

# EROSION AND SEDIMENT CONTROL NOTES

- Installation of perimeter sediment control shall be implemented as the first step of grading the site.
- Inspection of siltation control devices shall take place once every seven days and within 48 hours of any 0.5"/24 hour rain or greater rain event. Any siltation control in need of repair shall occur immediately.
- No graded areas are to remain bare for over 14 days without being seeded and mulched per specifications. If seasonal conditions prohibit seeding, mulching or matting shall be used.
- All slopes or drainage channels, once constructed to final grade, shall be seeded and mulched per specifications within seven (7) days.
- Silt fences shall be installed immediately around each storm sewer structure once final construction of each individual structure is complete.
- All siltation control devices shall remain in place until upslope areas have been permanently stabilized.
- Erosion control shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadsways, properties, and ditches.
- When deemed necessary, positive steps should be exercised to prevent this soil from damaging adjacent property and siting up all storm drainage systems whether on or off site.
- LOCATIONS AND DETAILS FOR ALL SILTATION CONTROL DEVICES SHALL FOLLOW "ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL" GUIDELINES.

### Siltation Control Schedule Implementation

- Perimeter siltation control and construction entrances to be installed.
- Begin placing aggregate base in parking areas once area has reached final grade to prevent erosion.
- Place silt fence around each storm sewer structure as it is completed.
- Immediately seed areas upon reaching final grade that are to be permanently seeded.

### Temporary Access Roads and Parking Areas Specifications

- Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
- Grades should be sufficient to provide drainage, but should not exceed 10 percent.
- Roadbeds shall be at least 24 feet wide.
- All cuts and fills shall be 3:1 or flatter to the extent possible.
- Drainage ditches shall be provided as needed.
- The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
- A 10-inch course of 2" MINUS aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

### Vegetation

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

### Maintenance

Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. See notes adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.

All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in 1/2 inch of rain or more.

### Straw Bale Siltation Control Specifications

#### Sheet Flow Applications

- Bales shall be placed in a single row, lengthwise on the contour, with both ends of adjacent bales tightly abutting one another.
- All bales shall be either wire-bound or string-tied. Straw bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings). See Detail shown on sheet 5 of 8.
- The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill and shall be built up to 4 inches against the uphill side of the barrier (See detail shown on sheet 5 of 8).
- Each bale shall be securely anchored by at least two stakes or rebars driven through the straw. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
- The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphills from a straw bale barrier tends to increase barrier efficiency).
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Straw bale barriers shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

#### Channel Flow Applications

- Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
- The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition:
- The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale (see detail) to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

### Maintenance

- Straw bale barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged fence, end runs and undercutting beneath fence.
- Necessary repairs to barriers or replacement of silt fence shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

### Silt Fence Specifications

- Silt Fence to be woven geotextile fabric Mirafix 100X or equal.
- Fabric to be supported by metal tee post with spade base spaced on 5 centers with 6 x 6/10 x 10 gage welded wire fence. See detail shown on sheet 5 of 8.
- Fabric shall be entrenched and backfilled. A trench shall be excavated a minimum of 6 inches deep for the length of the fence. The excavated soil shall be backfilled against the fence. See detail this sheet.
- Fence height shall be a minimum of 4 feet in height, with the fabric installed on the fence on the upstream side.
- Silt fences shall be used only on sheet flow conditions.
- Silt fences shall be installed around all storm sewer structures.

### Maintenance

- Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.
- Necessary repairs to barriers or replacement of bales shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

