

CITY APPROVAL OF THE CONSTRUCTION SITE PLANS DOES NOT MEAN THAT ANY BUILDING CAN BE CONSTRUCTED ON THE LOTS WITHOUT MEETING THE BUILDING SETBACKS AS REQUIRED BY THE ZONING CODE.

ALL PROPOSED UTILITIES AND/OR UTILITY RELOCATIONS SHALL BE LOCATED UNDERGROUND.

IF MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETERIOUS MATERIAL ARE NOT TO BE REUSED, THEY SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THE MATERIALS LISTED PREVIOUSLY ARE REUSED, A LETTER FROM A SOILS ENGINEER MUST CLARIFY AMOUNT, LOCATION, DEPTH ETC. AND 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.

NO SLOPES SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL).

ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWERS, PROPOSED ROADS AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF 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 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 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.

DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH AN ENGINEER'S SOIL REPORTS PRIOR TO AND DURING SITE SOIL TESTING. THE SOILS 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% AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) 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 THE DOCUMENT.
SPECIFIC GRAVITY.
NATURAL MOISTURE CONTENT.
LIQUID LIMIT.
PLASTIC LIMIT.

THE PERMITEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITEE 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 THE CITY OF O'FALLON AND AS NECESSARY BY MODOOT. THE PERMITEE'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 MODOOT MAY AT THEIR OPTION DIRECT THE PERMITEE 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 SILT OR MUD IN NEW OR EXISTING STORM SEWERS 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 MODOOT.

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.

ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED IN A MANNER ACCEPTABLE TO THE CITY OF O'FALLON CONSTRUCTION INSPECTION DEPARTMENT AND FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS.

ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.

SIDEWALKS, CURB RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENTLY APPROVED AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES ALONG WITH THE REQUIRED GRADES, SIGNAGE, SPECIFICATIONS AND CONSTRUCTION MATERIALS. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL BE FOLLOWED AND THE CONTRACTOR, PRIOR TO ANY CONSTRUCTION, SHALL NOTIFY THE PROJECT ENGINEER.

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.

TRAFFIC CONTROL IS TO BE PER MODOOT OR MUTCD WHICHEVER IS MORE STRINGENT.

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 MODOOT).

LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION.

CONNECTIONS AT ALL SANITARY OR STORM STRUCTURES TO BE MADE WITH A-LOCK JOINT OR EQUAL.

BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF SANITARY OR STORM SEWER STRUCTURES. PRE-CAST CONCRETE STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY.

ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.

HDPE PIPE IS TO BE N-12WT OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT FIELD TEST.

RIP-RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER, CONTRACTOR AND CITY INSPECTOR AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY, TO REDUCE EROSION ON AND OFF-SITE.

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 APPROVED EQUAL. "PEEL AND STICK" ADHESIVE PADS WILL NOT BE ALLOWED.

MANUFACTURER	PIPE SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACP INTERNATIONAL	3 7/8"	EPOXY CAP	CRYSTAL	NO DUMPING DRAINS TO WATERWAYS (SD-W-CC)	WWW.ACPINTERNATIONAL.COM
DAS MANUFACTURING INC.	4"	EPOXY	STANDARD	NO DUMPING DRAINS TO STREAM (#SDS)	WWW.DASMANUFACTURING.COM

A 5/8" TRASH BAR SHALL BE CENTERED WITHIN THE OPENING(S) OF ALL CURB INLETS AND AREA INLETS.

ALL IDENTIFICATION OR DIRECTIONAL SIGN(S) MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION.

NO GRADED AREAS ARE TO REMAIN BARE FOR OVER 14 DAYS WITHOUT BEING SEEDED AND MULCHED.

ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT FROM THE PLANNING & DEVELOPMENT DIVISION

Utility Contacts

Sanitary Sewers

City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
Contact: 636-281-2858

Water

City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
Contact: 636-281-2858

Storm Sewer

City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
636-281-2858

Electric

Ameren UE
200 Callahan Road
Wentzville, MO. 63385
636-639-8312

Gas

Laclede Gas Company
6400 Graham Road
St. Louis, MO. 63134
314-522-2297

Telephone

Century Tel
1151 Century Tel Dr.
Wentzville, MO. 63385
636-445-7052

Fire District

O'Fallon Fire Protection District
119 E. Elm St.
O'Fallon, MO. 63366
636-272-3493



AERIAL FOR ADJOINING STREETS AND AND HYDRANT LOCATIONS

N.T.S.

