

SECTION 2 – PROCEDURES

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2.1. PURPOSE

- 2.1.1. The purpose of this section is to establish a working relationship between the Owner/Developer, Design Engineer, Contractor and City of Lebanon by describing the step by step procedure to be followed by each party in initiating and completing the construction of any improvements that are to be connected to or become a part of the City of Lebanon system. This section applies to all development that are to take place in the City of Lebanon, whether they are residential, commercial, institutional, industrial, etc.
- 2.1.2. The City Engineer reserves the right to waive any or all parts of the specifications in specific instances as appropriate, except where Ohio EPA, Federal and/or State regulations would be violated by such a waiver.

2.2. CITY OF LEBANON MONUMENTS

- 2.2.1. All developments shall be tied into the City of Lebanon monument system. Monument information will be provided upon request.
- 2.2.2. Unless waived by the City Engineer, all subdivisions and large developments (as determined by the City Engineer) shall be required to set a minimum of one pair of intervisible monuments to serve as permanent horizontal and vertical benchmarks.
 - 2.2.2.1. Unless waived by the City Engineer, a minimum of one pair of monuments shall be placed for each section of a subdivision.
- 2.2.3. All reference monuments shall be Class I, Second-order monuments.
- 2.2.4. All monuments shall be placed in areas meeting the following criteria:
 - 2.2.4.1. Areas that will not receive vehicular traffic.
 - 2.2.4.2. Areas that will not be easily struck by a vehicle leaving the roadway.
 - 2.2.4.3. Areas which are open to allow the use of GPS receivers as well as optical instruments.
 - 2.2.4.4. As approved by the City Engineer.

- 2.2.5. Northing and Easting information of the set monuments shall be provided to the Office of the City Engineer. Northing and Easting information shall be tied to NAD-83.
- 2.2.6. Elevation information of the set monument shall be provided to the Office of the City Engineer. Elevation information shall be tied to NAVD-88.
- 2.2.7. Monuments shall be installed as per the standard drawing found in the Appendix.

2.3. FLOOD DAMAGE REDUCTION STANDARDS

- 2.3.1. The City of Lebanon Flood Damage Reduction Standards as found in Chapter 1308 of the Lebanon Codified Ordinances shall apply to all development taking place in the City of Lebanon.
- 2.3.2. The requirements set forth in the Flood Damage Reduction Standards include, but are not limited to:
 - 2.3.2.1. All structures to be located within the flood plain shall have the lowest floor elevation (including the basement) a minimum of two feet (2') above the 100-year base flood elevation.
 - 2.3.2.2. No development activity, include filling or grading shall take place within the floodway.
- 2.3.3. All development activity taking place in or adjacent to the 100-year flood plain or floodway shall require the completion of a Flood Hazard Area Development Permit Application.
- 2.3.4. Any storage of materials in or adjacent to the 100-year flood plain or floodway shall require the completion of a Flood Hazard Area Development Permit Application.

2.4. APPLICATION PHASE

- 2.4.1. The first step in the procedure is for the Owner/Developer to file a Development Utility Needs Analysis form with the Engineering Department of the City of Lebanon requesting utility service. In order to properly coordinate the work with Planning and Development, a copy of the application shall also be submitted to the City of Lebanon Planning and Development Department to serve as notification of the project. The application form may be obtained from the Engineering Department at 50 South Broadway, Lebanon, Ohio 45036. It is recommended that the Owner/Developer engage the services of a Design Engineer in the beginning to assist in preparing the application since much of the information requested must be provided by the Design Engineer.
- 2.4.2. In addition to the information to be provided on the application form, a site plan shall be provided on a 22" x 34" in sufficient detail to show the location of the proposed development. 24" x 36" drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing.
- 2.4.3. Upon receipt of an application, the City of Lebanon shall evaluate the impact the proposed development will have upon the existing facilities. From the estimated water demand and the wastewater flow provided by the Design Engineer, the City of Lebanon shall determine whether the existing water system is adequate to provide service and whether the existing sanitary sewer system has capacity to receive the estimated wastewater flow. A determination that capacity is available at the time of application does not guarantee nor reserve that capacity indefinitely for that development. Approval of the application by the City of Lebanon indicates that capacity will be available for service immediately upon completion of the project proposed in the application. If the City of Lebanon is capable of providing these services, a letter of conditions shall be issued listing the requirements that must be met in order to obtain acceptance of the proposed facilities by the City of Lebanon. Should it be determined that capacity for water or sanitary sewer service is unavailable, the Owner/Developer shall contact the City of Lebanon to explore alternate solutions.

