

GENERAL NOTES

- WHEN SPECIFIED ON THE PLANS OR IN THE SPECIFICATIONS, CONTINGENCY QUANTITIES SHALL BE PERFORMED ONLY UNDER WRITTEN DIRECTION OF THE OWNER. THE CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY CONTINGENCY WORK UNTIL DIRECTED. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY SME, INC. DATED DECEMBER 9, 2016, AND ANY SUBSEQUENT REVISIONS. A COPY OF THIS REPORT WILL BE MADE AVAILABLE TO THE CONTRACTOR THROUGH THE OWNER OR DESIGN ENGINEER. THE CONTRACTOR SHALL ADHERE TO ALL ASPECTS AND RECOMMENDATIONS OF THE REPORT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT STAKING INCLUDING HORIZONTAL AND VERTICAL CONTROL. THESE PLANS HAVE BEEN DEVELOPED FOR ELECTRONIC LAYOUT STAKING. ANY DISCREPANCIES DISCOVERED IN THE PLAN INFORMATION, OR BETWEEN THE PLAN AND ELECTRONIC DATA, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE DESIGN ENGINEER SO THE APPROPRIATE ADJUSTMENTS MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME. THE DESIGN ENGINEER MAKES NO REPRESENTATION REGARDING FITNESS FOR ANY PARTICULAR PURPOSE, OR SUITABILITY FOR USE WITH ANY SOFTWARE OR HARDWARE. DUE TO THE EASILY ALTERABLE NATURE OF ELECTRONIC DOCUMENTS, THROUGH EITHER UNINTENTIONAL OR INTENTIONAL MEANS, THE DESIGN ENGINEER DOES NOT MAKE ANY EXPRESS OR IMPLIED WARRANTY FOR THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND THEREFORE, ACCEPTS NO LIABILITY FOR THE COMPLETENESS, CORRECTNESS OR READABILITY OF THE ELECTRONIC DATA. HARD COPIES (I.E., PRINTS, PAPER COPIES, ETC.) SHALL PREVAIL IN ANY DISPUTE OVER ACCURACY OR SUFFICIENCY OF ELECTRONIC DOCUMENTS.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL SUBMIT A PLAN OF OPERATIONS FOR REVIEW AND APPROVAL BY THE OWNER THAT WILL INDICATE EQUIPMENT STAGING AREAS, STOCKPILE LOCATIONS, CONSTRUCTION TRAILERS AND SANITATION FACILITIES.
- THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE, TEMPORARY EXCAVATIONS PER APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS INCLUDING OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. NEITHER THE OWNER NOR THE DESIGN ENGINEER ASSUMES RESPONSIBILITY FOR CONSTRUCTION SAFETY OR THE CONTRACTOR'S OR OTHER PARTIES' COMPLIANCE WITH SAFETY REGULATIONS, SUCH RESPONSIBILITY IS NOT BEING IMPLIED AND SHOULD NOT BE INFERRED.
- APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.
- THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN PROTECTION ZONES:
 - STORAGE OF CONSTRUCTION MATERIALS, DEBRIS OR EXCAVATED MATERIAL
 - PARKING VEHICLES OR EQUIPMENT
 - FOOT TRAFFIC
 - ERECTION OF SHEDS OR STRUCTURES
 - IMPOUNDMENT OF WATER
 - EXCAVATION OR OTHER DIGGING
 - ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES OR PLANTS
- ANY EXISTING ROADWAY, DRIVEWAY, DRIVE CULVERT, LAWN, CURB, SIDEWALK, SIGN, MAILBOX, FENCE, RETAINING WALL, GUARDRAIL, LAWN IRRIGATION SYSTEM COMPONENT, LANDSCAPING ITEM, OR OTHER APPURTENANCE DISTURBED DURING CONSTRUCTION BUT NOT DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL BENCHMARKS, PROPERTY LINE REFERENCES (E.G., PINS, PIPES, MONUMENTS), AND ANY OTHER SURVEY REFERENCE. IN CASE OF DISTURBANCE, THE CONTRACTOR SHALL ENGAGE A REGISTERED SURVEYOR TO REPLACE THEM AT THE CONTRACTOR'S EXPENSE AND SHALL BE RESPONSIBLE FOR ANY ERRORS THAT MAY BE CAUSED BY THEIR LOSS OR DISTURBANCE. ALL NOTES AND CALCULATIONS USED IN RESETTING OF PROPERTY PINS, MONUMENTS, REFERENCE POINTS, OR ANY OTHER SURVEY REFERENCE SHALL BE STAMPED, SIGNED AND DATED BY THE REGISTERED SURVEYOR AND COPIES PROVIDED TO THE OWNER.
- THE CONTRACTOR SHALL DESIGNATE AND MAINTAIN A PERSON IN RESPONSIBLE CHARGE (SUPERVISOR) WITH A WORKING CELL PHONE AT THE CONSTRUCTION SITE DURING ALL CONSTRUCTION ACTIVITIES.

