STORM AND SANITARY SEWER MEASUREMENTS

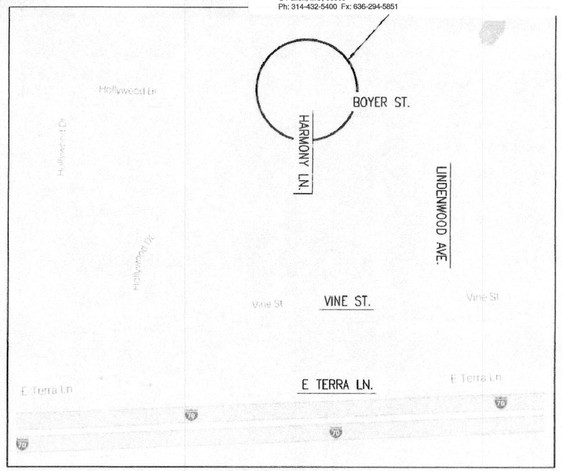
THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OF OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS: _____

~~98.23~~ 99.80 DENOTES AS-BUILT (TYP.)

METRON Surveying & Layout Co
313 Wood Street
O'Fallon, MO, 63366
Ph: 314-432-5400 Fx: 636-294-5851

John E. Winkler Jr. PLS-2006016644
Order No. 8884 Date: 11-27-18



LOCATION MAPS N.T.S.

STATE OF MISSOURI
JOHN E. WINKLER JR.
NUMBER
PLS-2006016644
RESPONSIBLE LAND SURVEYOR

11-27-2018

IMPROVEMENT PLANS for the BOYER STREET STORM SEWER PROJECT

TRACTS OF LAND BEING PART OF ST. CHARLES COUNTY, MISSOURI TOWNSHIP 47N, RANGE 3E

PREPARED FOR:
CITY OF O'FALLON
PUBLIC WORKS DEPARTMENT
100 NORTH MAIN STREET
O'FALLON, MO 63366
636.379.5566

CIVIL ENGINEER
THOUVENOT WADE & MOERCHEN, INC
400 N. FIFTH STREET, SUITE 101
ST. CHARLES, MO 63301
636.724.8300

DIRECTOR OF PUBLIC WORKS APPROVAL _____ DATE

INDEX OF SHEETS

1. COVER
2. QUANTITIES / SCHEDULES / 3 POINT TIES
3. CONTROL POINTS / EXISTING CONDITIONS / REMOVALS
4. STORM SEWER PLAN AND PROFILE
5. DETAILS – STORM SEWER – EROSION CONTROL
6. EROSION CONTROL DETAILS

LIST OF UTILITIES

TELEPHONE	– CENTURY TEL 1151 CENTURY TEL DR WENTZVILLE, MO 63385 636.332.7261	WATER	– CITY OF O'FALLON 100 N. MAIN ST. O'FALLON, MO 63366 636.379.5488
ELECTRIC	– AMEREN UE 200 CALLAHAN RD. WENTZVILLE, MO 63385 636.639.8312	SEWER	– DUCKETT CREEK SANITARY DIST. 3550 HIGHWAY K O'FALLON, MO 63368 636.441.1244
CABLE T.V.	– CHARTER COMMUNICATIONS 866.207.3663	GAS	– LACLEDE GAS 6400 GRAHAM RD ST. LOUIS, MO 63134 314.522.2297
STORM	– CITY OF O'FALLON 100 N. MAIN ST. O'FALLON, MO 63366 636.281.2858	MO ONE CALL	– 1.800.DIG.RITE
FIRE	– O'FALLON FIRE PROTECTION DISTRICT 119 E ELM ST O'FALLON, MO 63366 636.272.3493		

STATE OF MISSOURI
CHAD D. ROSS
NUMBER
PE-2011024027
PROFESSIONAL ENGINEER

CHAD D. ROSS
ENGINEER MO# PE-2011024027

DATE PREPARED	03/06/2018
ROUTE	STATE MO
DISTRICT	SHEET NO. 1
COUNTY	ST. CHARLES
JOB NO.	M29160608
CONTRACT ID.	PO #17-00040
PROJECT NAME	BOYER ST. STORM
SHEET NAME	COVER

DATE	DESCRIPTION

CIVIL SITE ENGINEERING NOTES

GENERAL NOTES:

PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL REVIEW ALL PLANS, SPECIFICATIONS, AND THE PROJECT SITE(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATION TO THESE PLANS OR OF ANY FIELD CONFLICTS.

