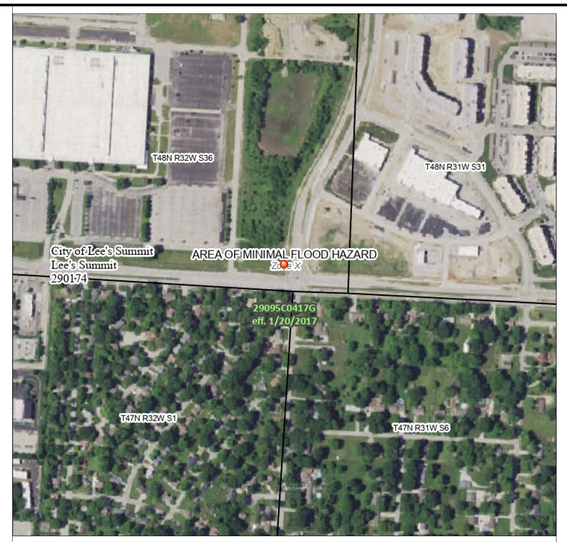
FINAL DEVELOPMENT PLAN



FLOOD INSURANCE RATE MAP

(N.T.S.)



LOCATION MAP
(N.T.S)

610 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086
JACKSON COUNTY
ZONING: PMIX PLANNED MIXED USE

DRAWING INDEX AND ISSUANCE LOG

SHEET #	SHEET NAME	DATE ISSUE	12/05/2025 OWNER REVIEW SET	12/22/2025 PERMIT SET	01/26/2026 PERMIT SET REV1	MM/DD/YYYY PERMIT SET REV2	MM/DD/YYYY REVISION 3	MM/DD/YYYY REVISION 4	MM/DD/YYYY REVISION 5	MM/DD/YYYY REVISION 6	MM/DD/YYYY REVISION 7	MM/DD/YYYY REVISION 8
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	MECHANICAL DETAILS				•							

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JOB NO. 06-24-20062

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SURVEYOR'S JOB NO. 25006813

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EVERGY
PHILLIP INGRAM OR
RON DEJARNETTE
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SPIRE
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AT&T
CLAYTON ANSPAUGH
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CA4089@ATT.COM

LEGAL DESCRIPTION PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE COMMITMENT NO.: KCC251158, COMMITMENT EFFECTIVE DATE: MAY 2, 2025 AT 8:00AM

L 10F, SUMMIT FAIR, LOTS 10D-10F, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEROF.

FIRE ACCESS ROAD NOTE:

ALL FIRE ACCESS LANES SHALL BE HEAVY DUTY ASPHALT CAPABLE OF SUPPORTING 75,000-POUNDS.

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED AT WW.DNR.MO.GOV/GEOLOGY/GEOSRV/OILANG.HTM, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

PRE-CONSTRUCTION MEETING NOTE:

THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

HFA
HFA-AE , LTD.

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f 888.520.9685
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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER 2023012235
ENGINEER

PRELIMINARY NOT FOR CONSTRUCTION, RECORDING, OR PERMITTING PURPOSES

2026.01.26 12:58:05-06'00'

DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
COVER SHEET

SHEET #
C-1.0

NOT ISSUED FOR CONSTRUCTION

Drawing Name: N:\HFA-FILES\2024 Projects\06-24-20062 VOC Lee's Summit, MO VMI Chipman\Civil\Design\Civil\CMOs\06-24-20062 - C-1 - COVER & NOTES.dwg Last Modified: Jan 26, 2026 - 8:58am Plotted on: Jan 26, 2026 - 8:58am by dfarfan.hfae

GENERAL NOTES

1. THE CONTRACTOR SHALL RETAIN A FULL SET OF LATEST APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS ON SITE DURING ALL CONSTRUCTION ACTIVITIES. LOCAL AUTHORITY'S STANDARDS SHALL SUPERSEDE ALL HFA STANDARDS.
2. THE CONTRACTOR WILL MAINTAIN ANY REQUIRED ACCESS TO ADJACENT PROPERTIES.
3. ANY TEMPORARY CONSTRUCTION EASEMENTS REQUIRED FOR PRIVATE WORK RELATED TO THE PROJECT SHALL BE ACQUIRED BY THE OWNER. NO WORK WILL BE PERFORMED ON PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION OF THE AFFECTED PROPERTY OWNER.
4. COORDINATE START-UP AND ALL CONSTRUCTION ACTIVITIES WITH THE OWNER.
5. CONSTRUCTION METHODS AND MATERIALS, NOT SPECIFIED IN THESE PLANS, ARE TO MEET OR EXCEED THE SITE WORK SPECIFICATIONS PROVIDED BY HFA, OR AS OTHERWISE SPECIFIED BY THE OWNER.
6. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH, AND IN ACCORDANCE WITH, REGULATIONS OF THE AUTHORITIES CONCERNED.
7. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT ALL WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC; AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG, AND ADJACENT TO, HIGHWAYS IN THE CONSTRUCTION AREA IN AN ADEQUATE AND SATISFACTORY MANNER, IN ACCORDANCE WITH THE DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
8. ALL AERIAL IMAGES ARE FOR REFERENCE ONLY AND ARE NOT TO SCALE.
9. ALL IMPORTED FILL SHALL BE FREE OF ROCKS GREATER THAN 12" IN DIAMETER AND ANY DETRIMENTAL ORGANIC MATERIAL OR REFUSE DEBRIS.
10. SAFETY RAILINGS ARE REQUIRED ON ANY RETAINING WALL 30" OR GREATER IN HEIGHT.
11. PROPOSED SPOT ELEVATIONS ARE AT TOP OF FINISHED CURB UNLESS OTHERWISE SPECIFIED.
12. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
13. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE DURATION OF THE CONSTRUCTION. THIS WILL BE APPLICABLE 24 HOURS A DAY.
14. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
15. ALL SIGNS AND TRAFFIC CONTROL DEVICES TO FOLLOW THE GUIDELINES OF THE MUTCD.
16. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR ALL BUILDING DIMENSIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND ENGINEER IN THE EVENT THERE ARE DISCREPANCIES DETERMINED BETWEEN PLANS.
17. THE DESIGN, INSPECTION AND CERTIFICATION OF ANY RETAINING WALL OVER 4FT SHALL BE BY A REGISTERED ENGINEER.
18. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
19. THE CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION.
20. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY, AND/OR MATERIAL, TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
21. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
22. THE ENGINEER OF RECORD SHALL REVIEW AND APPROVE MATERIAL SUBMITTALS.
23. THE DEMOLITION OF ANY EXISTING UNDERGROUND STORAGE TANKS, FUELING DISPENSERS, OR FUELING RELATED APPURTENANCES SUCH AS SUPPLY LINES, SHALL BE REMOVED PER LOCAL, STATE AND FEDERAL REQUIREMENTS.
24. THE CONTRACTOR SHALL MAINTAIN THE SITE AND PROVIDE 6' TALL CHAIN LINK SECURITY FENCE AROUND THE SITE UNTIL SUCH TIME AS THE OWNER TAKES OVER.
25. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL THROUGHOUT THE PROJECT, INCLUDING PROPER TRAFFIC CONTROL DEVICES AND/OR PERSONNEL AS REQUIRED. THIS INCLUDES BOTH VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH MUTCD.

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO DEMOLITION COMMENCING.
2. IF TOP SOIL OR OTHER SOIL IS TO BE STOCKPILED FOR MORE THAN 30 DAYS, A TEMPORARY COVER OF ANNUAL RYE OR OTHER SUITABLE GRASS SHALL BE PLANTED. STOCKPILE IS TO BE A MINIMUM DISTANCE OF 25' FROM ALL DRAINAGE STRUCTURES.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. WHEN SILT FENCE OR WATTLES ARE NOT PLACED AT A CONSTANT ELEVATION FOLLOWING CONTOURS ON STEEP SLOPES, THE "J" HOOK METHOD SHOULD BE USED (AT 50FT INTERVALS) TO CREATE PONDING AND PREVENT EROSION OF THE TRENCH BACKFILL OF SILT FENCE INSTALLATION
5. THE CONTRACTOR SHALL INCORPORATE PERMANENT EROSION CONTROL FEATURES AT THE EARLIEST PRACTICAL TIME. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE UNFORESEEN DURING THE DESIGN STAGE, THAT ARE NEEDED PRIOR TO INSTALLATION OF PERMANENT EROSION CONTROL FEATURES, OR THAT ARE NEEDED TEMPORARILY TO CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PROJECTS, BUT ARE NOT ASSOCIATED WITH PERMANENT CONTROL FEATURES ON THE PROJECT.
6. ALL STORM WATER POLLUTION PREVENTION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
7. ALL WASH WATER FROM CONCRETE TRUCKS, VEHICLE AND EQUIPMENT CLEANING, ETC. SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
8. GENERAL CONTRACTOR SHALL DENOTE THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, AND AREA FOR PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES.
9. THE CONTRACTOR WILL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY SWPPP. ADDITIONAL BMPS SHALL BE IMPLEMENTED AS NECESSARY AS THE PROJECT PROGRESSES AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
10. THE CONTRACTOR SHALL OBTAIN AND FOLLOW THE SWPPP AS APPROVED BY LOCAL AND STATE AGENCIES.
11. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS SHALL REQUIRE TEMPORARY SEED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM DETENTION STRUCTURES AT ALL POINTS THROUGHOUT CONSTRUCTION.
13. THE CONTRACTOR SHALL ADJUST EROSION CONTROL MEASURES THROUGHOUT GRADING AS NECESSARY TO PERFORM EFFECTIVELY.
14. RE-VEGETATION SHALL BE REQUIRED TO MEET THE FOLLOWING PERFORMANCE STANDARDS (SEDIMENT CONTROLS SHALL REMAIN IN PLACE UNTIL RE-VEGETATION IS ESTABLISHED).
15. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE REQUIRED TO BE EITHER EXISTING OR INSTALLED IN AREAS TO BE RE-VEGETATED. ANY APPLICATION OF TOPSOIL AND SEEDING UNDER THE DRIP LINE OF A TREE SHOULD BE MINIMIZED TO 3 INCHES SO AS NOT TO DAMAGE THE TREES ROOT SYSTEM.
16. ALL CONSTRUCTION TO BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACK FILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
17. PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
    A. ZERO TO 10% GRADE: RE-VEGETATION SHALL BE A MINIMUM OF SEEDING AND MULCHING.
    B. 10:1 UP TO 4:1 GRADE: RE-VEGETATION SHALL BE A MINIMUM OF HYDRO-SEEDING WITH MULCH AND FERTILIZER, SOD, OR GROUNDCOVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
    C. 4:1 TO 3:1 GRADE: THE SLOPE SHALL BE COVERED WITH LANDSCAPE FABRIC AND HYDRO-SEEDED WITH MULCH AND FERTILIZER, OR STAKED SOD, OR GROUNDCOVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
    D. MORE THAN 3:1 GRADE: ANY FINISH GRADE OVER 3:1 SHALL BE STABILIZED WITH ONE OR MORE OF THE FOLLOWING:
    E. RETAINING WALLS; CRIBBING WITH LANDSCAPE FABRIC; TERRACING WITH GROUNDCOVER; RIPRAP; STAKED SOD (UP TO 2:1 SLOPE)
    F. IF CRIBBING, TERRACING, OR RIPRAP IS USED, THE SLOPE'S STABILITY AND ERODIBILITY MUST BE EQUIVALENT TO OR BETTER THAN ITS PREDEVELOPMENT STATE.
20. PERMANENT EROSION CONTROL: THE DEVELOPER SHALL INCORPORATE PERMANENT EROSION CONTROL FEATURES AT THE EARLIEST PRACTICAL TIME. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE UNFORESEEN DURING THE DESIGN STAGE, THAT ARE NEEDED PRIOR TO INSTALLATION OF PERMANENT EROSION CONTROL FEATURES, OR THAT ARE NEEDED TEMPORARILY TO CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PROJECTS, BUT ARE NOT ASSOCIATED WITH PERMANENT CONTROL FEATURES ON THE PROJECT.
21. DUST: WHERE EXCESSIVE DUST MAY BECOME A PROBLEM, A PLAN FOR SPRAYING WATER ON HEAVILY TRAVELED DIRT AREAS SHALL BE ADDRESSED.
22. CONSTRUCTION EXITS: A STABILIZED ROCK EXIT IS REQUIRED ON CONSTRUCTION SITES. ROCK EXITS MUST BE AT LEAST 20' WIDE BY 50' LONG BY 6" THICK STABILIZED ROCK HAVING A MINIMUM AVERAGE DIAMETER OF 3". IF THERE IS AN EXISTING CURB, LOOSE MATERIAL SUCH AS FILL DIRT OR GRAVEL SHALL NOT BE USED TO RAMP UP TO IT FROM THE STREET. TEMPORARY WOODEN RAMPS IN FRONT OF CURBS ARE ACCEPTABLE.
23. DEBRIS, MUD, AND SOIL IN PUBLIC STREETS: DEBRIS, MUD AND SOIL SHALL NOT BE ALLOWED ON PUBLIC STREETS BUT IF ANY DEBRIS, MUD, OR SOIL FROM DEVELOPMENT SITES REACHES THE PUBLIC STREET IT SHALL BE IMMEDIATELY REMOVED VIA SWEEPING OR OTHER METHODS OF PHYSICAL REMOVAL. DEBRIS, MUD, OR SOIL IN THE STREET MAY NOT BE WASHED OFF THE STREET OR WASHED INTO THE STORM DRAINAGE SYSTEM. STORM DRAINAGE SYSTEMS DOWNSTREAM OF A DEVELOPMENT SITE SHOULD BE PROTECTED FROM DEBRIS, MUD, OR SOIL IN THE EVENT THAT DEBRIS, MUD, OR SOIL REACHES THE DRAINAGE SYSTEM.
24. FRANCHISE AND PRIVATE UTILITIES: THE PROPERTY OWNER OR MAIN CONTRACTOR ONSITE WILL BE RESPONSIBLE FOR RESTORING ALL EROSION AND SEDIMENT CONTROL SYSTEMS AND PUBLIC INFRASTRUCTURE DAMAGED OR DISTURBED BY UNDERGROUND PRIVATE OR FRANCHISE UTILITY CONSTRUCTION SUCH AS WATER AND SEWER SERVICE LEADS, TELEPHONE, GAS, CABLE, ETC. EROSION AND SEDIMENT CONTROL SYSTEMS MUST BE IMMEDIATELY RESTORED AFTER EACH UTILITY CONSTRUCTION.

EROSION CONTROL PLANNING SEQUENCE TO BE USED (IF NOT SPECIFIED ON EROSION CONTROL PLAN)

PHASE I
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES/EXITS.
2. PREPARE TEMPORARY PARKING AND STORAGE AREAS. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING: TRAILERS, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASH-OUT, MASON'S AREA, FUEL AND MATERIALS STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS THROUGHOUT THE CONSTRUCTION PROGRESS.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
5. CLEAR AND GRUB THE SITE.
6. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
7. BEGIN GRADING THE SITE.

PHASE II
1. TEMPORARILY SEED DISTURBED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUT STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IF SITE IS STABILIZED.

DEMOLITION NOTES

1. THE LOCATION OF THE UTILITIES SHOWN HAVE BEEN DETERMINED BY INFORMATION GATHERED AND SHALL NOT BE USED AS EXACT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO VERIFY EXACT LOCATIONS PRIOR TO DEMOLITION.
2. THE CONTRACTOR SHALL COORDINATE WITH THE PROPER UTILITY COMPANIES FOR REMOVAL AND RELOCATIONS OF THE RESPECTIVE UTILITY. THE CONTRACTOR SHALL VERIFY ANY WORK. THAT MAY BE DONE BY THE UTILITY COMPANIES.
3. CONTRACTOR SHALL PROTECT THE PUBLIC WITH BEST MANAGEMENT PRACTICES.
4. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING STRUCTURES, PAVEMENT, AND VEGETATION THAT IS NOT TO BE DISTURBED AND IS RESPONSIBLE FOR ANY DAMAGES TO THEM.
5. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL MATERIALS RESULTING FROM OPERATION ACCORDING TO GOVERNING AUTHORITIES AND SHALL OBTAIN THE PROPER PERMITS REQUIRED FOR DISPOSAL AND DEMOLITION.
6. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION AND AVOID ANY PROPERTY DAMAGE DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO DEMOLITION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICES TO ANY NECESSARY UTILITIES DURING CONSTRUCTION.
9. FOR ALL ITEMS NOTED TO BE REMOVED, REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALSO REMOVE ALL UNDERGROUND ELEMENTS AS WELL INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, PIPES, TANKS, ETC.
10. BACKFILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK MEETING THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL INVESTIGATION REPORT FOR THIS SITE.
11. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE PROPERLY PERMITTED AND REMOVED BY THE CONTRACTOR. CONTRACTOR SHALL SECURE ALL PERMITS FOR DEMOLITION AND REMOVAL OF MATERIALS FROM THE SITE.
12. LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE PLANS. ANY DAMAGE INCURRED TO ANY SURROUNDING AREAS SHALL BE REPAIRED / REPLACED AT THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PROTECT EXISTING ADJACENT STRUCTURES, PAVEMENT, UTILITIES, LANDSCAPE, ETC. FROM DAMAGE DURING CONSTRUCTION.
13. DEMOLITION AND REMOVAL OF UNDERGROUND STORAGE TANKS, FUELING DISPENSERS, AND FUELING RELATED APPURTENANCES SUCH AS SUPPLY LINES SHALL BE REMOVED AND DISPOSED OF PER LOCAL, STATE, AND FEDERAL REQUIREMENTS. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF SUPPLY LINES AND APPURTENANCES AND REMOVE PER REQUIREMENTS. CONTRACTOR SHALL SECURE ALL PERMITS FOR DEMOLITION AND REMOVAL OF MATERIALS FROM THE SITE.
14. CONTRACTOR SHALL ENSURE THAT SERVICES TO ALL UTILITIES TO BE REMOVED HAS BEEN DISCONTINUED AND SHUT OFF. ALL UTILITY LINES SHALL BE CAPPED PER UTILITY COMPANY STANDARDS.
15. CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNERS PRIOR TO DEMOLITION OF MATERIALS ALONG PROPERTY LINES.

SITE NOTES

1. UNLESS OTHERWISE SHOWN, ALL CURB RADII SHALL BE 5'.
2. ASPHALT CONCRETE SURFACE AND BASE COURSE MATERIALS SHOULD MEET OR EXCEED THE REQUIREMENTS AS OUTLINED IN THE SPECIFICATIONS OR AS SPECIFIED BY THE STATE OR LOCAL JURISDICTION, WHICHEVER IS MORE STRINGENT.
3. AN INDEPENDENT TESTING LABORATORY, SELECTED AND PAID FOR BY THE CONTRACTOR AND APPROVED BY THE OWNER, SHALL BE RETAINED TO PERFORM CONSTRUCTION TESTING OF IN-PLACE ASPHALT CONCRETE COURSES FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS AND SURFACE SMOOTHNESS REQUIREMENTS AS SPECIFIED IN THE CONSTRUCTION SPECIFICATIONS.
4. ALL REMOVAL OF ASPHALT PAVEMENT WILL BE SAW CUT.
5. CURBS MUST BE CAULKED BEFORE BACKFILLED AND STREET PAVED. ACCEPTABLE SUPPLIERS ARE: OMNI SEAL 50, PERCORA 864 AND 865, DOW CORNING 888, OR PRE-APPROVED EQUAL.
6. CONCRETE PIPE SHALL MEET LOCAL JURISDICTION OR DOT SPECS. NO DAMAGED OR REPAIRED PIPE WILL BE ALLOWED.
7. ANY DAMAGE TO THE EXISTING PUBLIC STREET DUE TO CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTORS EXPENSE.
8. PROVIDE A SMOOTH LINE BY FULL DEPTH SAW CUT FOR STREET WIDENING (TYP).
9. ALL EXISTING CURB CUTS WILL BE REMOVED AND REPLACED WITH STANDARD CURB, ANY CURB TO REMAIN THAT IS CURRENTLY DAMAGED OR CRACKED SHALL BE REMOVED AND REPLACED WITH STANDARD CURB, AND CURB DAMAGED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED.
10. DRIVEWAY APPROACHES SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE WITH A BROOM FINISH.
11. DETECTABLE WARNINGS ARE REQUIRED WHEN CONSTRUCTING OR ALTERING CURB RAMPS. A 24 IN WIDE STRIP OF DETECTABLE WARNING (TRUNCATED DOMES) SHOULD BE INSTALLED AT THE BOTTOM OF A CURB RAMP TO INDICATE THE TRANSITION FROM THE SIDEWALK TO THE STREET OR AS INDICATED ON DRAWINGS.
12. MINIMUM DENSITY FOR ASPHALT SHALL BE 92% OF THE MAXIMUM THEORETICAL DENSITY.
13. SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR.
14. BASE COURSE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR ON LOCAL AND RESIDENTIAL STREETS.

CONCRETE NOTES:
15. CONCRETE PAVING AND STRUCTURES SHOULD CONFORM TO PROJECT SPECIFICATION AND DETAILS. IF A DISCREPANCY IS FOUND THE MORE STRINGENT SHALL APPLY.
16. AN INDEPENDENT TESTING LABORATORY, SELECTED AND PAID FOR BY THE CONTRACTOR, AND APPROVED BY OWNER, SHALL BE RETAINED TO PERFORM CONSTRUCTION TESTING OF CONCRETE FOR COMPLIANCE WITH REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS.
17. VERTICAL CONCRETE SURFACES EXPOSED TO THE GENERAL PUBLIC SHALL BE WET-RUBBED TO A SMOOTH FINISH AFTER FORMS HAVE BEEN REMOVED. HORIZONTAL SURFACES SHALL BE BROOMED AS REQUIRED IN THE CONSTRUCTION SPECIFICATIONS.

PAVING NOTES

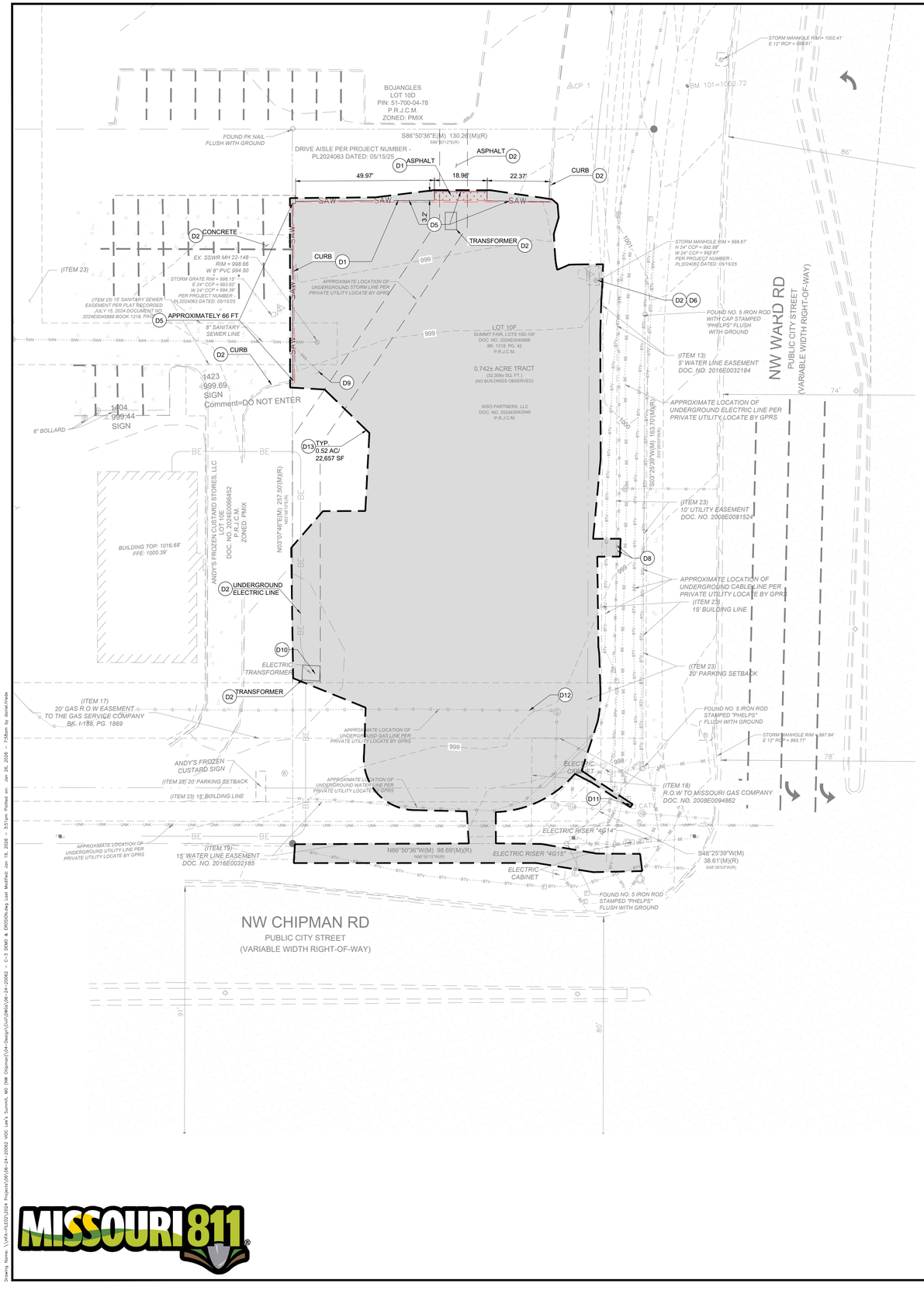
1. PLACE EXPANSION JOINT BETWEEN MEDIUM DUTY AND HEAVY DUTY CONCRETE.
2. CONTRACTOR TO PROVIDE DIAGONAL CONTROL JOINT FROM CORNERS OF PAVING TRANSITIONS.

GRADING NOTES

1. PROPOSED CONTOURS ARE AT FINISHED GRADE.
2. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES, EXCEPT THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PAVED AREA. BURNING OF TIMBER AND DEBRIS SHALL COMPLY WITH AHJ ORDINANCES.
3. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 8 INCH DEPTH COMPACTED TO 95% STANDARD PROCTOR OF THE MAXIMUM LABORATORY DENSITY. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.
4. OFF-SITE FILL MATERIAL (GRAVELLY CLAY), SHALL HAVE A PLASTICITY INDEX OF 15 OR LESS AND A CBR VALUE GREATER THAN 3. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO BRINGING ON SITE.
5. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM-AXLE DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOILS. CUT AREAS ARE TO BE SCARIFIED AND RECOMPACTED TO 95% STANDARD PROCTOR AND TESTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF BASE MATERIAL.
6. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOILS ARE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER SHALL RECOMMEND TO THE OWNER ON THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOF-ROLLING AND UNDERCUTTING SHALL BE PERFORMED DURING A SUFFICIENT DURATION OF DRY WEATHER.
7. AN INDEPENDENT CERTIFIED TESTING LABORATORY, SELECTED AND PAID FOR BY THE CONTRACTOR, AND APPROVED BY THE OWNER, SHALL BE RETAINED TO PERFORM CONSTRUCTION TESTING OF THE SUBGRADE FOR COMPLIANCE WITH THE MINIMUM REQUIREMENTS OF SUBGRADE COMPACTION. FOR BASE COURSE AND ASPHALT PAVING SEE TYPICAL SECTIONS AND SPECS.
8. ALL SLOPES ARE TO BE 3H:1V OR FLATTER UNLESS OTHERWISE INDICATED.
9. CONTRACTOR SHALL REFER TO THE STORMWATER POLLUTION PREVENTION PLAN AND REPORT FOR STORMWATER QUALITY CONTROL INCLUDING EROSION AND SEDIMENT CONTROL. PROPER MEASURES SHALL BE PRACTICED TO PREVENT EROSION ALONG THE EDGE OF PROPERTY, TOE OF SLOPE, AND ALONG DITCHES. MUD AND DEBRIS ARE NOT ALLOWED TO FLOW ONTO ADJACENT PROPERTIES OR PUBLIC ROADWAYS.
10. THE CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.
11. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL PERMIT REQUIREMENTS FOR THE DISPOSAL OF MATERIALS FROM THE SITE.
12. ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF TOPSOIL AND BE RE-VEGETATED. VEGETATION MUST BE ESTABLISHED TO MINIMIZE EROSION PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
13. PRIOR TO THE INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL NOT BE HELD LIABLE IF THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.
14. ALL GRADED AND OTHERWISE DISTURBED AREAS SHALL BE STABILIZED WITHIN 15 DAYS IMMEDIATELY AFTER GRADING OR DISTURBANCE HAS CEASED.
15. PERMANENT IMPROVEMENTS SUCH AS STREETS, STORM SEWERS, CURB AND GUTTERS, AND OTHER FEATURES FOR CONTROL OF RUNOFF SHALL BE SCHEDULED COINCIDENTAL TO REMOVING VEGETATIVE COVER FROM THE AREA SO THAT LARGE AREAS ARE NOT LEFT EXPOSED BEYOND THE CAPACITY OF TEMPORARY CONTROL MEASURES.
16. EROSION AND SEDIMENT CONTROL SYSTEMS MUST BE IMMEDIATELY RESTORED AFTER EACH UTILITY CONSTRUCTION. THE PROPERTY OWNER OR MAIN CONTRACTOR ONSITE WILL BE RESPONSIBLE FOR RESTORING ALL EROSION AND SEDIMENT CONTROL SYSTEMS AND PUBLIC INFRASTRUCTURE DAMAGED OR DISTURBED BY UNDERGROUND PRIVATE OR FRANCHISE UTILITY CONSTRUCTION SUCH AS WATER AND SEWER SERVICE LEADS, TELEPHONE, GAS, CABLE, ETC.
17. ALL CURBS SHALL BE 6 INCHES ABOVE FINISH GRADE UNLESS OTHERWISE SPECIFIED.
18. PRIOR TO DEMOLITION OCCURRING, EROSION CONTROL DEVICES ARE TO BE INSTALLED PER BMP SEQUENCE.
19. ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO INSURE CONNECTION AT STRUCTURE IS WATER TIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
20. ALL DRAINAGE STRUCTURES SHALL MEET H20 LOADING WHEN IN PAVED TRAFFIC AREAS. AND BE FLUSH WITH FINISHED GRADES IN PAVED AREAS.
21. EXISTING DRAINAGE STRUCTURES TO REMAIN SHALL BE INSPECTED AND REPAIRED AS NECESSARY. REMOVE ALL SILT AND DEBRIS.
22. FILLS SHALL BE LIMITED TO 10FT VERTICAL HEIGHT UNLESS INFORMATION DEMONSTRATING SLOPE STABILITY, EROSION CONTROL, AND DRAINAGE CONTROL IS PROVIDED ALONG WITH RE-VEGETATION.
23. TRANSITION GUTTER TO ALLOW A 4 INCH DEPRESSION AT CURB INLETS. (12FT FOR UPSTREAM SIDE AND SAGS AND 4FT FOR DOWNSTREAM SIDE)
24. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT 4FT OF DEPTH AND GREATER. CENTERLINE OF MANHOLE LID SHALL BE 2FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE.
25. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR PAVED AND UNPAVED AREAS.
26. PIPE LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM ALL PIPE LENGTHS.

UTILITY NOTES

1. EXISTING UTILITIES SHOWN ON PLANS HAVE BEEN SHOWN IN THEIR APPROXIMATE LOCATIONS PER AVAILABLE INFORMATION.
2. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE APPROPRIATE UTILITY AUTHORITIES, AND THE OWNER, AND CONTRACTOR HAVE BEEN NOTIFIED BY HFA.
3. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN UNLESS DULY AUTHORIZED TO DO SO BY THE AHJ. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. HFA AND THE OWNER ARE TO BE HELD HARMLESS.
4. ALL TRENCHING, BACKFILLING AND PIPE LAYING IS TO MEET ALL OSHA REQUIREMENTS.
5. THE LOCATION, DESCRIPTION AND SIZE OF ALL ABOVE-GROUND AND UNDER-GROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN DETERMINED WITH DUE CARE AND DILIGENCE, USING CURRENT TECHNIQUES, EQUIPMENT AND PROPER ACCURACY CONTROL PROCEDURES. HOWEVER, INFORMATION SHOWN HEREON IS NOT WARRANTED TO BE CORRECT IN EVERY DETAIL BECAUSE OF INACCURACIES IN OR LACK OF EXISTING DATA OR MAPS AND THE INABILITY TO VERIFY IN THE FIELD. PERSONS USING INFORMATION CONTAINED HEREON ARE HEREBY CAUTIONED ACCORDINGLY.
6. REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLANS.
7. ALL DESIGNS ARE SUBJECT TO THE AHJ'S LATEST DESIGN CRITERIA (WATER, SEWER, STREETS AND DRAINAGE). REVIEW FOR PLAT APPROVAL IS NOT APPROVAL OF PUBLIC IMPROVEMENTS, AND ALL PROPOSED IMPROVEMENTS ARE SUBJECT TO FURTHER REVIEW AT THE TIME CONSTRUCTION PLANS ARE SUBMITTED.
8. WATER AND SEWER IMPACT FEES WILL APPLY FOR THE ADDITIONAL IMPACT TO THE SYSTEM. THE FEES WILL BE BASED ON THE AHJS STANDARD REQUIREMENTS. THESE WILL BE PAID FOR BY THE OWNER.
9. ALL UTILITY SERVICE LINES TO BE CONNECTED TO NEW MAINS OR RELOCATED AS NEEDED FOR INSTALLATION OF STORM SEWER SYSTEM.
10. ALL CONDUITS PLACED BY CONTRACTOR MUST HA



GENERAL DEMOLITION NOTES:

1. ANY DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE CITY, COUNTY AND STATE, AND/OR GOVERNING BODY'S STANDARDS.
2. THE DEMOLITION PLAN SHALL BE DONE IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION REPORT.
3. EROSION AND SEDIMENT CONTROL MEASUREMENTS SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION.
4. THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.
5. THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY NEED TO BE REMOVED FOR THE PROPOSED PROJECT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF SUCH ITEMS AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE AREA OF WORK.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLAN OR NOT.
8. UPON DISCOVERY OF ANY UNDERGROUND TANKS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE. NO REMOVAL OF TANKS SHALL OCCUR UNTIL AUTHORIZED BY OWNER.
9. BUILDING AND APPURTENANCES DESIGNATED FOR DEMOLITION SHALL NOT BE DISTURBED BY THE CONTRACTOR UNTIL HE HAS FURNISHED WITH NOTICE TO PROCEED BY THE OWNER. AS SOON AS SUCH NOTICE HAS BEEN GIVEN, THE CONTRACTOR SHALL PERFORM THE DEMOLITION, UNDER THE DIRECTION OF THE OWNER'S REPRESENTATIVE.
9. ALL EXISTING UTILITIES WITHIN THE EXISTING BUILDING ARE TO BE REMOVED, WHERE CONFLICTS OCCUR WITH GRADE, BEAMS, PILES, PROPOSED UTILITIES AND TRENCH BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
10. FOUNDATIONS, FLOORS, FLOOR SLABS, AND ANY OTHER UNDERGROUND BUILDING STRUCTURES SHALL BE REMOVED IN ACCORDANCE WITH THE SPECIFICATIONS. AREAS OF STRUCTURE REMOVAL SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATIONS AND THE GEOTECHNICAL REPORT.
11. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL UNSUITABLE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL LAWS AND ORDINANCES.
12. ALL MATERIAL, EXCEPT THAT BELONGING TO A PUBLIC UTILITY COMPANY OR DENOTED FOR SALVAGE, SHALL BECOME PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER OF WATER, ELECTRIC, OR GAS METERS WHEN THE METERS ARE READY FOR REMOVAL, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL UTILITIES IN COMPLIANCE WITH LOCAL REQUIREMENTS. DISCONNECT TRANSFORMERS AS REQUIRED FOR BUILDING DEMOLITION.
13. AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, THE FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT TO PRESENT A NEAT, WELL DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL GRADE SITE TO EXISTING STORM DRAINAGE SYSTEM TO REMAIN ON SITE.
14. EXISTING TREES TO REMAIN SHOULD BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
15. THE CONTRACTOR IS TO COORDINATE WORK IN THIS PROJECT TO ENSURE ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
16. THE USE OF EXPLOSIVES SHALL NOT BE PERMITTED.

DEMOLITION KEY NOTES

#	
D1	EXISTING TO BE REMOVED
D2	EXISTING TO REMAIN
D5	LIMITS OF SAWCUT AND FULL DEPTH PAVEMENT REMOVAL
D6	EXISTING STRUCTURE TO BE PROTECTED DURING DEMOLITION AND CONSTRUCTION PHASES.
D8	CONTRACTOR TO COORDINATE WITH LOCAL WATER SEWER DEPARTMENT FOR POINT OF CONNECTION
D9	CONTRACTOR TO COORDINATE WITH LOCAL SANITARY SEWER DEPARTMENT FOR POINT OF CONNECTION
D10	CONTRACTOR TO COORDINATE WITH LOCAL ELECTRIC COMPANY FOR POINT OF CONNECTION
D11	CONTRACTOR TO COORDINATE WITH LOCAL TELEPHONE COMPANY FOR POINT OF CONNECTION
D12	CONTRACTOR TO COORDINATE WITH LOCAL GAS COMPANY FOR POINT OF CONNECTION
D13	DEMOLITION LIMITS

EXISTING LEGEND

	BOUNDARY LINE		FOUND SURVEY MONUMENT
	BOUNDARY ADJACENT / ROW LINE		SET SURVEY MONUMENT
	EASEMENT LINE		SITE CONTROL POINT
	EXISTING CURB LINE		SITE BENCHMARK
STS	UNDERGROUND STORM LINE	P.R.J.C.M.	PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
BE	UNDERGROUND ELECTRIC LINE	DOC. NO.	DOCUMENT NUMBER
UNK	UNSPECIFIED UTILITY LINE	BK. , PG.	BOOK, PAGE
W	UNDERGROUND WATER LINE		EXISTING HYDRANT
G	UNDERGROUND GAS LINE		EXISTING ELECTRIC METER
BTV	UNDERGROUND CABLE LINE	E	EXISTING ELECTRIC RISER
585	EXISTING MAJOR GROUND CONTOUR		EXISTING TELEPHONE HAND HOLE
586	EXISTING GROUND CONTOUR		EXISTING FIBER OPTIC HAND HOLE
	EXISTING BUILDING		EXISTING STORM MANHOLE/CATCH BASIN
	EXISTING ASPHALT		EXISTING SANITARY MANHOLE
	EXISTING CONCRETE		EXISTING TELEPHONE MANHOLE
			EXISTING STORM INLET
		B	EXISTING BOLLARD
		W	EXISTING WATER METER
	EXISTING TRAFFIC SIGNAL	G	EXISTING GAS VALVE
	EXISTING LIGHT POLE	CATV	EXISTING CABLE RISER
			EXISTING UTILITY POLE

PROPOSED LEGEND

	PROPERTY LINE
	LIMITS OF DISTURBANCE
SAW	PROPOSED SAW CUT
	ASPHALT TO BE REMOVED.
	AREA OF DISTURBANCE

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

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20 15 10 5 0 10 20 30 40

SCALE: 1 inch = 20 ft.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER PE-2023012235
NOTARIAL
RELEASED FOR CONSTRUCTION - NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES OR IMPLEMENTATION

2026.01.26 12:58:23-06'00'

DIEGO ALBERTO GARCIA
PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
LA-2005011193-LF

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER
06-24-20062

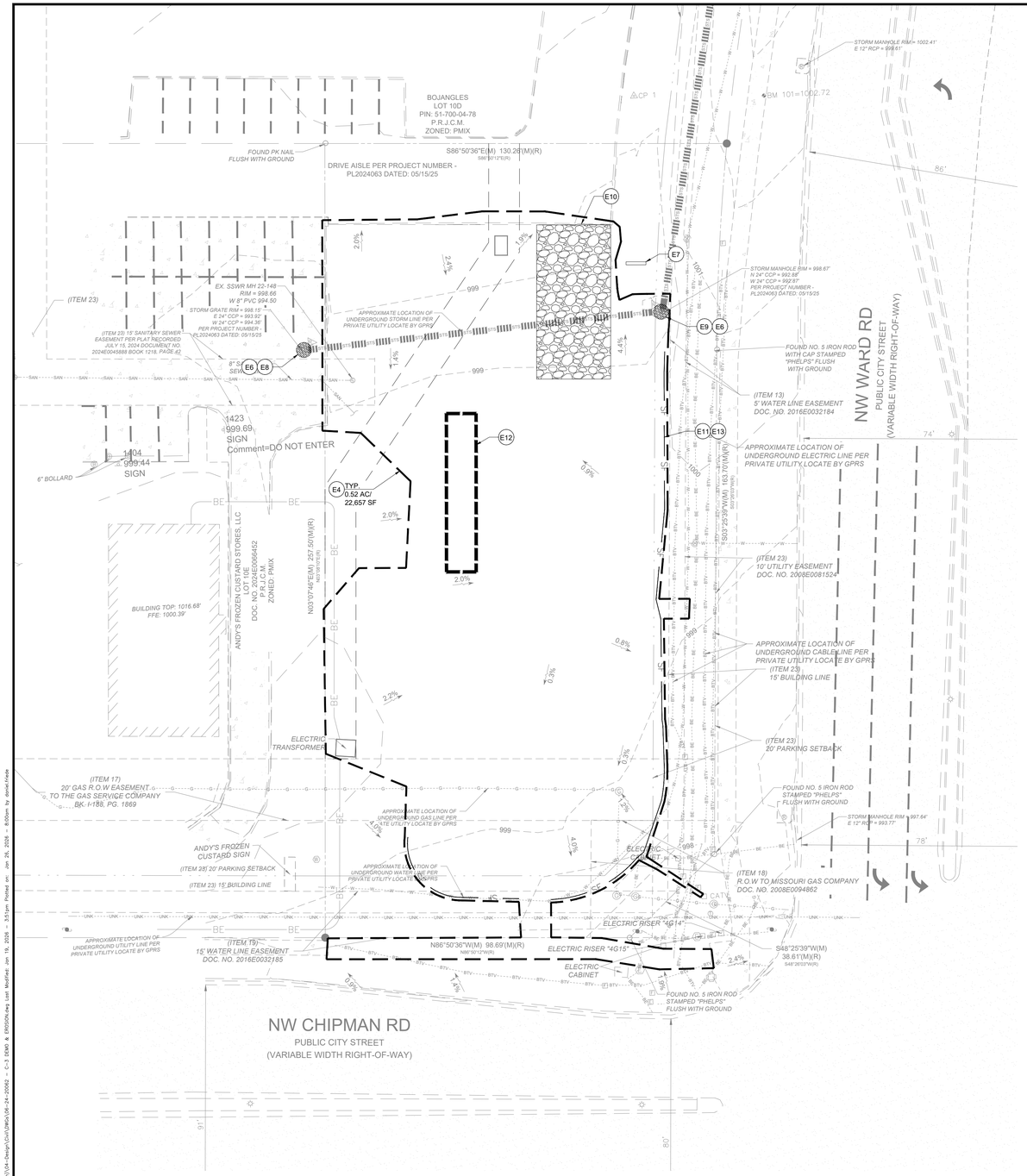
SHEET NAME
DEMOLITION PLAN

SHEET #
C-3.0

MISSOURI 811

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\HFA-KS\2025\2024 Projects\06-24-20062 - VOC - Lee's Summit, MO (NW Chipman)\04-Design\Civil\DWG\06-24-20062 - C-1 ENVR & DEMO.dwg Last Modified: Jan 16, 2026 - 3:51pm Plotted on: Jan 26, 2026 - 7:58am by daniel.kuhn



GENERAL EROSION NOTES:

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MISSOURI, MORA PERMIT FOR STORM WATER DISCHARGES AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. NEW OR AFFECTED CUT OR FILLED SLOPES MUST BE AT AN ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER, AND MUST BE PROVIDED WITH A GROUND COVER SUFFICIENT TO RETAIN EROSION WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE (ROUGH OR FINAL) OF GRADING.

I. A PERMANENT GROUND COVER, SUFFICIENT RESTRAIN EROSION, MUST BE PROVIDED WITHIN THE SHORTER OF 15 WORKING OR 90 CALENDAR DAYS (IF IN A HIGH QUALITY ZONE, THE SHORTER OF 15 WORKING OR 60 CALENDAR DAYS) AFTER COMPLETION OF CONSTRUCTION OR DEVELOPMENT ON ANY PORTION OF THE TRACT.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION/RETENTION POND AFTER THE STABILIZATION OF THE SITE AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS. CONTRACTORS OR SUBCONTRACTORS WILL ALSO BE RESPONSIBLE TO CLEAN THE SWALE FROM ANY SEDIMENT IF NECESSARY.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. SEDIMENT BASINS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.

P. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

Q. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, SILT DIKES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

R. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

BMP MAINTENANCE NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURE SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF OF THE SILT FENCE.
4. THE VEHICLE TRACKING CONTROL SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRED PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

PROJECT INFORMATION

THE PROPOSED PROJECT WILL CONSTRUCT A VEHICLE SERVICE STATION CONSISTING OF A 1,462 S.F. BUILDING AND ASSOCIATED PARKING AREA.

ACREAGE OF SITE IS 0.742 ACRES.

DISTURBED ACREAGE OF SITE (INCLUDING OFF-SITE WORK) IS 0.52 ACRES.

ANTICIPATED CONSTRUCTION START DATE IS JUNE 5, 2026 AND COMPLETION DATE IS DECEMBER 7, 2026.

VALVOLINE'S CONTRACTOR TO TAKE APPROPRIATE MEASURES TO KEEP SEDIMENT FROM ESCAPING SITE AND ALL ACCUMULATED SEDIMENT SHALL BE CLEANED OUT AND REMOVED FROM SITE.

EXISTING LEGEND:

	BOUNDARY LINE	○	FOUND SURVEY MONUMENT
	BOUNDARY ADJACENT / ROW LINE	●	SET SURVEY MONUMENT
	EASEMENT LINE	△	SITE CONTROL POINT
	EXISTING CURB LINE	⌬	SITE BENCHMARK
STS	UNDERGROUND STORM LINE	P.R.J.C.M.	PUBLIC RECORDS OF
BE	UNDERGROUND ELECTRIC LINE		JACKSON COUNTY, MISSOURI
UNK	UNSPECIFIED UTILITY LINE	DOC. NO.	DOCUMENT NUMBER
W	UNDERGROUND WATER LINE	BK. , PG.	BOOK, PAGE
G	UNDERGROUND GAS LINE	▷—	EXISTING HYDRANT
BTV	UNDERGROUND CABLE LINE	Ⓔ	EXISTING ELECTRIC METER
	EXISTING MAJOR GROUND CONTOUR	□ E	EXISTING ELECTRIC RISER
	EXISTING GROUND CONTOUR	☎	EXISTING TELEPHONE HAND HOLE
		◧	EXISTING FIBER OPTIC HAND HOLE
	EXISTING BUILDING	ⓢ	EXISTING STORM MANHOLE/CATCH BASIN
		Ⓢ	EXISTING SANITARY MANHOLE
	EXISTING ASPHALT	Ⓣ	EXISTING TELEPHONE MANHOLE
		□	EXISTING STORM INLET
	EXISTING CONCRETE	Ⓑ	EXISTING BOLLARD
		Ⓦ	EXISTING WATER METER
	EXISTING TRAFFIC SIGNAL	Ⓖ	EXISTING GAS VALVE
	EXISTING LIGHT POLE	□ CATV	EXISTING CABLE RISER
			EXISTING UTILITY POLE

PROPOSED LEGEND

	PROPERTY LINE
XXXX	CONTOUR ELEVATIONS
	LIMIT OF DISTURBED AREA
	TEMPORARY CONSTRUCTION EXIT
SF	SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT
	CONCRETE WASHOUT AREA
	STABILIZED STAGING AREA
	EROSION EELS SEDIMENT BARRIER

KEY NOTES

E4	LIMIT OF DISTURBED AREA
E6	EXISTING STRUCTURE TO BE PROTECTED DURING DEMOLITION AND CONSTRUCTION PHASES.
E7	SWPPP SIGN.
E8	PROTECT STORM SEWER STRUCTURE (BLOCK AND AGGREGATE JUNCTION/GRATE INLET BOX SEDIMENT DEVICE). SEE DETAIL ON SHEET C-10.2.
E9	PROTECT STORM SEWER CURB INLET (BLOCK AND AGGREGATE CURB INLET SEDIMENT DEVICE). SEE DETAIL ON SHEET C-10.2.
E10	CONSTRUCTION ENTRANCE TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. SEE DETAIL ON SHEET C-10.2.
E11	SILT FENCE TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. SEE DETAIL ON SHEET C-10.2.
E12	STORAGE/STAGING AREA.
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SEQUENCE OF CONSTRUCTION

PHASE I
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. INSTALL ALL PERIMETER SEDIMENT MEASURES.
5. INSTALL ALL TEMPORARY EROSION & SEDIMENT CONTROLS AS NEEDED.

