

## GENERAL NOTES:

- 1.) THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS.  
**CONTRACTOR MUST CONTACT "DIG-RITE" (1-800-344-7483) FOR UTILITY LOCATIONS BEFORE PERFORMING ANY EXCAVATION ON THE SITE.**  
SEWERS, GAS, TELEPHONE, WATERLINE AND ANY OTHER PRIOR TO CONSTRUCTION. ALL CONNECTIONS OR REPAIRS ARE TO BE MADE IN ACCORDANCE WITH LOCAL CODES AND/OR UTILITY COMPANIES REQUIREMENTS.
- 2.) ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.
- 3.) BOUNDARY AND TOPOGRAPHIC SURVEY BY ENGINEERS J.R. GRIMES CONSULTING ENGINEERS.
- 4.) ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH THE CITY OF O'FALLON.
- 5.) NO SLOPES SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL), UNLESS JUSTIFIED BY GEOTECHNICAL REPORT WHICH HAS BEEN ACCEPTED/APPROVED BY THE CITY OF O'FALLON AND THE OFFICE OF THE ENGINEER.
- 6.) STORMWATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT.
- 7.) THE DEVELOPER MUST SUPPLY THE CITY CONSTRUCTION INSPECTORS WITH SOILS REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
- 8.) ALL MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF O'FALLON.
- 9.) ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES AND/OR SEEDING AND MULCHING AS REQUIRED BY THE CITY OF O'FALLON. REFER TO SILTATION NOTES.
- 10.) PRIOR TO BEGINNING ANY WORK ON THE SITE, THE CONTRACTOR SHALL CONTACT THE OFFICE OF THE DEVELOPER FOR SPECIFIC INSTRUCTIONS RELEVANT TO THE SEQUENCING OF WORK.
- 11.) ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- 12.) GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD AND DEBRIS AT ALL TIMES.
- 13.) A GRADING PERMIT IS REQUIRED PRIOR TO ANY GRADING ON THE SITE. NO CHANGE IN WATERSHEDS SHALL BE PERMITTED.
- 14.) INTERM STORMWATER DRAINAGE CONTROL IN THE FORM OF SILTATION CONTROL MEASURES ARE REQUIRED.
- 15.) THE DEVELOPER IS REQUIRED TO PROVIDE ADEQUATE STORMWATER SYSTEMS IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARDS.
- 16.) ADEQUATE TEMPORARY OFF-STREET PARKING SHALL BE PROVIDED FOR CONSTRUCTION EMPLOYEES. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVING CONDITIONS.
- 17.) PRIOR TO ISSUANCE OF FOUNDATION OR BUILDING PERMITS, ALL APPROVALS FROM THE CITY OF O'FALLON AND THE DUCKETT CREEK SEWER DISTRICT MUST BE RECEIVED.
- 18.) INSTALLATION OF LANDSCAPING AND ORNAMENTAL ENTRANCE MONUMENT OR IDENTIFICATION SIGNAGE CONSTRUCTED BY THE CITY OF O'FALLON FOR SIGHT DISTANCE CONSIDERATIONS AND APPROVED PRIOR TO INSTALLATION OR CONSTRUCTION.
- 19.) THE DEVELOPER IS ADVISED THAT UTILITY COMPANIES WILL REQUIRE COMPENSATION FOR RELOCATION OF THEIR UTILITY FACILITIES WITHIN PUBLIC ROAD RIGHT-OF-WAY. UTILITY RELOCATION COST SHALL BE CONSIDERED THE DEVELOPER'S RESPONSIBILITY. THE DEVELOPER SHOULD ALSO BE AWARE OF EXTENSIVE DELAYS IN UTILITY COMPANY RELOCATION AND ADJUSTMENTS. SUCH DELAYS WILL NOT CONSTITUTE A CAUSE TO ALLOW OCCUPANCY PRIOR TO COMPLETION OF ROAD IMPROVEMENTS.
- 20.) ROAD IMPROVEMENTS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT. IF DEVELOPMENT PHASING IS ANTICIPATED, THE DEVELOPER SHALL COMPLETE ROAD IMPROVEMENTS, RIGHT-OF-WAY DESIGNATION, AND ACCESS REQUIREMENTS OF EACH PHASE OF DEVELOPMENT AS DIRECTED BY THE CITY OF O'FALLON PUBLIC WORKS DEPT. AS PREVIOUSLY NOTED, THE DELAYS DUE TO UTILITY RELOCATION AND ADJUSTMENTS WILL NOT CONSTITUTE A CAUSE TO ALLOW OCCUPANCY PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT.
- 21.) ALL DISTURBED EARTH AREAS WITHIN THE CITY OF O'FALLON RIGHT-OF-WAY SHALL BE SOODED
- 22.) ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE CITY OF O'FALLON
- 23.) IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE WITH THE UTILITY COMPANIES THE REMOVAL OF EXISTING UTILITY COMPANY FACILITIES THAT CONFLICT WITH THE NEW DEVELOPMENT AND THE INSTALLATION OF THE NEW SYSTEMS TO SERVE THE PROPOSED DEVELOPMENT.
- 24.) ALL CONSTRUCTION OF PUBLIC IMPROVEMENTS AND ALL CONSTRUCTION WITHIN CITY R.O.W. SHALL COMPLY WITH THE O'FALLON STANDARDS CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS. THE CITY ENGINEER SHALL BE NOTIFIED AT LEAST 1 WEEK IN ADVANCE OF THE START OF SAID CONSTRUCTION AND ALL APPLICABLE CITY PERMITS SHALL BE OBTAINED PRIOR TO THE START OF SAID CONSTRUCTION.