2.5. DESIGN PHASE

- 2.5.1. Design shall only be completed for improvements to be immediately constructed. For example, for a multi-section subdivision, design shall only be completed and submitted for the section to be platted, not for any or all sections to be platted at a later time. This is to help ensure that all improvements are constructed to current City of Lebanon standards.
- 2.5.2. Upon receipt of the letter of conditions from the City of Lebanon, the Owner/Developer may authorize his Design Engineer to prepare plans for the proposed development, in accordance with the requirements contained in the detailed specifications herein.
- 2.5.3. During the design phase, the Design Engineer shall work closely with the City Engineer to insure that the final product meets all requirements of the City of Lebanon. There shall be no provisional approval. All plans must show all necessary details before approval is granted.
- 2.5.4. Plans and specifications for water distribution, storm sewer, sanitary sewer, and roadway improvements shall be prepared by or under the supervision of a Professional Engineer registered in the State of Ohio who shall affix his/her seal and signature to each plan and/or plan-profile sheet and specifications.
- 2.5.5. The Design Engineer shall provide the following design data attached to the plans:
 - 2.5.5.1. Hydraulic calculations for the water system.
 - 2.5.5.1.1. A minimum pressure of 35 psi at the highest point of the development at finished grade must be maintained throughout the system for all fire flow and domestic use conditions. All water mains shall be looped unless a dead end main is approved by the City of Lebanon in writing.
 - 2.5.5.1.2. Any flow or pressure measurements will be the responsibility of the developer. The City of Lebanon does not perform flow or pressure testing. Any tests shall only be performed with permission of the City of Lebanon and under direct supervision of the City of Lebanon.
 - 2.5.5.1.3. ISO needed fire flow calculations shall be performed in accordance with the requirements set forth in the *Guide for determination of needed fire flow* which can be downloaded at <http://www.isomitigation.com/downloads/ppc3001.pdf>. These calculations shall be submitted to the City Engineer for approval.
 - 2.5.5.2. Design calculations of gravity sanitary sewer mains shall show the grade, expected average flow, peak flow, capacity, and velocity at peak flow between each manhole.
 - 2.5.5.3. Design calculations of sewage lift stations and force mains shall show pump capacity at design TDH (Total Dynamic Head), head loss thru the force main, static head between pump discharge and force main discharge, the velocity thru the force main, capacity of wet well and expected frequency of operation. A copy of the manufacturer's pump curve data and specifications must be provided.
 - 2.5.5.3.1. The Owner/Developer shall provide one of the following emergency measures for each lift station:
 - 2.5.5.3.1.1. The Owner/Developer shall provide emergency power back-up for the lift station and bypass pumping quick connect fittings.
- 2.5.6. Plans prepared by the Design Engineer for the construction of water mains shall be drawn on plan 22" x 34" sheets to a minimum scale of 1" = 50' for horizontal and 1" = 5' for profile. 24" x 36" drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:
 - 2.5.6.1. Title Sheet

- 2.5.6.1.1. Name and address of the Design Engineer
- 2.5.6.1.2. Name and address of the Owner/Developer
- 2.5.6.1.3. Name of Development and Phase number, if applicable
- 2.5.6.1.4. Vicinity map with scale indicated
- 2.5.6.1.5. Signature line for the City Engineer
- 2.5.6.1.6. Signature line for the City Planner
- 2.5.6.1.7. Signature Line for the Owner
- 2.5.6.1.8. Index of sheets
- 2.5.6.2. Plan Sheets
 - 2.5.6.2.1. Existing and proposed topography and layout of development (streets, curb and gutter, sidewalks, drainage headwalls, storm drains, lot lines, utility easements, etc.)
 - 2.5.6.2.2. Pipe material and pressure rating
 - 2.5.6.2.3. Pipe size
 - 2.5.6.2.4. Location and type of valves
 - 2.5.6.2.5. Location and size of hydrants
 - 2.5.6.2.6. Location and size of blowoff valves
 - 2.5.6.2.7. Location, size and material of water services, curb stop, box, water meter pit and assembly
 - 2.5.6.2.8. Profile of water main and other proposed underground utilities
 - 2.5.6.2.9. Existing utilities, i.e. hydrants, valves, line sizes, storm drains, and sewer lines
 - 2.5.6.2.10. The statement “All construction shall be in accordance with the City of Lebanon Standards and Specifications.”
- 2.5.7. Plans prepared by the Design Engineer for the construction of sanitary sewer mains shall be drawn on plan 22” x 34” sheets to a minimum scale of 1” = 50’ for horizontal and 1” = 5’ for profile. 24” x 36” drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:
 - 2.5.7.1. Title Sheet
 - 2.5.7.1.1. Name and address of the Design Engineer
 - 2.5.7.1.2. Name and address of the Owner/Developer
 - 2.5.7.1.3. Name of Development and Phase number, if applicable
 - 2.5.7.1.4. Vicinity map with scale indicated
 - 2.5.7.1.5. Signature line for the City Engineer
 - 2.5.7.1.6. Signature line for the City Planner
 - 2.5.7.1.7. Signature Line for the Owner
 - 2.5.7.1.8. Index of sheets
 - 2.5.7.2. Plan Sheets
 - 2.5.7.2.1. Existing and proposed topography and layout of development (street, curb and gutter, sidewalks, drainage headwalls, utility poles, lot lines and utility easements)

