding area and to the satisfaction of the State Inspector.

All walks, steps, driveways, drains, mail boxes, traffic signs, guardrail, poles, fences, etc. that are disturbed must be restored to their original condition or better.

The pavement, berms and median must be kept clean of dirt, mud and debris at all times.

All traffic shall be maintained in accordance with the Ohio Manual of Uniform Traffic Control Devices for Construction and Maintenance Operations.

Local traffic, facilities for pedestrian and vehicular ingress and egress, shall be provided at all times for the property adjacent to the work.

Two-way traffic shall be maintained at all times and all equipment used on pavement shall be rubber tired.

No vehicles, equipment, or personnel, including personal automobiles, will be permitted to park on or operate from the roadway pavement, berms, or median.

Name: Warren County Water & Sewer Department

Dated: 3/26/2018

Permit Number: 08 - 142 - 18

It must be stressed, that the pavement is to be kept clean at all times from mud and material carried onto the pavement. Failure to comply with this request will result in suspending all operations on State Right-of-Way while working under this Permit.

In the event of conflicts with traffic signal or highway lighting equipment during the installation(s), the Contractor and/or Permittee shall notify the O.D.O.T. District 8 Traffic Department at 513-933-6689. Seven working days notice will be required to inspect and correct the equipment problem. If the problem is too complex, an electrical contractor must be hired to perform the work. All repairs in such cases are to be made to the satisfaction of the District Traffic Maintenance Engineer, or the appointed representative, and at the expense of the Company or Permittee.

All excavated material not removed from the area shall be placed between the trench and right-of-way line until needed for backfill or excess to be disposed.

All backfill shall be performed in accordance with the provisions set forth under Construction Specifications Item 603, and piling of earth over trench for future settlement will not be permitted.

Backfilling shall follow completion of all work as closely as possible each day. The backfill shall be to level and slope of the adjacent surface and maintained in this manner until the final restoration.

The sides of all excavations shall be protected from caving by providing suitable sheeting and bracing. All sheeting and bracing shall be carefully removed as the backfilling of the trench progresses. Backfilling shall follow completion of the work as closely as possible. After the backfilling has been completed, the Contractor shall immediately remove all surplus material, dirt and rubbish from the site.

All ditch areas and slopes disturbed must be reshaped to drain properly; and, seeded or sodded as directed by the State Inspector.

Proper roadside drainage shall be maintained at all times.

Any settlement of the patches and/or street surface will be considered conclusive evidence of defective backfilling and/or pavement restoration and must be corrected at once.

Name: Warren County Water & Sewer Department

Dated: 3/26/2018

Permit Number: 08 - 142 - 18

The bore pits shall be located a minimum of 10' from the edge of pavement and shall not be moved either right or left of the designated plan site without permission being granted by the Permit Supervisor or her Assistant.

The permittee shall be responsible for any roadway pavement or berm failure occurring within eighteen (18) months of completion of this installation.

The distance augered ahead of the casing shall be kept as short as possible, and at no time shall the distance exceed 12". Under no circumstances will water jetting be permitted from excavation of material ahead of the casing or for the removal of spoil from the casing.

The length of the bore or push shall be the width of the pavement plus 10' on each side of the roadway unless otherwise noted on the accepted and/or stamped plans.

The tops of all manholes shall be constructed flush with the existing or proposed pavement and ground elevations unless otherwise specified by the State Inspector.

All bore pits or open manholes must be barricaded and fenced for safety, or as directed by the State Inspector.

Stop signs shall not be disturbed. If it becomes necessary to remove a stop sign, a portable stop sign shall be erected before the permanent sign is removed. The permanent sign shall be re-erected immediately after the installation is complete.

All Ohio Department of Transportation's guide signs shall be re-erected the same day as removed or as directed by the State Inspector in accordance with the Manual of Uniform Traffic Control Devices.

In the event of ice, snow or rain, all work shall be suspended as directed by the State Inspector and shall remain suspended until notified by the State Inspector.

The opening(s) in the pavement must be saw cut full depth and all excavated material removed from the area and not piled upon the pavement. The opening(s) must be backfilled with State of Ohio Department of Transportation (ODOT) Specification Item 613, low strength mortar backfill, and closed with a patch consisting of:

- 8" Item 305 cement concrete base and 3" of Item 448 Type 1H asphalt concrete surface course.
- 10" Item 301 asphalt concrete base placed in 2-5" lifts, 2" of Item 448 Type 1H asphalt concrete surface course rolled level with the surrounding pavement and the edges sealed as determined by the ODOT Inspector.
- Match existing pavement typical section, as directed by the ODOT Inspector

Any settlement of the patches and/or street surface will be considered conclusive evidence of defective backfilling and/or pavement restoration and must be corrected at once.

ARTIMIS facilities must be marked by ARTIMIS by calling 513-564-6400 or 513-564-6102. ARTIMIS must be contacted 5 working days in advance of the start of work to allow them to mark their facilities

1. MR 505

App No 15

Return To: OHIO DEPARTMENT OF TRANSPORTATION

505 S. STATE ROUTE 741

LEBANON, OHIO 45036

ATTN: PERMITS DEPARTMENT

State of Ohio

Department of Transportation

Permit Application

See Reverse side for additional requirements

REC'D MAR 01 2018

Office Use Only

County/

Jurisdiction WAR

Rte 42 LogPt 19.75

AccCat _____

[1] This form must be completed by the property owner or agents working for a utility company (if applicable). Application by contractor is unacceptable.

Name Warren County Water & Sewer Department

Address 406 Justice Drive

City Lebanon

State Ohio

Zip 45449 Phone (513) 695-1377

(Email Required) chris.brausch@co.warren.oh.us

[2] Type of Permit requested: _____ Commercial (See other side) _____ Residential _____ Field Utility _____ Drainage _____ Beautification (See other side) _____ Spraying, trimming, tree removal _____ Other _____

[3] Briefly describe work to be performed. (Attach plans and see Instructions.)

Water main extension project from an existing fh located along E. Lower Springboro Rd. beginning approx. 650' east of the int. with Township Line Rd. running east to SR. 42, crossing SR 42 by horizontal directional drilling methods and continuing northeast along the south R/W of SR 42 for approx. 150' then turning southeast towards the Little Miami River.

[4] Location where work is to be performed. Give sufficient detail to locate the site accurately, such as the distance in miles or feet from a mile post or from some geographical feature such as an intersecting highway.

In Warren County (along, across) State Route 42, 0.77 miles or _____ feet

North _____ East _____ West _____ South of SR 73 on the North _____ East West South _____ side of the road.

Work to commence on Fall 2018 and will require 365 days to complete

[5] Does the property owner own or have any interests in any adjacent property? _____ Yes No

If yes, please describe. _____

[6] Prior to any excavation in the highway right-of-way, the Ohio Utilities Protection Service (OUPS) must be contacted in accordance with ORC Section 3781.25 to 3781.32. OUPS can be reached at 1-800-362-2764. A call must be made to OGPUPS at 1-800-925-0988.

[7] Open cutting of pavement shall not be permitted unless no reasonable alternate method is available. Written approval of the Ohio Department of Transportation District Office must be obtained.

[8] All work requiring men or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[9] I have received a copy of the policies and regulations pertaining to the permit for which I have applied. If a permit is subsequently issued to me by the Ohio Department of Transportation, I understand that the permit will state the terms and conditions for its use, and I agree to comply with all conditions and regulations stipulated on or attached to the permit. I also understand and agree that failure to comply fully with all conditions and regulations of the permit or any change in the use of the permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation at the permittee's expense.

SIGN and PRINT here

→ Greg Miller Greg Miller
Signature of Property Owner or Agent for Owner

Date: 2/27/18 Daytime Phone: 937-704-9868

Office use only

Date Received _____

By _____

Date Accepted _____

By _____

Additional Requirements

1. All requests for vehicular access connections (commercial and residential driveways and field drives) are subject to the requirements and provisions of the State Highway Access Management Manual. You will find this form at <http://www.dot.state.oh.us/planning/Corridor/AccessMgmt/Manual> on the web.

2. Check with the issuing authority to determine which of the following documents and information are required and the number of copies needed to complete the review of your application. Plans should usually not be larger than 24"x 36."

(A) Map or plat showing property location, property lines, amount of frontage on state highway and on other abutting public roads, if any;

(B) Any existing access or easements of access on the property;

(C) Highway and driveway plan profile;

(D) Location of proposed access with respect to property lines and to the highway; NOTE: The proposed access location should also be physically marked on the property by a stake or other clearly visible means.

(E) Design and type of construction of the proposed access;

(F) Drainage plans showing drive culvert/pipe and impacts to the highway right of way;

(G) Subdivision, zoning, or development plan, if applicable;

(H) Maps and letters detailing utility locations before and after development in and along the right of way;

(I) Signing and striping plans;

(J) Traffic data and traffic control plan;

(K) Proof of liability insurance;

(L) Performance Bond, if required

Commercial Development

3. If you are requesting a permit for Commercial Development, complete the following. Applicants seeking permits for development generating high traffic volumes (over 100 trip ends in the peak hour) are advised to request a preliminary meeting with appropriate ODOT and/or local officials prior to submitting a formal application for access.

(3a) If the proposed access will serve residential development, what type (single family, apartment, townhouse) and number of units are in the proposed development?

Type of Units		Number of Units	
Type of Units		Number of Units	

(3b) If the proposed access will serve business commercial or industrial development, what types and number of businesses are in the proposed development and what is floor area square footage of each?

Type of Business		Square Footage	
Type of Business		Square Footage	

(3c) Number of vehicles using the access. Indicate if estimates are ___ Peak hour = ___ or ___ Average daily volumes = ___.

Number of Passenger Cars:	Number of Multi Units:	Total All Vehicles:
---------------------------	------------------------	---------------------

(3d) Consulting Firm: _____ Name of Contractor: _____
 Contact Name: _____ Contact Name: _____
 Phone Number: _____ Phone Number: _____

Beautification Permit

4. If you are applying for Beautification Permit, complete the following. Please submit proof of insurance.

Insurer's Name _____ Address _____ Phone () _____
 Number of adults (over 18) _____ under 18 _____ Total people _____

NO. DATE	DESCRIPTION OF REVISION

DESIGNED	GLM
DRAWN	GLM
CHECKED	GLM
BY	GLM
DATE	2/19/18

LOWER SPRINGBORO RD WATER IMPROVEMENT PROJECT
 WARREN COUNTY WATER & SEWER DEPARTMENT
PLAN & PROFILE
 STA. 111+00 TO STA. 116+00

JONES WARNER CONSULTANTS, INC.
 CONSULTING ENGINEERS
 8401 CLAUDE THOMAS ROAD, SUITE B1
 FRANKLIN, OHIO 45005
 PHONE: 937-704-9888 FAX: 937-704-9949
 EMAIL: jwarn@jwconsultants.com

DATE: 2/19/18
 PROJECT NO.: 17-031
 SCALE: H: 1"=20'
 V: 1"=5'
 SHEET NO.: 1 of 1

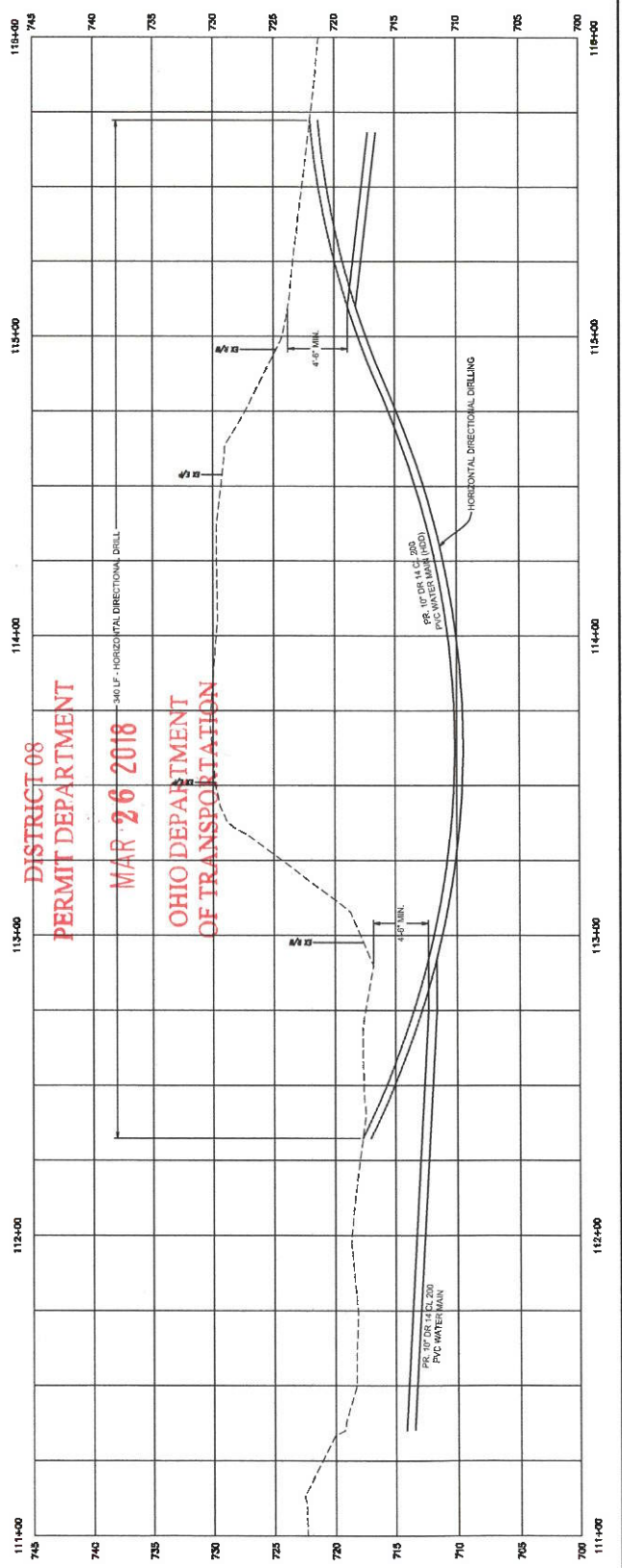
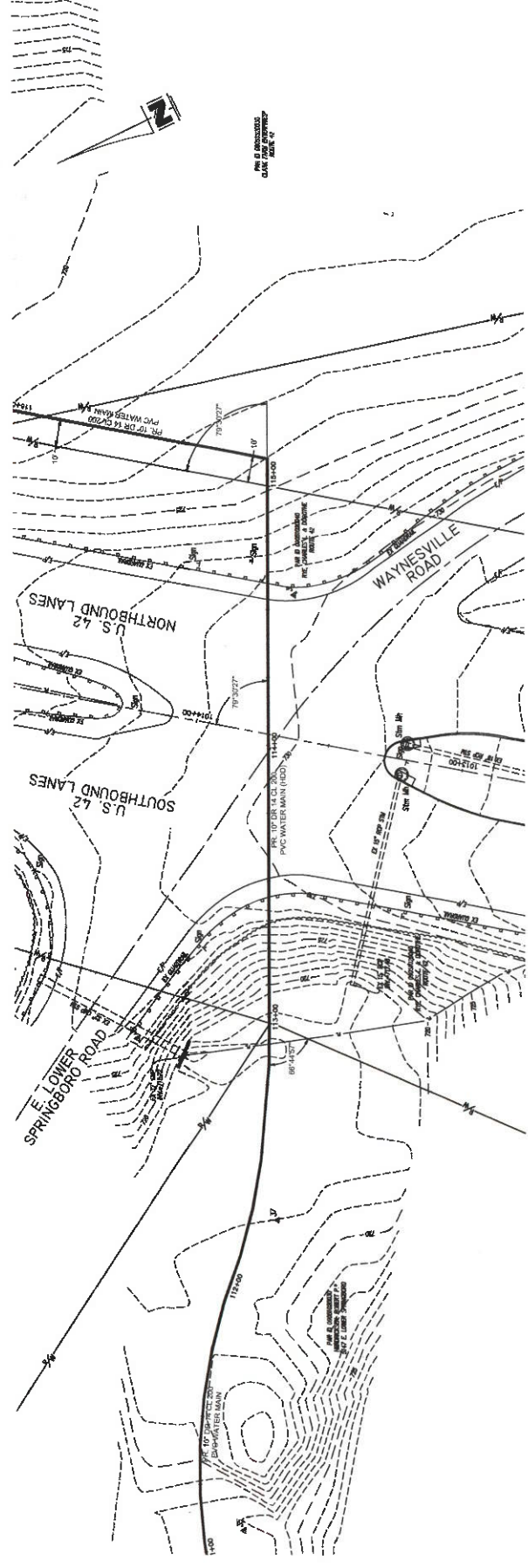