# GENERAL NOTES

- BOUNDARY AND TOPOGRAPHIC SURVEY BY STOCK & ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY SURVEY AND RECORD INFORMATION. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO SLOPE SHALL BE STEEPER THAN 3:1 OR AS APPROVED BY GEOTECHNICAL ENGINEER.
- FEMA MAP 29183C0430 E DATED 8/2/96 ZONE "X" AND OTHER AREAS.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE ARE UNDERGROUND.
- ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF OFALLON STANDARDS.
- ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO 1-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND 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 OFALLON PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF OFALLON.
- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING. REPORTS MUST CONTAIN THE FOLLOWING INFORMATION:
  - MAXIMUM DRY DENSITY
  - OPTIMUM MOISTURE CONTENT
  - MAXIMUM/MINIMUM ALLOWABLE MOISTURE CONTENT
  - CURVE MUST BE PLOTTED SHOWING DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE DETERMINED BY THE "MODIFIED AASHTO-180 COMPACTION TEST" OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST" AASHTO T-99, METHOD C" (ASTM D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
  - CURVE MUST HAVE ATLEAST 5 DENSITY POINTS
  - SPECIFIC GRAVITY
  - NATURAL MOISTURE CONTENT
  - LIQUID LIMIT
  - 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.
- ALL PAVED ROADWAYS GOING ON AND OFFSITE WILL BE KEPT FREE OF DIRT, ROCKS, GRAVEL OR OTHER MATERIALS DURING CONSTRUCTION.
- RIP RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.
- ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF OFALLON ORDINANCES.
- CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS PREPARED BY MIDWEST TESTING; REPORTS DATED OCTOBER 12, 2015 (MT #14002)
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY ROCK ENCOUNTERED. CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH ALL THE GEOTECHNICAL REPORTS LISTED ABOVE AND REVIEW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- PRESENT ZONING: "HTCD" (HIGH TECH CORRIDOR DISTRICT) BUILDING SETBACK REQUIREMENTS PER ZONING:
  - (A) FRONT YARD - THIRTY FEET (30')
  - (B) SIDE YARD - TWENTY FEET (20')
  - (C) REAR YARD - THIRTY FIVE FEET (35')
- IMPROVEMENTS ARE TO BE MADE TO THE ADJACENT RIGHT OF WAY OF ALL DEVELOPMENTS TO MEET CITY OF OFALLON STANDARDS AND SPECIFICATION. ANY ADJUSTMENTS IN THE GRADING OF RIGHT OF WAY WHETHER IT BE EXISTING CONDITIONS OR CAUSED BY THE CONSTRUCTION OF THE DEVELOPMENT SHALL BE APPROVED BY THE CITY OF OFALLON UPON INSPECTION OF THE SITE.
- ENGINEER ASSUMES 1 INCHES OF TOPSOIL, TO BE TREATED ON SITE.
- SEE LANDSCAPE PLAN FOR TREE PRESERVATION CALCULATIONS AND FOR PROPOSED TREE LOCATIONS AND INFORMATION.
- DRIVEWAYS AND ENTRANCES PER ST. CHARLES COUNTY STANDARDS, AND THE CITY OF OFALLON.
- ALL PUBLIC ROADWAYS SHALL BE KEPT FREE OF DIRT, ROCK, SILT, OR OTHER DEBRIS. MUD, DIRT, OR OTHER MATERIALS DEPOSITED ON THE ROADWAY BY VEHICLES ENTERING OR LEAVING THE SITE WILL BE REMOVED WITHIN A REASONABLE TIME FRAME.
- THE DEVELOPER IS TO POST A FINANCIAL GUARANTEE OF PERFORMANCE (PER APPROVED COST ESTIMATE) PRIOR TO CONSTRUCTION PLAN APPROVAL AS REQUIRED BY ARTICLE 405 OF THE SUBDIVISION ORDINANCE.

# EARTHWORK NOTES

BULK CUT.....	3,430	±	CUBIC YARD
BULK FILL.....	1,745	±	CUBIC YARD

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL. THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS LESS THAN SIXTY INCHES IN DIAMETER, STANDARD MANHOLES; PROCESS OR TRANSFER PIPING; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO UNSUITABLE MATERIAL THAT MUST BE REMOVED FROM SITE.

THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTORS RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

ASSUMPTIONS:  
 15% SHRINKAGE ON FILL.  
 BUILDING SUBGRADE = 12" (48" IN DATA FLOOR AREA)  
 EXCESS MATERIAL TO BE STOCKPILED ON-SITE, DISTRIBUTED EVENLY AT END OF PROJECT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN "ALL" GEOTECHNICAL INVESTIGATIONS FROM THE "OWNER". CONTRACTOR SHALL REVIEW AND FAMILIARIZE THEMSELVES WITH RECOMMENDATIONS AS OUTLINED BY THE PROJECT GEOTECHNICAL ENGINEER AND INCORPORATE IT IN THEIR PROPOSED SCOPE OF WORK.

CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS PREPARED BY MIDWEST TESTING; REPORT TITLED "GEOTECHNICAL EXPLORATION CENTENE DATA CENTER BUILDING EXPANSION, OFALLON, MISSOURI DATED OCTOBER 12, 2015 (MT #14002)

# GENERAL NOTES CONTINUED

- CONSTRUCTION WORKING HOURS  
OCTOBER 1 - MAY 31  
MONDAY-SUNDAY  
7:00 AM to 7:00 PM  
JUNE 1 - SEPTEMBER 30  
MONDAY-FRIDAY  
6:00 AM to 8:00 PM  
SATURDAY & SUNDAY  
7:00 AM to 8:00 PM  
CONSTRUCTION DONE OUTSIDE OF THESE HOURS REQUIRES WRITTEN APPROVAL FROM THE CITY ADMINISTRATOR OR CITY ENGINEER.
- IF MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS, OR OTHER DELETERIOUS MATERIALS ARE NOT TO BE REUSED, THEY SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- ALL INSTALLATIONS AND CONSTRUCTION SHALL CONFORM TO THE APPROVED ENGINEERING DRAWINGS. HOWEVER, IF THE DEVELOPER CHOOSES TO MAKE MINOR MODIFICATIONS IN DESIGN AND/OR SPECIFICATIONS DURING CONSTRUCTION, HE/SHE SHALL MAKE SUCH CHANGES AT HIS/HER OWN RISK, WITHOUT ANY ASSURANCE THAT THE CITY ENGINEER WILL APPROVE THE COMPLETED INSTALLATION OR CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO NOTIFY THE CITY ENGINEER OF ANY CHANGES FROM THE APPROVED DRAWINGS. THE DEVELOPER MAY BE REQUIRED TO CORRECT THE INSTALLED IMPROVEMENTS SO AS TO CONFORM TO THE APPROVED ENGINEERING DRAWINGS. THE DEVELOPER MAY REQUEST A LETTER FROM THE CONSTRUCTION INSPECTION DIVISION REGARDING ANY FIELD CHANGES APPROVED BY THE CITY INSPECTORS.
- ALL LOW PLACES WHETHER ON-SITE OR OFF-SITE SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE. TEMPORARY DITCHES CAN BE USED. ANY OFF-SITE DRAINAGE EASEMENTS WILL BE ACQUIRED BEFORE GRADING BEGINS.
- ALL GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. VEGETATIVE GROWTH SHALL BE ESTABLISHED WITHIN 6 WEEKS OF GRADING WORK BEING STOPPED OR COMPLETED IN ANY AREA. VEGETATIVE GROWTH SHALL BE SUFFICIENT TO PREVENT EROSION (70% COVERAGE PER SQUARE FOOT) AS REQUIRED BY MDNR AND EPA.
- CLEARING LIMITS SHALL BE VISIBLY MARKED IN THE FIELD PRIOR TO REMOVAL OF TREES.
- CLEARING LIMITS SHALL BE VISIBLY MARKED IN THE FIELD PRIOR TO GRADING.
- ALL EROSION CONTROL SYSTEMS ARE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHTS-OF-WAYS OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.
- ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELLITE DISHES, AND ROOFTOP MECHANICAL APPARATUS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS APPROVED BY THE PLANNING AND ZONING COMMISSION.
- SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND DETAILS.
- ROOF TOP MECHANICAL EQUIPMENT ARE SHOWN BY PARAPET WALL AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE FULLY SCREENED WITH LANDSCAPING OR SOILD MATERIALS.
- ALL PROPOSED WATER LINE SHALL BE C900 PVC OR BETTER.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE PLANNING DIVISION.
- ALL TRAFFIC SIGNALS, STREET SIGNS, SIGN POSTS, BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTPROOF PENETRATING SEALER SG AND CARBOLINE 133 HP PAINT (OR EQUIVALENT AS APPROVED BY THE CITY). SIGNS DESIGNATING STREET NAME SHALL BE ON THE SAME POST AS TRAFFIC CONTROL SIGNS.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
- CONTRACTOR TO ADJUST FINAL GRADE AS NECESSARY FOR AREAS TO BE SODDED TO MAINTAIN POSITIVE DRAINAGE.
- ALL LIGHT POLES ARE TO BE LOCATED WITHIN LANDSCAPED ISLANDS.
- LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
- ENSURE SIDEWALKS, CURB RAMPS, RAMP 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. (ENSURE AT LEAST ONE 8' WIDE HANDICAP ACCESSIBLE WHEEL ACCESS TO BE CONCRETE)
- ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED BY THE CITY OF OFALLON CONSTRUCTION INSPECTION DEPARTMENT AND FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS.
- TRAFFIC CONTROL IS TO BE PER MDOT OR MUTCD WHICHEVER IS MORE STRINGENT.

# DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities have been plotted from available information and therefore location 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 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 preconstruction conditions.
- Fill under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO 1-180 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 ruts and shall be non-yielding and non-pumping during proofrolling and compaction.
- 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 sewer contractor.
- Easements shall be provided for all sanitary sewers on the record plat.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- Adjustment to the connection to Duckett Creek Sanitary main requires DCSD Inspection. Contact Steve Overby, DCSD Chief Inspector at 636.441.1244 to schedule inspection. 48-hour advance notice required.

