

VETERANS MEMORIAL PARKWAY  
(SOUTH OUTER ROAD INTERSTATE HWY 70)

SCALE IN FEET  
1"=20'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

Some recent changes concern Pipe Field Testing and performance, and include the following:

**PART 4 - PIPE SEWER CONSTRUCTION**  
Section B, Pipe Field Tests, Paragraph 2, Reach Integrity Testing - delete the first sentence and the following replacement applies:

All sanitary and combined sewers shall sustain a maximum leakage limit of 100 gallons/mile of pipe diameter/mile of line/day, as required by the Missouri Department of Natural Resources Specifications.

Section B, Pipe Field Tests, Paragraph 2, Reach Integrity Testing, Subparagraph c, Infiltration/Exfiltration Testing - delete the sixth sentence, concerning leakage limits, and the following replacement applies:

The measurement of leakage shall not exceed 100 gallons/mile of pipe diameter/mile of line/day, as required by the Missouri Department of Natural Resources Specifications.

Section B, Pipe Field Tests, Paragraph 4, Manhole Testing, Subparagraph a, Vacuum Testing - after the first sentence the following addition applies:

The vacuum test must be performed prior to backfilling around the manhole unless the contractor provides documentation from the precast manhole manufacturer stating that the manhole may be vacuum tested after backfilling has taken place. The contractor must submit this documentation prior to backfilling around any manhole.

Section B, Pipe Field Tests, Paragraph 4, Manhole Testing, Subparagraph b, and the following addition applies:

For infiltration testing, the allowable leakage limit is 100 gallons/mile of pipe diameter/mile of line/day when the average head on the test section is three feet (3') or less.

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the clayton engineering company, inc.

ENGINEERS - SURVEYORS - PLANNERS

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REVISIONS	DATE	DESCRIPTION
1	07-20-22	EAS: Detention Access Easement and SWPPP inspection notes
2	04-26-22	EAS: City of Offallon comments
3	05-03-22	EAS: MODOT comments
4	05-13-22	EAS: BID SET
5	05-18-22	EAS: MODOT comments
6	06-09-22	EAS: New Address, trash rack, removed west gate
7	06-14-22	EAS: New west gate location