MAINTENANCE OF TRAFFIC NOTES:

- THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO THE PROJECT. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL SIGNS, FLAGS, FLAG PERSONS, BARRICADES, SIGN SUPPORTS, CONES, BARRELS AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISED EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH TRAFFIC SHALL BE KEPT MINIMAL AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS AT ALL TIMES.

EXISTING CONDITION AND DEMOLITION NOTES:

- THE CONTRACTOR MUST CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 AND THE OHIO OIL AND GAS ASSOCIATION (OGPUPS) AT 1-800-925-0988 AT LEAST 48 HOURS, BUT NO MORE THAN 10 WORKING DAYS, BEFORE BEGINNING ANY DIGGING, EXCLUDING SATURDAYS, SUNDAYS AND OTHER LEGAL HOLIDAYS. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WRITTEN REQUIREMENTS OF OUPS AND OGPUPS. THE CONTRACTOR SHALL COORDINATE THE MARKING AND/OR LOCATING TO STAY A MINIMUM OF TWO WORKING DAYS AHEAD OF PLANNED CONSTRUCTION ACTIVITIES.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE CONSTRUCTION PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)
- CLEARING AND GRUBBING SHALL BE PERFORMED WHERE EARTHWORK IS REQUIRED. THIS WORK SHALL INCLUDE CLEARING, GRUBBING, SCALPING, TREE AND STUMP REMOVAL, AND THE REMOVAL AND DISPOSAL OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF WORK.
- THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIAL, DEMOLISHED MATERIALS AND WASTE MATERIALS INCLUDING TREES, STUMPS, BRUSH, TRASH AND DEBRIS, FROM THE PROJECT LIMITS AND LEGALLY DISPOSE OF OFF-SITE.
- PAVEMENT TO BE REMOVED SHALL BE SAWCUT AND REMOVED FULL DEPTH AT LIMITS OR EXISTING JOINTS AS SHOWN IN THE PLANS. ADDITIONAL SAWCUTS MAY BE DESIRED TO FACILITATE THE REMOVAL OF THE EXISTING PAVEMENT, BUT THERE WILL BE NO EXTRA PAYMENT. PAVEMENT SHALL BE REMOVED WITHOUT DAMAGING OR UNDERMINING THE PAVEMENT TO REMAIN. IF ADJACENT PAVEMENT IS DAMAGED, THE CONTRACTOR SHALL MAKE ADDITIONAL SAWCUTS, REMOVE THE DAMAGED AREAS AND REPAIR AS NECESSARY WITH NO ADDITIONAL COMPENSATION.