## VEGETATIVE ESTABLISHMENT FOR URBAN DEVELOPMENT SITES APPENDIX A

GRADED AREA THAT ARE TO REMAIN BARE FOR OVER 6 MONTHS SHALL BE SEEDED AND MULCHED AS DESCRIBED BELOW

### SEEDING RATES:

#### PERMANENT:

TALL FESCUE - 30 lbs./ac.  
SMOOTH BROME - 20 lbs./ac.  
COMBINED FESCUE @ 15 lbs./ac. AND BROME @ 10 lbs./ac.

#### TEMPORARY:

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 sq. FEET (4,356 lbs. PER ACRE)

#### FERTILIZER RATES:

NITROGEN 30 lbs./ac.  
PHOSPHATE 30 lbs./ac.  
POTASSIUM 600 lbs./ac. ENM\*

\* ENM = EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE EVALUATION OF QUARRIED ROCK.

## SITE GRADING SPECIFICATIONS:

### SECTION 02110 - SITE CLEARING

#### PART 1 - GENERAL

##### SUMMARY

This Section includes the following:

Removing above-grade improvements.

Removing below-grade improvements.

##### PROJECT CONDITIONS

Traffic: Conduct site-clearing operations to ensure minimum interference with the roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements indicated to remain in place.

Improvements on Adjoining Property: Authority for performing removal and alteration work on property adjoining Owner's property will be obtained by Owner prior to award of contract.

Extent of work on adjacent property is indicated on Drawings.

##### EXISTING SERVICES

**General: Indicated locations are approximate; determine exact locations before commencing Work.**

Arrange and pay for disconnecting, removing, capping, and plugging utility services. Notify affected utility companies in advance and obtain approval before starting this Work.

Place markers to indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

#### PART 2 - EXECUTION

##### SITE CLEARING

General: Remove trees, shrubs, grass, and other vegetation, improvements, or obstructions, as required, to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. The owner will identify any trees & shrubs to remain.

Trees indicated to remain shall have minor roots and branches cut in a clean and careful manner where such roots and branches obstruct installation of new construction.

Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to prevent damage to root system.

Removal of Improvements: Remove existing above-grade and below-grade improvements as indicated and as necessary to facilitate new construction.

##### DISPOSAL OF WASTE MATERIALS

Burning on Owner's Property: Burning is not permitted on Owner's property.

Removal from Owner's Property: Remove waste materials and unsuitable or excess topsoil from Owner's property.

##### EARTHWORK

#### PART 1 - GENERAL

##### SUMMARY

This Section includes the following:

Preparing and grading subgrades for slabs-on-grade, walks, pavements, and landscaping.

Excavating and backfilling for buildings and structures.

Drainage and moisture-control fill course for slabs-on-grade.

Subbase course for walks and pavements.

Subsurface drainage backfill for walls and trenches.

Excavating and backfilling trenches within construction limits.

Excavating and backfilling for underground mechanical and electrical utilities and appurtenances.

##### DEFINITIONS

Excavation: consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed.

Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

Borrow: Soil material obtained off site when sufficient approved soil material is not available from excavations.

Subbase Course: The layer placed between the subgrade and surface pavement or walk.

Drainage Fill: Course of washed granular material placed under slab-on-grade to cut off upward capillary flow of pore water toward slab.

Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the owner. Unauthorized excavation, as well as remedial work directed by the owner, shall be at the Contractor's expense.

Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.

Utilities include on-site underground pipes, conduits, ducts, cables, and underground services within building lines.

##### QUALITY ASSURANCE

Codes and Standards: Perform earthwork complying with requirements of authorities with jurisdiction.

Testing and Inspection Service: Owner will employ a qualified independent geotechnical engineering testing agency to classify proposed on-site and borrow soils to verify that soils comply with specified requirements and to perform required field and laboratory testing.

##### PROJECT CONDITIONS

Existing Utilities: Do not interrupt existing utilities serving facilities occupied by the Owner or others except when permitted in writing by the owner and then only after acceptable temporary utility services have been provided.

#### PART 2 - PRODUCTS

##### SOIL MATERIALS

General: Provide approved borrow soil materials from off site when sufficient approved soil materials are not available from excavations.

Satisfactory Soil Materials: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.

Backfill and Fill Materials: Satisfactory soil materials.

Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, ASTM D 2940, with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

Bedding Material: Subbase materials with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate grading size 57, with 100 percent passing a 1-1/2-inch sieve and not more than 5 percent passing a No. 8 sieve.

##### ACCESSORIES

Detectable Warning Tape: Polyethylene film warning tape encasing a metallic core, 6 inches wide and 4 mils thick minimum, continuously inscribed with a description of the utility shall be installed in trench above all water mains as installed for this development.

#### PART 3 - EXECUTION

##### PREPARATION

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

Provide erosion and sedimentation control measures.

##### DEWATERING

Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

Protect subgrades and foundation soils from softening and damage by rain or water accumulation and from freezing temperatures or frost.

##### EXCAVATION

Explosives: Do not use explosives.

Unclassified Excavation: Excavation is unclassified and includes excavation to required subgrade elevations regardless of character of materials and obstructions encountered.

Excavate for structures, pavements, and walks to indicated elevations and dimensions. Widen excavations to permit placing and removing concrete formwork, installing services and other construction, and for inspections. Trim subgrades to required lines and grades to leave solid base to receive other work.

Excavate utility trenches to indicated slopes, lines, depths, and invert elevations of uniform widths to provide a maximum 12 inches of working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than the top of pipe or conduit.

Excavate and shape trench subgrade to provide uniform bearing and continuous support for pipe and conduit. Where encountering rock or other unyielding bearing surface, carry trench excavation 6 inches below invert elevation to receive bedding course.

Approval of Subgrade: When Geotechnical Engineer determines that unforeseen unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed. Payment will be made according to the Contract provisions for changes in the work.

The construction site is to be maintained so that the following conditions can be avoided, but if they occur, then the Contractor shall be responsible to Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities.

Fill unauthorized excavation under foundations or wall footings by extending indicated bottom elevation of concrete foundation or footing to excavation bottom, without altering required top elevation. Fill unauthorized excavations under other construction as directed by Geotechnical Engineer.

Store excavated and borrow soil materials acceptable for backfill and fill in shaped, graded, drained, and covered stockpiles. Locate stockpiles away from edge of excavations and outside drip line of remaining trees.

##### BACKFILLING

Backfill excavations promptly following acceptance of affected work below final grade.

Utility Trench Backfill: Place, compact, and shape bedding course to provide continuous support for pipes and conduits over rock and other unyielding bearing surfaces and to fill unauthorized excavations.

Place and compact initial backfill of satisfactory soil material or subbase material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit. Place and compact final backfill of satisfactory soil material to final subgrade.

Coordinate backfilling with utilities testing.

Install warning tape directly above water lines, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

Fill Preparation: Plow strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing surface.

When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface to depth required, pulverize, moisture-condition or aerate soil, and recompact to required density.

Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer to within 2 percent of optimum moisture content before compaction.

Remove and replace, or scarify and air dry, satisfactory soil material that is too wet to compact to specified density.

##### COMPACTION

Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers. Place evenly alongside structures and utilities to required elevations.

Compact soil to not less than the following percentages of maximum dry density according to ASTM D 1557:

All fill placed under proposed storm & sanitary sewers and/or paved areas shall be compacted to 80% of maximum density as determined by the Modified AASHTO T-180 compaction test or 95% of maximum density as determined by Standard Proctor Test AASHTO T-99

Under proposed roadways, tests shall be verified by a soils engineer concurrent with grading and backfilling operations

Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material to 90 percent.

