

CITY OF PICKERINGTON STANDARD GENERAL NOTES

Updated: June 1, 2016

GENERAL NOTES

Specifications: The requirements of the City of Pickerington, together with the City of Columbus Construction and Materials Specifications dated February 1, 2012, including all supplements thereto in force on date on contract shall govern all materials and workmanship involved in the improvements shown on these plans except as such specifications are modified by the following specifications or by the construction details set forth herein.

Standard Construction Drawings: All pertinent Standard Construction Drawings are available upon request from the City Engineering and Service Departments.

Manufacturer: All manufactured materials shall be “Made in the USA” or as approved by the City Engineer.

Contractor Responsibility: The City will not be responsible for means, methods, procedures, techniques, or sequences of construction that are not specified herein. The City will not be responsible for safety on the work site, or failure of the Contractor to permit work according to contract documents.

Safety Requirements: The Contractor and Subcontractor shall be solely responsible for complying with all federal, state, and local safety requirements including the Occupational Safety and Health Act of 1970 and all amendments, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also the sole responsibility of the Contractor and Subcontractor to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work, including the requirements for confined spaces per 29 CFR 1910.146.

Permits: Prior to the start of construction, the Contractor shall obtain all necessary permits including but not limited to Ohio EPA Permits to Install (PTI) and Notices of Intent (NOI), Building Permits, and Floodplain Permits. The Contractor must also have in their possession an approved and signed set of construction drawings.

Easements: Approval of these plans is contingent upon the recording of all easements required construction of the Work being secured and recorded prior to commencement of Work and no Work which requires an easement shall be allowed to proceed until this is completed.

Pre-Construction Meeting: A pre-construction meeting shall be held prior to the commencement of work for this improvement at the City of Pickerington, Ohio. The Contractor shall submit a tentative work schedule and a Temporary Erosion Control Plan to the Engineer at the time of the pre-construction meeting. This schedule will detail the timing of the work activities for the various aspects of the project improvements.

Miscellaneous Work: All items of work called for on the plans, for which no specific method of payment is provided, shall be performed by the Contractor. The cost of the work shall be included in the price for the various related items.

Site Visit: The Contractor shall perform field reconnaissance to become acquainted with the existing site conditions and the potential effects upon the scope of work.

Recycled Materials: The use of recycled materials, such as recycled 304, is not allowed.

Handicap Ramps: Handicap ramps and sidewalks shall be constructed in full compliance with the requirements of the Americans with Disabilities Act (ADA) of 1990, including all supplements and in accordance with the City of Columbus Standard Drawings dated January 1, 2007, including all supplements or replacement drawings issued thereto. Sidewalks shall be constructed with a cross slope not to exceed 2.0%. Handicap ramps and transition sidewalks shall be constructed in conjunction with curb and streets and audible warning devices are required at each ramp location.

Crosswalks: Crosswalk cross slopes shall be no more than 2.0%. All crosswalk lines and stop bars shall be thermoplastic paint, City of Columbus Item 644. There shall be no conflicts with crosswalks or handicap ramps and other structures such as valve boxes, curb inlets, catch basins, signs, or light posts.

Existing Pavement: Pavement shall be cut in neat, straight lines to the full depth of the existing pavement, or as required by the City Engineer.

Heat Welding: Contractor shall heat weld, per City of Columbus Supplemental Specification 1541, all cold joints in relation to this project.

Field Tile: All field tile broken during excavation shall be replaced to original condition or connected to either the curb subdrain or to the storm sewer system as directed by the Engineer. The cost of this work shall be the responsibility of the Contractor.

Fuel Storage: Any fuel storage container on site shall include a Secondary Containment device. Earth mounding is not adequate. Do not locate fuel storage in close proximity to water or in areas susceptible to high water

Water Withdrawal Registration: The Ohio Department of Natural Resources requires a water registration where surface or groundwater is withdrawn at a rate greater than 100,000 gallons per day. The Contractor will be required to apply for and submit the required form.

Dewatering Plan: If dewatering is planned for installation of utilities, Contractor shall provide the City with a dewatering plan. Commencement of any construction involving dewatering activities shall not begin without City approval.

Surplus Excavation: All surplus excavation shall be disposed off-site if not identified on the grading plan. Disposal of excess excavation within Special Flood Hazard Areas (100-year floodplain) is not permitted.