SHOULD IT APPEAR THAT THE WORK TO BE PERFORMED OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.

THESE PLANS AND SPECIFICATIONS ARE SUBJECT TO MODIFICATIONS DURING CONSTRUCTION WHEN CONDITIONS DEVELOP THAT WERE NOT APPARENT DURING THE DESIGN AND PREPARATION OF THE PLANS AND SPECIFICATIONS. ALL MODIFICATIONS MUST BE APPROVED BY ALL PERTINENT AGENCIES HAVING JURISDICTION OVER THIS PROJECT PRIOR TO CONSTRUCTION AND/OR IMPLEMENTATION OF ANY PROPOSED CHANGES.

IN THE EVENT OF ANY DISCREPANCY BETWEEN ANY DRAWING AND THE FIGURES WRITTEN THEREON, THE FIGURES SHALL BE TAKEN AS CORRECT.

THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PROJECT SITE(S) CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

TWM, INC. SHALL NOT BE RESPONSIBLE FOR OR HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES IN CONNECTION WITH THE WORK.

ALL WORKMANSHIP, EQUIPMENT, MATERIALS, AND TESTING SHALL CONFORM TO THE PERTINENT MUNICIPAL, COUNTY, STATE, AND FEDERAL JURISDICTIONS AND AGENCIES HAVING AUTHORITY OVER THIS PROJECT. IN ADDITION, ALL WORKMANSHIP, EQUIPMENT, MATERIALS, AND TESTING SHALL CONFORM TO THE RESPECTIVE UTILITY COMPANY REQUIREMENTS. ALL EQUIPMENT, MATERIALS, AND PRODUCTS SHALL BE OF THE LATEST MANUFACTURE AND COMPLY WITH THE MOST UP TO DATE SPECIFICATIONS AT THE TIME OF BIDDING OF THE PROJECT.

ALL UTILITIES INCLUDING BUT NOT LIMITED TO FIRE HYDRANTS, VALVE PIT COVERS, VALVE BOXES, CURB STOP BOXES, FIRE OR POLICE CALL BOXES, TRAFFIC CONTROL SIGNALS, OR OTHER UTILITY CONTROLS SHALL BE UNOBSTRUCTED AND ACCESSIBLE DURING THE CONSTRUCTION PERIOD.

WHERE SECTION OR SUBSECTION SURVEY MONUMENTS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AUTHORIZED SURVEYOR OR AGENT, HAVE WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

ALL ITEMS NOTED FOR REMOVAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

THIS PROJECT WILL REQUIRE COORDINATION WITH OTHER PARTIES INCLUDING BUT NOT LIMITED TO PUBLIC AND PRIVATE UTILITIES AND CITY OF O'FALLON. ANY COST ASSOCIATED WITH PROJECT COORDINATION SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "MOBILIZATION".

UTILITY NOTES:

THE TYPE, SIZE AND LOCATION OF UTILITIES AS DELINEATED ON THE PLANS AND SPECIFICATIONS HAVE BEEN DETERMINED BY REVIEW OF AVAILABLE EXISTING "AS-BUILT," OR "RECORD" DRAWINGS; FIELD SURVEY OF MISSOURI ONE CALL MARKED UTILITIES; OR FIELD SURVEY OF ABOVE GROUND SURFACE UTILITY FEATURES. THE OWNER AND ENGINEER HAVE NOT UNDERTAKEN SURFACE OR SUB-SURFACE EXPLORATORY INVESTIGATIONS TO CONFIRM OR VERIFY THE LOCATION OF UTILITIES ON THE PROJECT SITE. THEREFORE ALL UTILITY LOCATIONS, SIZE, AND FUNCTION MUST BE CONSIDERED APPROXIMATE AND THE CONTRACTOR MUST VERIFY ALL UTILITIES IN THE FIELD.