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Proctor Compaction Test or (ASTM D 1557). Any soft areas encountered during the proofrolling should be undercut and replaced with a properly compacted fill.

Areas where the existing grades are steeper than 5 horizontal: 1 vertical, and are to be filled, should be benched prior to filling. The benches should be cut at least 10 feet wide with a maximum vertical spacing of 5 feet between benches. The fill shall be placed on these level benches cut into approved soil. Benching is necessary for general slope stability.

We recommend the site preparation work be observed by a qualified soils technician working under the supervision of a Missouri registered professional engineer, prior to the placement of new compacted fill, to help verify that the above recommendations are carried out.

For cut/fill calculations, we recommend a shrinkage factor of 10% be applied to the onsite soils to be used as fill. Actual shrinkage amounts may vary.

Fill Placement and Compaction

In general, all soil to be used for engineered fill in structural areas of the site should consist of low plasticity soils, i.e., soils with a Liquid Limit less than 50, rocky clay with at least 50% or more rock fragments, or approved granular fill.

We recommend the slopes be built from the "bottom up" to provide the best compaction and stability.

All soil fill should be placed in loose lifts not exceeding eight inches in thickness and compacted. The fill should be compacted to at least 90% of the maximum density

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obtained from the Modified Proctor Compaction Test (ASTM D 1557). The placement and compaction of the fill should be observed and tested by a qualified soils technician to verify compliance with the above recommendations. At the completion of the grading operation, the building areas and all areas to be paved should be proofrolled to at least 90 percent of the above specification.

We recommend the geotechnical engineer be employed by the developer for independent quality control purposes. The earthwork contractor should be independently responsible to meet the project compaction requirements. If the contractor chooses to rely on the results of the developer's quality control compaction monitoring, that does not relieve the contractor's responsibility to meet the specified minimum compaction for new fill.

SLOPES

All proposed slopes shall be 3 horizontal to 1 vertical or less steep in inclination. Based upon the results of the subsurface exploration, it is our opinion the 3:1 slopes will be stable with an acceptable factor of safety provided the site is graded in accordance with the above grading recommendations.

SEWER AND UTILITY BACKFILLS

Where sewer and utility lines are not oriented perpendicular to the proposed contours their backfill can be detrimental to slope stability. These include, but are not limited to between storm OS4 to MH3, and sanitary between MHE to MHF and the sanitary 50 feet west of MHF. Backfill placed for sewer or utility lines that are not perpendicular to

THE COMPACTION DENSITY FOR PAVEMENT BASE SHOULD BE 90% OF MODIFIED PROCTOR COMPACTION.

STRUCTURAL FILL REQUIREMENTS CHART TAKEN FROM GEOTECHNICAL REPORT DATED SEPTEMBER, 2017 PLEASE REFER TO LATEST GEOTECH REPORT FOR ADDITIONAL INFORMATION. DOERING ENGINEERING TAKES NO RESPONSIBILITY FOR THIS INFORMATION ON THE PLANS.

4/26/18 Rev. Per. O'Fallon Comments
4/17/18 PLAN REVISIONS
3/29/18 REVERSE OVERFLOW STRUCTURE

Revised	Comment
6/7/17	1ST SUB TO CITY OF O'FALLON
8/3/17	Rev. Per. O'Fallon Comments
9/28/17	Rev. Per. O'Fallon Comments
9/28/17	Rev. per Modot comments
10/27/17	Rev. per city comments
11/25/17	Rev. per O'Fallon comments
2/22/18	Reverse Inflow on Autocore

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Engineered By:
DOERING ENGINEERING Inc.
CIVIL ENGINEERING • PLANNING • SURVEYING

Seal

STATE OF MISSOURI
MARK A. DOERING
Professional Engineer
E-23059
4/26/18

MARK A. DOERING
CIVIL ENGINEER E-23059
4/26/18
MO. EXPIRATION DATE:
DECEMBER 31 2018
IL. EXPIRATION DATE:
APRIL 30 2019
MO. CORPORATE
LICENSE NO. 001347
IL CORPORATE
LICENSE NO. 184.003035

BLUE IGUANA CAR WASH
1008 HIGHWAY K
O'FALLON, MO 63366
NOTES

Date: 6/7/17	Project Number: 16028
File Name: 16028_cd2	
Drawn By: JAB	Sheet
Check By: MAD	

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