Unauthorized Street Excavation: In the event excavation for the street is from 0” to 6” below that called for on the plans, the Contractor shall replace this excess excavated material with compacted 304 crushed limestone aggregate as directed and at no extra cost to the Owner or Engineer.

Dust Control: Dust generated from the project must be controlled at all times. The Contractor shall apply water or dust palliative on disturbed areas during construction to alleviate or prevent dust nuisance per City of Columbus Item 616. Dust palliative shall consist of clean calcium chloride meeting the requirements of City of Columbus Item 712.02. The water or calcium chloride shall be sprayed uniformly over the surface of the disturbed area.

Benchmarks: The Contractor shall carefully preserve bench marks, property corners, reference points, stakes and other survey reference monuments or markers. In cases of willful or careless destruction, the Contractor shall be responsible. Resetting the markers shall be performed by a licensed Ohio Professional Surveyor at the Contractor’s expense.

Non-rubber tired vehicles shall not be moved on or across public streets or highways without the written permission of the City Engineer.

Tracking or spilling mud, dirt, or debris upon the streets, residential or commercial drives, sidewalks, or bike paths is prohibited and any such occurrence shall be cleaned up immediately by the Contractor. If the Contractor fails to remove said mud, dirt, debris, or spillage, the City of Pickerington reserves the right to remove these materials and clean affected areas, the cost of which shall be paid by the Contractor / Developer.

Sanitary Facilities: The Contractor shall furnish and maintain sanitary convenience facilities for the workmen and inspectors for the duration of the work.

Storage of Equipment and Materials: No materials, including pipe, shall be stored within the public right-of-way or within one hundred (100) feet of any intersecting street or driveway. During non-working hours, storage of equipment shall comply with these same requirements. Compliance with these requirements along with additional provisions of the contract specifications shall not in any way relieve the Contractor of his legal responsibilities for the safety of the public. The Contractor shall indicate his intent with regard to storage of material at the preconstruction meeting.

Clearing & Preservation: Contractor shall be responsible for the existing trees preservation as indicated on the grading plan. The limits of the Clearing / Preservation are to be established prior to the start of construction.

Trees: It is the intention of the City to preserve as many trees as possible during construction of this project. Therefore, the Contractor shall keep disruption to an absolute minimum. The City reserves the right to mark specific trees, saplings, and / or turf areas for complete protection and preservation by the Contractor. The operation of all equipment, particularly when employing booms, the storage of material, and the deposition of excavation shall be conducted in a manner that will not injure trees, trunks, branches, or their roots.

All trees within the construction area not specifically designated for removal shall be preserved, whether shown or not shown on the approved construction drawings. Trees six inches or greater at the DBH (Diameter Breast Height) must be protected with fencing placed at the critical root zone or fifteen (15) feet, whichever is greater. Trees not indicated on the approved construction drawings for removal may not be removed without prior approval of the City.

If tree removal is required, the Contractor shall work with staff from the City on all tree removals. Removal of stumps shall be included in the price bid for the various items. Trees encountered during construction outside the right-of-way limits shall be removed only when necessary and cost of it shall be included in the price bid for the various items.

Restoration: The Contractor shall restore all disturbed areas to equal or better than existed before construction. Drainage ditches or watercourses that are disturbed by construction shall be restored to the grade and cross-sections that existed before construction. All signs, landscaping, structures or other appurtenances disturbed or damaged during construction shall be replaced or repaired to the satisfaction of the Owner or City Engineer. The Contractor shall pay for the cost of this work.

Landscape Maintenance: The Contractor shall water and maintain trees, plants, and shrubs planted under this contract for a project warranty period of one year following the final landscape acceptance date. Maintenance shall include cultivating, weeding, watering, and the application of appropriate insecticides and fungicides necessary to maintain plants free of insects and disease. Tree, plants, shrubs, and ground cover beds shall be adequately watered once a week for the first six weeks of the warranty period and then once every two weeks for the remainder of the one year warranty period except during winter. Where total rainfall is less than one inch (1.0") for 10 consecutive days, Contractor shall adequately water a minimum of twice a week for plants, shrubs, and ground cover beds and a minimum of once a week for trees until rainfall exceeds one inch (1.0") in 10 consecutive days. Fertilize trees, shrubs, and perennials in the early spring up to early June with a water-soluble fertilizer according to accepted landscape industry standards. This item shall be paid for as a lump sum unit price under the item special – trees, plants, and shrub maintenance.

