- THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL. STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
- ENGINEER, OWNER, AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL. EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.

3. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE

- 4. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO
- ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT. IF DEVIATION FROM THE REQUIREMENTS ARE PROPOSED THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
- 6. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE
- 7. EXISTING SITE INFORMATION / TOPOGRAPHIC SURVEY WAS PREPARED BY FRAZIER LAND SURVEYING SERVICES, INC. DATED 03/21/11. CEC IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN.
- 8 REFORE INSTALLATION OF STORM OR SANITARY SEWER OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
- 9. UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

SWPPP NOTES

- 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 AND AS REQUIRED BY MODOT
- 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.
- 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.
- 1. 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 THE MAXIMUM EXTENT PRACTICAL IN COMPLIANCE WITH PHASE II ILLICIT STORM WATER DISCHARGE GUIDELINES. (ORD. 5082, SECTION 405.0245)
- 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

SOIL AND WATER CONSERVATION DISTRICT (SWCD)Section 278.070(5), RSMo.,

APPENDIX A Vegetative Establishment For Urban Development Sites [R.O. 2006 App. A]

Seeding rates:

Permanent Tall; Fescue — 30 lbs./ac. Smooth Brome — 20 lbs./ac. Combined: Fescue @15 lbs./ac. and Brome @10 lbs./ac.

Wheat or Rye — 150 lbs./ac. (3.5 lbs. per square foot) Oats — 120 lbs./ac. (2.75 lbs. per square foot)

Seeding periods: Fescue or Brome — March 1 to June 1 August 1 to October 1 Wheat or Rye — March 15 to November 1 Oats — March 15 to September 15

Mulch rates: 100 lbs. per 1,000 square feet (4,356 lbs. per acre)

Fertilizer rates: Nitrogen 30 lbs./ac. Phosphate 30 lbs./ac. Potassium 30 lbs./ac. Lime 600 lbs./ac. ENM*

*ENM = effective neutralizing material as per State evaluation of quarried rock.

DEMOLITION NOTES

- 1. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D-698.
- 2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD.
- 3. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
- . ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY. UTILITY CONTACTS ARE LISTED ON THE SITE UTILITY PLAN.
- 5. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- 6. EROSION AND SEDIMENTATION CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND SHALL FUNCTION PROPERLY PRIOR TO INITIALIZATION OF DEMOLITION ACTIVITIES.
- ASBESTOS OR HAZARDOUS MATERIALS ARE NOT EXPECTED, IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
- 8. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
- 9. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED. CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- 10. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
- 11. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL
- 12. PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
- THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING 13. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE. BUT ARE NOT LIMITED TO: WELLS. ASBESTOS. UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA PHASE II WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
 - 14. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
 - 16. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS. ETC.. WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE PROVIDED THAT THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS O THE REPORT OF GEOTECHNICAL INVESTIGATION. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE
 - 17. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

MAINTENANCE OF TRAFFIC

CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH MISSOURI DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.

O'FALLON NOTES

- ALL TRAFFIC SIGNALS, STREET SIGNS, SIGN POST, BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY THE CITY OF O'FALLON AND MoDOT).
- ALL SIGNS SHALL REQUIRE A SEPARATE PERMIT BY THE CITY OF O'FALLON APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIGN SIZE OR LOCATION.
- ALL OFF-STREET PARKING SHALL BE PROPERLY MARKED BY DURABLE PAINT IN STRIPES A MINIMUM OF FOUR (4) INCHES WIDE WHICH EXTEND THE LENGTH OF THE PARKING SPACE.
- TRAFFIC CONTROL IS TO BE PER MODOT OR MUTCD WHICHEVER IS MORE
- ALL NON-REINFORCED CONCRETE SHALL BE 4,000 P.S.I. AT 28 DAYS.
- ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER PAVEMENT MUST HAVE PROPER ROCK BACKFILL AND REQUIRED COMPACTION