UTILITIES CONTACTS:

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GRADING NOTES:

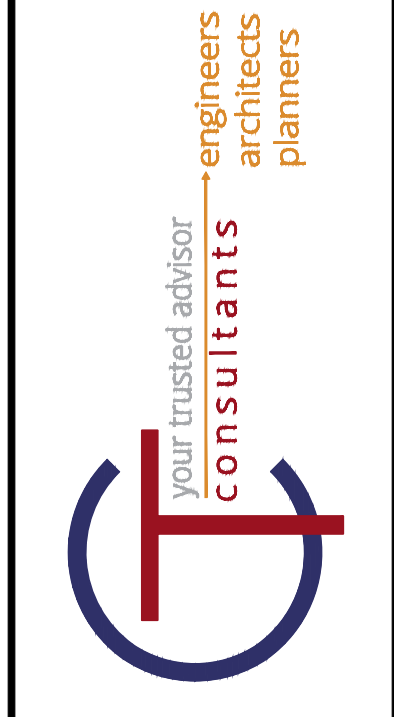
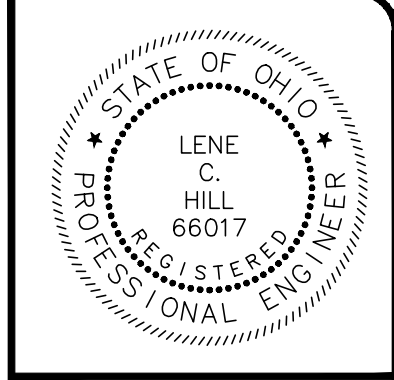
- THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY SME, INC. DATED NOVEMBER 6, 2018. THE CONTRACTOR SHALL ADHERE TO ALL ASPECTS AND RECOMMENDATIONS OF THE REPORT.
- ALL EXCAVATION IS CONSIDERED UNCLASSIFIED AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS AND MATERIALS OF CONSTRUCTION TO COMPLETE CONSTRUCTION AS DESIGNED. THE OWNER NOR THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE BIDDER SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE OR ESTIMATE TO THEIR SATISFACTION ANY EXISTING SITE CONDITION WHICH COULD AFFECT HIS BID OR THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, OBSTRUCTIONS, ETC.
- THE CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
- THE INTENT OF THIS PROJECT IS TO UTILIZE ALL USEABLE MATERIALS EFFICIENTLY. ACTUAL FIELD CONDITIONS MAY REQUIRE DECISIONS ON MATERIAL HANDLING AND USAGE. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING AND MAINTAINING SITE CONDITIONS.
- THE CONTRACTOR SHALL STRIP TOPSOIL FROM AREAS TO BE GRADED AND STOCKPILE IT PRIOR TO SITE GRADING OPERATIONS. TOPSOIL SHALL BE STRIPPED TO WHATEVER DEPTH ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
- DO NOT STOCKPILE SOIL MATERIALS NEAR THE EDGE OF EXCAVATIONS OR WITHIN DRIP LINES OF TREES TO REMAIN.
- EXCESS MATERIAL GENERATED FROM TRENCH EXCAVATION OPERATIONS SHALL BE INCORPORATED IN THE UNIT PRICE BID FOR EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION.
- THE CONTRACTOR SHALL PERFORM EXCAVATION AND EMBANKMENT OPERATIONS AS NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS AND ACHIEVE THE FINISHED GRADES SHOWN ON THE PLANS, EXCEPT AS NOTED:
 - STRUCTURAL FILL SHALL BE PLACED AND COMPACTED UNDER ALL BUILDING SLABS, FOOTINGS AND PAVEMENT.
 - ENGINEERED FILL SHALL BE PLACED AND COMPACTED UNDER ALL DRIVES, WALKS, STEPS AND RAMPS.
 - STRUCTURAL AND ENGINEERED FILL SHALL BE WETTED OR DRIED TO NEAR ITS OPTIMUM MOISTURE CONTENT, PLACED IN LIFTS AND COMPACTED TO A MINIMUM PERCENT COMPACTION, ALL UNDER THE OBSERVATION AND TESTING OF A GEOTECHNICAL ENGINEER.