REVISION #10  
07-20-22

REVISION #7  
06-14-22

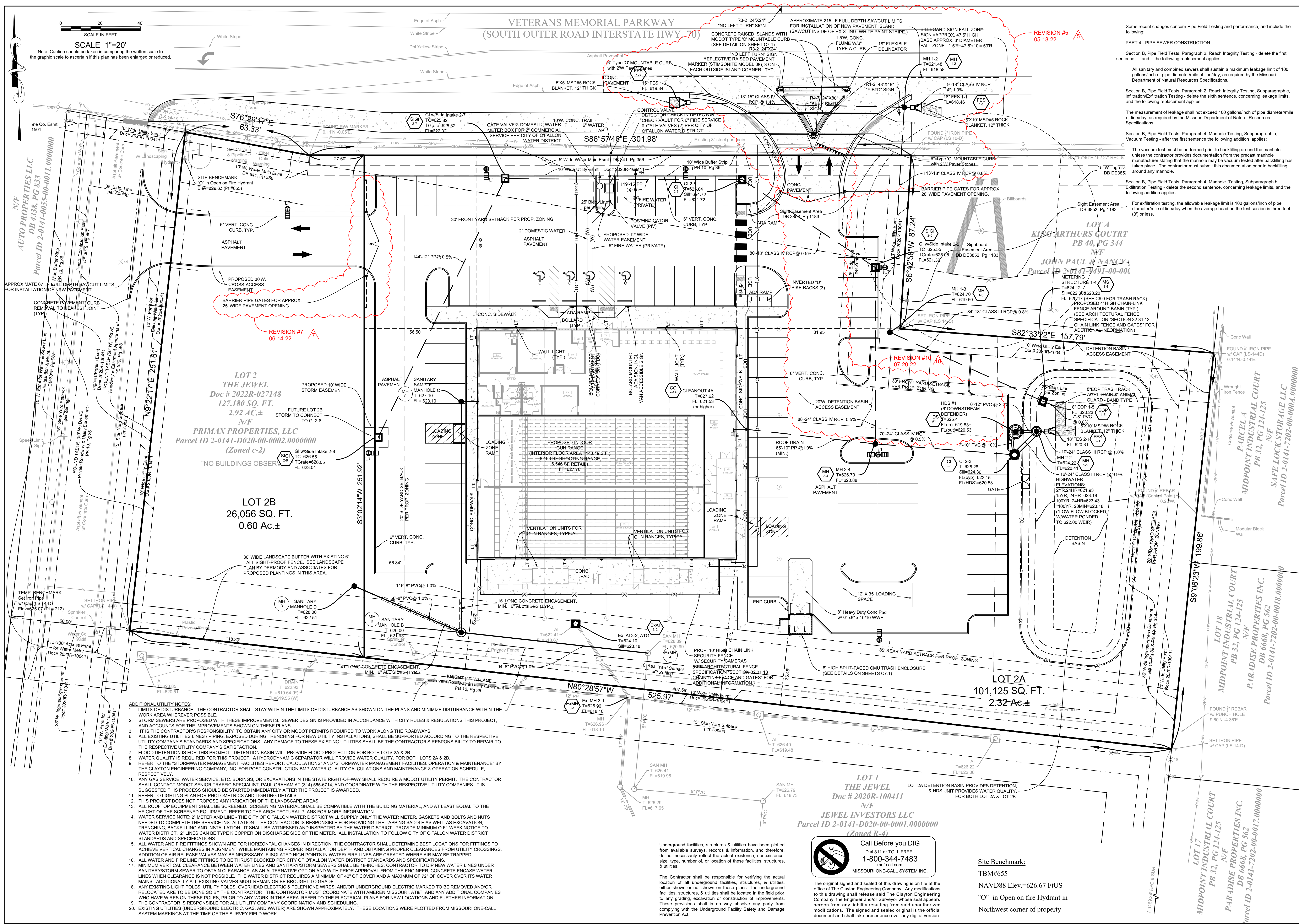
REVISION #5  
05-18-22

ERIC A. SKELTON - Professional Engineer  
No. 000000000

STATE OF MISSOURI  
REGISTERED PROFESSIONAL ENGINEER  
07-20-22

Designed: EAS  
Drawn: EAS  
Checked: EAS  
Date: March 19, 2022

Project Number: 21243  
Sheet Number: C4.0 of



- ADDITIONAL UTILITY NOTES:**
- LIMITS OF DISTURBANCE: THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHEREVER POSSIBLE.
  - STORM SEWERS ARE PROPOSED WITH THESE IMPROVEMENTS. SEWER DESIGN IS PROVIDED IN ACCORDANCE WITH CITY RULES & REGULATIONS THIS PROJECT. AND ACCOUNTS FOR THE IMPROVEMENTS SHOWN ON THESE PLANS.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY CITY OR MODOT PERMITS REQUIRED TO WORK ALONG THE ROADWAYS.
  - ALL EXISTING UTILITIES LINES (PIPING, EXPOSED DURING TRENCHING FOR NEW UTILITY INSTALLATIONS, SHALL BE SUPPORTED ACCORDING TO THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ANY DAMAGE TO THESE EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR TO THE RESPECTIVE UTILITY COMPANY'S SATISFACTION.
  - FLOOD DETENTION IS FOR THIS PROJECT. DETENTION BASIN WILL PROVIDE FLOOD PROTECTION FOR BOTH LOTS 2A & 2B.
  - WATER QUALITY IS REQUIRED FOR THIS PROJECT. A HYDRODYNAMIC SEPARATOR WILL PROVIDE WATER QUALITY. FOR BOTH LOTS 2A & 2B.
  - REFER TO THE "STORMWATER MANAGEMENT FACILITIES REPORT" AND "STORMWATER MANAGEMENT FACILITIES OPERATION & MAINTENANCE" BY THE CLAYTON ENGINEERING COMPANY, INC. FOR POST CONSTRUCTION BMP WATER QUALITY CALCULATIONS AND MAINTENANCE & OPERATION SCHEDULE, RESPECTIVELY.
  - ANY GAS SERVICE, WATER SERVICE, ETC. BORINGS, OR EXCAVATIONS IN THE STATE RIGHT-OF-WAY SHALL REQUIRE A MODOT UTILITY PERMIT. THE CONTRACTOR SHALL CONTACT MODOT SENIOR TRAFFIC SPECIALIST, PAUL GRAHAM AT (314) 565-6714, AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES. IT IS SUGGESTED THIS PROCESS SHOULD BE STARTED IMMEDIATELY AFTER THE PROJECT IS AWARDED.
  - REFER TO LIGHTING PLAN FOR PHOTOMETRICS AND LIGHTING DETAILS.
  - THIS PROJECT DOES NOT PROPOSE ANY IRRIGATION OF THE LANDSCAPE AREAS.
  - ALL ROOF TOP EQUIPMENT SHALL BE SCREENED. SCREENING MATERIAL SHALL BE COMPATIBLE WITH THE BUILDING MATERIAL, AND AT LEAST EQUAL TO THE HEIGHT OF THE SCREENED EQUIPMENT. REFER TO THE ARCHITECTURAL PLANS FOR MORE INFORMATION.
  - WATER SERVICE NOTE: 2" METER AND LINE - THE CITY OF OFFALON WATER DISTRICT WILL SUPPLY ONLY THE WATER METER, GASKETS AND BOLTS AND NUTS NEEDED TO COMPLETE THE SERVICE INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE TAPPING SADDLE AS WELL AS EXCAVATION, TRENCHING, BACKFILLING AND INSTALLATION. IT SHALL BE WITNESSED AND INSPECTED BY THE WATER DISTRICT. PROVIDE MINIMUM 0'1 WEEK NOTICE TO WATER DISTRICT. 2" LINES CAN BE TYPE K COPPER ON DISCHARGE SIDE OF THE METER. ALL INSTALLATION TO FOLLOW CITY OF OFFALON WATER DISTRICT STANDARDS AND SPECIFICATIONS.