PHASE II
6. BEGIN DEMOLISHING SITE.
7. BEGIN GRADING THE SITE.
8. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
9. TEMPORARILY SEED DENUDED AREAS.
10. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS.
11. INSTALL INLET/FLUME PROTECTION DEVICES.
12. PREPARE SITE FOR PAVING.

PHASE III
13. PAVE SITE.
14. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING, SODDING, AND PERMANENT MATTING BLANKET.
15. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE																								
NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE																								
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONTROL MEASURES																								
STRIP & STOCKPILE TOPSOIL																								
STORM FACILITIES																								
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FOUNDATION / BUILDING CONSTRUCTION																								
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PERMANENT CONTROL STRUCTURES																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

SURFACE STABILIZATION MEASURES

KEY	PRACTICE	DESCRIPTION	NOTES
M	DISTURBED AREA STABILIZATION(W/ MULCHING ONLY)	Temporary protection for disturbed areas; as an erosion retardant cover when temporary grassing is inapplicable.	Straw (1-2 tons/acre), Wood chips (5-6 tons/acre),, Wood fiber (0.5-1 tons/acre), Bark (35 cy/acre), Corn stalks (4-6 tons / acre), or Nets/Mats/Chemical stabilizers applicable
TS	DISTURBED AREA STABILIZATION(W/ TEMP. SEEDING)	Planting rapid-growing annual grasses, small grains, or legumes to provide initial, temporary cover for erosion control on disturbed areas.	May-Aug.: German millet (40 lbs./ac), Aug.-Dec.: Rye grain (120 lbs./ac), Jan.-May: Mixture of Rye grain (120 lbs./ac) and Kobe lespedeza (50 lbs./ac) 750 (1000 lbs.-for Fall) lbs./ac of 10-10-10 fertilizer
PS	DISTURBED AREA STABILIZATION(W/ PERM. SEEDING)	Controlling runoff and preventing erosion by establishing a perennial vegetative cover with seed.	Mixture of Tall fescue (80 lbs./ac) and Kobe lespedeza (40 lbs./ac) with 1000 lbs./ac of 10-10-10 fertilizer and 4,000 lbs./ac of lime *May-Aug.: Add 10 lbs./ac German millet *Oct.-Feb.: Add 40 lbs./ac Rye grain
SO	DISTURBED AREA STABILIZATION(W/ PERM. SODDING)	Transplanting vegetative sections of plant materials to promptly stabilize areas that are subject to erosion.	Warm Season: Hybrid Bermuda grass, Zaysiagrass, Centipede grass, or St Augustine grass Cool Season: Tall fescue/Kentucky bluegrass
DC	DUST CONTROL	Utilize dust control methods whenever there are offsite impacts, especially periods of drought until final stabilization is reached.	Phasing the project, vegetative cover, Mulch, sprinkling water, spray-on-adhesive, calcium chloride, barriers, etc.

24 HR EMERGENCY CONTACT:
JOHN FULK – 913–420–3253

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40
SCALE: 1 inch = 20 ft.

MISSOURI 811

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL
STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER
2023012235
ENGINEER
RELEASED FOR CONSTRUCTION
NOT VALID FOR PERMITTING OR IMPLEMENTATION
2026.01.26 12:58:28-06'00'
DIEGO ALBERTO GARCIA
PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
A-2005011004

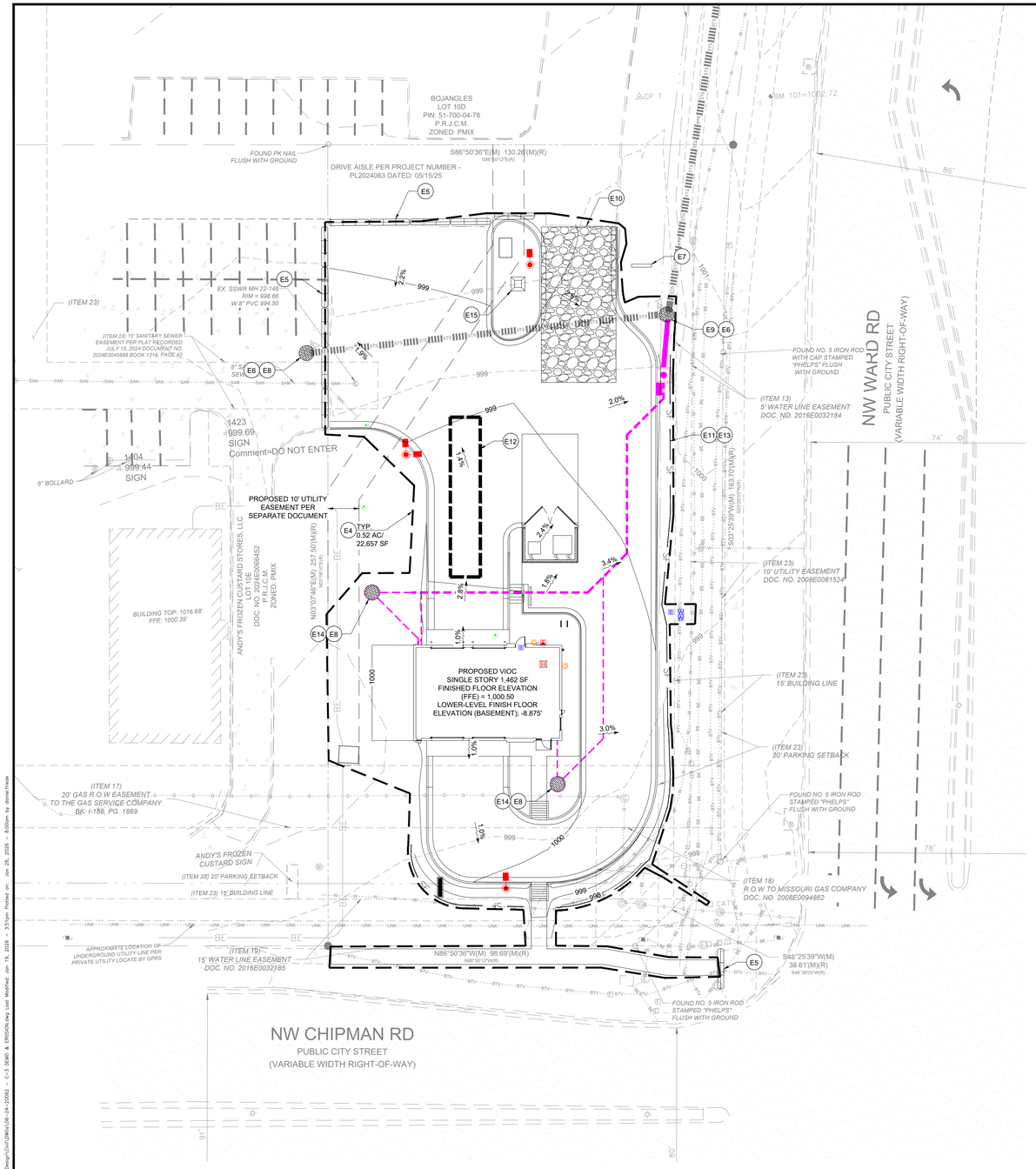
PROFESSIONAL LICENSE NO: 2023012235
PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME
Valvoline Instant Oil Change
VALVOLINE INSTANT OIL CHANGE
610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER: 06-24-20062
SHEET NAME: EROSION CONTROL PLAN PHASE 1 OF 2
SHEET #: C-3.1

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\HFA-KS\2025\2024 Projects\06-24-20062 - VOC - Lee's Summit, MO (NW Chipman)\04-Design\Civil\06-24-20062 - C-3.1 ESPP & EROSION.dwg Last Modified: Jan 19, 2026 - 3:51pm Plotted on: Jan 26, 2026 - 8:06am by daniel.kuhn



GENERAL EROSION NOTES:

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MISSOURI, MORA PERMIT FOR STORM WATER DISCHARGES AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. NEW OR AFFECTED CUT OR FILLED SLOPES MUST BE AT AN ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER, AND MUST BE PROVIDED WITH A GROUND COVER SUFFICIENT TO RETAIN EROSION WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE (ROUGH OR FINAL) OF GRADING.

I. A PERMANENT GROUND COVER, SUFFICIENT RESTRAIN EROSION, MUST BE PROVIDED WITHIN THE SHORTER OF 15 WORKING OR 90 CALENDAR DAYS (IF IN A HIGH QUALITY ZONE, THE SHORTER OF 15 WORKING OR 60 CALENDAR DAYS) AFTER COMPLETION OF CONSTRUCTION OR DEVELOPMENT ON ANY PORTION OF THE TRACT.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION/RETENTION POND AFTER THE STABILIZATION OF THE SITE AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS. CONTRACTORS OR SUBCONTRACTORS WILL ALSO BE RESPONSIBLE TO CLEAN THE SWALE FROM ANY SEDIMENT IF NECESSARY.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. SEDIMENT BASINS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.

P. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

Q. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, SILT DIKES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

R. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

BMP MAINTENANCE NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURE SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF OF THE SILT FENCE.
4. THE VEHICLE TRACKING CONTROL SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRED PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

PROJECT INFORMATION

THE PROPOSED PROJECT WILL CONSTRUCT A VEHICLE SERVICE STATION CONSISTING OF A 1,462 S.F. BUILDING AND ASSOCIATED PARKING AREA.

ACREAGE OF SITE IS 0.742 ACRES.

DISTURBED ACREAGE OF SITE (INCLUDING OFF-SITE WORK) IS 0.52 ACRES.

ANTICIPATED CONSTRUCTION START DATE IS JUNE 5, 2026 AND COMPLETION DATE IS DECEMBER 7, 2026.

VALVOLINE'S CONTRACTOR TO TAKE APPROPRIATE MEASURES TO KEEP SEDIMENT FROM ESCAPING SITE AND ALL ACCUMULATED SEDIMENT SHALL BE CLEANED OUT AND REMOVED FROM SITE.

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	BOUNDARY ADJACENT / ROW LINE	●	SET SURVEY MONUMENT
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586	EXISTING GROUND CONTOUR	▯	EXISTING TELEPHONE HAND HOLE
		▯	EXISTING FIBER OPTIC HAND HOLE
	EXISTING BUILDING	®	EXISTING STORM MANHOLE/CATCH BASIN
		Ⓢ	EXISTING SANITARY MANHOLE
	EXISTING ASPHALT	Ⓣ	EXISTING TELEPHONE MANHOLE
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	PROPERTY LINE
XXXX	CONTOUR ELEVATIONS
	LIMIT OF DISTURBED AREA
	TEMPORARY CONSTRUCTION EXIT
SF	SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT
	CONCRETE WASHOUT AREA
	STABILIZED STAGING AREA
	EROSION EELS SEDIMENT BARRIER

KEY NOTES

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E5	EROSION EELS SEDIMENT BARRIER. SEE DETAIL ON SHEET C-10.2.
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E14	PROPOSED STRUCTURES TO BE PROTECTED DURING CONSTRUCTION PHASES.
E15	CONCRETE WASHOUT. SEE DETAIL ON SHEET C-10.2.

SEQUENCE OF CONSTRUCTION

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SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
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24 HR EMERGENCY CONTACT:
JOHN FULK – 913-420-3253

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40

SCALE: 1 inch = 20 ft.

MISSOURI 811

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HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
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f 888.520.9685
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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER 2023012235
NOTARY
RELEASED - NOT FOR CONSTRUCTION PURPOSES OR IMPLEMENTATION
2026.01.26 12:58:34-06'00'
DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

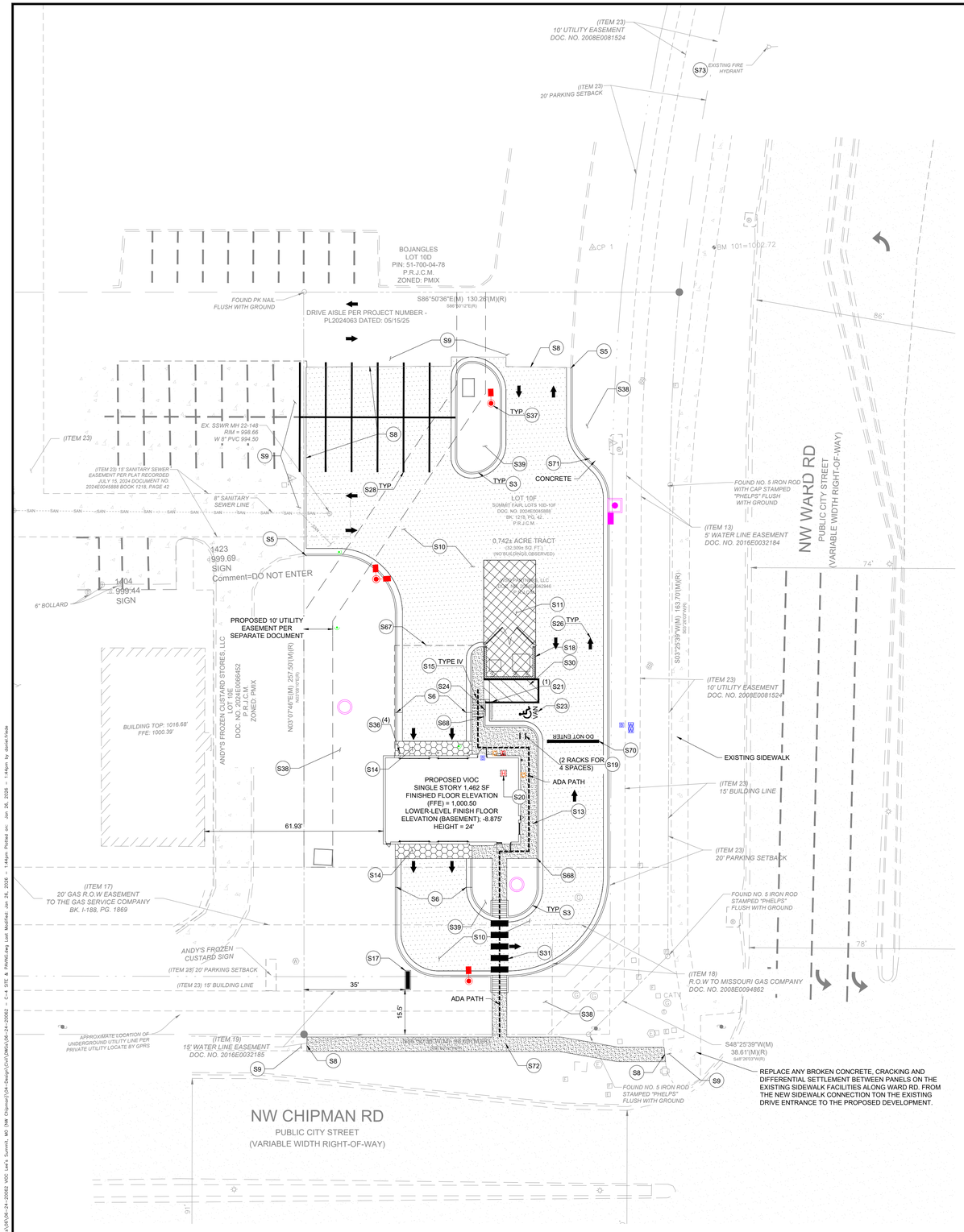
PROJECT NUMBER: 06-24-20062

SHEET NAME: EROSION CONTROL PLAN PHASE 2 OF 2

SHEET #: C-3.2

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\HFA-FILES\2024 Projects\06-24-20062_VIOC Lee's Summit, MO (NW Chipman)\04-Design\Civil\Sheets\06-24-20062 - C-3.2 EMP & EROSION.dwg Last Modified: Jan 19, 2026 - 3:51pm Plotted on: Jan 26, 2026 - 8:00am by daniel.hoke



GENERAL SITE NOTES:

1. CONTRACTOR MUST SECURE ALL NECESSARY PERMITS PRIOR TO STARTING WORK.
2. IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
4. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STATE AND LOCAL GOVERNMENT AGENCY'S LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
5. ALL HANDICAP SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODE.
6. NOTIFY THE CITY INSPECTOR TWENTY-FOUR (24) HOURS BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
7. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS, AND STAKES.
8. ARCHITECTURAL PLANS ARE TO BE USED FOR BUILDING STAKE OUT.
9. ALL DIMENSIONS ARE FROM FACE OF BUILDING, CURB, AND WALL UNLESS OTHERWISE SPECIFIED ON PLANS.
10. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
11. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATION.
12. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
13. ALL ROAD WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE AND LOCAL GOVERNMENT AGENCY SPECIFICATIONS.
14. STANDARD/HEAVY DUTY PAVEMENT AND CONCRETE SECTIONS SHALL FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY ECS MIDWEST, LLC, DATED OCTOBER 16, 2025
15. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED ON THE PLANS.

SITE KEY NOTES

S3	CG-1 CURB AND GUTTER PER AHJ STANDARDS. REFER TO DETAIL ON C-10.43 (BY OTHERS)
S5	TAPER CURB TO MATCH EXISTING
S6	TAPER CURB FROM 6" TO 0" OVER 10'. REFER TO DETAIL ON C-10.0
S8	MATCH EXISTING PAVEMENT ELEVATION. REFER TO DETAIL ON C-10.0
S9	EXISTING PAVEMENT TO REMAIN
S10	STANDARD DUTY CONCRETE PAVING (PER PAVING PLAN)
S11	HEAVY DUTY CONCRETE PAVING (PER PAVING PLAN)
S13	CONCRETE SIDEWALK. REFER TO DETAIL ON C-10.0
S14	EXTEND SAME CONCRETE FINISHING PROCESS AS INTERNAL SERVICE BAYS
S15	ADA SIDEWALK RAMP @ 8.33% MAX. REFER TO DETAIL ON C-10.0
S17	MONUMENT / PYLON SIGN (PER ARCH. PLANS)
S18	DUMPSTER ENCLOSURE (PER ARCH. PLANS)
S19	BICYCLE RACK (SEE NOTE FOR NUMBER). REFER TO DETAIL ON C-10.0
S20	CONDENSING UNIT. REFER TO MECHANICAL PLANS
S21	CONCRETE WHEEL STOPS (SEE NOTE FOR NUMBER). REFER TO DETAIL ON C-10.0
S23	ADA ACCESSIBLE PARKING SPACE AND AISLE STRIPING & SYMBOL OF ACCESSIBILITY (TYPICAL-PER ADA AND LOCAL REQUIREMENTS). REFER TO DETAIL ON C-10.0
S24	VAN ACCESSIBLE PARKING SIGN (TYPICAL-PER ADA AND LOCAL REQUIREMENTS). REFER TO DETAIL ON C-10.0
S26	DIRECTIONAL TRAFFIC ARROW (PER LOCAL CODES). REFER TO DETAIL ON C-10.0
S28	PARKING STALL STRIPING (PER LOCAL CODES). REFER TO DETAIL ON C-10.0
S30	4" WIDE PAINTED STRIPES, 2' OFF CENTER @ 45° (PER LOCAL CODES)
S31	PEDESTRIAN CROSSWALK STRIPING. (PER LOCAL CODES) REFER TO CITY OF LEE'S SUMMIT DETAIL ON C-10.3
S36	BOLLARD (SEE NOTE FOR NUMBER). REFER TO DETAIL ON C-10.0
S37	LIGHT POLE (TYPICAL-PER LIGHTING PLAN)
S38	LANDSCAPE AREA (PER LANDSCAPE PLAN)
S39	LANDSCAPE ISLAND (PER LANDSCAPE PLAN)
S67	SERVICE BELL HOSE, (PER ARCH PLANS)
S68	TYPE "B" CURB AND GUTTER WITH FLUSH SIDEWALK, REFER TO DETAIL ON C-10.0
S70	'DO NOT ENTER' PAVEMENT MARKING, REFER TO DETAIL ON C-10.1
S71	CONCRETE FLUME. REFER TO DETAIL ON C-10.1
S72	CONCRETE SIDEWALK PER LOCAL CODES. REFER TO CITY OF LEE'S SUMMIT DETAIL ON C-10.3
S73	EXISTING FIRE HYDRANT

SITE BENCHMARKS AND CONTROL:

CP 1: SET NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "AT WELL LLC"
GRID NORTHING: 1004897.61 (NAD83)
GRID EASTING: 2818804.20 (NAD83)
ELEVATION: 999.44' (NAVD88)

BM 3: FOUND CHISELED SQUARE IN CONCRETE
GRID NORTHING: 1004952.82 (NAD83)
GRID EASTING: 2818513.73 (NAD83)
ELEVATION: 999.37' (NAVD88)

BM 101: FOUND CUT CROSS IN CONCRETE SIDEWALK
GRID NORTHING: 1004895.46 (NAD83)
GRID EASTING: 2818846.27 (NAD83)
ELEVATION : 1002.72' (NAVD88)

SETBACK REQUIREMENTS:

MINIMUM CORNER SIDE:	10'
MINIMUM INTERIOR SIDE:	NONE
MINIMUM REAR:	20'

LEGAL DESCRIPTION PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE COMMITMENT NO.: KCC251158, COMMITMENT EFFECTIVE DATE: MAY 2, 2025 AT 8:00AM

L 10F, SUMMIT FAIR, LOTS 10D-10F, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEROF.

FIRE ACCESS ROAD NOTE:

ALL FIRE ACCESS LANES SHALL BE HEAVY DUTY ASPHALT CAPABLE OF SUPPORTING 75,000-POUNDS.

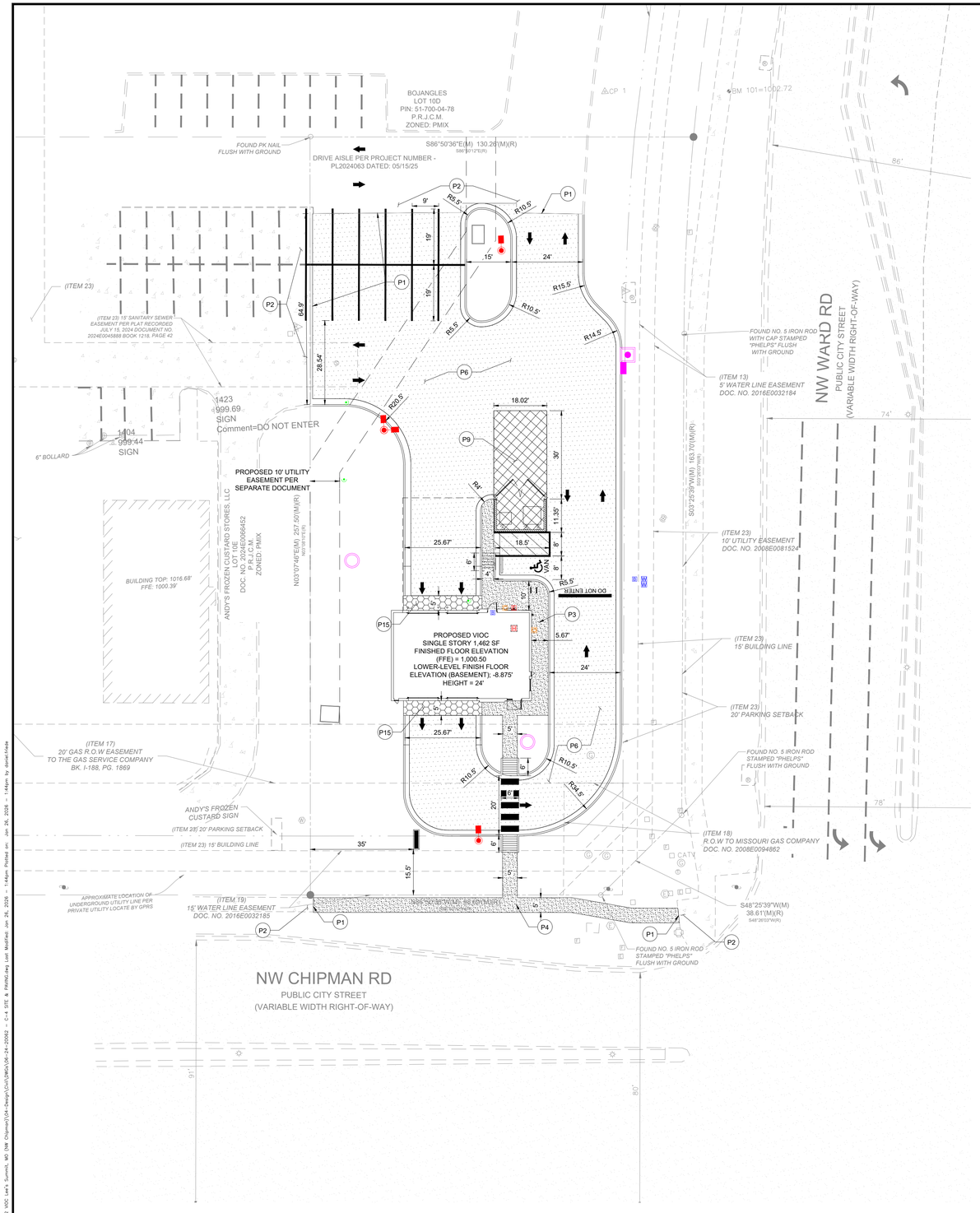
OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED AT WW.DNR.MO.GOV/GEOLOGY/GEOSRV/OILANG.HTM, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

PRE-CONSTRUCTION MEETING NOTE:

THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.


SITE
NW WARD RD
NW CHIPMAN RD
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GENERAL PAVING NOTES:

1. CONTRACTOR MUST SECURE ALL NECESSARY PERMITS PRIOR TO STARTING WORK.
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15. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED ON THE PLANS.

PAVING KEY NOTES

P1	MATCH EXISTING PAVEMENT ELEVATION
P2	EXISTING PAVEMENT TO REMAIN
P3	CONCRETE SIDEWALK. REFER TO DETAIL ON C-10.0
P4	CONCRETE SIDEWALK PER LOCAL CODES. REFER TO CITY OF LEE'S SUMMIT DETAIL ON C-10.3
P6	STANDARD DUTY ASHPHALT PAVING (SEE PAVING DETAIL)
P9	HEAVY DUTY CONCRETE PAVING (SEE PAVING DETAIL)
P15	EXTEND SAME CONCRETE FINISHING PROCESS AS INTERNAL SERVICE BAYS

EXISTING LEGEND

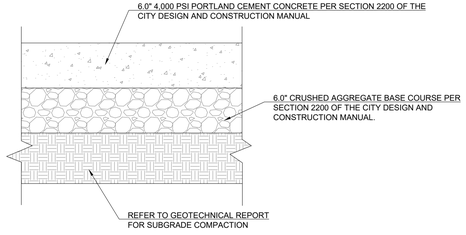
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	BOUNDARY ADJACENT / ROW LINE		SET SURVEY MONUMENT
	EASEMENT LINE		SITE CONTROL POINT
	EXISTING CURB LINE		SITE BENCHMARK
STS	UNDERGROUND STORM LINE	P.R.J.C.M.	PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
BE	UNDERGROUND ELECTRIC LINE		
UNK	UNSPECIFIED UTILITY LINE	DOC. NO.	DOCUMENT NUMBER
W	UNDERGROUND WATER LINE	BK. , PG.	BOOK, PAGE
G	UNDERGROUND GAS LINE		EXISTING HYDRANT
BTV	UNDERGROUND CABLE LINE	E	EXISTING ELECTRIC METER
585	EXISTING MAJOR GROUND CONTOUR	E	EXISTING ELECTRIC RISER
586	EXISTING GROUND CONTOUR	T	EXISTING TELEPHONE HAND HOLE
		T	EXISTING FIBER OPTIC HAND HOLE
	EXISTING BUILDING		EXISTING STORM MANHOLE/CATCH BASIN
		S	EXISTING SANITARY MANHOLE
	EXISTING ASPHALT	T	EXISTING TELEPHONE MANHOLE
			EXISTING STORM INLET
	EXISTING CONCRETE	B	EXISTING BOLLARD
		W	EXISTING WATER METER
	EXISTING TRAFFIC SIGNAL	G	EXISTING GAS VALVE
	EXISTING LIGHT POLE	CATV	EXISTING CABLE RISER
			EXISTING UTILITY POLE

PROPOSED LEGEND

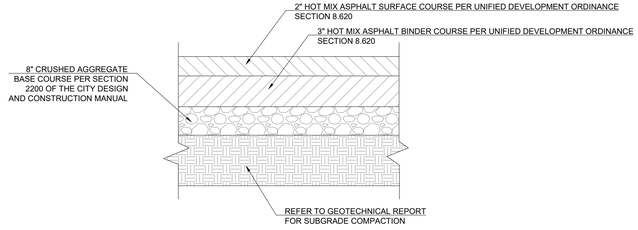
- PROPERTY LINE
- PROPOSED CURB & GUTTER
- PROPOSED SERVICE BELL HOSE
- PROPOSED SITE LIGHT, SEE PHOTOMETRIC PLAN
- PROPOSED DRAINAGE STRUCTURES (SEE GRADING/DRAINAGE PLANS)
- WM — WATER METER, (SEE UTILITY PLAN)
- SEWER STRUCTURES, (SEE UTILITY PLAN)
- DIRECTIONAL PAVEMENT MARKING
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT. REFER TO DETAIL P9 ON PAVING PLAN
- PROPOSED CONCRETE SIDEWALK PAVEMENT. REFER TO DETAIL P10 ON PAVING PLAN.
- EXTEND SAME CONCRETE FINISHING PROCESS AS INTERNAL SERVICE BAYS
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT. REFER TO KEYNOTE P6 ON PAVING PLAN.

PAVING NOTES:

1. ALL ASPHALT MATERIALS SHALL CONFORM TO THE KCMMB ASPHALT MATERIAL SPECIFICATION, CURRENT EDITION.
2. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS IN THE RIGHT OF WAY SHALL CONFORM TO THE KCMMB SPECIFICATIONS.



P9 HEAVY DUTY CONCRETE PAVING
N.T.S.



P6 STANDARD DUTY ASPHALT PAVING
N.T.S.

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40

SCALE: 1 inch = 20 ft.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER PE-2023012235
NOT FOR CONSTRUCTION, RECORDING OR IMPLEMENTATION
2026.01.26 13:52:56-06'00'
DIEGO ALBERTO GARCIA
PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
A-2005011193-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER: 06-24-20062

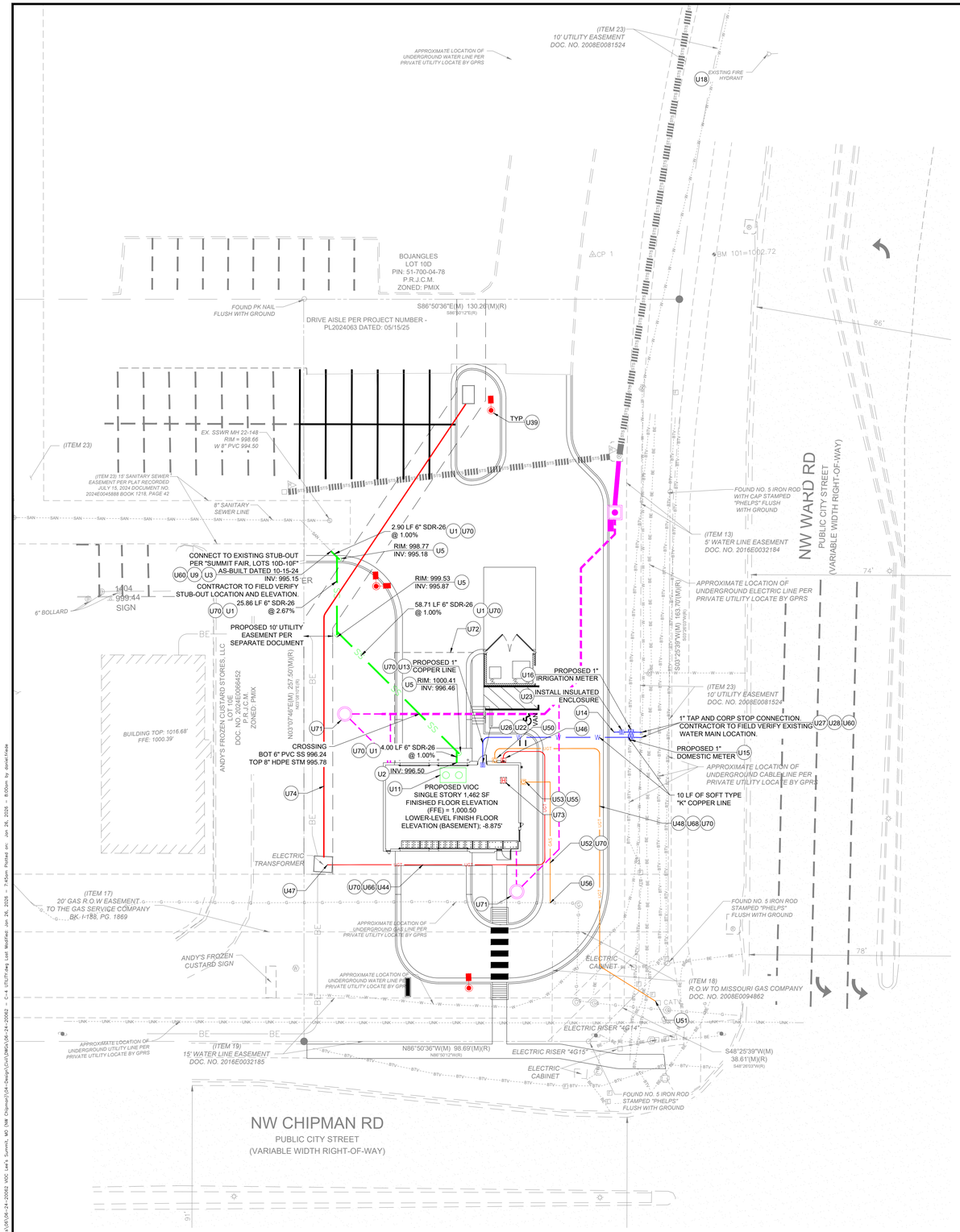
SHEET NAME: PAVING PLAN

SHEET # C-4.1

MISSOURI 811

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\HFA-FILES\2024 Projects\06-24-20062 VIOC - Lee's Summit, MO (NW Chipman)\04-Design\Civil\DWG\06-24-20062 - C-4.1 SITE & PAVING.dwg Last Modified: Jan 26, 2026 - 1:43pm Plotted on: Jan 26, 2026 - 1:43pm by Jaime Hicks



UTILITY KEY NOTES

#	
U1	SANITARY SEWER (SEE NOTE FOR TYPE, SIZE AND SLOPE)
U2	SANITARY SEWER POINT OF ENTRY (PER MEP PLANS)
U3	SANITARY SEWER POINT OF CONNECTION
U5	SANITARY SEWER CLEAN-OUT. REFER TO DETAIL ON C-10.1
U9	CONNECT TO EXISTING SANITARY SEWER, STUB-OUT. (CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION)
U11	OIL-WATER SEPARATOR IN BUILDING (PER MEP/ARCH. PLANS)
U13	DOMESTIC WATER LINE (SEE NOTE FOR TYPE AND SIZE)
U14	IRRIGATION WATER LINE (TYPE AND SIZE PER IRRIGATION PLAN)
U15	DOMESTIC WATER METER (SEE NOTE FOR SIZE)
U16	IRRIGATION WATER METER (SEE NOTE FOR SIZE)
U18	EXISTING FIRE HYDRANT
U22	BACKFLOW PREVENTER IN BUILDING
U23	REDUCED PRESSURE BACKFLOW PREVENTER. REFER TO DETAIL ON C-10.1
U26	WATER LINE POINT OF ENTRY (PER MEP PLANS)
U27	WATER LINE POINT OF CONNECTION. REFER TO DETAIL ON C-10.1
U28	CONTRACTOR SHALL COORDINATE WITH WATER DEPARTMENT TO ENSURE THAT SERVICE IS NOT INTERRUPTED AT ANY TIME.
U39	LIGHT POLE LOCATIONS (SEE LIGHTING PLAN FOR DETAILS)
U44	UNDERGROUND ELECTRIC SERVICE
U46	ELECTRIC SERVICE POINT OF ENTRY (PER MEP PLANS)
U47	ELECTRIC SERVICE POINT OF CONNECTION
U48	UNDERGROUND TELEPHONE SERVICE (INSTALL TWO 2" CONDUITS)
U50	TELEPHONE SERVICE POINT OF ENTRY (PER MEP PLANS)
U51	TELEPHONE SERVICE POINT OF CONNECTION
U52	GAS SERVICE LINE. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR THE INSTALLATION OF THE GAS SERVICE LINE.
U53	GAS METER
U55	GAS LINE POINT OF ENTRY (PER MEP PLANS)
U56	GAS LINE POINT OF CONNECTION
U60	CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
U66	ELECTRIC SERVICE LINE. CONTRACTOR SHALL COORDINATE WITH ELECTRIC COMPANY PRIOR TO ANY EXCAVATION OR INSTALLATION OF CONDUITS. NO OTHER UTILITIES ALLOWED IN ELECTRIC DITCH. CONTRACTOR SHALL INSTALL TWO (2) - 4" SECONDARY CONDUITS FROM THE TRANSFORMER TO THE BUILDING. (SEE MEP PLANS).
U68	TELEPHONE SERVICE LINE. CONTRACTOR SHALL COORDINATE WITH TELEPHONE COMPANY PRIOR TO ANY EXCAVATION OR INSTALLATION OF CONDUITS.
U70	UTILITY TRENCH AND BEDDING, REFER TO DETAIL ON C-10.1
U71	FOUNDATION SUMP PUMP, REFER TO DETAIL ON C-10.1
U72	BELL HOSE LOCATION, SEE MEP PLANS
U73	HVAC CONDENSER ON ROOF, SEE MEP PLANS
U74	CONSTRUCT ONE 4" SCHEDULE 40 PVC CONDUIT FOR UTILITY EXTENSION.

EXISTING LEGEND

	BOUNDARY LINE	○	FOUND SURVEY MONUMENT
	BOUNDARY ADJACENT / ROW LINE	●	SET SURVEY MONUMENT
	EASEMENT LINE	△	SITE CONTROL POINT
	EXISTING CURB LINE	◔	SITE BENCHMARK
STS	UNDERGROUND STORM LINE	P.R.J.C.M.	PUBLIC RECORDS OF
BE	UNDERGROUND ELECTRIC LINE		JACKSON COUNTY, MISSOURI
UNK	UNSPECIFIED UTILITY LINE	DOC. NO.	DOCUMENT NUMBER
W	UNDERGROUND WATER LINE	BK. , PG.	BOOK, PAGE
G	UNDERGROUND GAS LINE	▷—	EXISTING HYDRANT
BTV	UNDERGROUND CABLE LINE	(E)	EXISTING ELECTRIC METER
585	EXISTING MAJOR GROUND CONTOUR	□ E	EXISTING ELECTRIC RISER
586	EXISTING GROUND CONTOUR	T	EXISTING TELEPHONE HAND HOLE
		T	EXISTING FIBER OPTIC HAND HOLE
	EXISTING BUILDING	®	EXISTING STORM MANHOLE/CATCH BASIN
		S	EXISTING SANITARY MANHOLE
	EXISTING ASPHALT	T	EXISTING TELEPHONE MANHOLE
		□	EXISTING STORM INLET
	EXISTING CONCRETE	B	EXISTING BOLLARD
		W	EXISTING WATER METER
	EXISTING TRAFFIC SIGNAL	G	EXISTING GAS VALVE
	EXISTING LIGHT POLE	□ CATV	EXISTING CABLE RISER
			EXISTING UTILITY POLE

PROPOSED LEGEND

	PROPERTY LINE
	CURB AND GUTTER
	EASEMENT LINE
GAS	GAS LINES
UGT	TELEPHONE LINES
SS	SANITARY SEWER LINES
W	WATER LINES
UGE	UNDERGROUND ELECTRIC LINES
	LIGHT POLES
	SANITARY SEWER CLEAN OUT
	OIL & WATER SEPARATOR
W	WATER METER
B	RPZ/BFP
	DRAINAGE STRUCTURES (SEE GRADING/DRAINAGE PLANS)
	STORM SEWER ROOF DRAIN AND SUMP PUMP PIPE

GENERAL UTILITY NOTES:

1. CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ENSURE NO CONFLICTS EXIST WITH PROPOSED IMPROVEMENTS. NOTIFY ENGINEER IMMEDIATELY IF UTILITIES ARE LOCATED DIFFERENTLY THAN SHOWN. THE CONTRACTOR SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY IN ORDER TO RELOCATE IF NEEDED IN CONFORMANCE WITH THEIR GUIDELINES.
2. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO THE REMOVAL OF INDICATED UTILITIES ON SITE (SEE DEMOLITION PLAN). CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS REQUIRED FOR DEMOLITION AND HAUL OFF FROM THE APPROPRIATE AUTHORITIES.
3. AUTHORIZATION MUST BE OBTAINED FROM THE (CITY WATER/SEWER AUTHORITY) TO CONSTRUCT, ALTER OR MODIFY A WATER OR SEWER LINE. CONSTRUCTION OF WATER AND SEWER INFRASTRUCTURE WILL BE AUTHORIZED BY THE WATER SYSTEM UPON:
   - APPROVAL OF SUBMITTED PLANS.
   - NOTIFICATION OF THE WATER SYSTEM AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION.
4. AT THE COMPLETION OF THE WATER AND/OR SEWER CONSTRUCTION AND PRIOR TO RECORDING THE FINAL PLAT, THE CONTRACTOR WILL FURNISH THE WATER SYSTEM INSPECTOR RECORD DRAWINGS OF THE PROJECT.
5. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE GAS COMPANY FOR THE CONSTRUCTION OF THE GAS LINE BETWEEN METER AND MAIN.
6. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE POWER COMPANY FOR THE CONSTRUCTION OF ELECTRICAL CONDUIT TO PROVIDE SERVICE TO THE TRANSFORMER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING, PRIOR TO CONSTRUCTION, ALL EXISTING LOCATIONS AND INVERT ELEVATIONS OF SANITARY SEWERS, STORM DRAINAGE, AND WATER MAINS. IF ANY INVERT ELEVATION VARIES MORE THAN 0.1 FT. FROM RECORD ELEVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WORK SHALL NOT PROCEED UNTIL THE CONTRACTOR IS NOTIFIED BY THE ENGINEER.
8. CONNECT TO EXISTING UTILITIES AND INSTALL UTILITIES IN COMPLIANCE WITH REQUIREMENTS OF APPROPRIATE JURISDICTIONAL AGENCIES.
9. COORDINATE WITH BUILDING PLANS TO ASSURE ACCURACY OF UTILITY CONNECTIONS AND COMPLIANCE WITH LOCAL CODES.
10. ALL SEWERS TO BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING CLEANING OF ANY SILT OR DEBRIS ACCUMULATED IN STRUCTURES.
11. ALL SURPLUS EXCAVATED MATERIAL FROM THE TRENCH SHALL BE DISPOSED OFF THE SITE BY CONTRACTOR.
12. COORDINATE EXACT TRENCHING, ROUTING, AND POINT OF TERMINATION WITH ALL UTILITY COMPANIES.
13. ALL WATER LINES SHALL HAVE AT LEAST FOUR AND ONE HALF (4.5) FEET ABOVE GROUND COVER FROM THE TOP OF THE PIPE TO THE FINISHED GROUND SURFACE.
14. ALL WATER LINES 2" OR SMALLER SHALL BE TYPE K-COPPER.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING UTILITY LOCATES.

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40

SCALE: 1 inch = 20 ft.

