



A SET OF CONSTRUCTION PLANS FOR COOL SPRINGS BUSINESS PARK

THREE TRACTS OF LAND BEING PART OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 47 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, ST. CHARLES COUNTY, MISSOURI

CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: ALJ DATE: 7-31-08
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN
Buzoos-685

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 (636) 379-9166
COOL SPRINGS BUSINESS PARK

O'FALLON NOTES

- 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.
- All filled areas under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test, or 95% of maximum density as determined by the standard Proctor Test AASHTO T-99. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. All filled areas in proposed roads shall be compacted from the bottom up. All test shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in the 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 composition curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon.
- No area shall be cleared without the permission of the Project Engineer.
- The City of O'Fallon shall be notified 48 hours prior to construction for coordination and inspection.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.
- All construction and materials shall conform to the current construction standards of the City of O'Fallon.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- No slopes shall exceed 3(Horizontal) : 1(Vertical).
- The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor 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 grading and be maintained throughout the project until acceptance of the work by the Owner and/or the City of O'Fallon and/or MODOOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of O'Fallon and/or MODOOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silt or mud on new or existing pavement or in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of O'Fallon and/or MODOOT.

O'FALLON NOTES (CONTINUED)

- Developer must supply City Construction Inspectors with soil reports prior to or during site soil testing. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
 - Maximum dry density
 - Optimum moisture content
 - Maximum and minimum allowable moisture content
 - Curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the Modified AASHTO T-180 Compaction Test (A.S.T.M.-D-1557) or from a minimum of 95% 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.
 - Curve must have at least 5 density points with moisture content and sample locations listed on document.
 - 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.
- Trees, organic debris, rubble, foundations and other deleterious material shall be removed for the site and disposed in compliance with all applicable laws and regulations. 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.
- HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field test.
- If there are any physical changes to MoDOT's right of way, such as grading or entrance modification, MoDOT requests the opportunity to review the plans, there may be improvements to the roadway required to support the proposed development within MoDOT's Access Management Guidelines.
- Connectors of all sanitary or storm structures to be made with A-lock joint or equal.
- Inlet structure is to be per MoDOT or MUTCD whichever is most stringent.
- All sanitary laterals and sanitary main crossing under pavement must have the proper rock backfill and to required compaction.

GRADING NOTES:

- A Geotechnical Engineer shall be employed by the owner 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.
- 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.
- The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare over the winter without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and sitting up existing downstream storm drainage system.
- Any existing trash and debris currently on this property must be removed and disposed of off-site.
- Soil in the bottom and banks of any existing or former pond sites or tributaries should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.
- 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 area shall be thoroughly discing 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.
- 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.
- 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 3 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.
- The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- All siltation control devices shall be inspected by the contractor after any rain of 1/2" or more with any appreciable accumulation of mud to be removed and siltation measures repaired where necessary.
- No slope shall be steeper than 3(Horizontal):1(Vertical). All slopes shall be sodded or seeded and mulched.
- Any contaminated soil encountered during excavation shall be hauled and placed as directed by the owners environmental engineering representative.
- The location of and details for all siltation control devices (all fences and sediment basins) must follow the "St. Charles County Soil and Water Conservation District Erosion and Sediment Control" guidelines.

PRINCIPLES & STANDARDS:

- All excavation, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33 %). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed heel wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
- Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run-off waters. The design to be approved by the Designated Official. Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- Where natural vegetation is removed during grading, vegetation shall be reestablished in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible during the next seeding period after grading has been completed.
- When grading operations are completed or suspended for more than 14 days permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the City Engineer's recommendations. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.
- Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock rip rap or concrete or other suitable materials as approved by the City Engineer. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps.
- The adjoining ground to development sites (lots) shall be provided with protection from accelerated soil erosion, silt from erosion, and any other consequences of erosion. Run-off water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted with the approval of the City Engineer.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed stream bank erosion control measures and shall be approved by the City Engineer, FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- 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.

VEGETATIVE ESTABLISHMENT For Urban Development Sites APPENDIX A

Seeding Rates:	
Permanent:	
Tall Fescue	30 lbs./ac.
Smooth Brome	20 lbs./ac.
Combined Fescue & Brome	15 lbs./ac. and Brome @ 10 lbs./ac.
Temporary:	
Wheat or Rye	100 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.
Phosphorus	300 lbs./ac.
Potassium	300 lbs./ac.
Lime	8000 lbs./ac. ENM*

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

ESTIMATED CONSTRUCTION & GRADING SCHEDULE

GRADING	8/16/08 - 9/23/08
INSTALL EROSION CONTROL	8/16/08
UTILITY CONSTRUCTION	8/21/08 - 9/21/08
BUILDING CONSTRUCTION	8/30/08 - 10/30/08
PAVEMENT CONSTRUCTION	9/16/08 - 10/30/08
FINISH GRADING, SEED AND MULCH	SEE NOTE BELOW

NOTE: DATES MAY VARY DUE TO INCLEMENT WEATHER.