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33 11 13.15 Horizontal Directional Drilling
33 12 00 Water Utility Distribution Equipment

SECTION 01 11 00
GENERAL REQUIREMENTS

PART 1 – GENERAL

1.1 MISCELLANEOUS

A. GRAVEL BACKFILL

Gravel backfill, where required, shall be provided by the Contractor and consist of durable particles graded from fine to coarse. It shall conform to the ODOT-CM 310.02, Grading A Specifications. It shall not contain lumps or frozen material. All such materials must be obtained from a source approved by the Owner prior to use. The cost of this backfill shall be included in the Contractor's bid for installing the pipe and other appurtenances.

B. CONCRETE ENCASEMENT, CRADLE, ANCHORS AND BLOCKING

Concrete encasement, cradle and anchors will be provided by the Contractor where shown on the Construction Drawings. Concrete blocking will be provided at all bends. The cost of concrete shall be included in the bid for the installation of the encasement, anchors and blocking.

C. TOP SOIL

The top soil for lines constructed in agricultural areas is to be stockpiled and returned to the top of the trench backfill. Top soil is to be provided by the Contractor for all disturbed grass areas in residential and commercial areas.

If suitable care is not exercised in the stockpiling, and imported top soil is required to be provided by the Contractor, it shall meet the requirements of ODOT-CM 653.02.

It shall also be reasonably free from subsoil, clay lumps, stones, roots or similar objects larger than two (2) inches in diameter, brush, objectionable woods or litter, or any other material or substitutes which may be harmful to plant growth or a hindrance to grading, plant cultivating or mowing.

D. STREET CONSTRUCTION AND RESTORATION MATERIAL

The street construction and restoration materials shall meet the Specifications of the Ohio Department of Transportation, the Warren County Engineer and the Township Trustees, as applicable. All such materials shall be provided by the Contractor as part of the bid for the installation of the pipe and appurtenances and restoration.

E. CARRIER PIPE

Not Applicable.

F. DRIVEWAYS

All driveways shall be restored with a material comparable to the existing material. Blacktop shall be equal to roadway material specifications of the County Engineer/Township Trustees. The cost

of restoration of driveways shall be included in the Contractor's bid for installing the pipe and other appurtenances. Also refer to Section 3.7 A.

1.2 GRASS PLOT RESTORATION

Seed shall consist of the following mix:

- 40% Kentucky Bluegrass
- 40% Creeping Red Fescue
- 20% Annual Ryegrass

Where seed or sod is to be applied, fertilizer will be a 12-12-12 mixture.

The cost of all sod, fertilizer, seed and straw shall be included in the Contractor's bid for restoration.

1.3 CONCRETE REPLACEMENT

Concrete street pavements, concrete driveways, concrete curbs and concrete sidewalks shall be replaced with the following material:

- a) Concrete shall have a minimum twenty-eight (28) day compressive strength of 4,200 psi.
- b) All reinforced concrete pavements shall be replaced in kind with the reinforcement conforming in all respects to ASTM Specification A305, "Deformed Steel Bars"; A15, "Billet Steel Bars"; A16 "Rail Steel Bars"; and A160 "Axle Steel Bars".

1.4 ROCK

Wherever the word "rock" appears, it shall be interpreted to mean any material geologically in place and of a hardness when first exposed of three (3), or greater, in the scale of mineral hardness, which corresponds to the hardness of the transparent variety of calcite. Any material encountered not of a uniform hardness of three (3) in the scale of mineral hardness which cannot be removed from its original position with a modern one and one half cubic yard backhoe power excavator in good condition without continuous drilling and blasting will be considered rock provided that the Contractor proves by demonstration and photographic evidence that slate, shale, sandstone, or other hard material encountered cannot be removed with heavy equipment without continuous drilling and blasting. Other materials shall not be classed as rock, although it may be more economical to remove same by blasting. Boulders will not be classified as rock unless larger than ½ cubic yard.

PART 2 - PRODUCTS

2.1 PRESSURE PIPE

A. DUCTILE IRON – CLASS 52

Ductile Iron Pipe shall conform to Section 33. 11 13.13.

B. HDPE –DR 9

HDPE pipe shall conform to the American National Standards Institute Specifications for “Polyethylene (PE) Pressure Pipe and Fittings, 4in. Through 63 in., for Water Distribution and Transmission”, ANSI/AWWA C906.

C. PVC DR14 PIPE

PVC pipe shall conform to Section 33. 11 13.14.

PART 3 - EXCECUTION

3.1 GENERAL

A. CONSTRUCTION SITE

The construction area is the site of all the actual phases of the work described. The construction area shall be confined to the limits of the public right-of-way in the streets and easements.

B. CLIMATE CONDITIONS

All work which will be affected by climatic conditions (wind, rain, frost or freezing) shall be suspended unless permission is given by the Owner to proceed. Whenever work proceeds under any such conditions, the Contractor shall take the necessary precautions to insure the proper installation of the materials.

C. PUBLIC ACCESS

The Contractor shall provide and maintain temporary access to all properties in which such access was interrupted by the construction of the project.

D. STORING OF MATERIALS

Pipe shall not be staged, stored, or strung along the right-of-way. Only piping installed each day shall be located along the right-of-way. Pipe shall be neatly and compactly piled in such a manner as to cause the least inconvenience to the property owners and to traffic. Under no circumstances shall existing drainage courses be blocked. Storage of materials and/or equipment is not permitted on state highways.

Materials, tools and machinery shall not be piled or placed against shade trees, unless they shall be amply protected against injury therefrom. All materials, tools, machinery, etc. stored upon public thoroughfares must be provided with warning lights at nighttime and weekends to alert traffic of such obstructions.

E. INSEPTION OF WORK

The Owner or his designated representative shall be responsible for inspection of all work. Under no circumstances shall the Contractor perform any piping or paving work except in the presence of an inspector. Any such work performed without the knowledge of an inspector shall be ordered removed and replaced by the Owner at the Contractor's expense.

The Contractor shall be responsible for all inspection costs for work scheduled for weekends or holidays.

F. 24-HOUR SITE MAINTENANCE

The Contractor shall furnish the Owner a list of names and phone numbers of personnel who will be responsible for after hours maintenance of the construction site. The Contractor's personnel shall be immediately available to correct any safety hazard as directed by the Owner or any governmental agency entrusted with the public safety.

G. MAINTENANCE OF FENCES

The Contractor may, in the course of work, temporarily remove that portion of fences within the easement areas. He shall delegate an individual to protect any livestock kept in areas through which the work is being carried on. That individual will also be responsible for insuring that livestock shall not leave the enclosure in which they were placed. The Contractor shall, on a daily basis, prior to leaving the site, replace any and all fences which have been removed. He shall be held strictly accountable for loss of, or damage to, any livestock which leaves enclosures in which he works.

3.2 EXCAVATION

A. GENERAL

Excavation shall be limited to the rights-of-way, easements or lands controlled by the Owner.

B. LIMITS OF EXCAVATION

The length of trench to be opened at any one time will be limited with regard to both expeditious construction and to the convenience and comfort of the public residing in the neighborhood or frequenting streets adjacent to or along the excavation. Unless otherwise specifically permitted by the Owner, the following limitations to length of operations will be imposed:

- 1) Trench excavation shall not proceed more than 50 feet in advance of laying of the pipe.
- 2) Along public streets, all uncompleted main line, service line, excavation, installation and backfill shall be completed and confined to one block not to exceed 600 feet of street.

- 3) In private property, the length of uncompleted work must be held to the absolute minimum and in no case over 300 feet, except for seeding and sodding which shall be done in proper season.

All excavations within public right-of-way limits shall be completely closed at all times when there is a delay in the progress of the work, and as specifically addressed in permits.

C. SHEETING AND SHORING

The Contractor shall furnish at his expense, put in place and maintain such piling, sheeting, bracing, etc., as is required by the Industrial Commission and the Department of Industrial Relations, State of Ohio, in their Bulletin No. 1C-3 "Specific Safety Requirements Relating to Building and Construction Work", as revised and where required on the plans. All such work shall be performed in compliance with OSHA standards.

D. REMOVAL OF WATER

The Contractor shall keep all excavations free from water during the excavation for or the construction of the water main.

The Contractor shall provide for the disposal of all water removed from the excavations in such manner as to prevent injury to the public, the public health, public or private property, or to cause any inconvenience to the public.

The flow of water and sewage in all existing sewers, drains, gutters or water courses encountered during construction shall be adequately maintained by the Contractor at his expense.

E. ROCK EXCAVATION

Excavated rock shall be disposed of by the Contractor and shall not be used for backfill. There will be no separate payment for rock excavation for any rock encountered in the directional drilling of the waterline or for the service lines.

F. UNAUTHORIZED EXCAVATION

Any excavation not authorized by the Owner beyond the limits required for the property construction shall be backfilled at the Contractor's expense with materials approved by the Owner.

G. REMOVAL OF EXCAVATED MATERIAL

For pipelines located within rights-of-way, parking areas and drives, all trenches shall be completely backfilled with an approved type gravel. The excavated material shall be disposed of directly from the equipment excavating the trench into appropriate type carriers which will transport the excavated material from the site of the construction.

The street surface will be brushed and cleaned during the construction period so that excess material is immediately removed as it drops from the construction trucks and equipment.

The Contractor shall exercise extreme care to protect the existing street surface and base adjacent to the open trench excavation from failures due to the loads of the construction trucks and equipment.

It will be the Contractor's responsibility to dispose of all the excavated material when trenches are completely backfilled with gravel unless the plans or the specifications show or direct otherwise.

H. STORAGE OF EXCAVATED MATERIAL

When excavated material is to be used as trench backfill, the excavated material shall be placed so that free access may be had at any time to all parts of the work. The excavated material shall be neatly piled to cause as little inconvenience to the general public as possible.

Any selected dump or spoil area must be approved by the Owner prior to use by the Contractors. The Contractor shall furnish the Owner copies of all dump permits. Said permits shall hold the Owner harmless for any and all damage. The Contractor shall also maintain natural drainage through the dump or spoil area. If piping of any drainage course is required, the Contractor shall supply the Owner and the County Engineer with drainage calculations justifying the pipe sizes to be installed.

I. DUST CONTROL

The Contractor shall be required to control dust generated as a result of the construction. The Contractor shall use water and/or calcium chloride (ODOT Item 616) for dust control, as directed by the Engineer. No separate payment will be made for dust control.

3.3 CONCRETE ENCASEMENT AND ANCHORS

A. GENERAL

Buried pipelines shall be encased or anchored in 4,200 psi concrete where shown on the construction drawings or to the extent and/or at other locations as determined by the Owner.

B. CONCRETE ENCASEMENT

Concrete encasement shall provide a minimum cover of six (6) inches beneath and above the pipe O.D. and shall extend laterally to the undisturbed wall of the pipeline trench.

Additional thickness of concrete encasement, if required, shall be shown on the construction drawings. Bedding materials shall not be required for any buried pipeline encased in concrete. Pipelines to be encased shall be supported firmly in place so that the pouring of the concrete encasement will not alter the established line and grade.

Initial backfill material shall not be required for pipelines encased in concrete.

C. INSTALLATION BY HORIZONTAL DIRECTIONAL DRILLING

Refer to Manufacturer's Recommendations.

D. INSTALLATION BY BORING

Pipe shall be installed by the boring method utilizing an auger type boring machine or a machine of such design meeting the individual requirements of the state, county or township system being crossed. The Contractor shall provide an approach pit, completely sheeted and of sufficient size to operate the boring equipment and to receive the length of pipe. The operation of the boring equipment shall be subject to continuous checking by the Contractor to insure proper alignment of the carrier pipe as installed.

3.4 MAINTENANCE OF TRAFFIC & ROADWAYS

A. GENERAL

This item shall consist of maintaining and protecting traffic and the work while the contract is in force in accordance with the plans, special provisions, proposal and the provisions hereinafter set forth.

The installation and operation of all traffic controls and traffic control devices shall conform to the requirements of the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways" and be provided by the Contractor.

All costs associated with the maintenance of traffic and the installation of traffic control devices shall be included in the Contractor's bid for the installation of the pipe and appurtenances.

B. MARKINGS

Barricade and channelizing devices such as barricades, cones, hazard markers and drums shall be brightly visible. They shall also be protected by adequate advance warning devices and by suitable lighting or reflectorization at night (between the hours of sunset and sunrise).

Equipment and material stored on the right-of-way shall be marked at all times. At night any such material or equipment stored between the side ditches, or between lines five feet behind any raised curbs, shall be clearly outlined with lighted pot torches or other dependable devices that are approved by the Owner. In addition, the Contractor shall provide any other lights, barricades, etc., that may be needed for the protection of pedestrian traffic. No roadway may be closed to traffic.

C. FLAGMEN

All watchmen and flagmen shall be equipped and perform their duties according to the standards for flagging traffic contained in the "Ohio Manual of Uniform Traffic Control Devices". A "Stop" and "Slow" paddle must be used for flagging.

The control and regulation of traffic by the flagmen shall conform to the standards issued by the Ohio Department of Transportation.

The Contractor shall be responsible for providing flagmen and all such costs must be included in the Contractor's bid for the installation of the pipe and appurtenances.