Grass Seed: Grass Seed shall be fresh, clean, dry, new-crop seed complying with the Association of Official Seed Analysts "Rules for Testing Seeds" for purity and germination tolerances. Grass seed shall be furnished from a grass seed dealer or grower whose brands are grades registered or licensed by the State of Ohio, Department of Agriculture or from the approved list of grass seed dealers or growers on file with the Department. Seed older than one (1) year will not be acceptable.

Grass Seed Mixture: Provide seed of grass species and varieties, proportions by weight, and minimum percentages of purity, germination and maximum percentage of weed seed as indicated in 'submittals section described above.

- a) Seed mixture is to contain:
 - 40% Titian Tall Fescue
 - 40% Tarheel Tall Fescue
 - 10% Denim Kentucky Bluegrass

- 10% Renaissance Perennial Rye Grass
b) Apply at 8 lbs. per 1,000 square feet.

Submit certification from seed supplier for acceptance prior to placing order. Also provide specification for mulch as provided by supplier.

Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast and slow release nitrogen, 50% derived from natural organic sources of urea-form, phosphorous, and potassium.

- a) Composition: 13% nitrogen, 26% phosphorous, and 12% potassium by weight, or in amounts recommended in soil reports from testing agency. Apply at 6 lbs. per 1,000 square feet.

Soil Stockpiles: If stockpiled soils are to be used for future placement on the site, the following requirements are to be followed: Protect the stockpile from erosion by installing a perimeter silt fence. This silt fence must be maintained throughout the life of the project. Side slopes are to be no greater than 3:1. The stockpile is to be graded smooth and the soils stabilized with seed and mulch. The location of this stockpile is to be shown on the approved drawings. If the stockpile location is not indicated on the drawings, the stockpiling of soils will not be permitted. If excess soils are present, they must be hauled from the site before final acceptance by the City of Pickerington. A copy of the written agreement between the Contractor and the owner of the facility receiving the excess soils must be presented to the City before the soils are exported.

Driveway Replacement: When a trench across a driveway is located within or near the right-of-way, asphalt drives shall be replaced from the furthest edge of the trench to the edge of the road pavement or to the concrete drive apron, if one exists. Concrete drives shall be replaced between nearest adjacent joints if joints are within 4 feet of trench edge. All driveways disturbed or damaged during work under this contract shall be restored to their original condition by the Contractor unless otherwise specified. Methods and Payment for driveway replacement and for all work necessary to restore driveways to their original condition shall be the sole responsibility of the Contractor.

Record Drawings: Following the completion of construction of the site improvements, a proof survey shall be provided to the City Engineering Department that documents as-built elevations, dimensions, slopes and alignments for all elements of this project. The proof survey shall be prepared, signed and submitted by the firm whose Professional Engineer sealed the construction drawings. A copy of the specific criteria required for the completion of the Record Drawings is available from the City Engineering Department.

TRAFFIC CONTROL NOTES

Traffic Control: All traffic control devices shall be furnished, erected, maintained, and removed by the Contractor in accordance with the "Ohio Manual of Traffic Control Devices for Construction and Maintenance Operations", current edition. Copies are available from the Ohio Department of Transportation, Bureau of Traffic, 1980 West Broad Street, Columbus, Ohio, 43223.

All traffic lanes shall be fully open from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM, unless otherwise approved by the City Engineer. One lane may be closed to traffic during working hours.

Steady burning type 'C' lights shall be required on all barricades, drums, and similar traffic devices in use at night. Cones are not permitted to be used for night work.

Concrete barriers shall be used when working along a public street where excavation is taking place. These barriers must be in place before excavation starts and removed after all permanent backfill operations are completed.

If the City Engineer determines that the Contractor is not providing proper provisions for traffic control, the City Engineer will assign uniformed, off-duty police officers to the project at no cost to the City.

All trenches within the pavement, berm, and shoulder limits shall be backfilled or securely plated during non-working hours.

