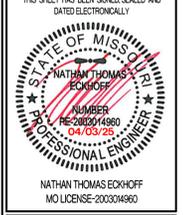


THE VILLAGE AT DISCOVERY LOTS 5-8

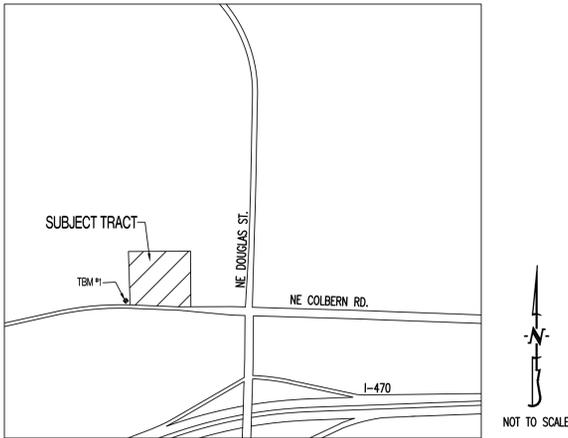
REVISIONS:

NO.	DATE
ORIGINAL	05/22/2024
REV. 1	07/23/2024

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY



LOCATION MAP



GENERAL NOTES:

ALL STREET, STORM DRAIN, AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT "DESIGN AND CONSTRUCTION MANUAL" (CURRENT EDITION).

ANY CITY DETAILS SHOWN ON THIS SET OF PLANS ARE FOR REFERENCE ONLY. CONTRACTOR TO HAVE A COPY OF THE CITY'S LATEST EDITION OF SPECIFICATIONS AND STANDARDS FOR ALL STREET, STORM, AND SANITARY CONSTRUCTION ON SITE AT ALL TIMES DURING CONSTRUCTION. REFER TO <https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure>

CONTRACTOR WILL BE RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THEIR PORTION OF WORK. THE DEVICES AND METHODS EMPLOYED WILL COMPLY WITH THE CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL CONCRETE MATERIALS SHALL CONFORM TO KCMMB STANDARDS AND SPECIFICATIONS.

THIS PLAT CONTAINS APPROXIMATELY 4.83 ACRES.

THIS TRACT IS ZONED PMIX.

THE STORM SEWER NETWORK DESIGN FOR THIS PROJECT IS BASED ON OPEN CHANNEL FLOW; THEREFORE THE HYDRAULIC GRADE LINE IS AT OR LESS THAN THE CROWN OF THE PIPE.

EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATES (HORIZONTAL AND VERTICAL) PRIOR TO ANY EXCAVATION.

ALL EXCAVATION TO BE IN ACCORDANCE WITH SECTIONS 319.010-319.050, REVISED STATUTES OF THE STATE OF MISSOURI. SUCH COMPLIANCE SHALL NOT, HOWEVER, EXCUSE ANY PERSON MAKING ANY EXCAVATION FROM DOING SO IN A CAREFUL AND PRUDENT MANNER, NOR SHALL IT EXCUSE SUCH PERSON FROM LIABILITY FOR ANY DAMAGE OR INJURY TO UNDERGROUND UTILITIES RESULTING FROM THE EXCAVATION.

A GEOTECHNICAL EVALUATION OF THE SUBSURFACE SOIL, GROUNDWATER CONDITIONS, AND A SLOPE STABILITY ANALYSIS HAS NOT BEEN PERFORMED BY THIS ENGINEER. THE OWNER SHALL SATISFY THEMSELVES OF ALL GEOTECHNICAL CONDITIONS PRIOR TO ANY CONSTRUCTION.

ALL LAND DISTURBANCE ACTIVITIES SHALL BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT CODE OF ORDINANCES. REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR NARRATIVE REPORT AND BMP DESCRIPTIONS AND DETAILS.

ALL SLOPES ARE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

IT IS THE INTENT OF THESE PLANS TO COMPLY WITH THE REQUIREMENTS OF THE MOENR CLEAN WATER COMMISSION.

ALL DISTURBED AREAS WITHIN THE "LIMITS OF DISTURBANCE" SHALL BE FINE GRADED, SEEDED, AND MULCHED.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES AND REMOVING THEM ONCE THE SITE IS STABILIZED.

ALL HDPE PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL FOR PIPE BEDDING REQUIREMENTS.

IN ORDER TO TERMINATE A STATE OPERATING PERMIT THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (MGNR) REQUIRES THAT THE PERMITTEE SUBMIT A COMPLETED FORM H (INCLUDED WITH THE APPROVAL PERMIT) TO THE MGNR. A PERMIT IS ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING PERMANENT MATERIALS COVER ALL AREAS THAT HAVE BEEN DISTURBED. VEGETATIVE COVER SHALL BE AT LEAST 70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA. A COPY OF FORM H SHOULD BE SUBMITTED TO THE CITY AT WHICH TIME THE CITY WILL REMOVE THE PROJECT FROM ITS INSPECTION SCHEDULE.

LAND DISTURBANCE SITES SHOULD BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 48 HOURS AFTER ANY STORM EVENT EQUAL TO OR GREATER THAN A 2-YEAR, 24-HOUR STORM HAS CEASED DURING A NORMAL WORK DAY OR WITHIN 72 HOURS IF THE RAIN EVENT CEASES DURING A NON-WORK DAY SUCH AS A WEEKEND OR HOLIDAY. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON A MONTHLY BASIS IF REQUESTED.

NO OIL AND GAS WELLS EXIST ON THIS TRACT ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS PERMIT DATABASE.

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.

TOTAL DISTURBED AREA ON SITE = 4.61 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NUMBER MORA23630.

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE	ORIGINAL 05/22/24	REVISION 1 07/23/24	REVISION 2 08/02/24	REVISION 3 09/03/24	REVISION 4 01/31/25	LOT 5 / ASI REVISION 5 02/28/25	REVISION 6 04/03/25
CE 1.0	COVER SHEET	X	X					
CE 1.1	CIVIL SPECIFICATIONS	X						
CE 2.1	EROSION CONTROL PLAN	X						
CE 3.0	OVERALL GRADING PLAN	X				X	X	
CE 3.1	GRADING PLAN SHEET 1	X						
CE 3.2	GRADING PLAN SHEET 2	X			X			
CE 3.3	GRADING PLAN SHEET 3	X	X				X	
CE 3.4	GRADING PLAN SHEET 4	X	X		X	X		
CE 3.5	GRADING PLAN SHEET 5	X	X				X	
CE 3.6	GRADING PLAN SHEET 6	X				X		
CE 4.1	UTILITY PLAN SHEET 1	X	X		X		X	X
CE 4.2	UTILITY PLAN SHEET 2	X	X		X	X	X	X
CE 5.1	SANITARY PLAN & PROFILE & SANITARY DETAILS	X						X
CE 6.1	STORM PROFILE - LINES 1-6	X	X	X			X	X
CE 6.2	STORM PROFILE - LINES 7-10 & STORM DETAILS	X	X				X	X
CE 6.3	STORM DETAILS	X	X					
CE 6.4	25-YR STORM CALCULATIONS	X	X					
CE 6.5	100-YR STORM CALCULATIONS	X	X					
CE 7.1	SITE PLAN SHEET 1	X	X		X			
CE 7.2	SITE PLAN SHEET 2	X	X		X	X		
CE 8.1	SITE DETAILS SHEET 1	X						
CE 8.2	SITE DETAILS SHEET 2	X	X		X			
CE 8.3	SITE DETAILS SHEET 3						X	
CE 8.4	LEE'S SUMMIT SITE DETAILS	X						
CE 8.5	LEE'S SUMMIT UTILITY DETAILS	X						
CE 9.1	LANDSCAPING PLAN	X	X					

PROJECT BENCHMARK:

TBM #1 - CONTROL POINT #50 SET BY OLSSON. 1/2" IMBEDDED CAP ON NORTH SIDE OF NW COLBERN RD. LOCATED AT 1ST FIELD ENTRANCE.

NORTHING = 1012389.819
EASTING = 2822108.784
ELEVATION = 990.810

REFER TO "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" PLANS BY OLSSON DATED 10/18/2023 FOR MORE INFORMATION.

FLOOD PLAIN STATEMENT:

THIS LOT IS LOCATED IN ZONE X UNSHADED - AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE FLOOD AS SHOWN ON THE FEMA F.I.R.M. PANEL #29095C04096, DATED JANUARY 20, 2017.

LEGAL DESCRIPTION:

VILLAGE AT DISCOVERY PARK, LOTS 5, 6, 7, & 8. A SUBDIVISION IN JACKSON COUNTY, LEE'S SUMMIT, MISSOURI.

UTILITY COMPANIES:

LOCATES:

MISSOURI ONE CALL INC.
1022 B NORTHEAST DRIVE
JEFFERSON CITY, MO 65109
1-800-344-7483



ELECTRIC:

ENERGY
816-524-3223

WATER/SANITARY SEWER:

CITY OF LEE'S SUMMIT
WATER UTILITIES DEPARTMENT
1200 S HAMBLEN RD
LEE'S SUMMIT, MO 64081
816-969-1900

FIBER:

GOOGLE FIBER
877-454-6959

TELEPHONE:

AT&T
800-286-8313

NATURAL GAS:

SPIRE
314-342-0500

CABLE TELEVISION:

SPECTRUM
877-772-2253

DEVELOPER:

DISCOVERY PARK LEE'S SUMMIT, LLC.
4220 PHILLIPS FARM RD.
COLUMBIA, MO 65201
573-615-2252

LEGEND OF SYMBOLS:

----	EXISTING CURB	FF-XXXX	FINISHED FLOOR OF STRUCTUREXXX	EXISTING MINOR CONTOUR
---	PROPOSED CURB	XXXXXX TC	PROPOSED TOP OF CURB ELEVATION	---XXX---	EXISTING MAJOR CONTOUR
XXXXXX	RIP RAP	XXXXXX TP	PROPOSED TOP OF PAVEMENT ELEVATION	---XXX---	PROPOSED MINOR CONTOUR
□	EXISTING STRUCTURE	XXXXXX FG	PROPOSED FINISHED GRADE ELEVATION	---XXX---	PROPOSED MAJOR CONTOUR
~~~~~	EXISTING TREELINE	XXXXXX TW	PROPOSED TOP OF WALL	TTTTTTT	100 YEAR FLOOD PLAN
~~~~~	PROPOSED TREELINE	XX	LOT NUMBER	TTTTTTTTT	FLOODWAY
○-○-○	EDGE OF WATERWAY	⊗	STORM SEWER STRUCTURE LABEL	---	ORDINARY HIGH WATER MARK
---W---	EXISTING WATERLINE	⊗	SANITARY SEWER STRUCTURE LABEL	---	STREAM SIDE BUFFER
---W---	PROPOSED WATERLINE	HP.	HIGH POINT	---	OUTER STREAM BUFFER
---G---	EXISTING GAS LINE	LP.	LOW POINT	█	PROPOSED CONCRETE PAVEMENT
---G---	PROPOSED GAS LINE	∞	EXISTING SIGNS	█	PROPOSED CONCRETE PAVEMENT IN PARKING GARAGE
---T---	EXISTING TELEPHONE	⊗	EXISTING POWER POLE	█	PROPOSED BUILDING FOOTPRINT
---FO---	EXISTING FIBER OPTIC	⊗	EXISTING GAS VALVE	█	PROPOSED HEAVY DUTY PAVEMENT
---OE---	EXISTING OVERHEAD ELECTRIC	⊗	EXISTING WATER VALVE	▨	PIPE EMBEDMENT UNDER PAVEMENT
---UE---	EXISTING UNDERGROUND ELECTRIC	⊗	EXISTING GAS METER	□	EXISTING TELEPHONE PEDESTAL
---UE---	PROPOSED UNDERGROUND ELECTRIC	⊗	EXISTING WATER METER	□	EXISTING ELECTRICAL TRANSFORMER
---OETV---	EXISTING OVERHEAD ELEC. & TV	⊗	EXISTING FIRE HYDRANT	⊗	EXISTING LIGHT POLE
---S---	EXISTING SANITARY SEWER	⊗	MANHOLE	→	EXISTING GUY WIRE
---S---	PROPOSED SANITARY SEWER	⊗	PROPOSED TRACER WIRE TEST STATION BOX		
---S---	EXISTING SANITARY SEWER LATERAL	⊗	EXISTING AIR CONDITIONER		
---S---	PROPOSED SANITARY SEWER LATERAL	⊗			

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1008 W. WILSON BLVD.
COLUMBIA, MISSOURI 65205
(314) 487-0291
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#00000001

OWNER:
DISCOVERY PARK LEE'S SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

COVER SHEET

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 10

SITE CLEARING & DEMOLITION :

IT IS THE INTENT THAT THE DEMOLITION BE COMPLETE AND ADEQUATE FOR THE INTENDED PURPOSE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL ITEMS, WHETHER IN VIEW OR HIDDEN UNDERNEATH THE SURFACE OF THE GROUND, REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR ENCOUNTERED DURING CONSTRUCTION.

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF EXCESS WASTE MATERIALS.

ERECT BARRIERS TO PROTECT PERSONNEL, STRUCTURES AND UTILITIES REMAINING INTACT.

PROTECT ALL EXISTING OBJECTS INTENDED TO REMAIN. IN CASE OF DAMAGE, MAKE REPAIRS OR REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

MINIMIZE INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, SIDEWALKS, AND ADJACENT FACILITIES.

DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.

IF CLOSURE IS PERMITTED, PROVIDE SIGNAGE INDICATING CLOSURE AND SIGNAGE TO DIRECT TRAFFIC TO ALTERNATE ROUTE.

MOISTEN SURFACES AS REQUIRED TO PREVENT DUST FROM BEING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON THE SITE.

PROVIDE THE OWNER'S REPRESENTATIVE A MINIMUM OF TWO BUSINESS DAYS' NOTICE PRIOR TO COMMENCING WORK OF THIS SECTION.

THE CONTRACTOR SHALL LOCATE EXISTING UTILITY LINES AND SERVICES TRaversING THE SITE AND DETERMINE THE REQUIREMENTS FOR THEIR PROTECTION. THE CONTRACTOR SHALL PRESERVE ACTIVE UTILITIES ON THE SITE THAT ARE DESIGNATED TO REMAIN.

BEFORE STARTING SITE OPERATIONS, THE CONTRACTOR SHALL DISCONNECT OR ARRANGE FOR THE DISCONNECTION OF ALL UTILITY SERVICES DESIGNATED TO BE REMOVED. THE CONTRACTOR SHALL PERFORM ALL SUCH WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY OR AGENCY INVOLVED.

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWN TO A MINIMUM DEPTH OF 2" WITH A TRUE SHAW LINE AND A VERTICAL FACE. REMOVE SUFFICIENT PAVEMENT TO PROVIDE FOR PROPER GRADE AND CONNECTIONS IN THE NEW WORK REGARDLESS OF ANY LIMITS INDICATED ON THE DRAWINGS.

EXISTING CASTINGS AND CULVERTS, IF SALVAGEABLE AND REMOVED INTACT, REMAIN THE PROPERTY OF THE CONTRACTOR.

ALL SEWERS AND DRAINAGE PIPES, WHICH HAVE BEEN OR ARE TO BE ABANDONED, SHALL BE PERMANENTLY SEALED AT THE ENDS WITH BULKHEADS CONSTRUCTED OF CONCRETE, HAVING A MINIMUM THICKNESS OF 8".

ABANDON STORM OR SANITARY SEWER STRUCTURES BY BREAKING THE CONCRETE BOTTOM OF THE STRUCTURE INTO PIECES NO LARGER THAN 12" IN ANY DIRECTION AND REMOVING THE TOP OF THE STRUCTURE TO 3' BELOW FINISHED GRADE. PLUG ALL PIPES WITH CONCRETE AND FILL STRUCTURE WITH 1" CLEAN GRAVEL.

ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE.

DO NOT STORE OR BURN MATERIALS ON-SITE UNLESS PERMITTED BY THE GOVERNING JURISDICTION.

ALL ASPHALT OR CONCRETE MATERIALS SHALL BE DISPOSED OF OFF-SITE.

MATERIAL ACQUIRED THROUGH DEMOLITION, OTHER THAN THOSE REQUIRED TO COMPLETE THE CONSTRUCTION PROJECT AND DESIGNATED FOR RETURN TO OWNER, WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE. THE MATERIAL WILL BE DISPOSED OF IN A LEGAL MANNER.

THE CONTRACTOR'S OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS INSIDE THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS. IF LIMITS ARE NOT INDICATED, RESTRICT WORK TO THE OWNER'S PROPERTY, EASEMENT, OR PUBLIC RIGHTS-OF-WAY.

COMPLETE WORK WITHIN PUBLIC RIGHTS-OF-WAY UNDER THE PERMISSION OF THE GOVERNING AGENCY.

IF ITEMS OUTSIDE THE LIMITS OF DISTURBANCE GET DAMAGED, OWNER COMPLETES THE REQUIRED REPAIRS AND CHARGES THE CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL MANHOLES, CASTINGS, WATER VALVES IRRIGATION BOXES, CLEAN OUTS AND ETC. WITHIN THE GRADING LIMITS TO MATCH THE FINISHED SURFACE. ADJUSTMENTS SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO CONSTRUCTION UNLESS NOTED AS A BID ITEM. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITY STRUCTURES AND APPURTENANCES THAT OCCURS DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

EARTHMOVING:

CONTRACTOR TO SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

TEST REPORTS: SUBMIT FOR APPROVAL TEST REPORTS, LIST OF MATERIALS AND GRADATIONS PROPOSED FOR USE. OBTAIN SAMPLES OF ANY PROPOSED FILL MATERIAL AND CONTRACTOR TO PROVIDE STANDARD PROCTOR TEST REPORTS TO ENGINEER.

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

1. UNDER STEPS, PAVEMENTS, AND WALKWAYS: 95 PERCENT STANDARD PROCTOR MINIMUM DENSITY, ASTM D 698.
2. UNDER LAWNS OR UNPAVED AREAS, 85 PERCENT, ASTM D 698.

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:

1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. PAVEMENTS, PLUS OR MINUS 1/2 INCH.
3. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

ALL ACTIVITIES WILL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES INDICATED ON SITE PLAN. SPECIFIED EXCAVATION REQUIREMENTS, PRECAUTIONS, AND PROTECTIVE SYSTEMS WILL BE OBSERVED AT ALL TIMES.

MOVEMENT OF TRUCKS AND EQUIPMENT ON OWNER'S PROPERTY WILL BE IN ACCORDANCE WITH OWNER'S INSTRUCTIONS.

TOPSOIL WILL BE STRIPPED FROM THE CONSTRUCTION SITE AND WILL BE DISPOSED OF LEGALLY OFF SITE.

TRENCHES WILL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE COMPLETED AND THE UTILITY SYSTEMS, AS INSTALLED, CONFORM TO REQUIREMENTS SPECIFIED BY THE CONTRACT DOCUMENTS.

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS:

1. AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.
 2. ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED.
- MAINTAIN STABILITY OF EXCAVATIONS. CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. REMOVE SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE AND DO NOT STOCKPILE MATERIALS WITHIN DRIP LINE OF TREES TO REMAIN.

COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698 BY AERATION OR WETTING TO THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY:

1. STRUCTURE, PAVEMENT, WALKWAYS: SUBGRADE AND EACH FILL LAYER TO 95% (-2%+4%) OF STANDARD PROCTOR MAXIMUM DRY DENSITY TO SUITABLE DEPTH. COMPACTION TESTING SHALL BE PERFORMED IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL AND NEW PAVING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TESTING WITH OWNERS DESIGNATED TESTING AGENCY.
2. UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY.
3. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
4. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:

1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
3. LANDSCAPE AREA FILL:
 - 3.1. ALL SUB-GRADE AREAS SHALL BE "TRIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.
 - 3.2. CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS.
 - 3.3. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE CHEMISVE SOILS IN SOIL CLASSIFICATIONS GROUPS ML, CL, CH OR A COMBINATION THEREOF, FREE OF ROCK OR GRAVEL LARGER THAN 1" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIAL, VEGETATION AND OTHER DELETERIOUS MATTER.
4. SUB-BASE MATERIAL: USE UNDER PAVEMENT, WALKS, STEPS, PIPING AND CONDUIT.

GRADE TO WITHIN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND WITHIN A TOLERANCE OF 1/2" IN 10'.

PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RECOMPACT AND REGRADE SETTLED, DISTURBED AND DAMAGED AREAS AS NECESSARY TO RESTORE QUALITY, APPEARANCE, AND CONDITION OF WORK.

CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO SLOPED OR SURFACED AREAS.

CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOILED SURFACES.

DISPOSAL OF EXCAVATION WASTE AND UNSUITABLE MATERIALS SHALL BE THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR. NO SPECIFIC OR PRE-APPROVED LOCATION IS BEING PROVIDED BY THE OWNER.

CONCRETE :

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:
 - FOUNDATIONS - 3,000 PSI
 - CAST-IN-PLACE WALLS - 3,500 PSI
 - FLOOR SLAB - 4,000 PSI
 - EXTERIOR SLABS, WALLS AND CURBS - 4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4 +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
 - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE, ON THE DRAWINGS:
 - CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
 - EXPOSED TO EARTH OR WEATHER.....2 INCHES
 - NOT EXPOSED TO WEATHER OR1 1/2 INCHES
 - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
 - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.
12. FLINT AND CHERY WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE. IN ALL EXPOSED CONCRETE (CAST-IN-PLACE OR PRECAST), LIGHTS WILL BE LIMITED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGHTS FREE.

CONCRETE PAVING JOINT SEALANTS:

DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS OR BUNDLES WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION DATE, POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

STORE AND HANDLE MATERIALS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, HIGH OR LOW TEMPERATURES, CONTAMINANTS, OR OTHER CAUSES.

DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:

1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.
2. WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.
3. WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

PROVIDE JOINT SEALANTS, BACKING MATERIALS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE, SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 893 FOR TYPE NS. PRODUCTS ALLOWED ARE: CRAFPO INC.; ROADSAVER SILICONE ; DOW CORNING CORPORATION; 888; PECORA NS 301, OR APPROVED EQUAL.

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTANNING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS; AND ARE APPROVED FOR APPLICATIONS INDICATED BY JOINT-SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. ROUND BACKER RODS FOR COLD-APPLIED SEALANTS: ASTM D 5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL SEALANT DEPTH AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT.

PRIOR TO JOINT INSTALLATION, CONTRACTOR IS TO EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT- SEALANT PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS.

COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.

COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

INSTALL BACKER MATERIALS OF TYPE INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY. DO NOT LEAVE GAPS BETWEEN ENDS OF BACKER MATERIALS. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR BACKER MATERIALS. REMOVE ABSORBENT BACKER MATERIALS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.

INSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKING ARE INSTALLED:

1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2. COMPLETELY FILL RECESSES PROVIDED FOR EACH JOINT CONFIGURATION.
3. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT. REMOVE EXCESS SEALANTS FROM SURFACES ADJACENT TO JOINT USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY JOINT-SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.

PROVIDE JOINT CONFIGURATION TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

PROVIDE RECESSED JOINT CONFIGURATION FOR SILICONE SEALANTS OF RECESS DEPTH AND AT LOCATIONS INDICATED.

CLEAN OFF EXCESS SEALANTS OR SEALANT SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF JOINT SEALANTS AND OF PRODUCTS IN WHICH JOINTS OCCUR.

PROTECT JOINT SEALANTS DURING AND AFTER CURING PERIOD FROM CONTACT WITH CONTAMINATING SUBSTANCES AND FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS OR OTHER CAUSES SO SEALANTS ARE WITHOUT DETERIORATION OR DAMAGE AT TIME OF SUBSTANTIAL COMPLETION. IF, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED JOINT SEALANTS IMMEDIATELY AND REPLACE WITH JOINT SEALANT SO INSTALLATIONS WITH REPAIRED AREAS ARE INDISTINGUISHABLE FROM THE ORIGINAL WORK.

PAVEMENT MARKING :

UNLESS NOTED OTHERWISE ON THE PLANS, PAINT SHALL BE WATERBORNE OR SOLVENT BORNE, COLORS AS SHOWN OR SPECIFIED HEREIN. WATERBORNE PAINT: PAINTS SHALL CONFORM TO FS IT-P-1952. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FS A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING AND ALKYL PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION FOR COLORS WHITE, YELLOW, BLUE, AND RED. RETROREFLECTIVE PAINT SHALL BE TYPE I GLASS BEADS PER SECTION 620 OF THE CURRENT MOST STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

PAINT SHALL BE APPLIED PER THE FOLLOWING COLOR CODE: WHITE FOR STANDARD PARKING SPACE LINES AND SIDEWALK CROSSINGS. BLUE FOR ACCESSIBLE PARKING STALL AND SYMBOLS AND ASSOCIATED CROSS-HATCHED AREAS

MATERIALS SHALL INCLUDE STANDARD COMMERCIAL GRADE MASKING MATERIALS, SCRAPERS, CLEANING SOLVENTS, AND OTHER MATERIALS REQUIRED FOR THE WORK. USE MATERIALS SPECIFIED BY MANUFACTURER'S DIRECTION LABEL ON CONTAINER.

DELIVER MATERIALS TO THE SITE IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT. PROTECT ALL PAINT FROM FREEZING. DO NOT ALLOW PAINT TO SETTLE, CAKE, OR THICKEN IN THE CONTAINER. READY STIR WITH A PADDLE TO A SMOOTH CONSISTENCY. PAINT SHALL ARRIVE ON THE JOB COLOR-MIXED EXCEPT FOR TINTING OF UNDERCOATS AND POSSIBLE THINNING.

PRIOR TO BEGINNING CLEANING OR PAINTING OPERATIONS, CONTRACTOR SHALL PROTECT ALL ITEMS OR SURFACES NOT INCLUDED IN AREA TO BE PAINTED. PROTECT VEHICLES, EQUIPMENT, STRUCTURES, OR OTHER ITEMS FROM PAINT SPATTERS, OVER SPRAY, OR DAMAGE.

CONTRACTOR SHALL PROVIDE BARRICADES AND ANY SIGNAGE NEEDED TO PROTECT ALL PAINTED AREAS FROM PEDESTRIAN AND VEHICULAR TRAFFIC UNTIL ACHIEVING SUFFICIENT DRYING TIME.