- 2.5.7.2.2. Pipe material
 - 2.5.7.2.3. Pipe size
 - 2.5.7.2.4. Location by station number and type manhole
 - 2.5.7.2.5. Length of sewer and grade between manholes
 - 2.5.7.2.6. Invert of sewer at each manhole for both inlet and outlet and the fall within the manhole
 - 2.5.7.2.7. Elevations of all tops of castings, etc.
 - 2.5.7.2.8. Location, size and material of house connections and sanitary cleanout
 - 2.5.7.2.9. Profile of sewer main and other proposed underground utilities
 - 2.5.7.2.10. Existing utilities; i.e. manholes, line sizes, storm drains, and water lines
 - 2.5.7.2.11. The statement “All construction shall be in accordance with the City of Lebanon Standards and Specifications.”
- 2.5.8. Plans prepared by the Design Engineer for the construction of sewage lift stations shall be drawn on plan 22” x 34” sheets to a minimum scale of 1” = 50’ for horizontal and 1” = 5’ for profile. 24” x 36” drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:
- 2.5.8.1. Title Sheet
 - 2.5.8.1.1. Name and address of the Design Engineer
 - 2.5.8.1.2. Name and address of the Owner/Developer
 - 2.5.8.1.3. Name of Development and Phase number, if applicable
 - 2.5.8.1.4. Vicinity map with scale indicated
 - 2.5.8.1.5. Signature line for the City Engineer
 - 2.5.8.1.6. Signature line for the City Planner
 - 2.5.8.1.7. Signature Line for the Owner
 - 2.5.8.1.8. Index of sheets
 - 2.5.8.2. Plan Sheets
 - 2.5.8.2.1. Name of station manufacturer
 - 2.5.8.2.2. Name of pump manufacturer
 - 2.5.8.2.3. Number of pumps
 - 2.5.8.2.4. Pump discharge at design TDH
 - 2.5.8.2.5. Dimensions, elevations and capacity of wet well
 - 2.5.8.2.6. Location and type of pump controls
 - 2.5.8.2.7. Cathodic protection for steel tanks
 - 2.5.8.2.8. Piping and valve arrangement inside station
 - 2.5.8.2.9. The statement “All construction shall be in accordance with the City of Lebanon Standards and Specifications”
- 2.5.9. Plans prepared by the Design Engineer for the construction of storm sewer mains shall be drawn on plan 22” x 34” sheets to a minimum scale of 1” = 50’ for horizontal and 1” = 5’ for profile.

24" x 36" drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:

2.5.9.1. Title Sheet

- 2.5.9.1.1. Name and address of the Design Engineer
- 2.5.9.1.2. Name and address of the Owner/Developer
- 2.5.9.1.3. Name of Development and Phase number, if applicable
- 2.5.9.1.4. Vicinity map with scale indicated
- 2.5.9.1.5. Signature line for the City Engineer
- 2.5.9.1.6. Signature line for the City Planner
- 2.5.9.1.7. Signature Line for the Owner
- 2.5.9.1.8. Index of sheets

2.5.9.2. Plan Sheets

- 2.5.9.2.1. Existing and proposed topography and layout of development (street, curb and gutter, sidewalks, drainage headwalls, utility poles, lot lines and utility easements)
- 2.5.9.2.2. Pipe material
- 2.5.9.2.3. Pipe size
- 2.5.9.2.4. Location by station number and type manhole, catch basin, headwall, etc.
- 2.5.9.2.5. Length of sewer and grade between structures
- 2.5.9.2.6. Invert of sewer at each structure for both inlet and outlet and the fall within the structure
- 2.5.9.2.7. Elevations of all tops of castings, grates, etc.
- 2.5.9.2.8. Profile of sewer main and other proposed underground utilities
- 2.5.9.2.9. Existing utilities; i.e. manholes, line sizes, storm drains, and water lines
- 2.5.9.2.10. The statement "All construction shall be in accordance with the City of Lebanon Standards and Specifications."

2.5.10. Plans prepared by the Design Engineer for the construction of roadways shall be drawn on plan 22" x 34" sheets to a minimum scale of 1" = 50' for horizontal and 1" = 5' for profile. 24" x 36" drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:

2.5.10.1. Title Sheet

- 2.5.10.1.1. Name and address of the Design Engineer
- 2.5.10.1.2. Name and address of the Owner/Developer
- 2.5.10.1.3. Name of Development and Phase number, if applicable
- 2.5.10.1.4. Vicinity map with scale indicated
- 2.5.10.1.5. Signature line for the City Engineer
- 2.5.10.1.6. Signature line for the City Planner
- 2.5.10.1.7. Signature Line for the Owner

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- 2.5.10.1.8. Index of sheets
 - 2.5.10.2. Plan Sheets
 - 2.5.10.2.1. Existing and proposed topography and layout of development (street, curb and gutter, sidewalks, drainage headwalls, utility poles, lot lines and utility easements)
 - 2.5.10.2.2. Centerline profile of the roadway
 - 2.5.10.2.3. Intersection details
 - 2.5.10.2.4. Pavement width
 - 2.5.10.2.5. Right-of-Way width
 - 2.5.10.2.6. Centerline, gutter and top of curb spot elevations and any additional spot elevations needed to ensure proper drainage
 - 2.5.10.2.7. Elevations of all tops of castings, etc.
 - 2.5.10.2.8. Profile of all underground utilities
 - 2.5.10.2.9. Existing utilities; i.e. manholes, line sizes, storm drains, and water lines
 - 2.5.10.2.10. Typical sections taken at a maximum of 25-foot intervals and at all points of pipe crossings
 - 2.5.10.2.11. The statement “All construction shall be in accordance with the City of Lebanon Standards and Specifications.”
 - 2.5.11. Plans prepared by the Design Engineer for the grading of a development shall be drawn on plan 22” x 34” sheets to a minimum scale of 1” = 50’ for horizontal and 1” = 5’ for profile. 24” x 36” drawings will be acceptable but not preferred. Other paper sizes will not be accepted unless specifically permitted by the City Engineer in writing. The drawings shall contain the following minimum information:
 - 2.5.11.1. Title Sheet
 - 2.5.11.1.1. Name and address of the Design Engineer
 - 2.5.11.1.2. Name and address of the Owner/Developer
 - 2.5.11.1.3. Name of Development and Phase number, if applicable
 - 2.5.11.1.4. Vicinity map with scale indicated
 - 2.5.11.1.5. Signature line for the City Engineer
 - 2.5.11.1.6. Signature line for the City Planner
 - 2.5.11.1.7. Signature Line for the Owner
 - 2.5.11.1.8. Index of sheets
 - 2.5.11.2. Plan Sheets
 - 2.5.11.2.1. Existing and proposed topography and layout of development (street, curb and gutter, sidewalks, drainage headwalls, utility poles, lot lines and utility easements).
 - 2.5.11.2.1.1. Proposed grading plans shall take into account Excavation material from basements/crawlspace as it relates to building pads and development drainage.
 - 2.5.11.2.1.1.1. For developments such as subdivisions where the exact size and dimensions of the future structures is unknown at the time of construction of the development, a building pad consistent with the type of homes anticipated for the development shall be assumed and grading shall be provided to provide proper drainage.
 - 2.5.11.2.2. Final drainage patterns shall be clearly indicated with flow arrows.