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HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
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DATE	ISSUE
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12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER
2023012235
ENGINEER

RECORD COPY - NOT FOR CONSTRUCTION, RELEASED FOR PUBLIC REVIEW AND PERMITTING PURPOSES ONLY

2026.01.26 12:58:49-06'00'

DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER
06-24-20062

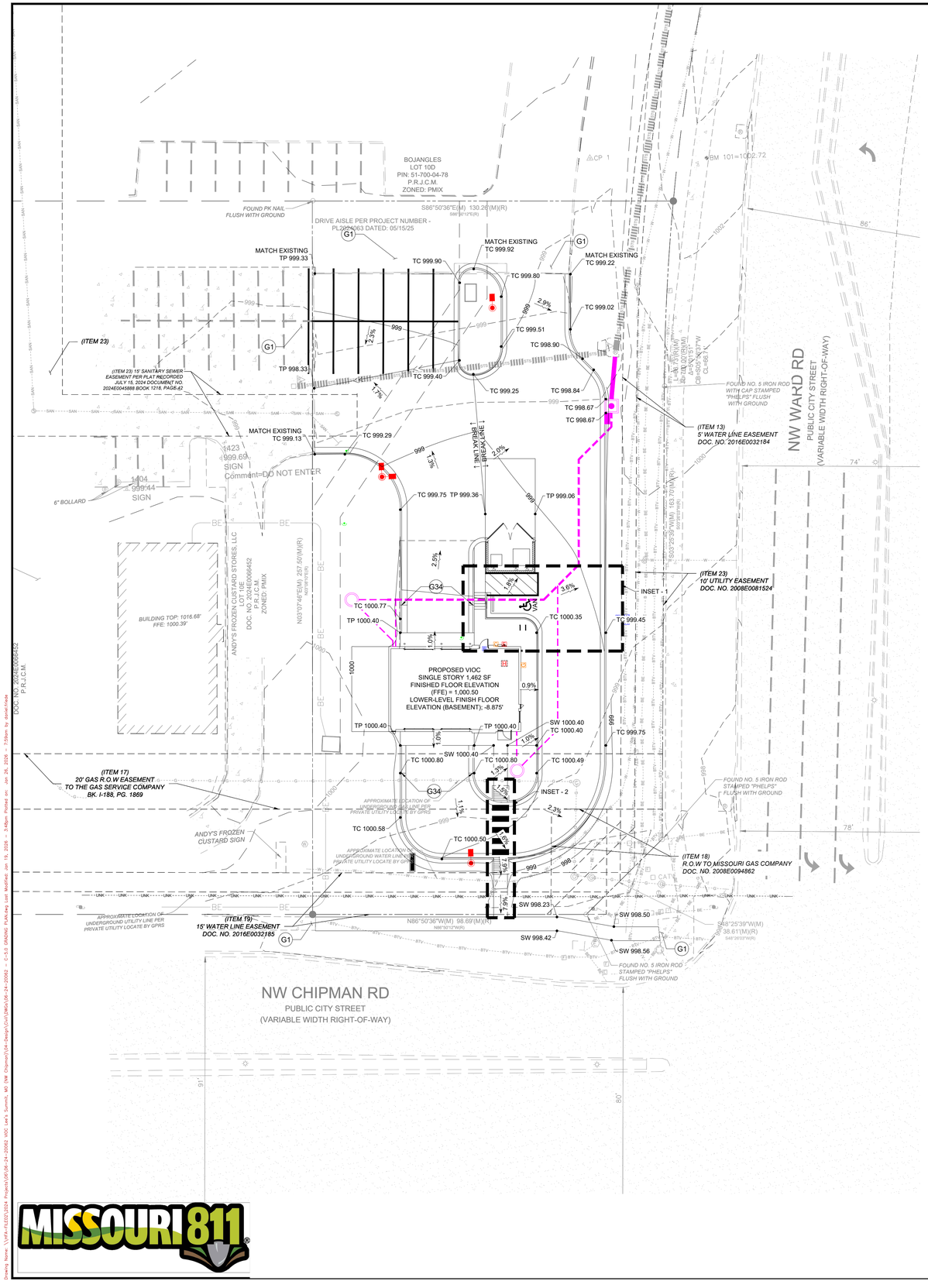
SHEET NAME
UTILITY PLAN

SHEET #
C-4.2

NOT ISSUED FOR CONSTRUCTION

MISSOURI 811

Drawing Name: \LMS-FILES\2024 Projects\06-24-20062 VOC Lee's Summit, MO\06 Chipman\04-Design\Civil\CMC\06-24-20062 - C-4 UTILITY.dwg Last Modified: Jan 26, 2026 - 3:45pm Plotted on: Jan 26, 2026 - 4:00pm by daniel.hoke



GENERAL GRADING/DRAINAGE NOTES:

1. ALL GRADING AND SITE PREPARATION SHALL CONFORM WITH SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE CITY LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS.
3. PRIOR TO ANY EXCAVATION OF THE PROJECT SITE, THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS AND STAKES.
5. ALL INDICATED ELEVATIONS ARE FINISHED ELEVATIONS.
6. FIELD VERIFY LOCATIONS, SIZES AND IF APPLICABLE INVERTS OF EXISTING UTILITIES FOR PROPOSED CONNECTIONS PRIOR TO CONSTRUCTION.
7. LOCATE AND PROTECT ALL UTILITIES ASSOCIATED WITH THE PROJECT PRIOR TO CONSTRUCTION.
8. INSTALL SILT CONTROL MEASURES BEFORE BEGINNING SITE WORK. THESE MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
9. MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
10. INSTALL ALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO GRADING.
11. CUT AND FILL SLOPES SHALL HAVE A MAXIMUM SLOPE OF 2:1.
12. ALL EXCAVATION SHALL INCLUDE CLEARING, STRIPPING AND STOCKPILING TOPSOIL, REMOVING UNSUITABLE MATERIALS, THE CONSTRUCTION OF EMBANKMENTS, CONSTRUCTION FILLS, AND THE FINAL SHAPING AND TRIMMING TO THE THE LINES AND GRADES SHOWN ON THE PLANS.
13. ALL TREES, BRUSH, AND ORGANIC TOPSOIL AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED, UNLESS OTHERWISE SPECIFIED, AND DISPOSED OF AT AN OFF-SITE LOCATION, WITH THE EXCEPTION THAT ENOUGH TOPSOIL SHALL BE RETAINED FOR RESPREAD AND GENERAL LANDSCAPING. AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MAXIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED AASHTO COMPACTION TEST IN THE PAVED AREAS AND 85% IN THE OTHER AREAS.
14. STRIP AND STOCKPILE TOPSOIL. SPREAD FOUR (4) INCHES MINIMUM OF TOPSOIL ON LANDSCAPE AREAS AND REMOVE EXCESS TOPSOIL FROM SITE. PREPARE SUB-GRADE FOR PAVEMENT AND CURBS AND BACKFILL CURBS AFTER CURB CONSTRUCTION.
15. PROVIDE SUPPLY OF TOPSOIL FOR LANDSCAPE CONTRACTOR FOR INSTALLATION IN ALL LANDSCAPE ISLANDS.
16. PROVIDE AND INSTALL TOPSOIL IN DISTURBED AREAS TO BE GRASSED, TO INCLUDE PAVEMENT SHOULDERS AND DETENTION AREAS.
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18. THE PAVEMENT SUBGRADE AND BASE COURSE MATERIAL SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE PRIOR TO CONSTRUCTING THE BASE AND SURFACE COURSES THEREON.
19. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE TO ALL INLETS AND CATCH BASINS. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
20. IF AREAS ARE DISTURBED BEYOND PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REGRADING OR REPAIR TO MATCH ORIGINAL EXISTING CONDITIONS.
21. SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
22. STRUCTURES FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THESE IMPROVEMENT PLANS AND THE APPLICABLE STANDARD SPECIFICATIONS. WHERE GRANULAR TRENCH BACKFILL IS REQUIRED AROUND THESE STRUCTURES, THE COST SHALL BE CONSIDERED AS INCIDENTAL AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE STRUCTURE.
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25. A GEOTEXTILE MATTING (LANDLOCK TRM 450 OR EQUIVALENT) SHALL BE USED FOR EROSION CONTROL AN ALL SLOPES GREATER THAN 3H:1V.
26. DRAINAGE STRUCTURES AND DETENTION POND SHALL BE MAINTAINED BY PROPERTY OWNERS.
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28. ALL PROPOSED SPOT ELEVATIONS SHOWN INDICATE FINISHED GRADED ELEVATIONS AT EDGE OF PAVEMENT AND/OR GRADE BREAKS, UNLESS OTHERWISE NOTED.
29. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
30. LOWER-LEVEL EXCAVATION REQUIRED TO BE COMPLETED BY CONTRACTOR.

EXISTING LEGEND

LEGEND			
"SQE"	SET 5/8" IR (W/CAP STAMPED "QUIDDITY ENG. PROPERTY CORNER")	HCDR	HARRIS COUNTY DEED RECORDS
"SX"	SET CUT "X" IN CONCRETE	HCMR	HARRIS COUNTY MAP RECRORS
AE	AERIAL EASEMENT	HCOPRRP	HARRIS COUNTY OFFICIAL PUBLIC RECORDS OF REAL PROPERTY
ACCE	ACCESS EASEMENT	IR	IRON ROD
APPROX	APPROXIMATE	LP	LIGHT POLE/POST
BBI	TYPE "BB" INLET	MH	MANHOLE
CD	CENTERLINE OF DITCH	No.	NUMBER
CDS	CONCRETE DITCH STRUCTURE	PG	PAGE
CF	CLERK'S FILE	PPC	POWER POLE W/DOWN CONDUIT
CLF	CHAIN LINK FENCE	PVC	POLYVINYL CHLORIDE PIPE
CM	CONTROLLING MONUMENT	ROW	RIGHT-OF-WAY
CPP	CORRUGATED PLASTIC PIPE	SAN	SANITARY MANHOLE
ECD	ELECTRICAL CONDUIT	SAW	SAMPLE WELL
EI	TYPE "E" INLET	SIGN	SIGN
EL	EDGE OF LANDSCAPING	SSE	SANITARY SEWER EASEMENT
ESMT	EASEMENT	STME	STORM EASEMENT
EV	UNDERGROUND ELECTRICAL VAULT	STM	STORM MANHOLE
FC	FILM CODE	TPD	TELEPHONE PEDESTAL
FND	FOUND	THH	TELEPHONE HAND HOLE
FV	FLUSH VALVE/FIRE HYDRANT	UE	UTILITY EASEMENT
GA	GUY ANCHOR	VOL	VOLUME
GB	GRADE BREAK	W/	WITH
GI	GRATE TOP INLET	WLE	WATER LINE EASEMENT
GLM	GAS LINE MARKER	WM	WATER METER
HCAD	HARRIS COUNTY APPRAISAL DISTRICT	WV	WATER VALVE

PIN FLAG FIBER OPTIC
STM STORM SEWER LINE
SAN SANITARY LINE
WTL WATERLINE
UT UNDERGROUND TV CABLE
UC UNDERGROUND CABLE
UE UNDERGROUND ELECTRICAL
UG UNDERGROUND GAS
UC UNDERGROUND TELEPHONE
TOP OF BANK
ASPHALT
OVERHEAD POWER
CONCRETE

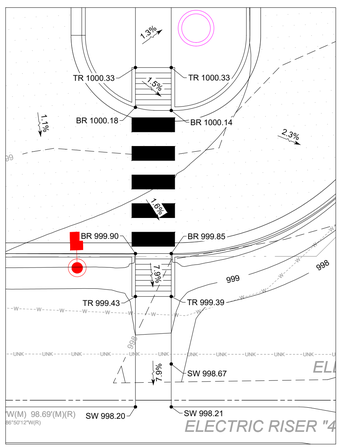
⚠1 12" WATER RELOCATION & 6" FORCE MAIN ALONG GRANT ROAD BETWEEN PAWNEE BEND AND LONGWOOD BEND PREPARED BY COSTELLO, 4-17-2017
⚠2 ROCK CREEK PLAZA PREPARED BY PARADISE ENGINEERING, 9-11-2015

PROPOSED LEGEND

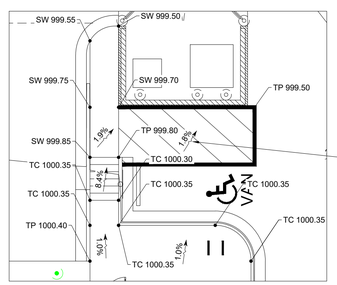
- PROPERTY LINE
- CURB & GUTTER
- XXXX — PROPOSED CONTOUR
- BREAKLINE
- STM —> STORM SEWER PIPE
- STORM SEWER ROOF DRAIN AND SUMP PUMP PIPE
- FLOWLINE
- STORM SEWER CLEAN OUT
- SUMP PUMP (SEE MEP PLANS/DETAILS)
- X% DRAINAGE SLOPE AND DIRECTION
- EG XXXX EXISTING SPOT ELEVATION
- FG XXXX FINISH GRADE ELEVATION
- BR XXXX BOTTOM OF RAMP
- TR XXXX TOP OF RAMP
- SW XXXX SIDEWALK ELEVATION
- TC XXXX TOP OF CURB
- FL XXXX FLOW LINE

GRADING KEY NOTES

#	
G1	MATCH EXISTING PAVEMENT ELEVATION.
G34	TRANSITION CURB FROM 6" TO 0" OVER 10'



INSET - 2
SCALE: 1 INCH = 10 FT



INSET - 1
SCALE: 1 INCH = 10 FT

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40
SCALE: 1 inch = 20 ft.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ae.com

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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL
STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER 2023012235
NOTARY PUBLIC
NOT FOR CONSTRUCTION
RELEASED FOR PERMITTING OR BIDDING PURPOSES ONLY
2026.01.26 12:58:54-06'00'
DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2005011190-F

PROFESSIONAL LICENSE NO: 2023012235
PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF
PROJECT NAME

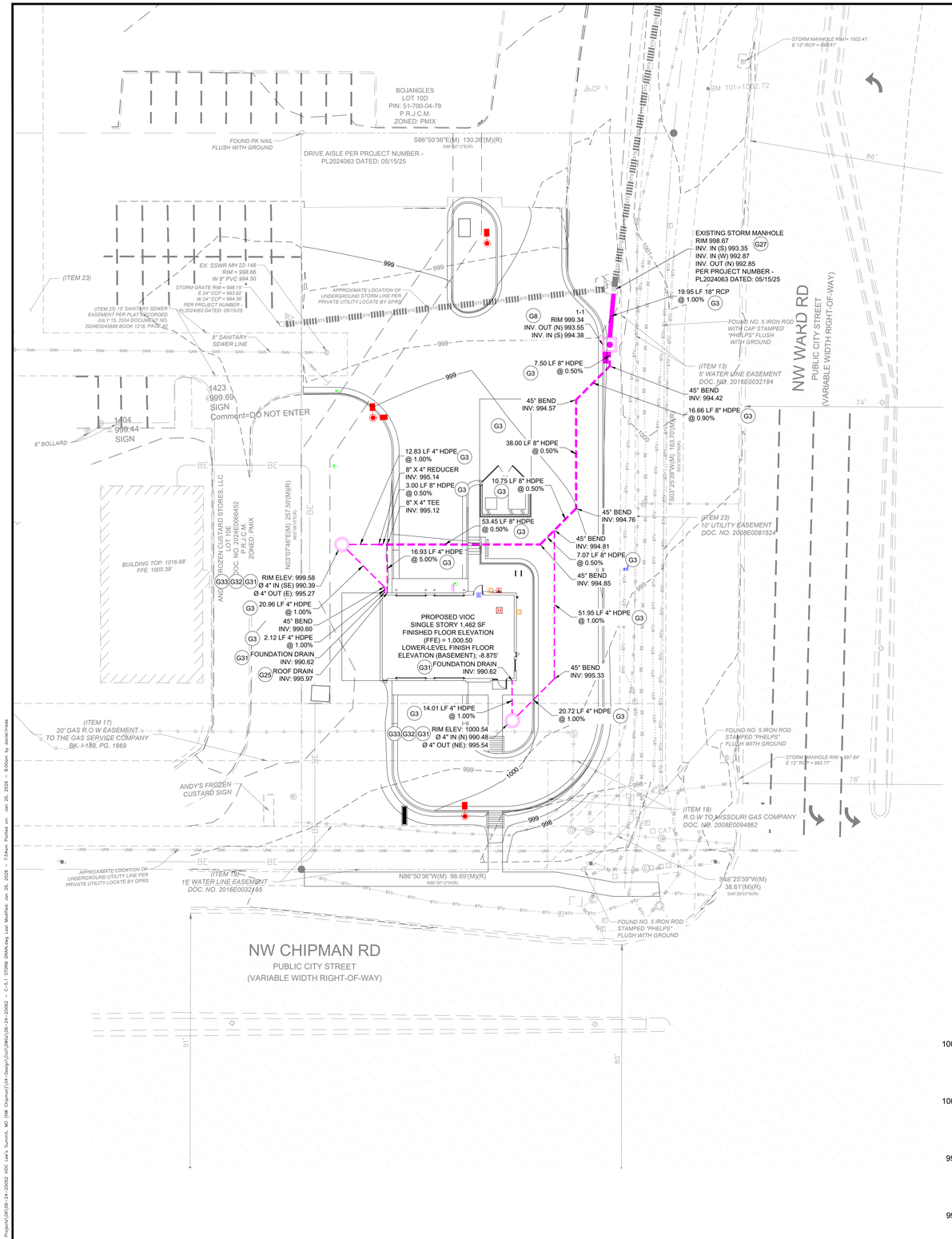
Valvoline Instant Oil Change

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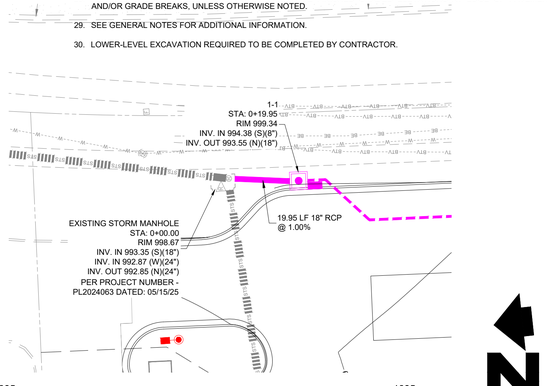
PROJECT NUMBER: 06-24-20062
SHEET NAME: GRADING PLAN
SHEET #: C-5.0

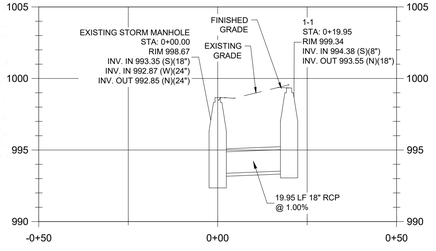
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STORM SEWER LINE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

EXISTING LEGEND

BOUNDARY LINE	FOUND SURVEY MONUMENT
BOUNDARY ADJACENT / ROW LINE	SET SURVEY MONUMENT
EASEMENT LINE	SITE CONTROL POINT
EXISTING CURB LINE	SITE BENCHMARK
STS STS UNDERGROUND STORM LINE	P.R.J.C.M. PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
BE BE UNDERGROUND ELECTRIC LINE	DOC. NO. DOCUMENT NUMBER
UNK UNK UNSPECIFIED UTILITY LINE	BK. , PG. BOOK, PAGE
W W UNDERGROUND WATER LINE	EXISTING HYDRANT
G G UNDERGROUND GAS LINE	EXISTING ELECTRIC METER
BTV BTV UNDERGROUND CABLE LINE	E EXISTING ELECTRIC RISER
585 586 EXISTING MAJOR GROUND CONTOUR	EXISTING TELEPHONE HAND HOLE
EXISTING GROUND CONTOUR	EXISTING FIBER OPTIC HAND HOLE
EXISTING BUILDING	EXISTING STORM MANHOLE/CATCH BASIN
EXISTING ASPHALT	EXISTING SANITARY MANHOLE
EXISTING CONCRETE	EXISTING TELEPHONE MANHOLE
EXISTING TRAFFIC SIGNAL	EXISTING STORM INLET
EXISTING LIGHT POLE	EXISTING BOLLARD
	EXISTING WATER METER
	EXISTING GAS VALVE
	CATV EXISTING CABLE RISER
	EXISTING UTILITY POLE

PROPOSED LEGEND

- PROPERTY LINE
- CURB & GUTTER
- XXXX PROPOSED CONTOUR
- STORM SEWER ROOF DRAIN AND SUMP PUMP PIPE
- SUMP PUMP (SEE MEP PLANS/DETAILS)
- CURB INLET WITH EXTENSION

STORM DRAIN KEY NOTES

#	
G3	STORM SEWER (SEE NOTE FOR TYPE, SIZE AND SLOPE). REFER TO DETAIL ON C-10.1
G8	SINGLE WINGED CURB INLET (SWCI). REFER TO DETAIL ON C-10.1
G25	ROOF DRAINS - PER ARCH. PLANS (SEE NOTE FOR NUMBER AND SIZE)
G27	CONNECT TO EXISTING STORM DRAIN PIPE, MANHOLE, STUB-OUT, OR INLET. (CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION)
G31	REFER TO PLUMBING PLAN FOR FOUNDATION DRAIN DESIGN
G32	REFER TO PLUMBING AND ELECTRICAL PLANS FOR SUMP PUMP, POWER AND LOW VOLTAGE DESIGN.
G33	FOUNDATION SUMP PUMP MANHOLE STRUCTURE PER DETAIL ON C-10.1

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40
SCALE: 1 inch = 20 ft.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
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www.hfa-ae.com

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01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER 2023012235
ENGINEER
RELEASED - NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES
2026.01.26 12:58:59-06'00'
DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
A-2005011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

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VALVOLINE INSTANT OIL CHANGE

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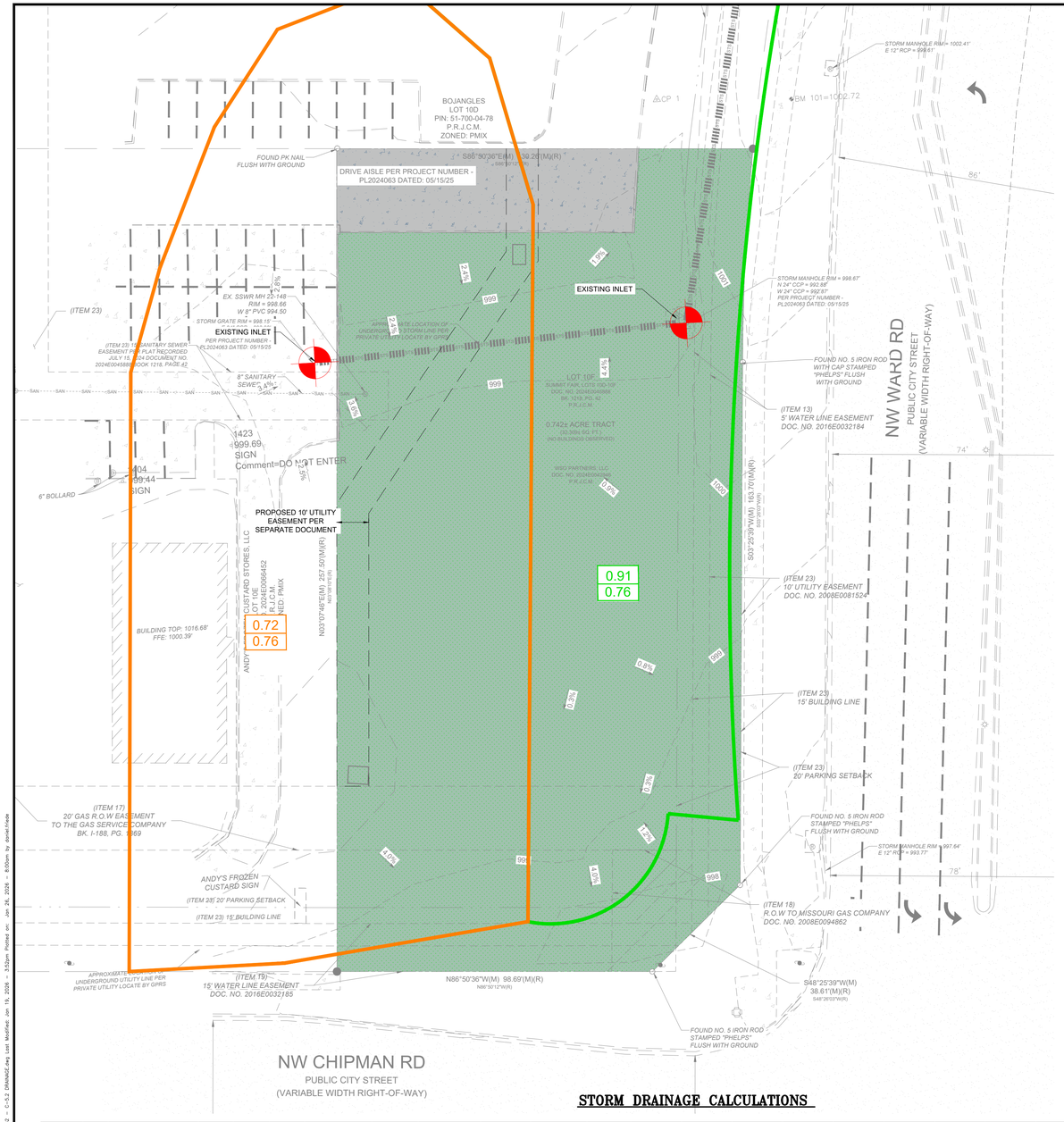
SHEET NAME
STORM DRAIN PLAN

SHEET #
C-5.1

MISSOURI 811

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\2024\06-24-0020\3054_Projects\06-24-20062_VIOC Lee's Summit, MO (NW Chipman)\04-Design\Civil\Dwg\06-24-20062 - C-5.1 STORM DRAIN.dwg Last Modified: Jan 26, 2026 - 7:54am Plotted on: Jan 26, 2026 - 8:00am by Jaydel Arce



PROPOSED LEGEND

- PROPERTY LINE
- PROPOSED CURB & GUTTER
- SITE LIGHT, SEE PHOTOMETRIC PLAN
- DRAINAGE STRUCTURES (SEE GRADING/DRAINAGE PLANS)
- WM — WATER METER, (SEE UTILITY PLAN)
- SEWER STRUCTURES, (SEE UTILITY PLAN)
- XXXX — PROPOSED CONTOUR
- STM -> — STORM SEWER PIPE
- STORM SEWER ROOF DRAIN AND SUMP PUMP PIPE
- DRAINAGE SLOPE AND DIRECTION
- DRAINAGE BASIN BOUNDARY
- X-X / X.XX — DRAINAGE AREA (ACRES) / RUNOFF COEFFICIENT OR CURVE NUMBER
- DRAINAGE AREA BOUNDARY

EXISTING LEGEND

- BOUNDARY LINE
- BOUNDARY ADJACENT / ROW LINE
- EASEMENT LINE
- EXISTING CURB LINE
- STS — UNDERGROUND STORM LINE
- BE — UNDERGROUND ELECTRIC LINE
- UNK — UNSPECIFIED UTILITY LINE
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- BTV — UNDERGROUND CABLE LINE
- 585 — EXISTING MAJOR GROUND CONTOUR
- 586 — EXISTING GROUND CONTOUR
- EXISTING BUILDING
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING TRAFFIC SIGNAL
- EXISTING LIGHT POLE
- FOUND SURVEY MONUMENT
- SET SURVEY MONUMENT
- SITE CONTROL POINT
- SITE BENCHMARK
- P.R.J.C.M. — PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
- DOC. NO. — DOCUMENT NUMBER
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- EXISTING SANITARY MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING STORM INLET
- EXISTING BOLLARD
- EXISTING WATER METER
- EXISTING GAS VALVE
- CATV — EXISTING CABLE RISER
- EXISTING UTILITY POLE

EXISTING AREA PROPERTIES

	AREA
ONSITE AREA	0. 74 AC
GREENSPACE	
IMPERVIOUS AREA	
BUILDING	

STORM DRAINAGE CALCULATIONS

DESIGN CRITERIA: K_{25} = 1.1; K_{100} = 1.25; n = 0.013 (RCP); STORM FREQUENCY = 25 YEAR; A.I.= AREA INLET; J.B.= JUNCTION BOX C.I. = CURB INLET; C.C. = CURB CUT; G.I. = GRATE INLET; HEIGHT OF STRUCTURE=RIM ELEV MINUS FLOWLINE OUT.

I. RUNOFF											III. PIPE DESIGN													REMARKS
			INCREMENTAL			CUMULATIVE					STRUCTURE				PIPE									
LINE NUMBER	STRUCTURE	RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	C x A	AREA "A" (ACRES)	C x A	SYSTEM TIME OF CONCENTRATION "T_c" AT STRUCTURE (MIN)	RAINFALL INTENSITY "I_{25} / I_{100}" (IN/HR)	ANTECEDENT PRECIPITATION FACTOR "K_{25} / K_{100}"	RUNOFF "Q_{25} / Q_{100}" (CFS)	Upstream Structure Number	Downstream Structure Number	Upstream Structure Rim Elevation	Height of Structure (FT)	Diameter "D" (IN)	Length "L" (FT)	Upstream Invert Elevation	Downstream Invert Elevation	Slope "S" (FT/FT)	Travel Time in Pipe "TT" (min)	Velocity Full V_F (FPS)	Runoff Q_{25} (CFS)	Runoff Q_{100} (CFS)	Full Flow Q_F (CFS)	
I	10	0.76	0.96	0.73	0.96	0.73	5.00	8.53	1.10	6.8	10	11	998.80	3.50	18	115.79	995.30	994.72	0.0050	0.46	4.2	6.8	9.4	7.4	FUTURE (BY OTHERS)
								10.32	1.25	9.4														
	11	0.76	0.72	0.55	1.68	1.28	5.00	8.53	1.10	12.0	11	12	998.20	4.42	24	116.80	993.78	993.20	0.0050	0.38	5.1	12.0	16.5	16.0	
								10.32	1.25	16.5														
	12	0.76	0.91	0.69	2.59	1.97	5.00	8.53	1.10	18.5	12	13	998.50	5.80	24	236.69	992.70	991.02	0.0070	0.65	6.1	18.5	25.4	18.9	
								10.32	1.25	25.4														
	13	0.76	0.00	0.00	2.59	1.97	5.00	8.53	1.10	18.5	13	EX	1002.77	11.95	24	94.13	990.82	989.79	0.0109	0.21	7.6	18.5	25.4	23.6	EXISTING
								10.32	1.25	25.4														

MISSOURI 811

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STATE OF MISSOURI
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NUMBER 2023012235
ENGINEER
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DIEGO ALBERTO GARCIA,
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PE-2023012235
HFA-AE, LTD.
A-2005111904-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

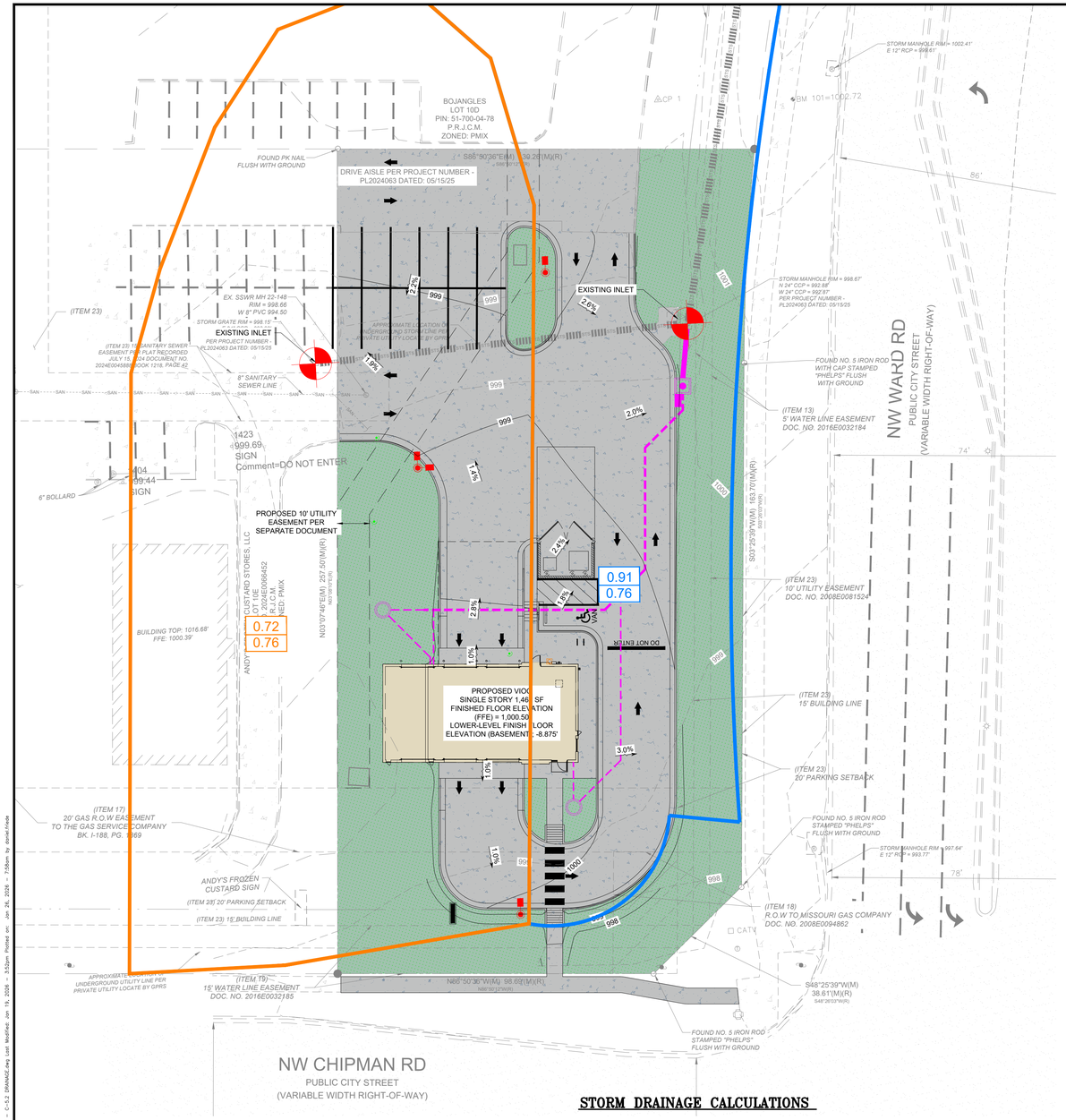
PROJECT NUMBER: 06-24-20062

SHEET NAME: PRE-DEVELOPMENT DRAINAGE PLAN

SHEET # C-5.2

NOT ISSUED FOR CONSTRUCTION

Drawing Name: L:\HFA-KS\2025\2024 Projects\06-24-20062_VOC - Lee's Summit, MO (NW Chipman)\04-Design\Civil\06-24-20062_C-5.2 DRAINAGE.dwg Last Modified: Jan 19, 2026 - 3:42pm Plotted on: Jan 26, 2026 - 8:00am by dfarrell4vale



PROPOSED LEGEND

- PROPERTY LINE
- PROPOSED CURB & GUTTER
- SITE LIGHT, SEE PHOTOMETRIC PLAN
- DRAINAGE STRUCTURES (SEE GRADING/DRAINAGE PLANS)
- WATER METER, (SEE UTILITY PLAN)
- SEWER STRUCTURES, (SEE UTILITY PLAN)
- XXXX — PROPOSED CONTOUR
- STM — STORM SEWER PIPE
- STORM SEWER ROOF DRAIN AND SUMP PUMP PIPE
- DRAINAGE SLOPE AND DIRECTION
- DRAINAGE BASIN BOUNDARY
- X-X / X.XX — DRAINAGE AREA (ACRES) / RUNOFF COEFFICIENT OR CURVE NUMBER
- DRAINAGE AREA BOUNDARY

EXISTING LEGEND

- BOUNDARY LINE
- BOUNDARY ADJACENT / ROW LINE
- EASEMENT LINE
- EXISTING CURB LINE
- STS — UNDERGROUND STORM LINE
- BE — UNDERGROUND ELECTRIC LINE
- UNK — UNSPECIFIED UTILITY LINE
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- BTV — UNDERGROUND CABLE LINE
- EXISTING MAJOR GROUND CONTOUR
- EXISTING GROUND CONTOUR
- EXISTING BUILDING
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING TRAFFIC SIGNAL
- EXISTING LIGHT POLE
- FOUND SURVEY MONUMENT
- SET SURVEY MONUMENT
- SITE CONTROL POINT
- SITE BENCHMARK
- P.R.J.C.M. — PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
- DOC. NO. — DOCUMENT NUMBER
- BK. , PG. — BOOK, PAGE
- EXISTING HYDRANT
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC RISER
- EXISTING TELEPHONE HAND HOLE
- EXISTING FIBER OPTIC HAND HOLE
- EXISTING STORM MANHOLE/CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING STORM INLET
- EXISTING BOLLARD
- EXISTING WATER METER
- EXISTING GAS VALVE
- CATV — EXISTING CABLE RISER
- EXISTING UTILITY POLE

PROPOSED AREA PROPERTIES

	AREA
ONSITE AREA	0. 701 AC
GREENSPACE	0.400 AC
IMPERVIOUS AREA	0.267 AC
BUILDING	0.034 AC

STORM DRAINAGE CALCULATIONS

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								10.32	1.25	25.4														

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DATED: 15 SEPTEMBER, 2025

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SCALE: 1 inch = 20 ft.

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PROFESSIONAL SEAL

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DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
A-2005011900-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

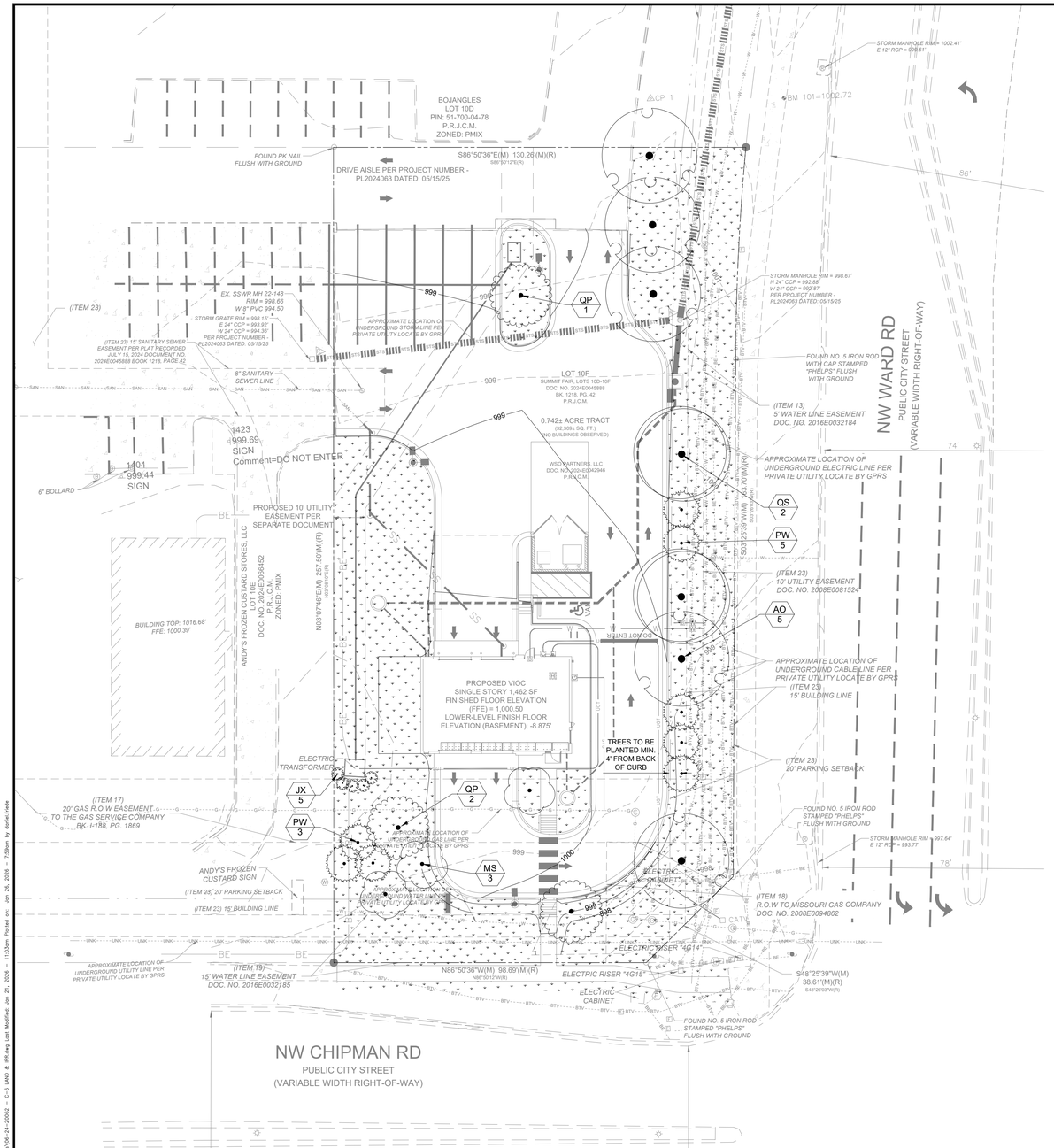
PROJECT NUMBER: 06-24-20062

SHEET NAME: POST-DEVELOPMENT DRAINAGE PLAN

SHEET #: C-5.3

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Drawing Name: L:\HFA-FILES\2024 Projects\06-24-20062 VIOC Lee's Summit, MO (NW Chipman)\Civil Design\Civil\06-24-20062 - C-5.3 DRAINAGE.dwg Last Modified: Jan 15, 2026 - 3:42pm Plotted on: Jan 26, 2026 - 3:49pm by daniel.frace



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	QTY
EVERGREEN TREE				
	PW	Pinus alba / White Pine	10` Ht.	8
LARGE SHADE TREE				
	AO	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	5
	QS	Quercus shumardii / Shumard Oak	2.5" Cal.	2
MEDIUM SHADE TREE				
	QP	Quercus phellos / Willow Oak	2" Cal.	3
ORNAMENTAL TREE				
	MS	Malus x 'Spring Snow' / Spring Snow Crabapple	1.5" Cal.	3
SHRUBS				
	JX	Juniperus x 'Grey Owl' / Grey Owl Juniper	5 gal. - 24" ht. min.	5

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
GROUND COVERS					
	FA	Festuca arundinacea / Tall Fescue	sod		13,801 sf

GENERAL LANDSCAPE NOTES:

THIS PLAN IS FOR LANDSCAPE LAYOUT ONLY. ALL GRADING, UTILITIES, SITE STRUCTURES, ETC. ARE FOR REFERENCE ONLY AND SHALL BE VERIFIED WITH CIVIL PLANS AND IN THE FIELD.

ALL PLANT MATERIALS SHALL ARRIVE AT THE SITE WITH SOIL MOIST.

CONTRACTORS SHALL HAVE UNDERGROUND UTILITIES LOCATED, LEGIBLY MARKED, AND SHALL REPAIR ANY AND ALL DAMAGE WHICH MAY OCCUR AS A RESULT OF LANDSCAPE INSTALLATION. UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATED, AND SHOULD BE VERIFIED ON THE CIVIL UTILITY PLAN AND IN THE FIELD.

UNDER NO CIRCUMSTANCES WILL LANDSCAPE WORK BE APPROVED FOR PAYMENT IF PLANT SIZE AND GENERAL HEALTH ARE NOT AS REQUIRED ON PLAN.

ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS AS SPECIFIED.

ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND THE OWNER BEFORE, DURING AND AFTER INSTALLATION.

THE LANDSCAPE ARCHITECT MUST APPROVE ANY ALTERATIONS OR REVISIONS TO THE LANDSCAPE PLAN.

THE CONTRACTOR SHALL PROTECT EXISTING FEATURES ON SITE.

ALL DISTURBED AREAS ON AND OFF THE SITE, INCLUDING THE TEMPORARY DETENTION AREA, SHALL BE COMPLETELY SODDED WITH GRASS SPECIFIED ON PLANS.

MAINTENANCE:

THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THESE PLANS, BEFORE PRICING THE WORK.

THE LANDSCAPE CONTRACTOR SHALL FULLY MAINTAIN ALL PLANTING (INCLUDING BUT NOT LIMITED TO WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) OF PLANTING AREAS AND LAWNS FOR 90 DAYS AFTER SUBSTANTIAL COMPLETION.

THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR ONE (1) YEAR BEGINNING AT THE DATE OF SUBSTANTIAL COMPLETION. THE LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE THE END OF THE GUARANTEE PERIOD (AS PER DIRECTION OF THE OWNER).

ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.

STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1) REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR ALL NEW PLANT MATERIAL. ALL NEW PLANT MATERIAL SHALL BE PLANTED AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN NATIONAL STANDARDS INSTITUTE REQUIREMENTS FOR TREE, SHRUB, AND OTHER WOODY PLANT MAINTENANCE (ANSI A300 PARTS 1 THROUGH 6).

ALL TOPSOIL (4"-5" IN PLANTING BEDS) (1"-2" FOR SEED AND SOD AREAS) APPLIED TO THE SITE SHALL BE LOAMY, FRIABLE SOIL, CONTAINING A MINIMUM OF 1.5 PERCENT BY DRY WEIGHT ORGANIC MATTER; FREE FROM SUBSOIL, REFUSE, ROOTS, HEAVY OR STIFF CLAY, STONES LARGER THAN 25 MM (1 IN.), NOXIOUS SEEDS, STICKS, BRUSH, LITTER, AND OTHER DELETERIOUS SUBSTANCES; SUITABLE FOR THE GERMINATION OF SEEDS AND THE SUPPORT OF VEGETATIVE GROWTH. THE PH VALUE SHALL BE BETWEEN 5.5 AND 6.5.

ALL PLANTING AREAS SHALL BE TOP DRESSED WITH SHREDDED HARDWOOD MULCH AT A MIN. 4" DEPTH ON DEWITT PRO 5 LANDSCAPE FABRIC. TOP OF MULCH SHALL BE EVEN WITH TOP OF CURBS OR EDGING. SEE CIVIL PLANS FOR ELEVATIONS. SECURE FABRIC WITH PINS OR STAPLES (2"x5"). PINS SHALL BE PLACED AT 5' O.C. AND JOINTS SHALL OVERLAP BY 12"

LANDSCAPE EDGING TO BE STEEL AND SHALL BE DARK IN COLOR.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT INSTALLED LANDSCAPING DOES NOT INTERFERE WITH OR OBSTRUCT ANY ADA PATHS OR OTHER VEHICULAR OR PEDESTRIAN USE AREAS. IT SHALL BE THE OWNER'S RESPONSIBILITY TO MAINTAIN ALL LANDSCAPING SO AS TO NOT INTERFERE WITH OR OBSTRUCT ANY ADA PATHS OR OTHER VEHICULAR OR PEDESTRIAN USE AREAS.

CITY OF LEE'S SUMMIT LANDSCAPE NOTES:

ONLY ORNAMENTAL TREES AND SHRUBS MAY BE PLANTED WITHIN ANY EASEMENT 1

CITY PLANTING REQUIREMENTS

LANDSCAPE PLAN PER APPROVED PRELIMINARY DEVELOPMENT PLAN, ORDINANCE NUMBER 10141 APPROVED MAY 20, 2025.

REQUIRED	PROVIDED
7 LARGE SHADE TREES	7 LARGE SHADE TREES
3 MEDIUM SHADE TREES	3 MEDIUM SHADE TREES
8 EVERGREEN TREES	8 EVERGREEN TREES
3 ORNAMENTAL TREES	3 ORNAMENTAL TREES
5 SPREADER EVERGREEN SHRUBS	5 SPREADER EVERGREEN SHRUBS

SITE DATA SUMMARY

VALVOLINE TRACT: (AFTER ROW DEDICATION)	0.742 ACRES/32,309 SF
ZONING:	PMIX PLANNED MIXED USE
BUILDING SF:	1,462 SF
F.A.R. (FLOOR/AREA RATIO):	1:0.05
LOT COVERAGE:	0.742 (32.309 SF)
PARKING REQUIRED:	6 (1 ADA)
PARKING PROVIDED:	11 (1 ADA)
PERVIOUS COVER:	13,202 SF
IMPERVIOUS COVER:	19,107 SF
REQUIRED BICYCLE PARKING:	0
PROVIDED BICYCLE PARKING:	4

SURVEY PROVIDED BY:

ATWELL
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NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

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SCALE: 1 inch = 20 ft.

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A-2005011900-F

PROFESSIONAL LICENSE NO: XXXXXXXXX

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
LANDSCAPE PLAN

SHEET #
C-6.0

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Drawing Name: L:\AE\+PLEDO\2024 Projects\06-24-20062 - VIOC - Lee's Summit, MO (NW Chipman)\04-Design\Civil\DWG\06-24-20062 - C-6 LAND & RW-Key Last Modified: Jan 21, 2026 - 11:03am Plotted on: Jan 26, 2026 - 7:56am by dustin.kane

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2026.01.26 12:59:19-06'00'
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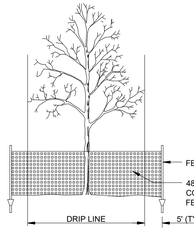
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06-24-20062

SHEET NAME
LANDSCAPE DETAILS

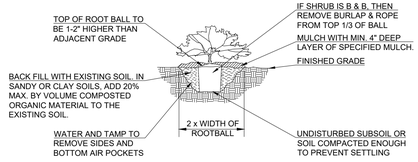
SHEET #
C-6.1

TREE PROTECTION NOTES

1. ALL TREES SHOWN ON THIS PLAN TO BE RETAINED SHALL BE PROTECTED DURING ALL PHASES OF DEMOLITION/CONSTRUCTION WITH TEMPORARY FENCING. IT SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY TO COORDINATE WITH LANDSCAPE CONTRACTOR.
2. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING). CLEARING SHALL BE DONE BY HAND.
3. FENCES SHALL COMPLETELY SURROUND TREE OR CLUSTERS OF TREES; SHALL BE LOCATED 5' FROM THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIP LINE); AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION BY CONTRACTOR. PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING.
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
4. EXCEPTIONS TO INSTALLING FENCES 5' FROM TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED: ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO THE PROPOSED BUILDING: ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
5. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHES) IN ADDITION TO THE REDUCED FENCING PROVIDED.
6. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES (UNDER DRIP LINES), THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
7. ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA. NO ROOT OVER 1 INCH DIAMETER WILL BE CUT.
8. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED WITH A CLEAN CUT FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL IMMEDIATELY. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE.
9. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIP TO EVAPORATION. LINES, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.
10. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
11. NO CONDUIT OR UTILITIES CAN BE INSTALLED WITHIN TREE PROTECTION AREAS. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
12. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE. GRADING LIMITED TO 3 INCH CUT.
13. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.
14. ALL PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES) BY A CERTIFIED ARBORIST AND SHALL BE APPROVED AND SUPERVISED BY OWNERS REPRESENTATIVE OR PROJECT URBAN FORESTER.
15. DAMAGE TO TREES OR ANY NATURAL RESOURCE DUE TO CONTRACTORS NEGLIGENCE DURING THE CONSTRUCTION PHASE SHALL BE APPRAISED BY THE OWNERS REPRESENTATIVE AND ORDERED REPAIRED, REPLACED, OR COMPENSATED.



