

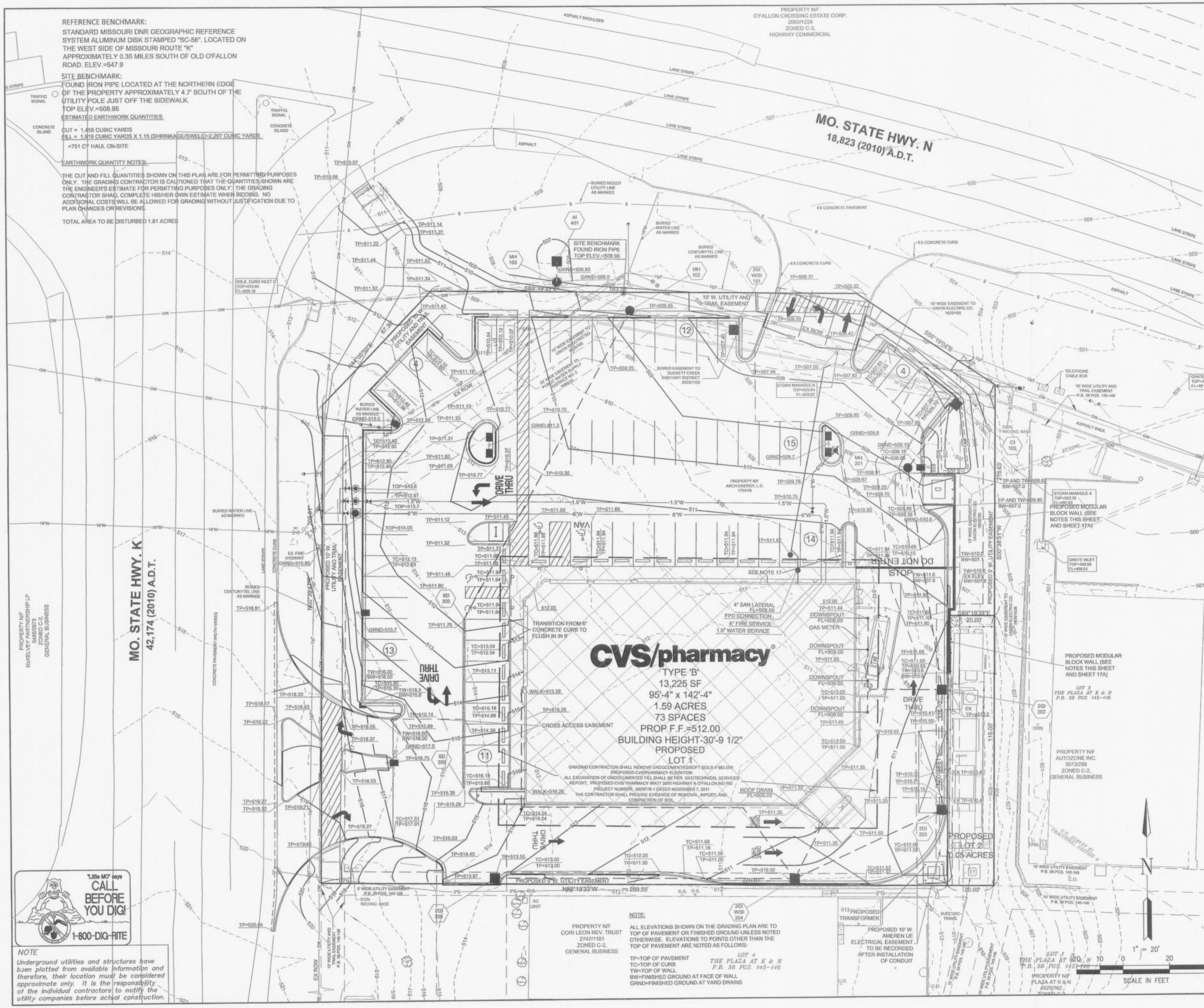
REFERENCE BENCHMARK:
STANDARD MISSOURI DNR GEOGRAPHIC REFERENCE
SYSTEM ALUMINUM DISK STAMPED "SC-56". LOCATED ON
THE WEST SIDE OF MISSOURI ROUTE "K"
APPROXIMATELY 0.35 MILES SOUTH OF OLD O'FALLON
ROAD. ELEV. = 547.9