2.5.11.2.3. The statement “All construction shall be in accordance with the City of Lebanon Standards and Specifications.”

2.6. COST ESTIMATE

2.6.1. The Design Engineer shall prepare an itemized cost estimate of the proposed public improvements, stormwater quality and detention facilities, and erosion and sedimentation control provisions. The estimate shall be reviewed and approved by the City of Lebanon prior to approval of the plans and submittal of Public Improvement and Erosion and Sedimentation Control Bonds as described in Section 2.10. The cost estimate shall match the column format provided in the As Built Plan Requirements found in the Appendix. Copies of the estimate shall be submitted to the Office of the City Engineer in hard copy and digital format in Microsoft Excel format.

2.7. REVIEW PHASE

2.7.1. Seven sets of plans shall be submitted to the City of Lebanon for review and approval. The Owner/Developer shall allow a minimum 30 work day period for the review time; however, the City of Lebanon shall conduct its review as expeditiously as possible.

2.7.2. The City of Lebanon shall review improvement/construction plans for individual site developments and subdivisions/PUDs as to the standard specifications contained herein and in accordance with the checklists provided in the Appendix. The City of Lebanon will prepare comments identifying any changes that shall be made to the plans prior to acceptance of the plans by the City. After all corrections are made, the corrected plans shall be resubmitted to the City of Lebanon for review.

2.7.2.1. Upon the request of the office of the City Engineer, and prior to plan approval, the design engineer shall submit the current entire design of the development in AutoCAD format to allow for the design of the electrical infrastructure to serve the development. This request will not be made until the design has reached 90% completion. The City of Lebanon Electric Department shall complete their design within 15 working days from the receipt of the digital files. The City of Lebanon will return the design of the electrical infrastructure for the development to the Design Engineer for inclusion in the plans.

2.7.3. The Owner/Developer shall submit plans and specifications in accordance with the policies for plan submittals to the Ohio EPA for approval and permits to install.

2.7.4. Final approval shall not be granted by the City Engineer until the following applicable items are met:

2.7.4.1. All comments from the Office of the City Engineer have been satisfactorily addressed.

2.7.4.2. Water and Sanitary Sewer PTI's are received by the City of Lebanon from the OEPA.

2.7.4.3. NOI Applications and NPDES Permit received by the City of Lebanon from the OEPA.

2.7.4.4. All electrical facilities are shown on the plans in accordance with the Electric Department standards.

2.8. SUBMITTAL OF WATER AND SEWER PLANS TO OHIO EPA FOR APPROVAL

2.8.1. The purpose of this section is to establish the procedure for submission of water and/or sanitary sewer plans to the Ohio Environmental Protection Agency (OEPA) for approval.

2.8.2. Prior to plans being submitted to OEPA for approval, they shall have been approved by the City of Lebanon subject to OEPA's conditions and approval. Upon approval of the plans by the City of Lebanon, the City of Lebanon will provide to the Owner/Developer a letter of recommendation for approval by the OEPA. In the event that OEPA requirements are more stringent than City of Lebanon requirements, OEPA requirements shall prevail.

- 2.8.3. It should be noted that City of Lebanon review relates directly to those water mains and sanitary sewers that are to become public utilities. Private sanitary sewer and water mains are required to meet City of Lebanon performance standards as well as OEPA requirements.
- 2.8.4. The Owner/Developer is responsible for payment of all fees for the application, review, permit to install, or other costs associated with OEPA approval.
- 2.8.4.1. It shall be the Owner/Developer's (or his agent's) responsibility to assemble and submit the required documents to the OEPA for approval.
- 2.8.4.2. Information shall be sent to the following:
- Ohio EPA
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
- 2.8.4.3. Responses to OEPA questions during their review shall be mailed to the OEPA representative involved.
- 2.8.4.4. At the same time plans are sent to the OEPA for review and approval, one (1) complete set of all materials submitted to OEPA shall be sent to:
- Office of the City Engineer
City of Lebanon
50 South Broadway
Lebanon, Ohio 45036
- 2.8.4.5. The City of Lebanon is required to be copied on all correspondence both to and from the OEPA.
- 2.8.4.6. It is the Owner/Developer's responsibility to provide corrected copies of material during the review process to the City of Lebanon so that the City of Lebanon has a complete set of plans as approved by the OEPA.
- 2.8.4.7. When the City of Lebanon is notified of the OEPA's approval, it will notify the Owner/Developer.