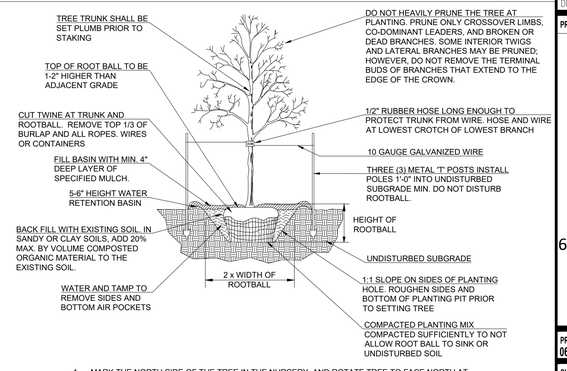
3 TREE PROTECTION
N.T.S.



1. REMOVE ANY DEAD, DYING OR SEVERELY BROKEN TWIGS OR BRANCHES. IF REMOVING THESE BRANCHED REDUCES THE SHRUB HEIGHT BELOW SPECIFIED HEIGHT THEN SHRUB SHALL BE REJECTED.
2. NEWLY PLANTED SHRUBS SHALL BE FERTILIZED WITH A TIME RELEASE FERTILIZER WITH A 20-20-20 ANALYSIS APPLIED PER MANUFACTURERS SPECIFICATION.

WEED BARRIER REQUIRED UNDER LANDSCAPE BEDS (INCLUDING MULCH AND ROCK BED)

2 SHRUB PLANTING
N.T.S.

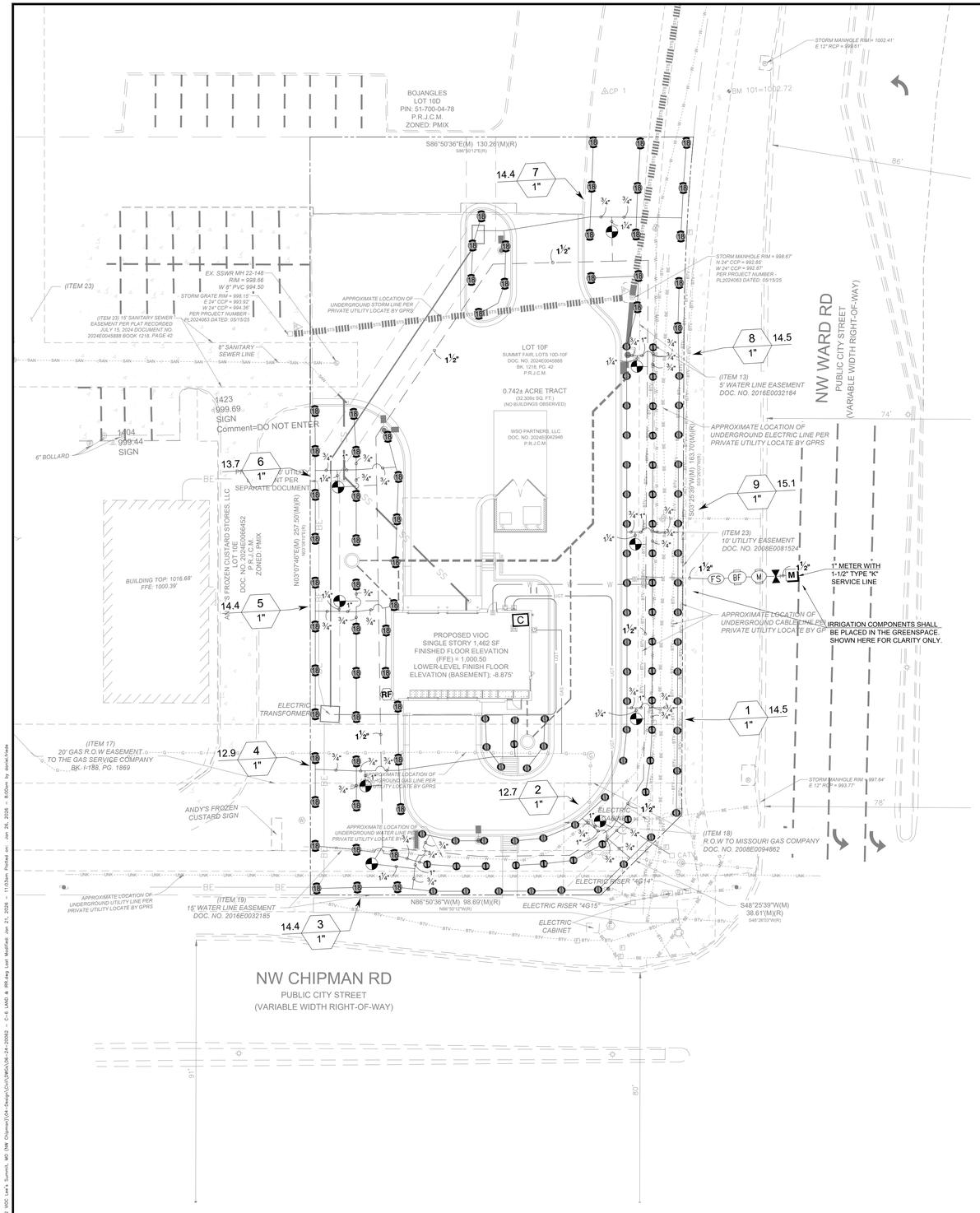


1. MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.
2. WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.
3. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOTBALL WITH SOIL.
4. DO NOT LIFT, ADJUST OR MOVE TREE USING THE TRUNK. USE METAL BASKET FOR THESE TASKS.
5. NEWLY PLANTED TREES SHALL BE FERTILIZED WITH A TIME RELEASE FERTILIZER WITH A 20-20-20 ANALYSIS APPLIED PER MANUFACTURERS SPECIFICATION.

1 TREE PLANTING
N.T.S.

Drawing Name: \\HFA-FILES\2024 Projects\06-24-20062_VOC Lee's Summit, MO (NW Chipman)\04-Design\Civil\06-24-20062_ - C-6 LAND & RP.dwg Last Modified: Jan 21, 2026 - 11:05am Plotted on: Jan 26, 2026 - 7:56am By: Abdel Kadre

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CRITICAL ANALYSIS

Generated:	2025-11-10 15:21
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	37.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	70 PSI
Elevation Change:	0 ft
Service Line Size:	1 1/2"
Length of Service Line:	5 ft
Pressure Available:	70 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	15.14 GPM
Flow Available at POC:	37.5 GPM
Residual Flow Available:	22.36 GPM
Critical Station:	7
Design Pressure:	45 PSI
Friction Loss:	1.1 PSI
Fittings Loss:	0.11 PSI
Elevation Loss:	0 PSI
Loss through Valve:	5.94 PSI
Pressure Req. at Critical Station:	52.2 PSI
Loss for Fittings:	0.08 PSI
Loss for Main Line:	0.78 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	12.5 PSI
Loss for Master Valve:	1.14 PSI
Loss for Water Meter:	1.14 PSI
Critical Station Pressure at POC:	67.8 PSI
Pressure Available:	70 PSI
Residual Pressure Available:	2.2 PSI

NOTE TO CONTRACTOR:

ALL DISTURBED AREAS SHALL RECEIVE SEED OR SOD ACCORDING TO LANDSCAPE PLAN. ALL AREAS RECEIVING SEED OR SOD AND NOT COVERED BY THE AUTOMATIC IRRIGATION SYSTEM SHALL BE HAND WATERED UNTIL VEGETATION IS ESTABLISHED AND ABLE TO SUSTAIN ITSELF IN A CONSISTENTLY HEALTHY CONDITION.

GENERAL IRRIGATION NOTES:

LINE LAYOUT AND EQUIPMENT PLACEMENT IS DIAGRAMMATIC. ADJUST HEAD AND LINE LOCATIONS ON SITE TO ACCOMMODATE EXISTING JOB CONDITIONS AND TO ACHIEVE 100% COMPLETE COVERAGE. ALL HEADS, LINES, VALVES, AND OTHER IRRIGATION EQUIPMENT SHALL BE LOCATED AND ROUTED THROUGH LANDSCAPE AREAS WHENEVER POSSIBLE AND SHALL BE LOCATED WITHIN THE BOUNDS OF THE PROPERTY. LOCATION OF IRRIGATION CONTROLLER & WEATHER STATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND/OR OWNER. SEE CIVIL UTILITY PLANS FOR EXACT LOCATION OF WATER METER.

SPRAY HEADS SHALL BE ADJUSTED SO AS TO NOT SPRAY UNDER PRESERVED TREES.

THE CONTRACTOR SHALL DISCUSS ANY IRRIGATION LOCATED WITHIN AN EASEMENT WITH THE OWNER AND FULLY INFORM THEM OF ALL LIABILITY OF FUTURE DAMAGE TO THEIR SYSTEM BY EASEMENT OWNER.

LATERAL LINES TO BE POLYFLEX PIPE SDR 9 CTS
MAIN LINE TO BE POLYFLEX PIPE SDR 9 CTS

ALL IRRIGATION EQUIPMENT TO BE RAINBIRD, THERE SHALL BE NO SUBSTITUTIONS.

GENERAL IRRIGATION NOTES:

CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO STARTING WORK ON THE SITE. UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATED, AND SHOULD BE VERIFIED ON THE CIVIL UTILITY PLAN AND IN THE FIELD.

CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, LICENSES, METERS, TAPS, AND IMPACT FEES REQUIRED TO INSTALL THE SYSTEM.

CONTRACTOR SHALL REFER TO THE LANDSCAPE PLAN FOR HEAD, LINE, AND VALVE PLACEMENT RELATIVE TO THE PROPOSED PLANTING PLAN. IRRIGATION SYSTEM SHALL PROVIDE 100% HEAD-TO-HEAD COVERAGE.

CONTRACTOR SHALL ADJUST HEADS AND NOZZLES TO PROVIDE 100% COVERAGE IN THE AREAS INDICATED ON THE PLAN. AVOID CONFLICTS WITH EXISTING AND PROPOSED PLANT MATERIAL, PAVING, STRUCTURES, AND UTILITY LINES. ADJUSTABLE ARC NOZZLES SHALL BE SUBSTITUTED IN PLACE OF FIXED ARC NOZZLES AS NECESSARY TO PREVENT OVER SPRAY ONTO PAVEMENT. IRRIGATION HEADS SHALL BE PLACED AND ADJUSTED TO PREVENT SPRAY ONTO BUILDINGS OR WALKWAYS.

VERIFY IN THE FIELD, THE LOCATION OF LINES, HEADS, OR VALVES WITHIN THE DRIP LINE OF ANY EXISTING TREES. HAND EXCAVATE OR BORE WITHIN THE DRIPLINE OF ANY TREE.

IRRIGATION CONTRACTOR SHALL COORDINATE INSTALLATION OF THE SYSTEM WITH THE LANDSCAPE CONTRACTOR SO THAT ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS.

ALL MAIN LINE PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 18". ALL LATERAL PIPING DOWNSTREAM OF THE MAINLINE SHALL BE BURIED TO HAVE A MINIMUM COVER OF 12".

ALL WIRING FROM THE IRRIGATION CONTROLLER TO THE REMOTE CONTROL VALVES SHALL BE UF-14 DIRECT BURIAL CABLE. ALL WIRE SPLICES SHALL BE MADE IN VALVE BOXES ONLY.

THE IRRIGATION CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PLACEMENT OF SLEEVES PRIOR TO PAVING. SLEEVE MATERIAL SHALL BE SCHEDULE 40 AND AT A MINIMUM DEPTH OF 18".

THE IRRIGATION CONTRACTOR IS REQUIRED TO REPAIR WITH APPROVED IN KIND MATERIALS ANY DAMAGE INCLUDING BUT NOT LIMITED TO: THE BUILDING, STRUCTURES, PAVING, OR PLANTINGS. DAMAGE TO UTILITIES BY THE IRRIGATION CONTRACTOR SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE, AND THE REGULATING UTILITY PROVIDER.

THE IRRIGATION SYSTEM SHALL BE DESIGNED TO OPERATE BASED ON AN AVAILABLE WATER PRESSURE OF 41 PSI. IF PRESSURE IS LESS THAN 41 PSI, CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD. IF PRESSURE IS GREATER THAN 100 PSI, A PRESSURE REDUCING VALVE SHALL BE INSTALLED FOR SAFE OPERATION OF THE IRRIGATION SYSTEM.

CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DISCREPANCIES IN EQUIPMENT USAGE, AREA DIMENSIONS OR STATIC WATER PRESSURE EXIST THAT MIGHT NOT HAVE BEEN PRESENT OR KNOWN INFORMATION IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISION NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL LAWNS DISTURBED OUTSIDE OF OF CONSTRUCTION DISTURBANCE AREAS. ALL IRRIGATION DISTURBANCE OUTSIDE OF CONSTRUCTION DISTURBANCE SHALL HAVE THE TRENCHES BACKFILLED WITH TOPSOIL, AS DESCRIBED IN THE GENERAL LANDSCAPE NOTES AND BE GRADED SMOOTH PER THE GRADING PLAN. IRRIGATION CONTRACTOR SHALL FOLLOW THE GENERAL LANDSCAPE NOTES FOR SEEDING OR SODDING FOR REPAIRING REQUIRED LAWN AREAS.

THIS SHEET IS FOR THE PURPOSE OF IRRIGATION LAYOUT ONLY. ALL GRADING, UTILITIES, SITE FEATURES, ETC. ARE FOR REFERENCE ONLY. PLEASE REFER TO CIVIL PLANS FOR MORE DETAILS.

ALL EMISSION DEVICES MUST BE ADJUSTED TO DIRECT FLOW OF WATER AWAY FROM IMPERVIOUS SURFACES AND MUST NOT BE INSTALLED CLOSER THAN 4" FROM THE HARDSCAPE.

ALL WIRING USED IN THE IRRIGATION SYSTEM MUST BE UL LISTED FOR DIRECT UNDERGROUND BURIAL.

IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), MC-178, PO BOX 13087, AUSTIN, TX 78711-3087. TCEQ'S WEBSITE IS WWW.TCEQ.STATE.TX.US

THE IRRIGATION CONTRACTOR FOR THIS SITE SHALL HAVE A TEXAS IRRIGATOR'S LICENSE AND SHALL BE RESPONSIBLE FOR SECURING ALL PERMITS, COORDINATING REQUIRED INSPECTIONS, PROVIDING FINAL AS-BUILT DRAWINGS, CONDUCTING FINAL WALK THROUGH, ETC.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
14 ADJ 14 F	Rain Bird R-VAN14 1806-SAM-P45 Turf Rotary, 8ft.-14ft. 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/1800 turf spray body on 6in. pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2in. NPT Female Threaded Inlet.	77	45
18 ADJ 18 F	Rain Bird R-VAN18 1806-SAM-P45 Turf Rotary, 13ft.-18ft. 45-270 degrees and 360 degrees. Hand Adjustable Multi-Stream Rotary w/1800 turf spray body on 6in. pop-up, with check valve and 45 psi in-stem pressure regulator. 1/2in. NPT Female Threaded Inlet.	56	45

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PGA-PRS-D Globe 1" 1in., 1-1/2in., 2in. Electric Remote Control Valve, Globe. With Pressure Regulator Module.	9
	Shut Off Valve	1
M	Rain Bird EFB-CP-PRS-D 1" 1in., 1-1/4", 1-1/2in., 2in. Brass Master Valve, that is Contamination Proof w/Self-Flushing Filter Screen. Globe Configuration, Reclaimed Water Compatible, and Purple Handle Cover Designates Non-Potable Water Use. With Pressure Regulator.	1
BF	Watts 919QT 1" Backflow reduced pressure zone	1
C	Rain Bird ESPLXME2 12 Station Traditionally-Wired, Commercial Controller. Indoor/Outdoor, Plastic Wall-Mount Enclosure.	1
RF	Rain Bird WR2-RFC Wireless Rain and Freeze Sensor Combo, includes 1 receiver and 1 rain/freeze sensor transmitter.	1
FS	Rain Bird FS-100-B 1in. Flow Sensor, Brass Model. Suggested Operating Range 2.0 GPM to 40.0 GPM. Size for Flow Not According to Pipe Size. Rain Bird Compatible Controllers: ESP-LX(M)(P) | LXD | LXME2(P) | ME3, or Controllers Accepting Custom K-Factor and Offset. Install in Rain Bird Valve Box.	1
M	Water Meter 1"	1
	Irrigation Lateral Line: PVC Schedule 40 3/4"	1,508 lf
	Irrigation Lateral Line: PVC Schedule 40 1"	45.9 lf
	Irrigation Lateral Line: PVC Schedule 40 1 1/4"	40.6 lf
	Irrigation Mainline: PVC Schedule 40 1 1/2"	652.5 lf

Valve Callout
#• Valve Number
#• Valve Flow
#" • Valve Size

SURVEY PROVIDED BY:

ATWELL
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800

DATED: 15 SEPTEMBER, 2025

N

20 15 10 5 0 10 20 30 40

SCALE: 1 inch = 20 ft.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ac.com

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DATE	ISSUE
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12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL
STATE OF MISSOURI
DIEGO ALBERTO GARCIA
NUMBER PE-2023012235
NOT FOR CONSTRUCTION
RELEASED FOR PERMITTING OR IMPLEMENTATION
2026.01.26 12:59:24-06'00'
DIEGO ALBERTO GARCIA,
PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD.
A-2005011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER
06-24-20062

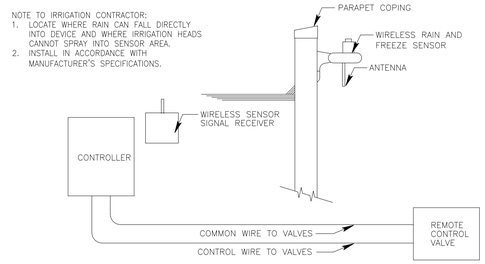
SHEET NAME
IRRIGATION PLAN

SHEET #
C-6.2

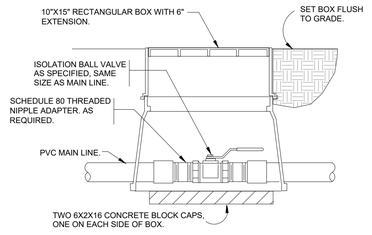
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MISSOURI 811

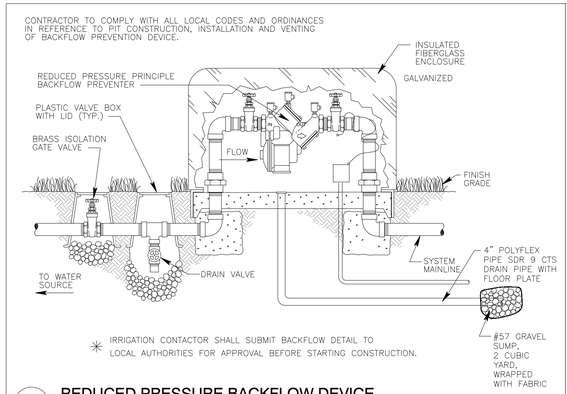
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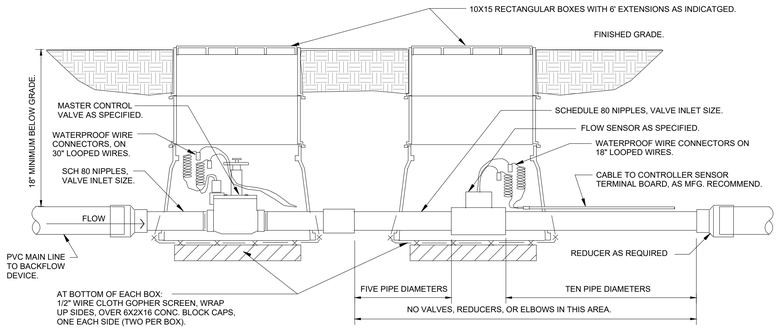
13 RAIN SENSOR
NTS



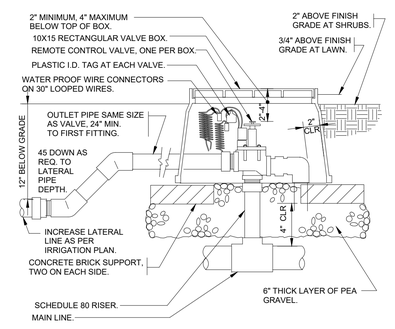
12 BRASS BALL ISOLATION VALVE
NTS



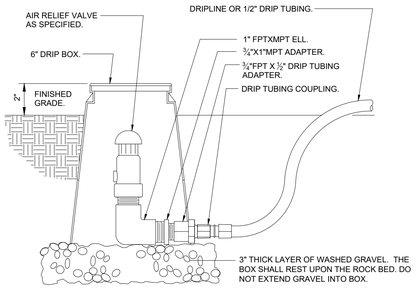
11 REDUCED PRESSURE BACKFLOW DEVICE
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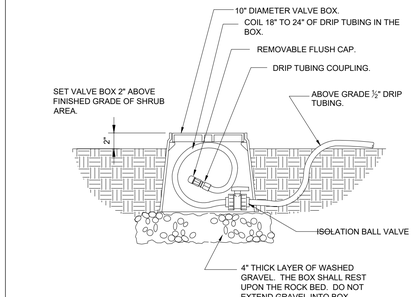
10 MASTER VALVE/FLOW SENSOR ASSEMBLY
NTS



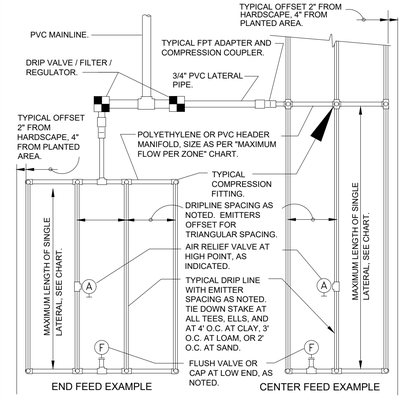
9 ELECTRIC REMOTE CONTROL VALVE
NTS



8 DRIP AIR RELIEF VALVE IN BOX
NTS



7 DRIP FLUSH CAP ASSEMBLY W/ BALL VALVE
NTS



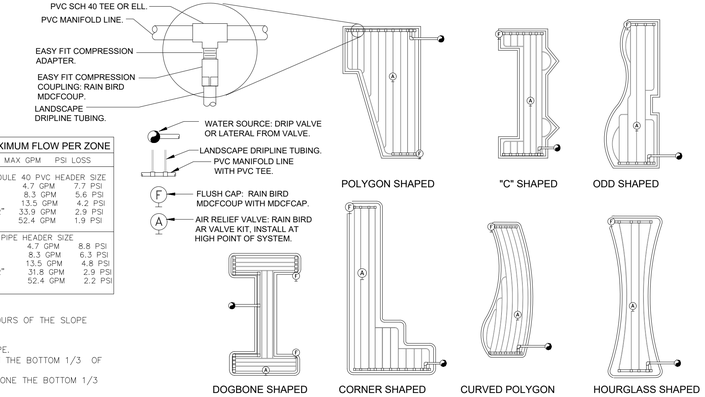
MAXIMUM LATERAL LENGTH (FEET)		
	EMITTER FLOW RATE GPH	
PSI	12" SPACING 0.6 0.9	18" SPACING 0.6 0.9
20	192 136	254 215
30	289 205	402 337
40	350 248	498 416
50	397 281	573 477
60	436 309	637 529

GRID PRECIPITATION RATES (IN/HR)			
EMITTER SPACING	LATERAL SPACING	EMITTER FLOW RATE 0.6	0.9
12	12	0.96	1.44
18	18	0.69	1.03
24	24	0.28	0.41

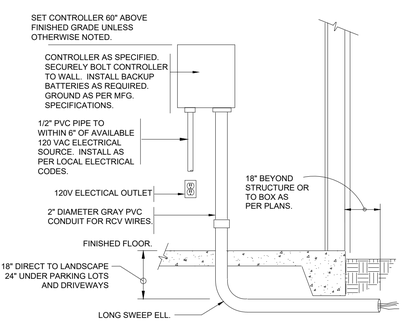
LATERAL FLOW PER 100 FT (GPM)			
EMITTER FLOW	12" SPACING	18" SPACING	24" SPACING
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
0.9 GPH	1.5 GPM	1.0 GPM	0.75 GPM

MAXIMUM FLOW PER ZONE	
MAX GPM	PSI LOSS
SCHEDULE 40 PVC HEADER SIZE	
1/2"	4.7 GPM 7.7 PSI
3/4"	8.3 GPM 5.6 PSI
1"	13.5 GPM 4.2 PSI
1-1/2"	33.9 GPM 2.9 PSI
2"	52.4 GPM 1.9 PSI
POLY PIPE HEADER SIZE	
1/2"	4.7 GPM 8.8 PSI
3/4"	8.3 GPM 6.3 PSI
1"	13.5 GPM 4.8 PSI
1-1/2"	31.8 GPM 2.9 PSI
2"	52.4 GPM 2.2 PSI

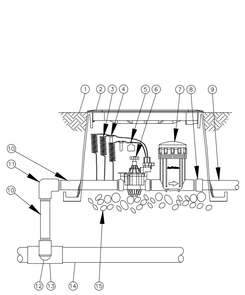
SLOPED CONDITION NOTE:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
3. NORMAL SPACING WITHIN THE TOP 2/3 OF SLOPE.
4. INSTALL DRIPLINE AT 25% GREATER SPACING AT THE BOTTOM 1/3 OF THE SLOPE.
5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM 1/3 ON A SEPARATE VALVE.



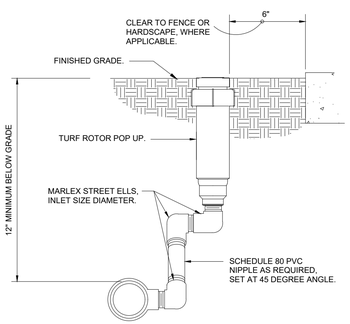
6 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS
N.T.S.



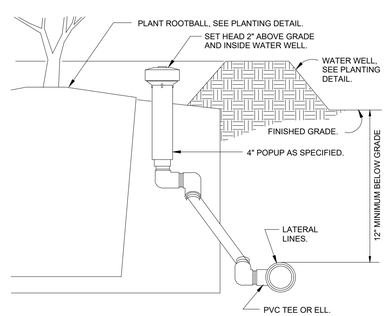
5 INTERIOR WALL MOUNT CONTROLLER
NTS



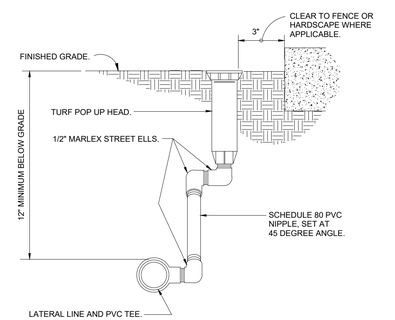
4 CZK-100-PRB-LC 1" LIGHT COMMERCIAL CONTROL ZONE KIT
NTS



3 TURN ROTOR MARLEX ASSEMBLY
NTS



2 POPUP BUBBLER AT PLANT PIT W/ SWING JOINT
NTS



1 TURF SPRAY MARLEX ASSEMBLY
NTS

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DATE	ISSUE
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01/26/2026	PERMIT SET REV 1

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STATE OF ARKANSAS DIEGO ALBERTO GARCIA REGISTERED PROFESSIONAL ENGINEER
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2026.01.26 12:59:29-06'00'
DIEGO ALBERTO GARCIA, PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2005011993-F
PROFESSIONAL LICENSE NO: 2023012235
PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME
Valvoline Instant Oil Change
VALVOLINE INSTANT OIL CHANGE
610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

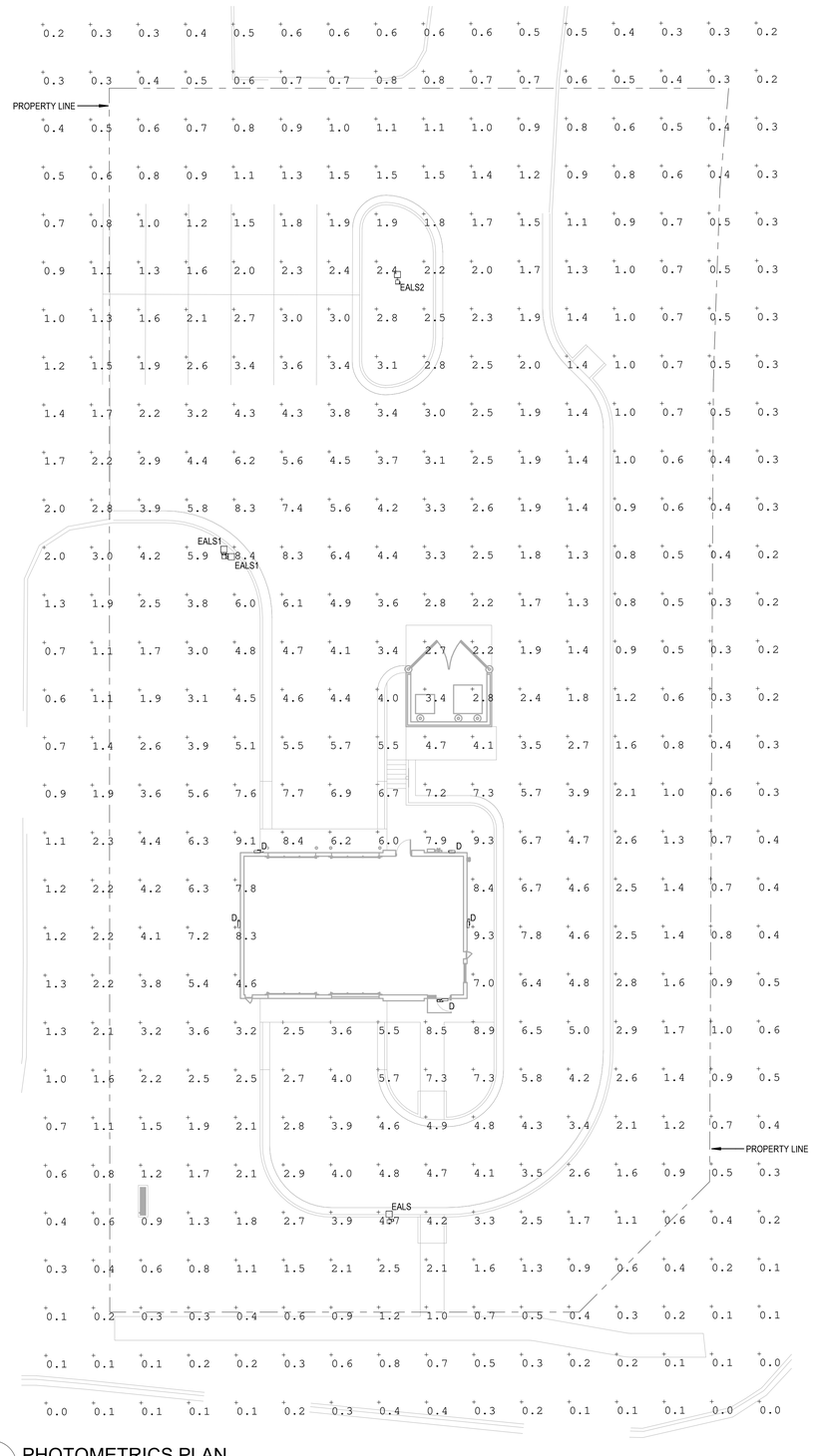
PROJECT NUMBER
06-24-20062

SHEET NAME
IRRIGATION DETAILS

SHEET #
C-6.3

NOT ISSUED FOR CONSTRUCTION

Drawing Name: \\HFA-FILE01\2024 Projects\06-24-20062 VOC Lee's Summit, MO\04 Drawings\Civil\DWG\06-24-20062 - C-6.1 MEP & IRR Key Unit Map.dwg Last Modified: Jan 21, 2026 - 11:03am Plotted on: Jan 28, 2026 - 7:56am by KarlaVieyra



1 C-8.0 PHOTOMETRICS PLAN
Scale: 1" = 15'-0"

LIGHTING FIXTURE SCHEDULE

MARK	SYMBOL	MANUFACTURER MODEL	CATALOG NUMBER	LAMPS WATTS	LAMPS TYPE	DESCRIPTION	MOUNTING HEIGHT
EALS		LITHONIA LED AREA LIGHT	RSX1-LED-P4-40K-R3-MVOLT-SPA-DDBXD	133W	LED	AREA LIGHT	POLE MOUNT AT 27'-6" AFF. SSS-25'-4G-DM-19AS-DDBXD
EALS1		LITHONIA LED AREA LIGHT	RSX1-LED-P4-40K-R4-MVOLT-SPA-DDBXD	133W	LED	AREA LIGHT	POLE MOUNT AT 27'-6" AFF. SSS-25'-4G-DM-19AS-DDBXD
EALS2		LITHONIA LED AREA LIGHT	RSX1-LED-P4-40K-R5-MVOLT-SPA-DDBXD	133W	LED	AREA LIGHT	POLE MOUNT AT 27'-6" AFF. SSS-25'-4G-DM-19AS-DDBXD
D		LITHONIA WALLPACK	DSXW1-LED-P7-40K-80CRI - TFTM-MVOLT-DDBXD	73W	LED	WALLPACK	SURFACE MOUNT

GC SHALL PURCHASE ALL LIGHTING FIXTURES, CONTACTOR PANELS, SENSORS CONTROLS, ETC. FROM WB LIGHTING (VIOCSUPPORT@WBLIGHT.COM) AND PROVIDE TO EC FOR INSTALLATION.

CALCULATION SUMMARY

CALC. LABEL	UNITS	AVG	MAX	MIN	MAX/MIN
PARKING AREA	FOOTCANDLES	3.3	8.3	0.6	13.8
PROPERTY LINE	FOOTCANDLES	1.0	3.4	0.3	11.3

LITHONIA LIGHTING®

Catalog Number
Notes
Type

Anchor Base Poles

SSS

SQUARE STRAIGHT STEEL

BAA

FEATURES & SPECIFICATIONS

INTENDED USE — These specifications are for USA standards only. Square Straight Steel is a general purpose light pole for up to 30-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION —

Pole Shaft: The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, 0.120"), or 50 KSI (7-gauge, 0.179"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional capabilities. Available shaft widths are 4", 5" and 6".

Pole Top: Options include 4" tenon top, drilled for side-mount fixture; tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable top cap.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

Anchor Base/Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (minimal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets SAE and GM classifications of ASTM D3359. Powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Paint-over-Hot-dipped-Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations.
Please refer to www.acuitybrands.com/buy-american for additional information.

INSTALLATION — Do not erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claims for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

SSS Square Straight Steel Poles

ORDERING INFORMATION — Lead times will vary depending on options selected. Consult with your sales representative. **Example:** SSS 20 5C DM19 DDBXD

SSS Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness	Mounting[1]		Options		Finish[4]
SSS[2]	10'-39' (for 12'/8' increments, add -6 for the pole height. Ex. 20-6 equals 20ft 6in.) See technical information table for complete ordering information.)	4C 4" Sq (0.120") 4G 4" Sq (0.179") 5C 5" Sq (0.120") 5G 5" Sq (0.179") 6G 6" Sq (0.179") See technical information table for complete ordering information.)	Tenon mounting: Open top (includes top cap) T20 2-3/8" O.D. (2-1/2" NPS) T25 2-7/8" O.D. (3-1/2" NPS) T30 3.5"* O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS) RAD/RAD/RAD/RAD drill mounting[3] DM19 1 at 90° DM28 2 at 180° DM28/90 2 at 180° and side-plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90° CAST/DUCTILE/CORTEN[TM]/ DELTA RAD drill mounting[3] DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90° BAA drill mounting[3] DM19RAD 1 at 90° DM28RAD 2 at 180° DM29RAD 2 at 90° DM39RAD 3 at 90° DM49RAD 4 at 90° EGR drill mounting[3] DM19EGR 1 at 90° DM28EGR 2 at 180° DM29EGR 2 at 90° DM39EGR 3 at 90° DM49EGR 4 at 90°	AERIS™ Suspend drill mounting[3] DM19AERIS_ 1 at 90° DM28AERIS_ 2 at 180° DM29AERIS_ 2 at 90° DM39AERIS_ 3 at 90° DM49AERIS_ 4 at 90° DMERIS™ Suspend drill mounting[3] DM19MERIS_ 1 at 90° DM28MERIS_ 2 at 180° DM29MERIS_ 2 at 90° DM39MERIS_ 3 at 90° DM49MERIS_ 4 at 90°	Shipped installed VD Vibration damper[5] HAnty Horizontal arm bracket (1 fixture)[6] FBUny Fretson outlet box electrical[7,8] CPLUUny 1/2" coupling[9] CPLMUny 3/4" coupling[9] CPLUny 1" coupling[9] NPLSUny 1/2" threaded nipple[9] NPLMUny 3/4" threaded nipple[9] NPLUny 1" threaded nipple[9] DHBUy Extra handhole[8,10] STUBK Steel handhole cover (standard in plastic, finish is smooth) FBCSTLBPC 2 Piece steel base cover (standard is plastic) K Interior coupling[9] LnkB Less anchor bolts (Include when anchor bolts are not needed) TP Tamper-resistant handhole cover fasteners NEC NEC 410.30 compliant gasketed handhole (Nail ID. Labeled) UL UL listed with label (includes NEC compliant cover) BAA Buy America(n) Act Compliant[11]	Shipped installed SH Shroud[12] HSny Horizontal arm bracket (1 fixture)[6] FBUny Fretson outlet box electrical[7,8] DMAVG Dark bronze DMAVD Black DMAVF Natural aluminum DMAVJ White DMAVK Textured dark bronze DMAVL Textured black DMAVN Textured natural aluminum DMAVP Textured white DSSSD Sandstone DDBTXD Textured dark bronze DBLBTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone Other finishes GALV Galvanized finish Architectural colors and special finishes Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.

NOTES:
1. Handhole covers (HHC), Ball base covers (FBC) and top caps (TC) shipped separately. Reviewed to call out in nomenclature. For additional parts please order as replacements.
2. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7 Gauge) in nomenclature. "C" – 0.120" | "G" – 0.179".
3. PT opens top; poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
4. Refer to the finish spec sheet for the correct drilling template pattern and orientation compatibility.
5. All RAD drillings require a minimum top O.D. of 4".
6. Insert "1" or "2" to designate fixture size, e.g. DM19AS2Z.
7. Qty 4" and 5" poles, VD cannot be installed if provisions (EMG, FBS, NPL, CPL) are located higher than 2/3 of the pole's total height.
Example: Pole height is 25ft, A provision cannot be placed above 16ft.
8. Specify location and orientation when ordering option.
For "A" – Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "'".
Example: 10' = 2 and 10ft 3in = 2'3"
For "Q" – Specify orientation from handhole (A,B,C,D) Refer to the Handhole Orientation diagram below.
Example: 12" coupling at 2'4", orientation C = 2Ft 12Ft 4C
9. Horizontal arm is 18" x 2-3/8" O.D. tenon-standard, with radius curve providing 12" rise and 2-3/8" O.D. If ordering two horizontal arm at the same height, specify with 1Hazy. *Example: HA2OBD*
10. FBS does not come with GFI outlet or handhole cover. These must be supplied by contractor or electrician.
11. Combination of tenon-top and drill mount includes extra handhole. DJH includes cover.
12. Provides enhanced corrosion resistance.
13. Use when mill certifications are required.
14. Finish must be specified. Additional colors available; see Architectural Colors brochure linked here (Form No. 794.1). Lead times may be extended up to 2 weeks due to paint procurement.

Accessories: Order as separate catalog number

PLBT20	Plug-in for ESA drillings
PLBT8	Plug-in for DMAxxES drillings



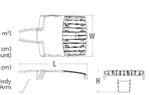
RSX1 LED
Area Luminaire

Catalog Number
Notes
Type

Anchor Base Poles

Specifications

EPA (ft²/80°): 0.57 ft² (0.05 m²)
Length: 21.8" (55.4 cm) (SPA mount)
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body 7.2" (18.4 cm) Arm
Weight (SPA mount): 22.0 lbs (10.0 kg)



Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.
The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

Design Select options indicated by this color background.

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Ordering Information **EXAMPLE:** RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED

Series	Performance Package	Color temperature	Distribution	Voltage	Mounting
RSX1 LED	P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	R2 Type 2 Wide R3 Type 3 Wide R3S Type 3 Short R4 Type 4 Wide R4S Type 4 Short R5 Type 5 Wide R5S Type 5 Short AFR Automotive Front Row AFRR90 Automotive Front Row Right Rotated AFRL90 Automotive Front Row Left Rotated	MVOLT[1] (120V-277V)[1] HVOLT (347V-480V)[1] XVOLT (277V-480V)[1] Ione specific voltage for options as noted) 120[2] 277[2] 208[2] 347[2] 240[2] 480[2]	SPA Square pole mounting (3.0" max. tenon for 3 at 90°, 3.5" max. tenon for 2, 3, 4 at 90°) RPA Round pole mounting (3.2" max. dia. IRO pole for 2, 3, 4 at 90°, 3.5" max. dia. RAD pole for 3 at 90°, 3 at 180°, 4 at 120°) WBA Wall arm adapter (fits 2-3/8" OD horizontal tenon) BS Adjustable slipfitter (fits 2-3/8" OD tenon)[3] WBA Wall bracket[3] WBGC Wall bracket with surface-conduit box AASP Adjustable-tilt arm square pole mounting[4] AAPP Adjustable-tilt arm round pole mounting[4] AABPB Adjustable-tilt arm with wall bracket[4] AABPDC Adjustable-tilt arm wall bracket and surface-conduit box[4]

Options	Finish
Shipped installed HS House-side shield[5] PE Photocontrol, button style[6,7] PER7 Seven-wire twist-lock receptacle only (no controls)[7,8,9] SF Single fuse (120, 277, 347)[1] DF Double fuse (208, 240, 480)[1] SPD20KV 20KV Surge pack (10KV standard) FAO Field adjustable output[10] DMG 0-10V dimming extend out back of housing for external control (control ordered separate)[11]	**Shipped included** ***Standalone and Networked Sensors/Controls (factory default settings, see table page 9)** NLTAIR2 PIRHN Nlight-AIR generation 2, with Networked, Bi-level motion/ambient sensor[12,13,14] BAA Buy America(n) Act Compliant CCE Coastal Construction[15] ***Note: NLTAIR2 PIRHN with eCLIPs kit can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.** **Shipped Separately (requires same field assembly)** BSS External glare shield[5] EGRV External glare 1/2 visor (360° around light aperture)[5] BS Bird spikes[16]	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured Dark Bronze DBLBTXD Textured Black DNATXD Textured Natural Aluminum DWHGXD Textured White

D-Series Size 1
LED Wall Luminaire

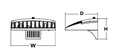
Catalog Number
Notes
Type



Specifications

Luminaire
Width: 13-3/4" (34.9 cm) Weight: 12 lbs (5.4 kg)
Depth: 10" (25.4 cm)
Height: 6-3/8" (16.2 cm)

Back Box (BBW, E20WC)
Width: 13-3/4" (34.9 cm) BBW Weight: 5 lbs (2.3 kg)
Depth: 4" (10.2 cm) E20WC Weight: 10 lbs (4.5 kg)
Height: 6-3/8" (16.2 cm)



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.
With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information **EXAMPLE:** DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines)[1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type I Short T2M Type II Medium T3S Type II Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT[2] 120[3] 208[3] 240[3] 277[3] 347[3,4] 480[3,4]	Shipped included (Blank) Surface mounting bracket BBW Surface mounted back box (for conduit entry)[5]	Shipped installed PE Photoelectric cell, button type[6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht[7,8] PIRH 180° motion/ambient light sensor, 15-30' mtg ht[7,8] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[7,8] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[7,8] E20WC Emergency battery backup, 0ne light external components enclosure), CA Title 20 compliant[9,10]

Other Options	Finish (required)
Shipped installed SF Single fuse (120, 277 or 347V)[2,4] DF Double fuse (208, 240 or 480V)[2,4] HS House-side shield[11] SPD Separate surge protection[12]	**Shipped separately**[13] BSW Bird-screened spikes VG Vandal guard DDL Diffused drop lens	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White	DSSSD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum	DWHGXD Textured white DSSTXD Textured sandstone

Accessories
Ordered and shipped separately.
DSXW1LE House-side shield (one per light engine)
DSXW1DLW Bird-screened spikes
DSXW1VG4 Vandal guard assembly

NOTES
1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
3. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
4. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
5. Not available with tenon 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Some as and ELCW. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BSW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode 85% fixture lumen output per product page at www.lithonia.com
9. Not available with E20WC.
10. Not available with E20WC.
11. Also available as a separate accessory; see Accessories information.
12. Not available with E20WC.

HFA
HFA-AE, L T D.
t 479.273.7780
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

STIPULATION FOR REUSE

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Date	Issued Record
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET

STATE OF MISSOURI
CHRISTOPHER A RICHARDSON
NUMBER PE-2025000028
PROFESSIONAL ENGINEER
Digitally signed by Christopher Allen Richardson
DN: C=US, E=crichardson@hfa-ae.com, O=Christopher Allen Richardson, OU=Professional Engineer, CN=Christopher Allen Richardson
Reason: I am the author of this document
Date: 2026.12.22 09:14:04-06'00'
Christopher Allen Richardson

CHRISTOPHER A RICHARDSON, P.E.
PE-2025000028
HFA-AE, LTD
E-2005011725-F

PROFESSIONAL IN CHARGE
CAR
PROJECT MANAGER
IN
QUALITY CONTROL
IN
DRAWN BY
AJ

PROJECT NAME

VALVOLINE INSTANT OIL CHANGE

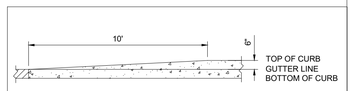
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LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

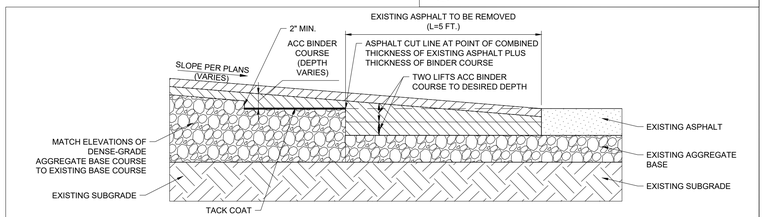
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PHOTOMETRICS PLAN

SHEET #
C-8.0

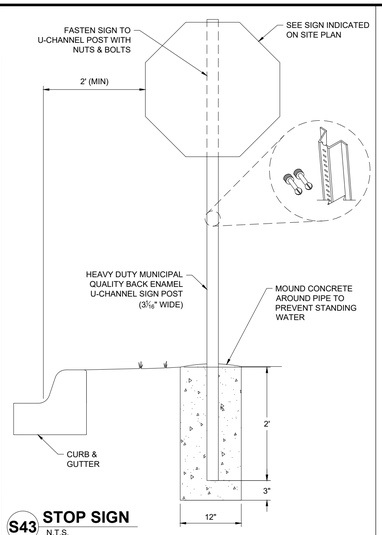
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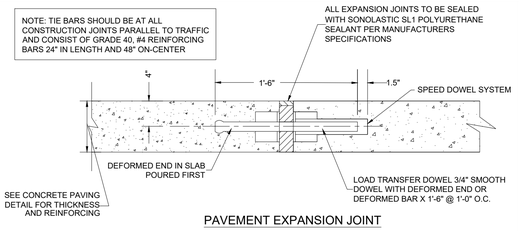
S6 CURB TAPER
N.T.S.



S8 MATCH EXISTING PAVEMENT ELEVATION (PAVEMENT TRANSITION)
N.T.S.

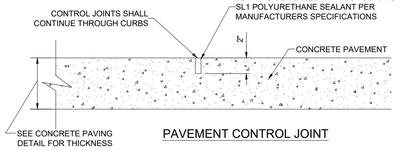


S43 STOP SIGN
N.T.S.