PERFORM PAINTING AS SOON AS FEASIBLE AND PRACTICAL AFTER THE FINISHING OF THE PAVEMENT OR AS DIRECTED BY THE OWNERS REPRESENTATIVE. ADEQUATE LIGHTING SHALL BE AVAILABLE AT THE TIME OF PAINTING. EXAMINE ALL SURFACES TO RECEIVE PAINT TO MAKE SURE THERE ARE NO DEFECTS IN THE SURFACE TO BE STRIPED. DO NOT PAINT OVER RUST, SCALE, GREASE, OIL, FUEL, DUST, WET PAVEMENT, OR OTHER CONDITIONS DETRIMENTAL TO PAINT ADHESION. REMOVE GREASE, OIL, OR FUEL ON ANY SURFACE BEFORE PAINTING. CORRECT ALL SURFACE DEFECTS BEFORE PAINTING. CONTRACTOR SHALL EXAMINE AREAS TO BE PAINTED. NOTIFY THE OWNERS REPRESENTATIVE IN WRITING OF CONDITIONS THAT MIGHT DELAY TIMELY COMPLETION OF THE WORK.

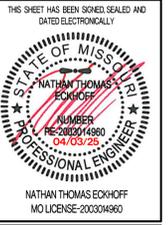
PAINTING SHALL NOT BE PERFORMED WHEN THE AMBIENT TEMPERATURE IS LESS THAN 55 DEGREES FAHRENHEIT AND NOT EXCEEDING 95 DEGREES FAHRENHEIT, OR WHILE THE SURFACE IS DAMP. THE SURFACE MUST BE FIVE DEGREES OR MORE ABOVE THE DEW POINT TEMPERATURE DURING PAINTING OPERATIONS AND WHILE PAINT IS DRYING.

AREAS TO BE PAINTED SHALL RECEIVE ONE COAT OF PAINT NOT LESS THAN 25 MILS THICKNESS WET PER MOOET 620.9 THROUGH 620.9.3.4.2. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE APPLYING THE NEXT COAT. FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING. PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAINT. OWNERS REPRESENTATIVE SHALL APPROVE APPLICATION TECHNIQUES.

REMOVE PAINT SPATTER FROM ADJACENT AREAS OR AREAS NOT DESIGNATED TO RECEIVE PAINT. CONTRACTOR SHALL REPAIR OR TOUCH UP ANY SURFACES IF EXPOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER. WHEN COLOR, DIRT, STAINS, EXISTING PAINT, ETC., SHOW THROUGH THE FINAL COAT, REPAINT THE SURFACE UNTIL THE FILM IS UNIFORM IN FINISH, COVERAGE, COLOR, AND APPEARANCE.

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024



OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

CIVIL SPECIFICATIONS

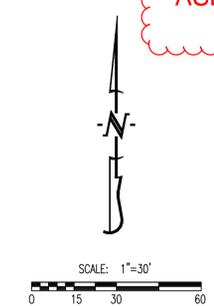
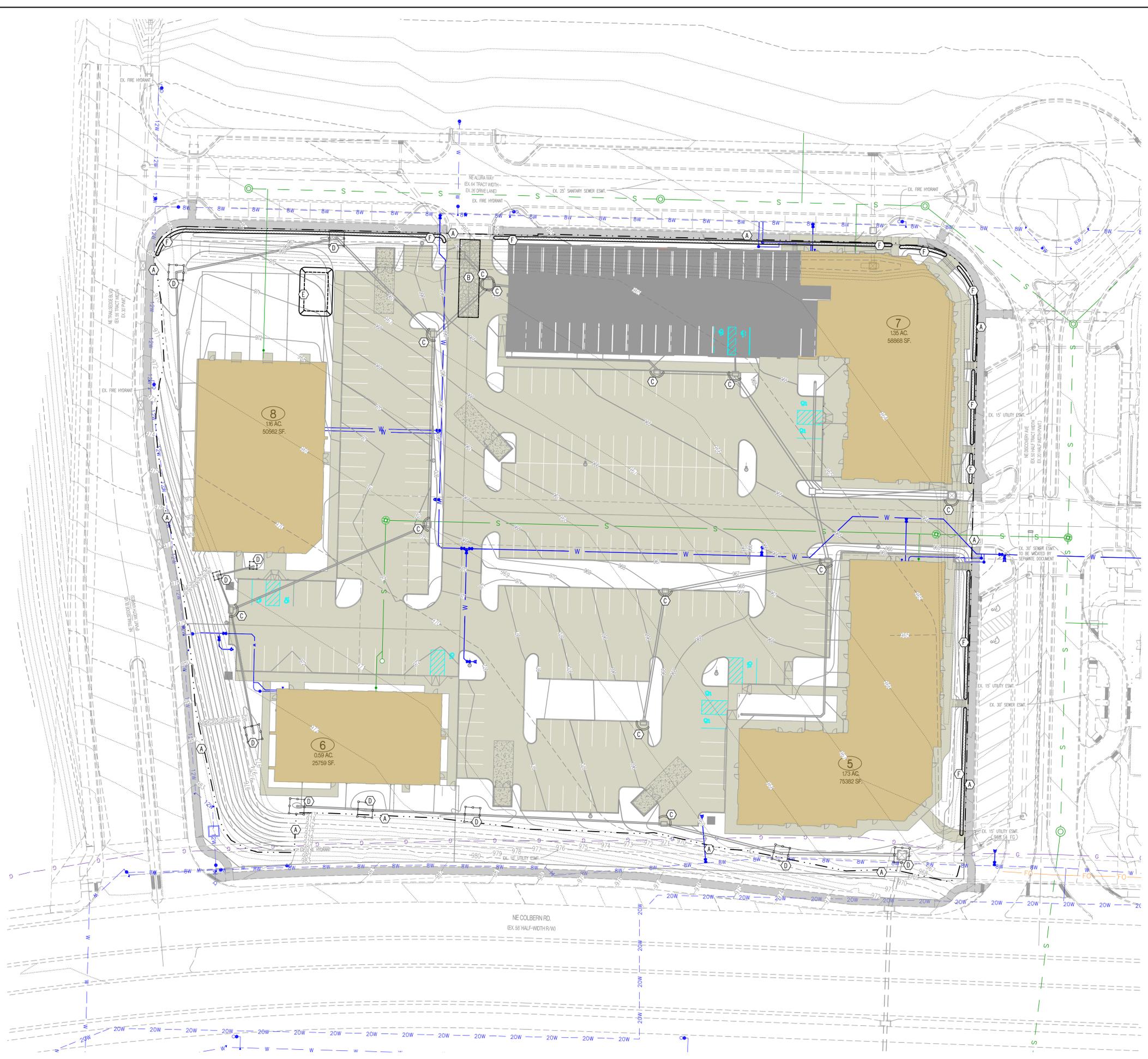
DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

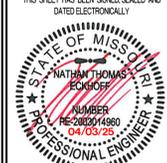
SHEET:
CE 11

ASBUILTS 1-14-26



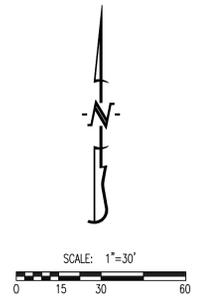
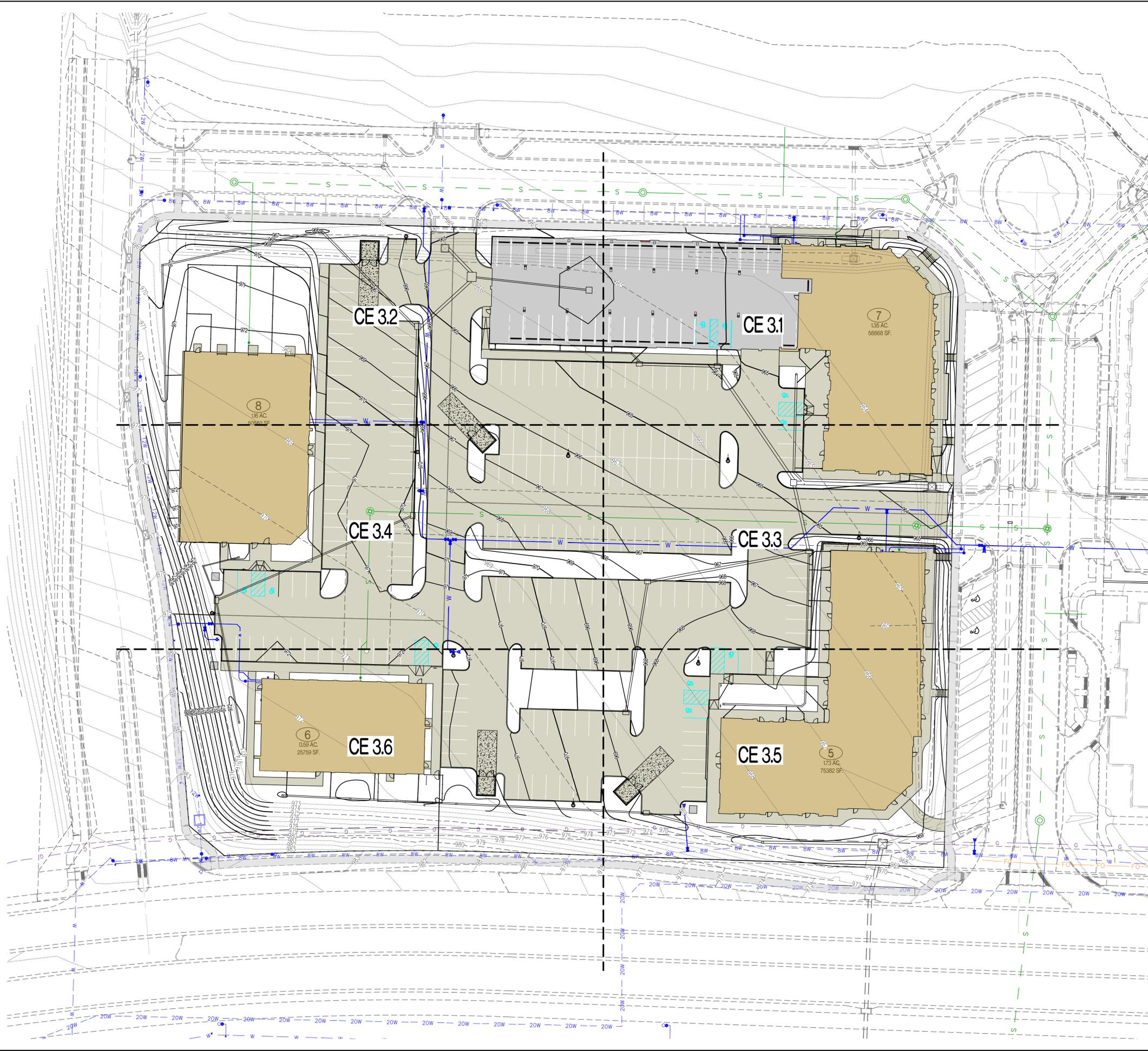
LEGEND OF LABELS:

- (A) LIMITS OF DISTURBANCE.
- (B) INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE. ALL CONSTRUCTION TRAFFIC SHALL LEAVE THE SITE VIA THIS EXIT. REFER TO ESC-01 ON CE 2.2.
- (C) INSTALL INLET PROTECTION AROUND THROAT OF INLET. REFER TO ESC-07 ON CE 2.2.
- (D) INSTALL 2" X 10" BOARD WRAPPED IN SILT FENCE AT THROAT OF INLET. REPLACE BOARD WITH CUTTERBUDDY (OR APPROVED EQUAL) AT THROAT OF INLET AFTER PAVING OPERATIONS ARE COMPLETE. REFER TO ESC-06 ON CE 2.2.
- (E) 20' X 30' X 3' MIN CONCRETE WASHOUT FACILITY. THE WASHOUT FACILITY IS TO BE LINED WITH A PLASTIC LINING MATERIAL (10 MIL POLYETHYLENE SHEETING MIN.) FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COULD COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL. A SIGN SHALL BE INSTALLED ADJACENT TO FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. REFER TO ESC-01 ON CE 2.2 FOR CITY REQUIREMENTS.
- (F) INSTALL STRAW WATTLE AS SHOWN. REFER TO ESC-04 ON CE 2.2.

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
<small>THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY</small>  NATHAN THOMAS ECKHOFF MO LICENSE 200304960	
PREPARED BY:  <small>ENGINEERS AND ARCHITECTS 1008 W. Wilson Blvd. Columbia, Missouri 65203 (314) 487-0291 www.crockettengineering.com Missouri Certificate of Authority #000001001</small>	
OWNER: DISCOVERY PARK LEES SUMMIT LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201	
<h1>THE VILLAGE AT DISCOVERY</h1> <h2>LOTS 5-8</h2> <h3>LEES SUMMIT, JACKSON COUNTY, MISSOURI</h3>	
DRAWING INCLUDES:	
EROSION CONTROL PLAN	
DESIGNED: NTE	
DRAWN: NMD	
PROJECT NO.: 230286	
SHEET: CE 21	

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ASBUILTS 1-14-26

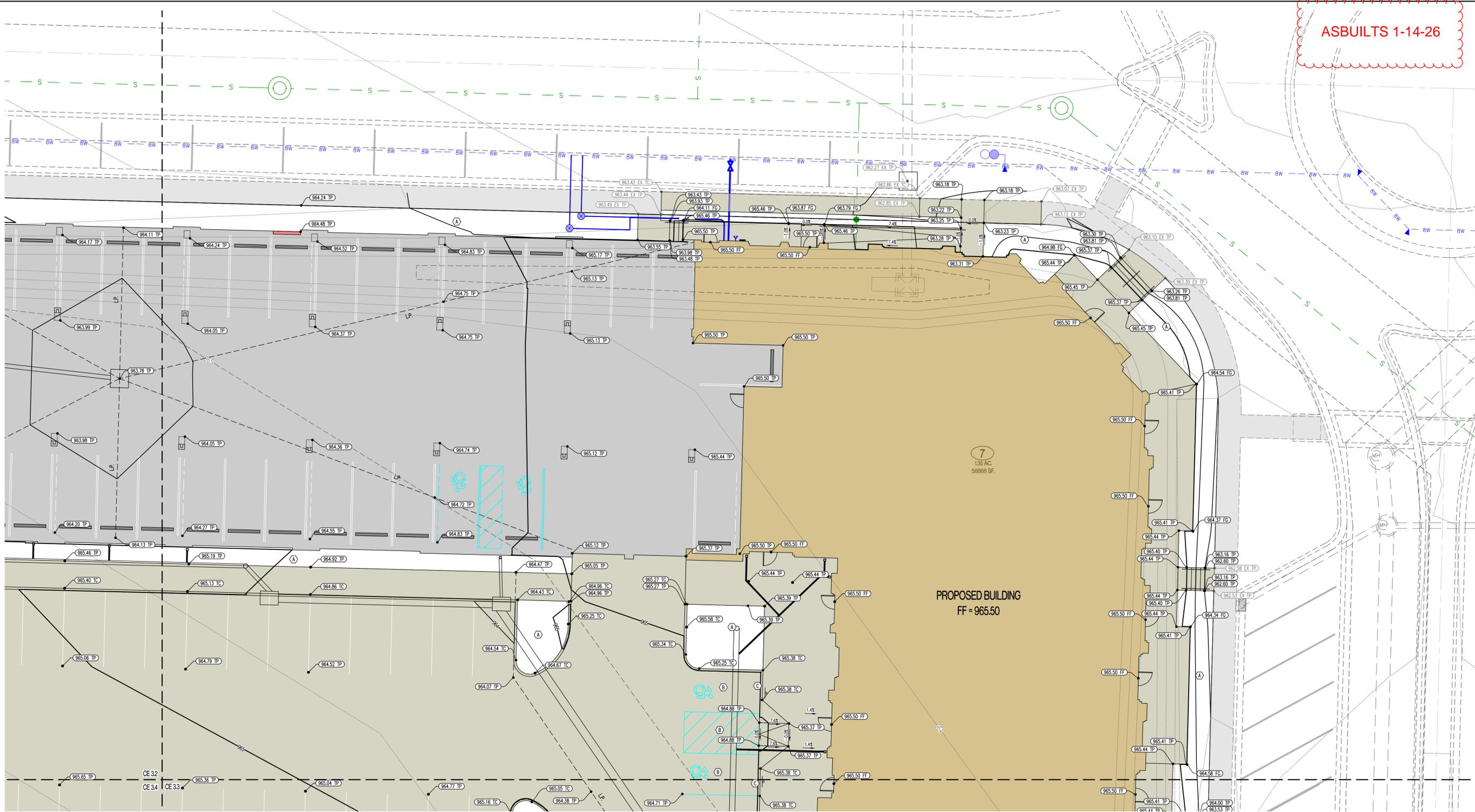


- LEGEND OF SYMBOLS:**
- EXISTING MINOR CONTOUR
 - - - EXISTING MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED MAJOR CONTOUR

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 4	01/31/2025
REV. 5	02/28/2025
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
NATHAN THOMAS ECKHOFF MISSOURI LICENSE 200304960	
PREPARED BY: ENGINEERING CONSULTANTS 1000 W. HIGGS BLVD. COLUMBIA, MISSOURI 65203 (314) 487-0291 www.crockettengineering.com Crockett Engineering Consultants, LLC Missouri Certificate of Authority #000001001	
OWNER: DISCOVERY PARK LEES SUMMIT, LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201	
<h1>THE VILLAGE AT DISCOVERY</h1> <h2>LOTS 5-8</h2> <h3>LEES SUMMIT, JACKSON COUNTY, MISSOURI</h3>	
DRAWING INCLUDES:	
OVERALL GRADING PLAN	
DESIGNED: NTE	
DRAWN: NMD	
PROJECT NO.: 230286	
SHEET: CE 3.0	

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NO.	DATE
ORIGINAL	05/27/2024

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NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT ENGINEERS
ENGINEERS & ARCHITECTS
1000 W. Illinois Blvd. Ste. 2000
Columbia, Missouri 65203
(314) 487-0292
www.crockettengineers.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000000001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

LOTS 5-8

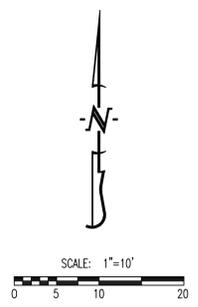
LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 1

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 31

CE 32	CE 31
CE 34	CE 33
CE 36	CE 35

SHEET KEY



LEGEND OF SYMBOLS:

- EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- FF=XXXX FINISHED FLOOR OF STRUCTURE
- XXXX.XX TC PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- XXXX.XX TP PROPOSED TOP OF PAVEMENT ELEVATION
- XXXX.XX FG PROPOSED FINISHED GRADE ELEVATION
- XXXX.XX FF PROPOSED FINISHED FLOOR AT DOOR
- XXXX.XX TW PROPOSED FINISHED GRADE AT TOP OF WALL

LEGEND OF LABELS

- (A) FINE GRADE AS SHOWN BY PROPOSED CONTOURS. PLACE MINIMUM OF 6" TOP SOIL. SEED AND MULCH ALL DISTURBED AREAS.
- (B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- (C) 0"-6" CURB TRANSITION

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REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 3	09/03/2024

THIS SHEET HAS BEEN SIGNED AND DATED ELECTRONICALLY



NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1000 W. Highway 266
Columbia, Missouri 65203
(314) 487-0291
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000000001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

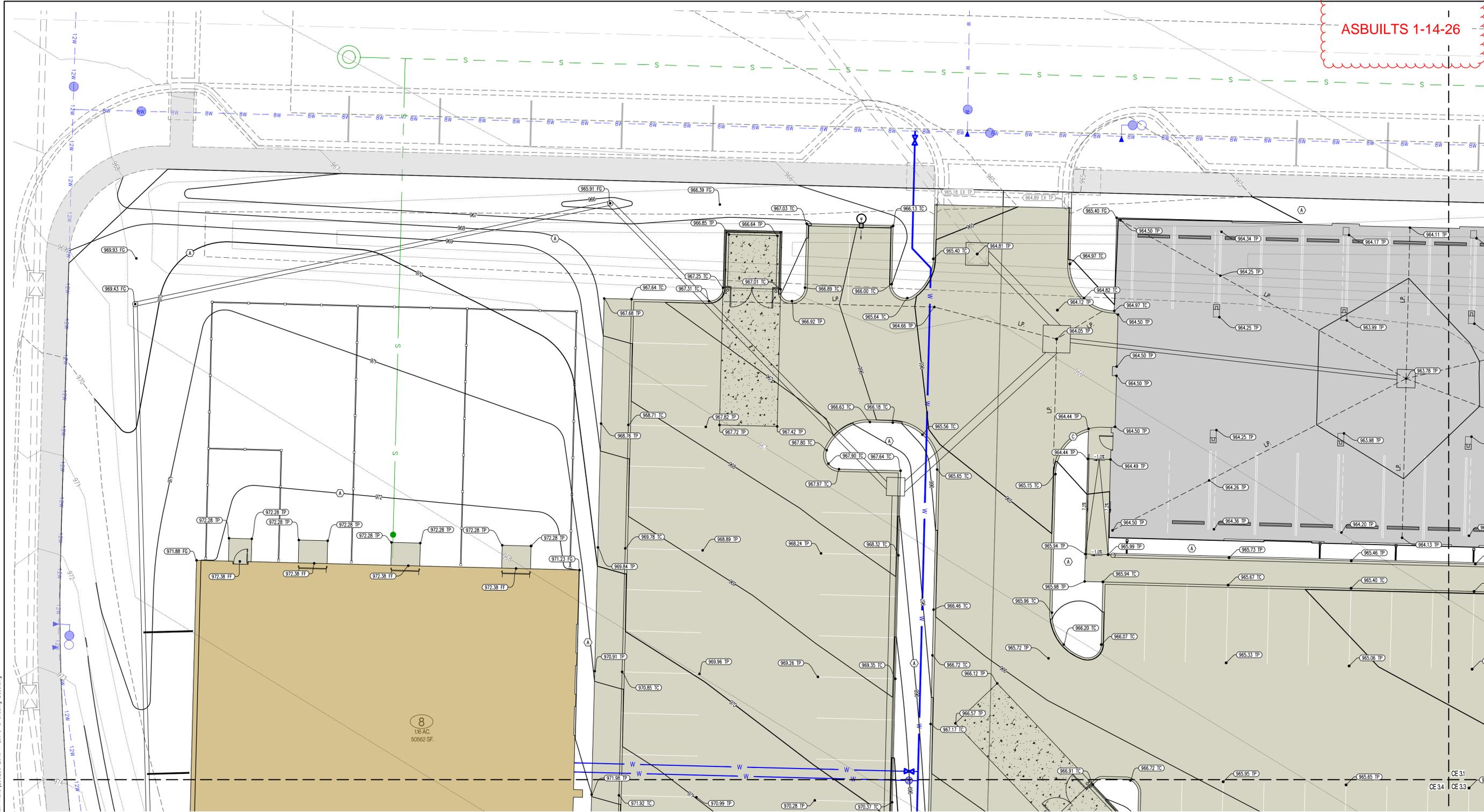
THE VILLAGE AT DISCOVERY

LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

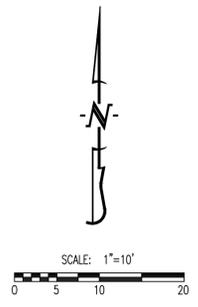
DRAWING INCLUDES:
GRADING PLAN SHEET 2

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 32



SHEET KEY

CE 32	CE 31
CE 34	CE 33
CE 36	CE 35



LEGEND OF SYMBOLS:

- xxx--- EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- xxx--- PROPOSED MINOR CONTOUR
- xxx--- PROPOSED MAJOR CONTOUR
- FF-XXXX FINISHED FLOOR OF STRUCTURE
- (XXX.XX TC) PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- (XXX.XX TP) PROPOSED TOP OF PAVEMENT ELEVATION
- (XXX.XX FG) PROPOSED FINISHED GRADE ELEVATION
- (XXX.XX FF) PROPOSED FINISHED FLOOR AT DOOR
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LEGEND OF LABELS

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- (B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- (C) 0"-6" CURB TRANSITION

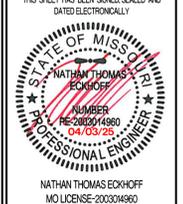
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ASBUILTS 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 2	07/28/2025

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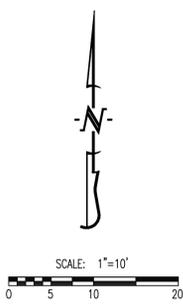
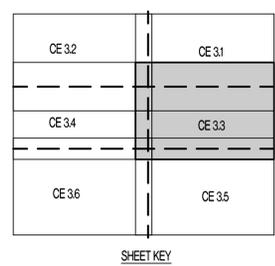
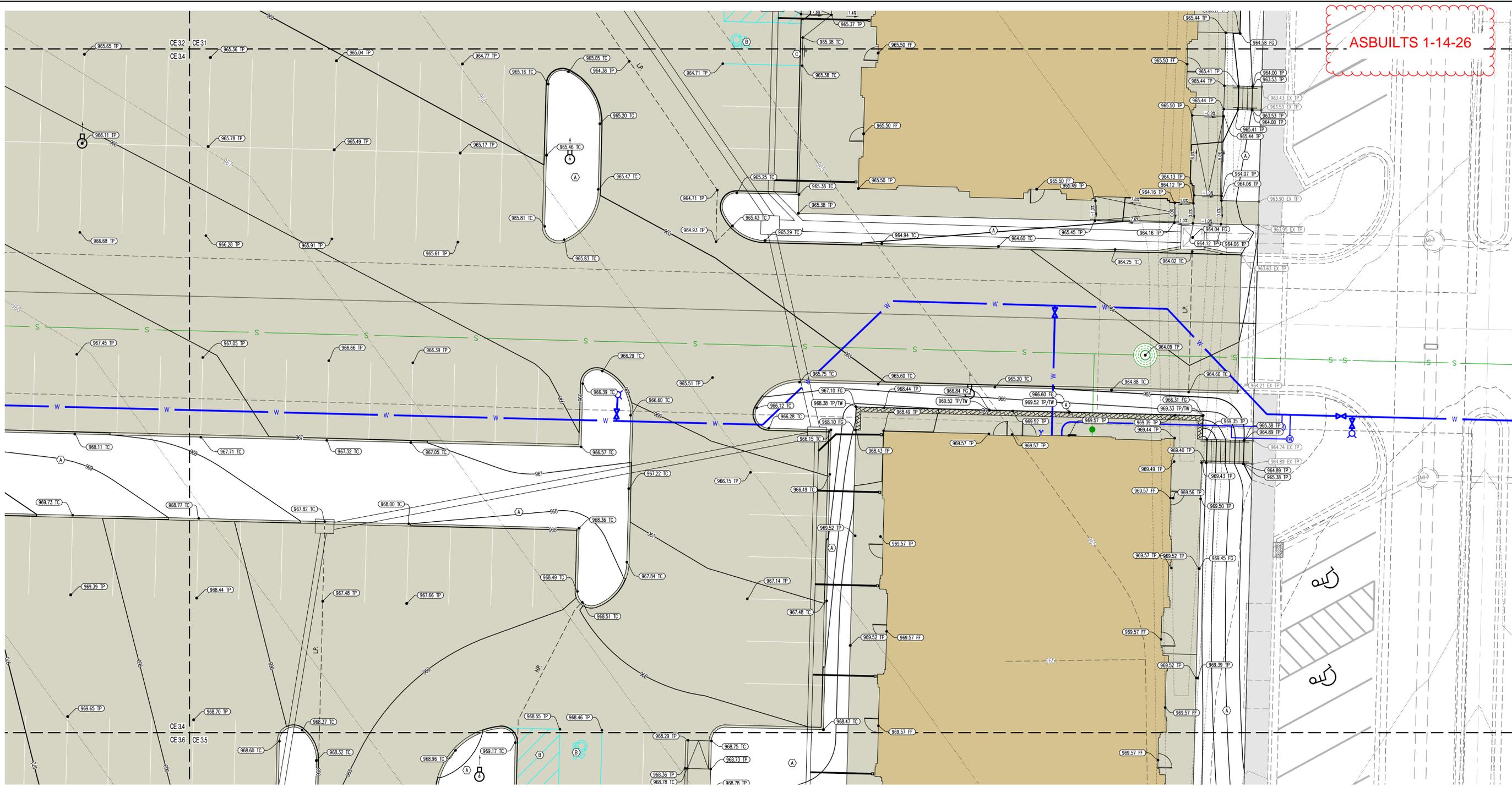
PREPARED BY:
CROCKETT ENGINEERS & ARCHITECTS
 1000 W. Illinois Blvd., Ste. 2000
 Columbia, Missouri 65203
 (314) 487-0292
 www.crockettengineering.com
 Missouri Certificate of Authority #00000001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
 LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
 GRADING PLAN SHEET 3