Property Access: Access to all adjoining properties shall be maintained at all times. Areas with multiple drives shall have at least half of the drives open at all times. Properties with a single access will require staged construction; short-term full closure of a single access will be permitted with the property owner and / or tenant's agreement. Such full closures shall be scheduled and coordinated with the property owner / tenant.

UTILITY GENERAL NOTES

Existing Utilities: The identity and location of the existing underground utility facilities known located in the construction area have been shown on the plans as accurately as provided by the Owner of the utility. The City of Pickerington and/or the Engineer assumes no responsibility as to the accuracy or the depths of the underground facilities shown on the plans.

Location, support, protection and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor. The Contractor shall expose and verify the location of any utilities within the limits of the proposed conduit path, prior to starting any excavation. The cost of this work shall be included in the price bid for the various items.

The Contractor shall cause notice given to the Ohio Utilities Protection Service (phone 800-362-2764) and to the Owners of the utility facilities shown on the plan who are not members of a registered underground protection service in accordance with Section 153.64 of the Revised Code. The above-mentioned notice shall be given at least two (2) days prior to the start of construction.

When unknown or incorrectly located underground utilities are encountered during construction, the Contractor shall immediately call the City of Pickerington, Service Department at 614-833-2292.

Ohio EPA Required Notes: Water lines shall be constructed a minimum ten feet (10') horizontally from any existing or proposed sanitary or storm lines. A minimum 18-inch (18") vertical clearance is required when a water line crosses a sanitary or storm line. Pressure testing will be in accordance with AWWA C-600 for DI, or C-605 for PVC material. Individual booster pumps will not be allowed for any individual water service. The normal working pressure in the waterlines shall not be less than 35 psi. All fire hydrants must meet AWWA Standard C502.

Curb Markings: The face of curb, when constructed or repaired, shall be stamped using the following markings: W – water service, WM – main line valve, WV – watch valve, S – sanitary service, SM – sanitary MH, X – conduit crossing, G – natural gas.

Wye Poles: Wye poles are to be installed at the location of all manholes, catch basins, valves, curb boxes, ends of service locations, and utility stubs. Wye poles shall consist of a minimum three-inch (3") sch. 40 PVC pipe or a four by four inch (4"x4") wood post. Wye poles are to be a minimum three-foot (3') above and below the ground. The top one-foot (1') shall be painted the following colors: Storm Sewer – orange, Water – blue, Sanitary Sewer - green. Wye poles will be repainted as necessary or as directed by the City.

All new conduits, catch basins and manholes constructed, as part of the project shall be free of all foreign matter and in a cleaned condition before the City of Pickerington will accept the project.

High Density Polyethylene (H.P.D.E.) corrugated pipe with internally formed smooth interior wall ADS N-12 or approved equal may be substituted for reinforced concrete pipe in non-paved areas.

Trench Dams: Clay trench dams shall be installed within 10 feet of any structure along all pipes leading to or from that structure. At least 2 feet of clay material backfill shall be compacted in place around all structures, allowing for a 4 inch placement of topsoil at the surface.

Concrete Pipe and Structure Inspection: All concrete pipe, storm and sanitary structures shall be stamped or have such identification noting that said pipe and structures have been inspected by the City of Columbus and meet their specifications. Pipe and structures without proper identification will not be permitted for installation. Fees for these inspections are to be paid by the Developer.

Backfill: Where the sewer and/or water main crosses a proposed right-of-way, the trench shall be backfilled with compacted granular material, Item 912 and shall be compacted in 8 inch lifts, from the bottom of the trench to a plane six inches (6") below the subgrade. The limits of placement shall be from right-of-way line to right-of-way line. Where the sewer and/or water main runs parallel with the centerline of the street or under sidewalks or within the influence line, measured from back of curb, backfill shall be compacted granular backfill from the bottom of the trench to within six inches (6") of the finished or existing grade. All other trench backfill shall be compacted in twelve-inch (12") lifts, loose measurement, to a soil density at least equal to that of the adjacent undisturbed soil. The cost of all backfill is to be included in the price bid for the various sewer and/or water main items.

STORM SEWER

Storm Sewer Testing: All flexible storm sewer pipe shall have a five percent (5%) deflection test conducted prior to the release of the maintenance bond.