3.5 RESTORATION

A. GENERAL

The Contractor shall provide for protection of existing streets and structures; the maintenance of streets, driveways, sidewalks, curbs, gutters, reseeding and resodding; removal and replacement of trees; restoration of agricultural land, the maintenance of the construction area during progress of the work and the complete restoration of the construction area to its original condition at the completion of the work.

Pavements, driveways, trees, shrubbery, fences, poles or other property and surface and sub-surface structures which have been damaged, removed or disturbed by the Contractor, shall be replaced at the expense of the Contractor.

During construction, driveways and pavement must be saw-cut by the Contractor prior to restoration. In concrete driveway sections, the cut must be replaced from expansion joint to expansion joint with new concrete. Fences must be restored by the Contractor. All such costs shall be included in the Contractor's bid for the installation of the pipe and appurtenances.

All costs associated with the restoration of areas disturbed by the installation of the water service laterals shall be included in the Contractor's bid for the installation of the water service laterals.

B. RESTORATION OF AGRICULTURAL LAND

Existing topsoil along pipe line excavations in cultivated fields shall be removed and stockpiled separately from the balance of the excavated material. The topsoil shall be replaced to a minimum depth equaling that of the in place soil in the backfilled excavation, neatly rounded over the top of the trench to a sufficient height to allow for settlement. The replaced topsoil shall not contain rock or stones from the excavated material below the depth of the original topsoil.

C. TREES AND SHRUBS

Trees and shrubs located on private right-of-way, which interfere with the construction operation, may be removed by the Contractor only within the limits of the construction easement and as authorized by the Owner; however, care shall be exercised to prevent damage to or removal of trees and shrubs which do not actually interfere with the Contractor's operations. If trees are necessarily removed, the tree stumps shall also be taken out of the ground.

Trees or shrubs located on the public right-of-way, which interfere with the construction operation, may be removed by the Contractor. However, care shall be exercised to prevent unnecessary damage or removal of trees and shrubs which do not actually interfere with the Contractor's operations. Trees and shrubs which may not be disturbed are indicated on the construction drawings.

Trees and shrubs outside of the construction easement or public right-of-way shall not be trimmed, removed or otherwise disturbed by the Contractor except with the express written permission of the Owner of the property. Such written permission shall be the responsibility of the Contractor to obtain and any expense involved shall be covered by the Contractor.

All branches, trunks, stumps and brush removed during the construction operations shall either be chipped and distributed evenly over the area or hauled from the project site and disposed of by the Contractor. Burning of these items shall not be permitted on the project site.

D. GRASS PLOTS

All disturbed areas except cultivated agricultural land or paved areas shall be reseeded, unless otherwise noted.

E. SEEDING

Seeding applications shall only be permitted between April 15th and October 15th of the calendar year. Seeded areas shall be fertilized after top soil has been placed in the backfill trench. Dry fertilizer shall be applied at the rate of twenty (20) pounds per 1,000 square feet and thoroughly raked into the soil at a depth of not less than one (1) inch. The soil shall then be hand raked to a finely divided planting surface and uniformly sown with clean lawn grass seed at the rate of three (3) pounds per 1,000 square feet. The completed seed area shall be covered with a mulching material. The type and quality of the lawn seed shall be approved by the Owner prior to sowing. The seed bed shall be thoroughly watered, as soon as the seed is covered, at the rate of 120 gallons per 1,000 square feet. The water shall be applied by means of a hydro-seed or a water tank under pressure with a nozzle that will produce a spray that will not dislodge the mulching material. A second water application shall be made no sooner than 7 days or later than 10 days after the first application, providing significant rainfall has not occurred within 7 days after the first application. When significant rainfall occurs within 7 days after the first application, the Owner may delay or omit entirely the second application, depending on weather conditions. The rate of the second application shall be 120 gallons of water per 1,000 square feet. The maximum number of water applications required shall be two. Fertilizer, seed and straw shall be provided by the Contractor as part of the bid for restoration.

F. TOPSOIL

Topsoil shall be placed at a minimum depth of four (4) inches in a backfilled trench and/or other areas where seeding is required.

G. STREETS, DRIVEWAYS, CURBS AND WALKS

The completed restoration of the streets, driveways, curbs and sidewalks within public right-of-way must meet the approval of the County Engineer, the State of Ohio Department of Transportation, the Township Trustees, or Board of County Commissioners, whichever has jurisdiction over said right-of-way.

H. DRAINAGE STRUCTURES

The Contractor shall restore all storm sewers, roadway culverts, drive culverts, catch basins, inlets or storm manholes, which were disturbed in any manner by construction, to their original or better condition as part of the bid for installation of the pipe and appurtenances. In no case will storm pipes under 12" in diameter be permitted as a restoration item. All storm piping shall be replaced in kind with either concrete or corrugated metal pipe in accordance with current Construction & Material Specifications, State of Ohio, Department of Transportation, and Warren County Highway Standards.

I. MAILBOXES AND NEWSPAPER BOXES

Where necessary, the Contractor may temporarily relocate mail and newspaper boxes. Upon backfilling of the trench, and in no case more than 48 hours, the box shall be reinstalled at its original location and height. During final restoration, all boxes shall be permanently set in concrete 39" above permanent level. Any boxes or supports damaged or destroyed by construction shall be immediately replaced by the Contractor at his expense.

3.6 EXISTING UTILITIES

The Contractor is required, at his own expense to do everything necessary to protect, support and sustain all sewers, water or gas pipes, service pipes, electric light, power, telephone or telegraph poles, conduits and other fixtures laid across or along the site of the work. The company or corporation owning said pipes, poles or conduits must be notified by the Contractor before any such fixtures are moved or harmed. In case any of said sewer, gas or water pipes, service poles, electric light, power, telephone or telegraph poles, conduits, or other fixtures are damaged, they shall be repaired by the authorities having control of the same, and the expense of the repairs shall be paid by the Contractor.

END OF SECTION

SECTION 33 11 13

PUBLIC WATER UTILITY DISTRIBUTION PIPING

PART 1 GENERAL

1.01 DESCRIPTION

A. Scope:

1. Contractor shall provide all labor, materials, equipment and incidentals as shown, specified and required to install and test all buried piping, fittings, and specials. The Work includes, but is not limited to, the following:
 - a. All types and sizes of buried piping, except where buried piping installations are specified under other Sections or other Contracts.
 - b. Unless otherwise specifically shown, specified, or included under other Sections, all buried piping Work required, beginning at the outside face of structures or structure foundations, including piping beneath structures, and extending away from structure.
 - c. Work on or affecting existing piping.
 - d. Installation of all jointing and gasket materials, specials, flexible couplings, mechanical couplings, harnessed and flanged adapters, sleeves, tie rods, and all other Work required for a complete, buried piping installation.
 - e. Supports, restraints, and thrust blocks.
 - f. Pipe encasements, with the exception of piping embedded in concrete within a structure or foundation.
 - g. Field Quality Control, including Testing.
 - h. Cleaning and disinfecting.
 - i. Incorporation of valves, meters and special items shown or specified into the piping systems per the Contract Documents and as required.

1.02 REFERENCES

A. Standards referenced in this Section are listed below:

1. American National Standards Institute, (ANSI):
 - a. ANSI B31.1, Power Piping.
2. American Society for Testing and Materials, (ASTM):
 - a. ASTM B 32, Specification for Solder Metal.
 - b. ASTM C 924, Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Test Method.
 - c. ASTM D 2321, Practice for Underground Installation of Thermoplastic Pipe for Sewers and other Gravity-Flow Applications.
 - d. ASTM D 2774, Practice for Underground Installation of Thermoplastic Pressure Piping.
 - e. ASTM F 1417, Test Method for Installation Acceptance of Plastic Gravity Sewer Lines using Low-Pressure Air.
3. American Water Works Association, (AWWA):
 - a. AWWA C111, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - b. AWWA C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - c. AWWA C605, Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
 - d. AWWA C606, Grooved and Shouldered Joints.
 - e. AWWA C651, Disinfecting Water Mains.

- f. AWWA M9, Concrete Pressure Pipe.
- g. AWWA M23, PVC Pipe - Design and Installation
- h. AWWA M41, Ductile-Iron Pipe and Fittings.
- 4. American Society of Civil Engineers, (ASCE):
 - a. ASCE 37, Design and Construction of Sanitary and Storm Sewers.
- 5. Concrete Pipe Handbook, American Concrete Pipe Association.
- 6. Factory Mutual System, (FM).
- 7. National Fire Protection Association, (NFPA):
 - a. NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances.
- 8. Underwriters' Laboratories, Inc., (UL).

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable provisions and recommendations of the following except as otherwise shown or specified.
 - 1. Comply with requirements of authorities having jurisdiction at the site.

1.04 SUBMITTALS

- A. Tests: Submit description of proposed testing methods, procedures and apparatus. Prepare and submit report for each test.
- B. Record Documents:
 - 1. Maintain accurate and up-to-date record documents showing field modifications. Record documents for buried piping Work shall show actual location of all piping and appurtenances at same scale as the Contract Drawings.
 - 2. Record documents shall show piping with elevations referenced to the project datum and the installation dimension from the roadway pavement, when possible. For straight runs of pipe provide offset dimensions as required to document pipe location.
 - 3. Include profile drawings with buried piping record documents when the Contract Documents include pipe profile drawings.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery:
 - 1. Deliver materials to the Site to ensure uninterrupted progress of the Work.
 - 2. Upon delivery inspect pipe and appurtenances for cracked, gouged, chipped, dented, and other damaged material and immediately remove from Site.
- B. Storage:
 - 1. Store materials to allow convenient access for inspection and identification. Keep material off the ground using pallets, platforms, or other supports. Protect steel members and packaged materials from corrosion and deterioration.
- C. Handling:
 - 1. Handle all pipe, fittings, specials and accessories carefully with approved handling devices. Do not drop or roll material off trucks. Do not otherwise drop, roll or skid piping.
 - 2. Avoid unnecessary handling of pipe.
 - 3. Keep pipe interiors free from dirt and foreign matter.
 - 4. Protect interior linings and exterior coatings of pipe and fittings from damage during handling. Pipe and fittings with damaged lining shall be replaced regardless of cause of

damage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Piping materials are specified in the Buried Piping Schedule at the end of this Section. Piping materials shall conform to specification for each type of pipe and piping appurtenances.
- B. General:
 - 1. Marking Piping:
 - a. Factory mark each piece of pipe or fitting with a designation conforming to the specification.
 - b. Manufacturer shall cast or paint material, type and pressure designation on each piece of pipe or fitting 4-inches in diameter and larger.
 - c. Pipe and fittings smaller than 4-inches in diameter shall be clearly marked by manufacturer as to material, type and rating.

PART 3 EXECUTION

3.01 INSTALLATION

- A. General:
 - 1. Install piping as shown, specified and as recommended by the manufacturer.
 - 2. If there is a conflict between manufacturer's recommendations and the Contract Documents, request instructions from Engineer, in writing, before proceeding.
 - 3. Owner shall inspect all trench excavations and bedding prior to laying pipe. Notify Owner, in writing, in advance of excavating, bedding pipe laying, and backfill operations.
 - 4. Minimum cover over piping shall be 54-inches, unless otherwise shown or accepted by Engineer.
 - 5. Excavation in excess of that required or shown and which is not authorized by the Engineer shall be replaced at Contractor's expense with approved granular material, furnished, placed and compacted.
 - 6. Comply with NFPA 24 for "Outside Protection", where applicable to water pipe systems used for fire protection.
- B. Separation of Sewers and Potable Water Pipe Lines:
 - 1. Horizontal Separation:
 - a. Wherever possible, existing and proposed potable water mains and service lines, and sanitary and storm sewers shall be separated horizontally by a clear distance of not less than ten feet.
 - b. If local conditions preclude a clear horizontal separation of not less ten feet, the installation will be permitted provided the potable water main is in a separate trench or on a undistributed earth shelf located on one side of the sewer and at an elevation so the bottom of the potable water main is at least 24-inches above the top of the sewer.
 - 2. Vertical Separation:
 - a. Provide a minimum vertical distance of 18 inches between the outside of the potable water main and the outside of the sewer when a sewer or drain must cross over a potable water main.
 - b. Center a section of potable water main at least 12.5 feet long over the sewer so that the sewer joints will be equidistant from the potable water main joints.
 - c. Provide adequate structural support where a potable water main crosses under a sewer to

maintain line and grade.

d. Exceptions:

- 1) Where it is not possible to provide the minimum horizontal and vertical separation described above, encase either potable water main or sewer in a watertight carrier pipe which extends ten feet on both sides of the crossing, measured perpendicular to the potable water main.

C. Plugs:

1. Temporarily plug installed pipe at the end of each day's Work or other interruption to the installation of any pipe line. Plugging shall prevent the entry of animals, liquids or persons into the pipe or the entrance or insertion of deleterious materials.
2. Install standard plugs into all bells at dead ends, tees or crosses. Cap all spigot ends.
3. Fully secure and block all plugs and caps installed for pressure testing to withstand the specified test pressure.
4. Where plugging is required for phasing of the Work or for subsequent connection of piping, install watertight, permanent type plugs.

D. Bedding Pipe: Bed pipe as specified below and in accordance with the details shown.

1. Where Engineer deems the existing bedding material unsuitable, remove and replace it with approved granular materials.
2. Where pipe is installed in rock excavation, provide a minimum of six inches of granular bedding material underneath the pipe.
3. Excavate trenches below the pipe bottom by an amount shown and specified. Remove all loose and unsuitable material from the trench bottom.
4. Carefully and thoroughly compact all pipe bedding with hand held pneumatic compactors.
5. Do not lay pipe until the Engineer approves the bedding condition. If a conflict exists obtain direction from Engineer before proceeding.
6. No pipe shall be brought into position until the preceding length has been bedded and secured in its final position.

E. Laying Pipe:

1. Conform to manufacturer's instructions and requirements of standards and manuals listed below, as applicable:
 - a. Ductile Iron Pipe: ANSI/AWWA C600, ANSI/AWWA C105, AWWA M41. Concrete Pipe: AWWA M9.
 - b. Thermoplastic Pipe: ASTM D2321, ASTM D2774, ANSI/AWWA C605, AWWA M23, AWWA M45, AWWA, M55.
2. Install all pipe accurately to line and grade shown, unless otherwise approved by Engineer. Remove and relay pipes that are not laid correctly.
3. Slope piping uniformly between elevations shown.
4. Ensure that ground water level in trench is at least 6-inches below bottom of pipe before laying piping. Do not lay pipe in water. Maintain dry trench conditions until jointing and backfilling are complete and protect and keep clean water pipe interiors, fittings and valves.
5. Place bell and spigot pipe so that bells face the direction of laying, unless otherwise approved by Engineer.
6. Excavate around joints in bedding and lay pipe so that the barrel bears uniformly on the trench bottom.
7. Deflections at joints shall not exceed 75 percent of the amount allowed by the pipe manufacturer.
8. For PVC and CPVC piping with solvent welded joints, two and one-half inches in diameter and smaller and copper tubing and thermoplastic piping, snake piping in trench to compensate for thermal expansion.