ABBREVIATIONS

MINIMUM DIAMETER N.T.S NOT TO SCALE GRATED INLET

CONC CONCRETE MANHOLE FINISHED FLOOR ELEVATION

INVFRT RADIUS TOP OF CURB ELEVATION TOP OF WALL ELEVATION

JNDFRGROUND

MISSOURI AMERICAN WATER DUCKETT CREEK SANITARY DISTRICT

SURFACE ELEVATION *

ALL SPOT ELEVATIONS ARE TOP OF SURFACE OR PAVEMENT UNLESS OTHERWISE NOTED

LAYOUT NOTES

- 1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- 2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
- 3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING. PRIOR TO INSTALLATION OF PAVED SURFACES.
- 4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.
- 5. SITE WORK CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH TO ALL SURFACES. SITE WORK CONCRETE SHALL BE CLASS "A" (4,000 PSI @ 28 DAYS) UNLESS OTHERWISE NOTED.
- 6. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
- 7. SITE DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
- 8. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON THE JOB SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
- 9. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS SHOULD SIGNIFICANT DEVIATION EXIST BETWEEN WHAT IS SHOWN HEREIN THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY WORK.
- 10. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF O'FALLON. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES. CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.
- 11. ALL LOTS SHALL BE SEEDED AND MULCHED AT THE MINIMUM RATES DEFINED IN APPENDIX A OR SODDED BEFORE AN OCCUPANCY PERMIT SHALL BE ISSUED EXCEPT THAT A TEMPORARY OCCUPANCY PERMIT MAY BE ISSUED BY THE BUILDING DEPARTMENT IN CASES OF UNDUE HARDSHIP BECAUSE OF UNFAVORABLE GROUND CONDITIONS. (SEE APPENDIX A ATTACHED)
- 12. DRIVEWAY LOCATIONS SHALL NOT INTERFERE WITH THE SIDEWALK HANDICAP RAMPS, OR CURB INLET SUMPS.
- 13. 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.
- 14. 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.
- 15. ANY PROPOSED PAVILIONS OR PLAYGROUND AREAS WILL NEED A SEPARATE PERMIT FROM THE BUILDING DIVISION.
- 16. 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 AT 379-3814 FOR THE LOCATION OF CITY MAINTAINED CABLE FOR STREET LIGHTS AND TRAFFIC SIGNALS. CALL MISSOURI ONE CALL AT 1-800-DIG-RITE (1-800-344-7483) FOR ALL OTHER UTILITIES.
- 17. ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE BUILDING DIVISION.
- 18. 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.
- 19. 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.
- 20. ALL SUBDIVISION IDENTIFICATION OR DIRECTIONAL SIGN(S) MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION.
- 21. MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETERIOUS MATERIAL THAT ARE NOT TO BE REUSED. 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. ETC. AND MUST BE APPROVED WITH THE CONSTRUCTION PLANS. LANDFILL TICKETS FOR SUCH DISPOSAL SHALL BE MAINTAINED ON FILE BY THE DEVELOPER. 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.
- 22. TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY OF THE WORK COVERED BY THE ABOVE PLANS AND AFTER APPROVAL THEREOF. THE DEVELOPER 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.
- 23. THE CITY ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL MAKE ALL NECESSARY INSPECTIONS OF CITY NFRASTRUCTURE, ESCROW ITEMS OR INFRASTRUCTURE LOCATED ON THE APPROVED PLANS.

MODOT I.T.S. FACILITIES IN AREA

IN THE INSTANCE OF DAMAGE TO MODOT OWNED FREEWAY AND ARTERIAL MANAGEMENT FACILITIES, THE MODOT ENGINEER WILL HAVE THE OPTION OF ISSUING A WORK ORDER FOR MODOT'S ON-CALL ITS MAINTENANCE CONTRACTOR TO MAKE NECESSARY REPAIRS. IF IT IS THE ENGINEER'S OPINION THAT THE CONTRACTOR CREATING THE DAMAGE WILL NOT BI ABLE TO MAKE OR ARRANGE FOR THE REPAIRS TO BE PERFORMED IN A TIMELY MANNER [4 HOURS TO RESPOND AND BEING REPAIRS, IN THE INSTANCE MODOT DEEMS THE DAMAGE TO BE AN "EMERGENCY" (I.E. CRITICAL DEVICE OUTAGE OR SIGNIFICANT NETWORK OUTAGE). IF THE DAMAGE IS NOT CAUSING A SIGNIFICANT OUTAGE (I.E. BROKEN PULLBOX, MINOR CONDUIT DAMAGE), AND DEEMED A "NON-EMERGENCY", REPAIRS MAY BE COMPLETED WITHIN 5 BUSINESS DAYS. THE ITS MAINTENANCE CONTRACTOR WILL THEN BILL THE CONTRACTOR CAUSING THE DAMAGE DIRECTLY. NOTICE OF FULL PAYMENT SHALL BE PROVIDED TO THE MODOT ENGINEER FOR APPROVAL OF COMPLIANCE TO THIS SPECIFICATION.

