

WATER MAIN PLANS  
FOR  
SPRING WOOD 2ND PLAT  
CITY OF LEE'S SUMMIT  
JACKSON COUNTY, MISSOURI

Snyder & Associates Engineers & Planners, Inc.  
Missouri State Certificate of Authority #2006008544

PROJECT NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CURRENT VERSION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THESE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. THEY DO NOT CONSTITUTE ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES.
7. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT A LOCATION TO BE SELECTED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, SUCH LOCATION TO BE ON THE SITE.
8. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, HE SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS AND FOLLOW THE EROSION CONTROL PLAN PREPARED BY THE DESIGN ENGINEER.
9. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
10. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE FIRM DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FREE FROM MUCK AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEET OF THE WORKMAN OR MACHINERY ENGAGED IN SUBGRADE, LAYING REINFORCING STEEL AND DEPOSITING CONCRETE THEREIN. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATION, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADE TO PROVIDE A FIRM BASE FOR WORKING AND FOR PLACING THE FLOOR SLAB.
11. A MINIMUM OF TEN FEET (10') SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. AT ANY POINT WHERE SANITARY SEWER LINES CROSS THE WATER MAIN, THE SANITARY SEWER SHALL BE ENCASED IN CONCRETE FOR A DISTANCE OF TEN FEET (10') IN EACH DIRECTION FROM THE CROSSING UNLESS THE WATER MAIN IS A MINIMUM OF EIGHTEEN INCHES (18") ABOVE THE TOP OF THE SANITARY SEWER LINE.
12. CONTRACTOR SHALL PROVIDE TESTING AND INSPECTION PER SECTION 3900-WATER MAINS CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
13. DUCTILE IRON PIPE SHALL BE WRAPPED WITH POLYWRAP.
14. CONTRACTOR IS RESPONSIBLE FOR ALL TESTING RELATED TO THE WATER MAIN INSTALLATION AND ACCEPTANCE PER CITY SPECIFICATIONS.
15. ALL UTILITY STREET CROSSINGS SHALL BE BACKFILLED WITH FLOWABLE FILL, OR AB-3.
16. MINIMUM DEPTH OF COVER OVER WATERLINE SHALL BE 42 INCHES MAXIMUM DEPTH OF COVER SHALL BE SEVEN FEET (7').
17. SITE TOPOGRAPHY TAKEN FROM SURVEY COMPLETED BY RL BUFORD AND ASSOCIATES. CONTRACTOR TO VERIFY EXISTING CONDITIONS OF THE SITE THAT MAY NOT BE REPRESENTATIVE OF CONSTRUCTION PLANS.

EROSION CONTROL NOTES:

- A MISSOURI STATE OPERATING PERMIT FOR STORM WATER DISCHARGE IS REQUIRED IF CONSTRUCTION ACTIVITY DISTURBS ONE ACRE OR MORE IN ACCORDANCE WITH THE MISSOURI DEPARTMENT OF NATURAL RESOURCES' REGULATION (10 CSR 20-6.200). COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED IN THIS INSTANCE. A CONSTRUCTION PERMIT FOR LAND DISTURBANCE WILL BE SECURED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES AND PROVIDED TO THE CONTRACTOR.
- SLOPES ARE TO BE LEFT IN A ROUGHENED CONDITION DURING GRADING.
- CURB INLET SEDIMENTATION FILTERS ARE TO BE INSTALLED AROUND CURB INLETS WHERE SEDIMENTATION IS A CONCERN. (SEE SWPP FOR DETAILS)
- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF STORM INLETS & REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.
- EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO BEGINNING GRADING OPERATIONS WHERE POSSIBLE. ALL REMAINING EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IMMEDIATELY FOLLOWING GRADING OPERATIONS.
- THE SITE IS TO BE SEEDED AND MULCHED AND TEMPORARY EROSION CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.
- SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS INCLUDING THE DETENTION BASIN.
- ROCK LINING IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).
- ROCK LINING SHALL BE TYPE 2 ROCK DITCH LINER ACCORDING TO MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SEC. 609.60. ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT SEDIMENT AND SOIL EROSION FROM BEING TRANSPORTED ONTO ADJACENT PROPERTY AND INTO STREAMS, LAKES, PONDS, OR OTHER AREAS.
- CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED.
- A. EROSION PROTECTION
1. CODE COMPLIANCE: THE CONTRACTOR SHALL COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF THE MISSOURI CODE, THE MISSOURI DEPARTMENT OF NATURAL RESOURCES NPDES PERMIT, AND LOCAL ORDINANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASUREMENTS TO PROTECT AGAINST EROSION AND DUST POLLUTION ON THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.

2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER, ARCHITECT AND ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

3. ALL AREAS DISTURBED BY CONSTRUCTION ON THIS PROJECT WILL BE SUBJECT TO CURRENT REGULATORY REQUIREMENTS AND THESE STANDARDS.
- B. STORM WATER DISCHARGE PERMIT:
1. THIS PROJECT REQUIRES A LAND DISTURBANCE PERMIT FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION COMMISSION (EPC). THE OWNER SHALL OBTAIN THE PERMIT. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL REQUIREMENTS OF THE PERMIT INCLUDING THE STORM WATER POLLUTION PREVENTION PLAN.