Storm Structure Lids and Castings: Manhole lids shall be either East Jordan Iron Works Catalog #V-1320 or Neenah Catalog #1762, and include the label "Storm". Curb inlet castings are to be either East Jordan Iron Works Catalog #7030T6 (Dipped) or Neenah Catalog #32900044. Curb inlet and catch basin grates shall include engraved lettering: "DUMP NO WASTE; DRAINS TO RIVER."

Channeling: All storm structures shall be channeled as directed by the Engineer and have bicycle safe grates.

Gutter Testing: The Contractor shall be responsible for testing the grades of the gutters with water, prior to final acceptance of the streets. The cost shall be included in the price bid for curb and gutter.

Roof Drain Openings: The Contractor shall provide two (2) three-inch (3") diameter roof drain openings in the curb for each lot; each opening located not more than four foot (4') in from each lot line. Invert of opening shall be no more than 3/4" above invert of curb gutter with 1/2" slope from back of curb.

WATER LINES

Water Mains: All water main materials and installations shall be in accordance with the current rules and regulations of the City of Pickerington. All water main material shall be Ductile Iron Pipe - Class 53 (under 12") or Class 54 (12" and over) meeting AWWA C151, or PVC – DR14, meeting AWWA C900 and approved by Factory Mutual System Class 200. All two-inch (2") water pipe shall be SDR-21, 200 psi. In case of conflict in grade between water lines and sanitary or storm sewers, the water lines shall be lowered during construction. Water mains shall be laid with a minimum of 4'-6" of cover. Metal detector tape shall be placed two foot (2') below finish grade and follow the alignment of the pipe and all pipe shall be installed with tracer wire per the below standards. Backfill around and over the top of the pipe shall be free of rocks, organic refuse or other objectionable material (see Backfill note above). All bends 11¼ degrees or greater will be blocked according to the details with concrete. The use of mortar or bagged concrete is prohibited. Blocking will not encase the bolts of the fittings and will extend to virgin soil.

Interruption of Water Service: The Contractor shall give written notice to all affected property owners at least 24 hours, but not more than 72 hours prior to any temporary interruption of water service. Interruption of water service shall be held to a minimum and shall be approved by the City.

Valves: Approved gate valve manufactures are Clow, Mueller, American AVK, and American Flow Control. Valves shall be AWWA C515 resilient wedge, iron body, and

bronze mounted. All valves that exceed 4½' bury shall be furnished with a permanent valve stem extension and guide.

Live Valves: No person other than a City employee may adjust live valves.

Hydrants: Acceptable hydrants are American Darling B-84-B, American AVK Hydrants, or Mueller Super Centurion. Hydrants shall have a 5¼" main valve, two – 2½" nozzles (national standard thread) and one – 4½" nozzle with a 5" sexless fitting Storz brand-flush. Install hydrant extensions where necessary or directed. Hydrants shall have a maximum spacing of 400'. The City will consider utilizing hydrants for blowoff purposes. All hydrant threads shall be coated with *Loctite SuperLube Synthetic – Based Lubricant with PTFE* (Item #82330) or equal, as approved by the City. Hydrants shall be painted using *Themec brand paint; color 1028-00WH (white) and color 1028-21RD (red)*. Order hydrants painted correctly, with the 2 ½" nozzles white, hydrant body red and no color on the Storz fitting. Remaining portions of grease and paint shall be turned over to the City.

All hydrants are to be 'bagged' after installation and remain 'bagged' until final acceptance by the City of Pickerington.

Service Clamps and Saddles: Connections to the water main shall be made by tapping through a service clamp or service saddle. The clamp or saddle shall have a minimum of two (2) bolts, provide full 360 degrees support against the pipe, and contain a half gasket. The clamp/saddle and the bolts shall be stainless steel. Approved clamps/saddles for the City are: Ford FS303, JMC 104, Smith Blair 372, and Romac 306.

Corp Stops: Approved corp stops for the City are: Ford F-1000, and Mueller H15008.

Curb Stops and Boxes: Approved curb stops for the City are: Ford Z-44-333, and Mueller H15209. Curb stops shall be located two feet (2') outside right-of-way line and be within the five-foot (5') water or utility easement is present. When no easement is present, curb stops and boxes shall be located one foot (1') inside the right-of-way. In no case shall the box be located on private property. Approved curb boxes are: Bingham-Taylor, and Tyler. The box shall be a screw type, and have "Water" labeled on the cap.