PAVEMENT EXPANSION JOINT

NOTE: CONTROL JOINTS SHALL BE SAW CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT - REINFORCEMENT LAPS SHALL NOT BE LOCATED WITHIN 3 FEET OF CONTROL JOINTS

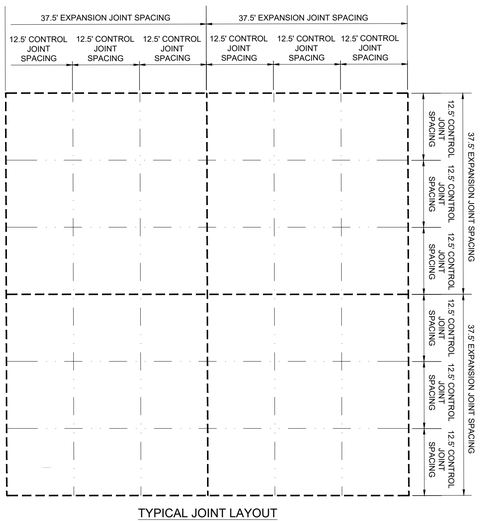


PAVEMENT CONTROL JOINT

PROPOSED

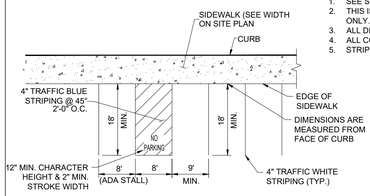
CONTROL JOINT
EXPANSION JOINT

NOTE: CONTRACTOR TO FIELD ADJUST JOINTS BASED UPON SITE CONDITIONS



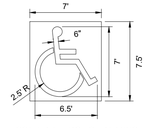
TYPICAL JOINT LAYOUT

P9 TYPICAL PAVING JOINT
N.T.S.



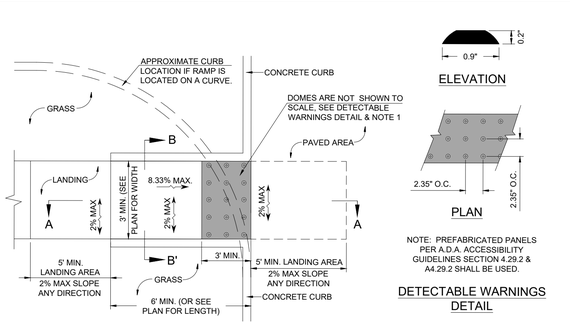
NOTES:
1. SEE SITE PLAN FOR COMPLETE STRIPING LAYOUT.
2. THIS IS FOR REFERENCE AND DIMENSION CONTROL ONLY.
3. ALL DIMENSIONS ARE TO CENTERLINE OF STRIPE UNLESS
4. ALL COLORS AS SHOWN OR BY LOCAL CODES.
5. STRIPING IS THE RESPONSIBILITY OF THE GENERAL

S23 S28 PARKING STALL STRIPING
N.T.S.



LOCATED AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY VAN LETTERING

ACCESSIBLE PARKING SYMBOL

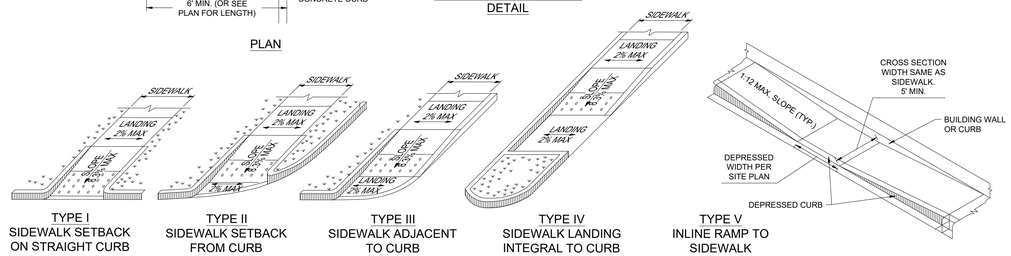


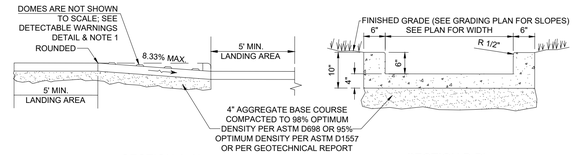
PLAN

NOTE: PREFABRICATED PANELS PER A.D.A. ACCESSIBILITY GUIDELINES SECTION 4.29.2 & A4.29.2 SHALL BE USED.

DETECTABLE WARNINGS DETAIL

NOTES:
1. THE SURFACE OF RAMP SHALL HAVE DETECTABLE WARNINGS AS SHOWN. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES. SEE DETECTABLE WARNINGS DETAIL.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. REFER TO PLANS FOR ADJACENT SLOPES.
5. THE CROSS SLOPE OF THE RAMP SURFACE SHALL BE NO GREATER THAN 1:50.
6. CONCRETE SHALL BE P.C.C. 4,000 PSI
7. PROVIDE EXPANSION JOINT MATERIAL WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK, OR STRUCTURE WITH THE TOP OF JOINT FILLER PLUS SEALANT FLUSH WITH ADJACENT CONCRETE SURFACE.
8. SEAL JOINT WITH AN APPROVED SEALING MATERIAL.
9. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS (WHERE USED).
10. CURB RAMP AND SIDE FLARE LENGTHS (WHERE USED) ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK PITCH. SEE TABLE FOR TYPICAL RAMP DIMENSIONS.
11. WHENEVER POSSIBLE, CONSTRUCT THE TRANSITION SLOPE FROM THE CURB RAMP AND FLARE SIDES TO ADJOINING SURFACES WITH A GRADUAL CURVE RATHER THAN AN ABRUPT ANGLE.





SECTION A-A'

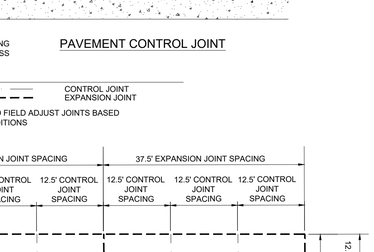
SECTION B-B'

CURB RAMP DIMENSIONS NEW CONSTRUCTION

RISE OF RAMP*	MAX. RAMP SLOPE	NOMINAL RAMP LENGTH (1:12)	SIDE FLARE DIMENSION AT CURB (1:10) (IF USED)	SIDE FLARE DIMENSION AT CURB (1:10) (IF USED)
3"	1:12	3.0 FT	2.5 FT	3.0 FT
4"	1:12	4.0 FT	3.3 FT	4.0 FT
5"	1:12	5.0 FT	4.2 FT	5.0 FT
6"	1:12	6.0 FT	5.0 FT	6.0 FT
7"	1:12	7.0 FT	5.8 FT	7.0 FT
8"	1:12	8.0 FT	6.7 FT	8.0 FT
9"	1:12	9.0 FT	7.5 FT	9.0 FT
10"	1:12	10.0 FT	8.4 FT	10.0 FT
11"	1:12	11.0 FT	9.2 FT	11.0 FT
12"	1:12	12.0 FT	10.0 FT	12.0 FT

*CURB HEIGHT PLUS RISE OF SIDEWALK CROSS SLOPE

S16 S15 ADA RAMP IN SIDEWALK
N.T.S.

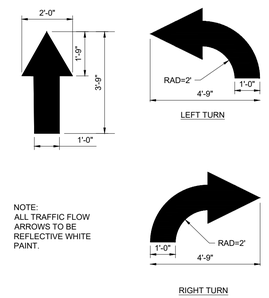


ISOMETRIC VIEW

PLAN VIEW

S19 U-SHAPED BIKE RACK
N.T.S.

NOTES:
1. BIKE RACK SHALL COMPLY WITH ALL CITY OR LOCAL JURISDICTION REQUIREMENTS.
2. CONCRETE PAD AND AGGREGATE BASE TO MATCH SIDEWALK SECTION.
3. INSTALL PER MANUFACTURERS SPECIFICATIONS.
4. 3' CLEAR AROUND PAD TO MINIMIZE DAMAGE TO BICYCLES & AUTOMOBILES.
5. BIKE PAD SHALL BE SEPARATE FROM ANY AND ALL ADA PATHS AND LANDINGS

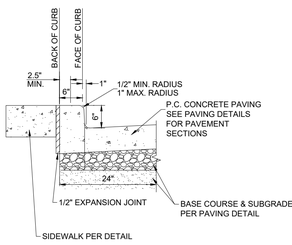


S26 DIRECTIONAL TRAFFIC ARROW
N.T.S.

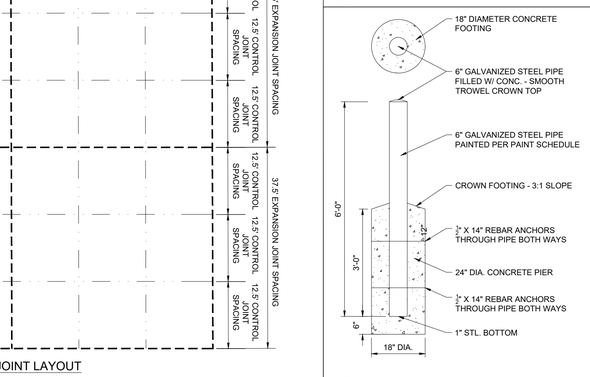
MINIMUM REQUIREMENTS:

1. USE TRAINED AND EXPERIENCED PERSONNEL IN APPLYING THE PRODUCTS AND OPERATING THE EQUIPMENT REQUIRED FOR PROPERLY PERFORMED WORK.
2. PAINT SHALL BE WATERBORNE OR SOLVENT BORNE. COLOR SHALL BE REFLECTIVE WHITE UNLESS OTHERWISE SPECIFIED. PAVEMENT MARKING PAINTS SHALL COMPLY WITH APPLICABLE STATE AND LOCAL LAWS ENACTED TO ENSURE COMPLIANCE WITH FEDERAL CLEAN AIR STANDARDS. PAINT MATERIALS SHALL CONFORM TO THE RESTRICTIONS OF THE LOCAL AIR POLLUTION CONTROL DISTRICT.
3. WATERBORNE PAINT: PAINTS SHALL CONFORM TO FEDERAL SPECIFICATION TT-P-1952 (LATEST REVISION) AND ALL APPLICABLE ASTM STANDARDS WITHIN THIS SPECIFICATION.
4. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FEDERAL SPECIFICATION A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING, AND ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION FOR COLOR YELLOW (UNLESS OTHER COLOR IS OTHERWISE SPECIFIED).
5. GLASS BEADS: AASHTO M 247, TYPE 1 OR FS TT-B-1325, TYPE 1, GRADATION A.
6. APPLY TWO COATS OF PAINT, AT MANUFACTURER'S RECOMMENDED RATE, WITHOUT ADDITION OF THINNER, WITH MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS AND DRY FILM THICKNESS OF 7 ½ MILS PER COAT. PAINT SHALL BE APPLIED FOR A TOTAL DRY FILM THICKNESS OF 15 MILS. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES.
7. APPLY GLASS BEADS AT PEDESTRIAN CROSSWALK STRIPING AND AT LANE STRIPING AND ARROWS. BROADCAST GLASS BEADS UNIFORMLY INTO WET MARKINGS AT A RATE OF 6 LB/GAL.

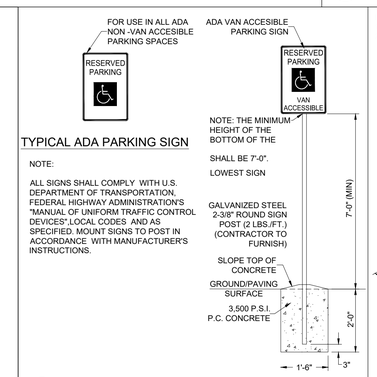
NOTES:
1. ALL CONCRETE CURBS TO BE F'C 4,000 PSI CONCRETE @ 28 DAYS.
2. CURB EXPANSION JOINTS TO MATCH SIDEWALK EXPANSION JOINT SPACING



S68 TYPE "B" CONCRETE CURB & GUTTER WITH FLUSH SIDEWALK
N.T.S.

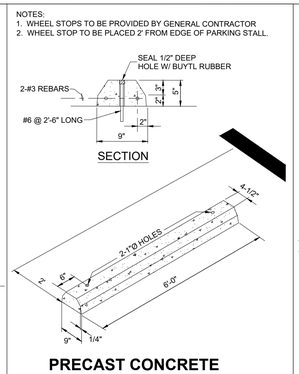


S36 BOLLARD
N.T.S.



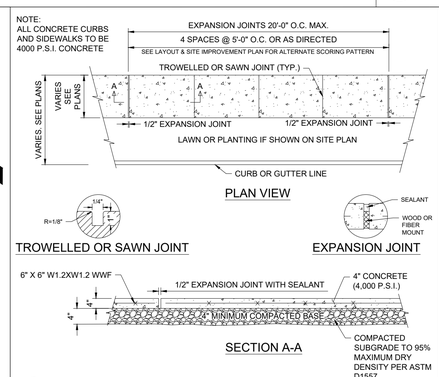
S24 ADA PARKING SIGN & SITE SIGN BASE
N.T.S.

NOTES:
1. WHEEL STOPS TO BE PROVIDED BY GENERAL CONTRACTOR
2. WHEEL STOP TO BE PLACED 2' FROM EDGE OF PARKING STALL.



S21 PRECAST CONCRETE WHEELSTOP
N.T.S.

NOTE:
ALL CONCRETE CURBS AND SIDEWALKS TO BE 4000 P.S.I. CONCRETE



S13 CONCRETE SIDEWALK
N.T.S.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ae.com

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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL



PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA

PROJECT MANAGER: KK

QUALITY CONTROL: WFM

DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER: 06-24-20062

SHEET NAME: DETAILS SHEET 1 OF 4

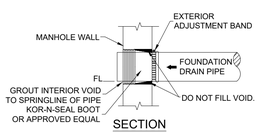
SHEET #: C-10.0

NOT ISSUED FOR CONSTRUCTION

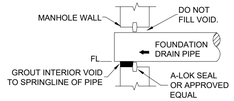
Drawing Name: \\HFA-FILES\2024 Projects\06-24-20062 VOC Lee's Summit, MO\06 Engineering\Civil Design\Civil\06-24-20062 - C-10 DETAILS.dwg Last Modified: Jan 26, 2026 - 7:54am Plotted on: Jan 26, 2026 - 8:00am by daniel.hale

Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	5"	6"	24" (< or Equal to 24" Pipes)
5' DIA	6 1/2"	8"	36" (> 24" Pipes)
6' DIA	7"	8"	

MANHOLE INFORMATION TABLE

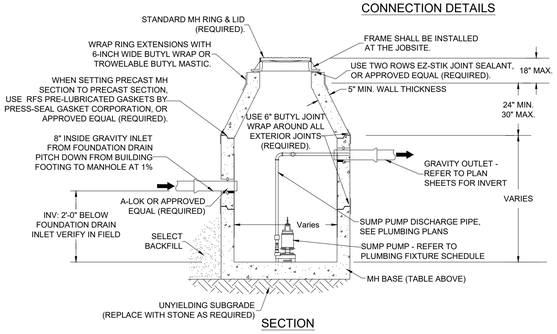


SECTION



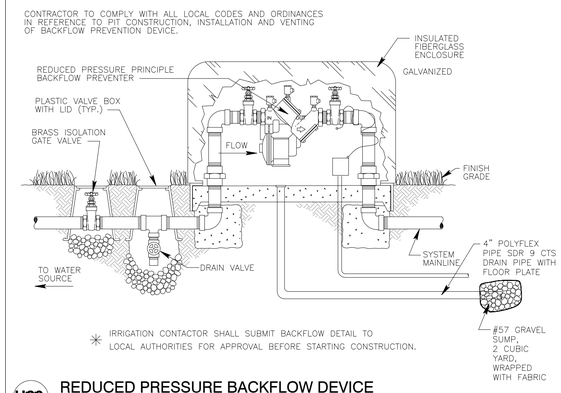
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CONNECTION DETAILS



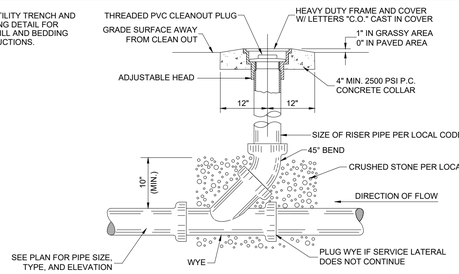
SECTION

U71 FOUNDATION SUMP PUMP MANHOLE
N.T.S.

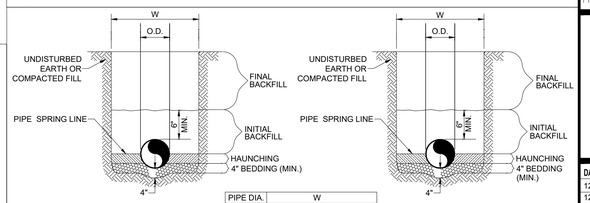


U23 REDUCED PRESSURE BACKFLOW DEVICE
NTS

NOTE:
1. SEE UTILITY TRENCH AND BEDDING DETAIL FOR BACKFILL AND BEDDING INSTRUCTIONS.



U5 SANITARY SEWER CLEAN-OUT
N.T.S.



PIPE DIA.	W
≤12"	O.D. OF PIPE + (12" TO 18")
>12"	≥ O.D. OF PIPE + 18"

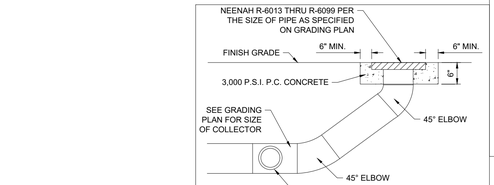
WATER LINE
N.T.S.

SANITARY SEWER
N.T.S.

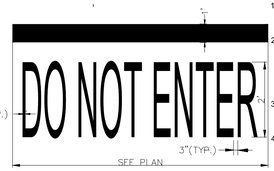
GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

U70 UTILITY TRENCH AND BEDDING
N.T.S.



G6 STORM DRAIN CLEAN-OUT
N.T.S.

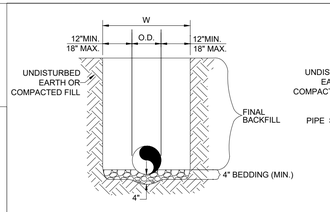


NOTE:
USE REFLECTIVE WHITE PAINT.

S70 DO NOT ENTER
N.T.S.

MINIMUM REQUIREMENTS:

1. USE TRAINED AND EXPERIENCED PERSONNEL IN APPLYING THE PRODUCTS AND OPERATING THE EQUIPMENT REQUIRED FOR PROPERLY PERFORMED WORK.
2. PAINT SHALL BE WATERBORNE OR SOLVENT BORNE, COLOR SHALL BE REFLECTIVE WHITE UNLESS OTHERWISE SPECIFIED. PAVEMENT MARKING PAINTS SHALL COMPLY WITH APPLICABLE STATE AND LOCAL LAWS ENACTED TO ENSURE COMPLIANCE WITH FEDERAL CLEAN AIR STANDARDS. PAINT MATERIALS SHALL CONFORM TO THE RESTRICTIONS OF THE LOCAL AIR POLLUTION CONTROL DISTRICT.
3. WATERBORNE PAINT: PAINTS SHALL CONFORM TO FEDERAL SPECIFICATION TT-P-1952 (LATEST REVISION) AND ALL APPLICABLE ASTM STANDARDS WITHIN THIS SPECIFICATION.
4. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FEDERAL SPECIFICATION A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING, AND ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS BEFORE APPLICATION FOR COLOR YELLOW (UNLESS OTHER COLOR IS OTHERWISE SPECIFIED).
5. GLASS BEADS: AASHTO M 247, TYPE 1 OR FS TT-B-1325, TYPE 1, GRADATION A.
6. APPLY TWO COATS OF PAINT, AT MANUFACTURER'S RECOMMENDED RATE, WITHOUT ADDITION OF THINNER. WITH MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS AND DRY FILM THICKNESS OF 7 ½ MILS PER COAT. PAINT SHALL BE APPLIED FOR A TOTAL DRY FILM THICKNESS OF 15 MILS. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES.



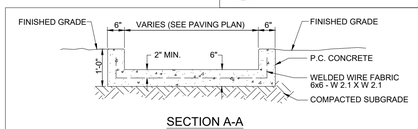
REINFORCED CONCRETE PIPE (RCP) & SPIRAL RIB PIPE SMALLER THAN 60"Ø

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.

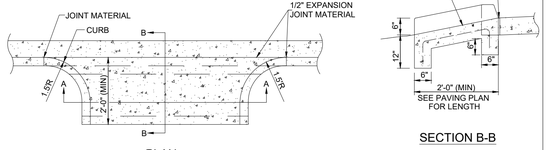
ALL OTHER PIPES INCLUDING SPIRAL RIB PIPE 60"Ø AND LARGER

6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

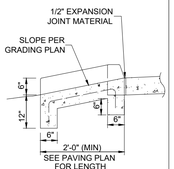
G3 STORM SEWER TRENCH AND BEDDING
N.T.S.



SECTION A-A



PLAN



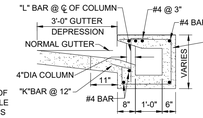
SECTION B-B

G22 CONCRETE FLUME
N.T.S.

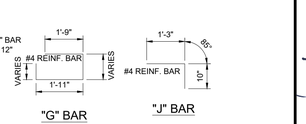
GENERAL NOTES:

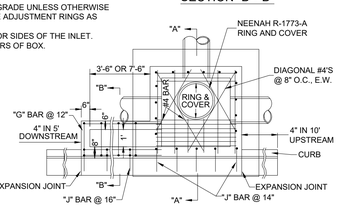
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL REINFORCING BARS TO HAVE 2" COVER.
3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
4. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF BOX.
5. ALL REINFORCING BARS TO BE GRADE 60.
6. PRECAST MANHOLE MAY BE USED UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
7. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT 4 FT OF DEPTH AND GREATER (FROM INVERT TO RIM). CENTERLINE OF MANHOLE LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
8. TOP OF MANHOLE TO BE LEVEL WITH FINISH GRADE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. USE ADJUSTMENT RINGS AS REQUIRED BUT NOT TO EXCEED 12".
9. PIPES SHALL SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF BOX.

PRECAST MANHOLE SPECIFICATIONS
ASTM C478
CONCRETE: 4000 PSI AE (MIN.)
JOINT: WATERTIGHT RUBBER GASKET

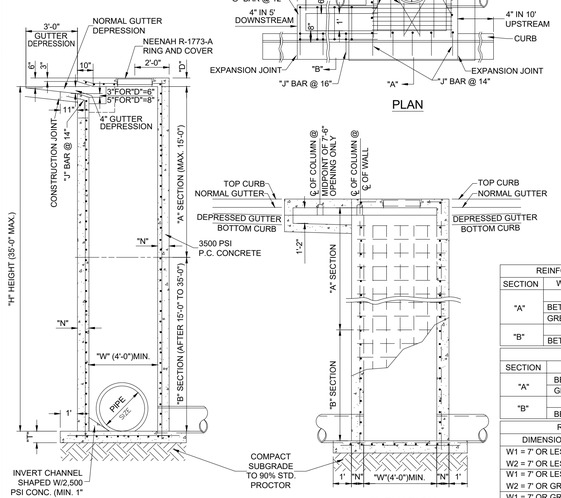


SECTION "B"-"B"





PLAN



REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

TABLE OF 'W' DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'	6" + PIPE THICKNESS	8"	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

G8 CURB INLET, SINGLE WINGED
N.T.S.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ae.com

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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL



PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

VALVOLINE INSTANT OIL CHANGE
610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

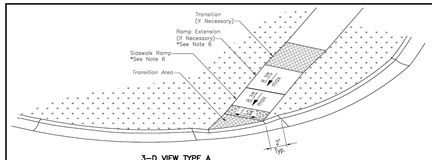
PROJECT NUMBER
06-24-20062

SHEET NAME
DETAILS SHEET 2 OF 4

SHEET #
C-10.1

NOT ISSUED FOR CONSTRUCTION

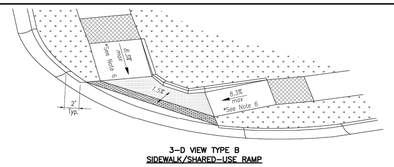
Drawing Name: \\VFA-FILE01\2024 Projects\[06-24-20062] VOC Lee's Summit, MO 64086 (Chipman)\04-Design\Civil\[06-24-20062] - C-10 DETAILS.dwg Last Modified on: Jan 26, 2026 - 7:45am Plotted on: Jan 26, 2026 - 7:45am by daniel.hale



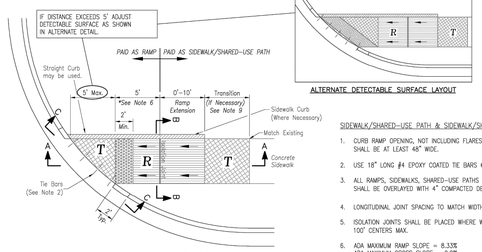
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

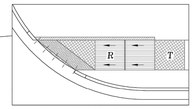
- R — SIDEWALK RAMP
- TS — TURNING SPACE
- DETECTABLE WARNING SURFACE
- T — TRANSITION



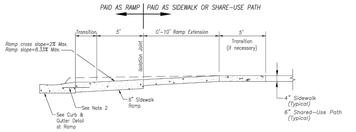
3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP



TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale



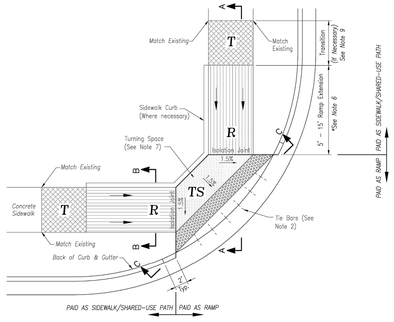
ALTERNATE DETECTABLE SURFACE LAYOUT



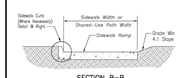
SECTION A–A

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

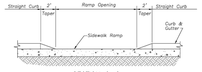
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

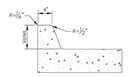


SECTION B–B

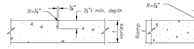


SECTION C–C

TYPE A & B SIDEWALK RAMP
Not to Scale

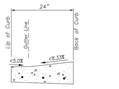


SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

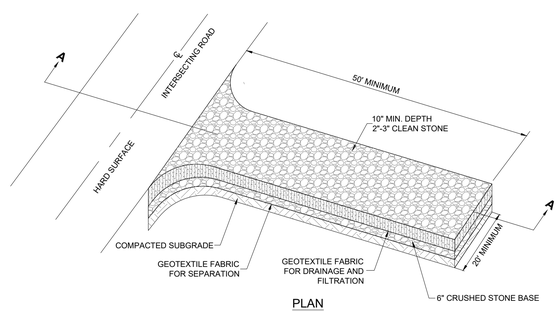
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

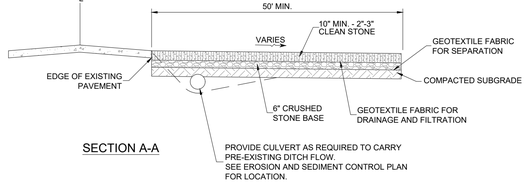
GEN-3A

NOTES:

1. CONTRACTOR TO LOCATE TEMPORARY CONSTRUCTION FENCING, JERSEY BARRIERS, OR BOTH ALONG THE SIDES OF THE CONSTRUCTION EXIT TO PREVENT CONSTRUCTION TRAFFIC FROM SHORT CIRCUITING/BYPASSING THE EXIT.



PLAN



SECTION A-A

E10 CONSTRUCTION ENTRANCE/EXIT
N.T.S.

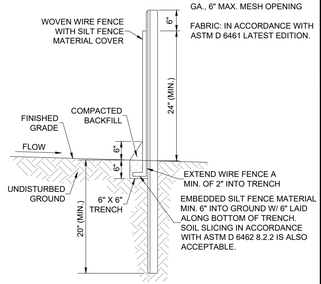
NOTES:

1. INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
2. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. ALSO, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
3. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 6O" ACROSS TWO POSTS, AS SHOWN.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE PER DETAIL- "SILT FENCE INSTALLATION (SLICING METHOD)".
6. WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
8. ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.

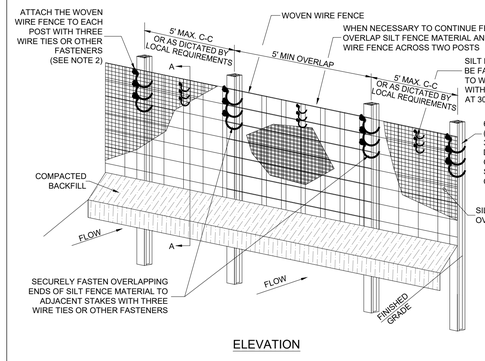
POSTS: STEEL T OR U TYPE.

FENCE: WOVEN WIRE, 14-1/2 GA., 6" MAX. MESH OPENING

FABRIC: IN ACCORDANCE WITH ASTM D 6461 LATEST EDITION.



A-A-SECTION

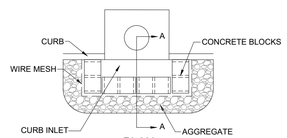


ELEVATION

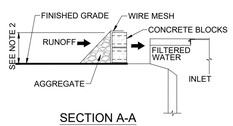
E11 SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT
N.T.S.

NOTES:

1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4", 8", OR 12" BLOCKS. MIN. HEIGHT OF BARRIER SHALL BE 12" AND MAX. HEIGHT SHALL BE 24".
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE AGGREGATE SHALL BE 3/4"-2" ANGULAR CLEAN STONE, WHICH WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.



PLAN

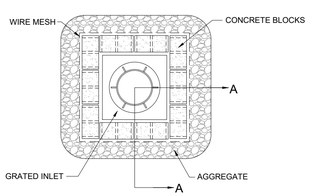


SECTION A-A

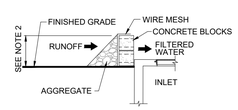
E9 BLOCK AND AGGREGATE CURB INLET SEDIMENT DEVICE
N.T.S.

NOTES:

1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4", 8", OR 12" BLOCKS. MIN. HEIGHT OF BARRIER SHALL BE 12" AND MAX. HEIGHT SHALL BE 24".
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE AGGREGATE SHALL BE 3/4"-2" ANGULAR CLEAN STONE, WHICH WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE REACHING THE JUNCTION BOX LID.



PLAN

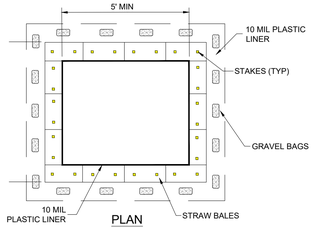


SECTION A-A

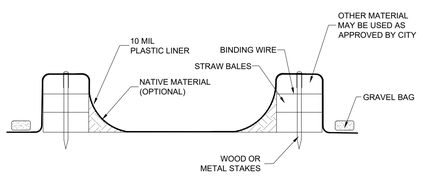
E8 BLOCK AND AGGREGATE JUNCTION BOX/GRATE INLET SEDIMENT DEVICE
N.T.S.

WASHOUT NOTES

1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
6. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.



PLAN

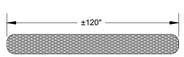


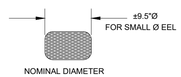
SECTION

E15 CONCRETE WASHOUT
N.T.S.

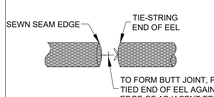
NOTE: ALL EROSION EELS™ USED FOR PERIMETER CONTROL SHALL USE MIXTURE SPECIFICATIONS 1.1 AND 1.2.







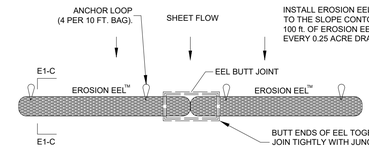
DETAIL E1-A: EROSION EELS™



DETAIL E1-B1

SPACING RECOMMENDATIONS FOR THE EROSION EEL™ FOR PERIMETER CONTROLS AND INTERCEPTING SHEET FLOW ON SLOPES

SLOPE(%)	SINGLE EEL SPACING(ft)	* STACKED DUAL EEL SPACING(ft)
0.5	300	N/A
1	200	N/A
2	160	N/A
3	80	N/A
4	50	N/A
5	40	N/A
6	35	N/A
8	30	N/A
10	25	N/A
15	+17	N/A
20	+12	+25
25	N/A	+15
33	N/A	+10
50	N/A	+6



DETAIL E1-B: INTERCEPTING SHEET FLOW PERPENDICULAR TO FLOW PATH - PLAN VIEW

GENERAL NOTES:

1. EROSION EELS™ USED IN PERIMETER CONTROL APPLICATIONS SHALL HAVE A SPECIFICATION MIXTURE 1.1 OR 1.2.
   a. MIXTURE SPECIFICATION 1.1. A FILTER MIXTURE COMPRISED OF 50% SHREDDED RUBBER AND 50% WOOD CHIP PARTICLES BY VOLUME. THE SHREDDED RUBBER SHALL BE WASHED AND PROCESSED TO REMOVE MOST, IF NOT ALL, METAL COMPONENTS. THE RUBBER SHALL BE DERIVED FROM RECYCLED TIRES AND SHALL BE SHREDDED TO PRODUCE A MAXIMUM PARTICLE SIZE OF +/- 3/4 INCH. THE WOOD CHIPS SHALL BE PRODUCED FROM HARDWOOD TREES AND SHALL CONFIRM TO AASHTO CERTIFICATION SPECIFICATION MP 9-03.
   b. MIXTURE SPECIFICATION 1.2. A FILTER MIXTURE COMPRISED OF 1/3 SHREDDED RUBBER, 1/3 WOOD CHIPS, AND 1/3 RECYCLED SYNTHETIC FIBERS. THE SHREDDED RUBBER SHALL BE WASHED AND PROCESSED TO REMOVE MOST, IF NOT ALL, METAL COMPONENTS. THE RUBBER SHALL BE DERIVED FROM RECYCLED TIRES AND SHALL BE SHREDDED TO PRODUCE A MAXIMUM PARTICLE SIZE OF +/- 3/4 INCH. THE WOOD CHIPS SHALL BE PRODUCED FROM HARDWOOD TREES AND SHALL CONFIRM TO AASHTO CERTIFICATION SPECIFICATION MP 9-03. THE SYNTHETIC FIBERS SHALL BE PRODUCED FROM RECYCLED, MANUFACTURED MATERIALS, SUCH AS, BUT NOT LIMITED TO, PRE-CONSUMER SCRAP CARPET, TIRE CHORD, AND TIRE FIBER MATERIALS.
2. EROSION EELS™ SHALL BE MANUFACTURED FROM A WOVEN GEOTEXTILE COVERING WITH INTERIOR FILTER MATERIALS SUCH AS 100% SHREDDED RUBBER (MIXTURE SPECIFICATION 1.0, 50% SHREDDED RUBBER/50% AASHTO-CERTIFIED WOOD CHIPS (MIXTURE SPECIFICATION 1.1).
3. LENGTHS OF EROSION EELS™ SHALL BE EITHER A NOMINAL +/-10 FT. OR +/- 4.5 FT. NOMINAL DIAMETER SHALL BE +/-9.5 INCHES.
4. EROSION EELS™ CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF, REDUCE FLOW VELOCITY, RELEASE THE RUNOFF AS SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.
5. EROSION EELS™ SHALL BE INSTALLED ALONG THE GROUND CONTOUR, AT THE TOE OF SLOPES, AT AN ANGLE TO THE CONTOUR TO DIRECT FLOW AS A DIVERSION BERM, AROUND INLET STRUCTURES, IN A DITCH AS A CHECK DAM TO HELP REDUCE SUSPENDED SOLIDS LOADING AND RETAIN SEDIMENT, OR AS A GENERAL FILTER FOR ANY DISTURBED SOIL AREA.
6. NO TRENCHING IS REQUIRED FOR INSTALLATION OF EROSION EELS™
7. PREPARE BED FOR EEL INSTALLATION BY REMOVING ANY LARGE DEBRIS INCLUDING ROCKS, SOIL CLODS, AND WOODY VEGETATION. EROSION EELS™ CAN ALSO BE PLACED OVER PAVED SURFACES INCLUDING CONCRETE AND ASPHALT WITH NO SURFACE PREPARATION REQUIRED.
8. RAKE BED AREA WITH A HAND RAKE OR BY DRAG HARROW.
9. DO NOT PLACE EEL DIRECTLY OVER RILL AND GULLIES UNTIL AREA HAS BEEN HAND-EXCAVATED AND RAKED TO PROVIDE A LEVEL BEDDING SURFACE. ALL SURFACES SHALL BE UNIFORMLY COMPACTED FOR MAXIMUM SEATING OF EELS IN PLACE.
10. FOR LOCATIONS WHERE EELS WILL BE PLACED IN CONCENTRATED FLOWS (SUCH AS CHECK DAMS, INLET PROTECTION) AND FOR PERIMETER CONTROLS AT PRIMARY DISCHARGE LOCATIONS, BED THE EELS IN A FLOOMAT CRADLE PER THE DETAILED DRAWINGS.
11. FOR DITCH APPLICATIONS, THE MAXIMUM DRAINAGE AREA SHALL BE 10 ACRES.
12. IF MORE THAN ONE EROSION EEL™ IS PLACED IN A ROW, THE EELS SHALL BE OVERLAPPED A MINIMUM OF 12 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. COMPRESS THE TWO EELS OF THE OVERLAP TIGHTLY TOGETHER EITHER BY HAND OR MANUFACTURER-APPROVED MECHANIZED MEANS.
13. WHEN USED IN DITCHES AS A CHECK DAM, EROSION EELS™ SHALL BE INSTALLED PER MANUFACTURER'S DETAILS.
14. FOR CHECK DAM APPLICATIONS, EROSION EELS™ SHALL BE PLACED PERPENDICULAR TO THE FLOW OF THE WATER. EROSION EELS SHALL CONTINUE UP THE SIDES SLOPES A MINIMUM OF 3 FEET ABOVE THE DESIGN FLOW DEPTH.
15. EROSION EELS™ SHALL REMAIN IN PLACE UNTIL FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED OR UNTIL THE STORAGE CAPACITY/FUNCTIONAL LIFE OF THE EEL HAS BEEN EXHAUSTED (REQUIRING REPLACEMENT WITH NEW EELS).
16. ANCHORING POSTS FOR CHECK DAM APPLICATIONS SHALL HAVE A MINIMUM WEIGHT OF 1.25 LBS/FT STEEL T-POSTS (5 TO 7 FT. LENGTHS) ROLLED FROM HIGH CARBON STEEL. POSTS SHOULD BE HOT-DIP GALVANIZED OR COATED WITH A WEATHER-RESISTANT PAINT FOR STEEL APPLICATION. POSTS SHOULD BE EQUIPPED WITH A METAL ANCHOR PLATE. INSTALL PER DETAILS ON THIS SHEET.
17. PLACE T-POSTS THROUGH HANDLE OF BAGS. DO NOT DRIVE POSTS THROUGH EROSION EELS™ T-POSTS ARE TO BE EMBEDDED A MINIMUM OF 2 FT INTO GROUND.

E5 EROSION EELs™ SEDIMENT BARRIER
N.T.S.

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ac.com

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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

STATE OF MISSOURI — DIEGO ALBERTO GARCIA — NUMBER PE-2023012235 — NOTARIAL SEAL — NOTARY PUBLIC

PRELIMINARY, NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES

2026.01.26 12:59:43-06'00'

DIEGO ALBERTO GARCIA
PROFESSIONAL ENGINEER
PE-2023012235
HFA-AE, LTD
A-2020011993-F

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE
DIEGO A. GARCIA

PROJECT MANAGER
KK

QUALITY CONTROL
WFM

DRAWN BY
DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE
610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

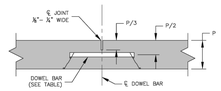
PROJECT NUMBER
06-24-20062

SHEET NAME
DETAILS SHEET 3 OF 4

SHEET #
C-10.2

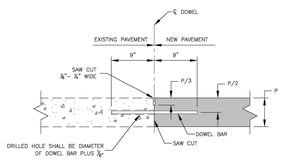
NOT ISSUED FOR CONSTRUCTION

Drawing Name: T:\HFA-FILES\2024 Projects\06-24-20062 VOC Lee's Summit, MO\04 Civil\Cad\Dwg\Civil\Sht\06-24-20062 – C-10 DETAILS.dwg Last Modified on: Jan 26, 2026 – 7:43am Plotted on: Jan 26, 2026 – 7:43am by daniel.hoyle



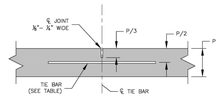
NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

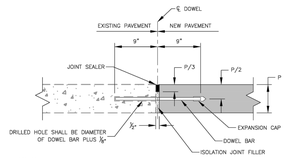


NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT

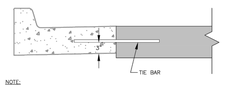


2 LONG. CONTRACTION/CONSTRUCTION JOINT



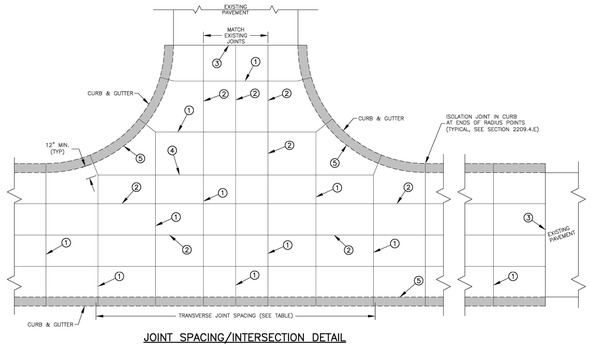
NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

4 TRANSVERSE ISOLATION JOINT



NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)



JOINT SPACING/INTERSECTION DETAIL

PCCP THICKNESS (P)	DOWEL SIZE	TIE BAR SIZE	DOWEL SPACING	TIE BAR SPACING	MAX. TRAN. SPACING	MAX. LONG. SPACING
6"	N/A	#5 x 30"	N/A	30" CTRS.	12'	12'
7"	1" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	14'	14'
8"	1 ¼" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	14'
≥9"	1 ½" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	15'

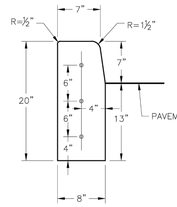
GENERAL NOTES:
- THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PERPENDICULAR TO THE PLANE OF THE JOINT AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND PARALLEL TO EACH OTHER.
- ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.
- DOWEL BARS SHALL BE PLACED AT 9 INCHES FROM LONGITUDINAL JOINTS.
- TIE BARS SHALL BE PLACED AT 12 INCHES FROM TRANSVERSE JOINTS.
- PANEL LENGTH SHALL NOT EXCEED 125 TIMES THE THICKNESS (WIDTH) UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
- IN ACCORDANCE WITH 2208.4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

Drawn By:	MJF
Checked By:	GMB
Date:	08/2023
Proj. #	

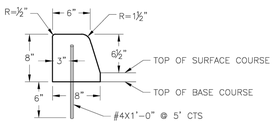
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: TYPICAL PAVEMENT JOINT DETAILS
Project:

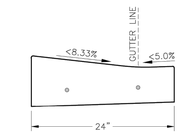
GEN-10



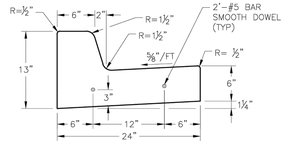
STRAIGHT CURB (TYPE C-1)



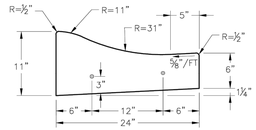
DOWELLED CURB (TYPE DC)



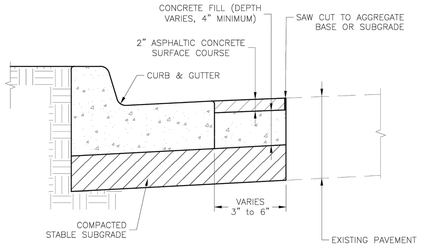
CURB & GUTTER DETAIL AT RAMP (ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER (TYPE CG-1)



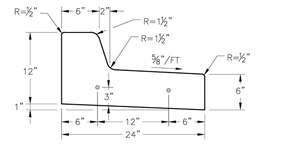
ROLL BACK CURB & GUTTER (TYPE CG-2)



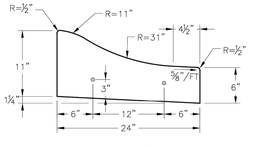
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 2 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



STRAIGHT BACK DRY CURB & GUTTER (TYPE CG-1 DRY)



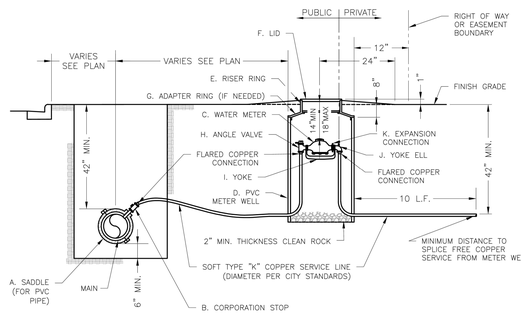
ROLL BACK DRY CURB & GUTTER (TYPE CG-2 DRY)

Drawn By:	MJF
Checked By:	DL
Date:	08/2023
Proj. #	

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STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL
Project:

GEN-4



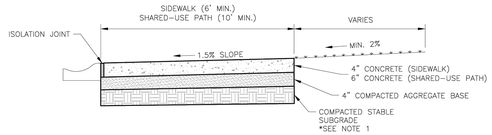
NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

Date:	08/2023
Drawn By:	MJF
Checked By:	KLY

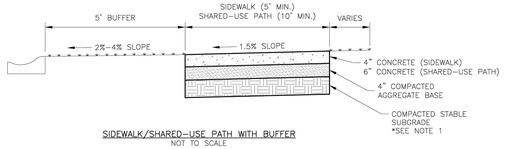
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION WITH METER WELL

WAT-11



SIDEWALK/SHARED–USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED–USE PATH WITH BUFFER
NOT TO SCALE

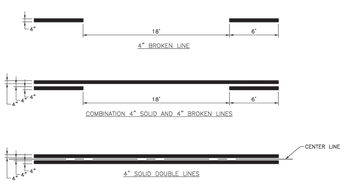
GENERAL NOTES:
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED–USE PATHS.
4. ALL SIDEWALK/SHARED–USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 100 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED–USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED–USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED–USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED–USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

Date:	08/2023
Drawn By:	MJF
Checked By:	DL

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PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

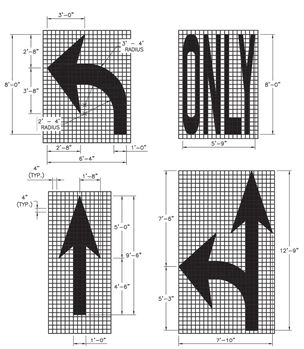
SIDEWALK/SHARED-USE PATH DETAIL

GEN-2



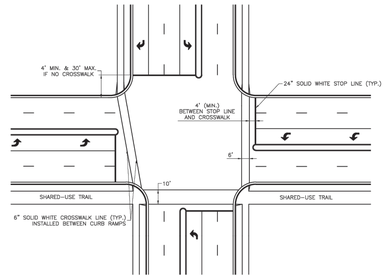
TYPICAL LINE DETAILS

NOTES:
1. ALL EDGE LINE, CENTER LINE, AND LANE LINE PAVEMENT MARKINGS SHALL BE 4" WIDE UNLESS OTHERWISE NOTED.
2. EDGE LINES SHALL BE CONTINUOUS SOLID WHITE OR YELLOW LINES. RIGHT SIDE EDGE LINES SHALL BE SOLID WHITE. MEDIAN OR LEFT SIDE EDGE LINES ON DIVIDED ROADWAYS ARE TO BE SOLID YELLOW. EDGE LINES AND CENTER LINES SHALL BE CONTINUOUS ACROSS DRIVEWAYS.



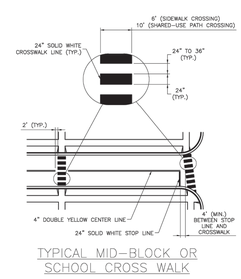
ARROW AND SYMBOL DETAILS

NOTES:
1. ALL ARROW AND SYMBOL MARKINGS SHALL BE WHITE, AND SHALL BE CENTERED IN THEIR RESPECTIVE TRAFFIC LANES.
2. RIGHT–TURN AND COMBINATION RIGHT–TURN/STRAIGHT ARROWS ARE REVERSE OF ARROWS SHOWN.