2.9. APPROVED PLANS

- 2.9.1. No work shall commence on any public improvements until the Contractor has, in his possession a complete set of approved plans. Each set of plans shall also be approved and signed by the City Engineer.
- 2.9.2. Upon approval by the City Engineer, the Owner/Developer or Engineer shall submit a digital copy of the approved plans in AutoCAD format to the office of the City Engineer.

2.10. BONDING

- 2.10.1. Public Improvement Bonds shall be required for all private projects involving the installation of public utilities, and/or roadways.
- 2.10.1.1. For developments involving dedication of Right-of-Way, prior to the approval of a Final Plat by the City of Lebanon the developer shall post public improvement bonds in the amount of 130% of the estimated cost of the public improvements, as approved by the City of Lebanon, to secure the performance and construction of the uncompleted and unapproved public improvements. The bonding forms found in the Appendix shall be used when submitting bonds.
- 2.10.1.2. For development not involving the dedication of Right-of-Way, prior to the final approval of the construction drawings by the City of Lebanon and prior to the start of construction, the developer shall post public improvement bonds in the amount of 130% of the estimated cost

of the public improvements, as approved by the City of Lebanon, to secure the performance and construction of the uncompleted and unapproved public improvements. The bonding forms found in the Appendix shall be used when submitting bonds.

- 2.10.2. All developments shall post bonds for erosion and sedimentation control and stormwater detention and quality.
- 2.10.3. Prior to the Developer securing bonds, line item estimates for all items to be bonded shall be submitted to the Office of the city Engineer for approval of the bonding amounts.
 - 2.10.3.1. The estimates shall indicate the item of work, the item unit, number of units, unit price, and total cost for each item to be bonded. Lump sum estimates shall not be submitted.
 - 2.10.3.2. Separate bond estimates shall be submitted for each bond type (Streets and Appurtenances, Sidewalks, Water, Sanitary, and/or Storm Sewer, Stormwater Detention and Quality, and Sedimentation and Erosion Control).
- 2.10.4. After preliminary acceptance of the constructed improvements and a complete set of As-Built plans have been received and approved by the City of Lebanon in hard copy and digital format, the public improvement bond may be reduced to an amount determined by the City of Lebanon, but shall be no less than 20% of the estimated cost of the public improvements amount and 130% of all non-completed items. A maintenance bond will be held for a period of 24 months beyond the approval date of the improvements to cover any defects in construction of the improvements to be determined by the City of Lebanon. After this period and after the final inspection and completion of any punchlist items, the bond may be released to the Owner/Developer.
 - 2.10.4.1. Approval of improvements shall not be granted until a punch list has been completed by the City of Lebanon and all items have been satisfactorily completed.
- 2.10.5. Erosion and Sedimentation Control Bonds shall be required for all private developments that meet the requirements set forth in Section SECTION 8 of this manual. Bonds shall be provided in the amount of 130% of the estimated cost of the sedimentation and erosion control measures for the site, as approved by the City of Lebanon.
 - 2.10.5.1. Erosion and Sedimentation Control Bonds may be reduced upon approval of the site by the City Engineer. Prior to approval, the site shall have been permanently stabilized.
- 2.10.6. The City of Lebanon will accept security in any of five separate forms except in the case of Erosion Control improvements. In the case of Erosion and Sedimentation Controls, only a certified check or cashier's check is acceptable. As Developer, with the exception of Erosion Control improvements, you may, at your option, select the form of security as best suits your situation. The five forms of acceptable security are as follows:
 - 2.10.6.1. Certified check or cashier's check payable to the City of Lebanon, Ohio. This check shall be deposited by the City in an appropriate fund and encumbered for the purposes set forth in the Security Agreement. Upon completion and proper maintenance of all improvements to City of Lebanon specifications, the principal amount of the funds will be disbursed back to the Developer.
 - 2.10.6.2. Original Letter of Credit in favor of the City of Lebanon.
 - 2.10.6.2.1. Please note that the Letter of Credit must include the following language for automatic renewal and notice to the City of Lebanon, Ohio in case of non-renewal:
 - 2.10.6.2.1.1. "It is a condition of this Letter of Credit that it shall be deemed automatically extended without amendment for successive one year periods from its present or any future expiration date unless at least sixty (60) days before any such expiration date we notify the City Engineer of the City of Lebanon, at the address listed above, in writing by certified or registered mail, that we elect not to consider this letter of credit renewed for any such additional period, at such time the City of Lebanon, Ohio

may declare the Developer to be in default and demand immediate payment of all sums under this Letter of Credit.”

2.10.6.2.2. If the Letter of Credit contains a draft presentment deadline, it is mandatory that the Letter of Credit include the following language:

2.10.6.2.2.1. “The draft presentment deadline set forth in this letter of credit shall automatically be extended for one year periods unless at least sixty (60) days prior to any draft presentment deadline, or any prior extension thereof, the _____ (name of financial institution) Bank notifies the City Engineer of the City of Lebanon, Ohio, 50 South Broadway, Lebanon, Ohio 45036, that the draft presentment deadline shall not be extended for a successive one year period, at such time the City of Lebanon, Ohio may declare the Developer to be in default and demand immediate payment of all sums under this Letter of Credit.”

2.10.6.2.3. The Letter of Credit must also contain the following language:

2.10.6.2.3.1. “The Security Agreement referenced by this Letter of Credit and all its terms and conditions, is attached hereto, made a part hereof, and fully incorporated herein, as if fully rewritten”.