2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO THE MISSOURI DNR UPON REQUEST WHICH INCLUDE THE NOTICE OF INTENT, PROOF OF PUBLICATION, POLLUTION PREVENTION PLAN, PROJECT INSPECTION DIARY, AND OTHER ITEMS. FAILURE TO COMPLY WITH THE DISCHARGE REQUIREMENTS IS IN VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF MISSOURI.

3. UPON FINAL STABILIZATION OF THE DISTURBED AREA, A "NOTICE OF DISCONTINUATION" MUST BE FILED BY THE OWNER WITH THE MISSOURI DNR. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN RECORD COPY AND PROVIDE ORIGINAL DOCUMENTS TO THE OWNER UPON ISSUANCE OF THE NOTICE OF DISCONTINUATION.
- POLLUTION PREVENTION PLAN:
1. SITE DESCRIPTION: THIS PROJECT IS FOR THE CONSTRUCTION OF ROUGH GRADING FOR COMMERCIAL DEVELOPMENT. THE ENTIRE PROJECT COVERS APPROXIMATELY 1.70 ACRES. THE ESTIMATED AVERAGE RUNOFF COEFFICIENT WILL BE 0.80 RUNOFF FROM THIS PROJECT SITE AND WILL BE ROUTED THROUGH THE EXISTING CITY STORM SEWER.

2. POTENTIAL SOURCES OF POLLUTION FOR THIS PROJECT RELATE TO SILTS, SEDIMENT, AND OTHER MATERIALS WHICH MAY BE TRANSPORTED FROM THE CONSTRUCTION SITE AS THE RESULT OF A STORM EVENT.

3. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.

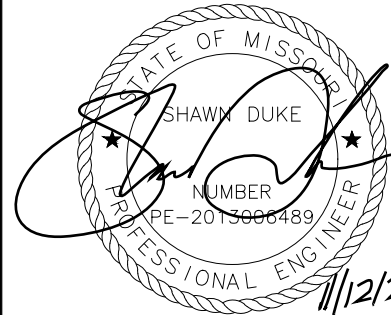
4. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

a. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS, AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.

b. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION, OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.

c. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT DOWNSTREAM OF DISTURBING ACTIVITIES AS REQUIRED AND AS SHOWN ON THE PLANS.

d. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.