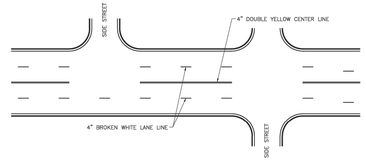


TYPICAL INTERSECTION MARKINGS

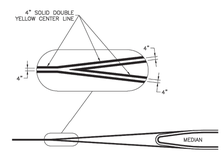
NOTES:
1. TRANSVERSE CROSSWALK LINES SHALL BE INSTALLED SUCH THAT THE DISTANCE BETWEEN LINES IS AT LEAST 6 FEET OR 10 FEET.
2. STOP LINES ARE REQUIRED AT SIGNALIZED INTERSECTIONS, ON MULTI–LANE STOP CONTROLLED APPROACHES, OR ADVANCE OF CROSSWALKS AT CONTROLLED INTERSECTIONS.



TYPICAL MID–BLOCK OR SCHOOL CROSS WALK



TYPICAL MARKINGS FOR FOUR–LANE UNDIVIDED ROADWAY



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

PAVEMENT MARKING GENERAL NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL WORDS AND SYMBOLS SHALL CONFORM TO THE LATEST EDITION OF STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS PRINTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
3. PAVEMENT MARKINGS, EITHER TEMPORARY OR PERMANENT ARE REQUIRED AT ALL TIMES IF THE ROADWAY IS OPEN TO TRAFFIC.
4. ALL PAVEMENT MARKINGS THAT CONFLICT WITH THE DESIRED MARKINGS SHALL BE COMPLETELY REMOVED. REMOVALS SHALL NOT LEAVE THE ROAD SURFACE SCARRED WITH AN IMAGE THAT MISLEADS TRAFFIC. ANY EXCESS DAMAGE OR SCARRING OF PAVEMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. THE PROPOSED PERMANENT MARKINGS SHALL BE LAID OUT BY THE CONTRACTOR IN ADVANCE OF THE MARKING INSTALLATION. MARKINGS SHALL NOT BE APPLIED UNTIL THE LAYOUT HAS BEEN APPROVED BY THE CITY TRAFFIC ENGINEER.
6. CENTER LINES SHALL BE MARKED ON ALL UNDIVIDED ARTERIAL STREETS, AND ANY OTHER UNDIVIDED STREET WITH MORE THAN TWO LANES AND/OR A SPEED LIMIT OF 30 MPH OR MORE.
7. EDGE LINES SHALL BE MARKED ON ALL NON–CURBED STREETS.

Drawn By:	RWC
Checked By:	MP
Date:	05/2020
Proj. #:	

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ROADWAY MARKING DETAILS
Project:

PM-1

HFA
HFA-AE, LTD.
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
t 479.273.7780
f 888.520.9685
www.hfa-ae.com

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DATE	ISSUE
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT SET
01/26/2026	PERMIT SET REV 1

PROFESSIONAL SEAL

Diego A. Garcia
2026.01.26 12:59:49-06'00'

PROFESSIONAL LICENSE NO: 2023012235

PROFESSIONAL IN CHARGE: DIEGO A. GARCIA
PROJECT MANAGER: KK
QUALITY CONTROL: WFM
DRAWN BY: DF

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

610 NW CHIPMAN RD
LEE'S SUMMIT
MO 64086

PROJECT NUMBER: 06-24-20062

SHEET NAME: DETAILS SHEET 4 OF 4

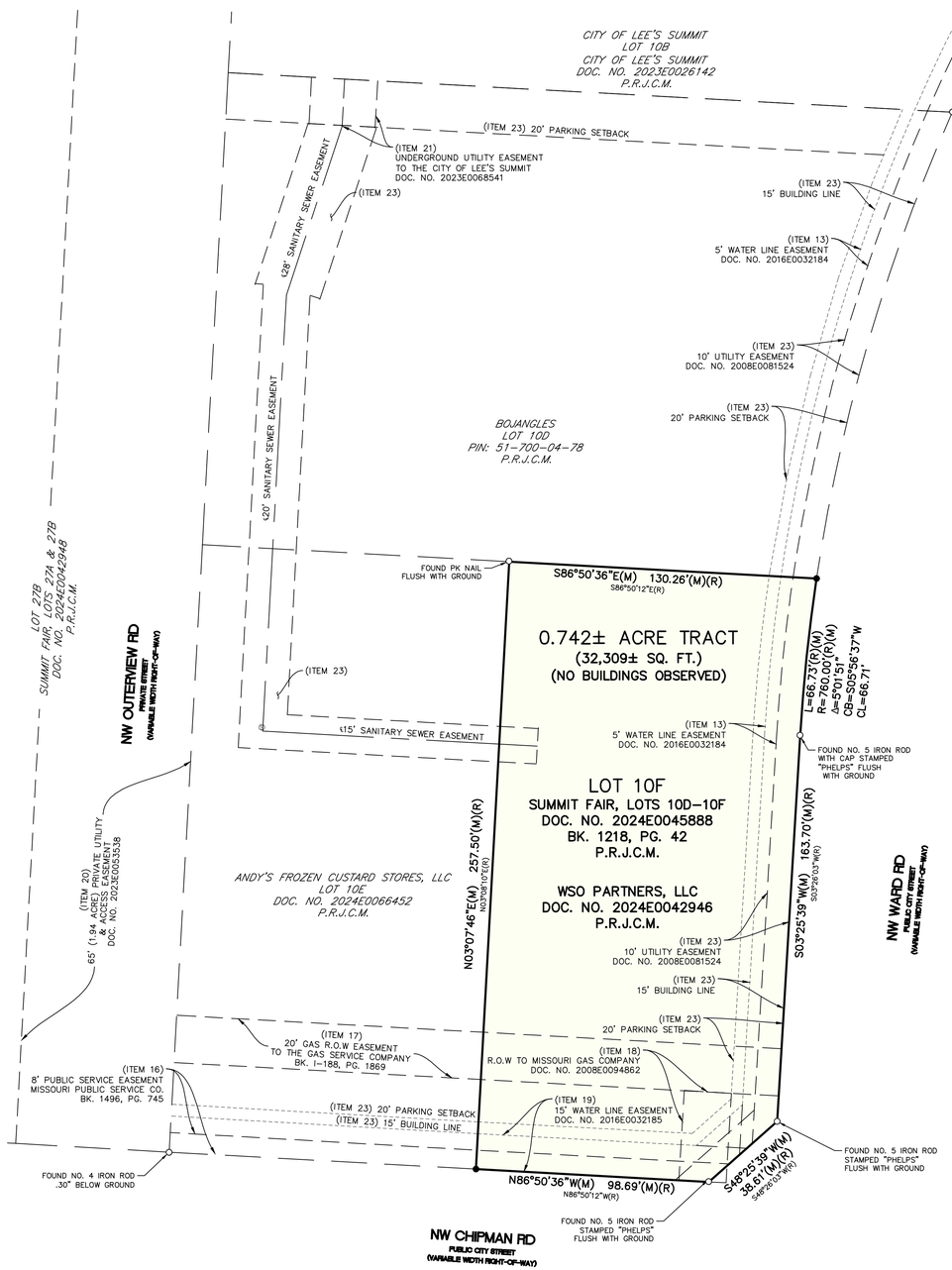
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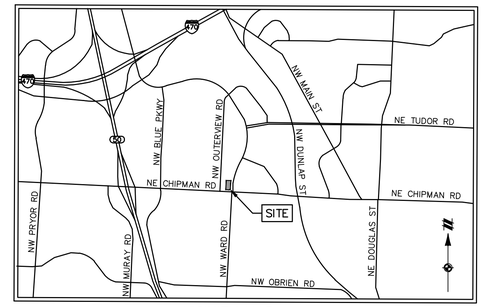
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ALTA/NSPS LAND TITLE SURVEY

SUMMIT FAIR, LOT 10F, A SUBDIVISION SITUATED IN THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 48 NORTH, RANGE 32 WEST, CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI





VICINITY MAP
NOT TO SCALE

GRAPHIC SCALE
SCALE: 1"=30'
30' 0' 30' 60' 90'

BASIS OF BEARING:
MISSOURI STATE PLANE
WEST ZONE (NAD83)

LEGEND

○	FOUND SURVEY MONUMENT
●	SET SURVEY MONUMENT
P.R.J.C.M.	PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
DOC. NO.	DOCUMENT NUMBER
BK. , PG.	BOOK, PAGE
———	BOUNDARY LINE
—— —— ——	BOUNDARY ADJACENT / ROW LINE
— — — — —	EASEMENT LINE
-----------	SET BACK LINE

LEGAL DESCRIPTION PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE COMMITMENT NO.: KCC251158, COMMITMENT EFFECTIVE DATE: MAY 2, 2025 AT 8:00AM

LOT 10F, SUMMIT FAIR, LOTS 10D–10F, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.

SURVEYOR'S TITLE RESPONSE TO SURVEY RELATED SCHEDULE B, PART II EXCEPTIONS WITHIN FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE COMMITMENT NO.: KCC251158, COMMITMENT EFFECTIVE DATE: MAY 2, 2025 AT 8:00AM

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY ATWELL, LLC., TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING EASEMENT, RIGHT–OF–WAY AND TITLE OF RECORD, ATWELL, LLC. RELIED UPON THE TITLE COMMITMENT.

THIS PROPERTY MAY BE SUBJECT TO THE TERMS, PROVISIONS, COVENANTS, CONDITIONS, RESTRICTIONS, OBLIGATIONS, AND RESERVATIONS CONTAINED IN THE FOLLOWING RECORDED INSTRUMENTS.

SCHEDULE B, PART II EXCEPTIONS NUMBERS 1–8, & 24–25 ARE NOT SURVEY RELATED MATTERS AND INTENTIONALLY NOT LISTED BELOW.

9. COVENANTS AND RESTRICTIONS, TOGETHER WITH A RIGHT OF ACCESS IN FAVOR OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, PURSUANT TO DECLARATION RECORDED APRIL 24, 2007 AS DOCUMENT NO. 2007E0054314, AS AFFECTED BY THE CERTIFICATE OF COMPLETION RECORDED AUGUST 8, 2007 AS DOCUMENT NO. 2007E0104283.
RESPONSE: NOT PLOTTED; CONDITIONS AND RESTRICTIONS ARE BLANKET IN NATURE

10. TERMS, PROVISIONS, COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS AND PROVISIONS FOR CREATION OF A PROPERTY OWNERS ASSOCIATED WITH THE POWER TO LEVY ASSESSMENTS, ESTABLISHED PURSUANT TO STORM WATER DRAINAGE AND DETENTION EASEMENT AGREEMENT RECORDED JUNE 5, 2007 AS DOCUMENT NO. 2007E0074477.
RESPONSE: NOT PLOTTED; PURSUANT IS BLANKET IN NATURE OVER SURVEYED PROPERTY

11. TERMS AND PROVISIONS OF CITY OF LEE'S SUMMIT ORDINANCE 6622, ACCEPTING THE FINAL PLAT OF SUMMIT FAIR 2ND PLAT, LOTS 8, 10–4 & TRACT C, RECORDED AUGUST 7, 2008 AS DOCUMENT NO. 2008E0085123.
RESPONSE: PLOTTED; EASEMENTS, RESTRICTIONS AND BUILDING LINES SHOWN HEREON

12. UTILITY EASEMENTS, SANITARY SEWER EASEMENT AND PROPOSED SIDEWALKS, ESTABLISHED BY THE PLAT RECORDED AUGUST 7, 2003 AS DOCUMENT NO. 2008E0085124 IN PLAT BOOK I–122, PAGE 1, EXCEPT THOSE EASEMENTS TERMINATED BY INSTRUMENTS RECORDED AS DOCUMENT NO. 2016E0069054 AND 2016E0069059.
RESPONSE: UTILITY EASEMENTS, SANITARY SEWER AND PROPOSED SIDEWALKS SHOWN HEREON

13. WATER LINE EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032184.
RESPONSE: PLOTTED; 5' WIDE WATER LINE EASEMENTS PLOTS ALONG THE EASTERN PORTION OF SURVEYED PROPERTY AND ADDITIONAL LANDS LYING NORTH OF SURVEYED PROPERTY; AS SHOWN HEREON

14. TERMS AND PROVISIONS OF THE SUMMIT ORCHARDS COMMUNITY IMPROVEMENT DISTRICT AND COOPERATIVE AGREEMENT, NOTICE OF WHICH IS GIVEN BY MEMORANDUM THEREOF RECORDED JULY 8, 2019 AS DOCUMENT NO. 2019E0051682.
RESPONSE: NOT PLOTTED; COOPERATIVE AGREEMENT IS BLANKET IN NATURE

15. BUILDING LINES, RESTRICTIONS, UTILITY, DRAINAGE, STORM WATER, SANITARY SEWER, AND WATERLINE EASEMENTS SHOWN ON THE PLAT RECORDED JANUARY 10, 2023 AS DOCUMENT NO. 2023E0001734 IN BOOK 208 AT PAGE 26; SUBJECT TO ORDINANCE NO. 9847, PROVIDING A NEW PERMANENT EASEMENT; AND PROVIDING NOTICE OF ELECTRIC EASEMENT GRATED TO MISSOURI PUBLIC SERVICE COMPANY, AND GAS EASEMENT GRANTED TO THE GAS SERVICE COMPANY, AND FURTHER VACATING WATER SYSTEM EASEMENT RECORDED IN BOOK I–1154 AT PAGE 1961, SAID ORDINANCE RECORDED MARCH 11, 2024 AS DOCUMENT NO. 2024E014842.
RESPONSE: PLOTTED; BUILDING LINES, RESTRICTIONS AND UTILITY EASEMENTS SHOWN HEREON

16. EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE COMPANY, A MISSOURI CORPORATION, RECORDED FEBRUARY 7, 1961 AS DOCUMENT NO. 762400 IN BOOK I–496 AT PAGE 745.
PARTIAL RELEASE OF RIGHT OF WAY AGREEMENT RECORDED OCTOBER 21, 2008 AS DOCUMENT NO. 2008E0111404.
RESPONSE: PLOTTED; 8' PUBLIC SERVICE EASEMENT PLOTS ALONG THE SOUTHERN PORTION OF SURVEYED PROPERTY AND ADDITIONAL LANDS LYING WEST OF SURVEYED PROPERTY; AS SHOWN HEREON

17. RIGHT OF WAY GRANTED TO THE GAS SERVICE COMPANY AS MORE FULLY SET FORTH IN THE INSTRUMENT RECORDED JUNE 23, 1970 AS DOCUMENT NO. I–62891 IN BOOK I–188 AT PAGE 1869, EXCLUDING THE TEMPORARY CONSTRUCTION EASEMENT NOW EXPIRED.
ASSIGNMENT OF EASEMENTS AND RIGHTS OF WAY FROM SOUTHERN UNION COMPANY, DOING BUSINESS IN MISSOURI AS MISSOURI GAS ENERGY, SUCCESSOR IN INTEREST TO WESTERN RESOURCES, INC., FORMERLY THE KANSAS CITY POWER AND LIGHT COMPANY TO LACLEDE GAS COMPANY RECORDED SEPTEMBER 3, 2013 AS DOCUMENT NO. 2013E0093218.
RESPONSE: PLOTTED; RIGHT–OF–WAY PLOTS IN THE SOUTHERN PORTION OF THE SURVEYED PROPERTY AND ADDITIONAL LANDS LYING WEST OF SURVEYED PROPERTY; AS SHOWN HEREON

18. RIGHT OF WAY GRANTED TO MISSOURI GAS COMPANY, A DIVISION OF SOUTHERN UNION COMPANY, RECORDED SEPTEMBER 4, 2008 AS DOCUMENT NO. 2008E0094862.
RESPONSE: PLOTTED; RIGHT–OF–WAY PLOTS IN SOUTHEASTERN PORTION OF SURVEYED PROPERTY, AS SHOWN HEREON
ASSIGNMENT TO LACLEDE GAS COMPANY RECORDED SEPTEMBER 3, 2013 AS DOCUMENT NO. 2013E0093218.
RESPONSE: NOT PLOTTED; ASSIGNMENT IS BLANKET IN NATURE

19. WATER LINE EASEMENT GRANTED TO THE CITY OF LEE'S SUMMIT, RECORDED APRIL 13, 2016 AS DOCUMENT NO. 2016E0032185.
RESPONSE: PLOTTED; WATER LINE EASEMENT PLOTS IN THE SOUTHERN PORTION OF SURVEYED PROPERTY AND ADDITIONAL LANDS LYING WEST OF SURVEYED PROPERTY; AS SHOWN HEREON

20. ACCESS AND UTILITY EASEMENT AGREEMENT, BY AND AMONG, CITY OF LEE'S SUMMIT, MISSOURI, A MUNICIPAL CORPORATIONS, ECP 850 LEES SUMMIT LLC, A DELAWARE LIMITED LIABILITY COMPANY, TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND SUMMIT SQUARE RESIDENCE III, LLC, A DELAWARE LIMITED LIABILITY COMPANY, DESCRIBED BY INSTRUMENT RECORDED JULY 27, 2023 AS DOCUMENT NO. 2023E0053538.
SIDE AGREEMENT REGARDING ACCESS AND UTILITY EASEMENT AGREEMENT, BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI, A MUNICIPAL CORPORATION, TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND SUMMIT SQUARE RESIDENCE III, LLC, A DELAWARE LIMITED LIABILITY COMPANY, RECORDED SEPTEMBER 20, 2023 AS DOCUMENT NO. 2023E0068537.
RESPONSE: PLOTTED; ACCESS AND UTILITY EASEMENTS PLOTS WEST OF THE SURVEYED PROPERTY, BUT NOT LOCATED WITHIN THE SURVEYED PROPERTY; AS SHOWN HEREON

21. UNDERGROUND UTILITY EASEMENT, GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, A MUNICIPAL CORPORATION, RECORDED SEPTEMBER 20, 2023 AS DOCUMENT NO. 2023E0068541.
RESPONSE: PLOTTED; UTILITY EASEMENT LOCATED NORTH OF THE SURVEYED PROPERTY, BUT NOT LOCATED WITHIN THE SURVEYED PROPERTY; AS SHOWN HEREON

22. DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS RECORDED JULY 2, 2024 AS DOCUMENT NO. 2024E0042947.
RESPONSE: NOT PLOTTED; BLANKET IN NATURE OVER SURVEYED PROPERTY

23. EASEMENTS, RESTRICTIONS AND BUILDING SETBACK LINES SHOWN ON THE PLAT RECORDED JULY 15, 2024 AS DOCUMENT NO. 2024E0045888 IN BOOK I218, PAGE 42.
RESPONSE: PLOTTED; EASEMENTS, RESTRICTIONS AND BUILDING LINES SHOWN HEREON

ALTA TABLE A NOTES:
(CORRESPONDING NUMBERS COINCIDE WITH TABLE A ITEMS)

1. MONUMENTS FOUND OR AT ALL CORNERS OF THE PROPERTY ARE SHOWN HEREON.

2. APPROXIMATE ADDRESS: 610 NW CHIPMAN ROAD, LEE'S SUMMIT, MO 64086

3. SAID DESCRIBED PROPERTY IS LOCATED INSIDE AN AREA HAVING ZONE DESIGNATION "ZONE X" (AREAS OF MINIMAL FLOODING (NO SHADING) ON FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER NO. 29095C0417G, WITH AN EFFECTIVE DATE OF JANUARY 20, 2017, IN LEE'S SUMMIT, STATE OF MISSOURI. IN RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN–MADE OR NATURAL CAUSES. THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

4. THE MEASURED ACREAGE OF THE PARCEL IS 32,309 SQUARE FEET OR 0.742 ACRES.

5. CONTOURS AT 1 FOOT INTERVALS AND GROUND ELEVATIONS SHOWN HEREON PER GROUND SURVEY. SOURCE BENCHMARK AND DATUM SHOWN HEREON.

6a./6b. THE CURRENT ZONING REPORT WAS PROVIDED FOR THIS SURVEY, PREPARED BY NATIONAL DUE DILIGENCE SERVICES, A DIVISION OF AMERICAN SURVEYING AND MAPPING INC., DATED JUNE 16, 2025. SEE SHEET NUMBER 2 FOR ZONING REPORT INFORMATION.

7a./7b1. NO BUILDINGS OBSERVED AT TIME OF SURVEY.

8. SUBSTANTIAL FEATURES OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY ARE SHOWN HEREON.

9. NUMBER AND TYPE OF PARKING SPACES: NO PARKING SPACES WERE OBSERVED ON THE SUBJECT TRACT AT THE TIME OF SURVEY.

11. NO PLANS AND/OR REPORTS OF UNDERGROUND UTILITIES EXISTING ON OR SERVING THE SURVEYED PROPERTY WERE PROVIDED BY CLIENT. UTILITIES ARE SHOWN HEREON BY EITHER OBSERVED SURFACE EVIDENCE AND/OR GROUND PENETRATING RADAR SYSTEMS, LLC (GPRS) MARKINGS (A THIRD PARTY UTILITY LOCATING SERVICE). UNDERGROUND UTILITIES ARE SHOWN PER MAPS PROVIDED THROUGH AN 811 DESIGN STAGE TICKET (NUMBER **252483519**). SEE 811 UTILITY TABLE FOR DETAILED INFORMATION REGARDING STATUS OF RESPONSES TO ONE CALL TICKET.

SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL UNMARKED AND/OR BURIED UTILITIES IN THE AREA, EITHER IN–SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE THE EXACT LOCATION INDICATED BY SAID VISIBLE EVIDENCE.

NOTE TO THE CLIENT, INSURER, AND LENDER – WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.E.IV. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

13. NAMES OF ADJOINING OWNERS ARE SHOWN HEREON.

14. THE SUBJECT PROPERTY HAS DIRECT ACCESS TO NW CHIPMAN ROAD (PUBLIC CITY STREET) ALONG THE SOUTHERN BOUNDARY LINE, AND DIRECT ACCESS TO NW WARD ROAD (PUBLIC CITY STREET) ALONG THE EASTERN BOUNDARY LINE AS SHOWN HEREON.

16. NO OBSERVED EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WORK.

17. THERE WAS NO INFORMATION OF PROPOSED CHANGES IN STREET RIGHT OF WAYS PROVIDED AND THERE WAS NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.

SOURCE DOCUMENTS:

1. MINOR PLAT OF LOT 10F, SUMMIT FAIR, LOTS 10D–10F, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DOCUMENT #2024E0045888 AND BOOK I218, PAGE 42.

GENERAL NOTES

1. COMPARE ALL DISTANCES AND POINTS IN FIELD AND REPORT ANY DISCREPANCIES IN SAME TO SURVEYOR AT ONCE.
2. UTILITIES SHOWN HEREON ARE BY VISIBLE LOCATION OF ABOVE GROUND STRUCTURES, MARKINGS AND UTILITY MAPS RECEIVED FROM GROUND PENETRATING RADAR SYSTEMS, INC. (GPRS), SERVICE ORDER NO. 20251244 PLACED ON AUGUST 4, 2025. UNDERGROUND UTILITIES MAY EXIST THAT ARE NOT SHOWN HEREON.
3. CALL 811 ("COMMON GROUND ALLIANCE" NATIONAL UNDERGROUND UTILITY LOCATOR SERVICE) FOR FIELD LOCATION OF UNDERGROUND UTILITY LINES PRIOR TO ANY DIGGING OR CONSTRUCTION.
4. NO DIMENSIONS SHOULD BE ASSUMED BY SCALING.
5. BEARINGS BASED ON THE MISSOURI STATE PLANE COORDINATE SYSTEM OF 1983 (NAD83) WEST ZONE. ELEVATIONS, IF SHOWN, ARE DERIVED FROM THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) USING GEOID18.
6. ALL DISTANCE VALUES ARE US SURVEY FEET.
7. ALL DISTANCE AND AREA VALUES ARE GROUND WITH THE COMBINED SCALE FACTOR OF 1.0001005.
8. THE SURVEYED PROPERTY IS RURAL PROPERTY TYPE DEFINED BY THE CURRENT MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS.
9. THIS SURVEY WAS EXECUTED IN ACCORDANCE WITH THE MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS AS SET FORTH PER 2 CSR 90–60.010 – 60.070.

SURVEYORS CERTIFICATE:

STATE OF MISSOURI)
) SS
COUNTY OF JACKSON)

TO: VALVOLINE, LLC
WSO PARTNERS, LLC, A MISSOURI LIMITED LIABILITY COMPANY
FIDELITY NATIONAL TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6a, 6b, 7a, 7b1, 8, 9, 11a, 11b, 13, 14, 16, 17, AND 18 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON AUGUST 13, 2025.

DATE OF PLAT OR MAP: SEPTEMBER 15, 2025.

PRELIMINARY NOTE: THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED UPON AS A LEGAL SURVEY DOCUMENT.

JOSEPH C. CROUCH
MISSOURI PROFESSIONAL LAND SURVEYOR NO. 2015017836
ATWELL, LLC
MY LICENSE EXPIRES 12/31/2025

SHEET INDEX

1 ALTA – BOUNDARY AND EASEMENT INFO
2 ALTA – PLANIMETRIC AND TOPOGRAPHIC INFO

811 Know what's below. Call before you dig.
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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ATWELL
www.atwell-group.com
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800
MO COA # 2011037945

A TRACT OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, SE 1/4 OF SECTION 36 T48N, R32W

JACKSON COUNTY, MISSOURI

CLIENT
VALVOLINE INC.

ALTA/NSPS LAND TITLE SURVEY

610 NW CHIPMAN ROAD
LEE'S SUMMIT,
MO 64086

DATE
SEPTEMBER 15, 2025

REVISIONS:

REVISIONS

JOSEPH C. CROUCH
MISSOURI PROFESSIONAL LAND SURVEYOR NO. 2015017836
ATWELL, LLC

DR. AEC | CH. JCC
P.M. ASA
CREW CHIEF: M. WILKERSON
JOB 25006813
SHEET NO.
1 OF 2

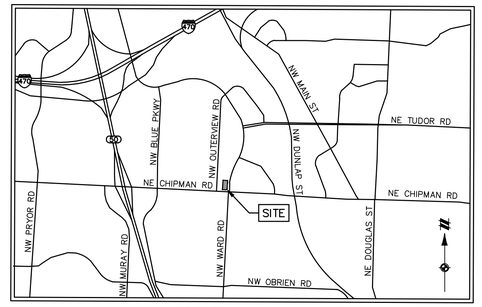
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ALTA/NSPS LAND TITLE SURVEY

SUMMIT FAIR, LOT 10F, A SUBDIVISION
SITUATED IN THE SOUTHEAST QUARTER OF SECTION 36,
TOWNSHIP 48 NORTH, RANGE 32 WEST,
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

30' 0' 30' 60' 90'

GRAPHIC SCALE
SCALE: 1"=30'
BASIS OF BEARING:
MISSOURI STATE PLANE
WEST ZONE (NAD83)

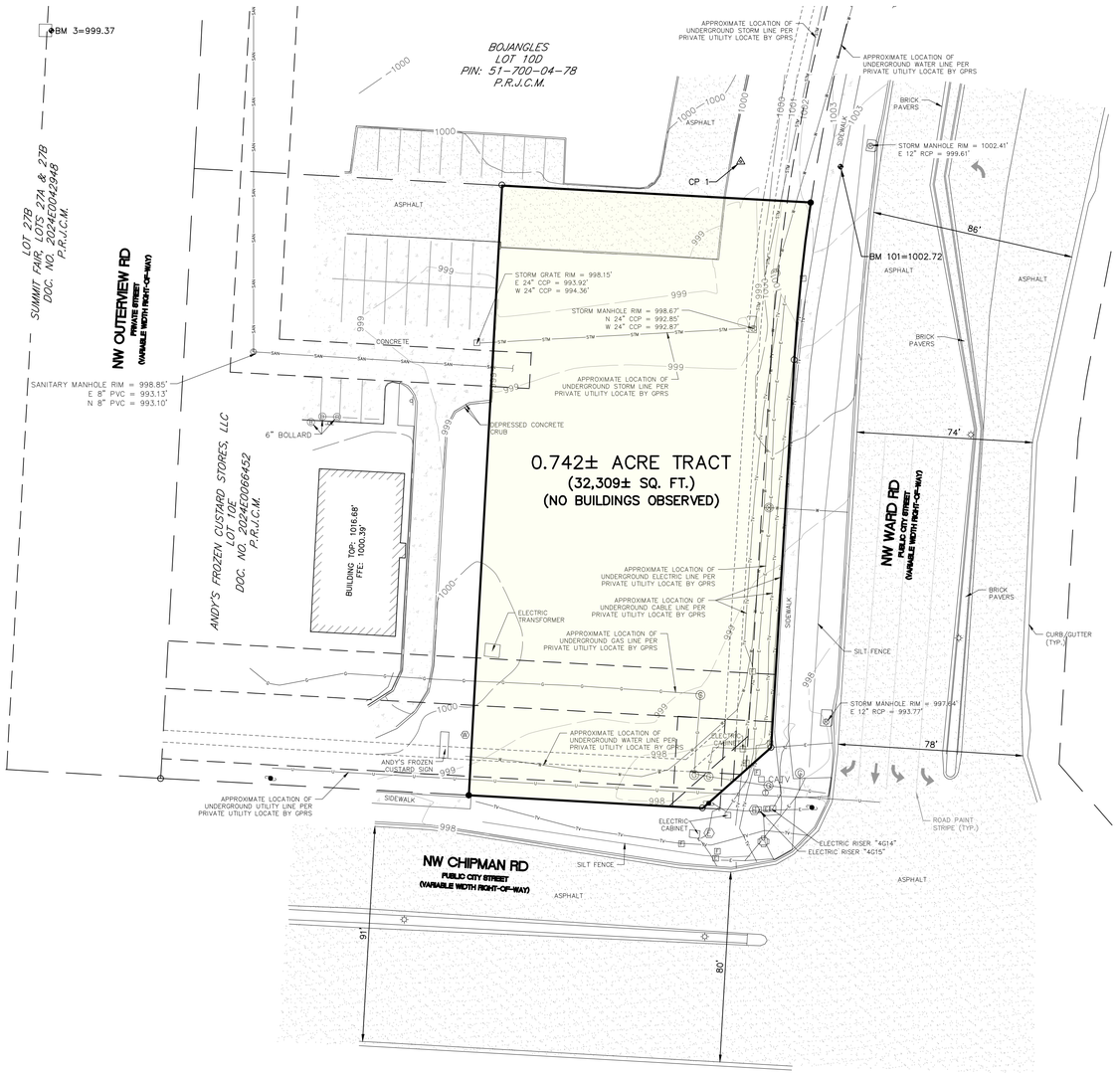


VICINITY MAP
NOT TO SCALE

ZONING INFORMATION

VALVOLINE, LLC. PROVIDED THE SURVEYOR OF RECORDS WITH A ZONING SUMMARY REPORT FOR PROJECT #25006813, UNDER REPORT BY: NATIONAL DUE DILIGENCE SERVICES, A DIVISION OR AMERICAN SURVEYING AND MAPPING, INC., PROJECT NO. 252306-56993, DATED JUNE 16, 2025. INFORMATION SHOWN ON SHEETS 3, 4, AND 5 OF THAT REPORT ARE SHOWN BELOW:

1.	SUBJECT PROPERTY	
1.1.	PROPERTY ADDRESS:	700 NW WARD RD
1.2.	CITY, COUNTY, STATE:	LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
1.3.	ASSESSOR PARCEL NUMBER:	51-700-01-31-00-0-00-000
1.4.	YEAR BUILT:	N/A
2.	PROPOSED LAND USE	AUTOMOTIVE REPAIR SHOP – MINOR REPAIR
3.	ZONING DISTRICT AND PERMITTED USE	
3.1.	ZONING JURISDICTION:	CITY OF LEE'S SUMMIT
3.2.	ZONING DISTRICT:	(PMIX) PLANNED MIXED USE DISTRICT
3.3.	DATE OF EXISTING ORDINANCE:	ADOPTED 2018; AMENDED 2025
3.4.	IS THE PROPOSED USE PERMITTED?	YES; PER THE ZONING LETTER ATTACHED UNDER EXHIBIT D, THE PROPOSED USE IS PERMITTED BY RIGHT.
4.	ADJACENT ZONING	
	NORTH:	(PMIX) PLANNED MIXED USE DISTRICT
	SOUTH:	RIGHT-OF-WAY
	EAST:	RIGHT-OF-WAY
	WEST:	(PMIX) PLANNED MIXED USE DISTRICT
5.	PARCEL AREA	32,234 SQUARE FEET = 0.74 ACRES
6.	ZONING REQUIREMENTS (PER SEC. 6.040 & ORD. 9551)	
6.1	MINIMUM FRONT FROM STREET:	*
	MINIMUM CORNER SIDE:	10'
	MINIMUM INTERIOR SIDE:	NONE
	MINIMUM REAR:	20'
	*15' ARTERIAL; 0' OTHER STREETS IF MAIN ENTRY AND ANY DISPLAY WINDOWS FACE STREET, OTHERWISE 15	
6.2	HEIGHT RESTRICTIONS	REQUIRED
	MAXIMUM (MEASURED IN FEET):	45'
	MAXIMUM (NUMBER OF STORIES):	N/A
6.3	AREA REQUIREMENTS	REQUIRED
	MINIMUM LOT AREA:	20,000 SQ. FT.
	MINIMUM LOT WIDTH (AT BUILDING LINE):	NONE STATED
	MINIMUM LOT FRONTAGE (AT RIGHT-OF-WAY):	NONE STATED
6.4	DENSITY RESTRICTIONS	REQUIRED
	MAXIMUM FLOOR AREA RATIO:	0.5 FAR
	MAXIMUM DWELLING UNITS PER ACRE:	NONE STATED
	MAXIMUM LOT COVERAGE (FOR BUILDING):	NONE STATED
7.	PARKING STANDARDS (PER ORD. 9551)	
7.1.	PARKING USE CATEGORY:	COMMERCIAL
7.2.	PARKING SPACE FORMULA:	5 SPACES PER 1,000 SQUARE FEET



VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

SOURCE BENCHMARK:

OPUS SOLUTION ON CONTROL POINT NO. 1 USING THE FOLLOWING CORS BASE STATION:

PID:	DESIGNATION
DL6302	MORM MODOT RICHMOND CORS ARP
DM4676	MOHV MODOT HARISONVILE CORS ARP
DR8627	MOB4 MODOT BELTON CORS GRP

BENCHMARKS AND CONTROL:

COORDINATES SHOWN HEREON ARE PER MISSOURI STATE PLANE WEST ZONE (NAD83) 2011 ADJUSTMENT, IN US SURVEY FEET. ELEVATIONS SHOWN HEREON ARE PER NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN US SURVEY FEET.

SITE BENCHMARKS AND CONTROL: (AS SHOWN HEREON)

CP 1: SET NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "ATWELL LLC"
GRID NORTHING: 1004897.61 (NAD83)
GRID EASTING: 2818804.20 (NAD83)
ELEVATION: 999.44' (NAVD88)

BM 3: FOUND CHISELED SQUARE IN CONCRETE
GRID NORTHING: 1004952.82 (NAD83)
GRID EASTING: 2818513.73 (NAD83)
ELEVATION: 999.37' (NAVD88)

BM 101: FOUND CUT CROSS IN CONCRETE SIDEWALK
GRID NORTHING: 1004895.46 (NAD83)
GRID EASTING: 2818846.27 (NAD83)
ELEVATION: 1002.72' (NAVD88)

LEGEND

○	FOUND SURVEY MONUMENT
●	SET SURVEY MONUMENT
△	SITE CONTROL POINT
◆	SITE BENCHMARK
P.R.J.C.M.	PUBLIC RECORDS OF JACKSON COUNTY, MISSOURI
DOC. NO.	DOCUMENT NUMBER
BK. , PG.	BOOK, PAGE
▷—	EXISTING HYDRANT
(E)	EXISTING ELECTRIC METER
□ E	EXISTING ELECTRIC RISER
T	EXISTING TELEPHONE HAND HOLE
T	EXISTING FIBER OPTIC HAND HOLE
S	EXISTING STORM MANHOLE/CATCH BASIN
S	EXISTING SANITARY MANHOLE
T	EXISTING TELEPHONE MANHOLE
□	EXISTING STORM INLET
B	EXISTING BOLLARD
W	EXISTING WATER METER
G	EXISTING GAS VALVE
□ CATV	EXISTING CABLE RISER
	EXISTING UTILITY POLE
	EXISTING TRAFFIC SIGNAL
	EXISTING LIGHT POLE
	BOUNDARY LINE
	BOUNDARY ADJACENT / ROW LINE
	EASEMENT LINE
	EXISTING CURB LINE
STM STM	UNDERGROUND STORM LINE
E E	UNDERGROUND ELECTRIC LINE
U U	UNSPECIFIED UTILITY LINE
W	UNDERGROUND WATER LINE
G G	UNDERGROUND GAS LINE
TV TV	UNDERGROUND CABLE LINE
585	EXISTING MAJOR GROUND CONTOUR
586	EXISTING GROUND CONTOUR
	EXISTING BUILDING
	SURVEYED PROPERTY
	EXISTING ASPHALT
	EXISTING CONCRETE

811 UTILITIES – TICKET NO.: 252483519

OWNER	RESPONDED	PLOTTED	MARKED	NOTES
AT&T TRANSMISSION	NO	NO	NO	NO RESPONSE
ATT DISTRIBUTION	NO	NO	NO	NO RESPONSE
CHARTER COMMUNICATIONS	NO	NO	NO	NO RESPONSE
EVERGY	NO	NO	NO	NO RESPONSE
GOOGLE FIBER	NO	NO	NO	NO RESPONSE
SPIRE MO WEST	NO	NO	NO	NO RESPONSE
LUMEN	NO	NO	NO	NO RESPONSE
CITY OF LEES SUMMIT FIBER	NO	NO	NO	NO RESPONSE
CITY OF LEES SUMMIT WATER	NO	NO	NO	NO RESPONSE
CITY OF LEES SUMMIT SEWER	NO	NO	NO	NO RESPONSE
CITY OF LEES SUMMIT STORMSEWER	NO	NO	NO	NO RESPONSE
MNA-BLUEBIRD	NO	NO	NO	NO RESPONSE
SPECTRUM	NO	NO	NO	NO RESPONSE
UPN DBA SEGRA	NO	NO	NO	NO RESPONSE

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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ATWELL
www.atwell-group.com
1250 EAST DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.577.0800
MO COA # 2011037945

A TRACT OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, SE 1/4 OF 36 T48N, R32W

JACKSON COUNTY, MISSOURI

CLIENT
VALVOLINE INC.

ALTA/NSPS LAND TITLE SURVEY

610 NW CHIPMAN ROAD
LEE'S SUMMIT,
MO 64086

DATE
SEPTEMBER 15, 2025

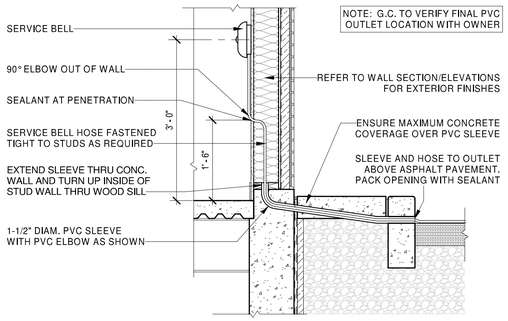
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REVISIONS

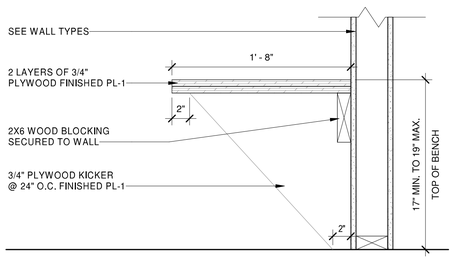
JOSEPH C. CROUCH
MISSOURI PROFESSIONAL LAND SURVEYOR NO. 2015017836
ATWELL, LLC

DR. AEC	CH. JCC
P.M. ASA	
CREW CHIEF: M. WILKERSON	
JOB 25006813	
SHEET NO. 2 OF 2	

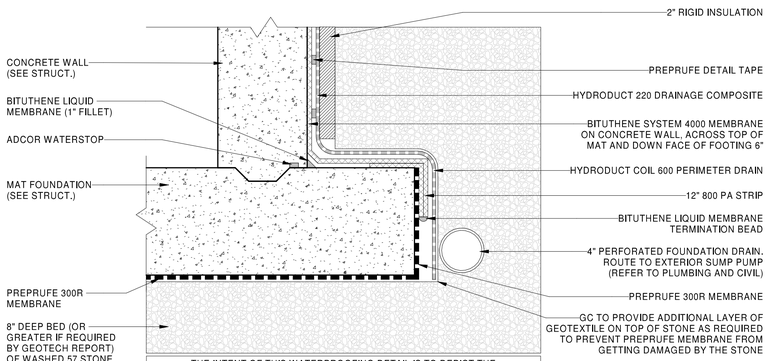
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4 A-1.1 SERVICE BELL DETAIL
Scale: 3/4" = 1'-0"



3 A-1.1 BENCH DETAIL
Scale: 1 1/2" = 1'-0"



THE INTENT OF THIS WATERPROOFING DETAIL IS TO DEPICT THE MANUFACTURER'S STANDARD WATERPROOFING DETAIL. ALL PENETRATIONS THROUGH THE WATERPROOFING SYSTEM SHALL BE SEALED AS PER MANUFACTURER'S REQUIREMENTS TO MAINTAIN A FULL SYSTEM WARRANTY. REFER TO STRUCTURAL DRAWINGS FOR MAT FOUNDATION DESIGN AND DIMENSIONS.

NOTE: THIS WATERPROOFING DETAIL SHALL BE APPLIED AROUND THE ENTIRE PERIMETER OF THE LOWER LEVEL TO CREATE A SEALED WATERPROOFING SYSTEM AND PREVENT GROUND WATER INFILTRATION INTO THE BUILDING.

NOTE: THIS DETAIL IS WITHIN GCP'S WARRANTY SPECIFICATIONS AND IN NO WAY RELIEVES THE CONTRACTOR FROM FOLLOWING ALL MANUFACTURER SPECIFICATIONS.

2 A-1.1 WATERPROOFING DETAIL
Scale: 1 1/2" = 1'-0"

FLOOR PLAN KEY NOTES:

1. OIL- WATER SEPARATOR - SEE PLUMBING
2. LINE OF CHASE ABOVE
3. ROUTE PROCESS PIPING FROM DRUM TRANSFER PUMP @ UPPER LEVEL, DOWN IN CHASE TO LUBE BAR DRUM TRANSFER IN LUBE PIT. COORDINATE ROUNTING IN FIELD
4. MECHANICAL DUCT ABOVE. SEE MECHANICAL PLANS.
5. PROVIDE UNDERSLAB WATERPROOFING BENEATH ENTIRE LOWER LEVEL - SEE DETAIL 2/A-1.1
6. AUTO AIR DRYER, REFER TO OPERATIONS EQUIPMENT PLAN G-3.1 (COORDINATE LOCATION WITH PLUMBING DRAWINGS.)
7. OIL-WATER SEPARATOR PUMP AND BASIN - SEE PLUMBING
8. BUMP HAT STORAGE
9. GYPSUM BOARD NOT REQUIRED TO BE INSTALLED ON STUD FRAMING WHERE NOT VISIBLE BENEATH STAIR. SEE DETAIL 1/A-5.3.
10. TIRE ROTATION AIR LINE LOCATION. G.C. TO COORDINATE W/ VENDOR
11. CHANGING BENCH - SEE DETAIL 3/A-1.1
12. PROVIDE 5/8" CDX PLYWOOD IN LIEU OF GYPSUM WALL BOARD BEHIND SHELVING FROM FLOOR TO 8'-0" AFF

GENERAL NOTES

A. INTERIOR WALL SEPARATING THE SERVICE BAYS FROM THE WAITING/RESTROOM/OFFICE/MECHANICS ROOM, AND INTERIOR WALLS SURROUNDING THE RESTROOM, OFFICE AND MECHANICAL ROOM SHALL BE PROVIDED WITH SOUND BATT INSULATION FOR THE FULL HEIGHT OF THE WALLS. VAPOR BARRIER IS NOT REQUIRED IN THESE WALLS.

B. ALL EXTERIOR WALLS AND ROOF SHALL BE PROVIDED WITH INSULATION TO ACHIEVE A COMPLETELY INSULATED THERMAL ENVELOPE AS REQUIRED - REFER TO SHEET A-4.1. PROVIDE VAPOR BARRIER PER LOCAL CLIMATE REQUIREMENTS.

C. ALL GYPSUM BOARD IN SERVICE BAYS SHALL BE 5/8" HIGH ABUSE FIRE SHIELD BY NATIONAL GYPSUM.

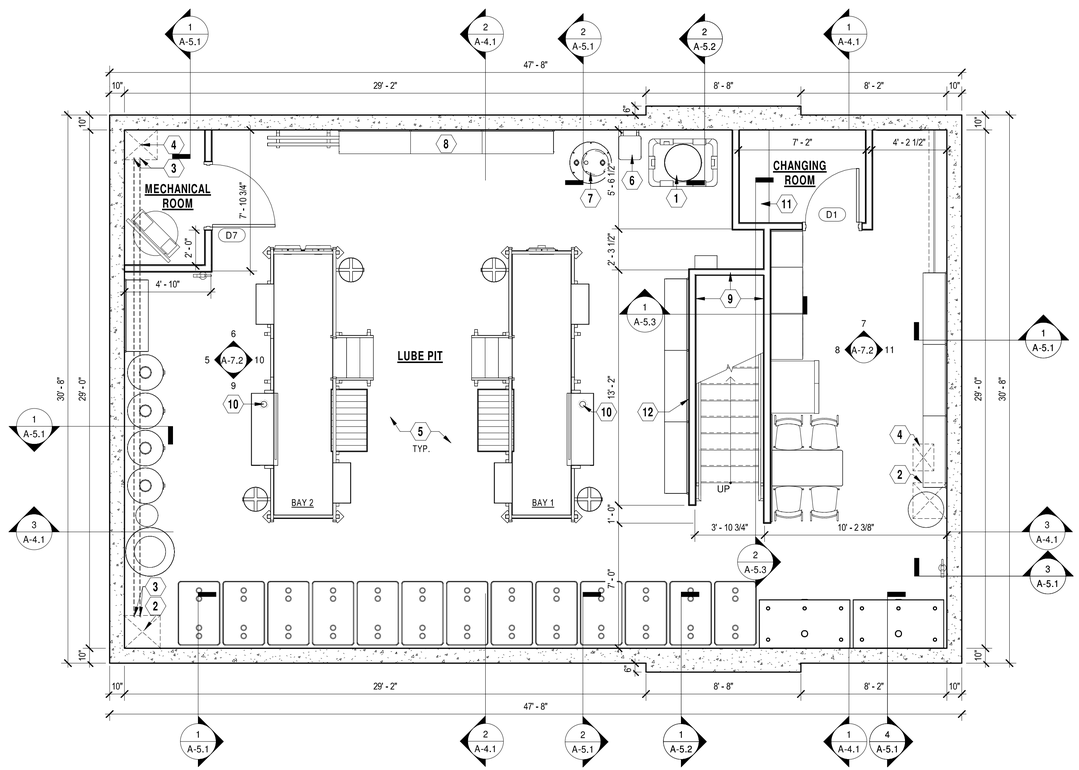
D. ALL WALLS EXTENDING TO UNDERSIDE OF PLYWOOD ROOF SHEATHING SHALL BE BRACED TO STRUCTURE AS REQUIRED. PROVIDE NECESSARY BLOCKING FOR STABLE, SECURE INSTALLATION.

E. REFER TO SHEET G-3.1 FOR EQUIPMENT SCHEDULES AND LOCATIONS.

F. DIMENSIONS FOR INTERIOR WALLS ON PLANS ARE TO ROUGH FRAMING (U.N.O.) EXTERIOR DIMENSIONS ARE TO FINISHED SURFACES AND OPENINGS.