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 33

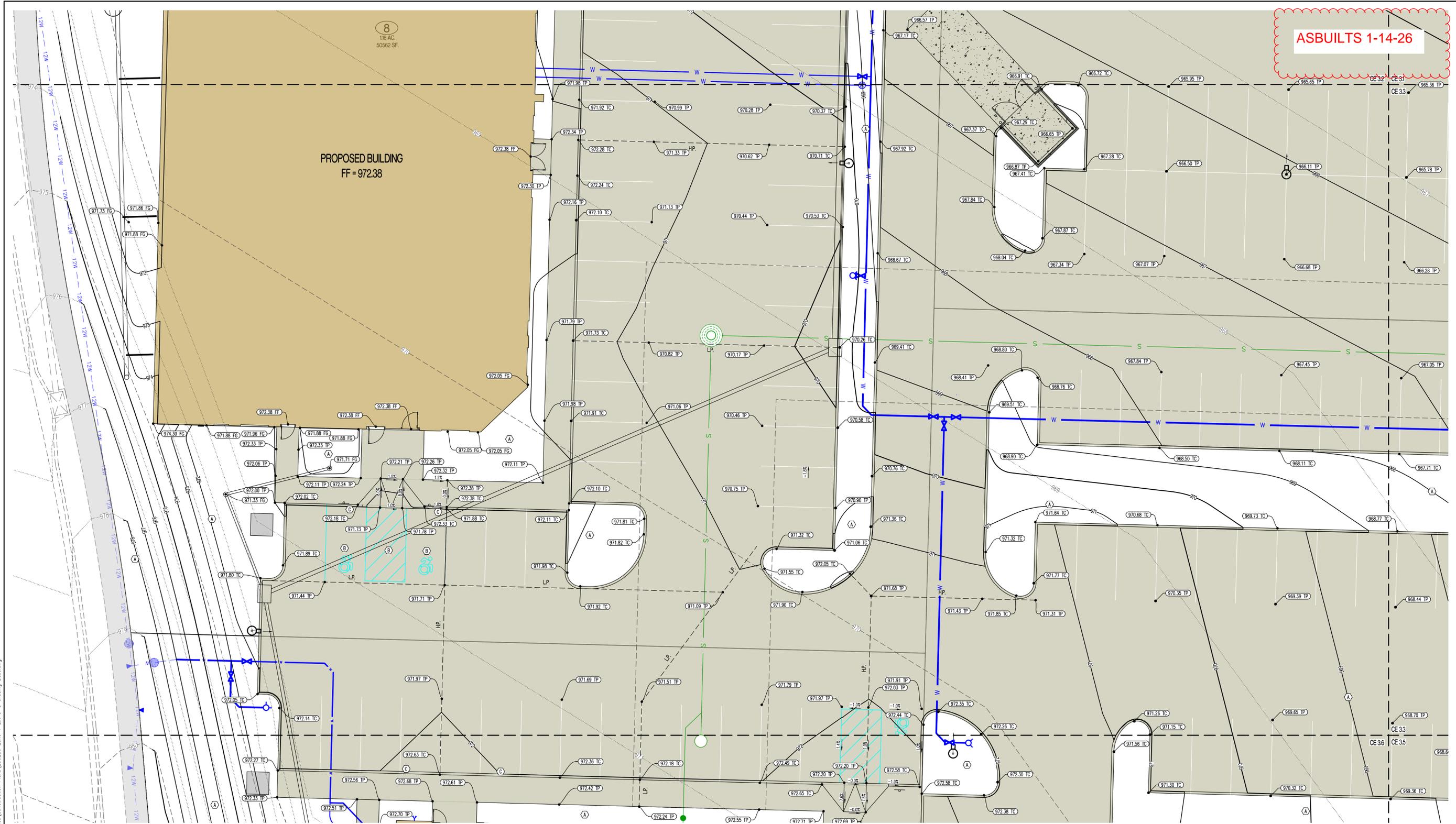


- LEGEND OF SYMBOLS:**
- XXX--- EXISTING MINOR CONTOUR
 - - -XXX- - - EXISTING MAJOR CONTOUR
 - XXX--- PROPOSED MINOR CONTOUR
 - - -XXX- - - PROPOSED MAJOR CONTOUR
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 - (XXX.XX TP) PROPOSED TOP OF PAVEMENT ELEVATION
 - (XXX.XX FC) PROPOSED FINISHED GRADE ELEVATION
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- LEGEND OF LABELS**
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 - (C) 0"-6" CURB TRANSITION

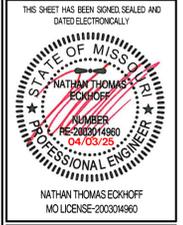
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ASBUILTS 1-14-26

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 2	09/03/2024
REV. 3	09/23/2024
REV. 4	09/23/2024



PREPARED BY:
CROCKETT
 ENGINEERS & ARCHITECTS
 1000 W. Kings Blvd., Ste. 200
 Columbia, Missouri 65205
 (314) 487-0292
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority
 #00000001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

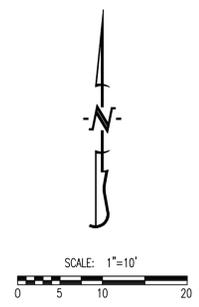
THE VILLAGE AT DISCOVERY

LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

CE 3.2	CE 3.1
CE 3.4	CE 3.3
CE 3.6	CE 3.5

SHEET KEY



LEGEND OF SYMBOLS:

- XXX--- EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- XXX--- PROPOSED MINOR CONTOUR
- - - - - PROPOSED MAJOR CONTOUR
- FF-XXXX FINISHED FLOOR OF STRUCTURE
- (XXXXXX TC) PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- (XXXXXX TP) PROPOSED TOP OF PAVEMENT ELEVATION
- (XXXXXX FG) PROPOSED FINISHED GRADE ELEVATION
- (XXXXXX FF) PROPOSED FINISHED FLOOR AT DOOR
- (XXXXXX TW) PROPOSED FINISHED GRADE AT TOP OF WALL

LEGEND OF LABELS

- (A) FINE GRADE AS SHOWN BY PROPOSED CONTOURS. PLACE MINIMUM OF 6" TOP SOIL SEED AND MULCH ALL DISTURBED AREAS.
- (B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- (C) 0"-6" CURB TRANSITION

DRAWING INCLUDES:

GRADING PLAN SHEET 4

DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

SHEET:
CE 3.4

ASBUILTS 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 5	07/28/2025

THIS SHEET HAS BEEN SIGNED AND DATED ELECTRONICALLY



NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1000 W. Illinois Blvd. Suite 200
Columbia, Missouri 65205
(314) 487-0291
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000001001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

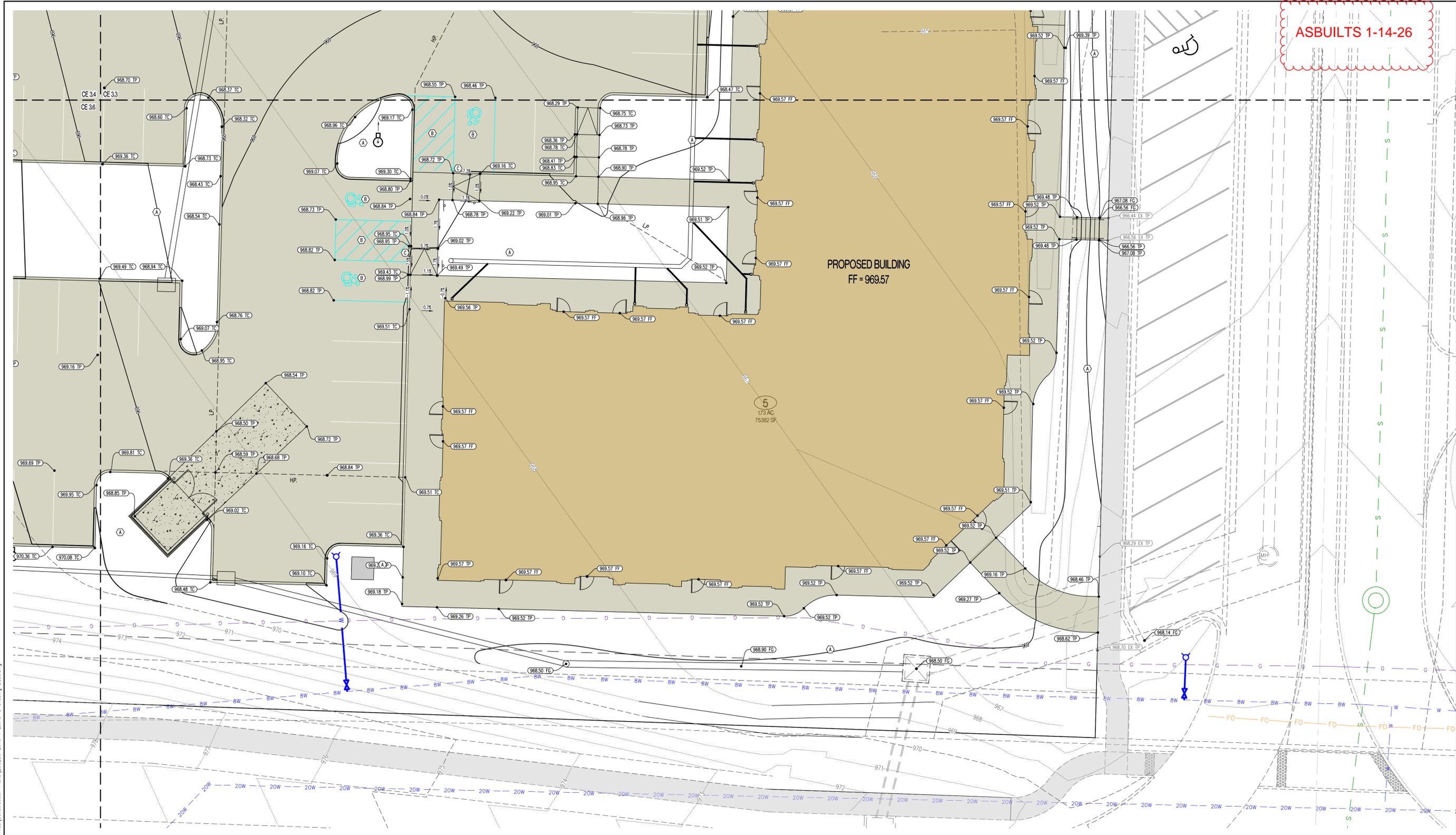
THE VILLAGE AT DISCOVERY

LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

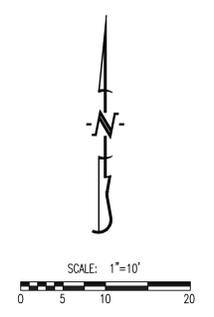
DRAWING INCLUDES:
GRADING PLAN SHEET 5

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 35



SHEET KEY

CE 32	CE 31
CE 34	CE 33
CE 36	CE 35



LEGEND OF SYMBOLS:

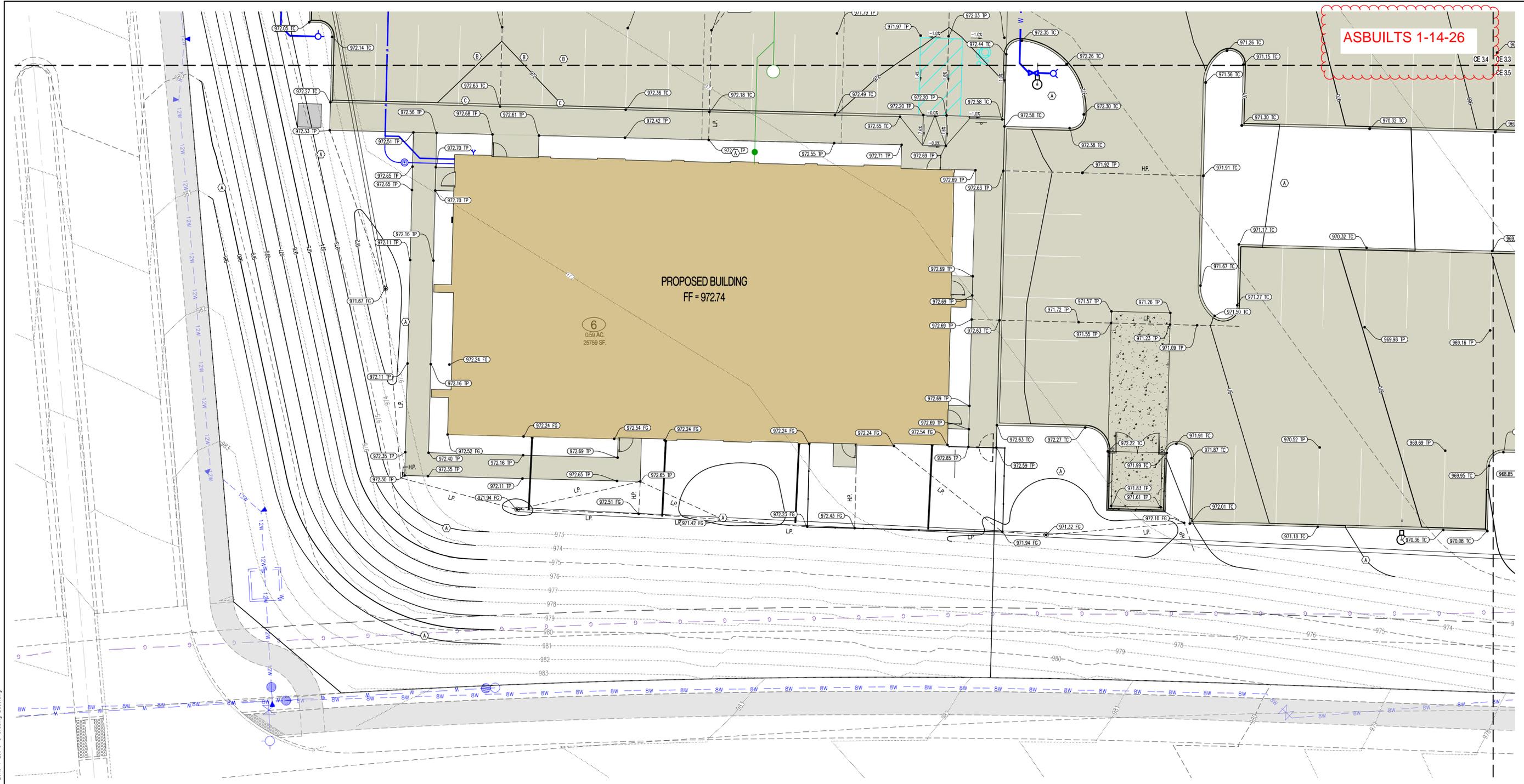
- XXX--- EXISTING MINOR CONTOUR
- - -XXX- - - EXISTING MAJOR CONTOUR
- XXX--- PROPOSED MINOR CONTOUR
- XXX--- PROPOSED MAJOR CONTOUR
- FF-XXXX FINISHED FLOOR OF STRUCTURE
- (XXXX TC) PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- (XXXX TP) PROPOSED TOP OF PAVEMENT ELEVATION
- (XXXX FG) PROPOSED FINISHED GRADE ELEVATION
- (XXXX FF) PROPOSED FINISHED FLOOR AT DOOR
- (XXXX TW) PROPOSED FINISHED GRADE AT TOP OF WALL

LEGEND OF LABELS

- (A) FINE GRADE AS SHOWN BY PROPOSED CONTOURS. PLACE MINIMUM OF 6" TOP SOIL SEED AND MULCH ALL DISTURBED AREAS.
- (B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- (C) 0"-6" CURB TRANSITION

Y:\2023\230286 - Discovery Park Lees Summit\Zone Lot 5-8\Civil\ACAD Files\Construction Plans\230286 Zone 1 Lot 5-8 Grading Base.dwg

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 5-8\Civil\ACAD Files\Construction Plans\230286 Zone 1 Lot 5-8 Grading Base.dwg



ASBUILTS 1-14-26

CE 32	CE 31
CE 34	CE 33
CE 36	CE 35

SHEET KEY

LEGEND OF SYMBOLS:

- XXXX ----- EXISTING MINOR CONTOUR
- - - - - XXXX - - - - - EXISTING MAJOR CONTOUR
- XXXX ----- PROPOSED MINOR CONTOUR
- XXXX ----- PROPOSED MAJOR CONTOUR
- FF-XXXX FINISHED FLOOR OF STRUCTURE
- (XXX.XX TC) PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- (XXX.XX TP) PROPOSED TOP OF PAVEMENT ELEVATION
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- (C) 0"-6" CURB TRANSITION

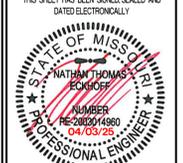
REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 4	01/31/2025
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
NATHAN THOMAS ECKHOFF MISSOURI LICENSE: 200304960	
PREPARED BY: CROCKETT ENGINEERS & ARCHITECTS 1008 W. Illinois Blvd., Suite 200 Columbia, Missouri 65203 (314) 487-0292 www.crockettengineering.com Missouri Certificate of Authority #00000001	
OWNER: DISCOVERY PARK LEES SUMMIT LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201	
<h1 style="margin: 0;">THE VILLAGE AT DISCOVERY</h1> <h2 style="margin: 0;">LOTS 5-8</h2> <h3 style="margin: 0;">LEES SUMMIT, JACKSON COUNTY, MISSOURI</h3>	
DRAWING INCLUDES:	
GRADING PLAN SHEET 6	
DESIGNED: NTE	
DRAWN: NMD	
PROJECT NO: 230286	
SHEET: CE 36	

ASBUILTS 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV 1	07/23/2024
REV 2	09/03/2024
REV 3	09/28/2024
REV 4	10/03/2024
REV 5	10/03/2024
REV 6	04/03/2025

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY



NATHAN THOMAS ECKHOFF
 MISSOURI PROFESSIONAL ENGINEER
 LICENSE NO. 200304960
 MISSOURI LICENSE 200304960

PREPARED BY:
CROCKETT ENGINEERING
 ENGINEERS & ARCHITECTS
 1000 W. Illinois Blvd., Suite 200
 Columbia, Missouri 65203
 (314) 487-0299
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority
 #000000001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

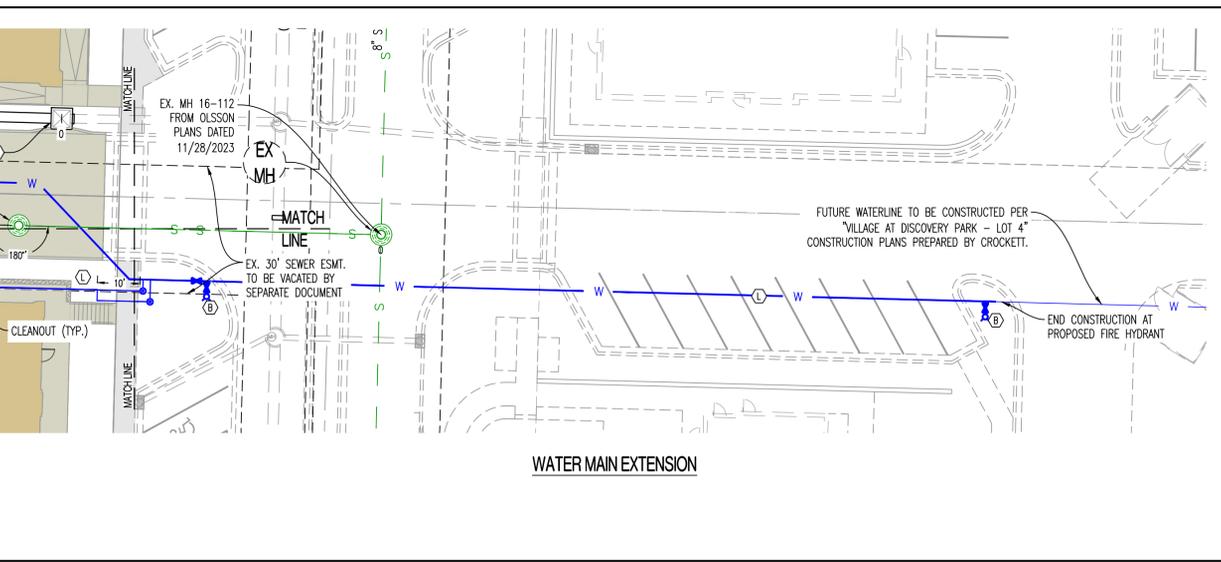
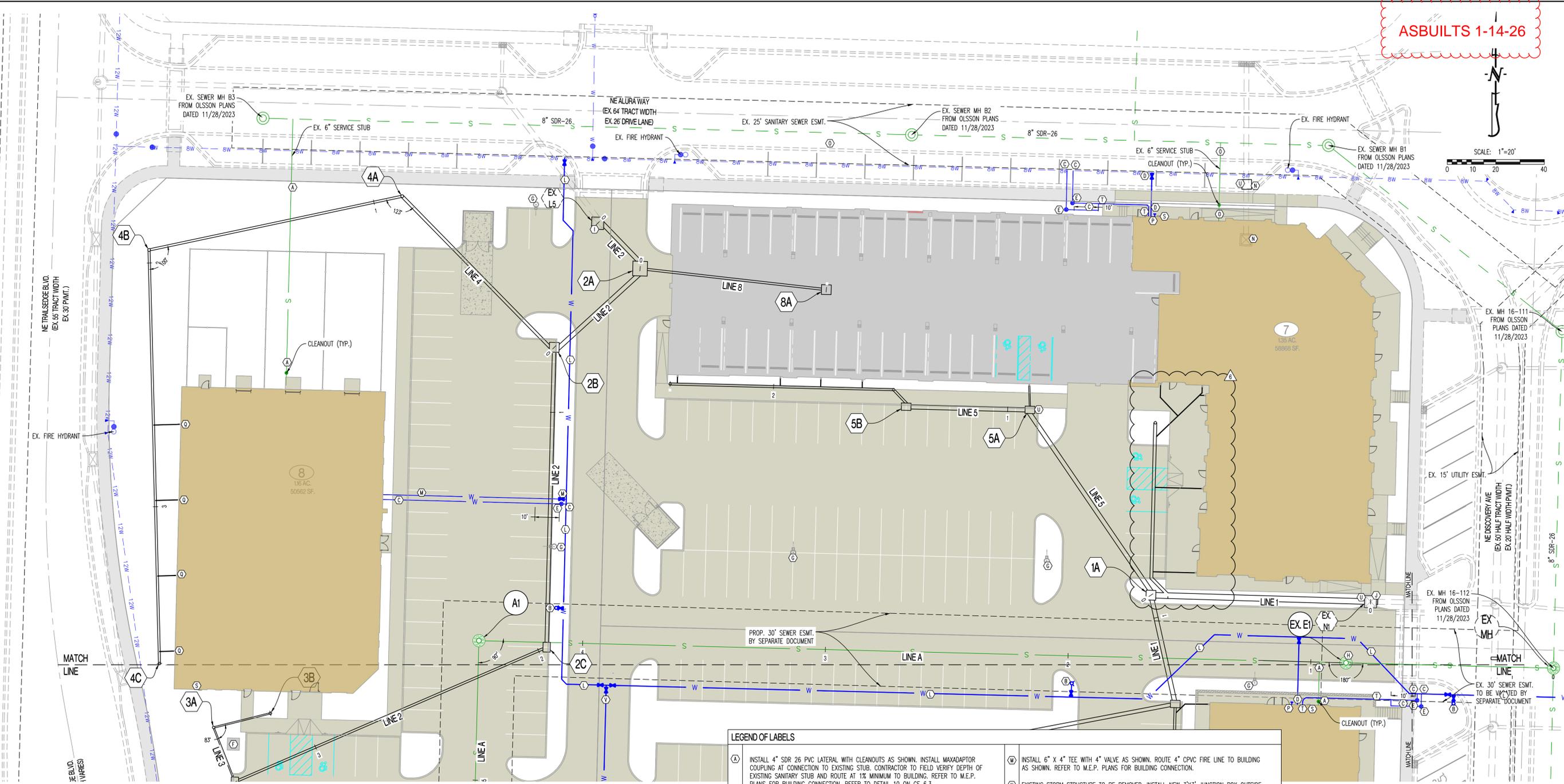
THE VILLAGE AT DISCOVERY

LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
 UTILITY PLAN SHEET 1

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 41



- LEGEND OF LABELS**
- (A) INSTALL 4" SDR 26 PVC LATERAL WITH CLEANOUTS AS SHOWN. INSTALL MAXADAPTOR COUPLING AT CONNECTION TO EXISTING STUB. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING SANITARY STUB AND ROUTE AT 1% MINIMUM TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. REFER TO DETAIL 10 ON CE 6.3.
 - (B) PROPOSED FIRE HYDRANT. CONTRACTOR TO INSTALL TEE AT WATER MAIN. INSTALL 6" C900 PVC WITH GATE VALVE AS SHOWN.
 - (C) PROPOSED 2" SOFT TYPE K COPPER WATERLINE SERVICE. INSTALL 2" CORPORATION STOP VALVE AT MAIN. 2" SOFT TYPE K COPPER SHALL EXTEND 10' MINIMUM BEYOND METER PIT.
 - (D) PROPOSED 6" C900 PVC FIRE LINE. INSTALL TEE AND GATE VALVE AT CONNECTION TO MAIN. CONTRACTOR TO VERIFY TEE SIZE. DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER TO BE INSTALLED IN BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
 - (E) PROPOSED 2" METER PIT. CONFIRM SIZE WITH M.E.P. PRIOR TO INSTALLATION. REFER TO DETAIL WAI-11 ON CE 8.5.
 - (F) PROPOSED TRANSFORMER. COORDINATE WITH M.E.P.
 - (G) PROPOSED LIGHT POLE. REFER TO M.E.P. PLANS.
 - (H) CONTRACTOR TO ASBUILT TOP OF PLANNED SANITARY SEWER MANHOLE. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.6.
 - (I) CONTRACTOR TO ASBUILT TOP OF PLANNED SIDE OPENING INLET. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.6. REPLACE SIDE OPENING INLET TOP WITH JUNCTION BOX TOP.
 - (J) CONTRACTOR TO ASBUILT TOP OF PLANNED SIDE OPENING INLET. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.6. REPLACE SIDE OPENING INLET TOP WITH CURB INLET TOP.
 - (K) CONTRACTOR TO ASBUILT TOP OF PLANNED JUNCTION BOX. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.6. REPLACE JUNCTION BOX TOP WITH EV5636 GRATE AND FRAME.
 - (L) CONTRACTOR TO TAP EXISTING WATERLINE AND INSTALL 6" C900 PVC WATERLINE WITH 6" GATE VALVES AND 8"x6"x8" TEE AS SHOWN. CONTRACTOR TO VERIFY SIZE AND DEPTH AND FURNISH ALL FITTINGS AS REQUIRED. REFER TO "PRIVATE SITE DEVELOPMENT PLANS" BY OLSSON DATED 10/18/2023 FOR EXISTING PLANNED WATERLINE.