2.10.6.2.4. Payment pursuant to the Letter of Credit shall not be conditioned except upon notification by the City Engineer to the issuing financial institution that the developer is in default of the installation and/or maintenance of improvements within the subject development.

2.10.6.2.5. The Letter of Credit must state that it is being issued in connection with the installation of improvements in a particular development being developed by a certain developer. This reference must be specific and identify the development and section or phase thereof as may be applicable. Additional reference must be made that the letter of credit is being issued in connection with the security agreement between the City and the developer.

2.10.6.3. Original Escrow Letter issued by a financial institution.

2.10.6.3.1. The following text shall be included:

2.10.6.3.1.1. “The Security Agreement referenced by this Original Escrow Letter and all its terms and conditions, is attached hereto, made a part hereof, and fully incorporated herein, as if fully rewritten”.

2.10.6.4. Surety Bond issued by a surety company authorized to do business in the State of Ohio. An authorized representative must sign the security agreement which will serve as the bond. A power of attorney from the surety company authorizing the signature on behalf of the surety company must accompany the security agreement.

2.10.6.5. Surety Obligation of National Bank. A national bank may bind itself as surety to indemnify the City should the Developer default in the installation of the development improvements if it has a segregated deposit sufficient to cover the bank’s total potential liability. Therefore, an authorized representative of the national bank must sign the security agreement, which signature shall also constitute a certification that the national bank has a segregated deposit sufficient in amount to cover the bank’s total potential liability.

2.10.7. Irrespective of the type of security selected by the Developer, all security agreements with the exception of erosion control must be signed by the Surety.

2.10.8. The term “Surety” as used herein includes a bank, savings and loan or other financial institution where the security provided is a letter of credit, escrow letter or surety obligation of a national bank. The term “Surety” when referring to a bank, savings and loan or other financial institution is not intended to create obligations beyond those provided by the security agreement. In the event that Surety fails to make funds available to the City of Lebanon, Ohio in accordance with

the security agreement within thirty (30) days after notification of default, then amounts due shall bear interest at eight per cent (8%) per annum.

- 2.10.9. Other than filing in the blanks, no other alterations to the Security Agreements or escrow letter may be made. Do not retype the security agreements or the escrow letter. Use only the forms provided or photocopies thereof. Security agreements and escrow letters which have been altered or retyped will not be accepted. The Development name on a Security Agreement must exactly match the name of the Development on the record Development plat. No exceptions. For example, if the name of the Development is Spicewood, the name on the agreement must be spelled the same. The spelling Spice Wood is not the same as Spicewood. In addition, if the Development is Section One, referring to as Section 1 is not the same.
- 2.10.10. Upon completion of the Security Agreements by the Developer and the Surety, they must be returned to the Office of the City Engineer.
- 2.10.11. All Security Agreements must be submitted to the City Engineer with the plat of the improvement. In no circumstances will Security Agreements be approved the City Engineer until the plat has been approved by that City Engineer.
- 2.10.12. Following performance of improvements in a Development, the Developer may request a reduction in the bond. Such requests may be made in writing to the Office of the City Engineer, and shall be granted in the sole discretion of the City of Lebanon, Ohio.
- 2.10.13. A copy of each of the following Security Agreements is included in the Appendix:
 - 2.10.13.1. Streets and Appurtenances
 - 2.10.13.2. Sidewalks
 - 2.10.13.3. Water, Sanitary Sewer, and/or Storm Sewer
 - 2.10.13.4. Erosion Control
 - 2.10.13.5. Stormwater Detention/Retention and Quality
 - 2.10.13.6. Escrow Letter

2.11. PERMITS, EASEMENTS, AND RIGHTS-OF-WAY

- 2.11.1. The Owner/Developer shall make application for, obtain and pay for all licenses, permits, easements and rights-of-way. The Contractor shall be required to comply with all State and Municipal ordinances, laws and codes that may apply to the same.

2.12. CONSTRUCTION PHASE

- 2.12.1. The Contractor will not be permitted to commence work until he has obtained all insurance required by these documents and such insurance has been approved by the City of Lebanon.
- 2.12.2. Such insurance shall be secured from an insurance company or companies authorized to write casualty and property insurance in the State of Ohio and shall protect the Contractor, his subcontractors, the Owner/Developer, and the City of Lebanon from claims for bodily injury, death, property damage, fire and other risks set out herein.
- 2.12.3. Each policy of insurance covering the Contractor's operations under the contract shall provide, either in the body of the policy or by appropriate endorsement (rider) to the policy, that such policy cannot be altered or canceled in less than ten (10) days after the mailing of written notice of such alteration or cancellation to the Owner/Developer (insured) and the Design Engineer or not less than five (5) days after actual receipt by the Owner/Developer (insured) and the Design Engineer, of written notice of such pending alteration or cancellation.