SITE BENCHMARK:
FOUND IRON PIPE LOCATED AT THE NORTHERN EDGE
OF THE PROPERTY APPROXIMATELY 4.7' SOUTH OF THE
UTILITY POLE JUST OFF THE SIDEWALK.
TOP ELEV. = 508.86

ESTIMATED EARTHWORK QUANTITIES:
CUT = 1,458 CUBIC YARDS
FILL = 1,919 CUBIC YARDS X 1.15 (SHRINKAGE/SWELL) = 2,207 CUBIC YARDS
= 751 C' HAUL ON-SITE

EARTHWORK QUANTITY NOTES:
THE CUT AND FILL QUANTITIES SHOWN ON THIS PLAN ARE FOR PERMITTING PURPOSES
ONLY. THE GRADING CONTRACTOR IS CAUTIONED THAT THE QUANTITIES SHOWN ARE
THE ENGINEER'S ESTIMATE FOR PERMITTING PURPOSES ONLY. THE GRADING
CONTRACTOR SHALL COMPLETE HIS/HER OWN ESTIMATE WHEN BIDDING. NO
ADDITIONAL COSTS WILL BE ALLOWED FOR GRADING WITHOUT JUSTIFICATION DUE TO
PLAN CHANGES OR REVISIONS.

TOTAL AREA TO BE DISTURBED 1.81 ACRES



CVS/pharmacy
TYPE 'B'
13,226 SF
95'-4" x 142'-4"
1.59 ACRES
73 SPACES
PROP F.F. = 512.00
BUILDING HEIGHT - 30'-9 1/2"
PROPOSED LOT 1

COMPACTION REQUIREMENTS			
MATERIAL TESTED	PROCTOR TYPE	MIN DRY DENSITY %	MOISTURE CONTENT RANGE
STRUCTURAL FILL (COHESIVE)	MODIFIED	90%	-2 TO +2%
STRUCTURAL FILL (GRANULAR)	MODIFIED	90%	-2 TO +2%
RANDOM FILL (NON-LOAD BEARING)	MODIFIED	88%	-3 TO +3%
UTILITY TRENCH BACKFILL/WALL BACKFILL	MODIFIED	90%	-2 TO +2%

