

GENERAL NOTES

- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY OTHERS FROM AVAILABLE RECORDS. 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.
- ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.
- BOUNDARY AND TOPOGRAPHIC INFORMATION BY COLE AND ASSOCIATES, INC.
- ALL MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS AS REQUIRED BY THE CITY OF O'FALLON.
- ALL GRADED AREAS INDICATED SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES, SEEDING AND MULCHING AS INDICATED.
- 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.
- GRADING CONTRACTOR SHALL INSTALL SILTATION CONTROL PRIOR TO STARTING THE GRADING PER SILTATION SPECIFICATIONS. ADDITIONAL SILTATION CONTROL DEVICES MAY BE REQUIRED AS DIRECTED BY THE CITY OF O'FALLON.
- ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD AND DEBRIS AT ALL TIMES.
- PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS. CONTRACTOR TO GRADE ALL AREAS TO REQUIRED SUBGRADE.
- NO GRADE SHALL EXCEED 3:1 SLOPE.
- SITE IS NOT IN FLOOD PLAIN PER FE.M.A. MAP No. 29183C0410 E.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE SHALL BE UNDERGROUND.
- ALL FILLED PLACES IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP TO 90% 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.
- THE EROSION CONTROL PLAN SHOULD BE IMPLEMENTED BEFORE GRADING BEGINS.
- 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 ROADWAYS, PROPERTIES, AND DITCHES.
- EXISTING SITE CURRENTLY HAS NO TREES ON-SITE, THEREFORE NO REQUIREMENTS FOR TREE PRESERVATION ORDINANCE.
- ALL GRADES ARE TO FINISH GRADE OR FINISH PAVEMENT. THE CONTRACTOR SHALL DEDUCT PAVEMENT THICKNESS IN BUILDING AREAS TO OBTAIN SUBGRADE ELEVATIONS.

SANITARY SEWER NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR SANITARY SEWERS TO MEET REQUIREMENTS OF THE DUCKETT CREEK SANITARY DISTRICT.
- ALL MANHOLES SHALL BE 42" DIA. PRE-CAST CONCRETE PER ASTM C-478.
- ALL LATERAL SEWER CONSTRUCTION METHODS TO CONFORM TO LATEST STANDARDS AND SPECIFICATIONS OF THE DUCKETT CREEK SEWER DISTRICT.
- ALL TRENCHES UNDER AREAS TO BE PAVED SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF O'FALLON SPECIFICATIONS.
- CONTRACTOR TO START LAYING PIPE AT DOWNSTREAM MANHOLE AND WORK UPSTREAM.
- TAILSTAKE ELEVATIONS AND WYE LOCATIONS ARE SHOWN ON THE SANITARY SEWER PROFILES.
- CLEANOUTS SHALL BE LOCATED AT ALL HORIZONTAL AND VERTICAL CHANGES IN DIRECTION OF FLOW OF BUILDING LATERALS AND ANY SANITARY LATERAL OF 100 FEET OR LONGER.
- 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 TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY AND RAILROAD SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 90 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.
- GAS, WATER, AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OF HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY AND STORM SEWERS.
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEMS.
- EASEMENTS SHALL BE PROVIDED FOR ALL SANITARY SEWERS, STORM SEWERS AND ALL UTILITIES ON THE RECORD PLAT.
- THE DUCKETT CREEK SANITARY DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION FOR COORDINATION OF INSPECTION.
- ALL SANITARY SEWER MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE WITH MISSOURI DEPT. OF NATURAL RESOURCES SPECIFICATION TO CSR-8.120(7)(E).
- ALL PVC SANITARY SEWER PIPE IS TO BE 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.
- BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.
- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- ALL SANITARY FLOW LINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- ALL PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH MANHOLES. NO FLAT INVERT STRUCTURES ARE ALLOWED.
- PRE-MANUFACTURED ADAPTERS SHALL BE USED AT ALL PVC AND 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.

STORM SEWER NOTES

- ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C75 CLASS III UNLESS NOTED.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCK.
- ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE ONLY. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- ALL TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 90 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- ALL STORM SEWER JOINTS SHALL BE GASKETED O-RING TYPE.

STRAW BALE SILTATION CONTROL SPECIFICATIONS

SILTATION CONTROL GENERAL NOTES

- Installation of all perimeter sediment control shall be implemented on the first site grading and within seven (7) days of beginning the site.
- Inspection of siltation control devices shall take place once every seven days and within 24 hours of any 0.5724 inch rain event. Any siltation control in need of repair shall occur immediately.
- 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.

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 4 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.
- An 8-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 (Mert 500X) may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

VEGETATION

OFFSITE AREAS:
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.