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- 2.12.4. Certificates of insurance coverage shall include a statement of alteration or cancellation provisions of the policy, sufficient to show definitely that such provisions comply with the requirements stated herein.
- 2.12.5. The construction phase shall not begin until a written Notice to Proceed from the City of Lebanon is received by the Owner/Developer. When the City of Lebanon is ready to issue a Notice to Proceed, a Pre-Construction Conference will be scheduled and held jointly by the City of Lebanon and the Contractor. The Owner/Developer shall be responsible to the City of Lebanon for the proper construction of the facilities.
- 2.12.6. The City Engineer and the Design Engineer shall be notified immediately of any conflicts encountered in the field between the water and sanitary sewer improvements and existing infrastructure.
- 2.12.7. It is required that the Contractor contact the City of Lebanon when water or sanitary sewer lines have been backfilled under streets so that a representative may visually inspect the backfill material before asphalt or concrete is placed on the streets. Compaction testing by a certified geotechnical firm may be required by the City of Lebanon at the expense of the Owner/Developer.
- 2.12.8. After the installation of each storm and sanitary sewer section from structure to structure, a preliminary check of the pipe slope shall be conducted and provided to the City of Lebanon. Refer to Paragraphs 4.11.6. and 7.10.7.
- 2.12.9. Foundation As-Built Drawings
- 2.12.9.1. Prior to the construction of any structure proceeding past the footer/foundation phase, an As-Built Foundation Plan shall be submitted to and approved by the City of Lebanon. The foundation as-built plan shall meet the following requirements:
- 2.12.9.1.1. The drawing scale shall not exceed 1" = 30'.
- 2.12.9.1.2. All property boundaries, including bearing and distance information, shall be shown.
- 2.12.9.1.3. All easements and building setback lines shall be clearly shown and labeled.
- 2.12.9.1.4. The footer/foundation of the structure shall be accurately located in the field by actual field survey.
- 2.12.9.1.5. The top of footer/foundation elevation shall be given. The elevation shall be based upon NAVD 88.
- 2.12.9.1.6. The minimum yard depth shall be provided to all lot lines. Distances shall be carried to the nearest 1/100 foot (e.g., 48.26').
- 2.12.9.1.7. The drawing shall be provided in hard copy and shall be signed and stamped by a Professional Surveyor registered in the State of Ohio.
- 2.12.9.2. The Foundation As-Built Drawing will be compared to the site plan/plot plan submitted for the structure. The location and elevation of the structure will be checked to ensure the structure is constructed as approved by the City of Lebanon.
- 2.12.10. Any deviation, change, addition or deletion from the approved plans must be approved by the City of Lebanon in writing before the deviation, change, addition or deletion is made during construction.
- 2.12.11. Representatives of the City of Lebanon shall have the right to enter upon the project site to make periodic inspection of the work in progress.
- 2.12.12. Upon completion of construction, the Contractor shall pressure test and disinfect all water lines, and conduct infiltration, exfiltration or air tests on sewer lines as outlined in these standard specifications. Any section of lines that does not pass the prescribed test must be corrected to the

satisfaction of the City of Lebanon and retested until all testing procedures are satisfied. All testing must be conducted in the presence of a representative of the City of Lebanon.

- 2.12.13. A video inspection of the all sanitary and storm sewer mains shall be conducted in accordance with the requirements set forth in Section 2.13. Copies of the video and written reports shall be provided to the City Engineer prior to the acceptance of the improvements or the release of bonds
- 2.12.14. For residential developments, final asphalt shall not be placed until a minimum of 80 percent of homes in the section have been completed, unless otherwise approved by the City Engineer.
- 2.12.15. Upon completion of construction, the Owner/Developer shall certify, to the City of Lebanon in writing that all payments have been made to all parties involved in the construction of the facilities. The certifications shall state the final total project cost.
- 2.12.16. Upon the completion of construction, the City of Lebanon will perform a preliminary inspection of the improvements and prepare a punchlist, if required, and send a copy to the Owner/Developer. Punchlist items shall be addressed immediately upon the receipt of the punchlist and shall be completed in a timely manner.
- 2.12.17. Upon completion of final inspection punchlist items, receipt of As-Built Drawings, and final acceptance of the improvements, the Owner/Developer shall transfer ownership of the new facilities to the City of Lebanon and said facilities shall become an asset of the City of Lebanon.

2.13. VIDEO INSPECTION

- 2.13.1. It is strongly recommended that video inspections be performed upon the completion of the public infrastructure improvements (prior to individual site construction activities).
- 2.13.2. Video inspections shall be required at a time determined by the City Engineer which shall be prior to final bond release after a minimum of 80 percent build-out.
- 2.13.3. Video inspections shall only be performed by a professional firm specializing in utility video inspections.
- 2.13.4. Copies of the video inspections and written reports shall be submitted to the Office of the City Engineer.
- 2.13.5. The following procedures and limitations shall be adhered to:
 - 2.13.5.1. The camera shall not follow a sewer jet.
 - 2.13.5.1.1. If a sewer line requires cleaning, said cleaning shall be performed prior to the video inspection, not as part of the sewer inspection.
 - 2.13.5.1.2. If use of the camera is required to ensure that the line has been thoroughly cleaned, this footage shall not be a substitute for the actual video inspection
 - 2.13.5.2. If the line is to be cleaned prior to video inspection, upon the completion of the cleaning, clean water shall be placed into the upstream junction of the section to be inspected. Water shall be added until flow is observed in the downstream junction. This procedure is to ensure that any standing water in the sewer lines will be clearly visible.

2.14. INSURANCE REQUIREMENTS

- 2.14.1. Whenever work is performed in the right-of-way or in City-owned property, the contractor shall have insurance that conforms with the following:
 - 2.14.1.1. Insurance, Worker's Compensation - The Contractor shall take out and maintain during the life of this contract, Worker's Compensation Insurance, as required by statute, for all of his employees employed at the site of the project, and in case any work is sublet, for all the subcontractor's employees not otherwise insured. In case any class of an employee, who is engaged in hazardous work at the site of the project, is not protected under the Worker's

Compensation Statute, the Contractor shall provide adequate coverage for the protection of the employees not otherwise protected.