- GRADING NOTES**
- THE CONTRACTOR SHALL RESTORE OFFSITE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - ALL GRADES SHALL BE WITHIN 0.1 FEET MORE OR LESS OF THOSE SHOWN ON THE GRADING PLAN.
 - NO SLOPE SHALL BE GREATER THAN 3:1 AND SHALL BE EITHER SODDED OR SEEDED AND MULCHED UNLESS OTHERWISE NOTED OR DETAILED.
 - THE CONTRACTOR SHALL FIELD INVESTIGATE THE ENTIRE SITE PRIOR TO HIS BID SUBMITTAL NOTING THE EXISTING VEGETATION AND TREES AND INCLUDING THE REMOVAL AND DISPOSAL OF SAME IN HIS BID.
 - NO AREA SHALL BE CLEARED WITHOUT PERMISSION OF THE OWNER.
 - SILTATION CONTROL WILL BE PROVIDED AS REQUIRED TO PREVENT RUN-OFF. SEE SILTATION CONTROL PLAN AND DETAILS.
 - ALL TRASH, DEBRIS, ORGANIC MATERIAL, REFUSE, FROZEN EARTH, ETC., SHALL BE REMOVED FROM FILL AREAS PRIOR TO THE PLACEMENT OF CONTROL MATERIAL. ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
 - THE CONTRACTOR SHALL PROVIDE EROSION CONTROL PER THE EROSION AND SEDIMENT CONTROL PLANS AND MAY BE REQUIRED TO PROVIDE ADDITIONAL MEASURES AS REQUESTED BY THE CITY OF O'FALLON, SHOULD EROSION CONTROL PLAN PROVE TO BE INSUFFICIENT.
 - CARE SHALL BE EXERCISED IN COMPACTION OF BACKFILL MATERIALS OVER THE TOP OF STRUCTURES OR PIPES IN ORDER TO PREVENT DAMAGE TO THE WATERPROOFING MEMBRANES, JOINTS, SEALS AND/OR THE PIPES AND STRUCTURES THEMSELVES. COMPACTION AND PLACING OF BACKFILL AND FILL MATERIALS SHALL BE PERFORMED UNDER THE CONTINUOUS SUPERVISION OF AN APPROVED TESTING LABORATORY. 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 CITY, COUNTY, AND STATE ROADS SHALL BE KEPT FREE OF DIRT DAILY.
 - FINAL GRADES AT THE PROJECT BOUNDARY SHALL MATCH EXISTING ELEVATIONS UNLESS OTHERWISE SHOWN.
 - THE DEVELOPER IS REQUIRED TO PROVIDE ADEQUATE STORM WATER SYSTEMS IN ACCORDANCE WITH CITY OF O'FALLON STANDARDS.
 - ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH CITY MAPLEWOOD STANDARDS.
 - INTERIM STORM WATER DRAINAGE CONTROL, IN THE FORM OF SILTATION CONTROL MEASURES ARE REQUIRED.
 - G.C. TO BE AWARE THAT A LAND DISTURBANCE PERMIT WILL BE REQUIRED. SITE PLAN/APPRAVAL IS NOT TO BE CONSTRUED AS APPROVAL OF A LAND DISTURBANCE PERMIT.
 - ALL WORK SHALL BE IN COMPLIANCE WITH THE PROJECT GEOTECHNICAL SERVICES REPORT TITLED "PROPOSED CVS/ PHARMACY #8403 PROPOSED CVS/ PHARMACY #8403 7300 HIGHWAY K O'FALLON MO FSI PROJECT NUMBER: 0029776-1 DATED NOVEMBER 7, 2011
 - THIS IS A CURB TRANSITION AREA. THE TOP OF ASPHALT PAVEMENT AND THE TOP OF CURB ARE THE SAME ELEVATION AT THE POINT OF WHICH THE ASPHALT MEETS THE EDGE OF THE SIDEWALK. THE ASPHALT PAVEMENT WILL SLOPE DOWN FROM THE CURB THROUGH THE LENGTH OF THE PARKING SPACE. AT A POINT 18' FROM THE EDGE OF THE SIDEWALK THE TOP OF CURB SHALL BE 6" ABOVE THE ASPHALT PAVEMENT.
 - THE GENERAL CONTRACTOR SHALL INCLUDE \$35,000 IN BID FOR UNSUITABLE SOIL REMOVAL AND REPLACEMENT.
 - THE GENERAL CONTRACTOR SHALL INCLUDE \$25,000 IN BID FOR TREATMENT OF SOILS WITH LIME.
 - THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS/HER BID \$12,000 FOR THE POTENTIAL REMOVAL OF PETROLEUM IMPACTED SOILS THAT ARE DISTURBED AND REQUIRED TO BE DISPOSED OF OFF-SITE AS SPECIAL WASTE.