### SITE COVERAGE CALCULATIONS:

42,524 S.F. 11.4% (0.98 ACRES) BUILDING:  
 303,666 S.F. 81.4% (6.97 ACRES) LANDSCAPE:  
 26,740 S.F. 7.2% (0.61 ACRES) PAVEMENT:  
 372,930 S.F. 100% (8.561 +/- ACRES) TOTAL

### PRESENT ZONING: "HTCD" (HIGH TECH CORRIDOR DISTRICT)

#### BUILDING SETBACK REQUIREMENTS PER ZONING:

- (A) FRONT YARD - THIRTY FEET (30')
- (B) SIDE YARD - TWENTY FEET (20')
- (C) REAR YARD - THIRTY FIVE FEET (35')

#### O'Fallon P&Z Parking Requirements

Building Area	GSF	USE	DESIGN	OCCUPANCY	ACTUAL
DATA CENTER	27,345	B (BUSINESS)	273	10	
SUPPORT SPACE	5,907	S (STORAGE)	20	0	
TOTAL REQUIRED:			293 SPACES		
TOTAL PROVIDED:			17 SPACES*		

Handicapped Spaces:  
 1-25 spaces Provided  
 17 Rear Spaces Provided  
 Required: 1 Total Parking Spaces  
 Provided: 2 Total Parking Spaces (2 Van Accessible)

Required Bicycle Parking:  
 - One (1) space per fifteen required automobile parking spaces (min. 4)  
 - Required automobile parking spaces is 17 spaces.  
 - Required bicycle parking is 4 spaces.

# STORM SEWER NOTES

- ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76-80 CLASS III UNLESS NOTED.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWER AND DRAINAGE FACILITIES, 2009
- TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCK.
- ALL TRENCH BACKFILLS UNDER PAVEMENT SHALL BE GRANULAR BACKFILLED.
- ALL CURB INLETS AND AREA INLETS TO HAVE 5/8" TRASH BAR ACROSS INLET OPENINGS.
- "O" RING RUBBER GASKET TO BE USED ON ALL STORM SEWER PIPE.
- GRANULAR BACKFILL TO BE PLACED WITH A MINIMUM OF 1'H:1'V SLOPE FROM EDGE OF PAVEMENT.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- PROVIDE 36" MINIMUM COVER FOR STORM SEWERS
- PROVIDE CONCRETE CRADLES FOR RCP AND CONCRETE ENCASEMENTS FOR HOPE AT CROSSING WITH SANITARY SEWER.
- COMPACTED ROCK BACKFILL IS REQUIRED IN THE DISTURBED GROUND AROUND THE STRUCTURE OF ALL DROP STRUCTURES.
- ALL STORM SEWERS ARE TO BE CONSIDERED PRIVATE, UNLESS OTHERWISE NOTED.
- CONTRACTORS TO PROVIDED ALTERNATE BID FOR ADS N-12 ULTRA WT OR EQUAL (SMOOTH INTERIOR) AASHTO TYPE "S" (N-12 ULTRA WT).
- ALL STRUCTURES AND MANHOLES SHALL HAVE POSITIVE DRAINAGE THROUGH THE STRUCTURE.
- CONNECTIONS AT ALL STORM OR SANITARY STRUCTURES TO BE MADE WITH "A-LOCK" JOINT OR EQUAL.

# DUCKETT CREEK NOTES CONT'D

- 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 2-1/2 feet.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- 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 shall consist of same size clean or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted outside of paved areas. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- All creek crossings shall be lined with rip-rap as directed by District inspectors.
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.
- It is the responsibility of the Contractor to adjust all sanitary sewer manholes (that are affected by the development) to finish grade.
- Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.

# STORMWATER DETENTION

THE PROPOSED SITE IS LOCATED WITHIN TWO EXISTING WATERSHEDS. STORMWATER DETENTION BASINS WERE CONSTRUCTED FOR BOTH OF THESE WATERSHEDS AS PART OF PHASE I AND II OF THE PROGRESS POINT DEVELOPMENT. THE DETENTION BASIN CALCULATIONS INCLUDED CONSIDERATIONS FOR FUTURE DEVELOPMENT OF LOT 'A'. THEREFORE, NO ADDITIONAL DETENTION IS REQUIRED.

# TRAFFIC CONTROL

TRAFFIC CONTROL IS TO BE PER MDOT AND/OR MUTCD STANDARDS, WHICHEVER IS MOST STRINGENT.