Service Box Adjustment: The Contractor shall furnish all labor, materials, and equipment required to raise or lower existing valve boxes and / or service boxes to the grade and location shown on the plans. Any damage to the Curb, Utility, and Service Boxes caused by the Contractor shall be replaced by the Contractor at his own expense. The cost to be included in the price bid for this item.

Water Services: Water services are to be poly tubing, meeting PE 3408 CTS, 200 psi standards. Water service pipe must be "sleeved" inside Schedule 40 PVC under sidewalks and all paved areas. All water services shall have tracer wire per the city tracer wire standards.

Water Services Crossing Roadway: Where water services cross existing or proposed roadways, the trench shall be backfilled with CDF or Item 304, Compacted Granular Material. If the Contractor chooses to use a narrow bucket for installation of water service

lines, provisions must be made to perform compaction of backfill in accordance with the plans and specifications. The Contractor also has the option to push bore these water services.

Water Main Testing: The installing Contractor is responsible for conducting pressure and leakage tests at a pressure of 150 psi for one (1) hour. The normal working pressure for the water main shall not be less than 35 psi.

Chlorination of Water Mains: The Contractor shall be responsible in having the water mains chlorinated and tested in accordance with Item 801.13 and AWWA specifications Section C651. The cost of chlorination shall be included in the price bid for the various water main items. The Contractor shall submit two (2) copies of the test results to the City.

Miscellaneous Water Requirements: For every five (5) hydrants, please provide one (1) Storz fitting and one (1) hydrant repair kit. For every 10 hydrants, please provide a hydrant. For every five (5) watch valves, provide a valve repair kit. For every five (5) mainline valves, provide a valve repair kit, of which the repair kit size is to be coordinated with the City. All provided material shall be in accordance with these general notes.

SANITARY SEWER

OEPA Permits to Install: Connections to the sanitary sewer will be permitted upon receiving an OEPA Permit to Install (PTI), and upon receiving a satisfactory letter from the design engineer stating that the project has been constructed as per the plans, and all of the conditions of the PTI have been met. The developer is responsible for obtaining all required Ohio EPA approvals and paying review fees.

Sanitary Design Requirements: Sanitary sewage collection systems shall be constructed in accordance with the rules, regulations, standards and specifications of the City of Pickerington, Ohio EPA, Ohio Department of Health and the current edition of the Great Lakes-Upper Mississippi River Board (Ten States) - Recommended Standards for Wastewater Facilities.

Miscellaneous Sewer Connections: Roof drains, foundation drains, field tile, and any other sources of “clean” water are prohibited from connection to the sanitary sewer system.

Sewer Pipe: Sewer pipe shall be PVC sewer pipe ASTM D-3034, SDR 35 (SDR-26), unless otherwise shown on the plans.

Services: Pipe for all six-inch (6”) house services shall be PVC sewer pipe ASTM D-3034, SDR 35. All service extensions shall be laid at a minimum grade of ¼ inch per foot (2.08%) and shall be constructed at the time of the main sewer, unless otherwise directed by the Engineer. All ends of services shall be located in the field by the Developer’s Engineer, prior to construction of the sanitary sewers.

Service Risers: Service risers, Item 914, shall be installed where depth from wye fitting to the existing or proposed surface elevations exceed 10 feet. Top of riser shall be 9 feet +/-

below existing or proposed surface elevations, whichever is higher. Modify City of Columbus Standard Drawing No. AA-S161 for risers by eliminating the concrete foundation and substitute compacted No. 67 stone.

Testing: All sanitary sewer pipe and services are subject to either an infiltration/exfiltration test or air test. A five percent (5%) deflection test shall be conducted on all plastic pipe installation shall be done prior to acceptance, and before the release of the maintenance bond. All testing shall require a thirty (30) day waiting period from the date of final backfilling, including all laterals.

Vacuum Testing: All manholes and pipe junction structures shall conform to the requirements of ASTM C-1244-93 for vacuum test, or the latest version thereto. Vacuum testing will be done prior to acceptance of the structures, and before the release of the maintenance bond. If a casting loses its seal between these dates, a vacuum test shall be performed immediately.