 - SOIL OBTAINED ON-SITE MAY BE USED AS FILL MATERIAL PROVIDED IT IS FREE OF ORGANIC MATTER, DEBRIS, EXCESSIVE MOISTURE, AND ROCK FRAGMENTS 6" AND LARGER.
 - NO SLAG, RIVER GRAVEL, RECYCLED PORTLAND CEMENT CONCRETE, RECLAIMED ASPHALT CONCRETE, PAVEMENT OR RECLAIMED BITUMINOUS AGGREGATE BASE MAY BE USED.
 - THE CONTRACTOR SHALL DISPOSE OFF-SITE ANY EXCESS OR UNSUITABLE MATERIAL UNABLE TO BE PLACED ON-SITE.
 - UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF PROPOSED IMPROVEMENTS (I.E. BUILDINGS, UTILITIES, PAVEMENT, ETC.) SHALL BE UNDERCUT AND REPLACED WITH COMPACTED FILL, OR STABILIZED IN-PLACE UTILIZING CONVENTIONAL MEASURES SUCH AS DISCING, AERATION OR RECOMPACTION. OTHER MEANS OF STABILIZATION SHALL BE AT THE DISCRETION OF THE OWNER OR GEOTECHNICAL ENGINEER.
 - IT IS THE INTENT OF THE SLOPES AND SPOT GRADES NOTED ON THE PLANS TO PROVIDE POSITIVE DRAINAGE TO STORM WATER COLLECTION POINTS. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES IMMEDIATELY TO THE DESIGN ENGINEER FOR RESOLUTION.
 - EXPOSED PAVEMENT SUBGRADE AREAS SHALL BE MAINTAINED IN SUCH CONDITION THAT IT WILL BE WELL DRAINED AT ALL TIMES TO PREVENT PONDING OF WATER AFTER RAINS.
 - ALL EXISTING AND PROPOSED MANHOLE COVERS, VALVE BOXES, ETC., LOCATED WITHIN PEDESTRIAN RIGHT-OF-WAYS SHALL BE FLUSH MOUNTED WITH THE WALKING SURFACE.
 - BEFORE ACCEPTANCE OF THE SUB-GRADE UNDER BUILDING SLABS OR PAVEMENT, A PROOF ROLL TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING SHALL BE PERFORMED IN THE PRESENCE OF THE DESIGN ENGINEER USING A PNEUMATIC-TIRED AND LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN FIFTEEN (15) TONS AT A MAXIMUM VEHICLE SPEED OF 3 MPH. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. THE CONTRACTOR SHALL EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY THE DESIGN ENGINEER, AND REPLACE WITH COMPACTED BACKFILL, AS DIRECTED BY THE DESIGN ENGINEER OR GEOTECHNICAL ENGINEER. AUTHORIZED ADDITIONAL EXCAVATION AND REPLACEMENT MATERIAL SHALL BE PAID ACCORDING TO THE CONTRACT UNIT PRICES.
 - THE CONTRACTOR SHALL RECONSTRUCT ANY SUBGRADE DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER OR CONSTRUCTION ACTIVITIES WITHOUT ADDITIONAL COMPENSATION.