SHAWN DUKE - ENGINEER  
MO PE#2013006489

WHISPERING WOODS 2ND PLAT  
WATER MAIN PLANS

GENERAL NOTES

LEE'S SUMMIT, MO

**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.

802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

www.snyder-associates.com



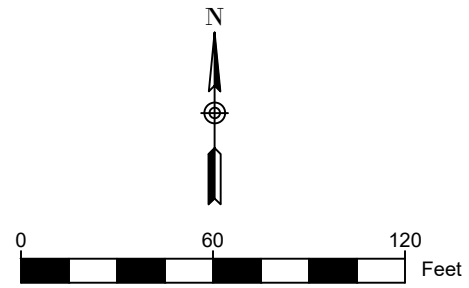
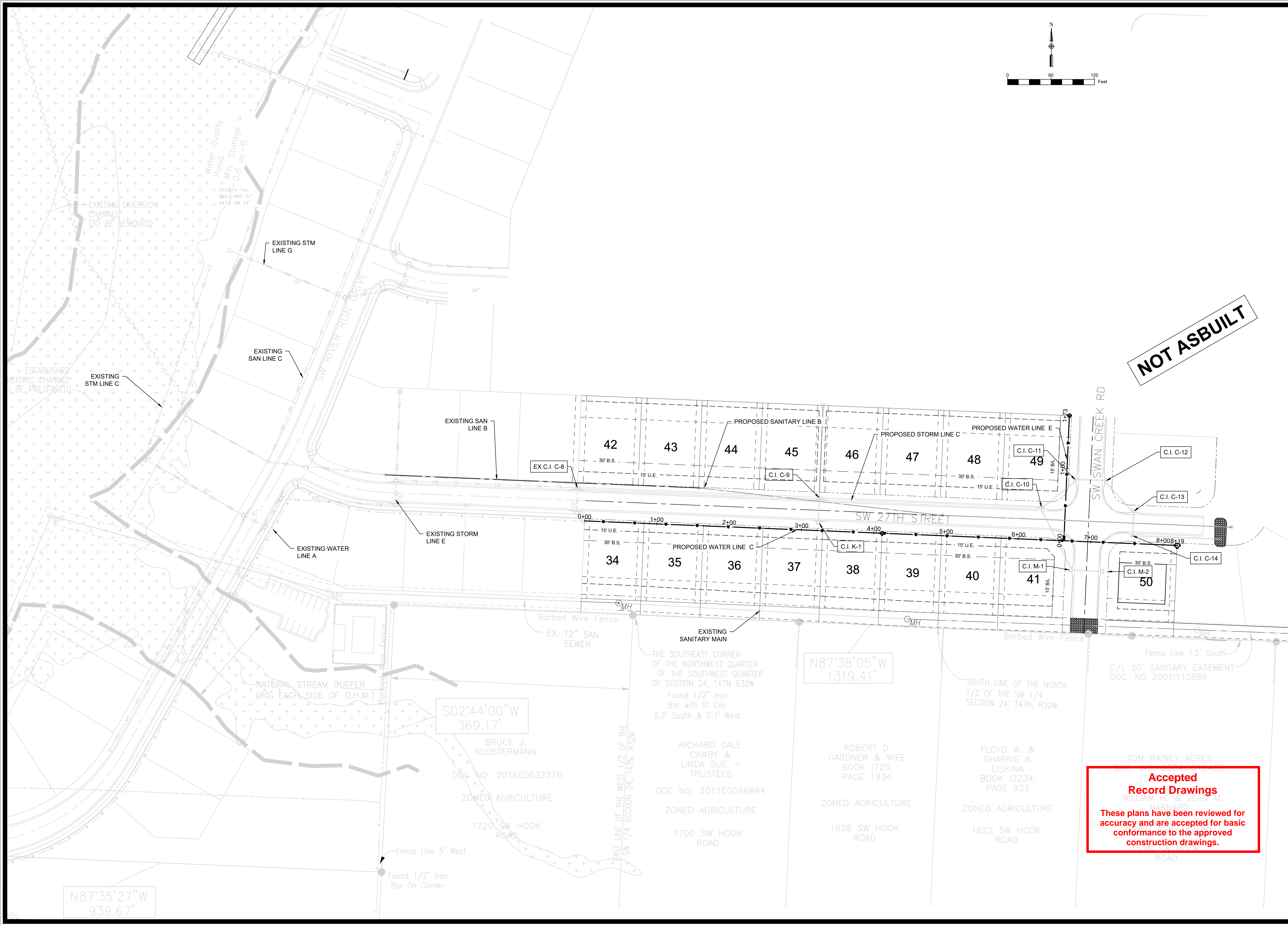
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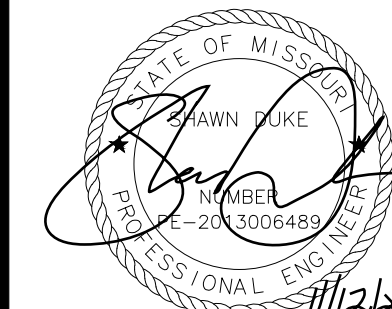
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Accepted  
Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.



MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 60'	
Technician: JS	Date: 7-28-20	Field Bk: Pg:	
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SHAWN DUKE - ENGINEER  
MO PE#2013006489

WHISPERING WOODS 2ND PLAT  
WATER MAIN PLANS

GENERAL LAYOUT

LEE'S SUMMIT, MO

**SNYDER & ASSOCIATES**  
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802 FRANCIS STREET  
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Sheet 3

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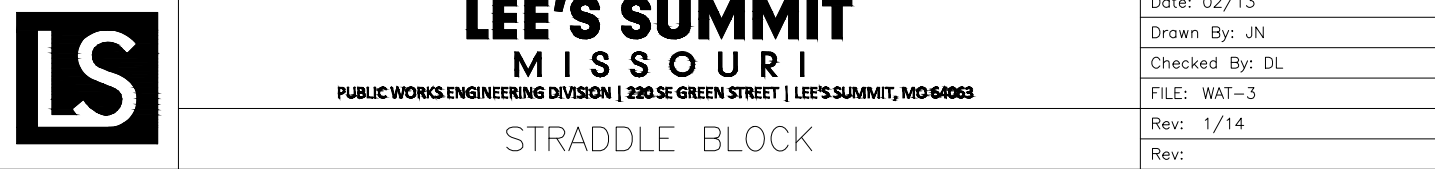
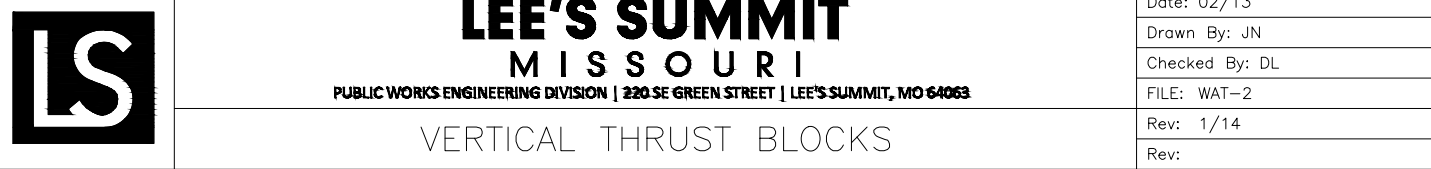
NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

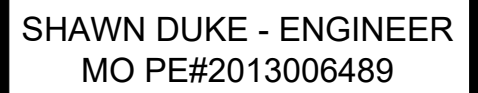


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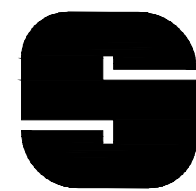


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802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.

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