- (M) INSTALL 6" X 4" TEE WITH 4" VALVE AS SHOWN. ROUTE 4" CPVC FIRE LINE TO BUILDING AS SHOWN. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (N) EXISTING STORM STRUCTURE TO BE REMOVED. INSTALL NEW 3'X3' JUNCTION BOX OUTSIDE OF BUILDING FOOTPRINT. CONTRACTOR MAY REUSE EXISTING STORM PIPING DURING INSTALLATION OF NEW STRUCTURE. NEW STORM STRUCTURE SHALL BE INSTALLED PRIOR TO PRIVATE STREET PAVING. USE ALTERNATE TOP. REFER TO DETAIL 3 ON CE 6.3. REFER TO CE 3.1 FOR TOP OF BOX ELEVATION.
- (O) INSTALL 6" SDR 26 PVC LATERAL WITH CLEANOUTS AS SHOWN. INSTALL MAXADAPTOR COUPLING AT CONNECTION TO EXISTING STUB. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING SANITARY STUB AND ROUTE AT 1% MINIMUM TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. REFER TO CLEANOUT DETAIL ON CE 5.1.
- (P) PROPOSED FIRE DEPARTMENT CONNECTION (FDC). COORDINATE WITH ARCHITECT AND M.E.P. FOR EXACT LOCATION. FDC SHALL BE 4" STORZ TYPE FITTING.
- (Q) PROPOSED ROOF DRAIN (6" PVC AT 1% MINIMUM SLOPE) CONNECTED TO STORM COLLECTOR. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. REFER TO DETAIL 9 ON CE 6.3.
- (R) PROPOSED GAS RISER. REFER TO M.E.P. PLANS. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER.
- (T) INSTALL 3" X 2" X 2" TEE AT 10' MIN. BEYOND METER WELL. ROUTE 3" CPVC WATERLINE SERVICE LINE TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (U) PROPOSED CONNECTION STRUCTURE TO INTERNAL ROOF DRAINS. ROUTE CONNECTING PIPE FROM STRUCTURE TO BUILDING AT 1% MIN. SLOPE. REFER TO M.E.P. PLANS.
- (V) INSTALL 6" X 6" TEE WITH 6" VALVE. ROUTE 6" CPVC AS SHOWN.
- (W) CONNECT TO EXISTING 8" WATERLINE STUB WITH 8" X 6" REDUCER. INSTALL 6" CPVC WITH VALVES AND FITTINGS AS SHOWN.
- (X) INSTALL 6" X 4" REDUCER AFTER VALVE. ROUTE 4" CPVC AS SHOWN. INSTALL 4" X 4" X 1.5" TEE AS SHOWN. ROUTE 4" CPVC FIRE LINE TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (Y) INSTALL 1.5" SOFT TYPE K COPPER WATERLINE SERVICE AND 1.5" METER PIT AS SHOWN. 1.5" SOFT TYPE K COPPER SHALL EXTEND A MINIMUM OF 10' BEYOND METER PIT.

GENERAL NOTES:
 1) CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE ANY EXCAVATION BEGINS.

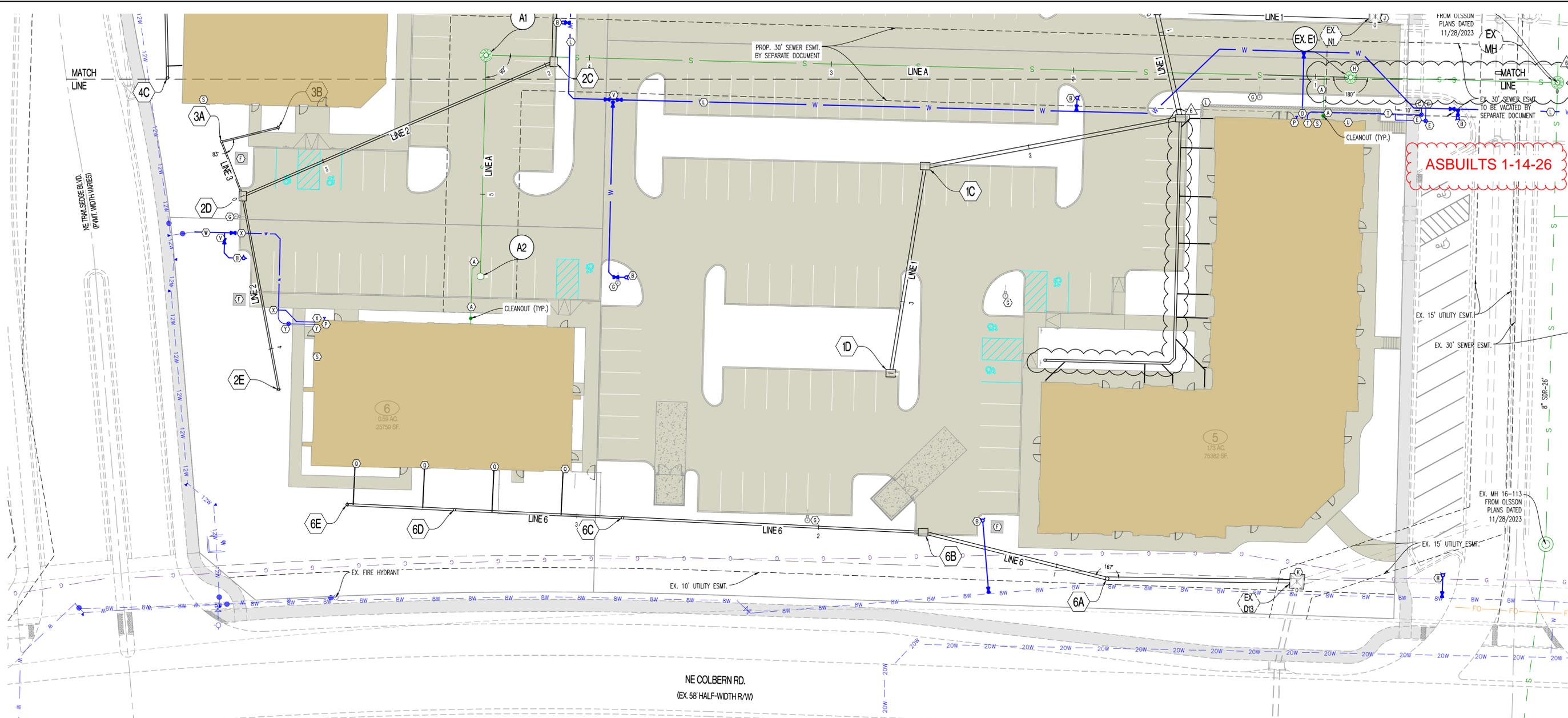
ESTIMATED SANITARY SEWER QUANTITIES

	LOTS 5-8
8" SEWER	448 LF
STD. MANHOLE	1 EA.
STD. CLEANOUT	4 EA.
WYES	4 EA.

ESTIMATED ADDITIONAL FLOW

LOT	ESTIMATED ADDITIONAL FLOW
LOT 5 (14,000 SF RETAIL/OFFICE, 40 APARTMENT UNITS)	54 PE X 100 GPCD = 5400 GPD = 3.75 GPM
LOT 6 (8,000 SF ANIMAL HOSPITAL)	8 PE X 150 GPCD = 900 GPD = 0.63 GPM
LOT 7 (8,600 SF RETAIL/OFFICE, 46 APARTMENT UNITS)	55 PE X 100 GPCD = 5500 GPD = 3.82 GPM
LOT 8 (11,500 SF PET DAYCARE CENTER)	11.5 PE X 100 GPCD = 1150 GPD = 0.80 GPM
TOTAL	12950 GPD = 8.99 GPM (35.97 GPM PEAK)

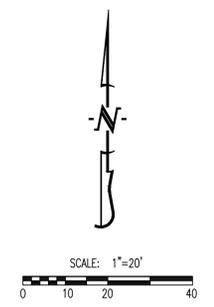
Y:\2023\230286 - Discovery Park Lees Summit\Zone Lot 5-8\Civil\ACAD Files\Construction Plans\230286 Zone 1 Lot 5-8 Site Base.dwg



ASBUILTS 1-14-26

- LEGEND OF LABELS**
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 - (B) PROPOSED FIRE HYDRANT. CONTRACTOR TO INSTALL TEE AT WATER MAIN. INSTALL 6" C900 PVC WITH GATE VALVE AS SHOWN.
 - (C) PROPOSED 2" SOFT TYPE K COPPER WATERLINE SERVICE. INSTALL 2" CORPORATION STOP VALVE AT MAIN. 2" SOFT TYPE K COPPER SHALL EXTEND 10' MINIMUM BEYOND METER PIT.
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 - (E) PROPOSED 2" METER PIT. CONFIRM SIZE WITH M.E.P. PRIOR TO INSTALLATION. REFER TO DETAIL WAT-11 ON CE 8.5.
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 - (L) CONTRACTOR TO TAP EXISTING WATERLINE AND INSTALL 6" C900 PVC WATERLINE WITH 6" GATE VALVES AND 8"x6"x8" TEE AS SHOWN. CONTRACTOR TO VERIFY SIZE AND DEPTH AND FURNISH ALL FITTINGS AS REQUIRED. REFER TO "PRIVATE SITE DEVELOPMENT PLANS" BY OLSSON DATED 10/18/2023 FOR EXISTING PLANNED WATERLINE.
 - (M) INSTALL 6" X 4" TEE WITH 4" VALVE AS SHOWN. ROUTE 4" CPVC FIRE LINE TO BUILDING AS SHOWN. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
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 - (R) PROPOSED GAS RISER. REFER TO M.E.P. PLANS. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER.
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- (A1) FROM OLSSON PLANS DATED 11/28/2023
- (A2) FROM OLSSON PLANS DATED 11/28/2023
- (A3) FROM OLSSON PLANS DATED 11/28/2023
- (A4) FROM OLSSON PLANS DATED 11/28/2023
- (A5) FROM OLSSON PLANS DATED 11/28/2023
- (A6) FROM OLSSON PLANS DATED 11/28/2023
- (A7) FROM OLSSON PLANS DATED 11/28/2023
- (A8) FROM OLSSON PLANS DATED 11/28/2023
- (A9) FROM OLSSON PLANS DATED 11/28/2023
- (A10) FROM OLSSON PLANS DATED 11/28/2023
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- (A48) FROM OLSSON PLANS DATED 11/28/2023
- (A49) FROM OLSSON PLANS DATED 11/28/2023
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- (A100) FROM OLSSON PLANS DATED 11/28/2023



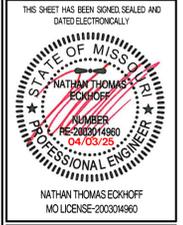
GENERAL NOTES:
 1) CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE ANY EXCAVATION BEGINS.

ESTIMATED SANITARY SEWER QUANTITIES	
8" SEWER	PLAT x
STD. MANHOLE	1 EA.
STD. CLEANOUT	4 EA.
WYES	4 EA.

ESTIMATED ADDITIONAL FLOW	
LOT 5 (14,000 SF RETAIL/OFFICE, 40 APARTMENT UNITS)	54 PE X 100 GPCD = 5400 GPD = 3.75 GPM
LOT 6 (8,000 SF ANIMAL HOSPITAL)	8 PE X 150 GPCD = 900 GPD = 0.63 GPM
LOT 7 (8,600 SF RETAIL/OFFICE, 46 APARTMENT UNITS)	55 PE X 100 GPCD = 5500 GPD = 3.82 GPM
LOT 8 (11,500 SF PET DAYCARE CENTER)	11.5 PE X 100 GPCD = 1150 GPD = 0.80 GPM
TOTAL	12950 GPD = 8.99 GPM (35.97 GPM PEAK)

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV 1	07/23/2024
REV 2	09/03/2024
REV 3	01/31/2025
REV 4	07/28/2025
REV 5	07/28/2025
REV 6	04/03/2025



PREPARED BY:
CROCKETT ENGINEERS & ARCHITECTS
 ENGINEERS ARCHITECTS
 1008 W. Illinois Blvd., Suite 200
 Columbia, Missouri 65203
 (314) 487-0299
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority
 #000001001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

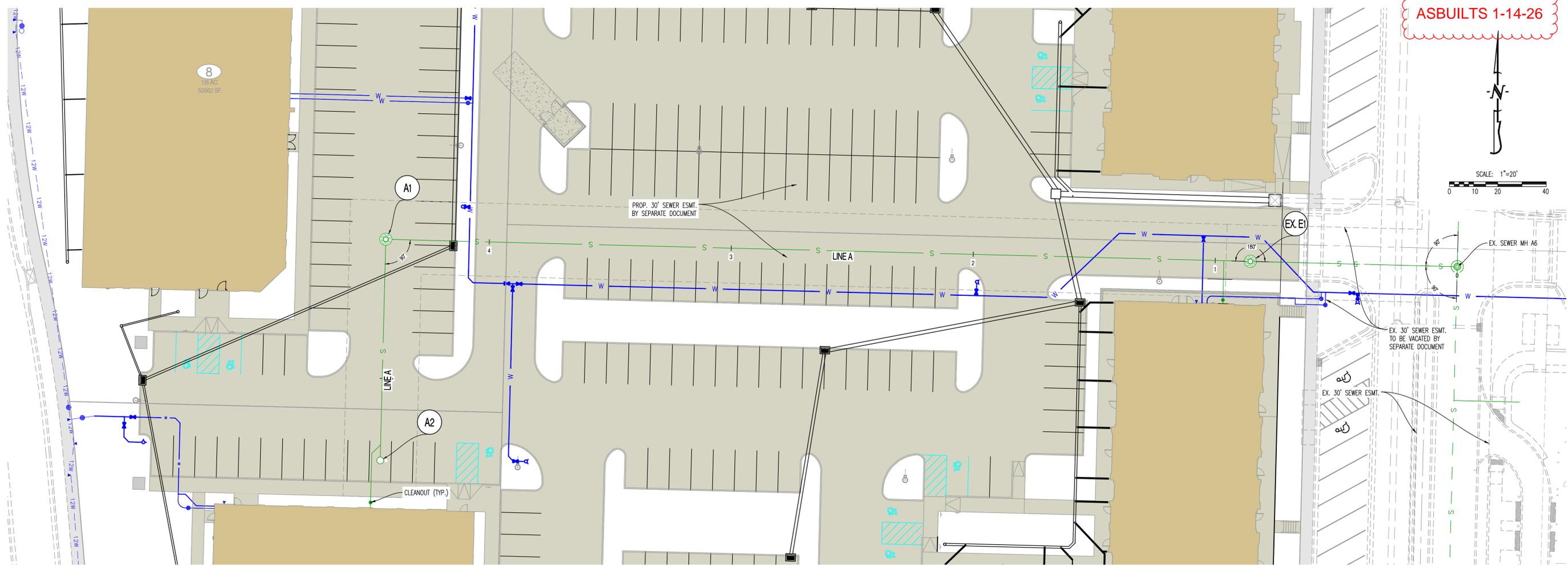
LEES SUMMIT, JACKSON COUNTY, MISSOURI

LOTS 5-8

DRAWING INCLUDES:
 UTILITY PLAN SHEET 2

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 42

ASBUILTS 1-14-26



REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 6	04/03/2025

THIS SHEET HAS BEEN SIGNED AND DATED ELECTRONICALLY

PREPARED BY: **CROCKETT ENGINEERS & ARCHITECTS**
 1000 W. Wilson Blvd.,
 Columbia, Missouri 65203
 (314) 487-0299
 www.crockettengineering.com
 Missouri Certificate of Authority #00000001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

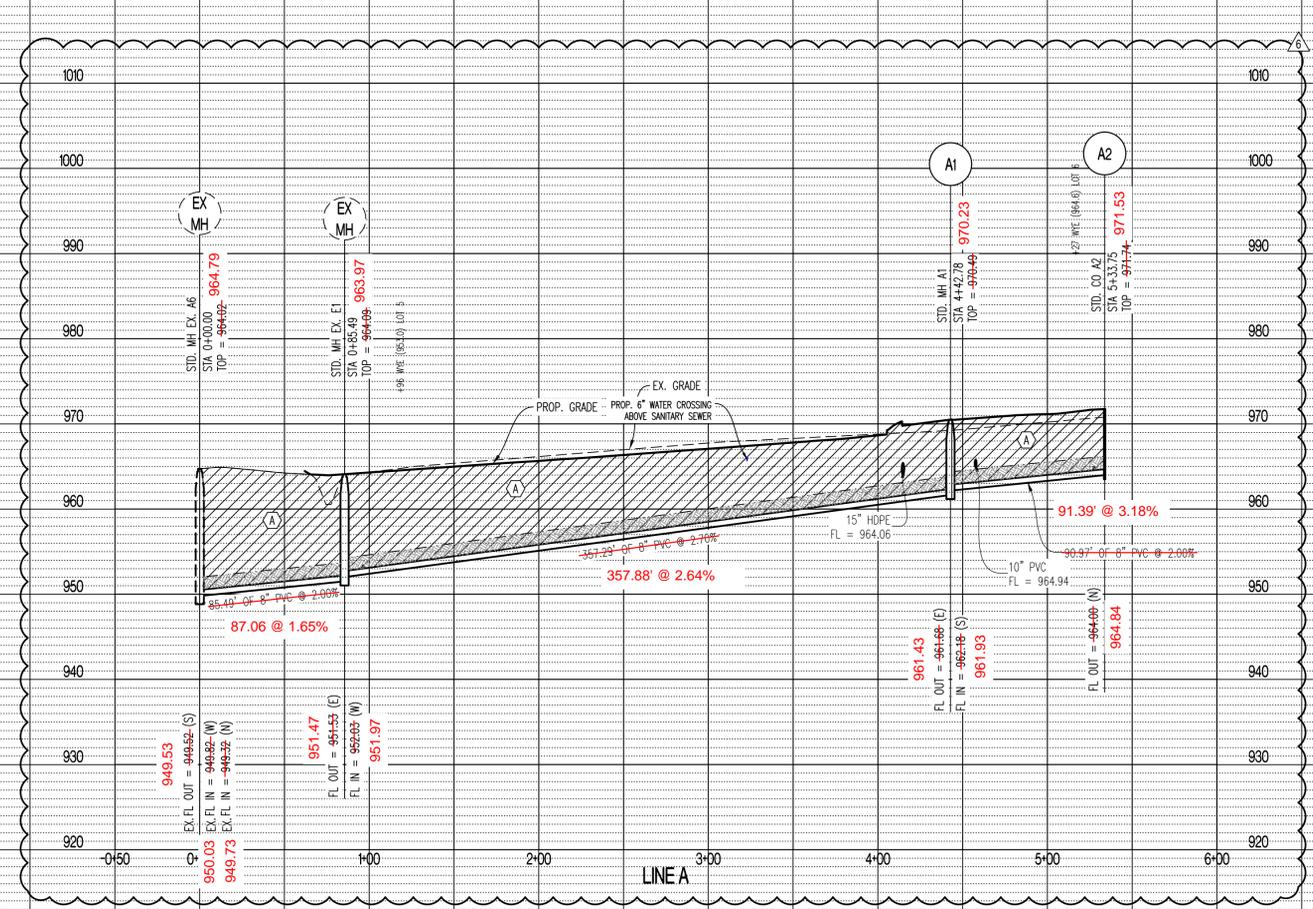
THE VILLAGE AT DISCOVERY

LOTS 5-8

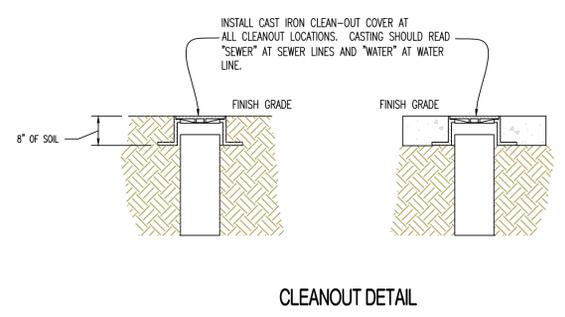
LEES SUMMIT, JACKSON COUNTY, MISSOURI

SCALE:
 HORIZ T = 50'
 VERT T = 10'

LEGEND OF LABELS:
 (A) REFER TO PIPE EMBEDMENT DETAIL 5 ON CE 6.3.



- GENERAL NOTES:
- 1) ALL PORTIONS OF THIS SANITARY SEWER SHALL BE PUBLIC.
 - 2) LENGTHS AND SLOPES OF PIPE ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
 - 3) COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.



DRAWING INCLUDES:
 SANITARY PLAN & PROFILE & SANITARY DETAILS

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 5.1

SCALE:
HORIZ 1" = 50'
VERT 1" = 10'

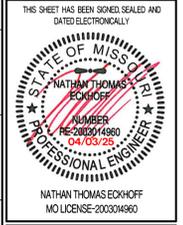
LEGEND OF LABELS:
 (A) REFER TO PIPE EMBEDMENT DETAIL 6 ON CE 6.3.
 (B) REFER TO PIPE EMBEDMENT DETAIL 5 ON CE 6.3.

GENERAL NOTES:
 1) ALL PORTIONS OF THIS STORM SEWER SHALL BE PRIVATE.
 2) LENGTHS AND SLOPES OF PIPE ARE MEASURED FROM EDGE OF STRUCTURE TO EDGE OF STRUCTURE.
 3) COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.