UTILITY NOTES:

- THE CONTRACTOR SHALL PROTECT, SUPPORT AND SHORE UP ANY EXISTING UTILITY ENCOUNTERED DURING CONSTRUCTION AND COORDINATE ALL WORK TO BE PERFORMED WITH EACH RESPECTIVE UTILITY COMPANY, INCLUDING WORK BEING PERFORMED DIRECTLY BY THE UTILITY COMPANIES, FOR MAIN OR SERVICE CONNECTIONS, DISCONNECTIONS, RELOCATIONS, DEMOLITION AND INSPECTIONS. THE CONTRACTOR SHALL SECURE AND PAY FOR ANY PERMITS, FEES AND UTILITY COMPANY CHARGES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER ACTIVE, COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON. THIS INCLUDES TRENCH PROTECTION SUCH AS TRENCH BOXES, WOOD SHEETING AND BRACING, OR ANY OTHER METHOD DETERMINED BY THE CONTRACTOR TO MAINTAIN A SAFE WORKING ENVIRONMENT. ALL EXCAVATIONS SHALL COMPLY WITH APPLICABLE LAWS AND REGULATIONS (FEDERAL, STATE AND LOCAL).
- WHERE THE PLANS PROVIDE FOR NEW CONDUIT TO BE CONNECTED TO OR CROSS OVER OR UNDER AN EXISTING UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITY BOTH AS TO LINE AND GRADE BEFORE BEGINNING TO LAY THE NEW CONDUIT.
- THE CONTRACTOR SHALL JET-CLEAN ALL STORM SEWERS AND VACUUM CLEAN ALL MANHOLES AND CATCH BASINS BEFORE ACCEPTANCE BY THE OWNER.
- ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- STORM SEWERS**
STORM MAIN SEWERS SHALL BE ONE OF THE FOLLOWING:
 - POLYVINYL CHLORIDE PIPE (PVC) 4" - 15" DIAMETER
 - ALL POLYVINYL CHLORIDE PIPE IN THIS SIZE RANGE SHALL CONFORM TO ASTM D-3034 SDR 35, SHALL BE INTEGRAL BELL AND SPIGOT TYPE, WITH JOINTS CONFORMING TO ASTM D-3212 AND ELASTOMERIC SEALS CONFORMING TO ASTM F-477.
 - ALL PIPE AND FITTINGS SHALL BE MARKED OR STENCILED IN CONFORMANCE WITH ASTM D-3034. ALL GASKETS SHALL BE MARKED OR STENCILED WITH THE ASTM SPECIFICATION DESIGNATION, NAME OR TRADEMARK OF THE MANUFACTURER, AND PIPE SIZE.
 - POLYVINYL CHLORIDE PIPE (PVC) 18" - 27" DIAMETER
 - ALL LARGE DIAMETER POLYVINYL CHLORIDE PIPE SHALL CONFORM TO ASTM F-679, SHALL BE INTEGRAL BELL AND SPIGOT TYPE, WITH JOINTS CONFORMING TO ASTM D-3212 AND ELASTOMERIC SEALS CONFORMING TO ASTM F-477.
 - ALL PIPE AND FITTINGS SHALL BE MARKED OR STENCILED IN CONFORMANCE WITH ASTM F-679. ALL GASKETS SHALL BE MARKED OR STENCILED WITH THE ASTM SPECIFICATION DESIGNATION, NAME OR TRADEMARK OF THE MANUFACTURER, AND PIPE SIZE.