- PRECAST MODULAR BLOCK WALL NOTES**
- THE PRECAST MODULAR BLOCK WALL IS SHOWN ON THESE PLANS FOR HORIZONTAL AND VERTICAL LOCATION PURPOSES ONLY.
 - THE DESIGN OF THE MODULAR BLOCK WALL SHALL BE PROVIDED BY THE WALL CONTRACTOR. THE MODULAR BLOCK WALL PLANS SHALL BE SEALED BY AN ENGINEER REGISTERED IN THE STATE OF MISSOURI AND SUBMITTED TO THE CITY OF O'FALLON FOR APPROVAL.
 - THE MODULAR BLOCK WALL DESIGN SHALL BE SUBMITTED TO THE PROJECTS GEOTECHNICAL ENGINEER FOR APPROVAL BY THE WALL CONTRACTOR PRIOR TO CONSTRUCTION.
 - THE MODULAR BLOCK WALL BLOCK TYPE, AND SIZE SHALL BE SELECTED BY THE CVS REPRESENTATIVE PRIOR TO CONSTRUCTION. THE COLOR OF THE WALL SHALL BE BETHANY LEDGE. GENERAL CONTRACTOR IS TO CONTACT ARCHITECT BETHANY BLOCK AND BRICK REPRESENTATIVE DAVID MUDRO AT 314-988-0321. ADDRESS IS 12601 ST. CHARLES ROCK RID BRIDGETON, MO 63044
 - THE ELEVATIONS SHOWN FOR THE MODULAR BLOCK WALL MAY VARY ACCORDING TO THE WALL SYSTEM SELECTED. THE ABBREVIATION "TW" XXXXX AS INDICATED ON THE GRADING PLANS INDICATES THE PROPOSED ELEVATION AT THE TOP OF THE FINISHED WALL. THE ABBREVIATION "BW" XXXXX INDICATES THE FINISHED GROUND ELEVATION AT THE FACE OF THE COMPLETED WALL. THE ACTUAL ELEVATION OF THE BOTTOM OF THE MODULAR BLOCKS OR FOUNDATION WILL BE DIFFERENT AND SHALL BE BASED ON THE WALL DESIGN.
 - THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW GLOBAL STABILITY, FOUNDATION STABILITY AND WALL STABILITY AND ISSUE A REPORT TO THE CVS REPRESENTATIVE PRIOR TO CONSTRUCTION. THE WALL INSTALLER SHALL PROVIDE AN ALLOWANCE IN HIS/HER BID OF \$5,000.00 FOR THIS PURPOSE.
 - INTERNAL STABILITY ANALYSES SHOULD CONFORM TO THE LATEST DESIGN METHODOLOGY ACCEPTED FOR USE BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA), AASHTO, OR THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA). SINCE THESE ANALYSIS PROCEDURES ARE BASED ON THE USE OF DRAINED STRENGTH PARAMETERS, THE BACKFILL USED FOR THE GEGRID REINFORCED BACKFILL SECTIONS SHOULD BE A DRAINABLE GRANULAR MATERIAL CONFORMING TO THE ASSUMPTIONS OF THE ANALYSIS. COHESIVE SOIL OR GRANULAR MATERIAL CONTAINING HIGH AMOUNTS OF FINES ARE NOT CONSIDERED DRAINABLE AND SHOULD NOT BE ALLOWED IN THE GEGRID REINFORCED BACKFILL ZONES, UNLESS PROVISIONS ARE MADE TO PROVIDE BACKSLOPE AND SURFACE DRAINAGE THAT WOULD PREVENT WATER FLOW ENTERING THE BACKFILL. BOTH THE AASHTO AND FHWA DESIGN METHODS SPECIFY THAT REINFORCED BACKFILL MATERIALS CONTAIN LESS THAN 15 PERCENT PASSING THE NO. 200 SIEVE. THE DESIGNER SHOULD STATE IN THE CONSTRUCTION SPECIFICATIONS THE BACKFILL MATERIAL DESCRIPTION AND DESIGN STRENGTH PARAMETERS SO THAT UNSUITABLE MATERIALS ARE NOT ALLOWED IN THE BACKFILL ZONES DURING CONSTRUCTION.

GLOBAL STABILITY OF THE WALL SYSTEMS SHOULD BE ANALYZED USING BOTH DRAINED AND UNDRAINED STRENGTH PARAMETERS. PARAMETERS USED IN THE ANALYSIS SHOULD NOT EXCEED THOSE GIVEN IN THE FOLLOWING TABLE FOR THE NATIVE AND FILL MATERIALS ENCOUNTERED, OR ANTICIPATED TO BE PLACED BEHIND THE REINFORCING ZONES OF THE PROJECT. THESE PARAMETERS ARE BASED ON LIMITED LABORATORY TESTING PERFORMED AS PART OF THIS STUDY AND OUR EXPERIENCE WITH SIMILAR MATERIALS. CONFIRMATORY TESTING IS RECOMMENDED. WE RECOMMEND THAT THE WALL CONTRACTOR/DESIGNER BE REQUIRED TO PROVIDE THE GLOBAL STABILITY ANALYSES BASED ON THE PLANNED FINAL CROSS-SECTIONS, INCLUDING THE TOPOGRAPHY ABOVE AND BELOW THE WALLS, USING THE GENERALIZED SUBSURFACE STRATIGRAPHY DISCUSSED IN GEOTECHNICAL REPORT.



PROJECT TITLE
NORTHEN 13,225-LEFT
CHAMFER DRIVE-THRU
STORE NUMBER: 6477
SEC HIGHWAY N AND HIGHWAY K
O'FALLON, MO
PROJECT TYPE NEW CONSTRUCTION
DEAL TYPE FEE FOR SERVICE
CS PROJECT NUMBER: 5710

PREMIER CIVIL ENGINEERING
Wentzville
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Phone (314) 925-7444 Fax (314) 925-7457
Premier Civil Engineering
Missouri State Certificate of Authority #LC0951128

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the use of plans authorized by the seal, signature, and date hereon attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after his date unless authorized.



STEVE MARION P.E.
ENGINEER
FE00007765

Developer / Owner Information
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Grading Plan
P-17 MO No. 26-11
APPROVED 12.11.11
City No.
Sheet Number:
10



NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

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