- 2.14.1.2. Insurance, Public Liability - The Contractor shall take out and maintain during the life of this contract, such Public Liability (Bodily Injury and Property Damage) Insurance as shall protect him and any subcontractor performing work at the site from claims for damages because of bodily injury, including accidental death and from claims for property damages which may arise from operations under this contract, whether such operations be by him or by any subcontractor, or by anyone directly or indirectly employed by either of them.
 - 2.14.1.2.1. Liability coverage is to be written on a comprehensive general liability policy and must include:
 - 2.14.1.2.1.1. premises-operations, manufacturers and contractors, owners, landlords and tenants;
 - 2.14.1.2.1.2. contractors protective;
 - 2.14.1.2.1.3. products-completed operations;
 - 2.14.1.2.1.4. contractual liability.
 - 2.14.1.2.2. General liability shall also include underground property damage by mechanical equipment. When blasting is done, coverage must be provided for the explosion hazard.
- 2.14.1.3. Railroad Insurance - Where work on railroad right-of way is involved, the Contractor shall also be covered by Railroad Property Liability Insurance with limits of liability as required by the railroad company on whose property the work is being performed.
 - 2.14.1.3.1. All comprehensive-automobile-general liability insurance policies shall include, as named insured, the Contractor, the Owner/Developer, and the City of Lebanon, Ohio.
- 2.14.1.4. Minimum Insurance Limits - The minimum amounts of insurance to be furnished by and for the general contractor and the subcontractors under this contract are:
 - 2.14.1.4.1. Worker's Compensation –
 - OH Statutes Employers Liability
 - \$100,000 limit of liability
 - 2.14.1.4.2. Comprehensive General Liability
 - Contracts less than \$1,000,000.00
 - \$2,000,000.00 minimum coverage
 - Contracts in excess of \$1,000,000.00
 - \$5,000,000.00 minimum coverage
 - 2.14.1.4.3. Comprehensive Automobile Liability
 - \$1,000,000.00 combined single limit per occurrence
 - 2.14.1.4.4. Railroad Protection Insurance - (where work is to be executed within the railroad right-of-way) Loss of Life or Injury to Person - As required by Railroad Property Damage - As required by Railroad
 - 2.14.1.4.5. In all cases the City of Lebanon shall be listed as an additional insured.

2.15. CERTIFICATION OF COMPLETION

- 2.15.1. Upon completion of construction and all punchlist items, the Design Engineer or a Professional Surveyor registered in the State of Ohio shall certify to the City of Lebanon that the project has been constructed in accordance with the approved plans and the standard specifications contained herein. A complete set of As-Built drawings, in accordance with the current City of Lebanon As-Built Drawing Requirements, must accompany the Design Engineer's certification.

2.15.1.1. If any major deviations (as determined by the City of Lebanon) are encountered, the Design Engineer shall certify in writing whether or not the improvements as installed will adequately perform. These certifications shall be signed and stamped by a Professional Engineer registered in the State of Ohio. Copies of all calculations shall be included with the certification.

2.15.2. Upon receipt of these certifications and As-Built Drawings, the City of Lebanon shall accept the facilities as an extension of the existing public system.

2.16. COMPREHENSIVE PERMIT INSPECTIONS

2.16.1. Inspection Scheduling

2.16.1.1. All inspections will be performed between the hours of 9:00 AM and 4:00 PM, Monday through Friday, excluding holidays.

2.16.1.2. All requests to schedule inspections shall be called in before to 4:00 PM on the business day prior to the inspection being needed.

2.16.2. Inspection requirements

2.16.2.1. The following are general requirements for comprehensive permit inspections. See each respective section for complete requirements.

2.16.2.2. Water service line

2.16.2.2.1. All water services shall be installed by open cut or by directional drilling.

2.16.2.2.2. If open cut, the service line shall be bedded with a minimum of 6" of #9's/Grits and shall have a minimum of 6" of #9's /Grits over the top of the service line prior to backfilling the trench.

2.16.2.2.2.1. Trench shall not be backfilled prior to inspection approval. Inspection shall take place prior to placing material over top of service line.

2.16.2.2.2.2. Additional material shall be on site to allow for 6" of #9's (grits) to be placed over the line upon approval of the inspection.

2.16.2.2.3. If directional drilled, the service line shall be potholed a minimum of once every 50 feet, no less than two per 100 feet, to verify depth.

2.16.2.2.4. Connections shall be made using compression fittings.

2.16.2.2.5. See Section 3 for additional requirements.

2.16.2.3. Sewer lateral

2.16.2.3.1. Trench shall not be backfilled prior to inspection approval.

2.16.2.3.2. The sewer lateral shall be laid in the trench with 6" of #9's (grits) beneath the sewer lateral.

2.16.2.3.3. Connections shall be made using Fernco (or approved equal) couplings.

2.16.2.3.4. Additional material shall be on site to allow for 6" of #9's (grits) to be placed over the lateral upon approval of the inspection.

2.16.2.3.5. See Section 4 for additional requirements.

2.16.2.4. Concrete

2.16.2.4.1. Crushed limestone 304 shall be in place and compacted.

2.16.2.4.2. Forms shall be in place. Proper form materials and heights shall be used.

2.16.2.4.3. Expansion joint material shall be on site and shall be of an approved type. Expansion joint material shall match the thickness of concrete being poured.

2.16.2.4.4. See Section 6 for additional requirements.

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