 - CORRUGATED POLYETHYLENE PIPE 12" DIAMETER AND LARGER
 - ALL CORRUGATED POLYETHYLENE PIPE IN THIS SIZE RANGE SHALL BE SMOOTH LINED CONFORMING TO ODOT 707.33. ALL PIPE AND FITTINGS SHALL BE MARKED OR STENCILED WITH THE APPROPRIATE CLASSIFICATION.
 - REINFORCED CONCRETE PIPE
 - ALL REINFORCED CONCRETE CIRCULAR PIPE SHALL BE CLASS IV PIPE, CONFORMING TO ASTM C-76. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443 AS IT PERTAINS TO THE USE OF CONFINED O-RING RUBBER GASKETS PLACED IN GROOVES CAST IN THE SPIGOT OF THE PIPE SUCH THAT THE GASKETS WILL BE ENCLOSED ON ALL SIDES WHEN THE PIPE IS LAID AND THE JOINT IS COMPLETED. CEMENT USED IN MANUFACTURING PIPE AND FITTINGS SHALL BE TYPE I CONFORMING TO ASTM C-150.
 - ALL PIPE AND FITTINGS SHALL BE MARKED OR STENCILED WITH THE APPLICABLE ASTM SPECIFICATION DESIGNATION ON THE INTERIOR SURFACE OF THE PIPE. ALL GASKETS SHALL BE MARKED OR STENCILED WITH THE ASTM SPECIFICATION DESIGNATION, NAME OR TRADEMARK OF THE MANUFACTURER, AND PIPE SIZE.
- ALL STORM SEWER JOINTS AND PIPES SHALL BE WATERTIGHT.
- SANITARY SEWERS**
 - ALL SANITARY SEWER WORK COMPLETED MUST BE IN ACCORDANCE WITH THE CURRENT REGULATIONS AND RULES OF THE CITY OF WILLOUGHBY.
 - ALL SANITARY SEWER CONNECTIONS SHALL BE A MINIMUM OF 6" DIAMETER AND SHALL HAVE PREMIUM JOINTS.
 - ALL SANITARY SEWER TRENCHES SHALL BE BACKFILLED PER TRENCH AND BEDDING DETAIL.
 - THE SANITARY SEWER SYSTEM SHALL BE SUBJECT TO FLUSH AND VIDEO PHOTOGRAPHY AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO FINAL ACCEPTANCE.
 - NO SANITARY SEWER SERVICE CONNECTIONS TO ANY BUILDING SHALL BE PERMITTED PRIOR TO THE FINAL ACCEPTANCE BY THE CITY OF WILLOUGHBY ENGINEER WHICH SHALL INCLUDE APPROVED RECTIFICATION OF ALL PUNCH LIST ITEMS AND THE SUBMITTAL OF MYLAR AS-BUILT DRAWINGS.
 - SANITARY SEWER WORK SHALL NOT BEGIN UNTIL AREAS OF SEWER CONSTRUCTION ARE ROUGH GRADED.
 - LOW STRENGTH MORTAR (LSM) REQUIRED AROUND ALL STRUCTURES IN PAVEMENT IN ACCORDANCE WITH ODOT 613 SPECIFICATIONS.
 - ALL SANITARY SEWER PIPE SHALL BE PVC SDR 26 WITH ASTM D3212 JOINT SPECIFICATION AND ASTM D2321 BEDDING SPECIFICATION.