THE ENGINEER AND OWNER FURTHER DO NOT WARRANT THAT ALL UTILITIES HAVE BEEN ILLUSTRATED ON THE PLANS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING MISSOURI ONE CALL AND/OR THE PERTINENT UTILITY FOR FIELD VERIFICATION OF ALL UTILITIES ON THE SITE PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION OPERATIONS. IF THE CONTRACTOR DETERMINES THAT SUBSTANTIAL DISCREPANCY EXISTS BETWEEN FIELD VERIFIED UTILITIES AND THESE PLANS WHICH WOULD SIGNIFICANTLY AFFECT THE FUNCTION, COST, OR PERFORMANCE OF THE PROJECT, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER FOR CLARIFICATION AND PROJECT DESIGN COORDINATION.

ANY RELOCATION OF PUBLIC OR PRIVATE UTILITIES SHALL BE UNDERTAKEN IN ACCORDANCE WITH ALL REQUIREMENTS OF THE UTILITY COMPANY AND WITH REGARD TO THE REQUIRED FEES, BONDS, PERMITS, AGREEMENTS, WORKING CONDITIONS, ETC. OF SAID COMPANY OR JURISDICTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND JURISDICTIONS A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF WORK TO ALLOW THE UTILITIES TO MARK THEIR LINES OR TO ALLOW THE PERTINENT JURISDICTIONS TIME TO COORDINATE THEIR STAFF, MATERIALS, AND EQUIPMENT TO CONDUCT INSPECTION.

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING STRUCTURES, AND/OR UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY OR JURISDICTION TO PROPERLY REPAIR ANY FACILITIES DAMAGED IN THE COURSE OF THE WORK.

ALL ABANDONED UNDERGROUND STRUCTURES ENCOUNTERED SHALL BE REMOVED TO SUFFICIENT DEPTH TO ALLOW UNDERGROUND UTILITIES TO CROSS.

UTILITIES AND APPURTENANCES TO REMAIN IN THEIR PRESENT LOCATION SHALL BE ADJUSTED TO GRADE. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PROTECT EXISTING UTILITIES.

CITY OF O'FALLON NOTES:

GENERAL NOTES

GN #1 DRIVEWAY LOCATIONS SHALL NOT INTERFERE WITH THE SIDEWALK HANDICAP RAMPS, OR CURB INLET SUMPS

GN #2 SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER.

GN #3 TRUNCATED DOMES FOR CURB RAMPS LOCATED IN PUBLIC RIGHT OF WAY SHALL MEET ADA REQUIREMENTS AND SHALL BE CONSTRUCTED USING RED PRE CAST TRUNCATED DOMES PER PAVEMENT DETAILS.

GN #4 ANY PROPOSED PAVILIONS OR PLAYGROUND AREAS WILL NEED A SEPARATE PERMIT FROM THE BUILDING DIVISION.

GN #5 THE CONTRACTOR IS RESPONSIBLE TO CALL MISSOURI ONE CALL AND THE CITY OF O'FALLON FOR THE LOCATION OF UTILITIES. CONTACT THE CITY OF O'FALLON (636) 379-3814 FOR THE LOCATION OF CITY MAINTAINED CABLE FOR STREET LIGHTS AND TRAFFIC SIGNALS, ALL OTHER UTILITIES CALL MISSOURI ONE CALL 1-800-DIG-RITE. 1-800-344-7483

GN #6 ALL PROPOSED UTILITIES AND/OR UTILITY RELOCATIONS SHALL BE LOCATED UNDERGROUND.

GN #7 ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE BUILDING DIVISION.

GN #8 ALL CONSTRUCTION OPERATIONS AND WORK ZONE TRAFFIC CONTROL WITHIN THE RIGHT OF WAY WILL FOLLOW MODOT OR M.U.T.C.D. STANDARDS WHICHEVER IS MORE STRINGENT.

GN #9 ALL FREE STANDING SIGNS SHALL BE LOCATED A MINIMUM OF TEN (10) FEET AWAY FROM ANY RIGHT OF WAY LINE AND/OR PROPERTY LINE AND A MINIMUM OF THREE (3) FEET FROM THE BACK OF CURBING OR SIDEWALK. ALL SIGNS SHALL ABIDE BY THE REGULATIONS FOR VISIBILITY AT CORNERS, INCLUDING CORNERS FROM DRIVEWAYS AND THE STREET IT INTERSECTS PER SECTION 400.260 OF THE O'FALLON ZONING CODE.