AS-STAKED 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 2	08/09/2024
REV. 3	03/13/2025
REV. 5	07/28/2025
REV. 6	04/03/2025



PREPARED BY:
CROCKETT
 ENGINEERS & ARCHITECTS
 1008 N. Wilson Blvd.
 Columbia, Missouri 65203
 (572) 847-0291
 www.crockettingeering.com
 Missouri Certificate of Authority
 #000001001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

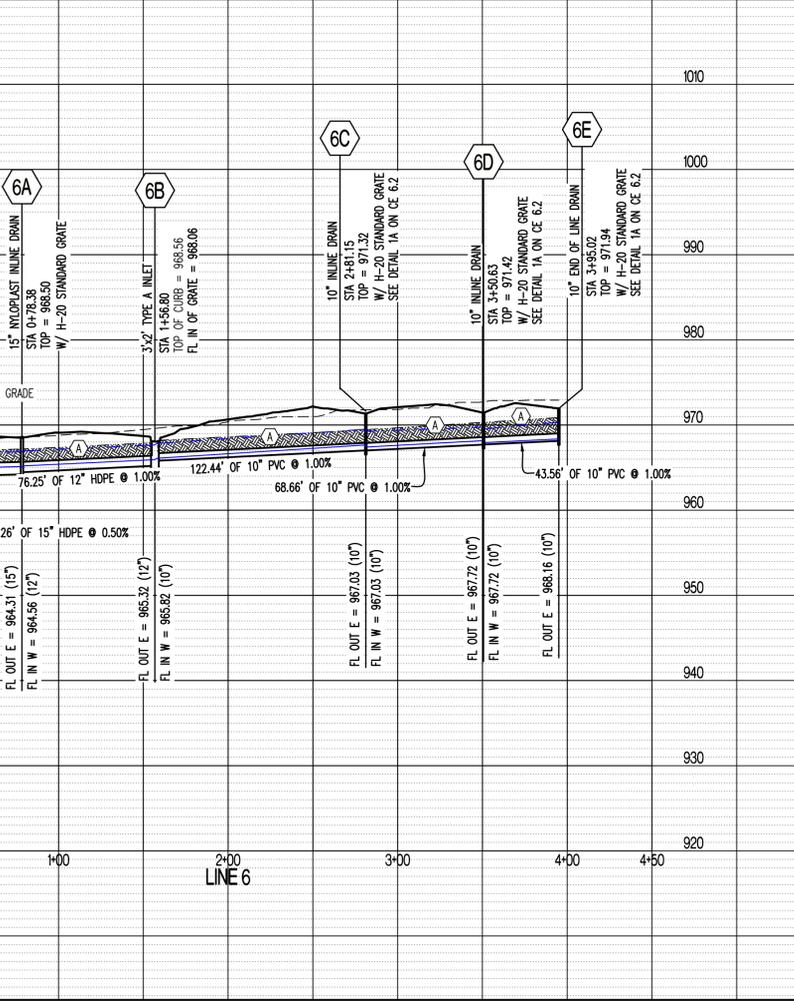
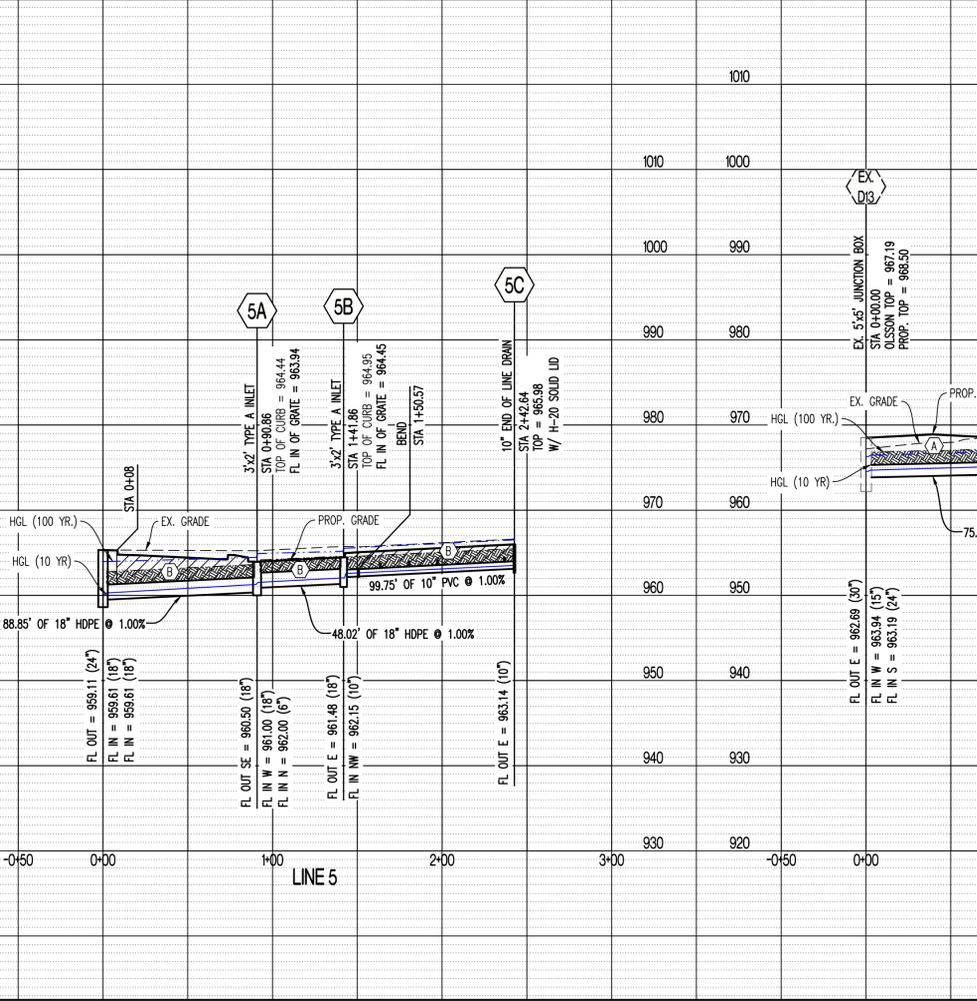
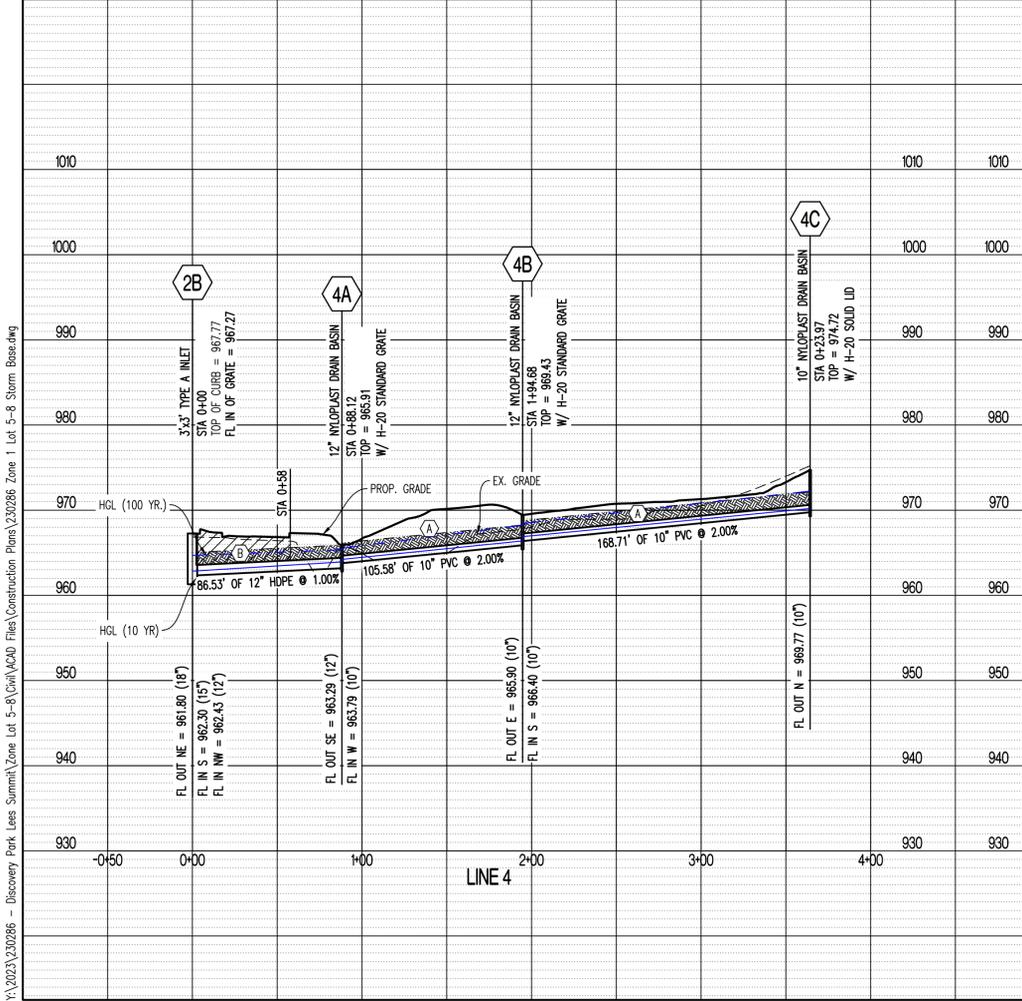
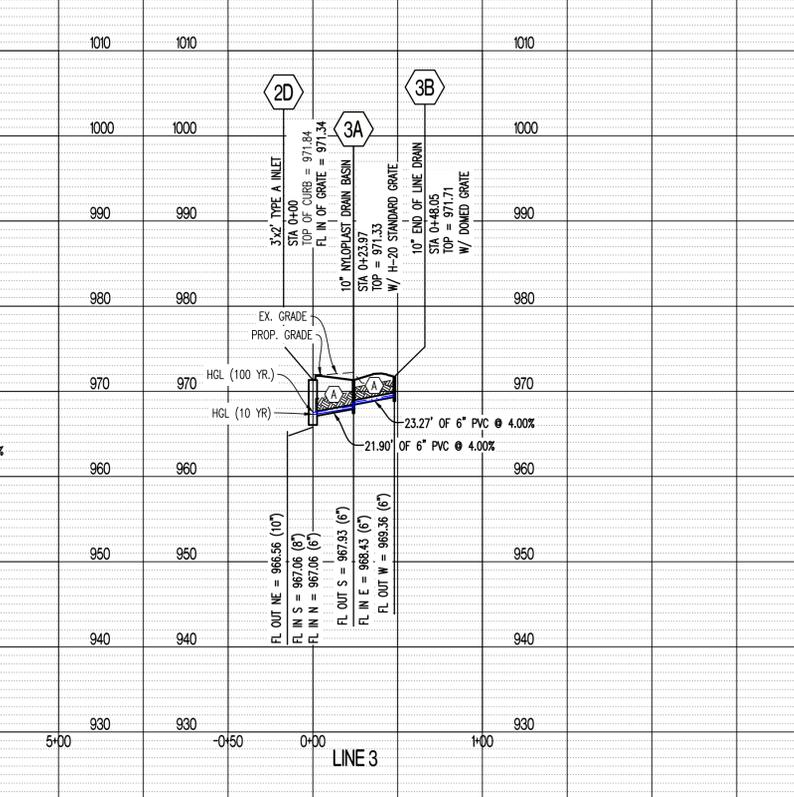
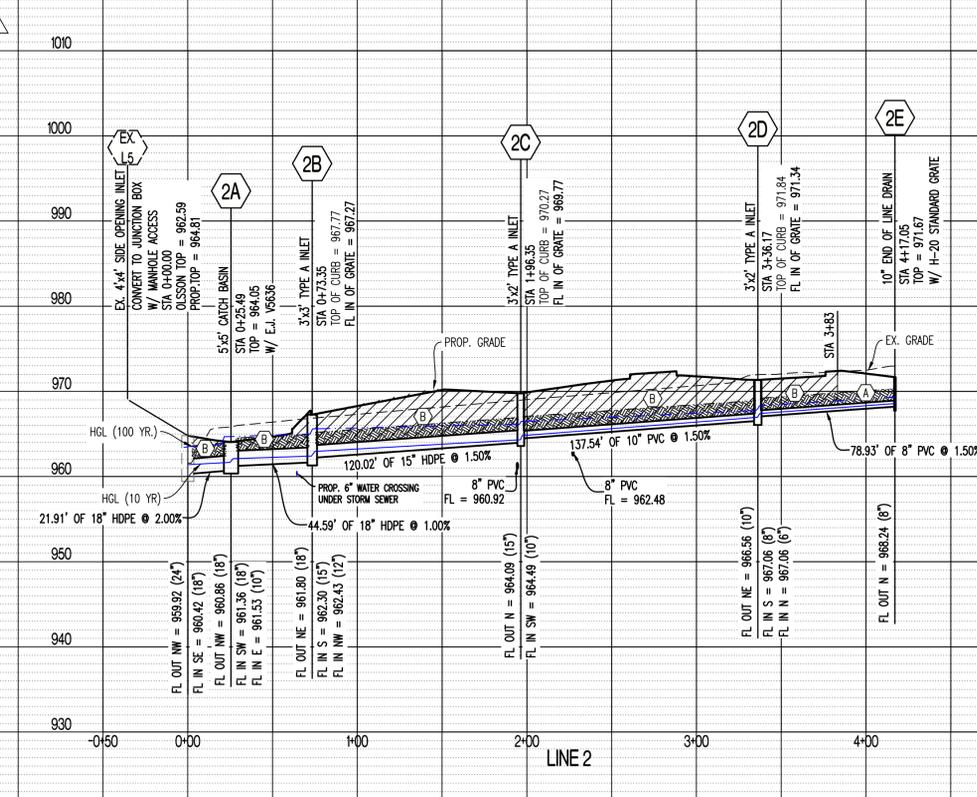
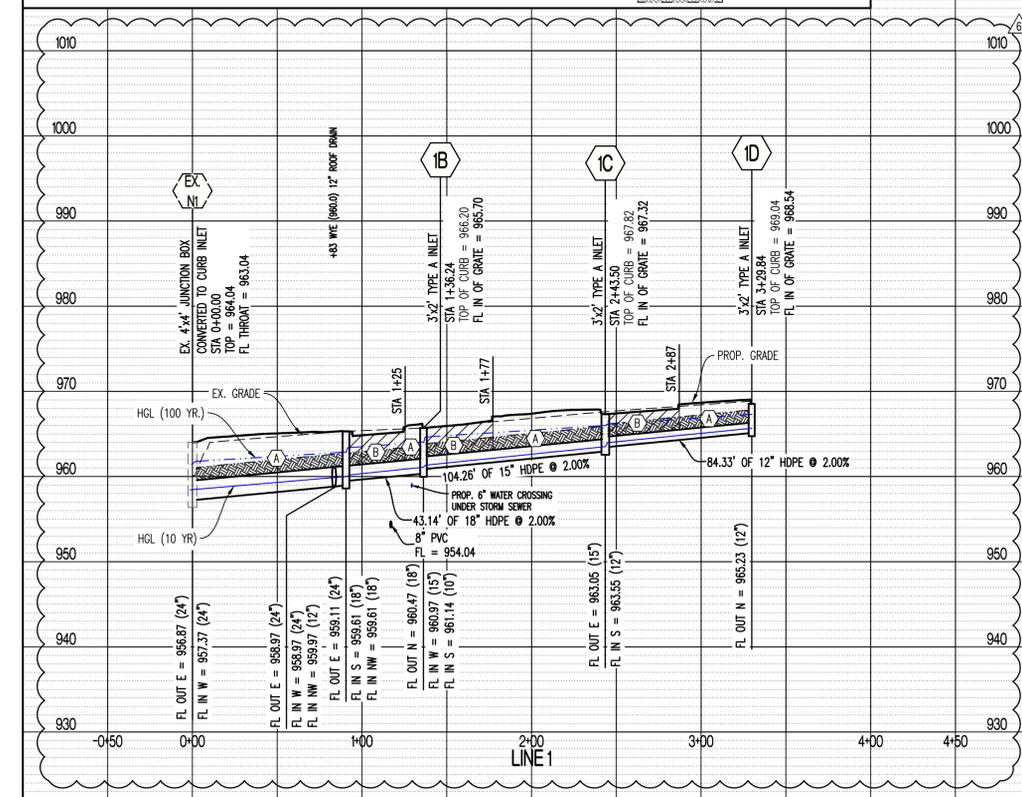
LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
 STORM PROFILE - LINES 1-6

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET:
 CE 6.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 5-8\Civil\ACAD Files\Construction Plans\230286 Zone 1 Lot 5-8 Storm Base.dwg



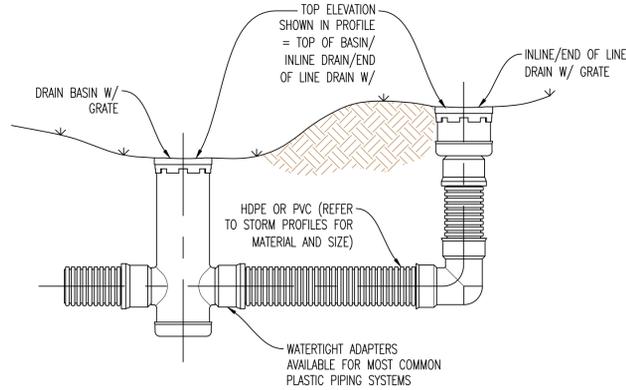
SCALE:
HORIZ 1" = 50'
VERT 1" = 10'

LEGEND OF LABELS:

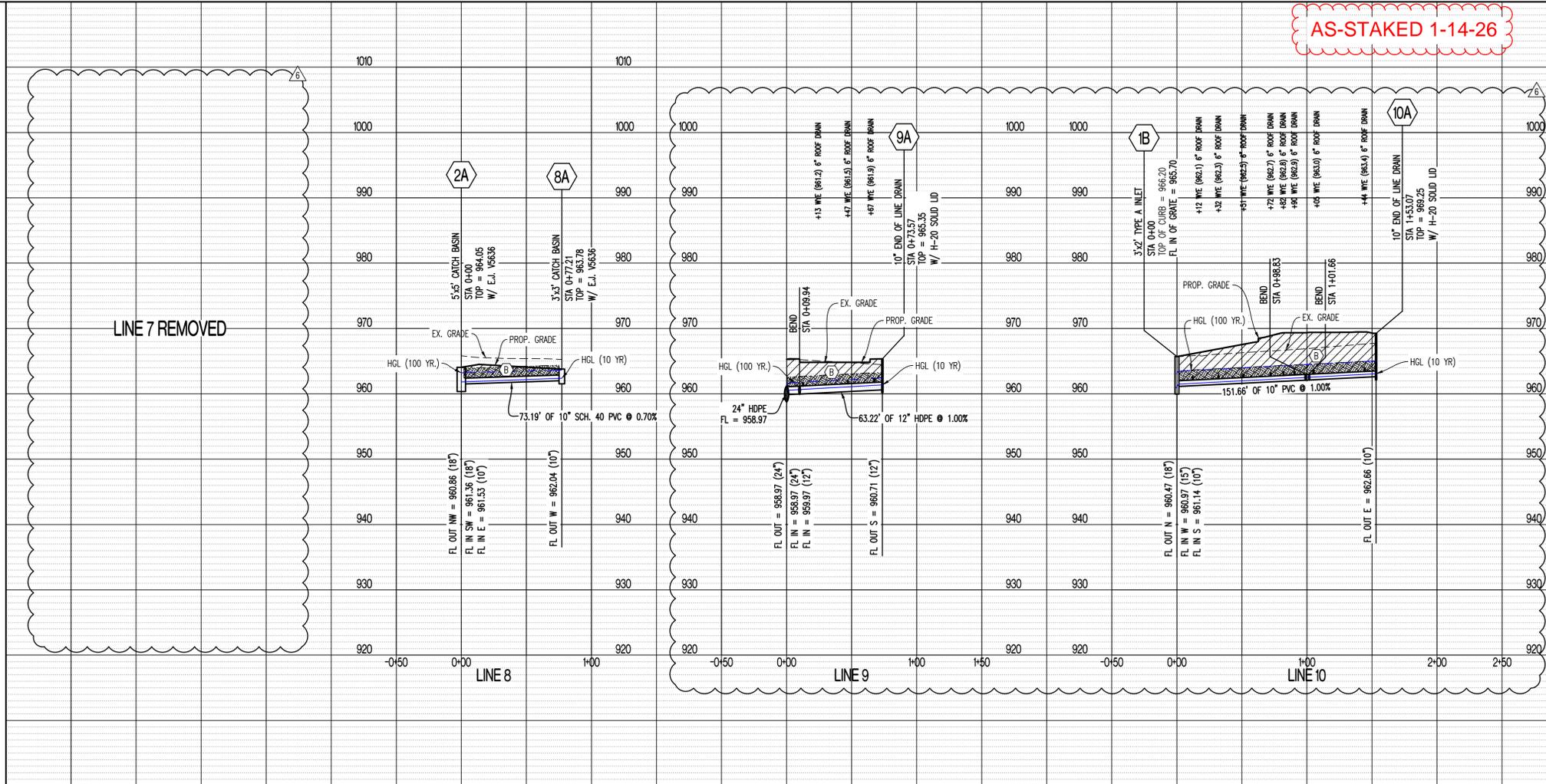
- Ⓐ REFER TO PIPE EMBEDMENT DETAIL 6 ON CE 6.3.
- Ⓑ REFER TO PIPE EMBEDMENT DETAIL 5 ON CE 6.3.

GENERAL NOTES:

- 1) ALL PORTIONS OF THIS STORM SEWER SHALL BE PRIVATE.
- 2) LENGTHS AND SLOPES OF PIPE ARE MEASURED FROM EDGE OF STRUCTURE TO EDGE OF STRUCTURE.
- 3) COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.

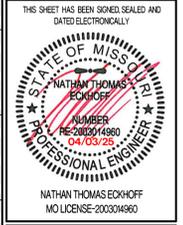


1 TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN



REVISIONS:

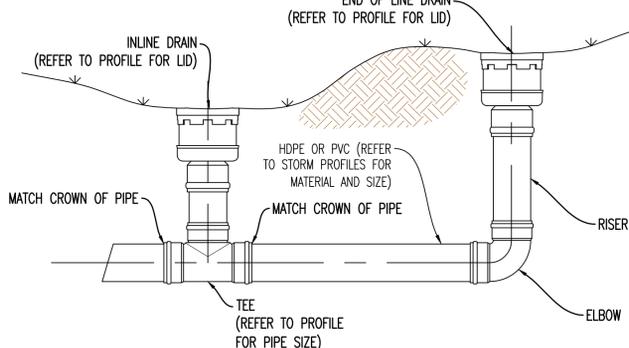
NO.	DATE
ORIGINAL	05/27/2024
REV 1	07/23/2024
REV 2	07/23/2024
REV 3	07/28/2024
REV 4	07/28/2024
REV 5	07/28/2024
REV 6	04/03/2025



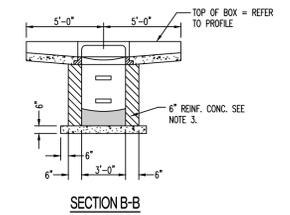
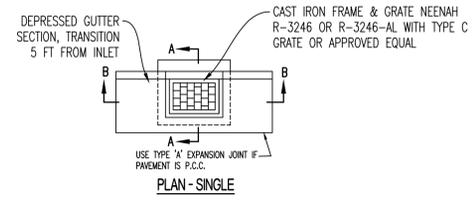
PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1008 W. Illinois Blvd., Ste. 100
Columbia, Missouri 65203
(314) 487-0299
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000001001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
LEES SUMMIT, JACKSON COUNTY, MISSOURI

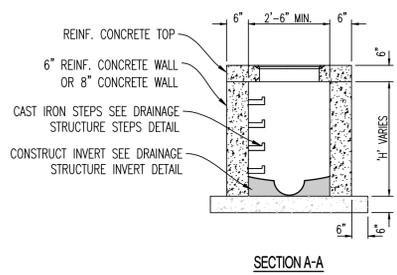
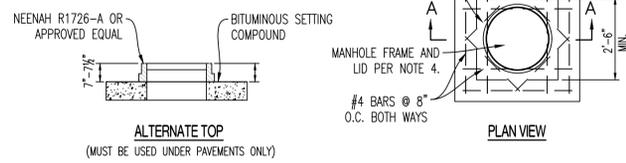


1A TYPICAL INSTALLATION OF INLINE DRAIN AND END OF LINE DRAIN



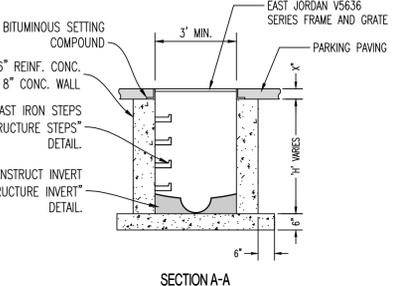
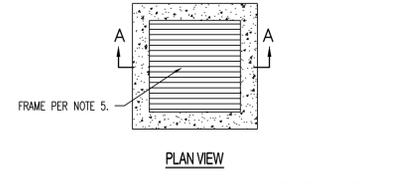
- NOTES:
1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
 2. REINFORCING STEEL SHALL BE GRADE 60
 3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
 4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.

2 SINGLE TYPE "A" INLET



- NOTES:
1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
 2. REINFORCING STEEL SHALL BE GRADE 60
 3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
 4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.
 5. FRAME AND LID SHALL BE NEEHAH R-1960-A (TYPE C LID) OR APPROVED EQUAL.

3 JUNCTION BOX



- NOTES:
1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
 2. REINFORCING STEEL SHALL BE GRADE 60
 3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
 4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.
 5. FRAME SHALL BE EAST JORDAN V5636 SERIES ASSEMBLY OR APPROVED EQUAL.

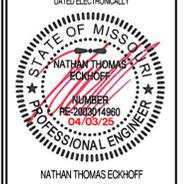
4 CATCH BASIN IN PAVEMENT

DRAWING INCLUDES:
STORM PROFILE - LINES 7-10 & STORM DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET: CE 62

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY



NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1008 W. Wilson Blvd., Ste. 100
Columbia, Missouri 65205
(314) 487-0299
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#00000001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
LEES SUMMIT, JACKSON COUNTY, MISSOURI

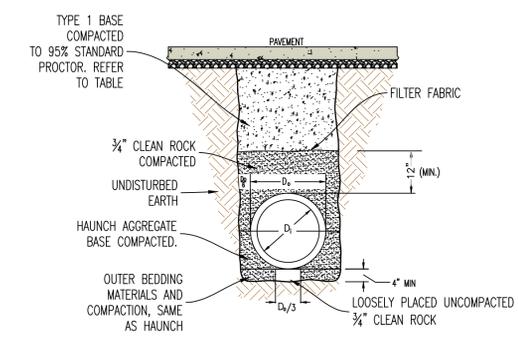
DRAWING INCLUDES:

STORM DETAILS

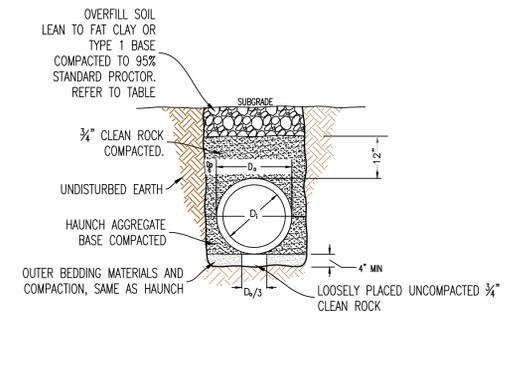
DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 63

STRUCTURAL FILL COMPACTION REQUIREMENTS

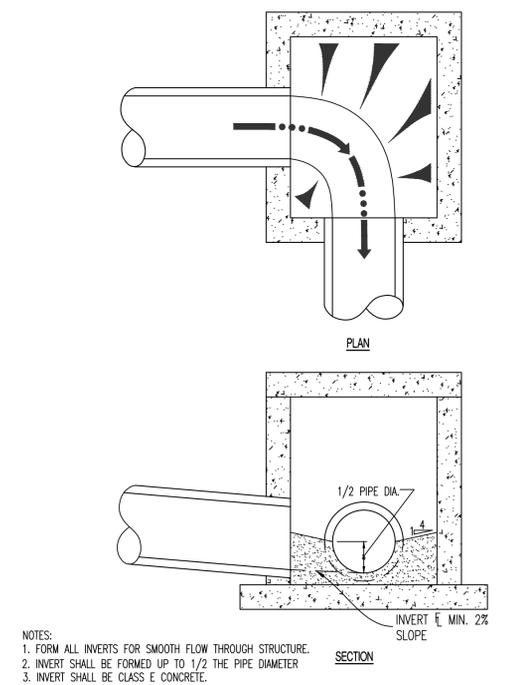
SOIL FILL THICKNESS	<ul style="list-style-type: none"> 9-INCHES OR LESS WHEN USING HEAVY SELF-PROPELLED COMPACTION EQUIPMENT 6-INCHES OR LESS WHEN USING HAND GUIDED OR LIGHT SELF-PROPELLED EQUIPMENT
COMPACTION/MOISTURE CONTENT REQUIREMENTS	<ul style="list-style-type: none"> LEAN TO FAT CLAY AND FAT CLAY <ul style="list-style-type: none"> 2% BELOW STANDARD PROCTOR OPTIMUM MOISTURE CONTENT (OMC) TO 4% ABOVE THE STANDARD PROCTOR OPTIMUM MOISTURE CONTENT LEAN CLAY AND SILT <ul style="list-style-type: none"> 2% BELOW TO 3% ABOVE STANDARD PROCTOR OMC GRANULAR <ul style="list-style-type: none"> WORKABLE MOISTURE CONTENT AND SHALL NOT PUMP WHEN PROOF-ROLLED
COMPACTION REQUIREMENTS	<p>95% OF STANDARD PROCTOR DRY DENSITY (ASTM D-698)</p> <ol style="list-style-type: none"> WE RECOMMEND ENGINEERED FILL BE TESTED FOR MOISTURE CONTENT AND COMPACTION DURING PLACEMENT. SHOULD THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED. AS STATED WITHIN ASTM D698, THIS PROCEDURE IS INTENDED FOR SOILS WITH 30% OR LESS MATERIAL LARGER THAN 3/4", ACCORDINGLY, WE RECOMMEND FULL TIME PROOF-ROLL OBSERVATION BE PERFORMED INSTEAD OF MOISTURE DENSITY TESTING FOR MATERIALS CONTAINING MORE THAN 30% AGGREGATE RETAINED ON THE 3/4" SIEVE.
NOTES:	<ol style="list-style-type: none"> IF LIMESTONE SCREENINGS ARE USED AS NEW STRUCTURAL FILL, THE CONTRACTOR SHOULD BE AWARE THIS MATERIAL IS EXTREMELY SUSCEPTIBLE TO DEGRADATION UPON WETTING WHICH CAN RESULT IN DEEP-SEATED PUMPING AND RUTTING. LIMESTONE SCREENINGS THAT PUMP AND RUT ARE NOT ACCEPTABLE FOR USE AS NEW STRUCTURAL FILL OR FOR LOW VOLUME CHANGE MATERIAL AND WILL NEED TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.