9. Carefully examine all pipe, fittings and specials for cracks, damage or other defects while suspended above the trench before installation. Immediately remove defective materials from the Site.
10. Inspect interior of all pipe and fittings and completely clean all dirt, gravel, sand, debris or other foreign material from pipe interior and joint recesses before it is moved into the trench. Bell and spigot mating surfaces shall be thoroughly wire brushed, and wiped clean and dry immediately before the pipe is laid.
11. Field cut pipe, where required, with a machine specially designed for cutting piping. Make cuts carefully, without damage to pipe or lining, and with a smooth end at right angles to the axis of pipe. Cut ends on all types of push-on joints shall be tapered and sharp edges filed off smooth. Flame cutting will not be allowed.
12. Blocking under piping will not be permitted, unless specifically approved by Engineer for special conditions. If permitted, conform to requirements of AWWA C600.
13. Touch up protective coatings in a satisfactory manner prior to backfilling.
14. Contractor shall notify Engineer in advance of backfilling operations. All piping shall be inspected by the Engineer prior to any backfilling.
15. On steep slopes, take measures acceptable to Engineer to prevent movement of the pipe during installation.
16. Thrust Restraint: During the installation of the pipe, thrust blocks, tied joints, or proprietary restrained joint systems shall be provided wherever required for thrust restraint. Thrust restraint shall conform to the applicable requirements of Paragraph 3.3.

F. Jointing Pipe:

1. Ductile Iron Mechanical Joint Pipe:
 - a. Wipe clean the socket, plain end and adjacent areas immediately before making joint. Make certain that cut ends are tapered and sharp edges are filed off smooth.
 - b. Lubricate the plain ends and gasket with soapy water or the manufacturer's recommended pipe lubricant, in accordance with AWWA C111, just prior to slipping the gasket onto the plain end of the joint assembly.
 - c. Place the gland on the plain end with the lip extension toward the plain end, followed by the gasket with the narrow edge of the gasket toward the plain end.
 - d. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight during assembly.
 - e. Push gland toward socket and center it around pipe with the gland lip against the gasket.
 - f. Insert bolts and hand tighten nuts.
 - g. Make deflection after joint assembly, if required, but prior to tightening bolts. Alternately tighten bolts 180 degrees apart to seat the gasket evenly. The bolt torque shall be as follows:

<u>Pipe Size</u> <u>(Inches)</u>	<u>Bolt Size</u> <u>(Inches)</u>	<u>Range of Torque</u> <u>(Ft-lbs)</u>
3	5/8	45 to 60
4 to 24	3/4	75 to 90
30 to 36	1	100 to 120
42 to 48	1-1/4	120 to 150

- h. All bolts and nuts shall be coated with two 8 mil dry film thickness per coat, coats of coal-tar epoxy coating as manufactured by Tnemec, or equal.
 - i. Restrained mechanical joints shall be in accordance with Section 33 11 13.13, Ductile Iron Public Water Utility Distribution Piping.
2. Ductile Iron Push-On Joint Pipe:

- a. Prior to assembling the joints, the last 8-inches of the exterior surface of the spigot and the interior surface of the bell shall be thoroughly cleaned with a wire brush, except where joints are lined or coated with a special protective lining or coating.
 - b. Rubber gaskets shall be wiped clean and flexed until resilient. Refer to manufacturer's instructions for procedures to ensure gasket resiliency when assembling joints in cold weather.
 - c. Insert gasket into joint recess and smooth out the entire circumference of the gasket to remove bulges and to prevent interference with the proper entry of the spigot of the entering pipe.
 - d. Immediately prior to joint assembly, apply a thin film of pipe manufacturer's recommended lubricant to the surface of the gasket that will come in contact with the entering spigot end of pipe. Contractor may, at their option, apply a thin film of lubricant to the outside of the spigot of the entering pipe.
 - e. For assembly, center spigot in the pipe bell and push pipe forward until it just makes contact with the rubber gasket. After gasket is compressed and before pipe is pushed or pulled all the way home, carefully check the gasket for proper position around the full circumference of the joint. Final assembly shall be made by forcing the spigot end of the entering pipe past the rubber gasket until it makes contact with the base of the bell. When more than a reasonable amount of force is required to assemble the joint, the spigot end of the pipe shall be removed to verify the proper positioning of the rubber gasket. Gaskets which have been scoured or otherwise damaged shall not be used.
 - f. Maintain an adequate supply of gaskets and joint lubricant at the Site at all times when pipe jointing operations are in progress.
3. Proprietary Joints:
- a. Pipe which utilizes proprietary joints for restraint specified in Section 33 11 13.13, Ductile Iron Public Water Utility Distribution Piping, or other such joints shall be installed in strict accordance with the manufacturer's instructions.
4. Ductile Iron Flanged Joints:
- a. Assemble flanged joints using ring-type gaskets, thickness as recommended by pipe manufacturer but not less than 1/8-inch thick, for raised face flanges. Use full face gaskets for flat face flanges, unless otherwise approved by ENGINEER or recommended by pipe manufacturer. Gaskets shall be suitable for the service intended in accordance with manufacturer's ratings and instructions. Gaskets shall be properly centered.
 - b. Bolts shall be tightened as recommended by the manufacturer in a sequence that ensures equal distribution of bolt loads.
 - c. Length of bolts shall be uniform. Bolts shall not project beyond the nut more than 1/4-inch when fully tightened. Bolts shall not fall short of the nut when fully taken up. Ends of bolts shall be machine cut and neatly rounded. Do not use washers.
 - d. Prior to assembly, lubricate bolt threads and gasket faces.
 - e. After assembly, coat all bolts and nuts, except those of stainless steel, with two coats, minimum dry film thickness of 8-mils each, of a high-build epoxy or bituminous coating manufactured by Themec, or equal.
5. Thermoplastic Pipe Joints:
- a. Solvent Cement Joints:
 - 1) Bevel pipe ends and remove all burrs before making joints. Clean both pipe and fittings thoroughly. Do not attempt to make solvent cement joints if temperature is below 40 degrees F nor in wet conditions.
 - 2) Use solvent cement supplied or recommended by the pipe manufacturer.
 - 3) Apply joint primer and solvent cement and assemble joints in strict accordance with the recommendations and instructions of the manufacturer of the joint materials and the pipe manufacturer.
 - 4) Observe safety precautions with the use of joint primers and solvent cements.

Allow air to circulate freely through pipelines to permit solvent vapors to escape. Slowly admit water when flushing or filling pipelines to prevent compression of gases within pipes.

- b. Bell and Spigot Joints:
 - 1) Bevel field-cut pipe, remove all burrs, and provide a reference mark at the correct distance from pipe end.
 - 2) Clean spigot end and bell thoroughly before making the joint. Insert O-ring gasket while ensuring that gasket is properly oriented. Lubricate spigot well with manufacturer's recommended lubricant. Do not lubricate bell and O-ring. Insert spigot end of pipe carefully into bell until reference mark on spigot is flush with bell.
- 6. HDPE Pipe Joints:
 - a. Bell and Spigot Joints:
 - 1) Remove all burrs, and provide a reference mark at the correct distance from pipe end. Mark shall be placed such that no more than one half inch of the machined spigot surface will be visible outside of the bell after the pipe has been joined.
 - 2) Clean spigot end and bell thoroughly with soap and water before positioning the gasket.
 - 3) Lubricate spigot groove with manufacturer's recommended lubricant. Thoroughly clean the gasket and place in the spigot groove starting at the bottom, ensuring that the gasket fins face backwards towards the pipe.
 - 4) Thoroughly lubricate the gasket with manufacturer's recommended lubricant and equalize the stretch in the gasket by running a screwdriver under the gasket around its entire circumference three times. Reposition the gasket in the groove after stretching.
 - 5) Thoroughly clean and lubricate the receiving bell. Align the pipe as straight as possible and insert spigot end of pipe carefully into bell until reference mark on spigot is flush with bell.
 - 6) If a mechanical means is used to insert the spigot end, the end of the pipe being pushed shall be protected with wood and to ensure even distribution of pressure.
 - b. Butt Fusion Welded Joints:
 - 1) Joints shall be installed in accordance with the manufacturer's instructions using a hydraulic butt fusion machine, or a manual machine equipped with a torque wrench. All equipment shall be able to achieve and maintain a heating tool temperature range of 400 to 450 degrees F and an interface pressure of 60 to 90 psi.
 - 2) Clean the interior and exterior of the pipe or fitting ends with a clean, dry, lint-free cloth.
 - 3) Align the ends to be joined in the fusion machine, without forcing ends into alignment. Adjust the alignment as necessary and tighten the clamps to prevent slippage.
 - 4) Place the facing tool between the ends to be joined, and face them to provide a clean, smooth, parallel mating surface. If stops are present, face the ends down to the stops. Remove all shavings after facing without touching the ends.
 - 5) Re-check alignment of the ends and check for slippage against the fusion pressure. Check that there are no detectable gaps between the ends and that outside diameters are in alignment.

- 6) Verify the heating tool is maintaining the recommended temperature range and then place the tool between the ends to be joined. Move the ends against the heating tool to ensure full contact. Hold the ends against the heating tool without force until the proper melt bead size is formed. Approximate melt bead sizes are as follows:
- 7) Upon formation of the proper melt bead size, quickly separate the ends and remove the heating tool.

Pipe Diameter (inches)	Approximate Melt Bead Size (inches)
2 to 4	1/8 to 3/16
4 to 12	3/16 to 1/4
12 to 24	1/4 to 7/16
24 to 54	7/16 to 9/16

- 8) After removing the heating tool, quickly inspect the melted ends, and then bring the ends together applying the correct joining force, as recommended by the manufacturer, using 60-90 psi interfacial pressure, to form a double bead rolled over the surface of the pipe on both ends.
- 9) Hold the joining force against the ends until the joint is cool to the touch. Cooling period shall last approximately 30-90 seconds per inch of pipe diameter. Heavier wall thicknesses may require longer cooling times as recommended by the manufacturer.
- 10) Upon completion of the joint, joint shall be inspected to ensure a double bead has been formed on both sides, uniformly rounded and consistent in size all around the joint. Any joint found to be faulty shall be cut out of the system and removed.

I. Backfilling:

1. Place backfill as the Work progresses. Backfill by hand and use power tampers until pipe is covered by at least one foot of backfill.

J. Connections to Valves and Hydrants:

1. Install valves and hydrants as shown on Drawings.
2. Provide suitable adapters when valves or hydrants and piping have different joint types.
3. Provide thrust restraint at all hydrants and at valves at pipeline terminations.

K. Transitions from One Type of Pipe to Another

1. Provide all necessary adapters, specials and connection pieces required when connecting different types and sizes of pipe or connecting pipe made by different manufacturers.

L. Closures:

1. Provide all closure pieces shown or required to complete Work.
2. Locate closures in straight runs of pipe.

3.02 THRUST RESTRAINT

- A. Provide thrust restraint on all pressure piping systems and where otherwise shown and specified.
- B. Thrust restraint may be accomplished by means of restrained pipe joints.

C. Restrained Pipe Joints:

1. Pipe joints shall be restrained by means suitable for the type of pipe being installed.
 - a. Restrain ductile iron push-on joints and mechanical joints utilizing a proprietary restrained joint system as specified in Section 33 11 13.13, Ductile Iron Public Water Utility Distribution Piping, lugs and tie rods, or other systems approved by Engineer.
 - b. Where push-on type or other non-restrained joints are utilized for thermoplastic piping, Contractor shall provide tie rods or other suitable joint restraint system, subject to the approval of Engineer.

3.03 WORK AFFECTING EXISTING PIPING

A. Location of Existing Piping

1. Locations of existing piping shown should be considered approximate.
2. Contractor shall determine the true location of existing piping to which connections are to be made, crossed or could be disturbed and location of other facilities which could be disturbed during earthwork operations, or which may be affected by Contractor's Work in anyway.

B. Taking Existing Pipelines Out of Service:

1. Do not take existing pipelines out of service, unless approved by ENGINEER, in writing.
2. Notify ENGINEER, in writing, at least 48 hours prior to taking pipeline out of service.

3.04 TESTING OF PIPING

A. General:

1. Test all piping, except as otherwise authorized by Engineer.
2. Notify Engineer, in writing, and local authorities having jurisdiction at least 48 hours in advance of testing if their presence is required.
3. Conduct all tests in the presence of the Engineer.
4. Remove or protect any pipeline-mounted devices that may be damaged by the test pressure.
5. Provide all apparatus and services required for testing, including but not limited to, the following:
 - a. Test pumps, bypass pumps, hoses, calibrated gages, meters, test containers, valves and fittings.
 - b. Temporary bulkheads, bracing, blocking and thrust restraints.
6. Provide air if an air test is required and power if pumping is required.
7. Unless otherwise noted, pipelines shall hold specified test pressure for two hours.
8. Repair and retest pipelines which fail to hold specified test pressure or which exceed the allowable leakage rate.
9. Unless otherwise specified, test pressures required are at the lowest elevation of the pipeline section being tested.
10. Advise local authorities having jurisdiction if their presence is required during testing.

B. Test Schedule:

1. Test piping at 1.5 times the operating pressure or at 250 psi, whichever is greater.

C. Hydrostatic Testing:

1. Preparation for Testing
 - a. For thermoplastic pipe follow procedures described in Section 7 of AWWA Standard C605.
 - a. For all other piping follow procedures described in AWWA Manual M9.

- b. Ensure that adequate thrust protection is in place and that all joints are properly installed.
2. Test Procedure:
 - a. Fill pipeline slowly to minimize air entrapment and surge pressures. Fill rate should not exceed one foot per second in the pipe being tested.
 - b. Examine exposed joints and valves, and correct visible leakage.
 - c. After the wetting period prescribed above, add fluid to pressurize line to the required test pressure. Maintain test pressure for a stabilization period of ten minutes before beginning test.
 - d. After the stabilization period, maintain test pressure for a two-hour period. Add fluid to restore test pressure if pressure drops five psi below test pressure at any time during the test period.
 - e. Pump from a test container to maintain test pressure. Measure the volume of fluid pumped from the container and record on the test report. Record pressure at the test pump at 15 minute intervals for the duration of the test.
3. Allowable Leakage Rates: Leakage is defined as the quantity of fluid that must be supplied to the pipeline or any section thereof to maintain pressure within five psi of the test pressure during a two-hour period. The two-hour test period shall not begin until after the pipe has been filled, exposed to the required wetting period, air has been expelled and pressure has been stabilized. Allowable leakage rates for all other piping system are listed below:
 - a. No Leakage: Pipe with flanged, welded, fused, screwed or soldered joints.
 - b. Rates based on the formula or table in AWWA Manual M41:
 - 1) Metal and fiberglass pipe joined with rubber gaskets as sealing members. This includes the following joint types:
 - i. Push-on joints
 - ii. Mechanical joints.
 - iii. Bolted sleeve type couplings
 - iv. Grooved and shouldered couplings.
 - c. Rates based on the make-up allowance in AWWA Manual M9:
 - 1) Cylinder and non-cylinder concrete pipe joined with O-ring rubber gasket sealing members.
 - d. Rates based on the formula or table in AWWA C605:
 - 1) Plastic pipe joined with O-ring gasket sealing members.