##### GRADING

Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated. Grade lawns, walks, and unpaved subgrades to tolerances of plus or minus 0.10 foot and pavements and areas within building lines to plus or minus 1/2 inch.

Subbase and Base Courses

Sub base: Under pavements and walks, place sub base course material on prepared subgrades and compact at optimum moisture content to required grades, lines, cross sections, and thickness.

Place shoulders along edges of sub base to prevent lateral movement. Construct shoulders at least 12 inches wide of acceptable soil materials and compact simultaneously with each subbase layer.

Under slabs-on-grade, place drainage fill on prepared subgrade and compact to required cross sections and thickness.

Field Quality Control (BY GENERAL CONTRACTOR)

Perform field in-place density tests according to ASTM D 1556 (sand cone method), ASTM D 2167 (rubber balloon method), ASTM D 2922 (nuclear method) or ASTM D 2937 (drive cylinder method), as applicable.

Footings Subgrades: Test each soil stratum to verify design bearing capacities.

Paved Areas and Building Slabs: At subgrade and at each compacted fill and backfill layer, perform at least one field in-place density test for every 2,000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.

Foundation Wall Backfill: At each compacted backfill layer, perform at least one field in-place density test for each 100 feet or less of wall length, but in no case fewer than two tests.

Trench Backfill: In each compacted initial and final backfill layer, perform at least one field in-place density test for each 150 feet or less of trench, but in no case fewer than two tests.

When testing agency reports that subgrades, fills, or backfills are below specified density, scarify and moisten or aerate, or remove and replace soil to the depth required, recompact, and retest until obtaining required density.

##### PROTECTION

Repair and re-establish grades where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction.

Settling: Where settling occurs during the Project correction period, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing.

##### DISPOSAL

Transport surplus satisfactory soil to designated stockpiles on the Owner's property. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the Owner's property.

Dispose: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the Owner's property.

## STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

### I INTRODUCTION

This Stormwater Pollution Prevention Plan is for the Persimmon Pointe Market site located in OFALLON, Missouri. The site is located on the west side of State Highway K north of the intersection of State Highway K and Highway 40/64. (see location map)

### II SITE INFORMATION

A. Soils  
The soil consists of 10 to 20 feet of soft to stiff, brown, silty clay. The soil in the area is in the hydrologic category 'C' according to the Soil Conservation Service's Soil Survey Map for St. Charles County.

B. Existing Run-Off Water Quality  
No run-off water quality is available for this site.

C. Surface Waters and Receiving Waters  
The site is part of a watershed that is located between Technology Drive and Highway 40/64. The runoff drains from west to east and crosses Highway K by means of an existing culvert. The drainage is part of the Schote Creek watershed.

D. Site Area and Run-Off Coefficient  
The total area to be cleared is 10.2 acres. It is planned to clear this portion of the parcel at this time. The run-off coefficient after construction is complete and grass cover has been established will be about 0.60. The present coefficient is estimated to be 0.60.

III CONSTRUCTION ACTIVITY

The purpose of this project is to clear the site for future development. Siltation controls will be installed as indicated on the plan prior to clearing. As the designated area has been cleared, the area will then be seeded with winter wheat to establish a vegetative cover resistant to erosion.

### IV OFF-SITE VEHICLE TRACKING

A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be swept daily to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material to or from the construction site will be covered with a tarpaulin.

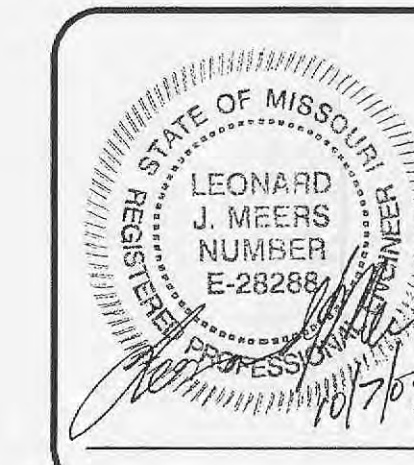
### V MAINTENANCE/INSPECTION PROCEDURES

These are the inspection and maintenance procedures that shall be used to maintain erosion and sediment controls.

A All control measures shall be inspected at least once each week and following any storm event of 0.5 inches or more.

B All measures shall be maintained in good order with necessary repairs initiated within 24 hours of report.

C Sediment accumulation shall be checked monthly and removed if the accumulation exceeds 10% of the capacity.



64K, L.L.C. TRACT  
SPECIFICATION AND DETAILS

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