Manhole Castings & Lids: Contractor to install one-inch (1") Conseal CS202 Butyl Rubber Sealant between all castings and the top section of manhole. Lids are to be either East Jordan Iron Works Catalog #V-1320 or Neenah Catalog #1762, and include the label "Sanitary".

Risers: Brick risers are not allowed for adjusting castings to grade. Use City approved riser rings only.

Settlement Tolerance: There is ZERO tolerance of settlement in the sanitary pipe system.

Existing Manholes: When tying into an existing manhole, a proper sized, water-tight, mechanical plug shall be placed in the new pipe as soon as possible. This plug is to be maintained in place until the sanitary sewer system is accepted by the City Engineer.

Video Taping: All sanitary sewers shall be videotaped in DVD format prior to acceptance by the City, and also before the release of the maintenance bond. The videotapes shall become the property of the City. The videotape shall clearly identify the location of the camera within the sewer, date, time of videotape, and be sufficient quality to determine the condition of the sewers. The pipes shall be clear of debris prior to video taping. The videotape is to clearly show the ends of all pipes in each manhole and the manhole itself.

UTILITY TRACER LINE WIRE

Tracer wire shall be placed with all proposed water lines. Tracer wire to be steel core copper clad reinforced #12 AWG, with 30 mil high density polyethylene coating. tracer wire shall be a #12 AWG continuous strand, have a minimum 380 lbs. tensile break load and follow APWA uniform color code (blue=water, green=sewer). Tracer wire to be installed over all waterlines, service lines, and force mains whether or not telemetry wire is buried with the pipe and be attached directly to pipe at the 12 o'clock position using corrosion free plastic zip ties. Tracer wire runs shall be continuous for a maximum run of 1000-feet. The wire shall be kept continuous and looped around fire hydrants, valves, curb boxes and manhole/vaults.

If wire splicing is absolutely unavoidable, use only approved splice kit filled with moisture displacement silicone for corrosion resistant protection. 3-way wire connections from main to termination box will be made only with approved direct bury connector with moisture displacement silicone filled cap for corrosion resistant protection.

To terminate tracer wire a magnetized termination box featuring a corrosion-resistant brass wire lug and a wax pad to cover wire connections after installation and lock moisture out shall be used. Termination box shall be capable of allowing connection to underground wires without removing the cap. Loop 18-24 inches of wire inside termination box. Termination boxes shall be placed at the ends of all runs, at all road intersections and at intervals not to exceed 500-feet, as approved by engineer. Wire shall be properly grounded per manufacturer recommendations.

For directional drilled pipe, #12 AWG solid steel core copper clad reinforced extra high strength hard drawn wire with a 45 mil high density polyethylene (hdpe) coating and a minimum 1150 lbs. tensile break load shall be used. Wire shall be specifically produced for directional drilling application.

Contactors shall conduct a conductivity/locate test (witnessed by city) upon completion. Tracer wire, splice kit and termination box shall be manufactured by copperhead industries or approved equal. The cost of all tracer wire and appurtenances shall be included in the price bid for the respective pipe.

EROSION AND SEDIMENT CONTROL

Erosion Control: Erosion control measures shall be in accordance with the requirements of Chapter 1258.22 of the Codified Ordinance of the City of Pickerington dated January 16, 2007 (including all supplements) and of *Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection Manual – Rainwater and Land Development*, whichever is the more stringent as determined by the City Engineer. All erosion and sediment control practices are subject to field modification at the discretion of the City of Pickerington and/or the Ohio EPA.

Construction Sequence:

1. The Contractor shall establish a stabilized construction entrance.
2. The Contractor shall place the required sediment fence and ditch checks. Inspection by the City of Pickerington will be required prior to any construction activity.
3. The Contractor shall establish all sediment basins and sediment control structures including the retention pond and outlet structure prior to denuding.
4. The Contractor shall perform site earthwork operations in accordance with the plan details and notes. Provisions for inlet protection shall be established as referenced by the details shown on this sheet. The Contractor shall apply water or dust palliative on disturbed areas during construction to alleviate or prevent dust nuisance per Item 616. Dust palliative shall consist of calcium chloride meeting the requirements of Section 712.02. The water or calcium chloride shall be spread uniformly over the surface of the disturbed areas.