3.06 CLEANING AND DISINFECTION

- A. Clean all pipe systems and all other piping shall be cleaned as follows:
 1. Thoroughly clean all piping and flush in a manner approved by Engineer, prior to placing in service.
 2. Piping 24-inches in diameter and larger shall be inspected from inside and all debris, dirt and foreign matter removed.
 3. If piping which requires disinfection has not been kept clean during storage or installation, Contractor shall swab each section individually before installation with a five percent hypochlorite solution, to ensure clean piping.
- B. Disinfection:
 1. Disinfect all potable and finished water piping.
 2. A suggested procedure for accomplishing complete and satisfactory disinfection is specified below. Other procedures will be considered for approval by the Engineer.
 - a. Thoroughly flush piping prior to disinfection with water. For pipelines 24 inches in diameter and larger, pipelines shall be manually cleaned, carefully removing all sweepings, dirt and debris prior to disinfection.
 - b. Conform to procedures described in AWWA C651. Calcium hypochlorite tablets

manufactured by Permatex shall be used as means of disinfection, unless alternative method is acceptable to Engineer.

3. Water for initial flushing, testing and chlorination will be furnished by the Contractor. Contractor shall provide all temporary piping, hose, valves, appurtenances and services required.
4. Chlorine tablets will be supplied by Contractor.
5. Bacteriologic tests will be performed by Owner. A certified test laboratory report will be made available to Contractor, if requested.
6. Chlorine concentration in the water entering the piping shall be between 50 and 100 parts per million, such that a minimum residual concentration of 25 mg/l will be left after a 24-hour retention period. Care shall be taken to ensure disinfection of the piping in all its parts. The operation shall be repeated as necessary to provide complete disinfection.
7. After the required retention period, the heavily chlorinated water shall be flushed to drain, unless otherwise directed by the Engineer.

END OF SECTION

SECTION 33 11 13.13

DUCTILE IRON PUBLIC WATER UTILITY DISTRIBUTION PIPING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish ductile iron pipe and fittings.
 - 2. Extent of piping is shown on the Drawings.
- B. Coordination:
 - 1. Review installation procedures under this and other Specification sections and coordinate installation of items that are to be installed with or before ductile iron pipe Work.

1.02 RELATED WORK

- A. Section 33 11 13, Public Water Utility Distribution Piping.

1.03 REFERENCES

- A. Standards referenced in this Section are listed below:
 - 1. ANSI B18.2.1, Square and Hex Bolts and Screws Inch Series.
 - 2. ANSI B18.2.2, Square and Hex Nuts. (Inch Series).
 - 3. ASTM A193, Alloy Steel and Stainless Steel Bolting Materials for High-Temperature Service.
 - 4. ASTM A194, Specification for Carbon Steel and Alloy Steel Nuts for Bolts for High-Pressure or High-Temperature Service, or Both.
 - 5. ASTM A307, Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
 - 6. ASTM A354, Specification for Quenched and Tempered Alloy Steel Bolts, Studs and Other Externally Threaded Fasteners.
 - 7. ASTM A563, Specification for Carbon and Alloy Steel Nuts.
 - 8. ASTM B117, Practice for Operating Salt Spray (Fog) Apparatus.
 - 9. ASTM C283, Test Methods for Resistance of Porcelain Enameled Utensils to Boiling Acid.
 - 10. ASTM D714, Test Method for Evaluating Degree of Blistering of Paints.
 - 11. ASTM D792, Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
 - 12. ASTM D5162, Discontinuity (Holiday) Testing of Non-Conductive Protective Coating on Metallic Substrates.
 - 13. ASTM E96, Test Methods for Water Vapor Transmission of Materials.
 - 14. ASTM G14, Test Method for Impact Resistance of Pipeline Coatings (Falling Weight Test).
 - 15. ASTM G62, Test Methods for Holiday Detection in Pipeline Coatings.
 - 16. ASTM G95, Test Methods for Cathodic Disbondment Test of Pipeline Coatings (Attached Cell Method).
 - 17. ANSI/AWWA C104, Cement-Mortar Lining for Ductile Iron Pipe and Fittings for Water.
 - 18. ANSI/AWWA C110, Ductile Iron and Gray-Iron Fittings, 3 in. – 48 in. for Water.
 - 19. ANSI/AWWA C111, Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
 - 20. ANSI/AWWA C115, Flanged Ductile Iron Pipe with Ductile Iron or Gray Iron Threaded

Flanges.

21. ANSI/AWWA C116, Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile Iron and Gray Iron Fittings for Water Service.
22. ANSI/AWWA C151, Ductile Iron Pipe, Centrifugally Cast, for Water.
23. ANSI/AWWA C153, Ductile Iron Compact Fittings for Water Service.
24. ANSI/AWWA C606, Grooved and Shouldered Type Joints.
25. European Standard (EN), EN 598: Ductile Iron Pipe, Fittings, Accessories and Their Joints for Sewerage Applications.
26. Manufacturers Standardization Society of the Valves and Fittings Industry (MSS), MSS-SP 60, Connecting Flange Joint Between Tapping Sleeves and Tapping Valves.
27. NACE RP0188, Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates.
28. National Association of Pipe Fabricators, Inc. (NAPF), NAPF 500-03, Surface Preparation Standard for Ductile Iron Pipe and Fittings Receiving Special External Coatings and/or Special Internal Linings.
29. ANSI /NSF 61, Drinking Water System Components - Health Effects.
30. SSPC PA 2, Measurement of Dry Coating Thickness with Magnetic Gages.
31. SSPC Painting Manual, Volume 1, Para. XIV.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Manufacturer shall have a minimum of five years successful experience producing ductile iron pipe and fittings and shall be able to show evidence of at least five installations in satisfactory operation in the United States that are similar applications to the specified service.
2. Lining and coating products shall be manufactured by a firm with a minimum of five years successful experience in protecting pipelines exposed to the specified service conditions, and shall be able to show evidence of at least five installations in satisfactory operation in the United States that are similar applications to the specified service.

B. Supply and Compatibility:

1. Unless otherwise approved by Engineer, obtain all pipe, fittings, and appurtenances included in this Section from a single ductile iron pipe manufacturer.
2. Ductile iron pipe manufacturer shall review and approve or prepare all Shop Drawings and other submittals for all pipe, fittings, and appurtenances furnished under this Section.
3. All pipe, fittings, and appurtenances shall be suitable for the specified service and shall be integrated into the overall piping system by ductile iron pipe manufacturer.
4. Ductile iron pipe manufacturer shall be responsible for all products and all factory-applied linings and coatings, whether installed at pipe manufacturer's facility or at manufacturer's Subcontractor's facility.

1.05 SUBMITTALS

A. Shop Drawings: Submit the following with Shop Drawings required under Section 33 11 13, Public Water Utility Distribution Piping:

1. Detailed drawings and data for pipe, fittings, gaskets, appurtenances, linings, and coatings.

B. Certificates:

1. Submit a certificate signed by manufacturer of each product that product conforms to applicable referenced standards and the Contract Documents.
- 2.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Refer to Section 33 11 13, Public Water Utility Distribution Piping.
- B. Handling of Pipe and Fittings Coated with Fusion Bonded Epoxy: Hooks, forks, chains, straps, and other lifting devices shall be rubber-coated and be used only on exterior of pipe and fittings in such a manner to avoid damaging the coating. If coating becomes damaged, CONTRACTOR shall notify pipe and coating manufacturer to determine if repair of damaged area or re-coating is required. Perform repairs using recommended procedures and materials provided by manufacturer, as accepted by ENGINEER. Pipe and fittings requiring re-coating shall be removed from Site and returned to manufacturer's facility. Repaired or re-coated pipe and fittings shall meet all requirements of this Section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General:
 - 1. Piping systems shall be suitable for their intended use.
 - 2. Joints shall be as specified in Section 33 11 13, Public Water Utility Distribution Piping. If not specified, provide flanged joints for exposed piping and push-on or mechanical joints for buried piping. Provide couplings on pipe with plain or grooved ends where shown or where approved by ENGINEER.
- B. Ductile Iron Pipe and Fittings:
 - 1. Flanged Pipe: Fabricate in accordance with ANSI/AWWA C115.
 - a. Pressure Class: As specified on drawings. If not otherwise specified use Class 52, Pressure Class 350.
 - 2. Non-Flanged Pipe: Conform to ANSI/AWWA C151 for material, pressure, dimensions, tolerances, tests, markings, and other requirements.
 - a. Pressure Class: As specified on drawings. If not otherwise specified, use Class 52, Pressure Class 350.
 - 3. Joints:
 - a. Flanged Joints: Do not use flanged joints in the underground installations except where specified or shown. Conform to ANSI/AWWA C110 and ANSI/AWWA C115 capable of meeting the pressure class 350 or special thickness class, and test pressure.
 - 1) Gaskets: Unless otherwise specified, gaskets shall be at least 1/8-inch thick, ring or full-face as required for the pipe, of a synthetic rubber compound containing not less than 50 percent by volume nitrile or neoprene, and shall be free from factice, reclaimed rubber, and other deleterious substances. Gaskets shall be suitable for the service conditions specified, specifically designed for use with ductile iron pipe and fittings.
 - i. Gasket Sealing Compounds: Provide high temperature resistant sealing compound (Loctite PST 592 or equivalent) with Dimethacrylate-ester base, and Teflon.
 - 2) Bolts: Conform to ANSIB18.2.1
 - i. Exposed: ASTM A 307, Grade B
 - ii. Buried or Submerged: ASTM A 193, Grade B8M, Class 2, Heavy hex, Type 316 stainless steel.
 - 3) Nuts: Conform to ANSI B18.2.2.
 - i. Exposed: ASTM A 563, Grade A, Heavy Hex.

- ii. Buried or Submerged: ASTM A 194, Grade B8M. Heavy hex, Type 316 stainless steel.
 - b. Mechanical Joints: Conform to ANSI/AWWA C110 and ANSI/AWWA C111, capable of meeting pressure class 350 or special thickness class, and test pressure specified in Section 33 11 13 Public Water Utility Distribution Piping.
 - 1) Glands: Ductile Iron.
 - 2) Gaskets: Plain tip.
 - 3) Bolts and Nuts: High strength, low alloy steel.
 - 4) Manufacturers: Provide products of one of the following:
 - i. Clow Water Systems, a Division of McWane, Inc.
 - ii. American Cast Iron Pipe Co.
 - iii. U.S. Pipe and Foundry Co.
 - c. Push-on Joints: Conform to ANSI/AWWA C111, capable of meeting pressure class 350 or special thickness class, and test pressure specified in Section 33 11 13 Public Water Utility Distribution Piping.
 - 1) Gaskets: Molded rubber.
 - 2) Stripes: Each plain end shall be painted with a circular stripe to provide a guide for visual check that joint is properly assembled.
 - 3) Products and Manufacturers: Provide products of one of the following:
 - i. Tyton or Fastite Joint by Clow Water Systems, a Division of McWane, Inc.
 - ii. Fastite Joint by American Cast Iron Pipe Co.
 - iii. Tyton Joint by U.S. Pipe and Foundry Co.
 - d. Restrained Joints: Restrained push-on joints shall be capable of being deflected after full assembly. Field cuts of restrained pipe are not allowed without approval of ENGINEER.
 - 1) Products and Manufacturers: Provide restrained joints for mechanical joint piping by one of the following:
 - i. Megalug, Series 1100, manufactured by EBAA Iron Sales, Inc.
 - ii. MJ Coupled Joint, manufactured by American Cast Iron Pipe Co.
 - iii. MJ Field Lok, manufactured by U.S. Pipe and Foundry Co.
 - 2) Products and Manufacturers: Provide restrained joints for push-on joint piping by one of the following:
 - i. Super-Lock Joint Pipe, manufactured by Clow Water Systems, a division of McWane, Inc.
 - ii. Lok-Ring Joint, or Flex-Ring Joint, manufactured by American Cast-Iron Pipe Company.
 - iii. TR Flex Joint, manufactured by U.S. Pipe and Foundry Co. d) Series 1700 D.I. Restrained Harness manufactured by EBAA Iron.
 - iv. All mechanical restraint devices shall be coated with a fully bonded coating system on castings and wedge assemblies.
 - e. Ball and Socket: Ball and socket joints (river crossing) shall be restrained, boltless, and capable of deflecting up to 15 degrees
 - 1) Gaskets: High quality rubber.
 - 2) Bell, Ball, Restrainer: Ductile Iron
 - 3) Products and Manufacturers:
 - i. Clow Water Systems
 - ii. American Cast Iron Pipe Co.
 - iii. U.S. Pipe and Foundry Co.
- 4. Flanged Fittings: Conform to ANSI/AWWA C110 or ANSI/AWWA C153.
 - a. Pressure Rating: As specified above for flanged joints.
 - b. Material: Ductile iron.
 - c. Gaskets: As specified above for flanged joints.
 - d. Bolts and Nuts: As specified above for flanged joints.

5. Mechanical Joint Fittings: Conform to ANSI/AWWA C110 or ANSI/AWWA C153.
 - a. Pressure Rating: As specified above for mechanical joints.
 - b. Material: Ductile iron.
 - c. Glands: Ductile iron.
 - d. Gaskets: As specified above for mechanical joints.
 - e. Bolts and Nuts: As specified above for mechanical joints.

C. General Requirements for Lining:

1. Surface Preparation:

- a. Initial Surface Inspection: Surface to be lined shall be inspected by pipe and fitting manufacturer and applicator, if applicator is other than pipe and fitting manufacturer. The inspecting parties shall inspect the surface to be coated and mutually determine the recommended surface preparation method.
- b. Surface Preparation: Prepare surface in accordance with the recommended method.
- c. Finished Surface Inspection: Lining applicator shall inspect finished surface prior to application to determine acceptability. If surface is unacceptable, surface preparation shall be repeated as necessary.

D. Cement-mortar Lining:

1. Where specified in piping schedules included with Section 33 11 13 Public Water Utility Distribution Piping, pipe and fittings shall be lined with a bituminous seal coated cement-mortar lining in accordance with ANSI/AWWA C104.

E. Specials:

1. Transition Pieces:

- a. Furnish suitable transition pieces (adapters) for connecting to existing piping.
- b. Unless otherwise shown or specified, expose existing piping to determine material, dimensions, and other data required for transition pieces.

2. Taps:

- a. Provide taps where shown or required for small-diameter pipe connections.
- b. Provide corporation stops where shown or required.
- c. Where pipe wall thickness or tap diameter will not permit the engagement of the required minimum number of full threads, provide a tapping saddle with outlet joints.