G. REFER TO STRUCTURAL FOR FLOOR PENETRATION LOCATIONS

H. POLYETHYLENE VAPOR BARRIER TO BE USED ON WALL/ CEILING APPLICATIONS WHERE UNFACED BATT INSULATION IS USED.



NORTH

1 A-1.1 FLOOR PLAN - LOWER LEVEL
Scale: 1/4" = 1'-0"

HFA
HFA-AE, L T D.
t 479.273.7780
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 12/05/25. AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

Date	Issued Record
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT

STATE OF MISSOURI
JAMI MARIE COOK
NUMBER A-2021048657
ARCHITECT
2025.12.22 08:59:35-06'00'
JAMI MARIE COOK, ARCHITECT
A-2021048657
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL IN CHARGE
JAMI MARIE COOK
PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
FLOOR PLAN - LOWER LEVEL

SHEET #
A-1.1

C:\Users\dwayne.ham\Documents\2024 Revit Projects\06-24-20062 - Lee Summit MO - ZB-Flat Roof Arch_V24_-HFA.Dwayne.Ham.rvt
12/19/2025 3:01:15 PM
A-1.1 FLOOR PLAN - LOWER LEVEL

FINISH SCHEDULE

ROOM	FLOOR	BASE	WALLS			CEILING/ EXPOSED STRUCTURE	REMARKS
			FULL HEIGHT	WAINSCOT BOTTOM	WAINSCOT TOP		
UPPER LEVEL							
WAITING ROOM	F-1	B-1	PR-3/PT-1	N/A	N/A	C-1	
UNISEX RESTROOM	F-1	B-1	PR-3/PT-1	N/A	N/A	C-1	
OFFICE	F-1	B-1	PR-3/PT-5	N/A	N/A	C-1	
MECHANICS ROOM	F-1	B-1	PR-3/PT-5	N/A	N/A	PR-3/PT-5	
SERVICE BAYS	F-1	B-1	PR-3/PT-5	W-1	PR-3/PT-5	PR-3/PT-5	SEE INTERIOR ELEVATIONS FOR WAINSCOT
LOWER LEVEL							
MECHANICAL ROOM	F-2	B-1	PR-1/PT-5	N/A	N/A	PR-2/PT-5	B-1 ON STUD WALLS ONLY
LUBE PIT	F-2	B-1	PR-1/PT-5	N/A	N/A	PR-2/PT-5	PT-6 AS SHOWN ON INTERIOR ELEVATIONS; B-1 ON STUD WALLS ONLY
CHANGING ROOM	F-2	B-1	PR-1/PT-5	N/A	N/A	PR-2/PT-5	B-1 ON STUD WALLS ONLY

NOTES:

1. ANY MOISTURE PROBLEMS SUCH AS ROOF LEAKS, IMPROPER GRADING, ETC. MUST BE CORRECTED PRIOR TO PAINT APPLICATION.

2. CLEAN & PREPARE ALL SURFACES ACCORDING TO COATING MFG. RECOMMENDATIONS.

3. ALL GALVANIZED SURFACES SHALL BE CORROSION PROTECTED PER SPEC. RUSTED AREAS SHOULD BE PREPARED PER SSPC-SP2 OR SP3 HAND OR POWER TOOL CLEANING & PRIMED WITH PR-2 PRIOR TO APPLICATION OF SPECIFIED FINISH COATS.

4. ALL SURFACES SHALL RECEIVE (2) APPLICATIONS OF TOP COAT, APPLIED ACCORDING TO MFG. RECOMMENDATIONS.

5. ENTIRE DOOR & FRAME SHALL BE PAINTED ONE COLOR AS NOTED

6. ALL WELDS SHALL BE GROUND SMOOTH PRIOR TO PRIME COAT.

7. ALL EXPOSED LINTELS SHALL BE PAINTED THE SAME COLOR AS THE DOOR FRAME AT MAN DOORS AND TO MATCH THE DESERT SAND METAL COLORS AT ALL OTHER EXPOSURES.

8. ALL EXPOSED STEEL AT STAIR, STAIR RAIL AND PIT OPENING SHALL BE PAINTED PT-4.

9. WALL FINISHES ON THE LOWER LEVEL SHALL EXTEND UP BETWEEN THE BEAM POCKETS TO THE UNDERSIDE OF THE METAL FLOOR DECK. WALL FINISHES ON THE UPPER LEVEL IN THE SERVICE BAYS AND THE MECHANICS ROOM SHALL EXTEND UP BETWEEN THE ROOF TRUSSES TO THE UNDERSIDE OF THE PLYWOOD ROOF SHEATHING.

10. ALL EXPOSED WOOD ROOF TRUSSES, BLOCKING, PLYWOOD ROOF SHEATHING, ETC. SHALL BE PAINTED PT-5.

FINISH LEGEND

MARK	COLOR	FINISH	MANUFACTURER	PRODUCT
PRIMERS:				
PR-1	TINTED TO MATCH		SHERWIN WILLIAMS	HEAVY DUTY BLOCK FILLER B42W150
PR-2	TINTED TO MATCH		SHERWIN WILLIAMS	PRO-CRYL PRIMER B66 -1300 SERIES
PR-3	TINTED TO MATCH		SHERWIN WILLIAMS	MULTI-PURPOSE LATEX PRIMER/SEALER B51-450 SERIES
PAINTS:				
PT-1	SW7012 (CREAMY)	GLOSS	SHERWIN WILLIAMS	WATER BASED ALKYD URETHANE ENAMEL B53
PT-2	SW7515 (HOMESTEAD BROWN)	GLOSS	SHERWIN WILLIAMS	SHER-CRYL HPA
PT-3	CEILING WHITE	GLOSS	SHERWIN WILLIAMS	WATER BASED ALKYD URETHANE ENAMEL B53
PT-4	VALVOLINE RED	GLOSS	SHERWIN WILLIAMS	WATER BASED ALKYD URETHANE ENAMEL B53 - Color to match Pantone 485 RED
PT-5	ULTRA WHITE	GLOSS	SHERWIN WILLIAMS	WATER BASED ALKYD URETHANE ENAMEL B53
PT-6	SW2936 (BLACK EMERALD)	GLOSS	SHERWIN WILLIAMS	WATER BASED ALKYD URETHANE ENAMEL B53
WALL PANELS:				
W-1	MAUNA LOA (1295)	SATIN SANDSTONE	CRANE COMPOSITES	FRP PANEL W/ MATCHING COLOR TRIMS – CLASS C
PLASTIC LAMINATE:				
PL-1	DOVE GREY	MATTE	WILSONART	STANDARD HPL FINISH D92-60
FLOOR FINISH:				
F-1	SEE FINISH NOTE D		SIKA / SHERWIN WILLIAMS	SIKAGARD 200 HD WB AND SIKAGARD H 1001
F-2	SEE FINISH NOTE E		SIKA	SIKAGARD 300 KNS
BASE:				
B-1	BLACK	SMOOTH	ROPPE OR EQUAL	700 SERIES 4" RUBBER COVE BASE
CEILING FINISH:				
C-1	WHITE	MEDIUM TEXTURE	ARMSTRONG	24"X24" CIRRUS HIGH NRC SQUARE LAY-IN CEILING PANELS SET IN PRELUDE XL ITEM NO. 7301-WH EXPOSED TEE SUSPENSION SYSTEM.

FINISH NOTES

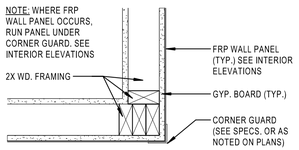
A. W-1 FINISH IS AVAILABLE THROUGH CRANE COMPOSITES. CONTACT: KEVIN BELLINGER @ (704) 904-4730. REFER TO DETAIL 4/A-7.1.

B. PROVIDE STANDARD FRP TRIMS & MOLDINGS IN COLORS TO MATCH FRP FOR FINISHES W-1. COMPLY w/ MANUFACTURERS INSTALLATION GUIDELINES USING ONLY APPROVED ADHESIVES AND SEALANTS.

C. INSIDE OF ACCESS CHASES SHALL BE PAINTED PT-6.

D. PROVIDE LIGHT BROOM FINISH. SIKAGARD 200 HD WB SHALL BE APPLIED TO HARDEN AND SEAL THE CONCRETE FLOOR SLAB IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. AFTER THE FLOOR SLAB HAS CURED, APPLY SIKAGARD H 1001 (3 COATS MIN.) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE YELLOW CAUTION STRIPING AND BLUE END-OF-BAY MARKING INTEGRAL w/ FLOOR FINISH - SEE FLOOR PLAN. PAINT TO BE SHERWIN WILLIAMS, PROPARK WATERBORNE TRAFFIC PAINT - BLUE.

E. PROVIDE LIGHT BROOM FINISH. SIKAGARD 300 KNS SHALL BE INSTALLED WITH (3) COATS MINIMUM. TWO COATS AT INITIAL FINISH AND ONE COAT AFTER CLEANING, JUST PRIOR TO TURN OVER.



2 A-1.2 CORNER GUARD DETAIL
Scale: 1 1/2" = 1'-0"

FLOOR PLAN KEY NOTES:

1. YELLOW SAFETY STRIPE INTERGRAL W/FLOOR FINISH. REFER TO FINISH NOTE "D" & PIT OPENING PLAN DETAIL 1/A-9.1.
2. FRP FINISH THIS WALL (OR AREA). PROVIDE/INSTALL TRIM AS REQUIRED. REFER TO FINISH SCHEDULE.
3. PLASTIC LAMINATE COUNTERTOP AND WALL CABINETS. REFER TO INTERIOR ELEVATIONS & DETAILS 1 & 2/A-7.1
4. SMOKE DETECTOR. (COORDINATE LOCATION IN MECHANICS ROOM WITH OWNER)
5. PIPE BOLLARD (SEE PLANS FOR QUANTITY/LOCATION). REFER TO DETAIL 6/A-10.1.
6. WATER HEATER ON PLATFORM ABOVE SINK. REFER TO INTERIOR ELEVATIONS AND PLUMBING.
7. COMBINATION BOTTLE FILLING STATION AND DRINKING FOUNTAIN, REFER TO INTERIOR ELEVATIONS AND PLUMBING.
8. ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL.
9. FURNISH AND INSTALL VESTIL OVERHEAD TRACK PROTECTOR - 24 1/4" HIGH =, MODEL #DSP-24 FROM NORTHERN TOOL + EQUIPMENT. SECURELY MOUNT TO FLOOR (EACH SIDE OF DOOR) TO COVER/ PROTECT VITECTOR ELECTRONIC EYES AND LIFTECH EQUIPMENT WITHOUT BLOCKING SIGHT LINE.
10. ROUTE LUBE BAR LINES DOWN IN SHAFT TO TANKS IN LUBE PIT.
11. PROVIDE SEALED CONCRETE APRONS IN FRONT OF OVERHEAD DOORS. REFER TO CIVIL FOR EXTENT OF PAVING AND FINISH MATERIAL.
12. EXTEND FLOOR FINISH (F-1) TO OUTER EDGE OF SLAB @ BAY DOORS.
13. PROVIDE PVC SLEEVE ROUTED THROUGH CONCRETE SIDEWALK AND WALL FOR SERVICE BELL RINGER HOSE. COORDINATE REQUIREMENTS WITH OWNER PRIOR TO SIDEWALK/ CURB INSTALLATION. SEE DETAIL 4/A1.1.
14. ANTIFREEZE FUNNEL DRAIN LINE TO BE ROUTED THROUGH WALL INTO ACCESS CHASE
15. PROVIDE 1 1/4" x 1 1/4" x 16 GA. STAINLESS STEEL CORNER GUARDS OVER FRP PANELS. GUARDS TO STOP AT TOP OF FRP. REFER TO DETAIL 2/A-1.2.
16. MECHANICAL DUCT. REFER TO MECHANICAL.
17. BLUE GUIDE SQUARE ON FLOOR - INTEGRAL WITH FLOOR FINISH. REFER TO FINISH NOTE "D" & PIT OPENING PLAN DETAIL 1/A-9.1.
18. LOCATION OF SIGNAGE ABOVE. REFER TO EXTERIOR ELEVATIONS AND SIGN SCHEDULE.
19. "OPEN" SIGNAGE. REFER TO EXTERIOR ELEVATIONS, SIGN SCHEDULE, AND ELECTRICAL.
20. EXTERIOR ACCESS DOOR. REFER TO EXTERIOR ELEVATIONS & DOOR SCHEDULE.
21. 2" Ø HOLE TO BE CORE DRILLED THRU FLOOR. G.C. TO COORDINATE LOCATIONS WITH OWNER.
22. ROYAL BLUE STRIPE INTEGRAL WITH FLOOR FINISH. REFER TO FINISH NOTE "D" & PIT OPENING PLAN DETAIL 1/A-9.1.
23. SLOPE CONCRETE TOPPING APPROXIMATELY 30" Ø AROUND FLOOR DRAIN (TYP.). SLOPE OF CONCRETE SHALL NOT EXCEED 1:48
24. 3/4" PLYWOOD ON ENTIRE WALL. PAINT PT-1 (BY G.C.).
25. AIR PRESSURE SHUT OFF VALVE LOCATION FOR AIR COMPRESSOR.
26. AIRLINE PEDESTAL (BY OWNER).
27. LINE OF METAL AWNING/CANOPY ABOVE. REFER TO DETAIL 5/A-5.2
28. INSTALL FIXED ALUMINUM ROOF ACCESS LADDER AND ROOF SCUTTLE AND LADDER UP SAFETY POST. INSTALL 5/8" PLYWOOD BEHIND ROOF ACCESS LADDER. SEE DETAIL 7/A-2.1. COORDINATE WITH STRUCTURAL DRAWINGS.
29. PROVIDE 5/8" CDX PLYWOOD IN LIEU OF GYPSUM WALL BOARD BEHIND SHELVING FROM FLOOR TO 8'-0" AFF

GENERAL NOTES

A. INTERIOR WALL SEPARATING THE SERVICE BAYS FROM THE WAITING/RESTROOM/OFFICE/MECHANICS ROOM, AND INTERIOR WALLS SURROUNDING THE RESTROOM, OFFICE AND MECHANICAL ROOM SHALL BE PROVIDED WITH SOUND BATT INSULATION FOR THE FULL HEIGHT OF THE WALLS. VAPOR BARRIER IS NOT REQUIRED IN THESE WALLS.

B. ALL EXTERIOR WALLS AND ROOF SHALL BE PROVIDED WITH INSULATION TO ACHIEVE A COMPLETELY INSULATED THERMAL ENVELOPE AS REQUIRED - REFER TO SHEET A-4.1. PROVIDE VAPOR BARRIER PER LOCAL CLIMATE REQUIREMENTS.

C. ALL GYPSUM BOARD IN SERVICE BAYS SHALL BE 5/8" HIGH ABUSE FIRE SHIELD BY NATIONAL GYPSUM.

D. ALL WALLS EXTENDING TO UNDERSIDE OF PLYWOOD ROOF SHEATHING SHALL BE BRACED TO STRUCTURE AS REQUIRED. PROVIDE NECESSARY BLOCKING FOR STABLE, SECURE INSTALLATION.

E. REFER TO SHEET G-3.1 FOR EQUIPMENT SCHEDULES AND LOCATIONS.

F. DIMENSIONS FOR INTERIOR WALLS ON PLANS ARE TO ROUGH FRAMING (U.N.O.) EXTERIOR DIMENSIONS ARE TO FINISHED SURFACES AND OPENINGS.

G. REFER TO STRUCTURAL FOR FLOOR PENETRATION LOCATIONS

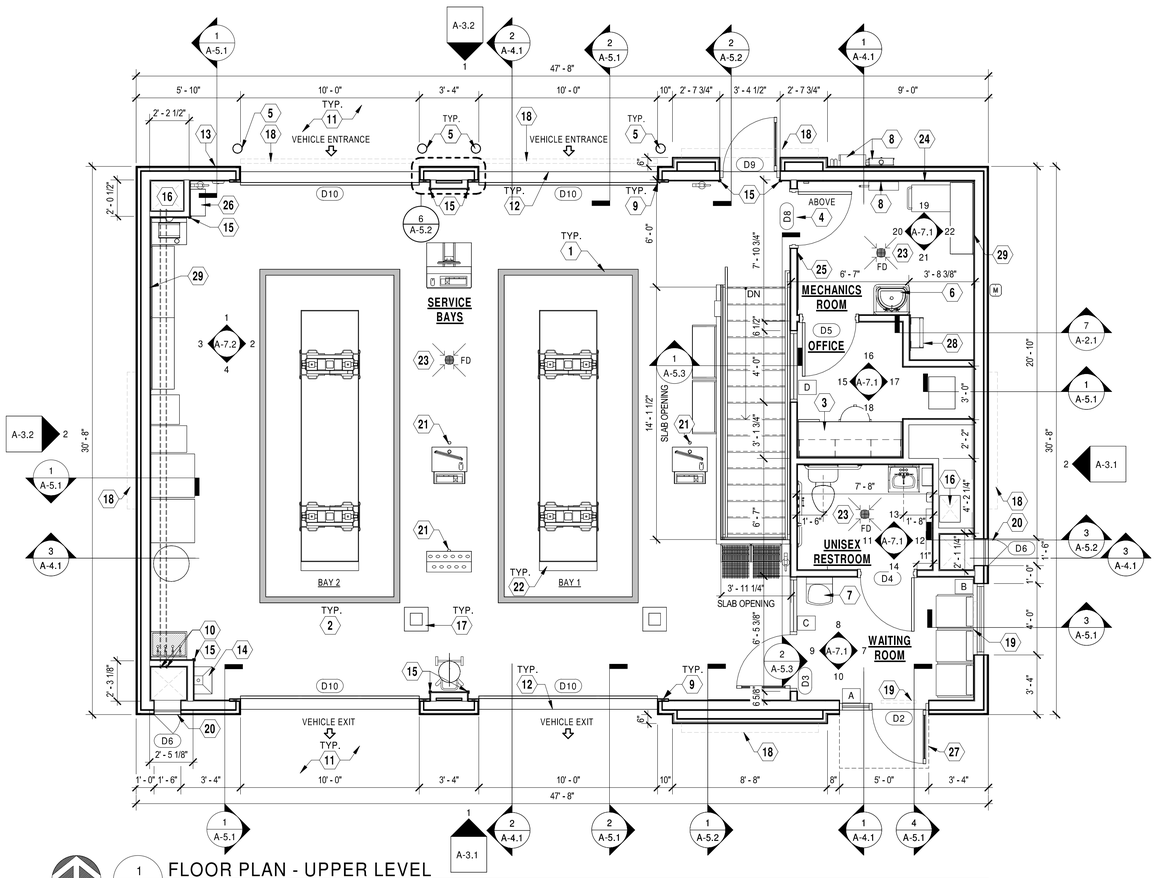
H. POLYETHYLENE VAPOR BARRIER TO BE USED ON WALL/ CEILING APPLICATIONS WHERE UNFACED BATT INSULATION IS USED.

KEY TO WALL TYPES

EXTERIOR WALL: EXTERIOR FINISH, OVER AIR/MOISTURE BARRIER, OVER PLYWOOD SHEATHING (PER STRUCTURAL), OVER 2x6 WALL STUDS (TYPE & SPACING PER STRUCTURAL). PROVIDE 5/8" HIGH ABUSE GYPSUM WALL BOARD ON INTERIOR FACE OVER POLYETHYLENE VAPOR BARRIER. INSULATE STUD CAVITY WITH BATT INSULATION.

INTERIOR WALL: 2x4 STUDS @ 16" O.C. (UNLESS OTHERWISE NOTED) w/ P.T. SILL PLATE AND DOUBLE TOP PLATES w/ 5/8" GYPSUM BOARD EACH SIDE. EXTEND WALL AND SECURE TO STRUCTURE. INSULATE STUD CAVITY WITH SOUND BATTS WHERE NOTED. INTERIOR WALLS IN THE LOWER LEVEL SHALL EXTEND UP TO THE UNDERSIDE OF THE METAL FLOOR DECK. INTERIOR WALLS AT THE UPPER LEVEL SURROUNDING THE SERVICE BAYS AND MECHANICS ROOM SHALL EXTEND UP TO THE UNDERSIDE OF THE PLYWOOD ROOF SHEATHING. ALL OTHER INTERIOR WALLS AT THE UPPER LEVEL SHALL EXTEND UP TO 6" ABOVE THE ACT CEILING.

NOTE: REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.



NORTH

1 A-1.2 FLOOR PLAN - UPPER LEVEL
Scale: 1/4" = 1'-0"

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12/22/2025	PERMIT

STATE OF MISSOURI
JAMI MARIE COOK
NUMBER A-2021048657
ARCHITECT

2025.12.22 08:59:40 -05'00'
JAMI MARIE COOK, ARCHITECT
A-2021048657
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL IN CHARGE
JAMI MARIE COOK
PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME

VALVOLINE INSTANT OIL CHANGE

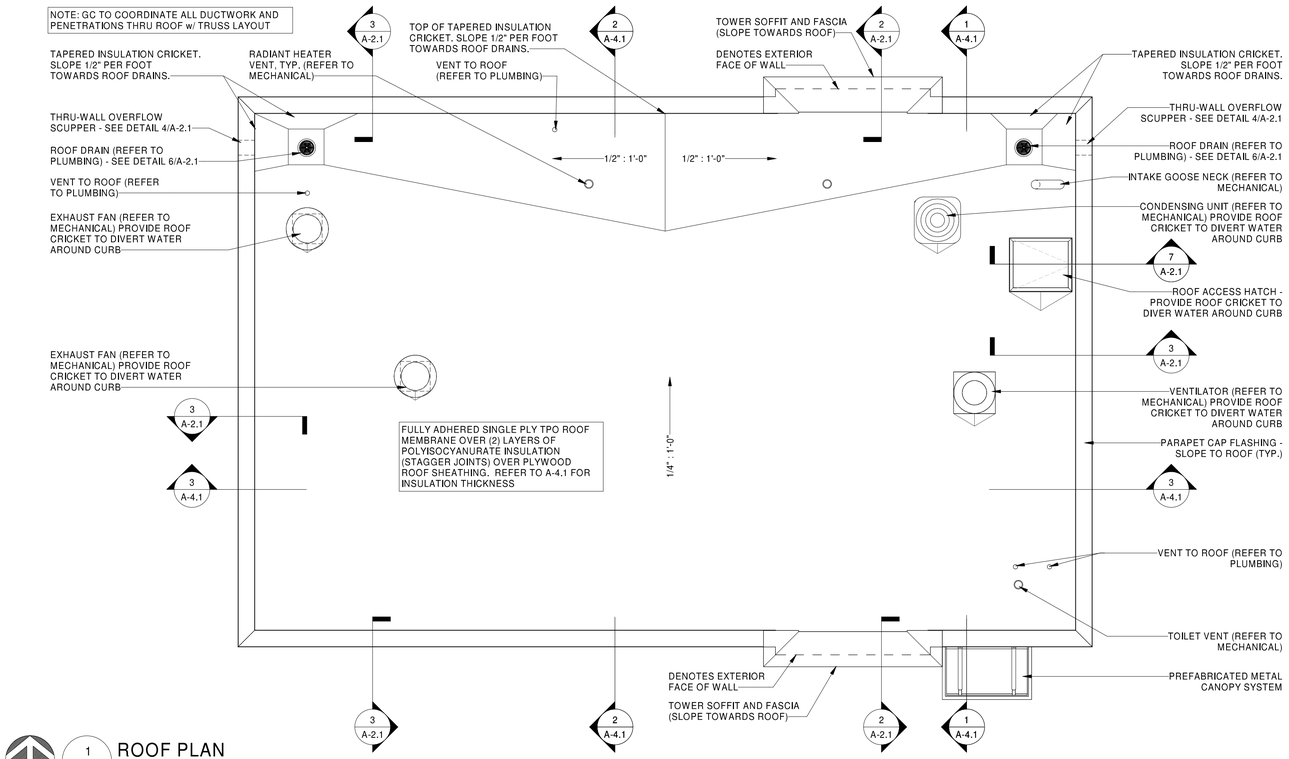
NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

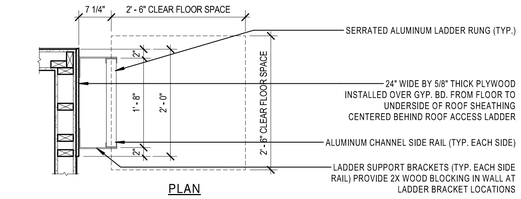
SHEET NAME
FLOOR PLAN - UPPER LEVEL

SHEET #
A-1.2

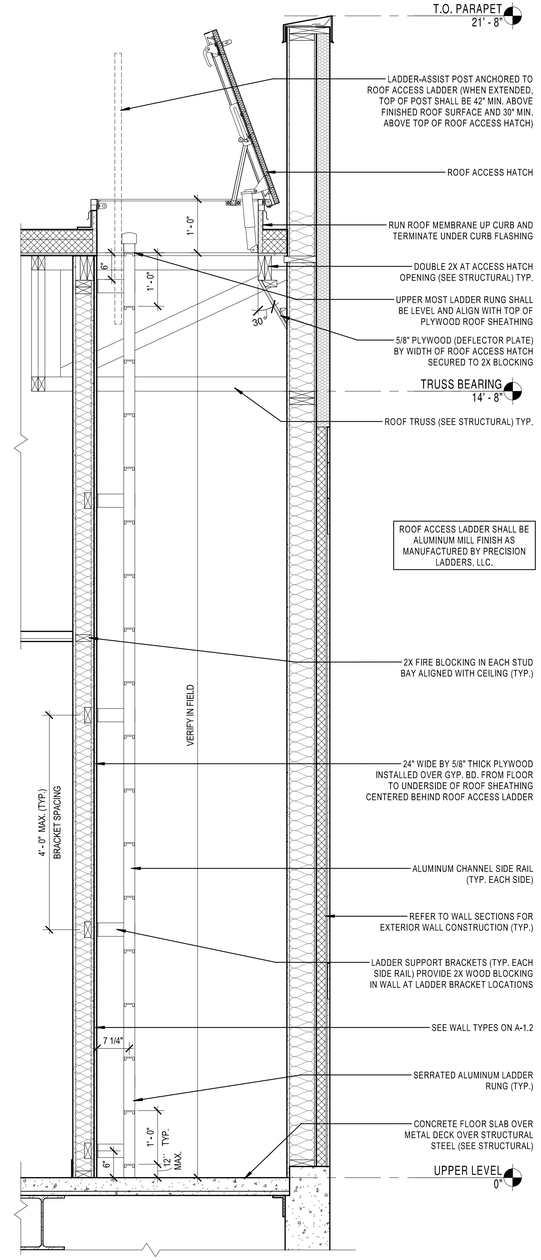
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A-1.2 FLOOR PLAN - UPPER LEVEL
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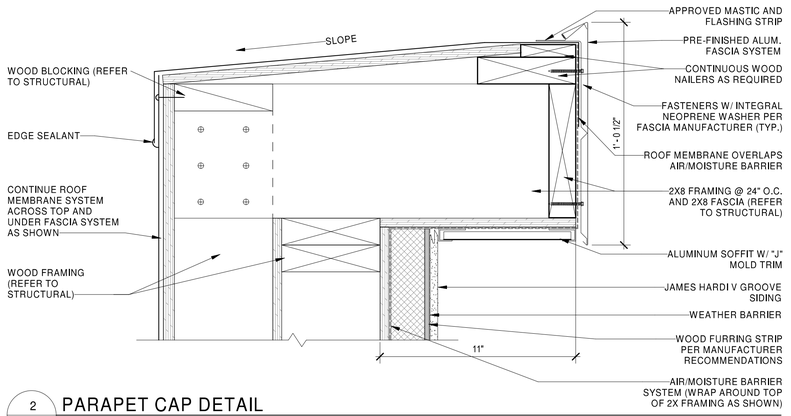
1 A-2.1 **ROOF PLAN** Scale: 1/4" = 1'-0"



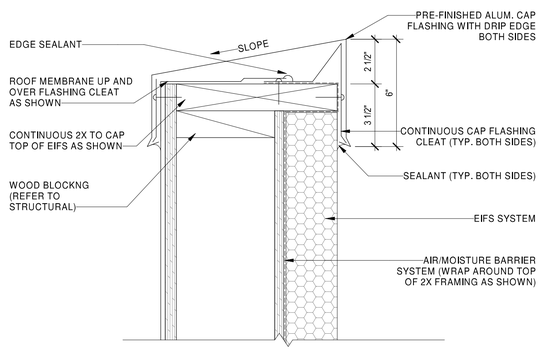
PLAN



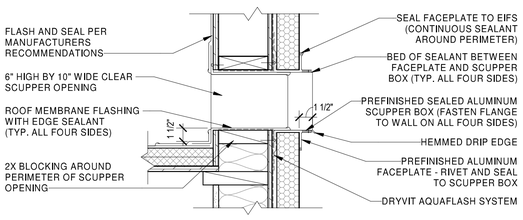
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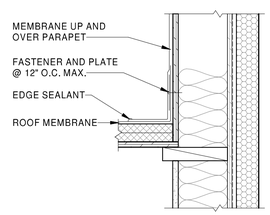
2 A-2.1 **PARAPET CAP DETAIL** Scale: 3" = 1'-0"



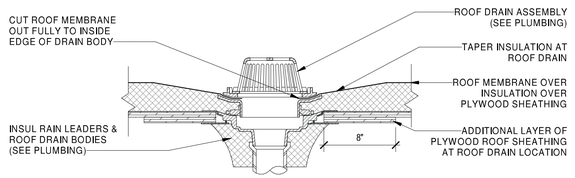
3 A-2.1 **PARAPET CAP DETAIL** Scale: 3" = 1'-0"



4 A-2.1 **SCUPPER DETAIL** Scale: 1 1/2" = 1'-0"



5 A-2.1 **PARAPET TO ROOF DETAIL** Scale: 1 1/2" = 1'-0"



6 A-2.1 **ROOF DRAIN DETAIL** Scale: 1 1/2" = 1'-0"

7 A-2.1 **ROOF HATCH AND LADDER** Scale: 3/4" = 1'-0"

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PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

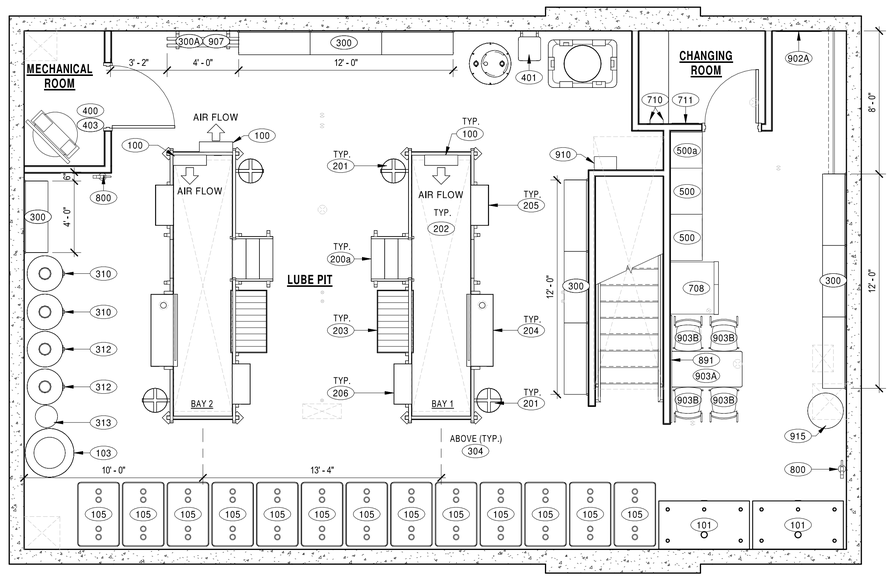
NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
ROOF PLAN & DETAILS

SHEET #
A-2.1

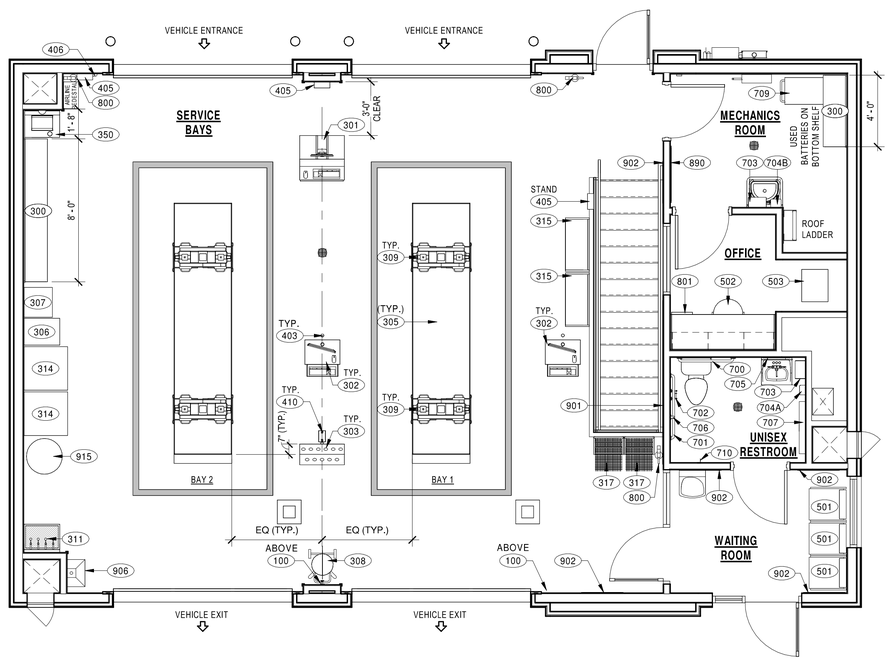
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A-2.1 - ROOF PLAN & DETAILS



1 G-3.1 OPERATIONS PLAN - LOWER LEVEL

Scale: 1/4" = 1'-0"

NORTH



2 G-3.1 OPERATIONS PLAN - UPPER LEVEL

Scale: 1/4" = 1'-0"

NORTH

EQUIPMENT SCHEDULE

ITEM #	DESCRIPTION	QUANTITY	MANUFACTURER	MODEL #	SUPPLIED BY	INSTALLED BY	COMMENTS
100	20" WORK STATION FAN	5	TPI	U18TE	GC	GC/DEVON	GC TO INSTALL UPPER LEVEL FANS. GC TO PROVIDE CATWALK FANS TO DEVON TO INSTALL ON CATWALKS IN LOWER LEVEL.
101	500 GAL TOTAL SINGLE WALL 1 COMPARTMENT TANK	2	NEWBERRY	FTSBS-0500-VAL	DEVON	GC	PER UL 142 SPECIFICATIONS GC SHALL RECEIVE, SET AND VENT TANKS
103	200 GAL TANK - WASTE ANTIFREEZE	1	ADVANCED ROTO LLC	VT-200-HD	DEVON	GC	
105	275 GAL TOTAL DOUBLE WALL TANK	13	ROTH	DWT 1000L	DEVON	GC	PER UL 2258 SPECIFICATIONS GC SHALL RECEIVE, SET AND VENT TANKS
200	CATWALK	2	DEVON INDUSTRIES	E-915-V	DEVON	DEVON	
200a	CATWALKS STEPS	2	DEVON INDUSTRIES	E-915-ST-V	DEVON	DEVON	
201	DRUM SUPPORT BRACKET	4	DEVON INDUSTRIES	E903-B	DEVON	DEVON	
202	DRIP CATCH PAN	2	DEVON INDUSTRIES	E-915-DPV-40	DEVON	DEVON	
203	OIL FILTER DISPENSER RACK	2	DEVON INDUSTRIES	E-304	DEVON	DEVON	
204	TECHNICIAN TOOL SHELF	2	DEVON INDUSTRIES	E500-2H	DEVON	DEVON	
205	UTILITY SHELF (2-TIER)	2	DEVON INDUSTRIES	E-300	DEVON	DEVON	M-307 MOLDED RUBBER BUMPER BOTH BOTTOM CORNERS
206	UTILITY SHELF (2-TIER)	2	DEVON INDUSTRIES	E-302	DEVON	DEVON	M-307 MOLDED RUBBER BUMPER BOTH BOTTOM CORNERS
207A	TECHNICIAN STEP STOOL - LOWER LEVEL	2	COTTERMAN	LOWER LEVEL: A2N2222A320B8C2P6 -D99990001	OWNER	OWNER	NOT SHOWN ON PLAN. ONE AT EACH CATWALK
207B	TECHNICIAN STEP STOOL - UPPER LEVEL	1	COTTERMAN	UPPER LEVEL: A1N2222A320B8C2P6 -D99990010	OWNER	OWNER	NOT SHOWN ON PLAN.ONE AT UPPER LEVEL
300	15" DEEP INVENTORY SHELVING	13	LOZIER		MIDWEST	GC	SEE PLANS TO DETERMINE LINEAR FOOTAGE NEEDED. 4 SHELVES PER SECTION
300A	INVENTORY SHELVING	1	DEVON INDUSTRIES	E-601 (1'-0" DEPTH)	DEVON	DEVON	48" LENGTH OF 2 BAR SHELVING SYSTEM
301	GREETER STATION	1	DEVON INDUSTRIES	C7030-DX-BLK	DEVON	DEVON	
302	PEDESTAL POST PODIUM	2	DEVON INDUSTRIES	CP09-2M	DEVON	DEVON	
303	LUBE DISPENSING CONSOLE - 12 OUTLETS	1	DEVON INDUSTRIES	E-101-12-SS	DEVON	DEVON	HOSE GUIDES INCLUDED W/ UNIT
304	ROLLING DRAIN PAN	2	DEVON INDUSTRIES	E203-32X	DEVON	DEVON	NOT SHOWN ON PLAN
305	PIT BULL SAFETY NET	2	PNC	PITBULL	DEVON	DEVON	
306	AUTOMATIC TRANSMISSION FLUID EXCHANGER	1	ADVANTAGE ENGINEERING COMPANY	MULTI-MODE	OWNER	OWNER	
307	ANTIFREEZE DRAIN AND FILL SYSTEM	1	ADVANTAGE ENGINEERING COMPANY	CE2000	OWNER	OWNER	
308	OIL EVACUATION MACHINE	1	JOHNDOW INDUSTRIES	JDI-20EV-BV	OWNER	OWNER	
309	ROLLING PIT JACK	4	DEVON	RPJ6K	DEVON	DEVON	PLUMB DEVON
310	105 GAL WINDSHIELD WASHER FLUID TANK	2	ADVANCED ROTO LLC	VT-105-HD-VWW	DEVON	DEVON	W/ PNUEMATIC PUMP
311	OIL DISPENSING BAR	1	DEVON	OB-24	DEVON	DEVON	4 OUTLET MODEL
312	105 GAL ANTIFREEZE TANK	2	ADVANCED ROTO LLC	VT-105-HD	DEVON	DEVON	W/ PNUEMATIC PUMP
313	GEAR OIL CANISTER	1			OWNER	OWNER	
314	A/C MACHINE	2	MAHLE ARCTIC PRO	ACX2180H	OWNER	OWNER	
315	BATTERY DISPLAY SHELVING 3'-0"	2			OWNER	OWNER	
317	WINDSHIELD WIPER DISPLAY	2			OWNER	OWNER	
350	DRUM TRANSFER PUMP	1	DEVON	DPOS	DEVON	DEVON	
400	AIR COMPRESSOR - 120 GAL VERTICAL TANK	1	CHAMPION	SINGLE PHASE CHP-R2-30A-S689	DEVON	DEVON	1PH 208V. VIBRATION ISOLATION DAMPERS SHALL BE INSTALLED BY DEVON. DEVON TO INSTALL CONDENSATE DRAIN TO DISCHARGE INTO LUBE PIT SUMP / CROCK BASIN.
401	AIR DRYER	1	CHAMPION	CGD25A1	DEVON	DEVON	
403	HOSE GUIDE ASSEMBLY	2	DEVON	SAB-02	DEVON	DEVON	
405	AUTOMATIC TIRE INFLATOR	3	HALTEC CORPORATION	89-XDA-VAV	HALTEC	HALTEC	(1) STAND; ALL OTHERS WALL MOUNTED; PEX PIPING
406	SERVICE BELL RINGER	1	MILTON	#805	OWNER	GC	100' HOSE
410	AIR HOSE STAND	1	DEVON	AHS-27	DEVON	DEVON	LOCATE IN FIELD BEHIND LUBE DISPENSING CONSOLE
500	LOCKERS	2			OWNER	GC	SECURE TO WALL PER MANUFACTURER'S RECOMMENDATIONS
500a	DIRTY UNIFORM CABINET	1			OWNER	GC	SECURE TO WALL PER MANUFACTURER'S RECOMMENDATIONS
501	WAITING ROOM CHAIRS	3	REALSPACE	ITEM # 184746	OWNER	OWNER	
502	ROLLING DESK CHAIR	1	REALSPACE	ITEM # 857562	OWNER	OWNER	
503	NETWORK RACK	1	NAVE POINT	00405913	OWNER	OWNER	
700	36" HORIZONTAL GRAB BAR	1	BOBRICK	B6806X36	GC	GC	
701	42" HORIZONTAL GRAB BAR	1	BOBRICK	B6806X42	GC	GC	
702	TOILET PAPER HOLDER	1	BOBRICK	B-685	GC	GC	
703	ELECTRIC HAND DRYER	2	EXCEL DRYER	XL-SB-H-110-120V	GC	GC	STAINLESS STEEL HAND DRYER (SURFACE MOUNTED): 44" A.F.F. TO AIR OUTLET.
704A	SOAP DISPENSER	1	GRAINGER	3WU72	GC	GC	SOAP DISPENSER (WALL MOUNTED): 48" A.F.F. MAX. TO OPERABLE CONTROL AND DISPENSER OPENING CENTERLINE
704B	SOAP DISPENSER	1	GRAINGER	3U515	GC	GC	SOAP DISPENSER (WALL MOUNTED): 48" A.F.F. MAX. TO OPERABLE CONTROL AND DISPENSER OPENING CENTERLINE
705	MIRROR	1	BOBRICK	B-165X1836	GC	GC	MOUNTING HEIGHT = 40" MAX TO BOTTOM EDGE OF THE REFLECTING SURFACE.
706	18" VERTICAL GRAB BAR	1	BOBRICK	B6806X18	GC	GC	
707	BABY CHANGING STATION	1	KOALA KARE	KB200-00 CREAM	GC	GC	
708	REFRIGERATOR	1	FRIGIDAIRE	FRSS2323AB	GC	GC	BLACK SIDE BY SIDE WITH ICE MAKER
709	MOBILE TOOL BOX ON WHEELS	1	GRAINGER	32H895	OWNER	OWNER	
710	COAT HOOK	3	BOBRICK	B-212	GC	GC	MOUNTING HEIGHT = 40" A.F.F.
711	MIRROR	1	GLACIER BAY	81172	GC	GC	MOUNTING HEIGHT = 48" TO BOTTOM EDGE OF THE REFLECTING SURFACE.
800	FIRE EXTINGUISHER	5	AMEREX	B456	GC	GC	GC TO CONFIRM THE TYPE, MODEL, QUANTITY, AND LOCATION WITH LOCAL FIRE MARSHAL PRIOR TO PROCUREMENT AND INSTALLATION.
801	FLOOR SAFE	1	FIREKING SECURITY GROUP	MB2014K-SG4440	OWNER	GC	SAFE TO BE PROVIDED W/ 5 KEYS
890	CORK BOARD - 36" X 48"	1			GC	GC	
891	CORK BOARD - 72" X 53"	1			GC	GC	
901	MURAL 9'-0"W X 5'-0"H	1	BRITTEN STUDIOS		OWNER	GC	
902	SNAP FRAME DISPLAY - 47 5/8" X 29 1/2"	5		VIOC - 2744	OWNER	GC	
902A	SNAP FRAME DISPLAY - 42 3/4" X 30 3/4"	1		VIOC - 2859	OWNER	GC	
903A	BREAK AREA TABLE	1	COSCO	ITEM # 728170	OWNER	GC	
903B	BREAK AREA CHAIRS	4	REALSPACE	ITEM # 192077	OWNER	GC	
906	ANTIFREEZE FUNNEL	1	DEVON	AFWASTE-PO	DEVON	DEVON	MOUNT ON WALL @ 30" A.F.F. SEE DETAIL 3/A-7.1.
907	GLOVE DRYING HOOKS	24	DEVON	DR03STBKL	DEVON	DEVON	
910	WALL MOUNT EYE WASH STATION	1	HONEYWELL	32-000462-000-H5	GC	GC	MOUNT ON WALL @ 48" A.F.F.
915	SPILL KIT – 55 GAL DRUM	2			OWNER	GC	

PREFERRED VENDORS

1. DAYTON
2. DEVON INDUSTRIES
3. COTTERMAN
4. BRW UNLIMITED SERVICES, INC.
5. RTI
6. FLUID EVACUATORS
7. CHAMPION
8. HALTEC CORPORATION
9. MILTON
10. GRAINGER
11. BOBRICK
12. KOALA KARE
13. AMANA
14. FRIGIDAIRE
15. AMEREX
16. BEST ACCESS DOORS
17. GCP APPLIED TECHNOLOGIES
    CONTACT: KELLY PANARIELLO
    PHONE #: 201.360.9052
    EMAIL: kelly.panariello@gcpat.com
18. OVERHEAD DOOR
    CONTACT: MIKE ROGERS
    2501 S. STATE HWY 121, SUITE 200
    LEWISVILLE, TX 75067
    PHONE #: 469.549.7136
    EMAIL: Mike_Rogers@overheaddoor.com
19. MIDWEST RETAIL SERVICES INC.
    CONTACT: WILL KALAL
    PHONE #: 614.647.5720
    EMAIL: wkalal@mw-rs.com

GENERAL NOTES

1. GC RESPONSIBLE TO OBTAIN FROM OWNER A DETAILED LIST OF ALL EQUIPMENT TO BE SUPPLIED BY OWNER, DEVON AND OWNERS VENDORS.
2. GC SHALL COORDINATE RECEIVING AND SAFELY STORING ALL EQUIPMENT DELIVERED TO SITE FROM OWNER, DEVON AND OWNERS VENDORS.
3. GC SHALL BECOME FAMILIAR WITH ALL EQUIPMENT MOUNTING REQUIREMENTS PRIOR TO CONSTRUCTION START.
4. GC TO PROVIDE SOLID BLOCKING IN WALLS AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT.
5. GC SHALL PROVIDE THE ELECTRICAL AND PLUMBING ROUGH INS AND FINAL CONNECTIONS FOR THE EQUIPMENT. REFER TO THE PLUMBING AND ELECTRICAL DRAWINGS.