IF THE CONTRACTOR CREATING THE DAMAGE IS SUB-CONTRACTED BY THE APPLICANT WHO APPLIED FOR THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PERMIT FOR WORK ON RIGHT OF WAY. IT WILL BE THE RESPONSIBILITY OF THE APPLICANT TO ENSURE THE BILL FOR THE ITS MAINTENANCE CONTRACTOR IS PAID IN FULL, PRIOR TO PROJECT COMPLETION. IF THIS BILL IS NOT PAID. THEN THE APPLICANT'S PERMIT DEPOSIT OR BOND WILL BE HELD. UNTIL THIS SPECIFICATION IS SATISFIED, PER SECTION 12 OF THE PERMIT FOR WORK ON RIGHT OF WAY GENERAL PROVISIONS.

UTILITY NOTES

- 1. ALL PROPOSED UTILITY LINES AND EXTENSIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH LOCAL UTILITY COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS WITH THE APPROPRIATE AGENCY.
- 2. THE CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- 3. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 4. MAINTAIN MINIMUM 10-FOOT HORIZONTAL AND 18-INCH MINIMUM VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER SUPPLY LINE, UNLESS OTHERWISE INDICATED AND DETAILED.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
- 6. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFF SITE AT NO ADDITIONAL COST. TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- 7. ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETCETERA. TO MATCH PROPOSED FINISHED GRADES, UNLESS OTHERWISE INDICATED. 8. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL
- IMPROVEMENTS. INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLF FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED. 9. CONTRACTOR SHALL COORDINATE WITH EACH UTILITY PROVIDER THE
- INSTALLATION OF UTILITY CONDUITS FOR TELEPHONE, ELECTRIC, GAS, IRRIGATION, AND ETCETERA. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR FOR THE TRENCHING AND CONDUIT INSTALLATION. COST FOR INSTALLATION AND MATERIALS SHALL BE INCLUDED IN VARIOUS BID ITEMS.
- 10. GAS SERVICE SHOWN IS TO BE CONSTRUCTED, BY THE BUILDING CONTRACTOR, FROM THE MAIN TO THE BUILDING. ALL VALVES & TEES PER LACLEDE GAS COMPANY SPECIFICATIONS. LOCATIONS AND SIZES WILL BE DETERMINED AT A LATER DATE.
- 11. ALL DOWNSPOUT COLLECTORS TO BE CONSTRUCTED OF PVC SDR-35 OR SIMILAR, OR AS REQUIRED BY CODE.
- 12. THE SITE LIGHTING LAYOUT SHOWN HEREON IS BY OTHERS AND IS FOR COORDINATION PURPOSES ONLY. CIVIL & ENVIRONMENTAL CONSULTANTS, INC. HAS NOT PERFORMED A SITE LIGHTING DESIGN FOR THIS PROJECT AND SUCH SHALL NOT BE INFERRED DUE THE ILLUSTRATION OF FIXTURE DESIGNATIONS AND LOCATIONS SHOWN HEREON. PLEASE REFER TO SEPARATE PLANS BY OTHERS FOR DETAILED FIXTURE AND POLE SPECIFICATIONS. ELECTRICAL LAYOUT AND CONTROL SYSTEM DESIGNS AND ANY OTHER SITE LIGHTING ELEMENTS.
- 13. ALL TRENCH BACKFILLS UNDER PAVED AREAS SHALL BE GRANULAR BACKFILL AND SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST," (A.S.T.M.-D-1557). ALL OTHER TRENCH BACKFILLS MAY BE EARTH MATERIAL (FREE OF LARGE CLODS OR STONES). REFER TO MUNICIPAL AND/OR AGENCY CONSTRUCTION SPECIFICATION MANUAL.
- 14. ALL PVC WATER PIPE SHALL CONFORM TO A.S.T.M.-D-2241, SDR 21 STANDARD SPECIFICATION FOR P.V.C. PRESSURE PIPE, 200 P.S.I.