ONSITE:
Refer to drawings for areas which shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

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)

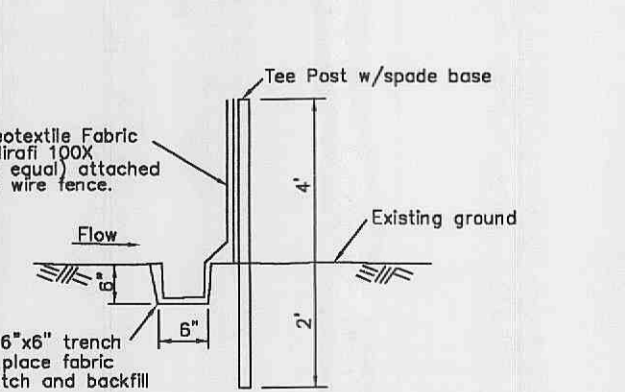
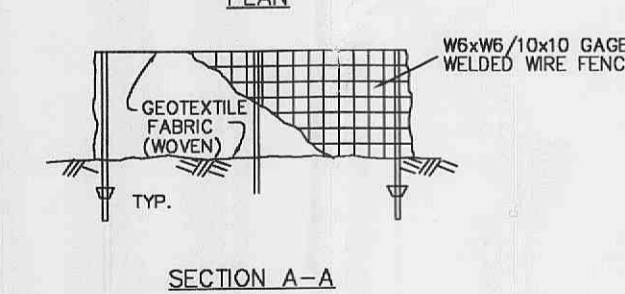
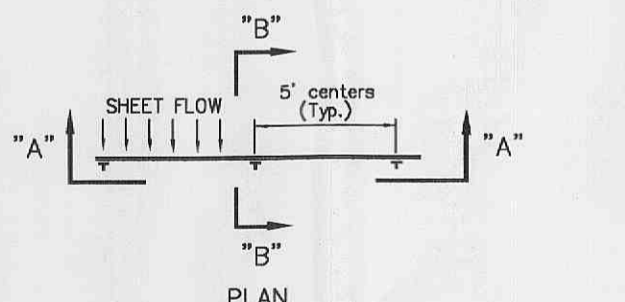
Fertilizer Rates:

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

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

MAINTENANCE

Seeded areas 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.



SILTATION CONTROL SILT FENCE DETAIL (n.t.s.)

SILTATION CONTROL STRAW BALE DETAIL (n.t.s.)

GENERAL NOTES:

- Do not scale drawing. Follow Dimensions.
- Additional siltation control shall be provided as directed by the City of O'Fallon.
- Siltation Control Devices to remain in place until adequate vegetative growth insures no further erosion of the soil.
- Siltation Fences shall be inspected periodically for damage and for the amount of sedimentation which has accumulated. Removal of sediment will be required when it reaches 1/2 of the height of the siltation fence.
- Straw Bales shall be inspected periodically for deterioration. Bales which have rotted or failed shall be replaced as directed by the City of O'Fallon.
- Attachment of Waxed Wire Fence and Geotextile Fabric to be in accordance with the manufacturer's recommendation.