GN #10 ALL SUBDIVISION IDENTIFICATION OR DIRECTIONAL SIGN(S) MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION.

GN #11 MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS, AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THE MATERIAL LISTED PREVIOUSLY ARE REUSED, A LETTER FROM A SOIL ENGINEER MUST CLARIFY AMOUNT, LOCATION, DEPTH. ECT. AND BE APPROVED WITH THE CONSTRUCTION PLANS. LANDFILL TICKETS FOR SUCH DISPOSAL SHALL BE MAINTAINED ON FILE BY THE CONTRACTOR. BURNING ON SITE SHALL BE ALLOWED ONLY BY PERMIT FROM THE LOCAL FIRE DISTRICT. IF A BURN PIT IS PROPOSED THE LOCATION AND MITIGATION SHALL BE SHOWN ON THE GRADING PLAN AND DOCUMENTED BY THE SOILS ENGINEER.

GN #12 TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY OF THE WORK COVERED BY THE ABOVE PLANS AND AFTER APPROVAL THEREOF, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE CONSTRUCTION INSPECTION OFFICE TO PROVIDE FOR INSPECTION OF THE WORK, SUFFICIENT IN THE OPINION OF THE CITY ENGINEER, TO ASSURE COMPLIANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED.

GN #13 THE CITY ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL MAKE ALL NECESSARY INSPECTIONS OF CITY INFRASTRUCTURE, ESCROW ITEMS OR INFRASTRUCTURE LOCATED ON THE APPROVED PLANS.

EROSION CONTROL NOTES

EN #1 THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY CITY OF O'FALLON AND AS NEEDED BY MODOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF O'FALLON AND AS REQUIRED BY MODOT MAY AT THEIR OPTION DIRECT THE PERMITTEE IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS AND/OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE CITY OF O'FALLON AS REQUIRED BY MODOT."

EN #2 ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAIN STORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHT OF WAY OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.

EN #3 EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT BASIN, ETC.) SHALL BE IN ACCORDANCE WITH ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL GUIDELINES.

EN #4 THIS DEVELOPMENT IS REQUIRED TO PROVIDE LONG TERM POST CONSTRUCTION BMP'S SUCH AS; LOW IMPACT DESIGN, SOURCE CONTROL AND TREATMENT CONTROLS THAT PROTECTS WATER QUALITY AND CONTROLS RUN OFF TO MAXIMUM EXTENT PRACTICAL IN COMPLIANCE WITH PHASE II ILLICIT STORM WATER DISCHARGE GUIDELINES. (ORD. 5082, SECTION 405.0245)

EN #5 GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, VEGETATIVE GROWTH IS TO BE ESTABLISHED WITHIN 6 WEEKS OF STOPPING GRADING WORK ON THE PROJECT. THE VEGETATIVE GROWTH ESTABLISHED SHALL BE SUFFICIENT TO PREVENT EROSION AND THE STANDARD SHALL BE AS REQUIRED BY EPA AND DNR. (70% COVERAGE PER SQUARE FOOT) ORD. 5242, SECTION 405.070

GRADING NOTES

GRN #1 CONTRACTOR MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH AN ENGINEER'S SOILS REPORT PRIOR TO AND DURING SITE GRADING. THE SOILS REPORT WILL BE REQUIRED TO CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY:
1. MAXIMUM DRY DENSITY.
2. OPTIMUM MOISTURE CONTENT.
3. MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT.
4. CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% COMPACTION AND ABOVE AS DETERMINED BY THE "STANDARD PROCTOR TEST AASHTO T-99, METHOD C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
5. CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT
6. SPECIFIC GRAVITY.
7. NATURAL MOISTURE CONTENT.
8. LIQUID LIMIT.
9. PLASTIC LIMIT.

BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE.

GRN #2 ALL FILL PLACED IN AREAS OTHER THAN PROPOSED STORM SEWERS, SANITARY SEWERS, PROPOSED ROADS, AND PAVED AREAS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP IN 8" LIFTS AND COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS CORRESPONDS TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL.