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DAH

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

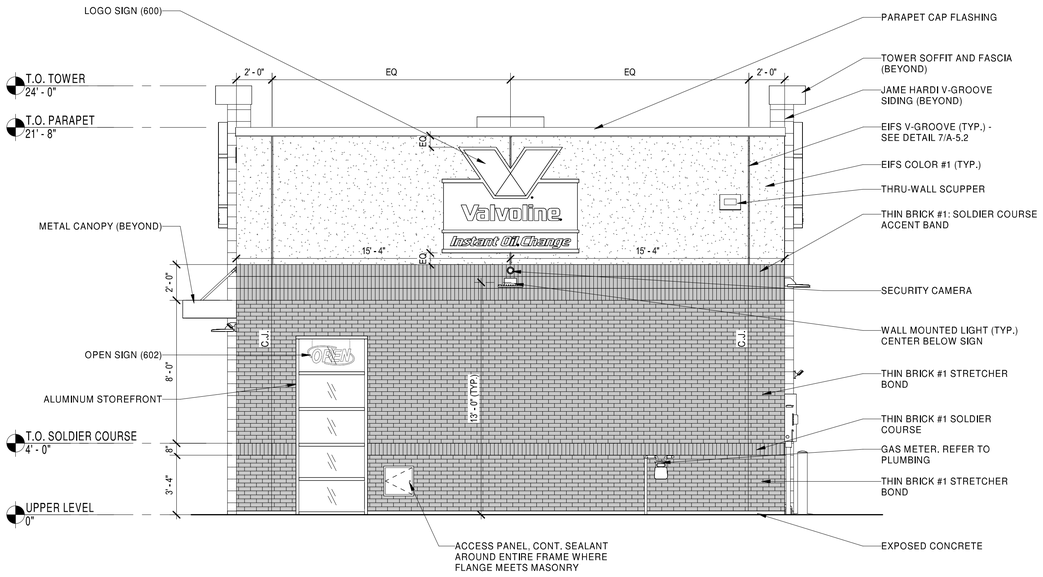
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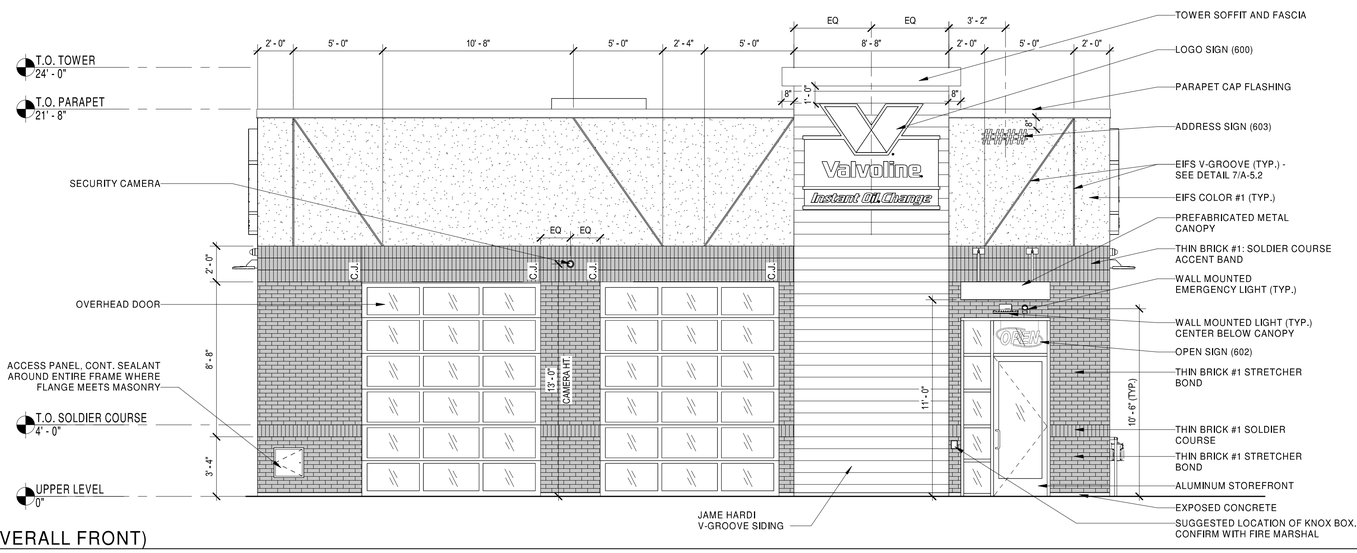
SHEET NAME
OPERATIONS EQUIPMENT PLAN AND SCHEDULE

SHEET #
G-3.1

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G-3.1 OPERATIONS EQUIPMENT PLAN AND SCHEDULE



2 A-3.1 EXTERIOR ELEVATION (OVERALL RIGHT)
Scale: 1/4" = 1'-0"



1 A-3.1 EXTERIOR ELEVATION (OVERALL FRONT)
Scale: 1/4" = 1'-0"

ELEVATION NOTES

1. EIFS SHALL BE DRYVIT, CLASS PB DRAINAGE SYSTEM WITH FLUID APPLIED WATER RESISTIVE BARRIER BEHIND INSULATION BOARD.
2. SIGNAGE SHOWN ON THESE ELEVATIONS IS FOR GENERAL REFERENCE PURPOSES ONLY. ALL SIGNAGE SHALL BE APPLIED FOR & PERMITTED UNDER A SEPARATE SIGNAGE SUBMITTAL.
3. G.C. SHALL PROVIDE BLOCKING IN STUD WALL BEHIND EACH SIGN AS REQUIRED BY SIGN VENDOR - FIELD VERIFY REQUIREMENTS W/ VENDOR & OWNER'S REPRESENTATIVE.
4. ALL FLASHING, SOFFIT, FASCIA, BREAK METAL, ETC SHALL MATCH MANUFACTURER'S STANDARD DETAILS.
5. ALL MASONRY WITH CORNER EXPOSURES TO HAVE SAME PROFILE AS FACE OF THE STANDARD MASONRY PRODUCT. NO CUT SURFACE ARE TO BE EXPOSED
6. ALL EXTERIOR SECURITY CAMERAS SHALL BE INSTALLED OVER ELECTRICAL BOXES RECESSED FLUSH WITH THE EXTERIOR WALL FINISH - REFER TO ELECTRICAL FOR ADDITIONAL INFORMATION.

EXTERIOR FINISHES

EXPOSED CONCRETE:	RUBBED FINISH
THIN BRICK SYSTEM:	MODULAR PANEL SYSTEM WITH INTEGRAL DRAINAGE THIN BRICK #1: GLEN GERY "EBONITE VELOUR THIN BRICK"
FIBER CEMENT SIDING (TOWER):	JAMES HARDI V-GROOVE SIDING 8.25" PAINTED SW-7018 "DOVETAIL"
MORTAR:	LEHIGH STANDARD KIT - "CHARCOAL"
MASONRY SEALER:	ALL MASONRY SURFACES SHALL BE TREATED W/ SEALER.
EXTERIOR INSULATED FINISH SYSTEM :	DRYVIT (SANDPEBBLE FINE) COLOR #1: #104 DOVER SKY
PREFABRICATED METAL CANOPY:	AWNEX INC. - "SEATTLE" DESIGN COLOR: "BLACK"
PARAPET CAP FLASHING:	ALUMINUM BREAK METAL PREFINISHED TO MATCH PAC-CLAD "BLACK"
TOWER SOFFIT AND FASCIA:	PAC-CLAD SNAP EDGE EXTENDED FASCIA (12-1/2") PREFINISHED TO MATCH PAC-CLAD "BLACK"
THRU-WALL SCUPPER:	ALUMINUM BREAK METAL PREFINISHED TO MATCH DIMENSIONAL METALS, INC. - "BLACK"
STOREFRONT SYSTEM:	2x4 1/2" KAWNEER TRIFAB VG 451T SERIES BLACK ANODIZED ALUMINUM STOREFRONT SYSTEM W/ 1" INSULATED GLAZING.
O.H. DOOR FINISH:	PREFINISHED TO MATCH PAC-CLAD "BLACK"
ACCESS PANEL:	PREFINISHED TO MATCH PAC-CLAD "BLACK"

SIGNAGE SCHEDULE

NUMBER	DESCRIPTION	SIZE	ILLUMINATED	QUANTITY
600	LOGO SIGN	7'-8" x 5'-11" (45 SF)	INTERNALLY	4
	PROVIDED BY OWNER, INSTALLED BY SIGN CONTRACTOR			
601	LANE INDICATOR SIGN	10'-0" x 1'-0" (10 SF)	NO	2
	PROVIDED BY OWNER, INSTALLED BY SIGN CONTRACTOR			
602	OPEN SIGN	2'-7 1/2" x 11 1/2" (2.52 SF)	INTERNALLY	2
	PROVIDED BY OWNER, INSTALLED BY SIGN CONTRACTOR			
603	ADDRESS SIGN	VERTICALLY BRUSHED STAINLESS STEEL ADDRESS NUMBERS - 10" TALL ARIAL BOLD FONT	NO	1
	PROVIDED AND INSTALLED BY G.C.			
605	MONUMENT SIGN	REFER TO SHEET A-11.1	INTERNALLY	1
	PER LOCAL AND DEVELOPMENTAL RESTRICTIONS			

ALL SIGNAGE ARE PERMITTED SEPARATELY BY VENDOR.

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Date	Issued Record
12/05/2025	OWNER REVIEW SET
12/22/2025	PERMIT

STATE OF MISSOURI
JAMI MARIE COOK
NUMBER A-2021048657
ARCHITECT
2025.12.22 08:59:50-06'00'
JAMI MARIE COOK, ARCHITECT
A-2021048657
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL IN CHARGE
JAMI MARIE COOK
PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME
VALVOLINE INSTANT OIL CHANGE
NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

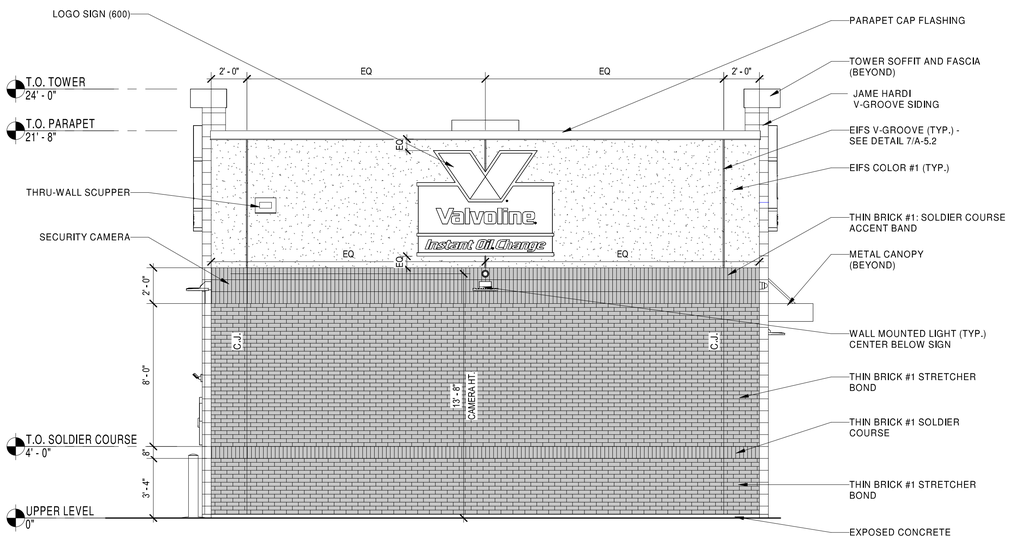
SHEET NAME
EXTERIOR ELEVATIONS

SHEET #
A-3.1

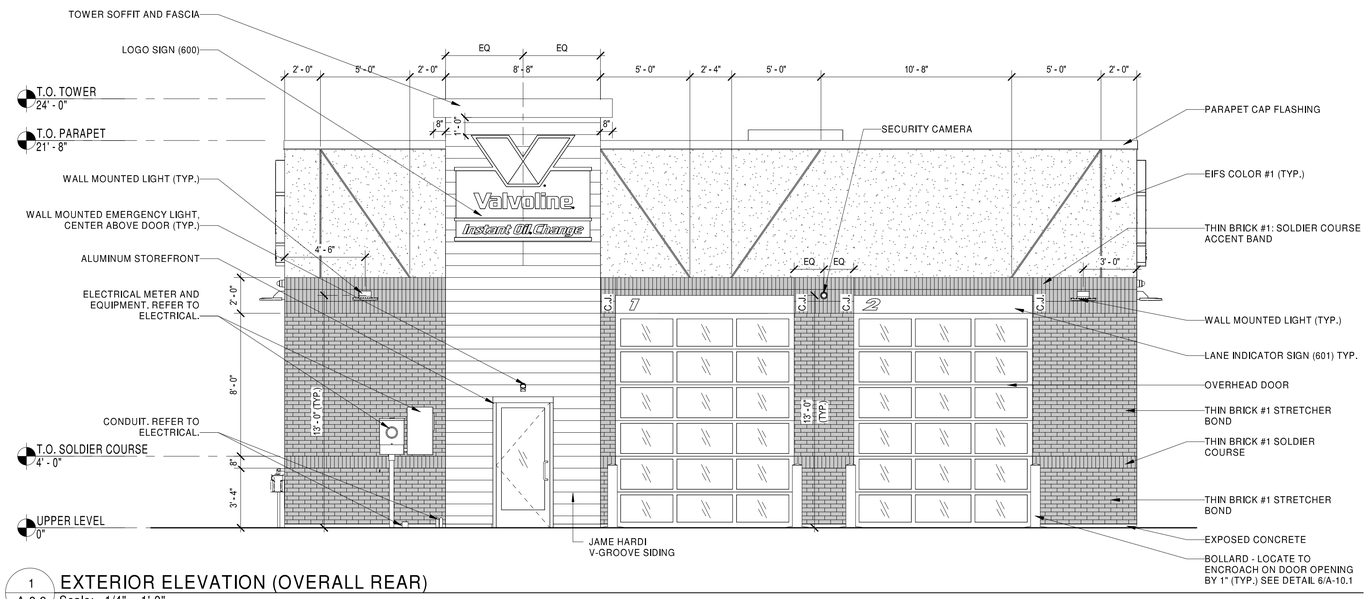
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A-3.1 - EXTERIOR ELEVATIONS
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ELEVATION NOTES

1. SEE SHEET A-3.1 FOR ELEVATION NOTES.
2. SEE SHEET A-3.1 FOR EXTERIOR FINISHES.
3. SEE SHEET A-3.1 FOR SIGNAGE SCHEDULE.



2 / A-3.2 EXTERIOR ELEVATION (OVERALL LEFT)
Scale: 1/4" = 1'-0"



1 / A-3.2 EXTERIOR ELEVATION (OVERALL REAR)
Scale: 1/4" = 1'-0"

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12/22/2025	PERMIT

STATE OF MISSOURI
JAMI MARIE COOK
NUMBER A-2021048657
ARCHITECT

2025.12.22 08:59:55-05'00'
JAMI MARIE COOK, ARCHITECT
A-2021048657
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL IN CHARGE
JAMI MARIE COOK
PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME

VALVOLINE INSTANT OIL CHANGE

NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

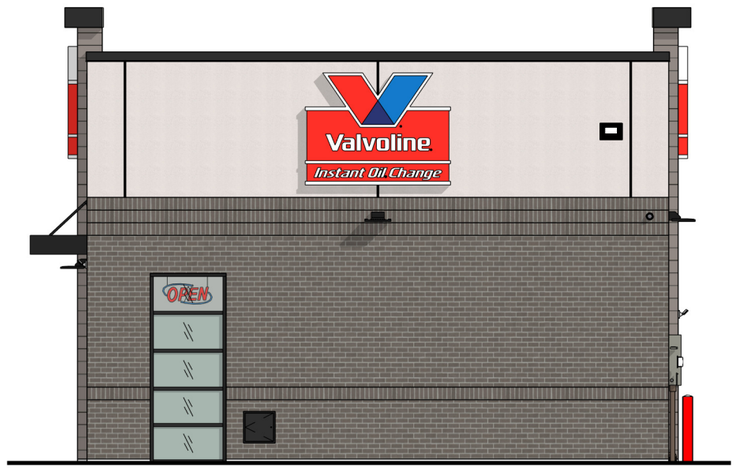
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EXTERIOR ELEVATIONS

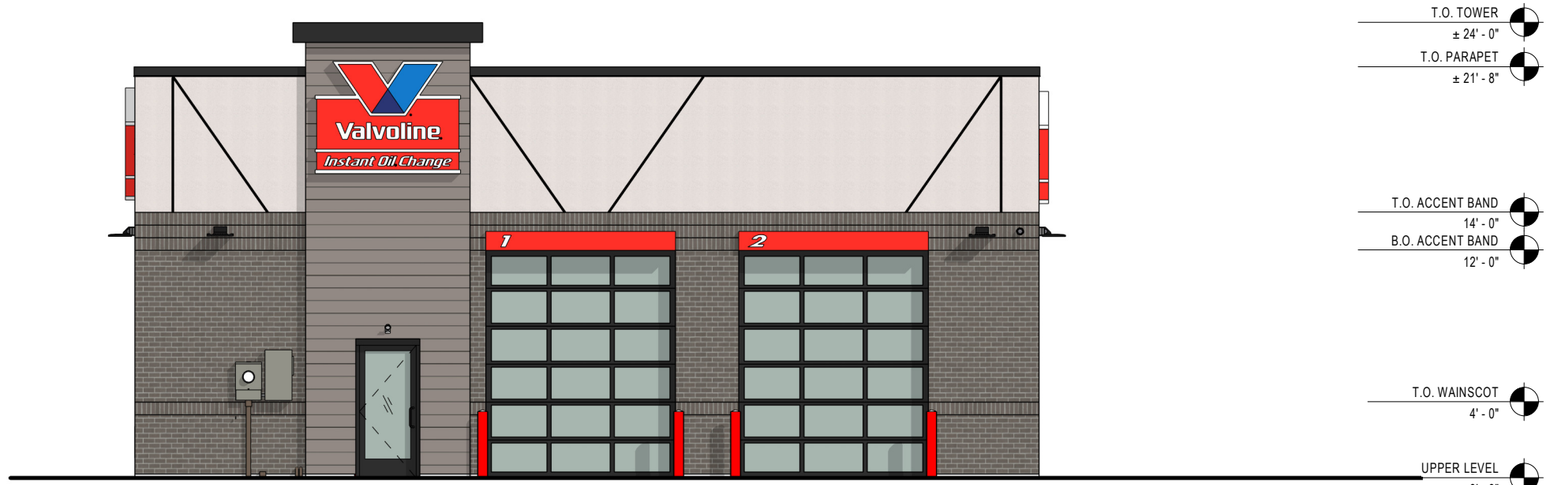
SHEET #

A-3.2

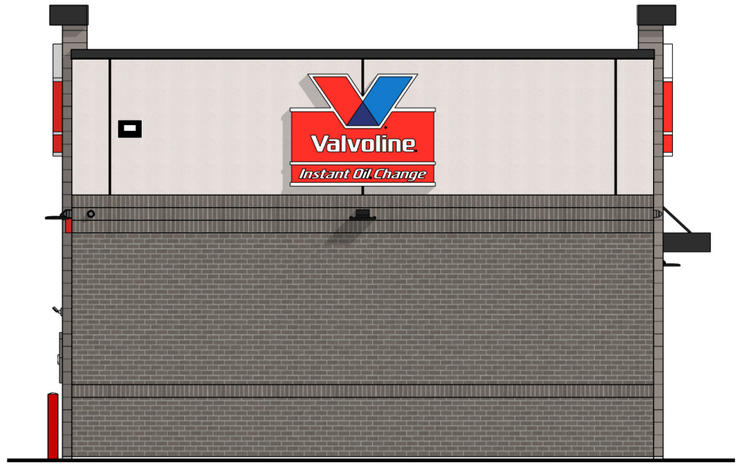
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A-3.2 EXTERIOR ELEVATIONS



2 EXTERIOR ELEVATION (RIGHT)
Scale: 1/8" = 1'-0"



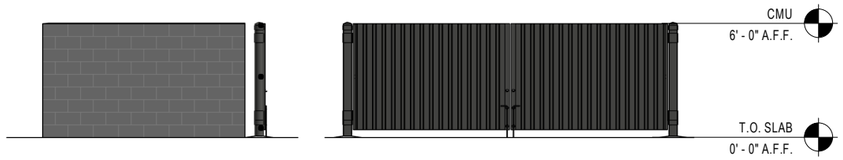
1 EXTERIOR ELEVATION (REAR)
Scale: 1/8" = 1'-0"



4 EXTERIOR ELEVATION (LEFT)
Scale: 1/8" = 1'-0"



3 EXTERIOR ELEVATION (FRONT)
Scale: 1/8" = 1'-0"



5 TRASH ENCLOSURE ELEVATIONS
Scale: 1/8" = 1'-0"

EXTERIOR FINISHES - BRICK / BRICK / CMU

EXTERIOR INSULATED FINISH SYSTEM:	DRYVIT (SANDPEBBLE FINE) COLOR #1: #104 DOVER SKY
THIN BRICK :	GLEN GERY "EBONITE VELOUR THIN BRICK"
FIBER CEMENT SIDING (TOWER):	JAMES HARDI V-GROOVE SIDING 8.25" PAINTED SW-7018 "DOVETAIL"
MORTAR:	LEHIGH STANDARD KIT - "CHARCOAL"
MASONRY SEALER:	ALL MASONRY SURFACES SHALL BE TREATED w/ SEALER.
PREFABRICATED METAL CANOPY:	AWNEX INC. "SEATTLE" DESIGN PREFINISHED TO MATCH PAC-CLAD "BLACK"
PARAPET CAP FLASHING:	ALUMINUM BREAK METAL PREFINISHED TO MATCH PAC-CLAD "BLACK"
TOWER SOFFIT AND FASCIA:	PAC-CLAD SNAP EDGE EXTENDED FASCIA (12-12") PREFINISHED TO MATCH PAC-CLAD "BLACK"
THRU-WALL SCUPPER:	ALUMINUM BREAK METAL - PREFINISHED TO MATCH DIMENSIONAL METALS, INC. - "BLACK"
STOREFRONT SYSTEM:	2x4 1/2" KAWNEER TRIFAB VG 451T SERIES BLACK ANODIZED ALUMINUM STOREFRONT SYSTEM W/ 1" INSULATED GLAZING.
TRASH ENCLOSURE:	SPLIT FACE CMU FIELD PAINTED SHERWIN-WILLIAMS SW-7050 "USEFUL GRAY". PROVIDE MOCK-UP AND VERIFY COLOR W/ OWNER.
GATE SYSTEM:	FIELD PAINTED SHERWIN-WILLIAMS SW-7069 "IRON ORE". PROVIDE MOCK-UP AND VERIFY COLOR W/ OWNER.
O.H. DOOR FINISH:	PREFINISHED TO MATCH PAC-CLAD "BLACK"
ACCESS PANEL:	PREFINISHED TO MATCH PAC-CLAD "BLACK"

DATE	ISSUE RECORD

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HFA-AE, L T D.

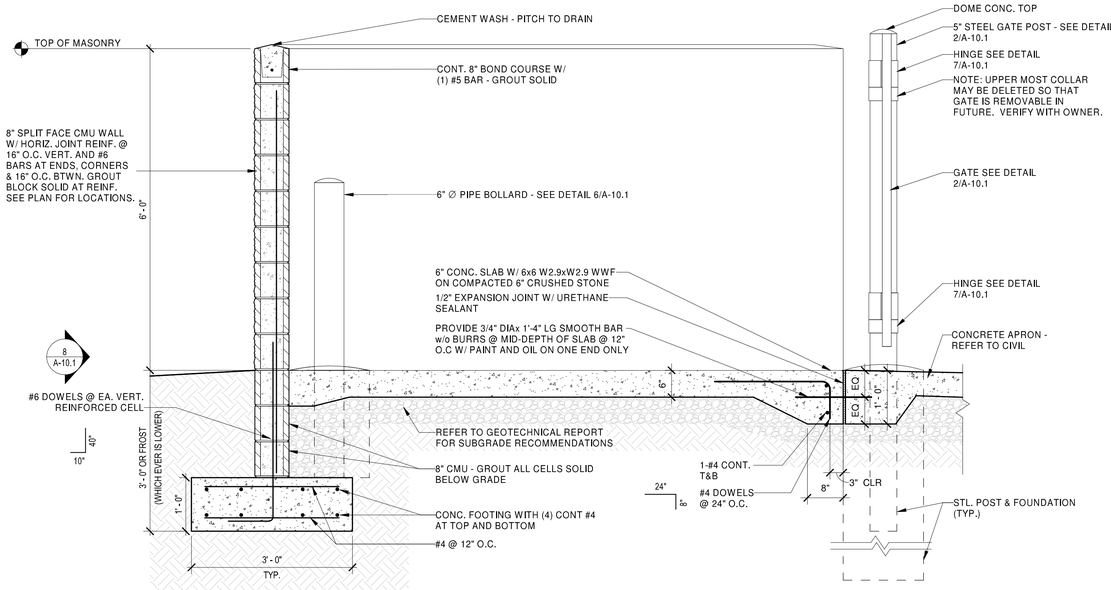
VALVOLINE INSTANT OIL CHANGE

LEE'S SUMMIT, MO.

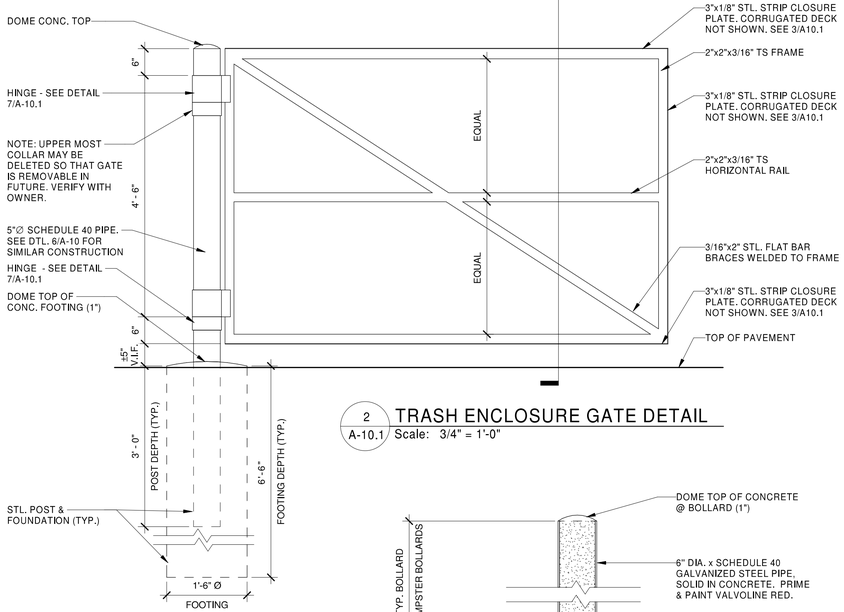
Valvoline
Instant Oil Change

Project No: 06-24-20062

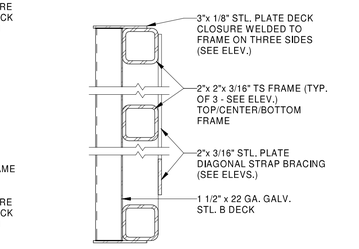
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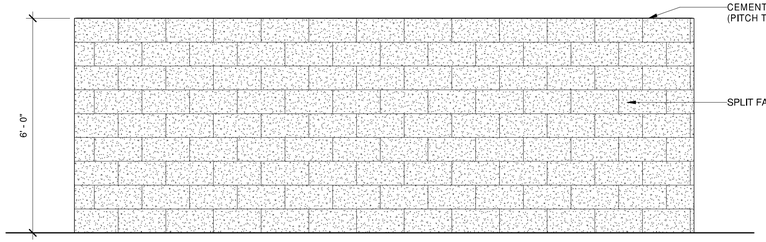
1 A-10.1 **SECTION @ TRASH ENCLOSURE**
Scale: 3/4" = 1'-0"



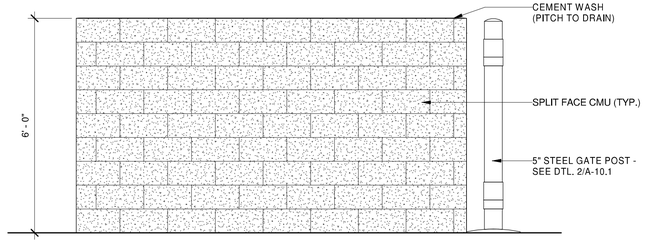
2 A-10.1 **TRASH ENCLOSURE GATE DETAIL**
Scale: 3/4" = 1'-0"



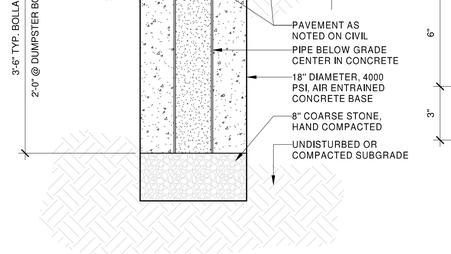
3 A-10.1 **GATE SECTION**
Scale: 3" = 1'-0"



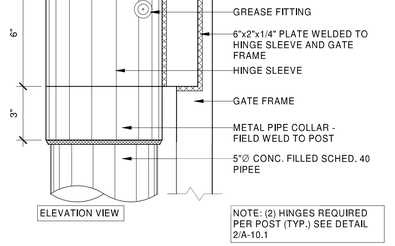
4 A-10.1 **DUMPSTER ENCLOSURE REAR ELEVATION**
Scale: 1/2" = 1'-0"



5 A-10.1 **TYP. DUMPSTER ENCLOSURE SIDE ELEVATION**
Scale: 1/2" = 1'-0"

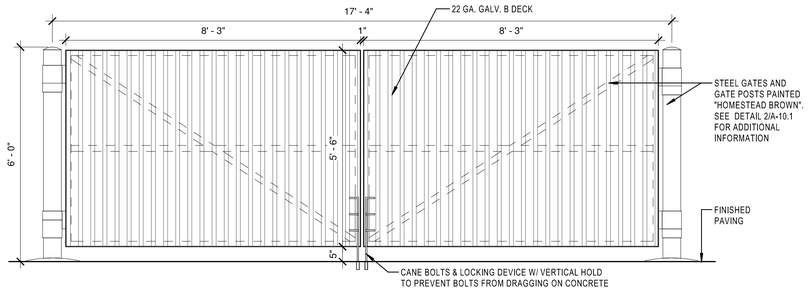


6 A-10.1 **BOLLARD DETAIL**
Scale: 1" = 1'-0"

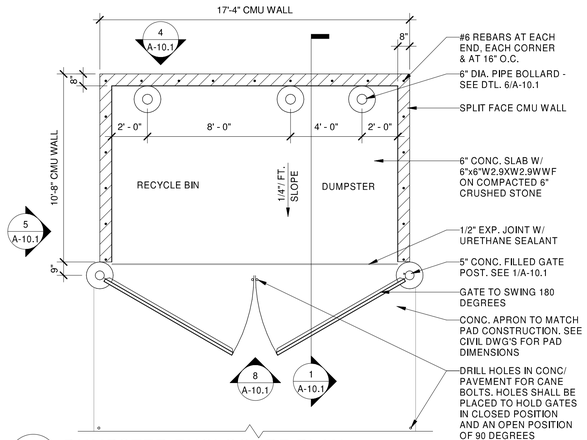


7 A-10.1 **HINGE DETAIL**
Scale: 3" = 1'-0"

NOTE:
GATES SHALL BE EQUIPPED WITH DROP (CANE) BOLTS. HEAVY DUTY HINGES AND LATCHES (WITH PADLOCK) DRILL HOLES 2" DEEP IN CONC. / PAVING TO ALLOW DROP BOLTS TO HOLD GATES IN CLOSED POSITION AND AT AN OPEN POSITION OF 90°. POSITION VERTICAL HOLD TO KEEP CANE BOLTS FROM DRAGGING CONC.



8 A-10.1 **DUMPSTER ENCLOSURE FRONT ELEVATION**
Scale: 1/2" = 1'-0"



9 A-10.1 **DUMPSTER ENCLOSURE PLAN**
Scale: 1/4" = 1'-0"

EXTERIOR FINISHES

SPLIT FACE CMU AND MORTAR:
FIELD PAINT: PR-1 FOLLOWED BY TWO COATS OF FINISH PAINT AS FOLLOWS:
- SHERWIN WILLIAMS SW-7050 (USEFUL GRAY)

BOLLARDS / GUARD POSTS:
FIELD PAINT: PR-2 FOLLOWED BY TWO COATS OF PT-4 (VALVOLINE RED)

GATES & GATE POSTS:
FIELD PAINT: PR-2 FOLLOWED BY TWO COATS OF SHERWIN WILLIAMS SW-7069 (IRON ORE)

GENERAL NOTES:
- ALL MASONRY SURFACES SHALL BE TREATED W/ SEALER. REFER TO SPECS.
- ALL EXTERIOR TRASH ENCLOSURE STEEL SHALL BE GALVANIZED PRIOR TO PAINTING.

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Bentonville, Arkansas 72712
www.hfa-ae.com

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12/22/2025	PERMIT

STATE OF MISSOURI
JAMI MARIE COOK
NUMBER A-2021048657
ARCHITECT
2025.12.22 09:00:50-06'00'
JAMI MARIE COOK, ARCHITECT
A-2021048657
HFA-AE, LTD
A-2005011993-F

PROFESSIONAL IN CHARGE
JAMI MARIE COOK
PROJECT MANAGER
DAH
QUALITY CONTROL
MND
DRAWN BY
DAH

PROJECT NAME

VALVOLINE INSTANT OIL CHANGE

NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
DUMPSTER ENCLOSURE

SHEET #
A-10.1

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A-10.1 - DUMPSTER ENCLOSURE

SPLIT SYSTEM SCHEDULE

NOTES:
1. CRANKCASE HEATER
2. CYCLE PROTECTOR
3. R-454B REFRIGERANT
4. RETURN AIR FILTERS
5. ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN DUCTS.
6. CONCENTRIC VENT KIT
7. 7-DAY PROGRAMMABLE THERMOSTAT
8. 5-YEAR COMPRESSOR WARRANTY
9. DRAIN PAN
10. 15 SEER

TAG	MANUFACTURER	MODEL	NOMINAL TONNAGE	SUPPLY AIR	OUTSIDE AIR	ESP	HP	ELECTRICAL				COOLING CAPACITY		HEATING CAPACITY		WEIGHT	NOTES
								VOLTAGE	MCA	MOCP	PHASE	TOTAL MBH	SENSIBLE MBH	INPUT MBH	OUTPUT MBH		
CU-1	CARRIER	26SCA536W003	3			--		208 V	17.6	30	1	33.69	23.06	--	--	177	1,2,3,8,10
F-1	CARRIER	59SC6A060M17**16	3	1000 CFM	100 CFM	0.50 in-wg	1/2	120 V	10.1	15	1	33.69	23.06	60	58	179	3,4,5,6,7,9,10

FAN SCHEDULE

NOTES:
1. BACKDRAFT DAMPER
2. FAN SPEED CONTROLLER
3. TIME DELAY SWITCH
4. TERMINATE WITH ROOF CAP
5. RC-75 SET (4) - ISOLATORS
6. ELECTRIC DISCONNECT
7. INLET & OUTLET FLEXIBLE CONNECTIONS
8. FLOOR SPRING ISOLATION
9. EPOXY POWDER WITH UV COATING
10. INSULATED ROOF CURB
11. ALUMINUM BIRD SCREEN
12. DAMPER TRAY

TAG	MANUFACTURER	MODEL	AREA SERVED	LOCATION	CFM	ESP	FAN TYPE	DRIVE TYPE	SONES	RPM	HP	ELECTRICAL		WEIGHT	NOTES
												VOLTAGE	PHASE		
EF-1	COOK	GEMINI GC-148	TOILET ROOM	CEILING MOUNTED	100	0.375 in-wg	CABINET	DIRECT	2.0	974	FRACT.	115 V	1	16 LBS	1,2,3,4
EF-2	COOK	120C17D (VF)	LOWER LEVEL	ROOF	1200	0.500 in-wg	DOWNBLAST CENT.	DIRECT	10.1	1407	1/2	115 V	1	37 LBS	1,2,6,9,10,11,12
EF-3	COOK	120C17D (VF)	PIT LEVEL	ROOF	800	0.500 in-wg	DOWNBLAST CENT.	DIRECT	6.7	1152	1/2	115 V	1	37 LBS	1,2,9,10,11,12
TF-1	COOK	120SQN17D(VF)	LOWER LEVEL	CEILING MOUNTED	1000	0.500 in-wg	INLINE CENT.	DIRECT	8.3	1339	1/2	115 V	1	78 LBS	1,2,5,6,7,8

FAN SCHEDULE (OPTIONAL ALTERNATE)

NOTES:
1. BACKDRAFT DAMPER
2. FAN SPEED CONTROLLER
3. TIME DELAY SWITCH
4. TERMINATE WITH ROOF CAP
5. RC-75 SET (4) ISOLATORS
6. ELECTRIC DISCONNECT
7. INLET & OUTLET FLEXIBLE CONNECTIONS
8. FLOOR SPRING ISOLATION
9. EPOXY POWDER WITH UV
10. INSULATED ROOF CURB
11. ALUMINUM BIRD SCREEN
12. DAMPER TRAY

TAG	MANUFACTURER	MODEL	AREA SERVED	LOCATION	CFM	ESP	FAN TYPE	DRIVE TYPE	SONES	RPM	HP	ELECTRICAL		WEIGHT	NOTES
												VOLTAGE	PHASE		
EF-1	GREENHECK	SP-B150	TOILET ROOM	CEILING MOUNTED	100	0.375 in-wg	CABINET	DIRECT	1.5	753	FRAC.	115	1	15 LBS	1,2,3,4,5
EF-2	GREENHECK	G-120-VG	LOWER LEVEL	ROOF MOUNTED	1200	0.500 in-wg	DOWNBLAST CENT.	DIRECT	10.3	1304	1/2	115	1	49 LBS	1,2,6,9,10,11,12
EF-3	GREENHECK	G-120-VG	UPPER LEVEL	ROOF MOUNTED	800	0.500 in-wg	DOWNBLAST CENT.	DIRECT	7.5	1101	1/2	115	1	49 LBS	1,2,6,9,10,11,12
TF-1	GREENHECK	SQ-120-VG	LOWER LEVEL	CEILING MOUNTED	1000	0.500 in-wg	INLINE CENT.	DIRECT	5.4	1267	1/2	115	1	60 LBS	1,2,5,6,7,8

GAS FIRED RADIANT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	AREA SERVED	MOUNTING	MBH INPUT	AIR SUPPLY SIZE	FLUE SIZE	ELECTRICAL		
								VOLTAGE	PHASE	FLA
RH-1	SPACE-RAY	LTU 75-30-N5 (30')	SERVICE BAY	CEILING HUNG	75	4"Ø	4"Ø	120 V	1	2.6
RH-2	SPACE-RAY	LTU 75-30-N5 (30')	SERVICE BAY	CEILING HUNG	75	4"Ø	4"Ø	120 V	1	2.6

AIR DEVICE SCHEDULE

TAG	MANUF.	MODEL	TYPE	MOUNTING	FACE SIZE	NECK SIZE	THROW
EG-1	TITUS	55FL	EXHAUST GRILLE	SURFACE	12"x20"	10"x18"	N/A
EG-2	TITUS	55FL	EXHAUST GRILLE	SURFACE	18"x18"	16"x16"	N/A
RG-1	TITUS	350RL	DUCT MOUNTED RETURN GRILLE	DUCT	14" X 14"	12" X 12"	N/A
RG-2	TITUS	PAR-AA	ARCHITECTURAL CEILING - RETURN	LAY-IN	12"x12"	6"x6"	N/A
RG-3	TITUS	23RL	RETURN GRILLE	SURFACE	20"x20"	18"x18"	N/A
RG-4	TITUS	PAR-AA	ARCHITECTURAL CEILING - RETURN	LAY-IN	24"x24"	10"x10"	N/A
SD-1	TITUS	OMNI-AA	ARCHITECTURAL CEILING DIFFUSER - SUPPLY	LAY-IN	24"x24"	10"ø	4-WAY
SD-2	TITUS	OMNI-AA	ARCHITECTURAL CEILING DIFFUSER - SUPPLY	LAY-IN	12"x12"	6"ø	4-WAY
SG-1	TITUS	300FL	DUCT MOUNTED SUPPLY GRILLE	DUCT	14" X 12"	12"x10"	ADJUSTABLE
SG-2	TITUS	272FL	SURFACE MOUNTED SUPPLY GRILLE	SURFACE	20"x16"	18"x14"	ADJUSTABLE

ELECTRIC DUCT HEATER SCHEDULE

NOTES:
1. THERMOSTAT
2. CONTROL OPTION G

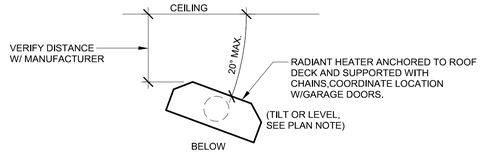
TAG	MANUFACTURER	MODEL	AREA SERVED	DUCT SIZE	ELECTRICAL				
					KW	VOLTAGE	PHASE	STAGES	NOTES
EDH-1	INDEECO	QUA	PIT	14x18	30	208 V	3	2	1 & 2

ELECTRIC CEILING HEATER SCHEDULE

NOTES:
1. REMOTE THERMOSTAT
2. ALUMINUM FRONT GRILLE
3. SURFACE MOUNTING BOX FOR ALUMINUM FRONT GRILLE
4. DISCONNECT
5. SURFACE MOUNTING SLEEVE FIF-FSM-N
6. 208/240V PRIMARY TRANSFORMER 24V SEC. TRANSFORMER RELAY FIR-FTR4-Z

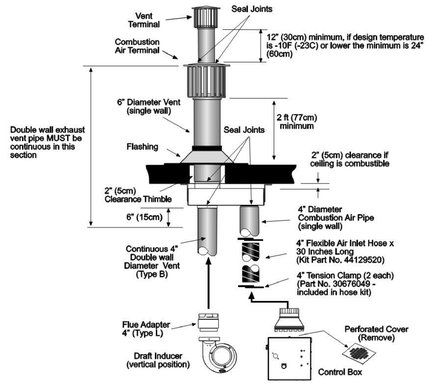
TAG	MANUFACTURER	MODEL	AREA SERVED	ELECTRICAL					
				KW	AMPS	VOLTAGE	PHASE	WEIGHT	NOTES
ECH-1	INDEECO	931IF-F4008-N	PIT LEVEL	4.0	19.2	208 V	1	23 LBS	ALL
ECH-2	INDEECO	931IF-F4008-N	PIT LEVEL	4.0	19.2	208 V	1	23 LBS	ALL

SEQUENCE OF OPERATION - HEATING
1. SERVICE BAY - RADIANT HEATERS SHALL BE CYCLED FROM THERMOSTATS AS SHOWN ON PLAN.
2. EXHAUST FAN (EF-2) AND TRANSFER FAN (TF-1) SHALL BE ENERGIZED WHENEVER THE LIGHTS IN THE BASEMENT ARE TURNED ON. INTERLOCK BY ELECTRICAL CONTRACTOR, SEE ELEC. SHEETS.

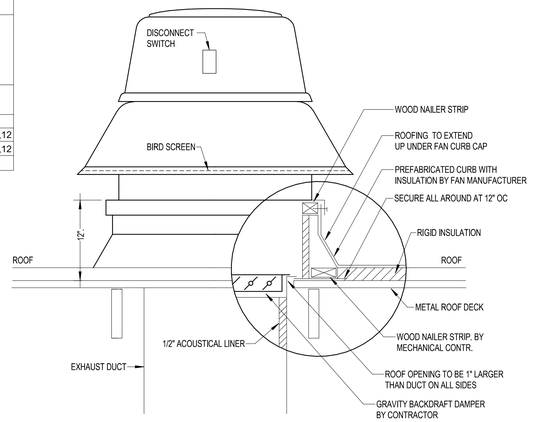


NOTE:
RH-1 SHALL BE MOUNTED TO TILT IN TOWARD THE SERVICE BAY. HEATERS SHALL BE MOUNTED IN ACCORDANCE TO MFG. INSTRUCTIONS.HEATERS SHALL BE CYCLED FROM THERMOSTAT AS SHOWN ON PLAN.

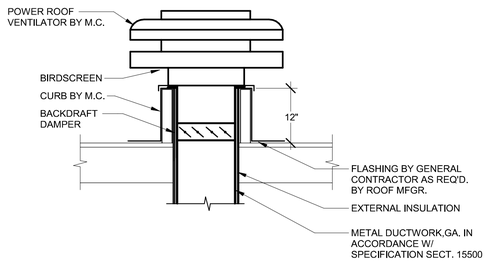
4 RADIANT HEATER DETAIL
M-2.1 Scale: NO SCALE



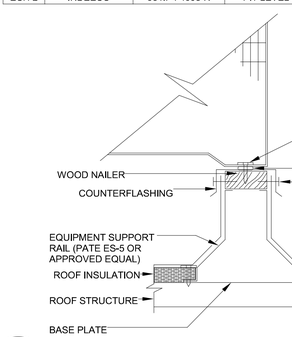
5 CONCENTRIC VENT THROUGH ROOF DETAIL
M-2.1 Scale: NO SCALE



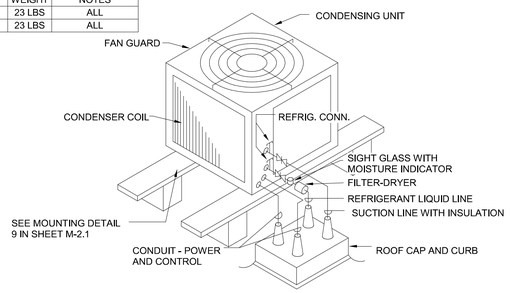
6 EXHAUST FAN DETAIL
M-2.1 Scale: NO SCALE



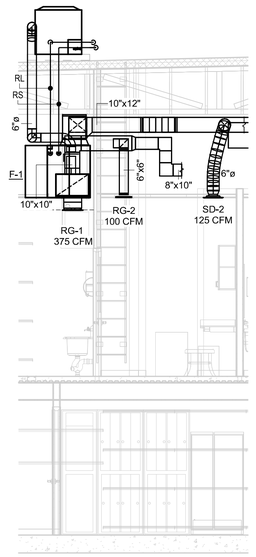
7 ROOF VENTILATOR DETAIL
M-2.1 Scale: NO SCALE



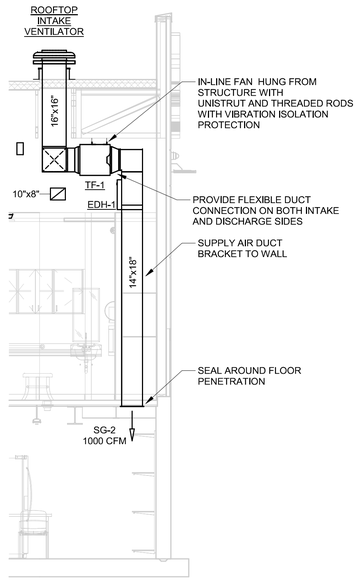
9 CONDENSING UNIT ROOF MOUNTING
M-2.1 Scale: 1/8" = 1'-0"



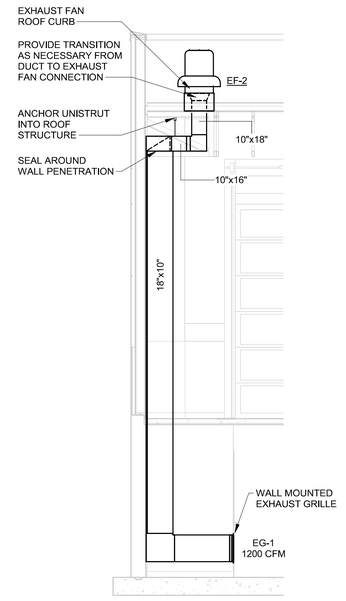
8 CONDENSING UNIT DETAIL
M-2.1 Scale: 3/16" = 1'-0"



1 MECHANICAL ELEVATION
M-2.1 Scale: 1/4" = 1'-0"



2 SECTION AT LOWER LEVEL TRANSFER FAN
M-2.1 Scale: 1/4" = 1'-0"



3 SECTION AT LOWER LEVEL EXHAUST FAN
M-2.1 Scale: 1/4" = 1'-0"

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Bentonville, Arkansas 72712
www.hfa-ae.com

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Date	Issued Record
12/05/2025	OWNER REVIEW SET
15/22/2025	PERMIT SET

STATE OF MISSOURI — JOHN KENNETH RALEY — NUMBER PE-2018039253 — PROFESSIONAL ENGINEER

2025.12.22 10:05:44-06'00'

JOHN KENNETH RALEY, P.E.
PE-2018039253
HFA-AE, LTD
E-2005011725-F

PROFESSIONAL IN CHARGE
JOHN KENNETH RALEY
PROJECT MANAGER
JPJ
QUALITY CONTROL
JPJ
DRAWN BY
AAMA

PROJECT NAME

Valvoline Instant Oil Change

VALVOLINE INSTANT OIL CHANGE

NW CHIPMAN RD & NW WARD RD
LEE'S SUMMIT, MO, 64086

PROJECT NUMBER
06-24-20062

SHEET NAME
MECHANICAL DETAILS

SHEET #
M-2.1

C:\Users\aline.mallorado\Documents\2024 Revit Projects\06-24-20062 - Lee Summit MO - 2B-Flat Roof Map_V24_HFA-Aline.Mallorado.rvt
12/16/2025 10:26:31 AM
M-2.1 MECHANICAL DETAILS