2.02 MARKING FOR IDENTIFICATION

A. In addition to identification markings specified in Section 33 11 13, Public Water Utility Distribution Piping, also stamp, mark, and identify pipe materials with:

1. Name or trademark of manufacturer.
2. Size and length dimensions.
3. Date and place of manufacture, including country.
4. Pipe Class

2.02 EXTERIOR SURFACE PREPARATION AND COATINGS

A. General Coating Requirements:

1. Coating types are specified in section 33 11 13, Public Water Utility Distribution Piping.

B. Buried Pipe and Fittings:

1. Asphaltic Coating: Buried Piping Installation, coat pipe and fittings with an asphaltic coating approximately one mil thick, in accordance with ANSI/AWWA C151, ANSI/AWWA C115, ANSI/AWWA C110, and ANSI/AWWA C153, as applicable.

2. Fusion Bonded Epoxy Coating for Fittings:
 - a. Buried Piping Installation, fittings shall be factory coated with 100 percent solids, thermosetting, dry powder epoxy, in conformance with ANSI/AWWA C116.
 - b. Apply coating utilizing a method, recommended by manufacturer that meets requirements of this Section, with a finished dry film thickness of at least six mils, with exception of joint areas, which shall receive at least a four-mil dry film thickness coating. Heat and cure the fittings per coating manufacturer's recommendations.
 - c. Manufacturer's Inspection and Certification:
 - 1) All coated fittings shall be visually inspected by manufacturer and show no sign of blisters, cracks, or lack of coverage.
 - 2) Check all coated fittings for coating thickness using a magnetic film thickness gage utilizing method outlined in SSPC PA 2 Film Thickness Rating.
 - 3) Holiday-test all coated fittings in accordance with ASTM D5162, NACE RP0188, and SSPC Painting Manual Vol. 1, Para. XIV, with a low voltage, wet sponge holiday detector. Repair methods and materials for holidays shall be as recommended by coating manufacturer and made prior to shipment to the Site.
 - d. Products and Manufacturers: Provide products of one of the following:
 - 1) Pipeclad 1500, by Valspar Corporation.
 - 2) Or equal.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect piping to assure that piping is free from defects in material and workmanship. Verify compatibility of all pipe, fittings, gaskets, linings, and coatings.

3.02 INSTALLATION AND FIELD QUALITY CONTROL

- A. For buried piping installation and testing, refer to Section 33 11 13, Public Water Utility Distribution Piping.

END OF SECTION

SECTION 33 11 13.14

POLYVINYL CHLORIDE (PVC) PRESSURE PIPE, FITTINGS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Furnish all labor, materials, equipment, and incidentals required, and install polyvinyl chloride (PVC) waterline, fittings, and appurtenances as shown on the drawings and as specified herein.

1.02 REFERENCE SPECIFICATIONS, CODES & STANDARDS

- A. This standard references the documents listed below. They form a part of this standard to the extent specified herein. In any case of conflict, the requirements of this standard shall prevail.
 1. ASTM D1598 - Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure.
 2. ASTM D1599 - Test Method for Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing, and Fittings.
 3. ASTM D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
 4. ASTM D2122 - Standard Method of Determining dimensions of Thermoplastic Pipe and Fittings.
 5. ASTM D2152 - Standard Test Method for Degree of Fusion of Extruded Poly (Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion.
 6. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series).
 7. ASTM D2412 - Standard Test Method for Determination of External Loading characteristics of Plastic Pipe by Parallel-Plate Loading.
 8. ASTM D2774 - Recommended Practice for underground Installation of Thermoplastic Pressure Piping.
 9. ASTM D2837 - Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.

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10. ASTM D3139 - Specifications for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
11. ASTM F477 - Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
12. AWWA M23 - PVC Pipe - Design and Installation.
13. NSF 14 - Plastics Piping System Components and Related Materials.
14. NSF 61 – Drinking Water System Components – Health Effects
15. PPI TR3 - Policies and Procedures for Developing Recommended Hydrostatic Design Stresses for Thermoplastic Pipe Materials.

1.03 SUBMITTAL

- A. Submit to the Engineer within ten days after receipt of Notice-to-Proceed a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
- B. Manufacture's installation guideline.
- C. Submit for approval detailed shop drawings of the following:
 1. PVC pipe
 2. Ductile Iron Pipe Fittings
 3. Encasement Pipe
 4. Gaskets
 5. Thrust Restraints
 6. Tracer Wire
 7. Lubricant

PART 2 - PRODUCTS

2.01 WATER MAIN

- A. Polyvinyl Chloride (PVC) Pipe
 1. Pipe 4 inches through 12 inches: Conform to requirements of AWWA C- 900 with a dimension ratio (DR) of 14 pressure class 305. PVC material used in pipe shall be as specified in ASTM D1784, Cell Classification 1245-B. Each pipe length shall be marked with the manufacturer's name, size, material code, pressure class, AWWA designation number, and seal of test agency that verified pipe material for potable water service.
 2. PVC pipe shall have bell and spigot push-on joints. The bell shall consist of an integral wall section with a solid cross-section elastomeric gasket securely locked in place to prevent displacement during assembly.
 3. The potable water mains shall be blue in color.
 4. All pipe shall be manufactured in the United States.

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- B. Steel Encasement Pipe: Conform to ASTM Designation A252, Grade 2. Joints shall be welded completely around the pipe by a certified welder. Pipe shall meet all AASHTO standards and Warren County requirements.
- C. Fittings:
 - 1. PVC Pipe: Fittings shall be ductile iron mechanical joint, with a working pressure of 250 psi and conforming to AWWA Specifications C110 or C153. All bolts and nuts shall be 304 stainless steel, Cor-blue or Cor- Ten or equal. Cor-Ten shall meet the requirements for ANSI/AWWA C111/A21-11 for buried application.
 - 2. Tapping Sleeves: Sleeve shall be stainless steel, mechanical joint type, with working pressure rating of 250 PSI, and conform to AWWA Standard C110.
 - 3. All fittings shall be manufactured in the United States.
- D. Restrained Joints
 - 1. Restrained Joint for PVC Pipe: Pipe fittings and other requiring restraint shall utilize Megalug appurtenances (or approved equal) joint restrain devices.
- E. Tracer Wire
 - 1. Tracer wire for direct burial applications shall be a #10 AWG (0.1019" diameter) fully annealed, high carbon 1055 grade steel, high strength solid copper clad steel conductor (HS-CCS), insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts. Conductor must be at 21% conductivity for locate purposes. Break load of 684 lbs. Tracer wire shall be Copperhead Industries, Part No. 1030B-HS, or equal.
 - 2. Install per manufacture instructions.

2.02 IDENTIFICATION

- A. Pipe shall bear identification markings that will remain legible after normal handling, storage, and installation. Markings shall be applied in a manner that will not weaken or damage the pipe. Marking shall be applied at intervals of not more than 5 feet on the pipe. Marking on the pipe shall include the following:
 - 1. Nominal size and OD base.
 - 2. PVC
 - 3. Dimension ration
 - 4. AWWA pressure rating.
 - 5. AWWA designation.

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6. Manufacturer's name and trademark.
7. Manufacturer's production code, including day, month, year, shift, plant, and extruder of manufacturer.
8. All PVC water pipe shall be color-coded blue.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Polyvinyl Chloride (PVC) water pipe shall be installed in accordance with the manufacturer's recommendation, as shown on the drawings, and as specified herein.
- B. The Contractor shall use care in handling, storage, and installation of pipe and fittings. Storage of pipe on the job site shall be done in accordance with the pipe manufacturer's recommendation. Under no circumstances shall pipe or fittings be dropped into the trench.
- C. Pipe shall be laid to lines and grade shown on the drawings with bedding and backfill as shown on the drawings. Blocking under the pipe will not be permitted. Bell holes shall be excavated so that only the barrel of the pipe bears upon the bottom of the trench or trench bedding.
- D. When laying is not in progress, or the potential exists for dirt or debris to enter the pipe, the open ends of the pipe shall be closed with plug or by other approved means.
- E. Pipe joints shall not be deflected more than manufacture maximum allowances. Pipe joints for DR14 10-inch pipe shall not be deflected more than 3.0-degrees (12.5-inches for each 20-foot pipe length) or manufacture's allowance, whichever is less. Deflection of pipe joints shall only occur through manual efforts.
- F. If allowed by the manufacture, pipe barrels may be laid to the line of curved trench by bending the pipe barrel into a curved shape. Pipe bending locations shall be approved by Warren County inspectors and shall not occur at locations where future service taps will be installed. Pipe barrels for DR14 10-inch pipe shall not be bent more than 2.5 degrees (11-inches for each 20-foot pipe length) or manufacturer's allowance, whichever is less. Bending shall only occur through manual efforts and shall be in accordance with manufacture's instructions.
- G. Changing direction of the pipe shall not be accomplished by in the same pipe length using both deflected joints and pipe bending.

3.02 TESTING WATER MAIN

- A. All water lines shall be field tested in accordance with AWWA C-900 and as specified herein. The Contractor shall supply all labor, equipment, material, gages, pumps, and incidentals required for testing.
- B. The test pressure shall be 150 psi for water mains, unless noted otherwise. The test pressure shall be measured at the highest point along the test section.

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- C. Testing shall be conducted after backfilling has been completed and before placement of permanent surface.
- D. Testing procedures shall be as follows:
 - 1. Fill line slowly with water. Maintain flow velocity less than two feet per second.
 - 2. Expel air completely from the line during filling and again before applying test pressure. Air shall be released at fire hydrants at points along the waterline.
 - 3. Apply test pressure. Maintain pressure within 5 psi of the test pressure for a period of two hours. Measure the quantity of water that was pumped into the line to maintain pressure and the quantity of water required to bring the line up to test pressure. The sum of these two quantities is defined as leakage.
 - 4. Carefully examine all exposed pipe, fittings, and joints during the test.
- E. No pipe installation will be accepted if the leakage is greater than that determine by the following formula:

$$L = \frac{SD(P)^{1/2}}{133,200}$$

in which L is the allowable leakage, in gallons per hour; S is the length of pipe tested; D is the nominal diameter, in inches; and P is the test pressure, in pig.

- F. If any test of pipe laid discloses leakage greater than that allowed, the Contractor shall, at his own expense, locate and repair the cause of leakage and retest the line.
- G. All visible leaks are to be repaired regardless of the amount of leakage.

3.03 CLEANING

- A. At the conclusion of the work, the Contractor shall thoroughly clean all of the new pipe lines by flushing with water and pigged to remove all dirt, stones, pieces of wood, or other material which may have entered during the construction period. Debris cleaned from the lines shall be removed from the job site. If, after this cleaning, any obstructions remain, they shall be removed at the Contractor's expense.

3.04 DISINFECTION

Disinfect completed water pipeline in accordance with Warren County Water & Sewer Department standards or specifications and specification Section 31 11 13.

END OF SECTION

SECTION 33 11 13.15
HORIZONTAL DIRECTIONAL DRILLING (HDD)

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

The CONTRACTOR shall provide all planning, equipment, labor, etc. necessary to properly install the proposed directional bores as indicated on the construction using horizontal directional drilling (directional boring) technology. Pipe materials shall match those indicated on the plans.

1.2 SUBMITTALS

Shop drawings and manufacturer's literature shall be submitted to the Owner for approval.

A. Detailed drawing and data for pipe, fittings, gaskets, appurtenances.

B. HDD Contingency Plan. Prepare and submit the plan to Ohio EPA for approval. Plan shall include:

- (a) crossing locations,
- (b) site specific information,
- (c) monitoring procedures,
- (d) notification procedures,
- (e) corrective actions,
- (f) best management practices (BMPs),
- (g) alternative contingency plan,
- (h) drilling fluid additives and lost circulation materials, and
- (i) disposal considerations for drilling fluids and drill cuttings

PART 2 – PRODUCTS:

2.1 PRESSURE PIPE AND FITTINGS FOR HORIZONTAL DIRECTIONAL DRILLING

A. Polyvinyl chloride pipe (pvc) for horizontal directional drilling

- 1. Products delivered under this specification shall be manufactured only from water distribution pipe and couplings conforming to AWWA C900 or AWWA C905, as appropriate for the size of the watermain indicated on the plans. Pipe sticks and bells shall be DR14 and rated for 250 psi or greater.
- 2. Pipe and couplings shall be made from unplasticized PVC compounds having a minimum cell classification of 12454-B, as defined in ASTM

D1784. Pipe, couplings, and locking splines shall be completely non-metallic. The compound shall qualify for a Hydrostatic Design Basis (HDB) of 4000 psi for water at 73.4°F, in accordance with the requirements of ASTM D2837.

3. Pipe shall be joined using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermoplastic splines shall be inserted into mating, precision-machined grooves in the pipe and coupling to provide full 360° restraint with evenly distributed loading.
4. Couplings shall be designed for use at or above the rated pressures of the pipe with which they are utilized, and shall incorporate twin elastomeric sealing gaskets meeting the requirements of ASTM F477. Joints shall be designed to meet the leakage test requirements of ASTM D3139.
5. Approved manufacturer includes C900/RJIB Certa-Lok PVC restrained-joint pipe by North American Pipe Corporation, or Owner approved equal.

B. High-density polyethylene (HDPE) for horizontal directional drilling

1. Pipes: HDPE water distribution pipe and couplings shall meet the requirements for Type III, Grade P345 Polyethylene Material as defined in ASTM Specification D-1248 (PE 3408). The minimum pressure class/SDR rating acceptable shall be Class 250/SDR 9. The pipe shall be DIPS and shall have an interior diameter no less than the piping that it is connected to.
2. Joints: Joints shall be of a heat fusion joining system. Pipe and fittings shall be thermal butt fusion, saddle fusion, or socket fusion in accordance with manufacturer recommended procedures and ASTM D-2161. At the point of fusion, the outside diameter and minimum wall thickness of the fitting shall match the outside diameter and minimum wall thickness specifications of ASTM D-1248 for the same size pipe.

Joining of the pipes and fittings shall be performed in accordance with ASTM D-2774. Depending upon the installation requirements and site location, joining shall be performed within or outside the excavation. Joints of the pipe sections shall be smooth on the inside and internal projection beads shall not be greater than 3/16 inch.

The tensile strength at yield of the butt-fusion joints shall not be less than the pipe. A specimen of the pipe cut across the butt-fusion joints shall be tested in accordance with ASTM D-638

The manufacturer shall provide fusion training. The contractor and the onsite joint inspector shall be trained by the manufacturer or manufacturer's authorized representative.

The fusion equipment and operator shall be required to demonstrate successful field experience. The fusion operator shall have pipe size experience of the same size pipe on this project for five years or longer.

3. Fittings: All fitting shall be provided as indicated on the plans. HDPE Fittings shall be of the same material and class as the pipe and shall be manufactured by the manufacturer of the pipe. HDPE Elbows, tees, and wyes shall be manufactured by mitered fabrication. The manufacturer shall have a written specification for all standard mitered fittings, which establishes Quality Control criteria and tolerances. The manufacturer may be required to demonstrate its ability to produce product required by this specification.