A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE PLANNING DEPARTMENT'S APPROVAL OF THE SITE PLAN IS PERMITTED. ANY COMPLETION DATE LONGER THAN THE ONE (1) YEAR PERIOD, OR AN EXTENSION OF THE TIME THEREOF, MUST BE REQUESTED IN WRITING BY THE DESIGN CONSULTANT AND APPROVED BY BOTH THE DIRECTOR OF PLANNING AND THE CITY ENGINEER.

NOTE: TEMPORARY VEGETATION TO BE IN PLACE DURING THE WINTER UNTIL THE PERMANENT SEEDING AND MULCH CAN BE COMPLETED.

DEVELOPMENT NOTES

- Area of Overall Tract: 3.758 Acres
 Lot 1: 1.889 Acres
 Lot 2: 1.129 Acres
 Lot 3: 1.239 Acres
- Existing Zoning: I-2 (City of O'Fallon)
- Proposed Use: Office/Retail
- Setbacks: 30' Front
 25' Side
 50' Rear
 50' Maximum Building Height
- Current Owner & Developer of Property: Jim Summers
 308 Cool Springs Road
 O'Fallon, MO 63366
 (636) 379-9166
- Site is served by:
 Ameren UE
 Laclede Gas Company
 City of O'Fallon Water
 Century Telephone Company
 Fort Zumwalt School District
 O'Fallon Fire Protection District
 City of O'Fallon Sewer
- Flood Plain exists on this site per F.I.R.M. #291931-0241E, dated Aug. 2, 1996. LOMA obtained.
- Parking Requirements:
 Office: 1 space per 300 s.f. of floor area.
 Warehouse: 1 space per employee, plus 1 space per 100 s.f. of floor area.
- Lot #1:
 2,101.62 sq. ft. / 300 = 7
 9,868.39 sq. ft. / 1,000 = 9.87
 3 Employees
 Spaces required = 10.87 ~ 20
 Spaces provided = 21 (including 1 handicap space)
- Lot #2:
 3,204.30 sq. ft. / 300 = 10.68
 87,96.20 sq. ft. / 1,000 = 8.79
 3 Employees
 Spaces required = 22.47 ~ 23
 Spaces provided = 24 (including 2 handicap spaces)
- Landscape requirements:
 1 tree per 40' of street frontage
 280.44' / 40' = 6.511 trees required
 Not less than 6% of the interior of the parking lot shall be landscaped.
 45 spaces x 270 sq. ft. = 12,150 x 6% = 729 sq. ft.
 Required = 729 sq. ft.
 Interior landscaping provided = 4,039.17 sq. ft.
- Tree Preservation:
 16,675.48 s.f. of existing tree mass on site
 5,853.42 s.f. tree mass to remain
 20% minimum per ordinance to remain
 5,853.42 / 16,675.48 = 35.10% to remain
- Overall Site Coverage Calculations: 163,579.00 s.f.
 Building Area: 23,987.50 s.f. = 14.65%
 Landscape Area: 78,050.65 s.f. = 47.72%
 Pavement Area: 61,560.45 s.f. = 37.63%
- Lot 1 Site Coverage: 60,438.01 s.f.
 Building Area: 11,970 s.f. = 19.81%
 Green Area: 20,799.36 s.f. = 34.41%
 Pavement Area: 27,668.65 s.f. = 45.78%
- Lot 2 Site Coverage: 49,175.89 s.f.
 Building Area: 11,992.50 s.f. = 24.39%
 Green Area: 8,729.92 s.f. = 17.75%
 Pavement Area: 28,453.47 s.f. = 57.86%
- Lot 3 Site Coverage: 53,965.32 s.f.
 Green Area: 48,521.37 s.f. = 89.91%
 Pavement Area: 5,443.95 s.f. = 10.09%
- Estimated existing sanitary contribution: 200 g.p.d.
 Estimated possible overall sanitary contribution: 690 g.p.d.
 Increase of estimated sanitary contribution = 490 g.p.d.
- Basin to be provided with initial phase of the development. Basin is sized for future development of Lot 3, however outfall structure to be modified when calculations are modified.
- Developer posts a financial guarantee of performance (per approved cost estimate) as required by Article 405 of the Subdivision Ordinance.
- All HVAC and mechanical units on site shall be properly screened as required by City Code. Ground mounted HVAC and mechanical units shall be screened by fencing, vegetation or some other means (approved by the Planning and Zoning Commission) that has a minimum height that is at least as tall as the tallest unit being screened.

BENCHMARKS:

SITE BENCHMARK: ELEVATION 494.17
 CUT 1" 3" SOUTH OF THE NORTHWEST PROPERTY CORNER
 OF TRACT ONE AND 25' EAST OF THE CENTERLINE OF COOL
 SPRINGS ROAD.

GRADING QUANTITIES:

13,128 C.Y. FILL (INCLUDES 8% SHRINKAGE)
 5,998 C.Y. CUT (INCLUDES SUBGRADES)
 7,130 C.Y. SHORT

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY.
 NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL
 VERIFY QUANTITIES PRIOR TO CONSTRUCTION. SPILLS
 FROM WATERLINE, SANITARY SEWERS, STORM SYSTEM
 AND GENERAL BACKFILL ARE NOT INCLUDED.

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