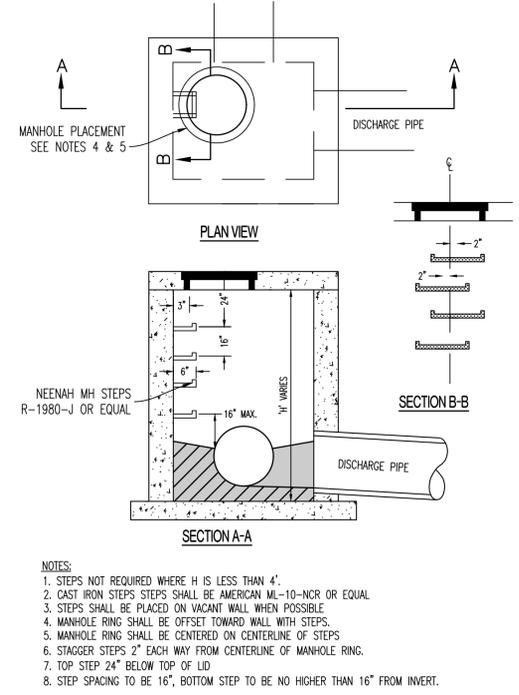
5 PIPE EMBEDMENT (UNDER PAVEMENT)



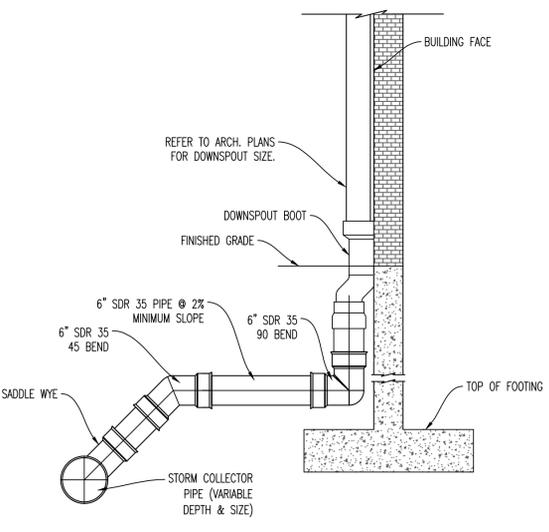
6 PIPE EMBEDMENT (NOT UNDER PAVEMENT)



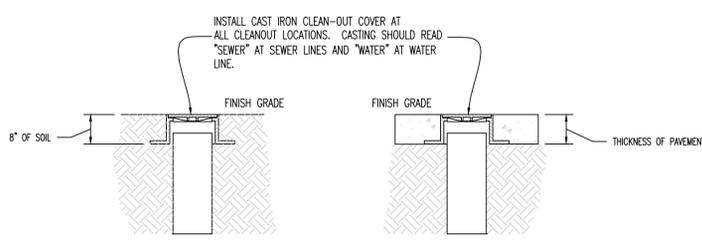
7 DRAINAGE STRUCTURE INVERT



8 DRAINAGE STRUCTURE STEPS



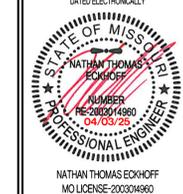
9 ROOF DRAIN DETAIL



10 CLEANOUT DETAIL

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY



PREPARED BY:
CROCKETT
 ENGINEERING CONSULTANTS
 1000 W. Wilson Blvd., Bldg. 1
 Columbia, Missouri 65203
 (373) 447-0992
 www.crockettengineering.com
 Missouri Certificate of Authority #200015101

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY LOTS 5-8 LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

25-YR STORM CALCULATIONS

DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

SHEET:

CE 6.4



PROJECT: The Village at Discovery Lots 5-8
 CALCULATED BY: MWB CHECKED BY: NTE
 DATE: 07/19/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCULATIONS															
AREA NO.	DESCRIPTION	STRUCTURE LABEL	INLET TYPE	OVERLAND FLOW HYDROLOGY				GUTTER AND INLET HYDRAULICS				NOTES			
				TIME OF CONCENTRATION (min)	RAINFALL INTENSITY (in/hr)	AREA (ac)	CA	RUNOFF (cfs)	GUTTER FLOW (cfs)	GUTTER SLOPE (ft/ft)	DEPTH OF GUTTER FLOW (in)		THEORETICAL INLET CAPACITY (cfs)	DESIGN INLET CAPACITY (cfs)	INLET BYPASS FLOW (cfs)
1	1D	A		0.81	0.13	0.11	7.4	0.77				9.80	7.84	0.00	TYPE A (IN SUMP)
2	1C	A		0.81	0.14	0.11	7.4	0.83				9.80	7.84	0.00	TYPE A (IN SUMP)
3	1B	A		0.81	0.15	0.12	7.4	0.89				9.80	7.84	0.00	TYPE A (IN SUMP)
4	EX N1	CURB		0.81	0.50	0.41	7.4	2.98				8.80	7.04	0.00	4 SIDE OPEN INLET (2.2 CFS/FT)
5	2E	AREA		0.30	0.11	0.03	7.4	0.24				0.79	0.63	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.7' OF HEAD
6	2D	A		0.81	0.27	0.22	7.4	1.61				9.80	7.84	0.00	TYPE A (IN SUMP)
7	2C	A		0.81	0.31	0.25	7.4	1.85				0.79	0.63	0.00	TYPE A (IN SUMP)
8	2B	A		0.81	0.07	0.06	7.4	0.42				9.80	7.84	0.00	TYPE A (IN SUMP)
9	2A	CB		0.81	0.23	0.19	7.4	1.37				13.40	10.72	0.00	EJ V5636 W/ 0.4' OF HEAD
10	3B	AREA		0.30	0.01	0.00	7.4	0.02				0.73	0.58	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
11	3A	AREA		0.30	0.03	0.01	7.4	0.07				0.89	0.71	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
12	4B	AREA		0.30	0.12	0.04	7.4	0.26				1.42	1.14	0.00	12' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
13	4A	AREA		0.30	0.16	0.05	7.4	0.35				1.42	1.14	0.00	12' NYLOPLAST (DOMED GRATE) W/ 0.5' OF HEAD
14	5A	A		0.81	0.83	0.67	7.4	4.94				9.80	7.84	0.00	TYPE A (IN SUMP)
15	6C	AREA		0.30	0.20	0.06	7.4	0.44				1.27	1.02	0.00	10' NYLOPLAST (DOMED GRATE) W/ 0.5' OF HEAD
16	6B	A		0.81	0.14	0.11	7.4	0.83				9.80	7.84	0.00	TYPE A (IN SUMP)
17	6A	AREA		0.30	0.06	0.02	7.4	0.13				0.66	0.53	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
18	EX D13	CB		0.30	0.06	0.02	7.4	0.13				4.10	3.28	0.00	5 SIDE OPEN INLET (0.82 CFS/FT)
19	8A	CB		0.50	0.32	0.16	7.4	1.18				13.40	10.72	0.00	EJ V5636 W/ 0.4' OF HEAD
				0.99	0.15	0.15	7.4	1.09							Lot 6
				0.99	0.24	0.24	7.4	1.75							Lot 8
				0.99	0.32	0.32	7.4	2.33							Lot 5
				0.99	0.57	0.56	7.4	4.18							Lot 7



PROJECT: The Village at Discovery Lots 5-8
 CALCULATED BY: MWB CHECKED BY: NTE
 DATE: 7/19/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE													
AREA NO.	DESCRIPTION	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION (min)	STORM DRAIN HYDRAULICS				STORM DRAIN SLOPE (ft/ft)	STORM DRAIN DRAINAGE DRAINAGE	STORM DRAIN MATERIAL	STORM DRAIN CAPACITY (cfs)	STORM DRAIN VELOCITY (ft/s)	NOTES
				CA	RAINFALL INTENSITY (in/hr)	RUNOFF (cfs)	STORM DRAIN SLOPE (ft/ft)						
LINE 1													
1	1D	-S	0.12	0.12	7.35	0.89	0.020	12	HDPE	5.46	6.95		
2	1C	-S	0.41	0.53	7.35	3.97	0.020	15	HDPE	9.99	8.06		
3	1B	-S	0.03	0.56	7.35	4.11	0.020	18	HDPE	16.09	9.11		
LINE 5													
1A	-S	0.67	1.23	7.35	9.05	0.020	24	HDPE	34.64	11.03			
LINE 2													
5	2E	-S	0.03	7.35	0.24	0.015	8	PVC	1.75	5.01			
6 + LINE 3													
2D	-S	0.23	0.26	7.35	1.94	0.015	12	HDPE	4.72	6.02			
7													
2C	-S	0.25	0.61	7.35	3.78	0.015	15	HDPE	8.57	6.98			
8 + LINE 4													
2B	-S	0.38	0.89	7.35	6.56	0.010	18	HDPE	11.37	6.44			
9 + LINE B													
2A	-S	0.35	1.24	7.35	9.11	0.020	18	HDPE	16.09	9.11			
LINE 3													
10	3B	-S	0.00	7.35	0.02	0.040	6	PVC	1.33	6.75			
11													
3A	-S	0.01	7.35	0.09	0.040	6	PVC	1.33	6.75				
ROOF (LOT B)													
4C	-S	0.24	0.24	7.35	1.75	0.010	10	PVC	2.59	4.75			
12	4B	-S	0.04	0.27	7.35	2.01	0.020	10	PVC	3.66	6.71		
13	4A	-S	0.05	0.32	7.35	2.36	0.010	12	HDPE	3.86	4.91		
LINE 5													
14	5A	-S	0.67	0.67	7.35	4.94	0.010	18	HDPE	11.37	6.44		
LINE 6													
ROOF (LOT 6)													
6D	-S	0.15	0.15	7.35	1.09	0.010	10	PVC	2.59	4.75			
15	6C	-S	0.06	0.21	7.35	1.53	0.010	10	PVC	2.59	4.75		
16	6B	-S	0.11	0.32	7.35	2.37	0.010	12	HDPE	3.86	4.91		
17	6A	-S	0.02	0.34	7.35	2.50	0.005	15	HDPE	4.95	4.03		
LINE 7													
ROOF (LOT 5)													
7A	-S	0.32	7.35	2.33	0.010	12	HDPE	3.86	4.91				
LINE 9													
19	8A	-S	0.16	7.35	1.18	0.007	10	PVC	2.17	3.97			

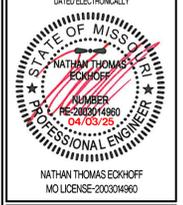
THE VILLAGE AT DISCOVERY PARK LOTS 5-8
 DRAINAGE AREA MAP
 SCALE: 1" = 60'



PREPARED BY:
CROCKETT
 ENGINEERING CONSULTANTS
 1000 W. Wilson Blvd., Bldg. 1
 Columbia, Missouri 65203
 (373) 447-0992
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority #200015101

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024

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CROCKETT
 ENGINEERING CONSULTANTS
 1000 W. WILSON BLVD.
 COLUMBIA, MISSOURI 65203
 (314) 447-0292
 www.crockettengineering.com
 Missouri Certificate of Authority #200015101

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY LOTS 5-8 LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
 100-YR STORM CALCULATIONS

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 6.5



PROJECT: The Village at Discovery Lots 5-8
 CALCULATED BY: MWB CHECKED BY: NTE
 DATE: 07/19/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCULATIONS

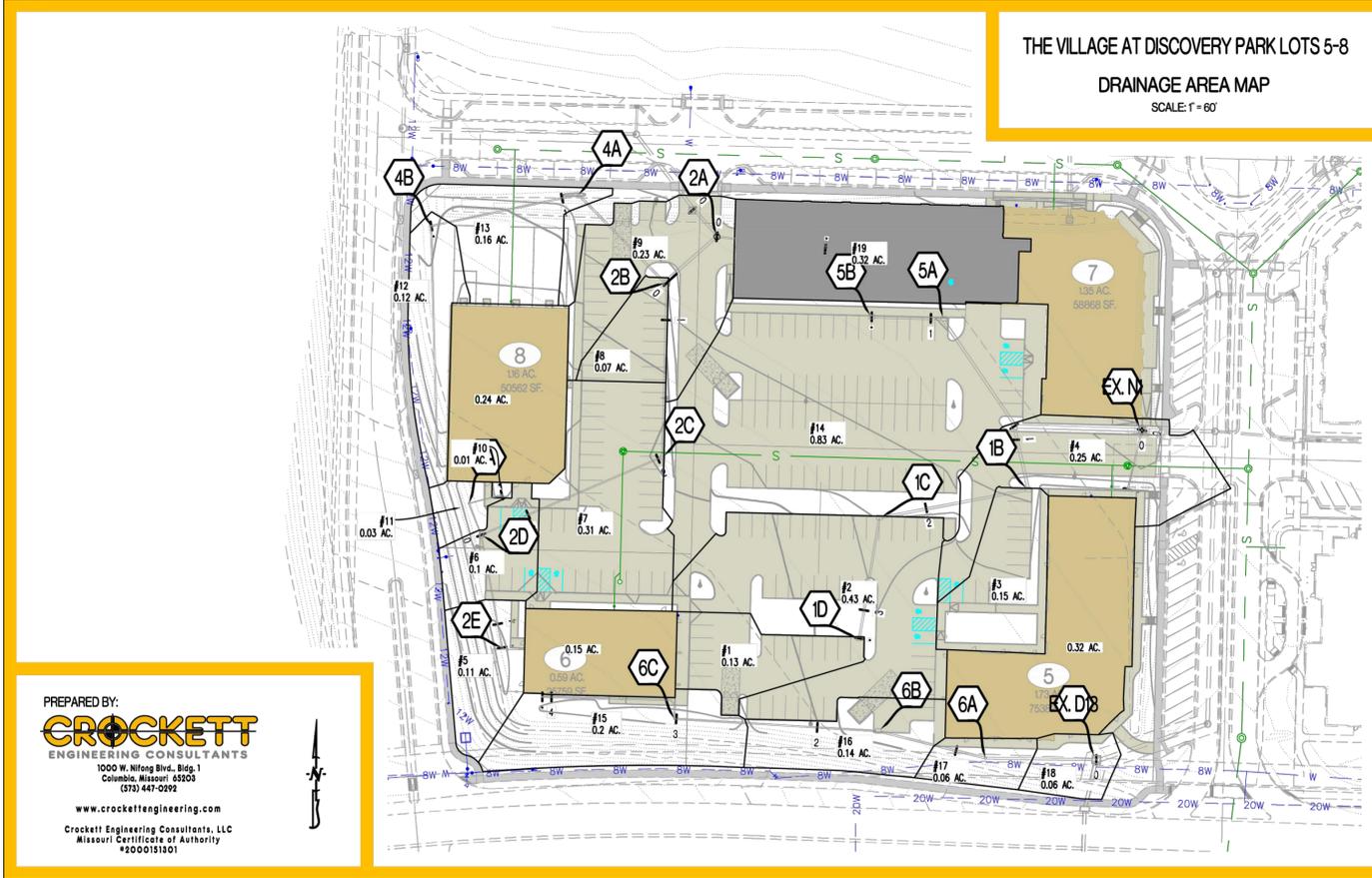
AREA NO.	STRUCTURE LABEL	INLET TYPE	OVERLAND FLOW HYDROLOGY				GUTTER AND INLET HYDRAULICS				NOTES			
			TIME OF CONCENTRATION (min)	AREA (ac)	CA	RUNOFF (cfs)	RUNOFF (cfs)	GUTTER SLOPE (ft/ft)	DEPTH OF GUTTER FLOW (ft)	THEORETICAL INLET CAPACITY (cfs)		DESIGN INLET CAPACITY (cfs)		
1	1D	A	0.99	0.13	0.13	10.3	133				9.80	7.84	0.00	TYPE A (IN SUMP)
2	1C	A	0.99	0.14	0.14	10.3	143				9.80	7.84	0.00	TYPE A (IN SUMP)
3	1B	A	0.99	0.15	0.15	10.3	153				9.80	7.84	0.00	TYPE A (IN SUMP)
4	EX N1	CURB	0.99	0.50	0.50	10.3	5.11				8.80	7.04	0.00	4 SIDE OPEN INLET (2.2 CFS/FT)
5	2E	AREA	0.38	0.11	0.04	10.3	0.43				0.79	0.63	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.7' OF HEAD
6	2D	A	0.99	0.27	0.27	10.3	2.76				9.80	7.84	0.00	TYPE A (IN SUMP)
7	2C	A	0.99	0.31	0.31	10.3	3.17				0.79	0.63	0.00	TYPE A (IN SUMP)
8	2B	A	0.99	0.07	0.07	10.3	0.72				9.80	7.84	0.00	TYPE A (IN SUMP)
9	2A	CB	0.99	0.23	0.23	10.3	2.35				13.40	10.72	0.00	EJ V5636 W/ 0.4' OF HEAD
10	3B	AREA	0.38	0.01	0.00	10.3	0.04				0.73	0.58	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
11	3A	AREA	0.38	0.03	0.03	10.3	0.31				0.89	0.71	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
12	4B	AREA	0.38	0.12	0.06	10.3	0.46				1.42	1.14	0.00	12' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
13	4A	AREA	0.38	0.16	0.06	10.3	0.62				1.65	1.32	0.00	12' NYLOPLAST (DOMED GRATE) W/ 0.5' OF HEAD
14	5A	A	0.99	0.83	0.82	10.3	8.48				9.80	7.84	0.00	TYPE A (IN SUMP)
15	6C	AREA	0.38	0.20	0.08	10.3	0.77				1.27	1.02	0.00	10' NYLOPLAST (DOMED GRATE) W/ 0.5' OF HEAD
16	6B	A	0.99	0.14	0.14	10.3	1.43				9.80	7.84	0.00	TYPE A (IN SUMP)
17	6A	AREA	0.38	0.06	0.02	10.3	0.23				0.66	0.53	0.00	10' NYLOPLAST (STANDARD GRATE) W/ 0.5' OF HEAD
18	EX D13	CB	0.38	0.06	0.02	10.3	0.23				4.10	3.28	0.00	5 SIDE OPEN INLET (0.82 CFS/FT)
19	8A	CB	0.63	0.32	0.20	10.3	2.06				13.40	10.72	0.00	EJ V5636 W/ 0.4' OF HEAD
			0.99	0.15	0.15	10.3	1.53							Lot 6
			0.99	0.24	0.24	10.3	2.45							Lot 8
			0.99	0.32	0.32	10.3	3.27							Lot 5
			0.99	0.57	0.56	10.3	5.62							Lot 7



PROJECT: The Village at Discovery Lots 5-8
 CALCULATED BY: MWB CHECKED BY: NTE
 DATE: 7/19/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE

AREA NO.	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION (min)	STORM DRAIN HYDRAULICS				VELOCITY FLOWING FULL (ft/s)	NOTES
			AREA (ac)	RUNOFF (cfs)	STORM DRAIN SLOPE (ft/ft)	STORM DRAIN DIAMETER (in)		
LINE 1								
1	1D	+5	0.15	0.15	10.32	1.53	0.020	12 HDPE 5.46 6.95
2	1C	+5	0.60	0.64	10.32	6.64	0.020	15 HDPE 9.89 8.06
3	1B	+5	0.04	0.68	10.32	7.07	0.020	18 HDPE 16.09 9.11
LINE 5	1A	+5	0.82	1.51	10.32	15.55	0.020	24 HDPE 34.64 11.03
LINE 2								
6	2E	+5	0.04	0.04	10.32	0.43	0.015	8 PVC 1.76 5.01
6 + LINE 3	2D	+5	0.30	0.34	10.32	3.53	0.015	12 HDPE 4.72 6.02
7	2C	+5	0.31	0.65	10.32	6.70	0.015	15 HDPE 8.57 6.98
8 + LINE 4	2B	+5	0.41	1.06	10.32	10.95	0.010	18 HDPE 11.37 6.44
9 + LINE 8	2A	+5	0.43	1.49	10.32	15.36	0.020	18 HDPE 16.09 9.11
LINE 3								
10	3B	+5	0.00	0.04	10.32	0.04	0.040	6 PVC 1.33 6.75
11	3A	+5	0.03	0.03	10.32	0.35	0.040	6 PVC 1.33 6.75
LINE 4								
ROOF (LOT 8)	4C	+5	0.24	0.24	10.32	2.45	0.010	10 PVC 2.59 4.75
12	4B	+5	0.05	0.28	10.32	2.92	0.020	10 PVC 3.66 6.71
13	4A	+5	0.06	0.34	10.32	3.54	0.010	12 HDPE 3.86 4.91
LINE 5								
14	5A	+5	0.82	0.82	10.32	8.48	0.010	18 HDPE 11.37 6.44
LINE 6								
ROOF (LOT 6)	6D	+5	0.15	0.15	10.32	1.53	0.010	10 PVC 2.59 4.75
15	6C	+5	0.08	0.22	10.32	2.31	0.010	10 PVC 2.59 4.75
16	6B	+5	0.14	0.36	10.32	3.74	0.010	12 HDPE 3.86 4.91
17	6A	+5	0.02	0.38	10.32	3.97	0.005	15 HDPE 4.95 4.03
LINE 7								
ROOF (LOT 5)	7A	+5	0.32	0.32	10.32	3.27	0.010	12 HDPE 3.86 4.91
LINE 8								
19	8A	+5	0.20	0.32	10.32	2.06	0.007	10 PVC 2.17 3.97



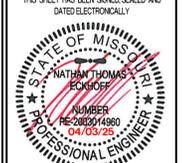
PREPARED BY:
CROCKETT
 ENGINEERING CONSULTANTS
 1000 W. WILSON BLVD., BLDG. 1
 COLUMBIA, MISSOURI 65203
 (314) 447-0292
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority #200015101

ASBUILTS 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 2	09/03/2024

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NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1008 W. HIGHWAY 263
COLUMBIA, MISSOURI 65203
(314) 487-0299
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000001001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

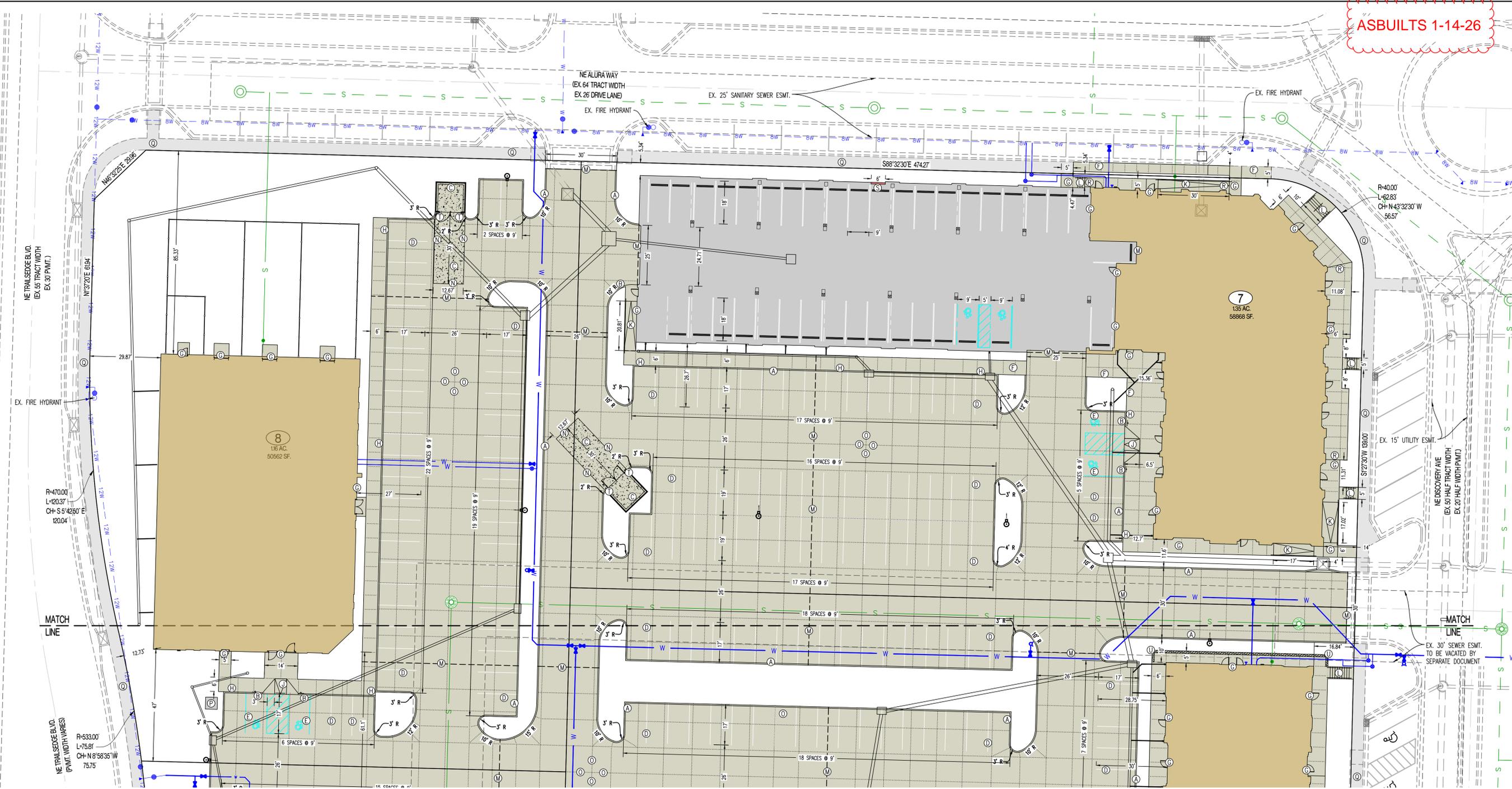
LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

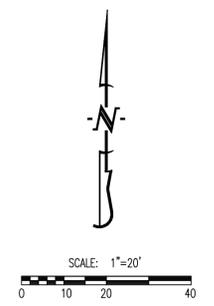
SITE PLAN SHEET 1

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET:
CE 7.1



- LEGEND OF LABELS**
- (A) CONSTRUCT LIGHT DUTY CONCRETE W/ INTEGRAL CURB AS SHOWN. REFER TO DETAIL 1 & 2 ON CE 7.1.
 - (B) TRANSITION FROM 6" CURB TO 0" CURB. REFER TO CE 3.0-CE 3.6.
 - (C) DUMPSTER PAD AREA W/ INTEGRAL CURB AS SHOWN. REFER DETAIL 7 ON CE 8.1. REFER TO ARCHITECTURAL PLANS FOR PROPOSED DUMPSTER ENCLOSURE DETAILS.
 - (D) PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE (TYPICAL) ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.
 - (E) CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AND ADA RAMP. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAIL 10 ON CE 8.2.
 - (F) CONSTRUCT 4" THICK, PCC WALK PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER DETAIL 5 ON CE 8.1.
 - (G) CONSTRUCT THICKENED EDGE SIDEWALK/PAVEMENT ABUTTING BUILDING PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 8.1.
 - (H) CONSTRUCT THICKENED EDGE SIDEWALK WALK AT BACK OF CURB PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 3 ON CE 8.1.
 - (I) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP AT BACK OF CURB. REFER TO DETAIL 8 ON CE 8.1.
 - (J) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH FLARE AT BACK OF CURB. REFER TO DETAIL 9 ON CE 8.1.
 - (K) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH HANDRAIL. REFER TO DETAIL 11 ON CE 8.2.
 - (L) INSTALL PCC STAIRS WITH HANDRAIL IN SIDEWALK. REFER TO DETAIL 12 ON CE 8.2 REFER TO CE 3.0-CE 3.6 FOR ELEVATIONS.
 - (M) INSTALL TYPE A OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL 6 ON CE 8.1.
 - (N) INSTALL TYPE B CONSTRUCTION JOINT WHERE PROPOSED CONCRETE PAVING ABUTS EXISTING CONCRETE PAVING. REFER TO DETAIL 6 ON CE 8.1.
 - (O) INSTALL TYPE C SAW JOINT IN PAVEMENT, MAXIMUM 12'X12' SQUARES (TYPICAL). REFER TO DETAIL 6 ON CE 8.1.
 - (P) PROPOSED TRANSFORMER PAD. COORDINATE WITH M.E.P. FOR EXACT SIZE AND LOCATION.
 - (Q) 5' STREET-SIDE SIDEWALK TO BE CONSTRUCTED. REFER TO OLSSON PLANS TITLED "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" DATED 10/18/2023.
 - (R) CONSTRUCT THICKENED EDGE SIDEWALK WITH EXPOSED FACE ADJACENT TO BUILDING AS SHOWN. REFER TO DETAIL 13 ON CE 8.1.
 - (S) CONSTRUCT BLOCK OUT (6" WIDE X 9" TALL MIN.) IN PARKING GARAGE. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION. REFER TO CE 3.1 FOR ELEVATIONS.
 - (T) INSTALL PIPE BOLLARD AS SHOWN. REFER TO DETAIL 13 ON CE 8.2.
 - (U) CONSTRUCT RETAINING WALL WITH QUADRANT PRIOR TO SIDEWALK CONSTRUCTION AS SHOWN. REFER TO CE 3.0-CE 3.6 FOR WALL HEIGHT. REFER TO DETAIL 14 ON #####.