Mechanical joint anchor fittings (MJ Adapter or Harvey Adapter) shall be used to transition from ductile iron to HDPE and from HDPE to PVC. The fitting shall be stronger than the pipe in that when it is subjected to tensile stress the pipe will pull apart before the fitting will pull out and the pipe will blow before the fitting will rupture under pressure.

The MJ Adapter shall have a pre-installed stainless steel stiffener, in accordance with Plastic Pipe Institute (PPI) recommendations, to neutralize point-loading, ACQ, creep and loss of gasket seal due to diameter contraction. The stiffener shall be engineered sufficiently thick to avoid radial buckling due to gasket pressure.

The MJ Adapter requires longer bolts and shall be sold with the modified longer bolt kit to avoid construction crew delays or improper installation with too short bolts.

All fittings shall be rated according to the manufacturer's written specifications, and clearly labeled on the fittings as such.

4. Installation: The installation shall conform to the requirements of the manufacturer, the AWWA Standard, and as indicated on the plans and specified herein.
5. Marking and Certification: Each length of HDPE shall

be clearly marked with the Manufacturer's Name, Tradename or Trademark, Nominal pipe size, Pipe Stiffness, Production Code/Extrusion Code, Material Cell Class Designation and ASTM number.

The pipe manufacturer shall provide certification that the stress regression testing has been performed on the specific product. The said certification shall include a stress live curve per ASTM D-2837. The stress regression testing shall have been performed in accordance with ASTM D-2837, and the manufacturer shall provide a product supplying a minimum Hydrostatic Design Basis of 1,600 psi as determined by ASTM D-2837. This certification shall also state that the pipe was manufactured from one specific resin in compliance with these specifications. The certificate shall state the specific resin used and its source.

PART 3 – EXECUTION:

3.1 MATERIALS

- A. Piping and conduits installed by horizontal directional drilling (directionally bore) shall be HDPE or PVC as indicated in the plans and other sections of these specifications.

3.2 INSTALLATION

- A. Depths of all existing utilities must be confirmed by the CONTRACTOR prior to the crossing to avoid conflicts. Equipment shall be utilized that does not require the conventional bore and receiving pits due to space constraints. Proper connection to the piping at each end shall be done by standard excavation. The CONTRACTOR shall be responsible to provide a slurry containment pit and shall remove all excess material and dispose of appropriately off-site upon completion. All erosion control facilities shall be provided to contain any solids from migrating beyond the project site. If the CONTRACTOR utilizes a subcontractor for this work, they shall provide proof of adequate comprehensive general liability insurance covering underground collapse and explosion and experience to the ENGINEER and OWNER for prior approval. The CONTRACTOR shall be required to provide all necessary water in accordance with other applicable sections of these specifications.
- B. In all cases the manufacturer's recommendations and procedures shall be followed regarding the installation of their pipe material by horizontal directional drilling.

- C. Subsurface investigation, if deemed necessary, shall be provided prior to bids by the CONTRACTOR. No additional payments will be made if rock is encountered or if soil conditions require additional construction time and equipment. Proper equipment and methods shall be used in rock and soil bores to insure proper grades, elevations and separations.
- D. All directional drilling operations shall be performed by a qualified directional drilling CONTRACTOR with at least (5) years experience involving work of a similar nature to the work required of this project. The CONTRACTOR must have installed a minimum of 10,000 linear feet of pipe (4-inch diameter or greater) using directional drilling operations. A list of project references and proof of contractor experience shall be presented to the ENGINEER, upon request by the ENGINEER.
- E. The requirements of all applicable local and state authorities shall be followed by the CONTRACTOR.
- F. The piping shall be installed at the minimum depths indicated in the plans and shall deviate no more than six inches along the vertical axis and 2' along the horizontal alignment.
- G. The CONTRACTOR shall provide accurate As-Built data based on downhole survey data or a walkover location system that indicates x, y and z coordinates of the pipe at least every thirty (30) feet along the alignment or at a midpoint if the bore length is less than thirty (30) feet.

END OF SECTION

SECTION 33 12 00

WATER UTILITY DISTRIBUTION EQUIPMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install complete and ready for operation and test all non-buried valves, hydrants and appurtenances as shown on the Drawings and as specified herein.
- B. The equipment shall include, but not be limited to, the following. However all items specified herein may not be included in this project.
 - 1. Valve Actuators - General
 - 2. Gate Valves
 - 3. Resilient Seated Gate Valves
 - 4. Hydrants

1.02 SUBMITTALS

- A. Submit to the ENGINEER, materials required to establish compliance with this Section. Submittals shall include at least the following:
 - 1. Certified drawings showing all important details of construction and dimensions.
 - 2. Descriptive literature, bulletins and/or catalogs of the equipment.
 - 3. The total weight of each item.
 - 4. A complete bill of materials.
 - 5. Additional submittal data, where noted with individual pieces of equipment.
- B. Test Reports
 - 1. Provide certified hydrostatic test data, per manufacturer's standard procedure or MSS-SP-61 for all valves.
- C. Certificates
 - 1. For each valve specified to be manufactured, tested and/or installed in accordance with AWWA and other standards, submit an affidavit of compliance with the appropriate standards, including certified results of required tests and certification of proper installation.
- D. Manufacturer's Installation and Application Data
- E. Operating and Maintenance Data
 - 1. Operating and maintenance instructions shall be furnished to the ENGINEER. The instructions shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions and other information required to instruct operating and maintenance personnel unfamiliar with such equipment.

1.03 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM A48 - Standard Specification for Gray Iron Castings.
 - 2. ASTM A126 - Standard Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings.
 - 3. ASTM A159 - Standard Specification for Automotive Gray Iron Castings.
 - 4. ASTM A240 - Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels.
 - 5. ASTM A276 - Standard Specification for Stainless Steel Bars and Shapes.

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6. ASTM A436 - Standard Specification for Austenitic Gray Iron Castings.
7. ASTM A536 - Standard Specification for Ductile Iron Castings.
8. ASTM B30 - Standard Specification for Copper-Base Alloys in Ingot Form.
9. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings

B. American Water Works Association (AWWA)

1. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
2. AWWA C500 - Metal-Seated Gate Valves Supply Service
3. AWWA C502 - Dry-Barrel Fire Hydrants.
4. AWWA C504 - Rubber Seated Butterfly Valves.
5. AWWA C507 - Ball Valves, 6-in Through 48-in (150mm Through 1200mm)
6. AWWA C508 - Swing-Check Valves for Waterworks Service, 2-in (50mm Through 24-in (600mm) NPS
7. AWWA C509 - Resilient-Seated Gate Valves for Water Supply Service
8. AWWA C511 - Reduced-Pressure Principle Backflow-Prevention Assembly
9. AWWA C540 - Power-Actuating Devices for Valves and Sluice Gates
10. AWWA C550 - Protective Epoxy Interior Coatings for Valves and Hydrants
11. AWWA C800 - Underground Service Line Valves and Fittings

C. American National Standards Institute (ANSI)

1. ANSI B2.1 - Specifications, Dimensions, Gauging for Taper and Straight Pipe Threads (except dry seals).
2. ANSI B16.1 - Cast Iron Pipe Flanges and Flanged Fittings
3. ANSI B16.10 - Face-to-Face and End-to-End Dimensions of Valves

D. American Iron and Steel Institute (AISI)

E. Manufacturer's Standardization Society of the Valve and Fittings Industry (MSS)

1. MSS-SP-61 - Pressure Testing of Steel Valves.
2. MSS-SP-70 - Cast Iron Gate Valves, Flanged and Threaded Ends.
3. MSS-SP-71 - Cast Iron Swing Check Valves, Flanges and Threaded Ends.
4. MSS-SP-72 - Ball Valves with Flanged or Butt-Welding Ends for General Services.
5. MSS-SP-78 - Cast Iron Plug Valves, Flanged and Threaded Ends.
6. MSS-SP-80 - Bronze Gate, Globe, Angle and Check Valves.
7. MSS-SP-82 - Valve Pressure Testing Methods
8. MSS-SP-98 - Protective Coatings for the Interior of Valves, Hydrants and Fittings.

F. National Electrical Manufacturers Association (NEMA)

G. Underwriters Laboratories (UL)

H. Factory Mutual (FM)

- I. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.04 QUALITY ASSURANCE

A. Qualifications

1. Valves, hydrants and appurtenances shall be products of well established firms who are fully experienced, minimum 10 years, reputable and qualified in the manufacture of the particular equipment to be furnished.
2. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with this Section as applicable.
3. All units of the same type shall be the product of one manufacturer.

B. Certifications

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1. The manufacturers shall furnish an affidavit of compliance with Standards referred to herein. Refer to PART 3 for testing required for certain items in addition to that required by referenced standards.

- C. Inspection of the units may also be made by the ENGINEER or other representative of the OWNER after delivery. The equipment shall be subject to rejection at any time due to failure to meet any of the specified requirements, even though submittal data may have been accepted previously. Equipment rejected after delivery shall be marked for identification and shall be removed from the job site at once.

1.05 SYSTEM DESCRIPTION

- A. All of the equipment and materials specified herein is intended to be standard for use in controlling the flow of finished water as noted on the Drawings.
- B. Valves, appurtenances and miscellaneous items shall be installed as shown on the Drawings and as specified, so as to form complete workable systems.

1.06 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping

1. Care shall be taken in loading, transporting and unloading to prevent injury to the valves, appurtenances, or coatings. Equipment shall not be dropped. All valves and appurtenances shall be examined before installation and no piece shall be installed which is found to be defective. Any damage to the coatings shall be repaired as acceptable to the ENGINEER.
2. Prior to shipping, the ends of all valves shall be acceptably covered to prevent entry of foreign material. Covers shall remain in place until after installation and connecting piping is completed.
 - a. All valves 3-in and larger shall be shipped and stored on site until time of use with wood or plywood covers on each valve end.
 - b. Valves smaller than 3-in shall be shipped and stored as above except that heavy cardboard covers may be used on the openings.
 - c. Rising stems and exposed stem valves shall be coated with a protective oil film which shall be maintained until the valve is installed and put into use.
 - d. Any corrosion in evidence at the time of acceptance by the OWNER shall be removed, or the valve shall be removed and replaced.

B. Storage and Protection

1. Special care shall be taken to prevent plastic and similar brittle items from being directly exposed to the sun, or exposed to extremes in temperature, to prevent deformation. See the individual piping sections and manufacturer's information for further requirements.

1.07 MAINTENANCE

- A. Special tools and the manufacturer's standard spare parts, if required for normal operation and maintenance, shall be supplied with the equipment, as specified herein.
- B. Provide all special tools required for normal maintenance. Tools shall be packaged in a steel case, clearly and indelibly marked on the exterior to indicate equipment for which tools are intended.
- C. Provide to the OWNER a list of all spare and replacement parts with individual prices and location where they are available. Prices shall remain in effect for a period of not less than 1 year after start-up and final acceptance.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT - GENERAL

- A. Reference is made to the construction drawings for additional requirements, including nameplates, provisions for temporary pressure gauges, protection against electrolysis and anchor bolts.
- B. The use of a manufacturer's name and/or model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- C. Valves, hydrants and appurtenances shall be of the size shown on the Drawings or as noted and as far as possible equipment of the same type shall be identical and from one manufacturer.
- D. Valves, hydrants and appurtenances shall have the name of the maker, nominal size, flow directional arrows, working pressure for which they are designed and standard referenced, cast in raised letters or indelibly marked upon some appropriate part of the body.
- E. Unless otherwise noted, items shall have a minimum working pressure of 250 psi or be of the same working pressure as the pipe they connect to, whichever is higher and suitable for the pressures noted where they are installed.
- F. Joints, size and material - unless otherwise noted or required by the ENGINEER:
 - 1. Except where noted, all joints referred to herein shall be of the same type, nominal diameter, material and with a minimum rating equal to the pipe or fittings they are connected to.
 - 2. Valves and appurtenances shall be of the same nominal diameter as the pipe or fittings they are connected to.
 - 3. All valves exposed to view, or in vaults.
 - a. 3-in and smaller - threaded ends
 - b. 4-in and larger flanged ends.
- G. Provide all special adaptors as required to ensure compatibility between valves, appurtenances and adjacent pipe.
- H. Valves and actuators located outdoors but not within a building; within maximum 2-ft above liquid; in vaults; or where otherwise noted shall be especially designed for submerged service where water may completely submerge the valve and operator. All other units shall be as a minimum weather tight.

2.02 VALVE ACTUATORS - GENERAL

- A. See the Paragraph 2.01H above for submergence requirements.
- B. The valve manufacturer shall supply and integrally, rigidly mount all actuators, including any type of manual or powered actuators, on valves at the factory. The valves and their individual actuators shall be shipped as a unit.
- C. Unless otherwise noted, valves shall be manually actuated; non-buried valves shall have an operating wheel, handle or lever mounted on the operator
- D. All actuators shall be capable of moving the valve from the full open to full close position and in reverse and holding the valve at any position part way between full open or closed.
- E. Each operating device shall have cast on it the word "OPEN" and an arrow indicating the direction of operation.
- F. Floor boxes for operating nuts recessed in concrete shall be standard cast iron type, cast-in-place, with fastening top by Clow or equal.
- G. Gear Actuators

1. Unless otherwise noted, gear actuators shall be provided for the following: all valves of larger than 10-in nominal diameter; where specified and/or indicated on the Drawings; where manual operator effort is greater than 80 ft-lbs rim pull.
2. Gear actuators shall be of the worm or helical gear type with output shaft perpendicular to valve shaft, having a removable hand wheel mounted on the output shaft. Unless noted they shall conform to AWWA C504, but except with butterfly valves, need not be certified.
3. Actuators shall be capable of being removed from the valve without dismantling the valve or removing the valve from the line.
4. Gearing shall be machine-cut steel designed for smooth operation. Bearings shall be permanently lubricated, with bronze bearing bushings provided to take all thrusts and seals and to contain lubricants. Housings shall be sealed to exclude moisture and dirt, allow the reduction mechanisms to operate in lubricant and be of the same material as the valve body.
5. Manual operator input effort to the handwheel shall be a maximum of 40 ft-lbs for operating the valve from full open to full close, under any conditions. Gear actuators shall indicate valve position and have adjustable stops. Maximum handwheel size shall be 24-in diameter.

H. Additional valve actuators are included with the individual valve types and as noted in Paragraph 1.02 above.

I. All position indication and direction of opening arrows shall be embossed, stamped, engraved, etched or raised decals.

