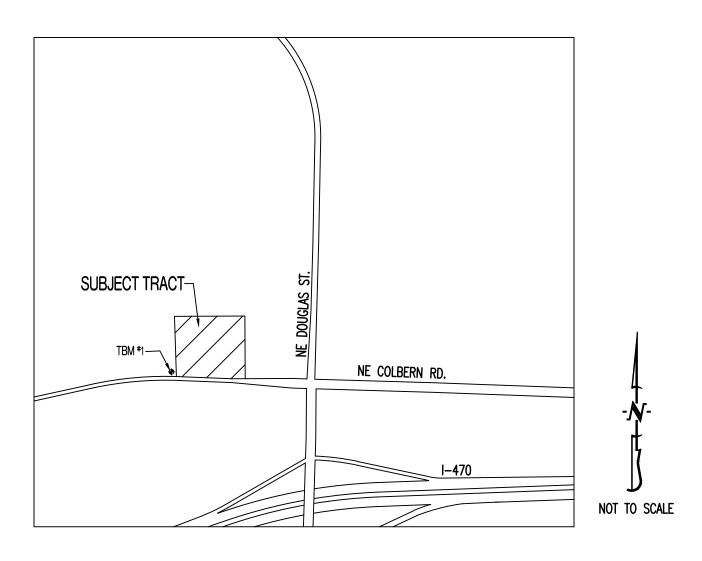
# THE VILLAGE AT DISCOVERY LOTS 5-8

#### **LOCATION MAP**



#### 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

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 #29095C0409G, 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



...

TELEPHONE:

800-286-8313

AT&T

NATURAL GAS: SPIRE 314-342-0500 WATER/SANITARY SEWER:
CITY OF LEE'S SUMMIT
WATER UTILITIES DEPARTMENT
1200 S HAMBLEN RD
LEE'S SUMMIT, MO 64081
816-969-1900

FIBER: G00GLE FIBER 877-454-6959

**ELECTRIC:** 

816-524-3223

CABLE TELEVISION: SPECTRUM 877-772-2253

#### **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 <a href="https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure">https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure</a>

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 MoDNR 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 (MDNR) REQUIRES THAT THE PERMITTEE SUBMIT A COMPLETED FORM H (INCLUDED WITH THE APPROVAL PERMIT) TO THE MDNR. 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 HOLIDY. 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.

## DEVELOPER:

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

| SHEET NUMBER | SHEET TITLE                                | ORIGINAL | REVISION 1 | REVISION 2 | REVISION 3 | REVISION 4 |
|--------------|--|----------|------------|------------|------------|------------|
|              | OHLLI IIILL                                | 05/22/24 | 07/23/24   | 08/02/24   | 09/03/24   | 01/31/25   |
| 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          |
| CE 3.1       | GRADING PLAN SHEET 1                       | X        |            |            |            |            |
| CE 3.2       | GRADING PLAN SHEET 2                       | Χ        |            |            | X          |            |
| CE 3.3       | GRADING PLAN SHEET 3                       | Х        | Х          |            |            |            |
| CE 3.4       | GRADING PLAN SHEET 4                       | X        | Х          |            | X          | X          |
| CE 3.5       | GRADING PLAN SHEET 5                       | Χ        | X          |            |            |            |
| CE 3.6       | GRADING PLAN SHEET 6                       | Χ        |            |            |            | X          |
| CE 4.1       | UTILITY PLAN SHEET 1                       | Χ        | X          |            | X          |            |
| CE 4.2       | UTILITY PLAN SHEET 2                       | Χ        | Х          |            | X          | X          |
| CE 5.1       | SANITARY PLAN & PROFILE & SANITARY DETAILS | X        |            |            |            |            |
| CE 6.1       | STORM PROFILE - LINES 1-6                  | Х        | Х          | X          |            | X          |
| CE 6.2       | STORM PROFILE - LINES 7-9 & STORM DETAILS  | Χ        | Х          |            |            | X          |
| CE 6.3       | STORM DETAILS                              | X        | Х          |            |            |            |
| CE 6.4       | 25-YR STORM CALCULATIONS                   | Χ        | Х          |            |            |            |
| CE 6.5       | 100-YR STORM CALCULATIONS                  | X        | Х          |            |            |            |
| CE 7.1       | SITE PLAN SHEET 1                          | X        | Х          |            | X          |            |
| CE 7.2       | SITE PLAN SHEET 2                          | Χ        | Х          |            | X          | X          |
| CE 8.1       | SITE DETAILS SHEET 1                       | Χ        |            |            |            |            |
| CE 8.2       | SITE DETAILS SHEET 2                       | Χ        | Х          |            | Х          |            |
| CE 8.3       | LEE'S SUMMIT SITE DETAILS                  | Х        |            |            |            |            |
| CE 8.4       | LEE'S SUMMIT UTILITY DETAILS               | Х        |            |            |            |            |
| CE 9.1       | LANDSCAPING PLAN                           | Χ        | X          |            |            |            |