- GENERAL NOTES:**
- ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE REQUIREMENTS OF THE FEDERAL AMERICANS WITH DISABILITIES ACT.
 - THE PAVEMENT JOINTS SHOWN ARE A GRAPHICAL REPRESENTATION OF A POSSIBLE JOINT CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH JOINT LAYOUT FOR APPROVAL BY ENGINEER PRIOR TO POURING OF PAVEMENT.
 - REFER TO ARCHITECTURAL PLANS FOR PARKING GARAGE LAYOUT. PARKING GARAGE PAVEMENT SHALL MATCH CROSS SECTION OF EXTERIOR PARKING LOTS.



CALCULATIONS: LOT 7

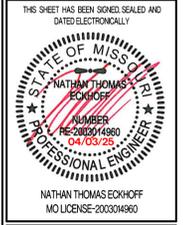
LAND AREA:	
TOTAL LAND AREA:	1.35 AC
BUILDING DETAILS:	
1ST FLOOR:	9,845 SQ.FT.
2ND FLOOR:	24,285 SQ.FT.
3RD FLOOR:	24,285 SQ.FT.
TOTAL S.F. (3-STORIES)	58,415 SQ.FT.
LOT COVERAGES:	
NET LAND AREA:	58,868 SQ.FT. 100%
TOTAL IMPERVIOUS SURFACE AREA:	47,873 SQ.FT. 81%
TOTAL OPEN SPACE:	10,995 SQ.FT. 19%
FLOOR AREA RATIO:	99%

CALCULATIONS: LOT 8

LAND AREA:	
TOTAL LAND AREA:	1.16 AC
BUILDING DETAILS:	
1ST FLOOR:	10,356 SQ.FT.
TOTAL S.F. (1-STORY)	10,356 SQ.FT.
LOT COVERAGES:	
NET LAND AREA:	50,562 SQ.FT. 100%
TOTAL IMPERVIOUS SURFACE AREA:	31,540 SQ.FT. 62%
TOTAL OPEN SPACE:	19,022 SQ.FT. 38%
FLOOR AREA RATIO:	20%

ASBUILTS 1-14-26

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024
REV. 2	08/28/2024
REV. 3	09/13/2024
REV. 5	07/28/2025



PREPARED BY:
CROCKETT ENGINEERS
 ENGINEERS & ARCHITECTS
 1000 N. Illinois St., Suite 200
 Columbia, Missouri 65203
 (314) 487-0291
 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
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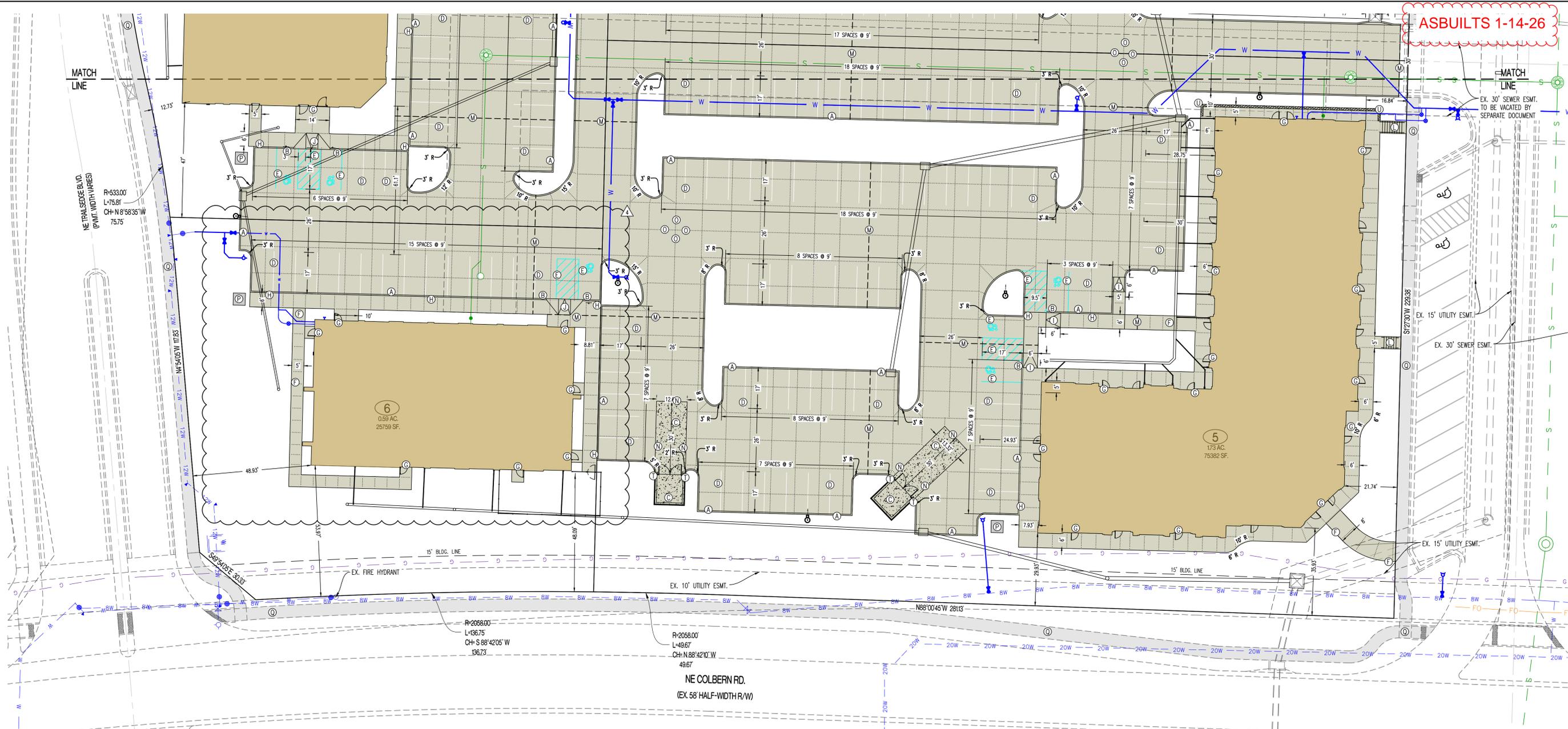
THE VILLAGE AT DISCOVERY

LOTS 5-8

LEES SUMMIT, JACKSON COUNTY, MISSOURI

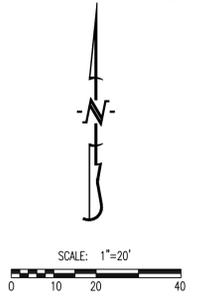
DRAWING INCLUDES:
 SITE PLAN SHEET 2

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 7.2



LEGEND OF LABELS	
(A)	CONSTRUCT LIGHT DUTY CONCRETE W/ INTEGRAL CURB AS SHOWN. REFER TO DETAIL 1 & 2 ON CE 7.1.
(B)	TRANSITION FROM 6" CURB TO 0" CURB. REFER TO CE 3.0-CE 3.6.
(C)	DUMPSTER PAD AREA W/ INTEGRAL CURB AS SHOWN. REFER DETAIL 7 ON CE 8.1. REFER TO ARCHITECTURAL PLANS FOR PROPOSED DUMPSTER ENCLOSURE DETAILS.
(D)	PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE (TYPICAL) ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.
(E)	CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AND ADA RAMPS. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAIL 10 ON CE 8.2.
(F)	CONSTRUCT 4" THICK, PCC WALK PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER DETAIL 5 ON CE 8.1.
(G)	CONSTRUCT THICKENED EDGE SIDEWALK/PAVEMENT ABUTTING BUILDING PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 8.1.
(H)	CONSTRUCT THICKENED EDGE SIDEWALK WALK AT BACK OF CURB PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 3 ON CE 8.1.
(I)	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP AT BACK OF CURB. REFER TO DETAIL 8 ON CE 8.1.
(J)	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH FLARE AT BACK OF CURB. REFER TO DETAIL 9 ON CE 8.1.
(K)	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH HANDRAIL. REFER TO DETAIL 11 ON CE 8.2.
(L)	INSTALL PCC STAIRS WITH HANDRAIL IN SIDEWALK. REFER TO DETAIL 12 ON CE 8.2 REFER TO CE 3.0-CE 3.6 FOR ELEVATIONS.
(M)	INSTALL TYPE A OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL 6 ON CE 8.1.
(N)	INSTALL TYPE B CONSTRUCTION JOINT WHERE PROPOSED CONCRETE PAVING ABUTS EXISTING CONCRETE PAVING. REFER TO DETAIL 6 ON CE 8.1.
(O)	INSTALL TYPE C SAW JOINT IN PAVEMENT, MAXIMUM 12'X12' SQUARES (TYPICAL). REFER TO DETAIL 6 ON CE 8.1.
(P)	PROPOSED TRANSFORMER PAD. COORDINATE WITH M.E.P. FOR EXACT SIZE AND LOCATION.
(Q)	5' STREET-SIDE SIDEWALK TO BE CONSTRUCTED. REFER TO OLSSON PLANS TITLED "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" DATED 10/18/2023.
(R)	CONSTRUCT THICKENED EDGE SIDEWALK WITH EXPOSED FACE ADJACENT TO BUILDING AS SHOWN. REFER TO DETAIL 13 ON CE 8.1.
(S)	CONSTRUCT BLOCK OUT (6' WIDE X 9' TALL MIN.) IN PARKING GARAGE. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION. REFER TO CE 3.1 FOR ELEVATIONS.
(T)	INSTALL PIPE BOLLARD AS SHOWN. REFER TO DETAIL 13 ON CE 8.2.
(U)	CONSTRUCT RETAINING WALL WITH GUARDRAIL PRIOR TO SIDEWALK CONSTRUCTION AS SHOWN. REFER TO CE 3.0-CE 3.6 FOR WALL HEIGHT. REFER TO DETAIL 14 ON #####.

- GENERAL NOTES:**
- ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE REQUIREMENTS OF THE FEDERAL AMERICANS WITH DISABILITIES ACT.
 - THE PAVEMENT JOINTS SHOWN ARE A GRAPHICAL REPRESENTATION OF A POSSIBLE JOINT CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH JOINT LAYOUT FOR APPROVAL BY ENGINEER PRIOR TO POURING OF PAVEMENT.
 - REFER TO ARCHITECTURAL PLANS FOR PARKING GARAGE LAYOUT, PARKING GARAGE PAVEMENT SHALL MATCH CROSS SECTION OF EXTERIOR PARKING LOTS.
 - PARKING CALCULATIONS ARE BASED ON APPROVED PRELIMINARY DEVELOPMENT PLANS. REFER TO "DISCOVERY PARK REZONING & PRELIMINARY DEVELOPMENT PLAN - ZONES 1 & 2" PREPARED BY OLSSON.



PARKING CALCULATIONS	
PARKING SUMMARY (LOT 5):	
SPACES REQUIRED:	
COMMERCIAL:	
OFFICES	
- 4 PER 1,000 SQ. FT. (NOT MEDICAL, DENTAL, OR VETERINARY) (9,000 SQ. FT.)	36 SPACES
- 5 PER 1,000 SQ. FT. (MEDICAL OR DENTAL) (4,580 SQ. FT.)	23 SPACES
RESIDENTIAL (36 UNITS):	
- 1.17 PER UNIT PLUS 0.15 PER UNIT FOR VISITORS	48 SPACES
PARKING SUMMARY (LOT 6):	
SPACES REQUIRED:	
COMMERCIAL:	
ANIMAL SERVICES	
- 2.5 PER 1,000 SQ. FT. (6,441 SQ. FT.)	16 SPACES
PARKING SUMMARY (LOT 7):	
SPACES REQUIRED:	
COMMERCIAL (9,845 SQ. FT.):	
OFFICES	
- 4 PER 1,000 SQ. FT. (NOT MEDICAL, DENTAL, OR VETERINARY) (6,000 SQ. FT.)	24 SPACES
- 5 PER 1,000 SQ. FT. (MEDICAL OR DENTAL) (3,845 SQ. FT.)	19 SPACES
RESIDENTIAL (46 UNITS):	
- 1.17 PER UNIT PLUS 0.15 PER UNIT FOR VISITORS	61 SPACES
PARKING SUMMARY (LOT 8):	
SPACES REQUIRED:	
COMMERCIAL:	
ANIMAL SERVICES	
- 2.5 PER 1,000 SQ. FT. (10,356 SQ. FT.)	26 SPACES
STANDARD SPACES REQUIRED:	253 SPACES
HANDICAP SPACES REQUIRED:	7 SPACES
SPACES PROVIDED:	
STANDARD SPACES PROVIDED:	241 SPACES
HANDICAP SPACES PROVIDED:	12 SPACES
EXISTING ADJACENT SPACES (TRACT B) PROVIDED:	39 SPACES
TOTAL SPACES PROVIDED:	280 SPACES

CALCULATIONS: LOT 5	
LAND AREA:	
TOTAL LAND AREA:	1.73 AC
BUILDING DETAILS:	
1ST FLOOR:	13,580 SQ.FT.
2ND FLOOR:	13,330 SQ.FT.
3RD FLOOR:	13,330 SQ.FT.
TOTAL S.F. (3-STORIES)	40,240 SQ.FT.
LOT COVERAGES:	
NET LAND AREA:	75,382 SQ.FT. 76%
TOTAL IMPERVIOUS SURFACE AREA:	57,124 SQ.FT. 24%
TOTAL OPEN SPACE:	18,258 SQ.FT. 19%
FLOOR AREA RATIO:	53%

CALCULATIONS: LOT 6	
LAND AREA:	
TOTAL LAND AREA:	0.59 AC
BUILDING DETAILS:	
1ST FLOOR:	6,442 SQ.FT.
TOTAL S.F. (1-STORY)	6,442 SQ.FT.
LOT COVERAGES:	
NET LAND AREA:	25,759 SQ.FT. 100%
TOTAL IMPERVIOUS SURFACE AREA:	12,931 SQ.FT. 50%
TOTAL OPEN SPACE:	12,828 SQ.FT. 50%
FLOOR AREA RATIO:	25%

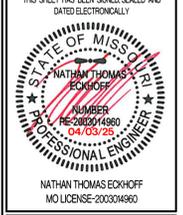
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ASBUILTS 1-14-26

REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY



NATHAN THOMAS ECKHOFF
MO LICENSE 200304960

PREPARED BY:
CROCKETT ENGINEERS & ARCHITECTS
1008 W. Illinois Blvd.
Columbia, Missouri 65205
(314) 487-0291
www.crockettengineering.com
Professional Engineer
Missouri Certificate of Authority
#000001001

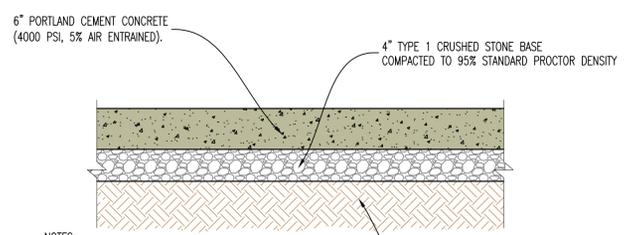
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARMS RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOTS 5-8
LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

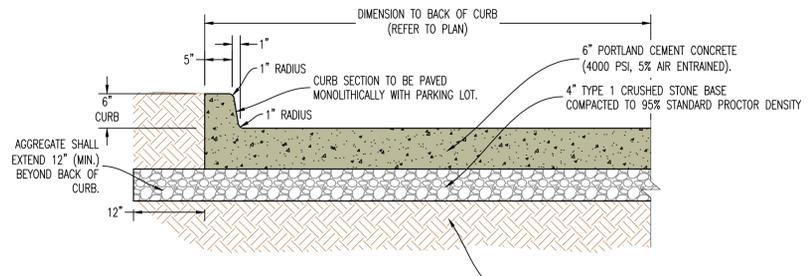
SITE DETAILS SHEET 1

DESIGNED: NTE
DRAWN: NMD
PROJECT NO: 230286
SHEET: CE 8.1



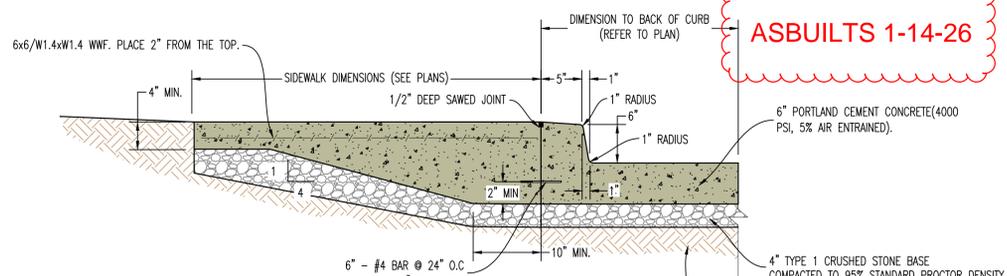
NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

1 LIGHT DUTY CONCRETE PAVEMENT CROSS-SECTION



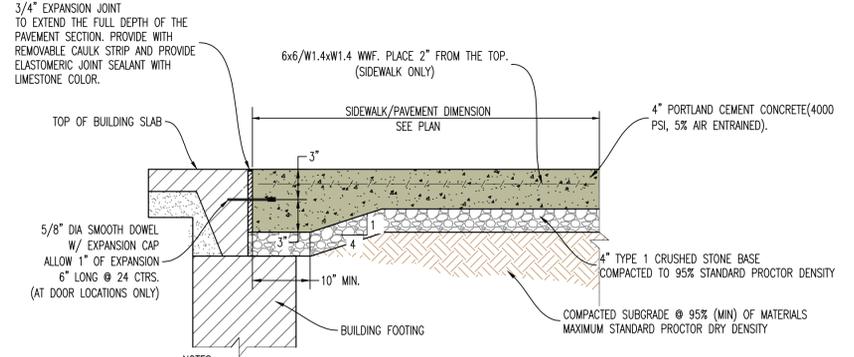
NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.
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2 6" CONCRETE BARRIER CURB CROSS-SECTION



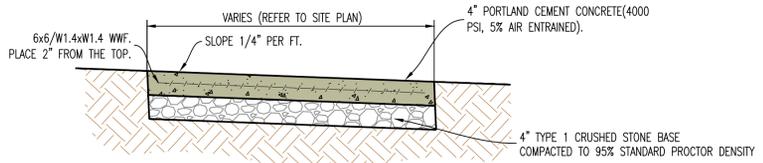
NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAN 12'X12' IN SIZE. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

3 THICKENED EDGE SIDEWALK WITH INTEGRAL CURB & GUTTER



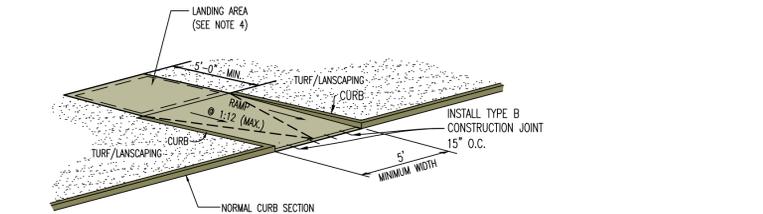
NOTES:
ALL LOW VOLUME CHANGE MATERIAL IN LOCATIONS OF SIDEWALK/PAVEMENT PLACED NEXT TO BUILDING IS TO BE REMOVED COMPLETELY AND REPLACED WITH TYPE 1 CRUSHED STONE BASE COMPACTED TO 95% STANDARD PROCTOR DENSITY PRIOR TO SIDEWALK/PAVEMENT INSTALLATION. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

4 SIDEWALK/PAVEMENT ABUTTING BUILDING



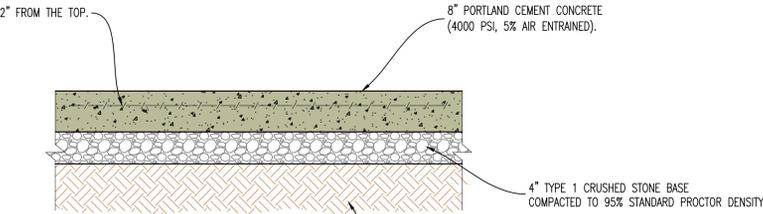
NOTE:
1. INSTALL 1/2" EXPANSION JOINTS AT INTERSECTIONS, RAMPS, STRUCTURES, AND DRIVEWAY APPROACHES. MAX. EXPANSION JOINT SPACING = 150'
2. INSTALL TRANSVERSE SAW JOINTS AT SPACING = SIDEWALK WIDTH. JOINT SEALER TO BE NON-BITUMINOUS (COLOR GRAY)
3. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

5 TYPICAL CONCRETE SIDEWALK



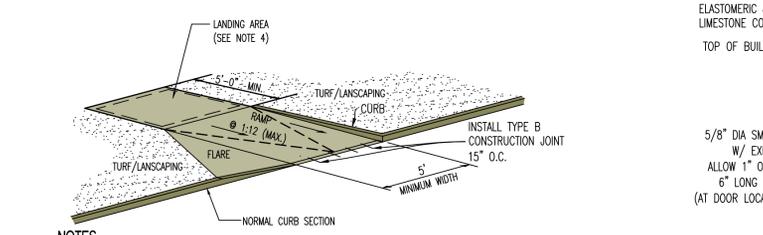
NOTES:
1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE. REFER TO GRADING PLAN.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
5. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

8 SIDEWALK RAMP WITH CURB



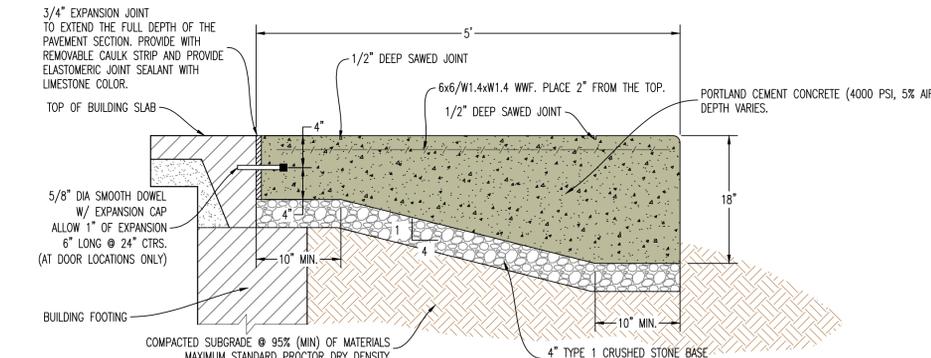
NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

7 HEAVY DUTY CONCRETE PAVEMENT CROSS-SECTION (REINFORCED)



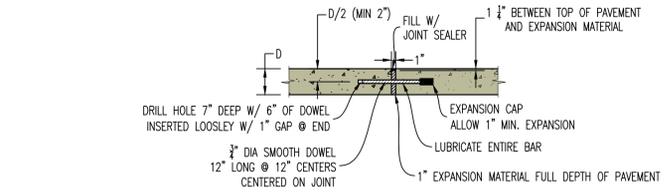
NOTES:
1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE. REFER TO GRADING PLAN.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
5. FLARE SLOPE NOT TO EXCEED 1:10.
6. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

9 SIDEWALK RAMP WITH CURB AND FLARE



NOTES:
ALL LOW VOLUME CHANGE MATERIAL IN LOCATIONS OF SIDEWALK/PAVEMENT PLACED NEXT TO BUILDING IS TO BE REMOVED COMPLETELY AND REPLACED WITH TYPE 1 CRUSHED STONE BASE COMPACTED TO 95% STANDARD PROCTOR DENSITY PRIOR TO SIDEWALK/PAVEMENT INSTALLATION. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

13 THICKENED EDGE SIDEWALK/PAVEMENT WITH EXPOSED FACE ABUTTING BUILDING



NOTE:
1. ALL BARS TO BE INSTALLED PERPENDICULAR TO EDGE AND IN SAME PLANE TO PREVENT LOCKING OF JOINT.
2. EDGE OF PAVEMENT TO BE SAWED/FORMED TO A CLEAN EDGE FOR INSTALLATION OF EXPANSION JOINT.