15. WATER LINES, VALVES, SLEEVES, METERS, AND FITTINGS SHALL MEET

- ALL SPECIFICATIONS AND INSTALLATION REQUIREMENTS OF MISSOURI AMERICAN WATER COMPANY. CONTRACTOR TO NOTIFY ALL AFFECTED PROPERTY OWNERS. ANY SHUTTING DOWN OF THE PUBLIC WATER SUPPLY SHALL BE COORDINATED WITH THE WATER COMPANY.
- 16. FIRE HYDRANTS SHALL BE A MAXIMUM OF 600 FEET APART. LOCAL FIRE DISTRICT APPROVAL IS REQUIRED.
- 17. ALL WATER MAINS MUST HAVE A MINIMUM OF 42" COVER.
- 18. PROVIDE WATER VALVES TO ISOLATE THE SYSTEM.
- 19. ALL EXISTING SITE IMPROVEMENTS DISTURBED, DAMAGED OR DESTROYED SHALL BE REPAIRED OR REPLACED TO MATCH PRE-CONSTRUCTION

STORM SEWER AND DRAINAGE NOTES

- 1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION. INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
- 2. ALL STORM SEWER AND STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH M.S.D. 2007 STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CIT YOF O'FALLON ORDINANCES.
- ANY WORK PERFORMED IN THE LOCAL OR STATE RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS. AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
- 4. ALL MANHOLE TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER
- STRUCTURES. PRECAST CONCRETE STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF O'FALLON. A §" TRASH BAR SHALL BE INSTALLED HORIZONTALLY IN THE CENTER OF THE OPENING(S) IN ALL CURB INLETS AND AREA INLETS.
- 7. HDPE PIPE IS TO BE N-12WT OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT FIELD TEST 8. ENCASE WITH CONCRETE BOTH SANITARY AND STORM SEWER AT CROSSING WHEN STORM SEWER IS WITHIN 18" ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE HDPE STORM SEWER WHEN IT IS MORE THAN 18" ABOVE SANITARY.
- 9. THE STORM SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED. 10. ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE 11. CONNECTIONS AT ALL STORM STRUCTURES ARE TO BE MADE WITH
- A-LOCK JOINT OR EQUAL 12. PRECAST CONCRETE INLET COVERS ARE NOT TO BE USED. 13. ALL STORM SEWERS SHALL BE RCP OR HDPE PIPE. ALL STRUCTURES AND FLARED END SECTIONS MUST BE CONCRETE, MANUFACTURING SPECIFICATIONS MUST BE FOLLOWED AND DETAILS PROVIDED FOR THE INSTALLATION OF HDPE PIPE. HDPE PIPE WILL NOT BE ALLOWED FOR DETENTION BASIN OUTFLOWS, FINAL PIPE RUN TO DETENTION BASINS, CREEK DISCHARGE OR OTHER APPROVED MEANS.
- 14. THE DISCHARGE POINT OF ALL FLARED END SECTIONS SHALL BE PROTECTED BY RIP RAP OR OTHER APPROVED MEANS 15. ADD 1" MINUS ROCK BACKFILL TO ALL STORM SEWER THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.

GRADING NOTES

- 1. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY SCI ENGINEERING, INC. TITLED "GEOTECHNICAL REPORT FOR DUNKIN' DONUTS" AND DATED APRIL 30, 2015.
- 2. CONTRACTOR SHALL ADHERE TO THE EROSION CONTROL PLAN PREPARED FOR THIS PROJECT.
- EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, MASS GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
- 4. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH INDICATED ON THE LANDSCAPE PLANS (6" MINIMUM).
- 6. PAVEMENT SLOPES ACROSS ACCESSIBLE PARKING STALLS AND
- ADJOINING ACCESS AISLES SHALL BE MAXIMUM 2% . 7. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE

EROSION CONTROL PLAN, UNLESS NOTED OTHERWISE.