  - ALL WATER AND FIRE FITTINGS SHOWN ARE FOR HORIZONTAL CHANGES IN DIRECTION. THE CONTRACTOR SHALL DETERMINE BEST LOCATIONS FOR FITTINGS TO ACHIEVE VERTICAL CHANGES IN ALIGNMENT WHILE MAINTAINING PROPER INSTALLATION DEPTH AND OBTAINING PROPER CLEARANCES FROM UTILITY CROSSINGS. ADDITION OF AIR RELEASE VALVES MAY BE NECESSARY IF ISOLATED HIGH POINTS IN WATER FIRE LINES ARE CREATED WHERE AIR MAY BE TRAPPED.
  - ALL WATER AND FIRE LINE FITTINGS TO BE THRUST BLOCKED PER CITY OF OFFALON WATER DISTRICT STANDARDS AND SPECIFICATIONS.
  - MINIMUM VERTICAL CLEARANCE BETWEEN WATER LINES AND SANITARY/STORM SEWERS SHALL BE 18-INCHES. CONTRACTOR TO DIP NEW WATER LINES UNDER SANITARY/STORM SEWER TO OBTAIN CLEARANCE. AS AN ALTERNATIVE OPTION AND WITH PRIOR APPROVAL FROM THE ENGINEER, CONCRETE ENCASE WATER LINES WHEN CLEARANCE IS NOT POSSIBLE. THE WATER DISTRICT REQUIRES A MINIMUM OF 42" OF COVER AND A MAXIMUM OF 72" OF COVER OVER ITS WATER MAINS. ADDITIONALLY ALL EXISTING VALVES MUST REMAIN OR BE BROUGHT TO GRADE.
  - ANY EXISTING LIGHT POLES, UTILITY POLES, OVERHEAD ELECTRIC & TELEPHONE WIRES, AND/OR UNDERGROUND ELECTRIC MARKED TO BE REMOVED AND/OR RELOCATED ARE TO BE DONE SO BY THE CONTRACTOR. THE CONTRACTOR MUST COORDINATE WITH AMEREN MISSOURI, AT&T, AND ANY ADDITIONAL COMPANIES WHO HAVE WIRES ON TO ANY WIRE IN THIS AREA. REFER TO THE ELECTRICAL PLANS FOR NEW LOCATIONS AND FURTHER INFORMATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY COORDINATION AND SCHEDULING.
  - EXISTING UTILITIES (UNDERGROUND ELECTRIC, GAS, AND WATER) ARE SHOWN APPROXIMATELY. THESE LOCATIONS WERE PLOTTED FROM MISSOURI ONE-CALL SYSTEM MARKINGS AT THE TIME OF THE SURVEY FIELD WORK.

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility and Damage Prevention Act.

The original signed and sealed of this drawing is on file at the office of The Clayton Engineering Company. Any modifications to this drawing shall release said The Clayton Engineering Company, the Engineer and/or Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications. The signed and sealed original is the official document and shall take precedence over any digital version.

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1-800-344-7483  
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**Site Benchmark:**  
TBM#655  
NAVD88 Elev.=626.67 FTUS  
"O" in Open on fire Hydrant in Northwest corner of property.