GENERAL WATERLINE INSTALLATION NOTES

- CONTRACTOR TO PROVIDE LINE AND GRADE STAKES AT 100' INTERVALS FOR WATER MAIN AND FOR EACH FITTING AND APPURTENANCE. A COPY OF CUT SHEET SHALL BE PROVIDED TO FIELD INSPECTOR PRIOR TO INSTALLATION.
- WATER WORK SHALL NOT BEGIN UNTIL AREAS OF WATERLINE CONSTRUCTION ARE ROUGH GRADED (WITHIN 1FT. OF FINISHED GRADE) AND FILL AREAS ARE COMPLETED AND COMPACTED.)
- NO WATER SERVICE CONNECTIONS TO ANY BUILDINGS SHALL BE PERMITTED PRIOR TO FINAL ACCEPTANCE BY AQUA OHIO, INC. WHICH SHALL INCLUDE APPROVED RECTIFICATION OF ALL PUNCH LIST ITEMS. ONCE PUNCH LIST ITEMS ARE COMPLETED, THE BUILDER SHALL BE RESPONSIBLE FOR GRADE ADJUSTMENTS TO WATER FACILITIES AT TIME OF BUILDING CONSTRUCTION AND DURING FINAL SITE GRADING.
- A MINIMUM OF 5 FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN UTILITY CONDUIT CROSSOVERS AND WATERLINE APPURTENANCES, I.E. HYDRANTS, VALVES, TEES, ETC.
- WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL MEET OR EXCEED ALL APPLICABLE A.W.W.A. STANDARDS INCLUDING BUT NOT LIMITED TO THE MOST RECENT VERSIONS OF C600 AND C651.
- WATERLINE MATERIAL AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH AQUA OHIO SPECIFICATIONS. PRESSURE CLASS 350 D.I.P. POLYWRAPPED, FITTINGS CLASS 53 CEMENT LINED POLYWRAPPED AND 1" TYPE "K" COPPER WITH COMPRESSION FITTINGS FOR DOMESTIC SERVICES OR 2" HDPE SDR 9 POLYETHYLENE 3408 PIPE AROUND CUL-DE-SAC. IF POLYETHYLENE IS USED, A 12 GAUGE WIRE AND METALLIC CAUTION TAPE MUST BE USED.
- ALL PIPE AND APPURTENANCES INSTALLED ON A DEPRESSURIZED WATER MAIN ARE TO BE WIPED CLEAN AND ALL INTERIOR SURFACES SATURATED WITH A MINIMUM 1% CHLORINE SOLUTION.
- ALL MECHANICAL JOINTS ARE TO BE RESTRAINED USING MEGALUG OR "FORD" EQUIVALENT. FIRE LINE RISERS TO INCLUDE (2) 5/8" ALL THREAD RODS EXTENDING FROM LOWER BEND TO RISER FLANGE.
- A RESTRAINT GASKET (FIELD-LOK OR APPROVED EQUAL) SHALL BE UTILIZED ON PUSH-ON JOINTS AS REQUIRED BY AQUA OHIO STANDARDS.
- ALL DUCTILE IRON PIPE AND FITTINGS TO BE POLYWRAPPED AND TAPED AS PER DUCTILE IRON RESEARCH ASSOCIATION RECOMMENDATIONS.
- DUCTILE IRON IN CASING SHALL BE CLASS 52, POLYWRAPPED AND ALL PUSH-ON JOINTS SHALL BE EQUIPPED WITH RESTRAINT GASKETS (FIELD-LOK OR APPROVED EQUAL) AND STAINLESS STEEL CASING SPACERS ARE REQUIRED.
- ALL THRUST BLOCKING WILL BE SOLID CONCRETE BLOCKS WITH OAK WEDGES OR POURED CONCRETE, PER AQUA STANDARDS DRAWING.
- ALL VALVES ARE OPEN LEFT AND ALL MAIN LINE VALVES ARE TO BE PLACED ON A MINIMUM OF ONE 4" SOLID CONCRETE BLOCK. ALL VALVES TO HAVE #57 LIMESTONE UP TO OPERATING NUT OF VALVE.
- ALL FIRE HYDRANTS TO HAVE A MINIMUM OF 1/2 CUBIC YARD OF #57 LIMESTONE 6" ABOVE DRAIN HOLE OR EQUIVALENT SIZE BANK RUN GRAVEL. PLASTIC SHALL BE PLACED OVER STONE PRIOR TO BACKFILL. ALL HYDRANTS TO BE TURNED WITH 4-1/2" NOZZLE FACING STREET WITH 5" STORZ HYDRANT FITTING AND MEETING FIRE DEPARTMENT SPECIFICATIONS.
- ALL VALVE BOX COVERS ARE TO BE PAINTED BLUE. CONTRACTOR RESPONSIBLE FOR ADJUSTMENT TO VALVE BOXES, CURB BOXES, AND FIRE HYDRANTS WITH RESPECT TO FINAL GRADING. ALL VALVES BOXES IN NEW OR PROPOSED PAVEMENT SHALL BE SCREW TYPE.
- WATERLINE WILL NOT BE ACCEPTED OR PLACED IN SERVICE UNTIL CONTRACTOR CONDUCTS AND OBTAINS SATISFACTORY RESULTS OF PRESSURE AND CHLORINE TESTS. BACTERIA TEST WILL THEN BE CONDUCTED BY AQUA OHIO. ALL VALVES, HYDRANTS, AND CURB BOXES TO BE PROPER GRADE PRIOR TO ACCEPTANCE.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO ENSURE SAFETY OF THE PUBLIC ON AND SURROUNDING THE SITE DURING CONSTRUCTION.