- 8. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- ALL SOILS TEST SHALL BE VERIFIED BY A SOILS ENGINEER
- CONCURRENT WITH THE GRADING AND BACKFILLING OPERATIONS. 10. CITY SHALL BE PROVIDED WITH A COPY OF THE COMPACTION TEST
- 11. A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED BY THE OWNER, OR CONTRACTOR, AND BE ON SITE DURING GRADING OPERATIONS. ALL SOILS TESTS SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER CONCURRENT WITH THE GRADING AND BACK FILLING OPERATIONS.
- 12. THE GRADING CONTRACTOR SHALL PERFORM A COMPLETE GRADING AND COMPACTION OPERATION AS SHOWN ON THE PLANS, STATED IN THESE NOTES, OR REASONABLY IMPLIED THERE FROM, ALL IN ACCORDANCE WITH THE PLANS AND NOTES AS INTERPRETED BY THE GEOTECHNICAL ENGINEER.
- 13. THE CONTRACTOR SHALL NOTIFY THE CITY AND ENGINEER AT LEAST TWO DAYS IN ADVANCE OF THE START OF THE GRADING OPERATION.
- 14. ALL AREAS SHALL BE ALLOWED TO DRAIN. ALL LOW POINTS SHALL BE PROVIDED WITH TEMPORARY DITCHES.
- 15. ANY EXISTING TRASH AND DEBRIS CURRENTLY ON THIS PROPERTY MUST BE REMOVED AND DISPOSED OF OFF-SITE IN AN APPROVED MANNER.
- 16. SITE PREPARATION INCLUDES THE CLEARANCE OF ALL STUMPS, TREES, BUSHES, SHRUBS, AND WEEDS; THE GRUBBING AND REMOVAL OF ROOTS AND OTHER SURFACE OBSTRUCTIONS FROM THE SITE; AND THE DEMOLITION AND REMOVAL OF ANY MAN-MADE STRUCTURES. THE UNSUITABLE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE. TOPSOIL AND GRASS IN THE FILL AREAS SHALL BE THOROUGHLY DISCED PRIOR TO THE PLACEMENT OF ANY FILL. THE SOILS ENGINEER SHALL APPROVE THE DISCING OPERATION.
- COMPACTION EQUIPMENT SHALL CONSIST OF TAMPING ROLLERS, PNEUMATIC-TIRED ROLLERS, VIBRATORY ROLLER, OR HIGH SPEED IMPACT TYPE DRUM ROLLERS ACCEPTABLE TO THE SOILS ENGINEER THE ROLLER SHALL BE DESIGNED SO AS TO AVOID THE CREATION OF A LAYERED FILL WITHOUT PROPER BLENDING OF SUCCESSIVE FILL LAYERS.
- 18. THE SOILS ENGINEER SHALL OBSERVE AND TEST THE PLACEMENT OF THE FILL TO VERIFY THAT SPECIFICATIONS ARE MET. A SERIES OF FILL DENSITY TESTS WILL BE DETERMINED ON EACH LIFT OF FILL. INTERIM REPORTS SHOWING FILL QUALITY WILL BE MADE TO THE OWNER AT REGULAR INTERVALS.
- . THE SOILS ENGINEER SHALL NOTIFY THE CONTRACTOR OF REJECTION OF A LIFT OF FILL OR PORTION THEREOF. THE CONTRACTOR SHALL REWORK THE REJECTED PORTION OF FILL AND OBTAIN NOTIFICATION FROM THE SOILS ENGINEER OF ITS ACCEPTANCE PRIOR TO THE PLACEMENT OF ADDITIONAL FILL. 20. ALL AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A DEPTH OF NOT LESS THAN 6 INCHES AND THEN COMPACTED IN ACCORDANCE WITH
- THE SPECIFICATIONS GIVEN BELOW. NATURAL SLOPES STEEPER THAN 1 VERTICAL TO 5 HORIZONTAL TO RECEIVE FILL SHALL HAVE HORIZONTAL BENCHES, CUT INTO THE SLOPES BEFORE THE PLACEMENT OF ANY FILL. THE WIDTH AND HEIGHT TO BE DETERMINED BY THE SOILS ENGINEER. THE FILL SHALL BE LOOSELY PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BELOW. THE SOILS ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE ACCEPTABILITY OF SOILS PLACED. ANY UNACCEPTABLE SOILS PLACED
- SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. 21. THE SEQUENCE OF OPERATION IN THE FILL AREAS WILL BE FILL, COMPACT, VERIFY ACCEPTABLE SOIL DENSITY, AND REPETITION OF THE SEQUENCE. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION ARE THOSE AT WHICH SATISFACTORY DRY DENSITIES CAN BE OBTAINED. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION IN THE REMAINING AREAS ARE FROM 2 TO 8 PERCENT
- ABOVE THE OPTIMUM MOISTURE CONTROL. 22. ANY CONTAMINATED SOIL ENCOUNTERED DURING EXCAVATION SHALL BE HAULED AND PLACED AS DIRECTED BY THE OWNERS ENVIRONMENTAL
- ENGINEERING REPRESENTATIVE. 23. DEVELOPER 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: A. MAXIMUM DRY DENSITY B. OPTIMUM MOISTURE CONTENT C. MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT.
- D. CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF E. 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. F. 5. CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT.
- G. SPECIFIC GRAVITY H. NATURAL MOISTURE CONTENT. LIQUID LIMIT. J. 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.