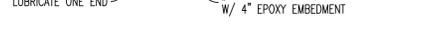
6 CONCRETE PAVEMENT JOINT DETAILS



TYPE A - EXPANSION JOINT



TYPE B - CONSTRUCTION JOINT

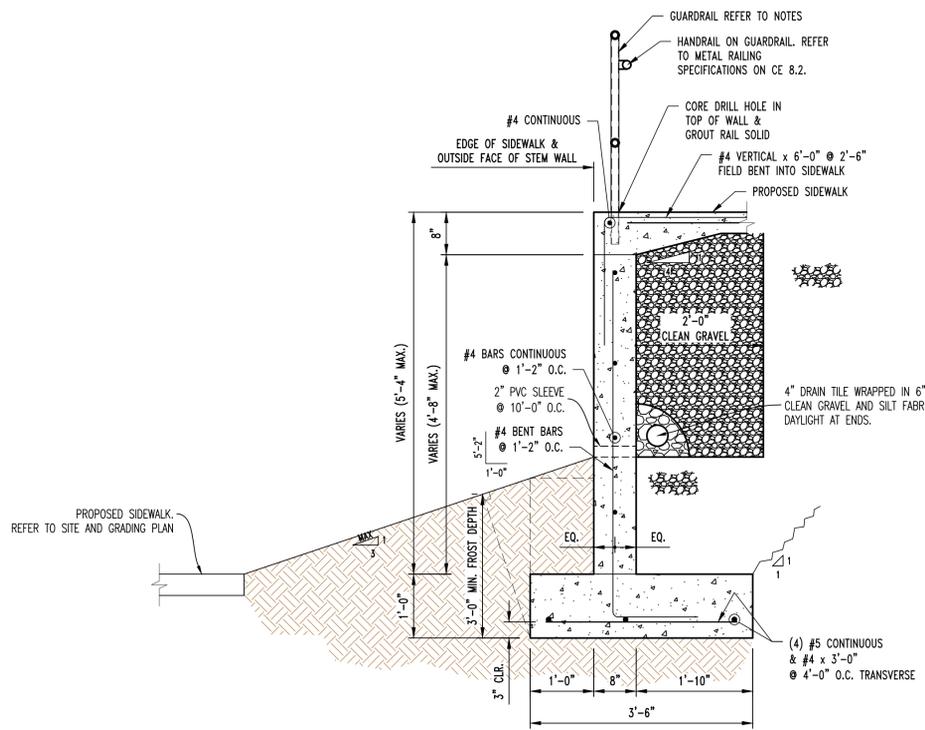


TYPE C - CONTROL JOINT SAWED



TYPE A ALTERNATE CONCRETE SILL

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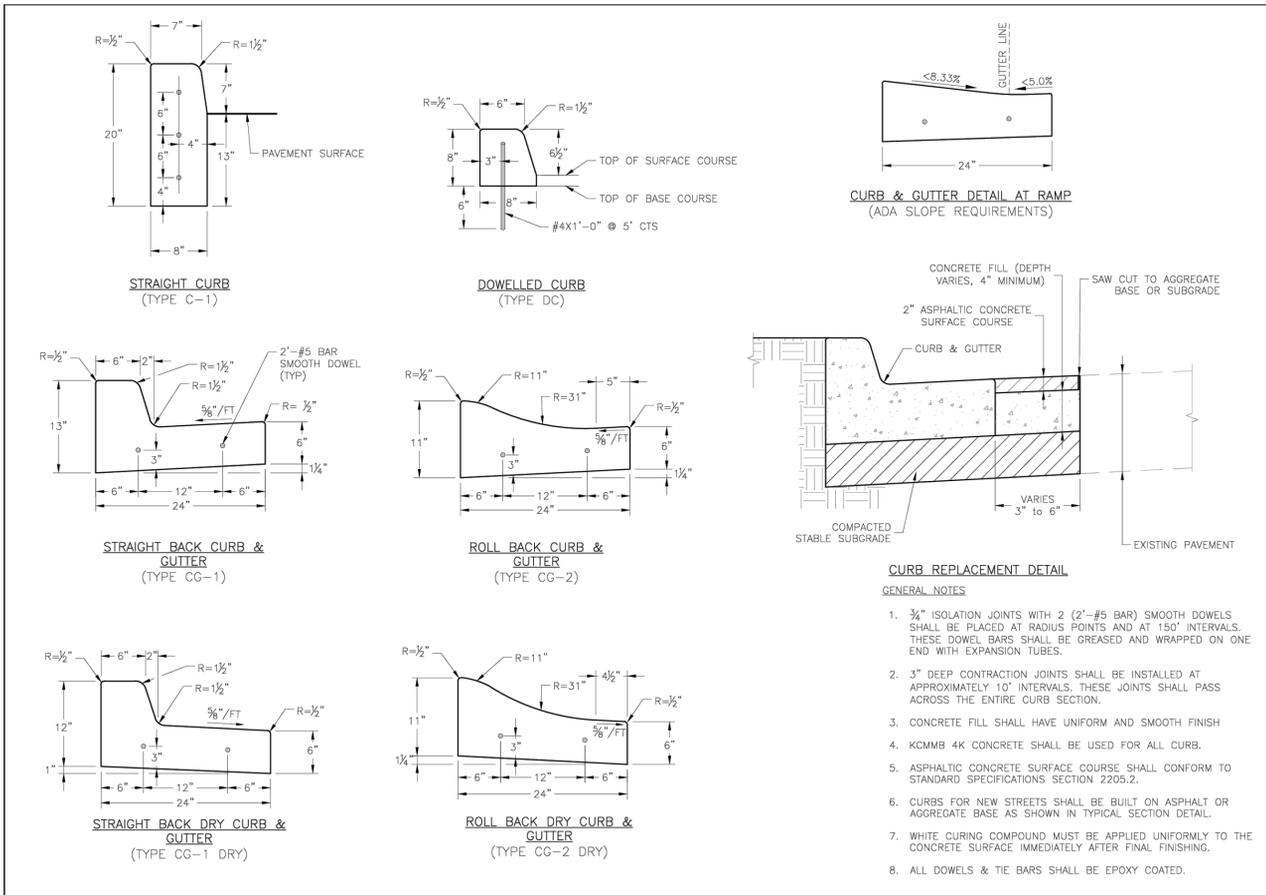
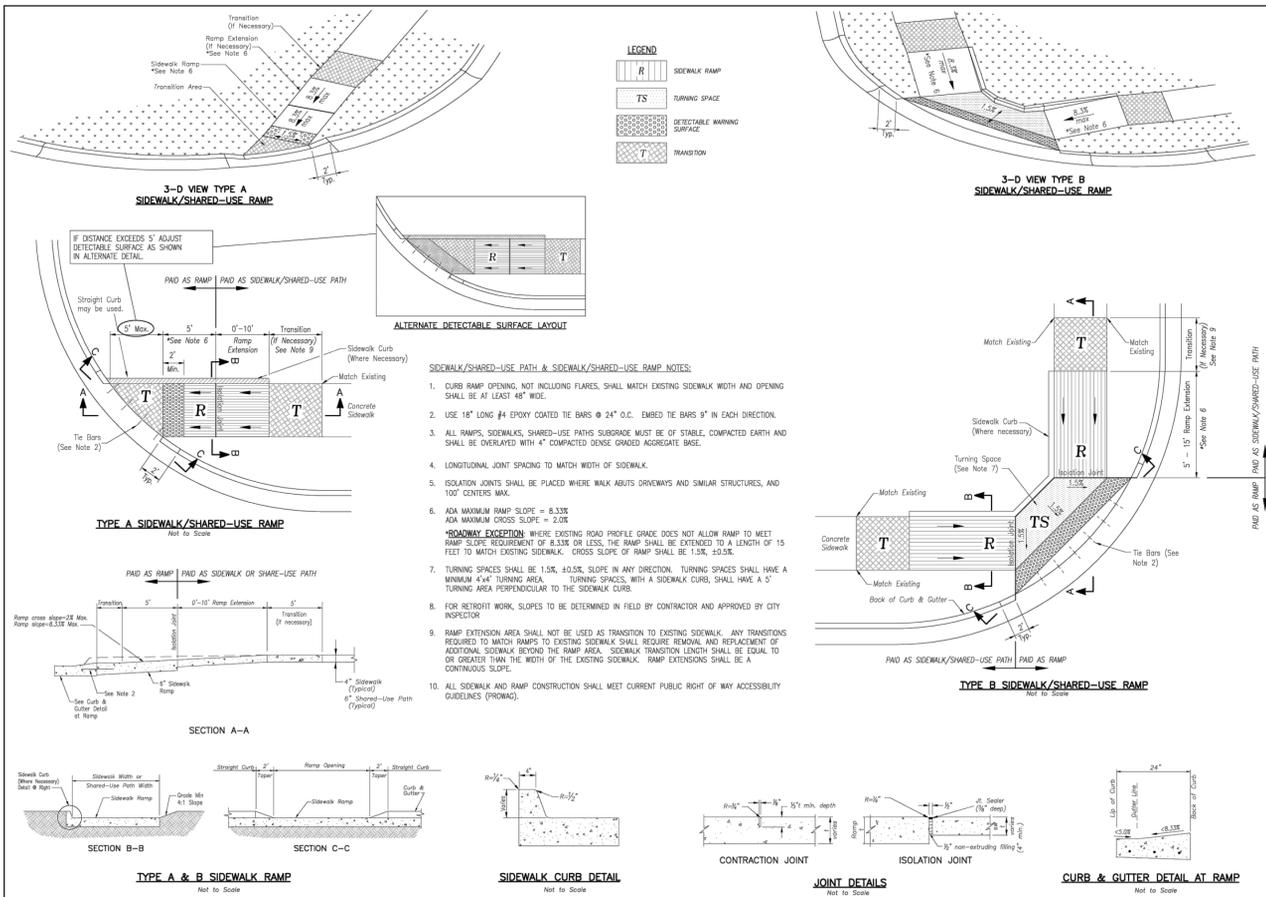


PEDESTRIAN GUARD RAIL REQUIREMENTS NOTE:

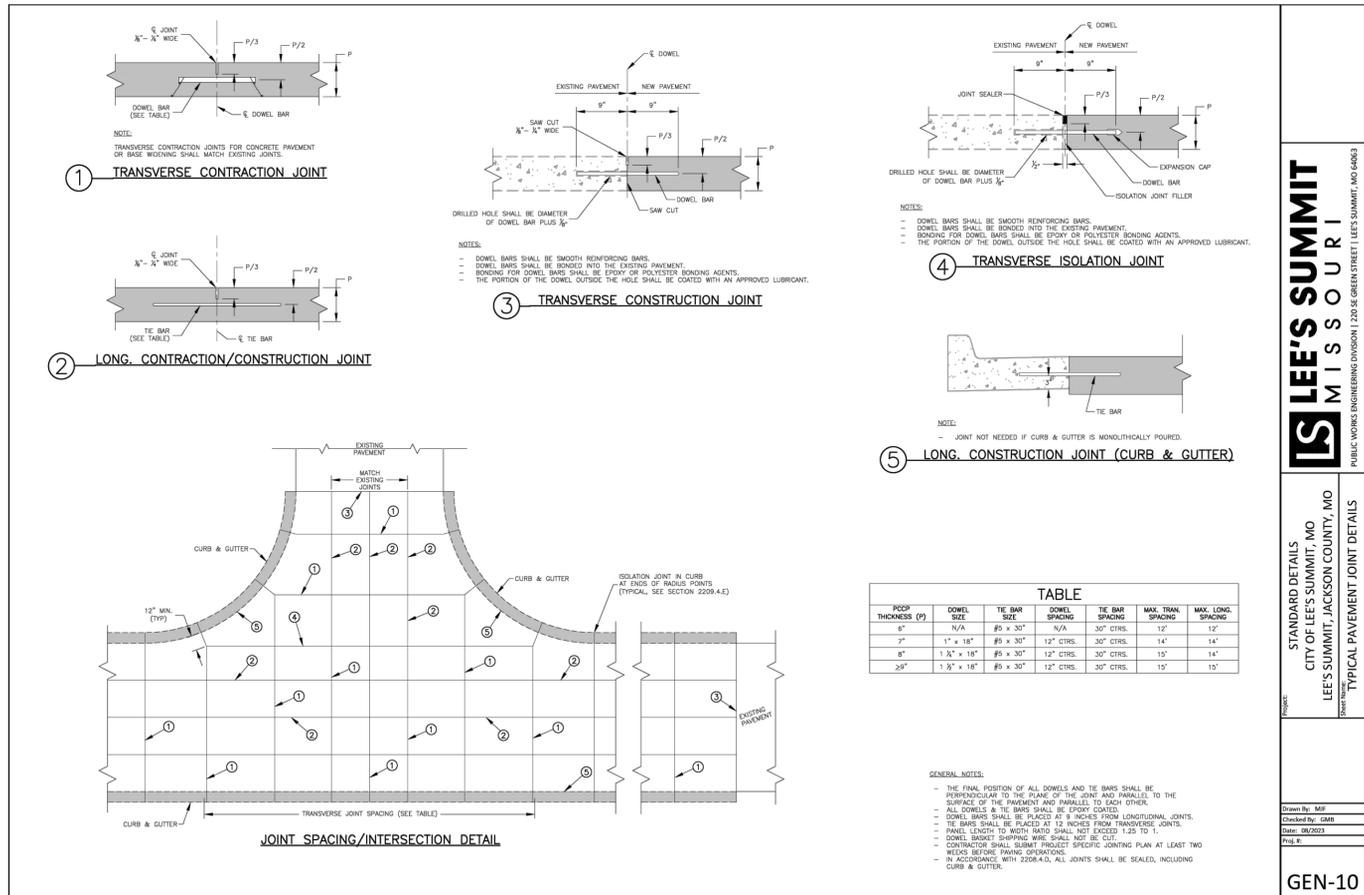
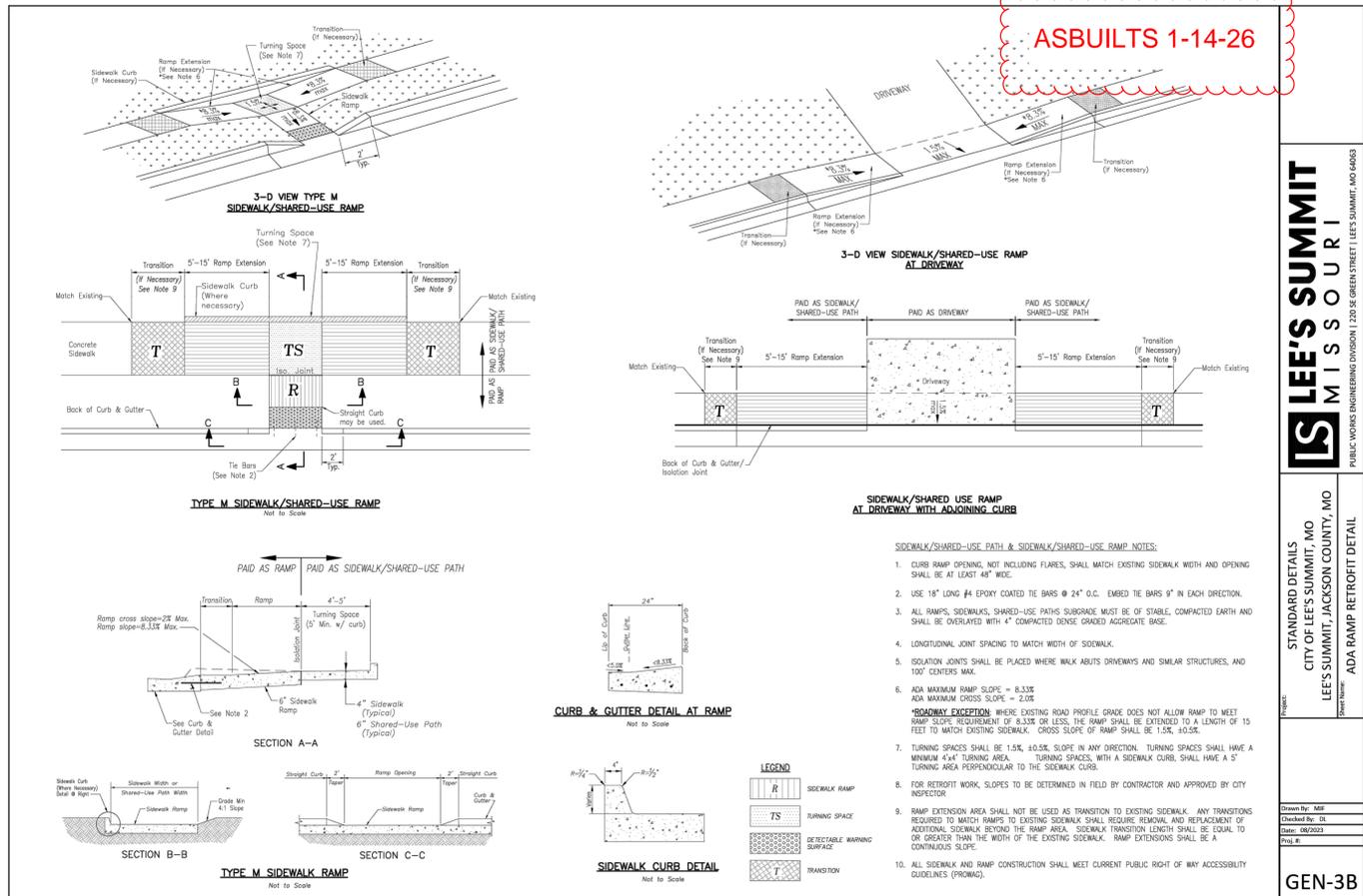
1. SHALL BE 42" TALL ABOVE ADJACENT WALKING SURFACE.
2. SHALL NOT HAVE OPENINGS LARGE ENOUGH TO PASS A 4" SPHERE.
3. MAIN RAILS SHALL RESIST 50 POUND PER LINEAL FOOT LATERALLY AT THE TOP RAIL OR 200 POUNDS CONCENTRATED LOAD LATERALLY.
4. INTERMEDIATE RAILS SHALL RESIST A CONCENTRATED LOAD OF 50 POUNDS LATERALLY.

14 CAST IN PLACE RETAINING WALL DETAIL

REVISIONS:	
NO.	DATE
ORIGINAL	05/27/2024
REV. 5	07/28/2025
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
PREPARED BY: CROCKETT ENGINEERS & ARCHITECTS 1000 W. Illinois Blvd., Ste. 100 Columbia, Missouri 65203 (314) 487-0299 www.crockettengineering.com Missouri Certificate of Authority #000001001	
OWNER: DISCOVERY PARK LEES SUMMIT, LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201	
THE VILLAGE AT DISCOVERY LOTS 5-8 LEES SUMMIT, JACKSON COUNTY, MISSOURI	
DRAWING INCLUDES:	
SITE DETAILS SHEET 3	
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 8.3



LEES SUMMIT MISSOURI
 STANDARD DETAILS
 CITY OF LEES SUMMIT, MO
 LEES SUMMIT, JACKSON COUNTY, MO
 ADA RAMP RETROFIT DETAIL
 GEN-3A



LEES SUMMIT MISSOURI
 STANDARD DETAILS
 CITY OF LEES SUMMIT, MO
 LEES SUMMIT, JACKSON COUNTY, MO
 CURB & GUTTER DETAIL
 GEN-4

REVISIONS:
 NO. DATE
 ORIGINAL 05/27/2024
 THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY
 NATHAN THOMAS ECKHOFF
 MISSOURI PROFESSIONAL ENGINEER
 NUMBER: PE-200314980
 EXPIRES: 03/31/25
 MO LICENSE: 200304980
 NATHAN THOMAS ECKHOFF
 PREPARED BY: CROCKETT ENGINEERS & ARCHITECTS
 1008 W. Wilson Blvd., Suite 200
 Columbia, Missouri 65203
 (314) 487-0299
 www.crockettingeering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority
 #00000000
 OWNER: DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201
 DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 8.4

LEES SUMMIT MISSOURI
 STANDARD DETAILS
 CITY OF LEES SUMMIT, MO
 LEES SUMMIT, JACKSON COUNTY, MO
 TYPICAL PAVEMENT JOINT DETAILS
 GEN-10
 THE VILLAGE AT DISCOVERY
 LOTS 5-8
 LEES SUMMIT, JACKSON COUNTY, MISSOURI
 DRAWING INCLUDES:
 LEES SUMMIT SITE DETAILS

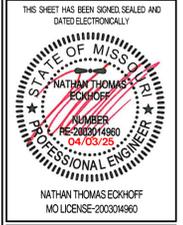
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ASBUILTS 1-14-26



REVISIONS:

NO.	DATE
ORIGINAL	05/27/2024
REV. 1	07/23/2024



PREPARED BY:
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 ENGINEERS & ARCHITECTS
 1000 W. Wilson Blvd., Ste. 2000
 Columbia, Missouri 65203
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 www.crockettengineering.com
 Crockett Engineering Consultants, LLC
 Missouri Certificate of Authority #00000001

OWNER:
 DISCOVERY PARK LEES SUMMIT LLC
 4220 PHILLIPS FARM RD
 COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY PARK LOTS 5-8 LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
 LANDSCAPING PLAN

DESIGNED: NTE
 DRAWN: NMD
 PROJECT NO: 230286
 SHEET: CE 9.1

LANDSCAPE COMPLIANCE: LOTS 5-8

LEE'S SUMMIT, MISSOURI
 CODE OF ORDINANCES: DIVISION II - LANDSCAPING, BUFFERS, AND TREE PROTECTION
 SITE ZONED: PMX; PROPOSED: PMX

STREET FRONTAGE TREES

1 TREE PER 30 FEET OF STREET FRONTAGE	14 TREES REQUIRED	14 TREES PROPOSED
DISCOVERY AVE - 403 LF STREET FRONTAGE	14 TREES REQUIRED	14 TREES PROPOSED
ALLURA WAY - 512 LF STREET FRONTAGE	18 TREES REQUIRED	18 TREES PROPOSED
TRAILSEDGE - 406 LF STREET FRONTAGE	14 TREES REQUIRED	14 TREES PROPOSED
NW COLBURN RD - 484 LF STREET FRONTAGE	17 TREES REQUIRED	17 TREES PROPOSED

OPEN YARD TREES

1 TREE PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT	31 TREES REQUIRED	31 TREES PROPOSED
TOTAL LOT AREA = 154,598 SF	31 TREES REQUIRED	31 TREES PROPOSED

STREET FRONTAGE SHRUBS

1 SHRUB PER 20 FEET OF STREET FRONTAGE	21 SHRUBS REQUIRED	21 SHRUBS PROPOSED
DISCOVERY AVE - 403 LF STREET FRONTAGE	21 SHRUBS REQUIRED	21 SHRUBS PROPOSED
ALLURA WAY - 512 LF STREET FRONTAGE	26 SHRUBS REQUIRED	26 SHRUBS PROPOSED
TRAILSEDGE - 406 LF STREET FRONTAGE	21 SHRUBS REQUIRED	21 SHRUBS PROPOSED
NW COLBURN RD - 484 LF STREET FRONTAGE	25 SHRUBS REQUIRED	25 SHRUBS PROPOSED

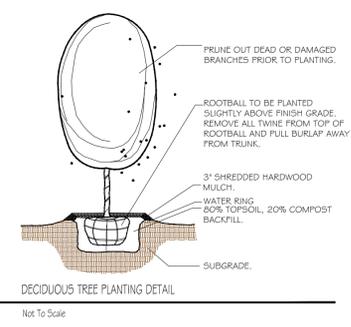
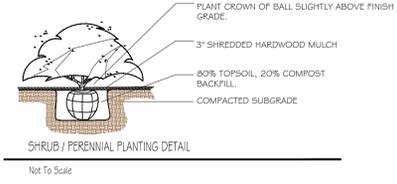
OPEN YARD SHRUBS

2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT	62 SHRUBS REQUIRED	62 SHRUBS PROPOSED
TOTAL LOT AREA = 154,598 SF	62 SHRUBS REQUIRED	62 SHRUBS PROPOSED

PLANTING SCHEDULE:

QUANTITY	SYMBOL	PLANT NAME	PLANT TYPE	SIZE
15	EF	ELM 'FRONTIER'	MEDIUM / LARGE TREE	3"
8	ZOV	ZELKOVA 'GREEN VASE'	MEDIUM / LARGE TREE	3"
11	MSS	MIYABI MAPLE 'STATE STREET'	MEDIUM / LARGE TREE	3"
5	LPE	LONDON PLANETREE 'EXCLAMATION'	MEDIUM / LARGE TREE	3"
7	ENH	ELM 'NEW HORIZON'	MEDIUM / LARGE TREE	3"
15	OCS	OAK 'CRIMSON SPICE'	MEDIUM / LARGE TREE	3"
10	HEA	HORNBEAM 'EMERALD AVE'	MEDIUM / LARGE TREE	3"
3	MRP	MAPLE 'RED POINT'	MEDIUM / LARGE TREE	3"
5	CST	CRABAPPLE 'SUGARTIME'	ORNAMENTAL TREE	2"
15	CRR	CRABAPPLE 'ROYAL HANDROPS'	ORNAMENTAL TREE	2"
15	NAJ	NINEBARK 'AMBER JUBILEE'	DECIDUOUS SHRUB	#5
32	HLL	HYDRANGEA 'LITTLE LIME'	DECIDUOUS SHRUB	#5
7	LMK	LILAC 'MISS KIM'	DECIDUOUS SHRUB	#5
12	HLP	HYDRANGEA 'LITTLE LIME PUNCH'	FLOWERING SHRUB	#5
22	SBB	SPIREA 'BIG BANG'	DECIDUOUS SHRUB	#5
28	BOV	BOWWOOD 'GREEN VELVET'	EVERGREEN SHRUB	#5
40	JSG	JUNIPER 'SEA GREEN'	EVERGREEN SHRUB	#5

- THE PLANT LIST IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY ALL PLANT COUNTS AND IF A DISCREPANCY EXISTS THE PLAN SHALL GOVERN.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES. THE LANDSCAPE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION.
- LANDSCAPE CONTRACTOR TO RECEIVE SITE GRADED TO +/-0.10 FOOT OF FINISHED GRADE.
- PLANTING BACK FILL MIX IS TO CONSIST OF 80% NATIVE TOPSOIL, AND 20% ORGANIC MATTER.
- SHRUB BEDS, BERMS, AND TREE WELLS ARE TO BE MULCHED WITH 3-4" DYED HARDWOOD MULCH. ALL BED AND LAWN AREAS SHALL BE IRRIGATED.
- ALL LAWN AREAS TO BE SODDED WITH TALL FESCUE SOD.
- LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWELVE MONTHS.
- ALL PLANTING BEDS AND TREE RINGS TO BE GENERATED FROM TURF AREAS BY 'V' TRENCHING.
- ALL PLANT MATERIAL MUST MEET THE SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- PLANT LOCATIONS MAY BE ADJUSTED ONSITE TO AVOID UTILITIES, SITE FEATURES, ETC.



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