5. Exposed slopes shall be stabilized as soon as they are constructed.
6. The Contractor shall place seeding and mulching as necessary to stabilize all denuded areas. All denuded areas shall have soil stabilization applied within seven (7) days of disturbance if they are to be substantially unworked for more than 21 days or if they are at final grade.
7. The Contractor shall remove and dispose of the erosion control devices only after all areas have established vegetative cover and upon approval from the City of Pickerington.
8. After removal of erosion control devices, the Contractor shall clean all inlets and storm pipes of all sediment incurred during construction. The Contractor shall dredge all sediment deposited within the retention pond and provide confirmation that the basin has been restored to its design grade through the completion of a basin verification survey.

Soil and Erosion Control Inspections: The City of Pickerington Engineer and/or Inspectors or designated agent shall make inspections as hereinafter required and either shall approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the Erosion and Sediment Control Plan as approved. Approved plans for grading, stripping, excavating, and filling work and a copy of the Site's Stormwater Pollution Prevention Plan shall be maintained at the site during the progress of the work.

The applicant shall, during construction, arrange for and schedule the following inspections by the City:

1. Start of Construction;
2. During the clearing operation, excavation, after significant rainfall, and at other times determined by the Engineer, to assure that effective control practices relative to erosion and sedimentation are being followed;
3. At the completion of rough and final grading;
4. At the close of the construction season, or when construction will cease for seven (7) or more days;
5. All public underground conveyance and control structures prior to backfilling, and all taps of private underground conveyance systems into public conveyance systems; and,
6. Upon Completion of final landscaping.

The permittee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved Erosion and Sediment Control Plan(s). The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be documented in written form and submitted to the Engineer and/or Inspectors.

Maintenance and compliance inspections of stormwater management systems shall be conducted on a routine, periodic basis, as deemed appropriate by the City, or as complaints arise concerning the system. By seeking and obtaining plan approval under the stormwater regulations, the operator and owner shall be deemed to have consented to inspections by the City and other appropriate regulatory agencies or departments upon presentation of proper identification by the representative(s) of the agency(ies) conducting the inspections. The City

inspectors or its designated agent shall enter the property of the applicant as deemed necessary to make regular inspections to ensure that Work is being completed as documented in the Contract documents.

OEPA Notice of Intent (NOI): Developer shall obtain a NOI from the OEPA and maintain SWP3 provisions throughout the duration of the project. No construction work shall begin without an approved and current Ohio EPA Notice of Intent (NOI). A copy of the approved NOI shall be filed with the City of Pickerington.

Establishment of Permanent Vegetation: Permanent vegetation shall not be considered established until ground cover is achieved which, in the opinion of the Engineer, provides adequate cover and is mature enough to control soil erosion satisfactorily and to survive adverse weather conditions.

Seeding & Mulching: The Contractor shall seed & straw any disturbed soil. The straw is to be “crimped” into the soil using a disk or other method as approved by the City. Hydroseeding is permitted with approval of the City Engineer.

Erosion Control Fabric: Jute matting, excelsior matting or a similar product is to be applied on slopes of 2:1 or greater. Install matting as per manufacturer and industry standards.

Concrete Washout Area: The Contractor shall provide for an isolated concrete washout area onsite. This location shall be shown on the construction drawings or, if not shown, the location shall be determined by the preconstruction conference. No concrete dispensing vehicles shall be permitted to discharge wash water into a private or public storm sewer system.

Vacant lots: Properties/lots which are to remain vacant for a period of time to exceed 30 days shall be graded for drainage and seeded. No dumping of construction debris or other waste shall be permitted.

Basin Verification Survey: A State of Ohio Registered Surveyor shall execute a verification survey of all basins. The survey is to indicate horizontal and vertical as-built information and shall include survey shots taken within the basin.

Basin Seeding: All detention and retention basin areas shall be provided with topsoil, and shall be seeded and mulched per CMSC Sections 653 and 659. Grasses seeded within the basin should be able to survive 48 hours underwater. Jute and Excelsior matting shall be used as required to stabilize slopes and prevent erosion.

Aerators: All retention basins and ponds shall have aerators. Forward specifications to the City for review and approval.