- 24. 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 T THE COMPACTIVE FEFORT 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. 25. THE SURFACE OF THE FILL SHALL BE FINISHED SO IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAY'S 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.
- 26. ALL SEDIMENT AND DETENTION BASINS ARE TO BE CONSTRUCTED DURING THE INITIAL PHASE OF THE GRADING OPERATION OR IN ACCORDANCE WITH THE APPROVED SWPPP.

GRADING NOTES

- 27. 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
- 28. NO SLOPES SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL) UNLESS OTHERWISE APPROVED BY THE SOILS REPORT AND SPECIFICALLY LOCATED ON THE PLANS AND APPROVED BY
- 29. ALL LOW PLACES WHETHER ON SITE OR OFF SHALL BE GRADED TO PROVIDE DRAINAGE WITH TEMPORARY DITCHES.
- 30. ALL EXISTING WELLS ON SITE SHALL BE CAPPED PER DNR STANDARDS.
- 31. 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 GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACK FILL BUT NOT GREATER THAN 8 FT. 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 RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.

32. 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.

Standard No Dumping Drains

Style To Stream (#SDS)

www.dasmanufacturing.com

Provide a marking on the storm sewer inlets. The City will allow the following markers and adhesive procedures only as shown in the table below or an approved equal. 'Peel and stick' adhesive pads will not be allowed. Manufacturer Size Adhesive Style Message (Part #) ACP International Cap To Waterways (SD-W-CC)

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities have been plotted from available information and therefore location shall be considere approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of
- improvements. Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed
- sanitary and storm sewers, including house laterals. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match 4. All fill including places under proposed storm and sanitary sewer lines and payed areas including trench backfills within
- AASHTO T-180 Compaction Test (ASTM D1557)". All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and nonpumping during proofrolling and compaction.

and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the "Modifie

- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system. All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the
- It is the responsibility of the contractor to adjust all sanitary sewer manholes (that are affected by the development) to
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat. All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- 10. The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination o 1. All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of
- the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2½ feet.
- Resources specification 10 CSR-8.120(7)(E). 3. All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe

2. All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural

- shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe. 4. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement
- 15. All pipes shall have positive drainage through manholes. Flat invert structures not allowed.

16. Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.

- 7. All creek crossings shall be lined with rip-rap as directed by District inspectors.
- 18. Brick shall not be used on sanitary sewer manholes.
- 19. Existing sanitary sewer service shall not be interrupted. 20. Maintain access to existing residential driveways and streets.
- 22. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the

21. Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not

- responsibility of the developer. 23. 'Type N' Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required. 24. All sanitary sewer system work shall be conducted under the inspection of a representative of the District. All work
- the work is backfilled. All testing must be witnessed by the District's Inspector and the Contractor shall furnish all testing equipment as approved by the District. Testing shall include: • A mandrel test of all gravity sewers using a mandrel with a diameter that has a diameter 95% of the inside pipe diameter. If the mandrel test fails on any section of pipe, that section of pipe shall be uncovered and

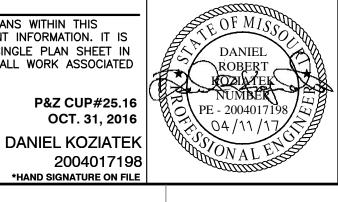
may not require inspection but the District's representative may designate specific areas that must be inspected before

- replaced. No expansion devices will be allowed to be used to "force" the pipe that is deformed back into round. Any string lines used in mandrel testing shall be removed after testing is completed. An air pressure test of all gravity sewers to a pressure of 5 PSI with no observed drop in pressure during a
- test period of 5 minutes. A vacuum test of all manholes for a period of 1 minute and the vacuum shall be 10" of mercury and may not drop below 9" of mercury at the end of the 1 minute test.

NOTES:

Revised August 2012

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.



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RAWING NO. **02** OF **14**