GRN #3 THE SURFACE OF THE FILL SHALL BE FINISHED SO IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAYS WORK IT WOULD APPEAR THAT THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY, THE SURFACE SHALL BE FINISHED SMOOTH. IF THE SURFACE HAS BEEN FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING LIFTS. FILL SHALL NOT BE PLACED ON FROZEN GROUND, NOR SHALL FILLING OPERATIONS CONTINUE WHEN THE TEMPERATURE IS SUCH AS TO PERMIT THE LAYER UNDER PLACEMENT TO FREEZE.

GRN #4 ALL SEDIMENT AND DETENTION BASINS ARE TO BE CONSTRUCTED DURING THE INITIAL PHASE OF THE GRADING OPERATION OR IN ACCORDANCE WITH THE APPROVED SWPPP.

GRN #5 WHEN GRADING OPERATIONS ARE COMPLETE OR SUSPENDED FOR MORE THAN 14 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO ST. CHARLES SOIL AND WATER CONSERVATION DISTRICT – MODEL SEDIMENT AND EROSION CONTROL REGULATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY IMPROVEMENTS) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET WHEN SEEDED.

GRN #6 NO SLOPES SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL) UNLESS OTHERWISE APPROVED BY THE SOILS REPORT AND SPECIFICALLY LOCATED ON THE PLANS AND APPROVED BY THE CITY ENGINEER.

GRN #7 ALL LOW PLACES WHETHER ON SITE OR OFF SHALL BE GRADED TO PROVIDE DRAINAGE WITH TEMPORARY DITCHES.

GRN #8 ALL EXISTING WELLS ON SITE SHALL BE CAPPED PER DNR STANDARDS.

GRN #10 ALL TRENCH BACK FILLS UNDER PAVED AREAS SHALL BE GRANULAR BACK FILL, AND COMPACTED MECHANICALLY. ALL OTHER TRENCH BACK FILLS MAY BE EARTH MATERIAL (FREE OF LARGE CLODS, OR STONES) AND COMPACTED USING EITHER MECHANICAL OR WATER JETTING, GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5 FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10 FEET WILL REQUIRE MULTIPLE PROBES EVERY 7.5 FOOT CENTERS.
a) DEPTH, TRENCH BACK FILLS LESS THAN 8 FEET DEEP SHALL BE PROBED TO A DEPTH EXTENDING HALF THE DEPTH OF THE TRENCH BACK FILL, BUT NOT LESS THAN 3 FEET. TRENCH BACK FILL GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACK FILL BUT NOT GREATER THAN 8 FEET.
b) EQUIPMENT, THE JETTING PROBE SHALL BE A METAL PIPE WITH AN INTERIOR DIAMETER OF 1.5 TO 2 INCHES.
c) METHOD, JETTING SHALL BE PERFORMED FROM THE LOWEST SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGHEST POINT, AND FROM THE BOTTOM OF THE TRENCH BACK FILL TOWARD THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE TRENCH WITHOUT FIRST SATURATING THE TRENCH.
d) SURFACE BRIDGING, THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER SURFACE TO CRUST AND ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAK DOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACK FILLED WITH THE SAME MATERIAL USED AS TRENCH BACK FILL AND REJETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.

GRN #11 SITE GRADING.
a. WITHIN CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED EVERY TWO HUNDRED FIFTY (250) FEET ALONG THE CENTERLINE FOR EACH LIFT.
b. OUTSIDE OF CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED AT TWO (2) FOOT VERTICAL INTERVALS AND APPROXIMATELY EVERY ONE THOUSAND (1,000) CUBIC YARDS.

CITY FILE #17-00040
CITY PERMIT #

CITY OF O'FALLON, MO
PUBLIC WORKS DEPARTMENT
100 NORTH MAIN STREET
O'FALLON, MO 63366
636.379.5566

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THOUVENOT, WADE & MOERCHEN, INC.
ENGINEERS ◆ SURVEYORS ◆ PLANNERS

PROFESSIONAL REGISTRATIONS LICENSE NO.
MISSOURI PROFESSIONAL ENGR. CORP. NO 001538
MISSOURI LAND SURVEYING CORP. NO 002346