2.03 GATE VALVES (3-IN AND LARGER)

A. General Requirements

1. Unless otherwise specified below, these requirements shall apply to all gate valves.
2. Gate valves shall meet the requirements of AWWA C500, AWWA C509, AWWA C515 as applicable to the type of valve specified.
3. Submerged valves shall be furnished with mechanical joints and stainless steel hardware; non-rising stem design.
4. Exposed valves shall be furnished with Class 125 flanged ends; provide valves with outside screw and yoke.
5. All-metal valves shall be manufactured of ASTM A126 Cast Iron, Class B, with bronze mounting design.
6. Rising stem valves shall be sealed with adjustable and replaceable packing; valve design must permit packing replacement under operating system pressures with only moderate leakage.
7. Non-rising stem valves shall use a double O-ring stem seal, except that packing shall be used where geared operators are required.
8. Except as otherwise specified, valves shall be rated for the following working water pressures:

<u>Valve Size</u>	<u>Pressure (psig)</u>
3-in to 12-in	250
14-in to 20-in	250
24-in and greater	250

- a. All valve bodies shall be hydrostatically tested to at least twice the rated working water pressure. In addition, valves shall be seat-tested, bi-directional at the rated working pressure, with seat leakage not to exceed one fluid ounce per inch of valve diameter per hour. Provide certificates of testing.
9. Flanged valves to have face-to-face dimensions per ANSI B16.10 and flanges per ANSI B16.1.
10. All bonnet and packing gland bolts shall be zinc or cadmium electroplated steel; packing gland bolts shall have bronze nuts.
11. All valves shall be marked per AWWA Standards, including name of manufacturer, valve size and working pressure and year of manufacture.
12. Unless otherwise indicated, valves 12-in and smaller shall be capable of installation in the vertical or horizontal position, and sealing in both directions at the rated pressure.

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13. Metal-seated valves shall be coated internally and externally with an asphaltic varnish, per AWWA C500. Resilient seated valves shall be coated, interior and exterior, with fusion bonded epoxy per AWWA C550.

B. Valve Applications

1. Valves for Potable Water Service.
 - a. Double disc design manufactured by American-Darling Valve; Kennedy Valve; M&H Valve Company or equal.
 - b. Double revolving disc manufactured by American-Darling Valve.
2. At the CONTRACTOR's option and unless otherwise indicated, any of the listed valve styles may be used, at no additional cost to the OWNER.

C. Valve Requirements

1. Solid Wedge
 - a. Conform to AWWA C500.
 - b. Tongue and grooved guides for wedges.
2. Resilient Seated
 - a. Conform to AWWA C509. Also UL and FM approved.
 - b. Internal and external epoxy coating of valve body, including bonnet, per AWWA C550.
 - c. Gate shall be encapsulated with synthetic rubber. It shall be bonded and vulcanized in accordance with ASTM B429 Method B.
 - d. No recesses in valve body.

D. Tapping Valves and Sleeves

1. Tapping valves shall comply with the same requirements as solid wedge or double disc gate valves except they shall have the flanged end and port opening modified for tapping service. Valves shall be capable of passing a full nominal sized cutter without damage to the valve. The tapping sleeve shall be gray cast iron or ductile iron mechanical joint type with the outlet flange conforming to MSS-SP-60.
2. All water valves, 4-in and larger, shall be iron body gates, bronze trim, flanged ends, O.S.&Y. pattern, solid wedge, rising spindle, Jenkins No. 651, or Hammond 1R-1140.

2.04 HYDRANTS

A. Type: Compression/Post-type dry barrel.

B. Construction:

1. Cast iron body.
2. Bronze Mounted.
3. Working Pressure: 250 psi in accordance with AWWA C502.
4. Test Pressure: 400 psi in accordance with AWWA C502.

C. Connections/Features:

1. Main Valve:
 - a. Seat: Rubber.
 - b. Opening: 5-1/4 inches.
2. Pumper Connections:
 - a. Number: One NST, with 5" Stortz fitting and chained cap.
 - b. Diameter: 4-1/2 inches.
3. Hose Connection:
 - a. Number: Two with chained caps.
 - b. Diameter: 2-1/2 inches.
4. Thread Type: National Standard
5. Nozzles: Bronze with "O"-ring type seals. Lead caulking will not be allowed.
6. Inlet:
 - a. Type: Mechanical Joint

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b. Size: 6 inches.

D. Miscellaneous Features:

1. Chained caps and operating nut shall be square, tapered from 7/8 inches at the top to one-inch at the bottom and shall turn to the left to open.
2. Provide barrel extension sections with stem extensions as required to set hydrant at grade level.
3. Provide ground (grade) line breakable component to protect the hydrant barrel from impact.
4. Provide cast iron safety stem coupling to keep the main valve closed if barrel and stem are damaged or separated from the hydrant.
5. Depth of Bury (Grade to top of inlet pipe): 5.5 feet (minimum).
6. Lubricant: USEPA approved food-grade grease. Oil will not be allowed.
7. Main stem and valve assembly shall be removable from top of hydrant for maintenance of valve seat.
8. Provide drain openings (minimum 3/8 inch diameter) to drain barrel standpipe completely when main valve is closed. Drain openings shall close completely with no leakage when main valve is opened.

E. Paint:

1. Use manufacturer's standard paint system.
2. Color:
 - a. Body: Red
 - b. Bonnet: Red

F. Product and Manufacturer:

1. Mueller Super Centurion A-423; American Darling B62B; Kennedy 81A; or Clow Medallion.

2.05 GATE VALVES FOR HYDRANTS; 6-INCH VALVE

- A. All gate valves shall conform to AWWA standard C509.
- B. Gate valves shall be installed in each hydrant installation between the hydrant and main line in accordance with the Warren County Standard Details W-8, W-9, and W-9A.
- C. Valves shall be iron body, bronze mounted with modified wedge disc, resilient seat.
- D. O-ring seals and non-rising stems to withstand working pressure of 250 psi and test pressure of 400 psi.
- E. The valves shall be equipped with mechanical joint ends and be provided with all required bolts, glands, and rubber gaskets. Provide grooved or shouldered.
- F. A valve box with cover shall be provided for each buried valve.
- G. Product and Manufacturer:
 1. Clow; Dresser; and American Darling.

2.06 TAPPING SLEEVE AND VALVE

- A. Tapping Valve:
 1. Valve shall be cast iron body, bronze mounted, double disc, non-rising stem, parallel seat gate valve.

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2. Valve shall have "O" ring seals and shall conform to the requirements of AWWA C-500.
 3. The valve shall be designed for a test pressure of 200 psi.
 4. The tapping valve shall be provided with extra heavy ends designed for tapping services. The flange on the sleeve end of the valve shall be drilled and faced to insure proper alignment with the saddle.
 5. The other end connection shall be mechanical joint and suitable for bolting to the tapping machine.
 6. Tapping sleeve shall be ductile iron, mechanical joint with a class 125 pound outlet flange.
 7. Product and Manufacturer:
 - a. American Darling.
 - b. U.S. Pipe.
 - c. American Flow Control.
 - d. Or equal.
- B. A valve box with cover shall be provided for each buried valve.

2.07 SERVICE VALVES

- A. Corporation Stops:
1. Provide ball type corporation stops conforming to AWWA Standard C800 and of all bronze construction.
 2. Corporation stop diameter shall be a minimum 3/4-inch up to 2-inch as required or shown on the Warren County Standard Detail W-10.
 3. Threaded tap end of stop shall have AWWA (Mueller) standard taper threads with the service line connection end for flared fitting copper tubing.
 4. Acceptable Manufacturer:
 - a. Ford Co. Model F-1000 or FB-1000.

2.08 WATER METERS AND PITS

- A. Comply with the Warren County Water and Sewer Standard Details W-10 through W-15C.

2.09 SURFACE PREPARATION AND SHOP COATINGS

- A. Notwithstanding any of the specified requirements, all coatings and lubricants in contact with potable water shall be certified as acceptable for use with that fluid.
- B. If the manufacturer's requirement is not to require finished coating on any interior surfaces, then manufacturer shall so state and no interior finish coating will be required, if acceptable to the ENGINEER.
- C. The exterior surface of various parts of valves, operators, floor-stands and miscellaneous piping shall be thoroughly cleaned of all scale, dirt, grease or other foreign matter and thereafter one shop coat of an approved rust-inhibitive primer shall be applied in accordance with the instructions of the paint manufacturer or other primer compatible with the finish coat provided.
- D. Unless otherwise noted, interior ferrous surfaces of all valves shall be given a shop finish of an asphalt varnish conforming to AWWA C509, (except mounting faces/surfaces) or epoxy AWWA C550 with a minimum thickness of 4 mil.
- E. Ferrous surfaces obviously not to be painted shall be given a shop coat of grease or other suitable rust-resistant coating. Mounting surfaces shall be especially coated with a rust preventative.
- F. Special care shall be taken to protect uncoated items and plastic items, especially from environmental damage.

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2.10 FACTORY INSPECTION, TESTING AND CORRECTION OF DEFICIENCIES

- A. Factory inspection, testing and correction of deficiencies shall be done in accordance with the referenced standards and as noted herein.
- B. See Division 1 for additional requirements. Also refer to PART 1, especially for required submission of test data to the ENGINEER.
- C. In addition to all tests required by the referenced standards, the following shall also be factory tested:
 - 1. All types of air and vacuum valves.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. All valves, hydrants and appurtenances shall be installed per the manufacturer's instructions in the locations shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the ENGINEER before they are installed.
- B. Install all brackets, extension rods, guides, the various types of operators and appurtenances as shown on the Drawings, or otherwise required. Before setting these items, check all Drawings and figures which have a direct bearing on their location. The CONTRACTOR shall be responsible for the proper location of valves and appurtenances during the construction of the work.
- C. All materials shall be carefully inspected for defects in construction and materials. All debris and foreign material shall be cleaned out of openings, etc. All valve flange covers shall remain in place until connected piping is in place. All operating mechanisms shall be operated to check their proper functioning and all nuts and bolts checked for tightness. Valves and other equipment which do not operate easily, or are otherwise defective, shall be repaired or replaced at no additional cost to the OWNER.
- D. Where installation is covered by a referenced standard, installation shall be in accordance with that standard, except as herein modified, and the CONTRACTOR shall certify such. Also note additional requirements in other parts of this Section.
- E. Unless otherwise noted, joints for valves and appurtenances shall be made up utilizing the same procedures as specified under the applicable type connecting pipe joint and all valves and other items shall be installed in the proper position as recommended by the manufacturer. CONTRACTOR shall be responsible for verifying manufacturers' torquing requirements for all valves.

3.02 INSTALLATION OF VALVE BOXES

- A. Valve boxes shall be set plumb, and centered with the bodies directly over the operating nuts. The valve box shall be set so traffic loads are not transmitted to the valve. Any valve box set too high or too low shall be adjusted at the CONTRACTOR's expense.

3.03 INSTALLATION OF FIRE HYDRANTS

- A. Hydrants shall be set on a solid concrete block unit 1'6" x 8" x 1'-4" and backfill with No. 57 gravel.
- B. Concrete blocks shall be set at the back and both sides of the hydrant to hold it solid and in vertical position.

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- C. The hydrant shall be set with the center of the lowest nozzle at least 15-inches, but not more than 18-inches above finished grade and/or as approved by the ENGINEER. The pumper nozzle shall be oriented normal to the edge of pavement.
- D. The hydrant shall be harnessed to the gate valve and the gate valve shall be harnessed to the main line by using suitable tie anchor pipe and fittings to suit the installation as shown on the drawings and Standard Detail W-8. The gate valves required for hydrants shall be in accordance with Paragraph 2.10.

3.04 INSTALLATION OF MANUAL OPERATIONAL DEVICES

- A. Unless otherwise noted, all operational devices shall be installed with the units of the factory, as shown on the Drawings or as acceptable to the ENGINEER to allow accessibility to operate and maintain the item and to prevent interference with other piping, valves and appurtenances.
- B. For manually operated valves 3-in in diameter and smaller, valve operators and indicators shall be rotated to display toward normal operation locations.
- C. Floor boxes, valve boxes, extension stems and low floor stands shall be installed vertically centered over the operating nut, with couplings as required and the elevation of the box top shall be adjusted to conform with the elevation of the finished floor surface or grade at the completion of the Contract. Boxes and stem guides shall be adequately supported during concrete pouring to maintain vertical alignment.

3.05 INSPECTION, TESTING AND CORRECTION OF DEFICIENCIES

- A. See also Division 1. Take care not to over pressure valves or appurtenances during pipe testing. If any unit proves to be defective, it shall be replaced or repaired to the satisfaction of the ENGINEER.
- B. Functional Test: Prior to plant startup, all items shall be inspected for proper alignment, quiet operation, proper connection and satisfactory performance. All units shall be operated continuously while connected to the attached piping for at least one hour, without vibration, jamming, leakage, or overheating and perform the specified function.
- C. The various pipe lines in which the valves and appurtenances are to be installed are specified to be field tested. During these tests any defective valve or appurtenance shall be adjusted, removed and replaced, or otherwise made acceptable to the ENGINEER.
- D. Various regulating valves, strainers, or other appurtenances shall be tested to demonstrate their conformance with the specified operational capabilities and any deficiencies shall be corrected or the device replaced or otherwise made acceptable to the ENGINEER.

3.06 CLEANING

- A. All items (including valve interiors) shall be cleaned prior to installation, testing disinfection and final acceptance.

3.07 DISINFECTION

- A. Disinfection of valves and appurtenances on all potable water lines and where otherwise noted, shall be as noted in Paragraph 1.02B above.

END OF SECTION



BOARD OF COUNTY COMMISSIONERS WARREN COUNTY, OHIO

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ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Clerk of the County Commissioners, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio 45036, until November 15, 2018 @ 11:00 a.m., at the Office of the Warren County Commissioners, and then at said time bids will be opened and read aloud for the Lower Springboro Road Water Improvement Project, Phase 3.

Bid documents and specifications are available online at the Warren County's Website at <http://www.co.warren.oh.us/commissioners/Resources/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Chris Brausch at the Warren County Water and Sewer Department, (513) 695-1193. Each bid shall contain the full name of each person or company submitting the bid and be accompanied by a bid bond for the full amount of the bid or a certified check in the amount equal to ten (10) percent of the bid.

The project description: Install 7,184 feet of 10 inch watermain along Corwin Road, Wayne Township, Warren County. The Engineer's opinion of probable construction cost is \$670,000.

This notice is posted on the Warren County Government internet site. The Warren County Government Web Site can be accessed by logging onto the internet and typing in the following address <http://www.co.warren.oh.us/commissioners/Resources/Bids/Default.aspx>. To access bid project information, under the "Your Government" heading click on the "Board of Commissioners" tab, then click on the "Bid Projects" tab and choose the project you wish to obtain information about. Please contact the Warren County Commissioners Office at (513) 695-1250 if you have trouble with this procedure or if you need additional information on accessing bid project information on our web site. Please be aware that if you are downloading this document to bid this project, addendums to the scope may be issued prior to the bid date. In order to stay updated on any change, please email Kiana Hawk in the Commissioner's Office at Kiana.Hawk@co.warren.oh.us with your contact information.

The Board of Warren County Commissioners reserve the right to accept the lowest and best bid, to reject all bids, and to waive any irregularities in bids.

By order of the Board of County Commissioners, Warren County, Ohio.

Tina Osborne, Clerk