WATER LINE NOTES

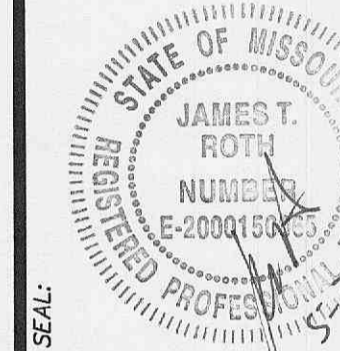
- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR WATER MAINS TO MEET REQUIREMENTS OF PUBLIC WATER DISTRICT NO. 2.
- WATER MAINS SHALL BE POLY VINYL CHLORIDE (PVC) CLASS 200, SDR 21 PIPE CONFORMING TO A.S.T.M. SPECIFICATION D2241. THE PIPE SHALL BE PRESSURE RATED FOR A HYDROSTATIC WORKING PRESSURE OF 200 PSI AT 73.4 DEGREES F AND SHALL MEET ALL APPLICABLE REQUIREMENTS AS SET FORTH UNDER COMMERCIAL STANDARD (CS) 256-63.
- DUCTILE IRON PIPE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL THE REQUIREMENTS OF U.S.A. STANDARD A2151 (A.W.W.A. C-151-85). THE PIPE SHALL BE FURNISHED WITH MECHANICAL, PUSH ON, OR FLANGE JOINTS AS REQUIRED. THE INTERIOR SURFACE OF PIPE SHALL BE COATED WITH A CEMENT-MORTAR LINING IN ACCORDANCE WITH U.S.A. STANDARD A 21.4 (A.W.W.A. C 104). AFTER DRYING, THE CEMENT LINING SHALL BE SEAL COATED WITH SIMILAR A.W.W.A. APPROVED BITUMINOUS VARNISH. ALL FITTINGS AND BENDS SHALL BE CONSTRUCTED OF CAST OR DUCTILE IRON.
- WATER MAIN TRACER TAPE TO BE INSTALLED WITH ALL WATER MAIN AND SHALL CONSIST OF THREE INCH WIDE TAPE MADE OF BONDED LAYER PLASTIC WITH A METALLIC FOIL CORE. TAPE SHALL BE "TERRA TAPE D" AS MANUFACTURED BY THE GRIFFOLYN COMPANY OF HOUSTON, TEXAS, OR APPROVED EQUAL.
- WATER MAIN LOCATOR WIRE SHALL BE INSTALLED WITH ALL WATER MAIN, FITTINGS, AND VALVE INSTALLATION AND SHALL CONSIST OF A STANDARD ELECTRIC SERVICE WIRE, A SINGLE NO. 12 U.L. APPROVED SOLID COPPER WIRE WITH INSULATION FOR 600 VOLTS.
- ALL VALVES FOR EXTERIOR USE SHALL BE BURIED GATE VALVES WITH A VALVE BOX AND TWO INCH SQUARE NUT ATTACHMENT FOR MANUAL OPERATION WITH STANDARD VALVE WRENCH. GATE VALVES SHALL BE IRON BODIED WITH BRASS OR BRONZE MOUNTED DOUBLE DISC GATE. GATE VALVES SHALL BE OF THE NON-RISING STEM TYPE, OPENED BY TURNING COUNTER-CLOCKWISE. THE VALVE STEM SHALL HAVE DOUBLE "O" RING SEALS AND TERMINATE AT TOP WITH TWO INCH SQUARE NUT. GATE VALVE CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GOVERNING SPECIFICATIONS OF THE A.S.T.M. AND A.W.W.A. ALL GATE VALVES FOR USE SHALL BE "MUELLER" OR APPROVED EQUAL.
- VALVE BOXES FOR USE SHALL BE THE SCREW-TYPE, EXTENSION SLEEVE KIND, OR P.V.C. PIPE. ALL BOXES SHALL BE FITTED WITH A RECESSED COVER HAVING THE WORD "WATER" GAST IN THE TOP.
- FIRE HYDRANTS SHALL BE MUELLER "CENTURION" OR THE AMERICAN DARLING MODEL NO. "B-84-B". HYDRANTS SHALL BE TRAFFIC MODEL TYPE WITH A WORKING PRESSURE OF 150 PSI IN FULL COMPLIANCE WITH A.W.W.A. STANDARD SPECIFICATIONS C-502 OF THE LATEST REVISION. HYDRANTS TO BE THREE-WAY WITH TWO HOSE CONNECTIONS AND ONE PUMPER CONNECTION AND SHALL HAVE 5 1/4" VALVE OPENINGS. HYDRANT COLOR PER FIRE DISTRICT.
- CONCRETE FOR THRUST BLOCKING AT BENDS, TEES, VALVES, HYDRANTS, ETC., SHALL BE 3,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- BEFORE WATER MAINS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE TESTED FOR TWO HOURS ON EACH SEGMENT BETWEEN END POINTS AT A TEST PRESSURE OF AT LEAST 50% IN EXCESS OF NORMAL MAXIMUM OPERATING PRESSURE, NOT TO EXCEED 200 PSI. WATER MAINS SHALL BE STERILIZED AND FLUSHED IN ACCORDANCE WITH THE PUBLIC WATER DISTRICT NO. 2. SPECIFICATIONS.
- ALL WATER LINES AND SERVICE LINES SHALL HAVE A MINIMUM OF 42" OF COVERAGE.
- VERTICAL CLEARANCE BETWEEN SEWERS AND WATER MAINS SHALL BE A MINIMUM OF 2' - 0".



CALL 1-800-DIG-RITE (MISSOURI ONE CALL) TO HAVE LOCATIONS MARKED IN THE FIELD (SUBSCRIBING UTILITIES REQUIRE 48 HOURS NOTICE PRIOR TO CONSTRUCTION).

DATE	BY	REVISION COMMENTS
3/7/04		
4/7/04		

DEVELOPER/OWNER:
MCEAGLE DEVELOPMENT COMPANY
1001 BOARDWALK SPRINGS PLACE
O'FALLON, MO 63366
636-561-9300



SHOPPES AT WINGHAVEN

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Job Number: 03-303
Sheet Number: C2.0