- THE LOCATION OF EXISTING UTILITIES AND STRUCTURES. BOTH ABOVE GROUND UNDERGROUND ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF THE SURVEY AND ARE NOT NECESSARILY COMPLETE AND/ OR CORRECT. THE EXACT LOCATION AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTING FROM DAMAGE EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN ON PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR RESTORATION OF SAME IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER. THE CONTRACTOR SHALL CONTACT OHIO UTILITIES PROTECTION SERVICES, AT 1-800-362-2764, TWO WORKING DAYS PRIOR TO START OF CONSTRUCTION AS REQUIRED BY OHIO LAW.
- THE WATERLINE SHALL BE INSTALLED AT 4'-0" OF COVER FROM EXISTING/ PROPOSED GRADE TO TOP OF THE WATERLINE. THIS 4' SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
- A MINIMUM OF 10'-0" HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN ALL STORM AND SANITARY SEWER AND WATERLINE, OUT TO OUT.
- A MINIMUM 18" VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL STORM AND SANITARY SEWERS AND WATERLINE, OUT TO OUT.
- DRIVEWAY RESTORATION SHALL BE AS FOLLOWS: CONCRETE DRIVEWAYS WILL BE REPLACED FROM THE NEAREST EXISTING JOINT TO THE STREET. FULL SLAB REPLACEMENT, ASPHALT DRIVEWAYS WILL BE REPLACED FROM THE FARTHEST TRENCH CUT LINE TO THE STREET. REPAIRING ONLY THE TRENCH WIDTH CUT ACROSS A DRIVEWAY ONLY IS NOT ACCEPTABLE.
- THE CONTRACTOR SHALL VISIT THE SITE TO PERSONALLY ASCERTAIN THE NATURE OF THE WORK INVOLVED AND THOROUGHLY BECOME FAMILIAR WITH THE SITE PRIOR TO THE SUBMISSION ON HIS OR HER BID.
- THE CONTRACTOR SHALL CAREFULLY LAYOUT THE WATERLINE AND ALL RELATED FACILITIES TO ENSURE THAT THEY ARE LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY AND/ OR ACQUIRED EASEMENTS AS INDICATED.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE SITE (YARDS, DITCHES, DRIVEWAYS, ETC.) TO ITS ORIGINAL OR BETTER CONDITION UPON COMPLETION OF THE WATERLINE INSTALLATION.
- THE CONTRACTOR MAY DEFLECT THE WATERLINE AS PER MANUFACTURE'S SPECS WITH PERMISSION FROM AQUA AS NEEDED TO MAINTAIN MINIMUM HORIZONTAL AND VERTICAL SEPARATION DISTANCES.
- THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, AND STAKES. ANY BENCHMARK, PROPERTY CORNER, OR SURVEY MARKER DAMAGED OR DISRUPTED BY THE CONTRACTOR SHALL BE RESET BY AN OHIO REGISTERED PROFESSIONAL SURVEYOR AT THE CONTRACTORS EXPENSE.
- ALL MAIL BOXES, TRAFFIC CONTROL SIGNS AND ADVERTISING SIGNS ENCOUNTERED DURING CONSTRUCTION SHALL BE REPLACED IMMEDIATELY AFTER THE WATER MAIN HAS BEEN INSTALLED AND BACKFILLED. TEMPORARY SIGNS TO BE USED AS NEEDED.
- BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
- WATER SERVICE LINE CONNECTIONS ARE NOT TO BE INSTALLED UNTIL PRESSURE TEST AND BACTERIA TESTS HAVE BEEN APPROVED.
- THE NORMAL WORKING PRESSURE IN WATER LINES SHALL NOT BE LESS THAN 35 PSI.
- THE CONTRACTOR SHALL FOLLOW AQUA TAPPING PROCEDURE WHEN MAKING TAPS ON AN EXISTING WATER MAIN. THIS INCLUDES TAPS FOR WATER SERVICES, DEVELOPER MAIN EXTENSIONS, MAIN REPLACEMENT EXTENSIONS, AND HYDRANT TAPS.



ISSUED FOR:	CD	NO	REVISION	DATE
8/5/2019	AS SHOWN	LOH / GMS	GMS	LOH
SCALE:	AS SHOWN	LOH / GMS	GMS	LOH
DESIGNED BY:				
DRAWN BY:				
CHECKED BY:				

LAKELAND TRANSFER CENTER
LAKELAND COMMUNITY COLLEGE
7601 CLOCKTOWER DR., KIRTLAND, OH 44094

GENERAL NOTES

PROJECT NO.	18050002
DISCIPLINE	CIVIL
SHEET NAME	G-02
SHEET	OF
5	55