### LEGAL DESCRIPTION

Adjusted Lot A of Progress Point Village

Adjusted Lot A of "Boundary Adjustment Plat of Lot A and Common Ground and Detention Easement of PROGRESS POINT," a subdivision in St. Charles County, Missouri, according to the plat thereof recorded in Plat Book 41 page 83 of the St. Charles County Records and being more particularly described as follows:

BEGINNING at the northeast corner of Adjusted Lot A of "Boundary Adjustment Plat of Lot A and Common Ground and Detention Easement of PROGRESS POINT," a subdivision in St. Charles County, Missouri, according to the plat thereof recorded in Plat Book 41 page 83 of the St. Charles County Records; thence along the northeastern line of said Adjusted Lot A South 27 degrees 15 minutes 05 seconds East, a distance of 420.43 feet to the Southeast corner thereof; thence along the southeastern line of said lot South 62 degrees 44 minutes 55 seconds West, a distance of 1029.90 feet to the Eastern line of Waterbury Falls Drive, variable width; thence along said Eastern line the following: along a curve to the left having a radius of 76.00 feet, an arc length of 13.34 feet, and a chord which bears North 07 degrees 49 minutes 34 seconds West, a chord distance of 13.32 feet to a point; thence along a curve to the right having a radius of 40.00 feet, an arc length of 29.77 feet, and a chord which bears North 08 degrees 28 minutes 08 seconds East, a chord distance of 29.09 feet to a point; thence along a curve to the left having a radius of 412.00 feet, an arc length of 127.87 feet, and a chord which bears North 20 degrees 54 minutes 01 seconds East, a chord distance of 127.35 feet to a point; thence along a curve to the left having a radius of 412.00 feet, an arc length of 152.65 feet, and a chord which bears North 01 degrees 16 minutes 59 seconds West, a chord distance of 151.77 feet to a point; thence along a curve to the left having a radius of 405.00 feet, an arc length of 125.16 feet, and a chord which bears North 18 degrees 14 minutes 02 seconds West, a chord distance of 124.66 feet to a point; thence along a curve to the right having a radius of 40.00 feet, an arc length of 62.73 feet, and a chord which bears North 17 degrees 50 minutes 13 seconds East, a chord distance of 56.49 feet to the Southern line of Weldon Spring Road, variable width; thence along said Southern line North 62 degrees 45 minutes 39 seconds East, a distance of 787.62 feet to the Point of Beginning and containing 372,930 square feet or 8.561 acres more or less as per calculations by Stock & Associates during the month of April, 2010.

# VEGETATION ESTABLISHMENT

\* VEGETATION ESTABLISHMENT PER "ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL" GUIDELINES.

### SEEDBED PREPARATION

- LOOSEN SOIL TO DEPTH OF 3 INCHES FOR BROADCAST SEEDING OR DRILLING.
- AVOID EXCESSIVELY WET CONDITIONS

### AMENDMENTS

\* PER SOIL TEST OR FOLLOWING TABLE:

TEMPORARY SEEDING PERMANENT	LBS./1,000 S.F.			LIME
	N	P	K	
	0.7	0.7	0.7	14 ENH+
	1.0	1.4	1.4	14 ENH+

+ SOIL TEST RESULTS TAKE PRECEDENCE, DUE TO HIGHLY VARIABLE SOIL PH.

### SEEDING RATES

TEMPORARY	80 LBS. / ACRE
OATS	
WHEAT OR RYE	90-120 LBS. / ACRE
PERMANENT	80 LBS. / ACRE
FESCUES	
KENTUCKY BLUEGRASS	80 LBS. / ACRE
PERENNIAL RYEGRASS	80 LBS. / ACRE

### SEEDING PERIODS

TEMPORARY	JANUARY 1 - JUNE 1 / AUGUST 1 - OCTOBER 1
OATS	
WHEAT/RYE	JANUARY 1 - JUNE 1 / JULY 15 - NOVEMBER 15
PERMANENT	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1
FESCUE	
KENTUCKY BLUEGRASS	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1
PERENNIAL RYE GRASS	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1

### MULCH

- 75% OF GROUND SURFACE SHALL BE COVERED

PREPARED BY:

IMPROVEMENT PLANS FOR:

CENTENE DATA CENTER BUILDING EXPANSION

6430 WELDON SPRING ROAD OFALLON, MISSOURI

GEORGE M. STOCK E-25116 CIVIL ENGINEER CERTIFICATE OF AUTHORITY NUMBER: 000996

### REVISIONS:

NO.	DATE	DESCRIPTION
1.	2015-12-07	PROGRESS PRINT

### SPECIFICATIONS SHEET

SHEET NO.:

C2.0