#### LEGEND OF SYMBOLS:

|                | OTTVIDOLO.                          |                     |  |                |  |
|----------------|-------------------------------------|---------------------|--|----------------|--|
|                | EXISTING CURB                       | FF=XXX.X            | FINISHED FLOOR OF STRUCTURE                    | XXX            | EXISTING MINOR CONTOUR                       |
|                | PROPOSED CURB                       | (XXX.XX TC)         | PROPOSED TOP OF CURB ELEVATION                 | — — — XXX— — — | EXISTING MAJOR CONTOUR                       |
|                | RIP RAP                             | (XXX.XX TP)         | PROPOSED TOP OF PAVEMENT ELEVATION             | XXX            | PROPOSED MINOR CONTOUR                       |
|                | EXISTING STRUCTURE                  | (XXX.XX FG)         | PROPOSED FINISHED GRADE ELEVATION              | XXX            | PROPOSED MAJOR CONTOUR                       |
|                | EXISTING TREELINE                   | (XXX.XX TW)         | PROPOSED TOP OF WALL                           |                | 100 YEAR FLOOD PLAIN                         |
| ~~~~           | PROPOSED TREELINE                   | XX                  | LOT NUMBER                                     | $\Box$         | FLOODWAY                                     |
| 000            | EDGE OF WATERWAY                    |                     |  | <del></del>    | ORDINARY HIGH WATER MARK                     |
| — w — —        | EXISTING WATERLINE                  | $\langle X \rangle$ | STORM SEWER STRUCTURE LABEL                    | <del></del>    | STREAM SIDE BUFFER                           |
| ——— W ———      | PROPOSED WATERLINE                  |                     |  |                | OUTER STREAM BUFFER                          |
| —— G ——        | EXISTING GAS LINE                   | X                   | SANITARY SEWER STRUCTURE LABEL                 |                | PROPOSED CONCRETE PAVEMENT                   |
| G              | PROPOSED GAS LINE                   | H.P.                | HIGH POINT                                     |                |  |
| T              | EXISTING TELEPHONE                  | L.P.                | LOW POINT                                      |                | PROPOSED CONCRETE PAVEMENT IN PARKING GARAGE |
| — — — F0 — — — | EXISTING FIBER OPTIC                |                     |  |                | DOODOOED DUILDING FOOTDDINT                  |
| —— OE ——       | EXISTING OVERHEAD ELECTRIC          | <del>- 0</del>      | EXISTING SIGNS                                 |                | PROPOSED BUILDING FOOTPRINT                  |
| — — —UE— — —   | EXISTING UNDERGROUND ELECTRIC       | Ø<br>GV             | EXISTING POWER POLE                            |                | PROPOSED HEAVY DUTY PAVEMENT                 |
| ——— UE ———     | PROPOSED UNDERGROUND ELECTRIC       | SV<br>⊠             | EXISTING GAS VALVE                             |                |  |
| — — OETV — —   | EXISTING OVERHEAD ELEC. & TV        | $\bowtie$           | EXISTING WATER VALVE                           |                | PIPE EMBEDMENT UNDER PAVEMENT                |
| — — OETVT — —  | EXISTING OVERHEAD ELEC., TV & TELE. | ©                   | EXISTING GAS METER                             | T              | EXISTING TELEPHONE PEDESTAL                  |
| —— s ——        | EXISTING SANITARY SEWER             | <b>w</b>            | EXISTING WATER METER                           | E              | EXISTING ELECTRICAL TRANSFORMER              |
| —— s ——        | PROPOSED SANITARY SEWER             | '                   | EXISTING FIRE HYDRANT                          | E              | EXISTING ELECTRIC METER                      |
| <b>— —</b>     | EXISTING SANITARY SEWER LATERAL     | ©                   | MANHOLE  PROPOSED TRACED WIDE TEST STATION POY | ¤              | EXISTING LIGHT POLE                          |
| <b>—</b>       | PROPOSED SANITARY SEWER LATERAL     | (B)                 | PROPOSED TRACER WIRE TEST STATION BOX          | $\rightarrow$  | EXISTING GUY WIRE                            |
|                | Come Gravitati Chillian Maria Vita  | AC                  | EXISTING AIR CONDITIONER                       |                |  |

REVISIONS:

NO. DATE

ORIGINAL 05/22/2024

1 REV. 1 07/23/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

OF M/S

NATHAN THOMAS

CONTROL

NATHAN THOMAS

DECKHOSE

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

Of Authority

Of Authority

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Crockett Engineering Consultants, LLC

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

LAGE AT DISCOVER LOTS 5-8

DRAWING INCLUDES:

COVER SHEET

DESIGNED: NTE
DRAWN: NMD

PROJECT NO.: 230286

EET: CE 1.0 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 SAWED TO A MINIMUM DEPTH OF 2" WITH A TRUE SAW 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 DRAWING.

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

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.

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:

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.

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: AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.

ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED. MAINTAIN STABILITY OF EXCAVATIONS; CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. PREVENT 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.

UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY. 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:

STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.

LANDSCAPE AREA FILL: 3.1. ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.

CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE COHESIVE 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:

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

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.

UNLESS NOTED OTHERWISE ON THE DRAWINGS:

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,

> CAST AGAINST AND EXPOSED TO EARTH.......3 INCHES EXPOSED TO EARTH OR WEATHER......2 INCHES

NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH......1 ½ INCHES C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL

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 CHERT WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE (CAST-IN-PLACE OR PRECAST). LIGNITE WILL BE LIMITED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGNITE FREE.

JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.

#### 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

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 5893 FOR TYPE NS. PRODUCTS ALLOWED ARE: CRAFCO INC.: ROADSAVER SILICONE, DOW CORNING CORPORATION; 888, PECORA NS 301, OR APPROVED EQUAL

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTAINING; 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 DEPTHAND 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.

NSTALL 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

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:

REPRESENTATIVE SHALL APPROVE APPLICATION TECHNIQUES.

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 TT-P-1952. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FS A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING AND ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION FOR COLORS WHITE, YELLOW, BLUE, AND RED. RETROFLECTIVE PAINT SHALL BE TYPE L GLASS BEADS PER SECTION 620 OF THE CURRENT MODOT STANDARD SPECIFICATIONS FOR HIGHWAY

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. READILY 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 MODOT 620.9 THROUGH 620.9.3.4.2. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE 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

REMOVE PAINT SPLATTER 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:

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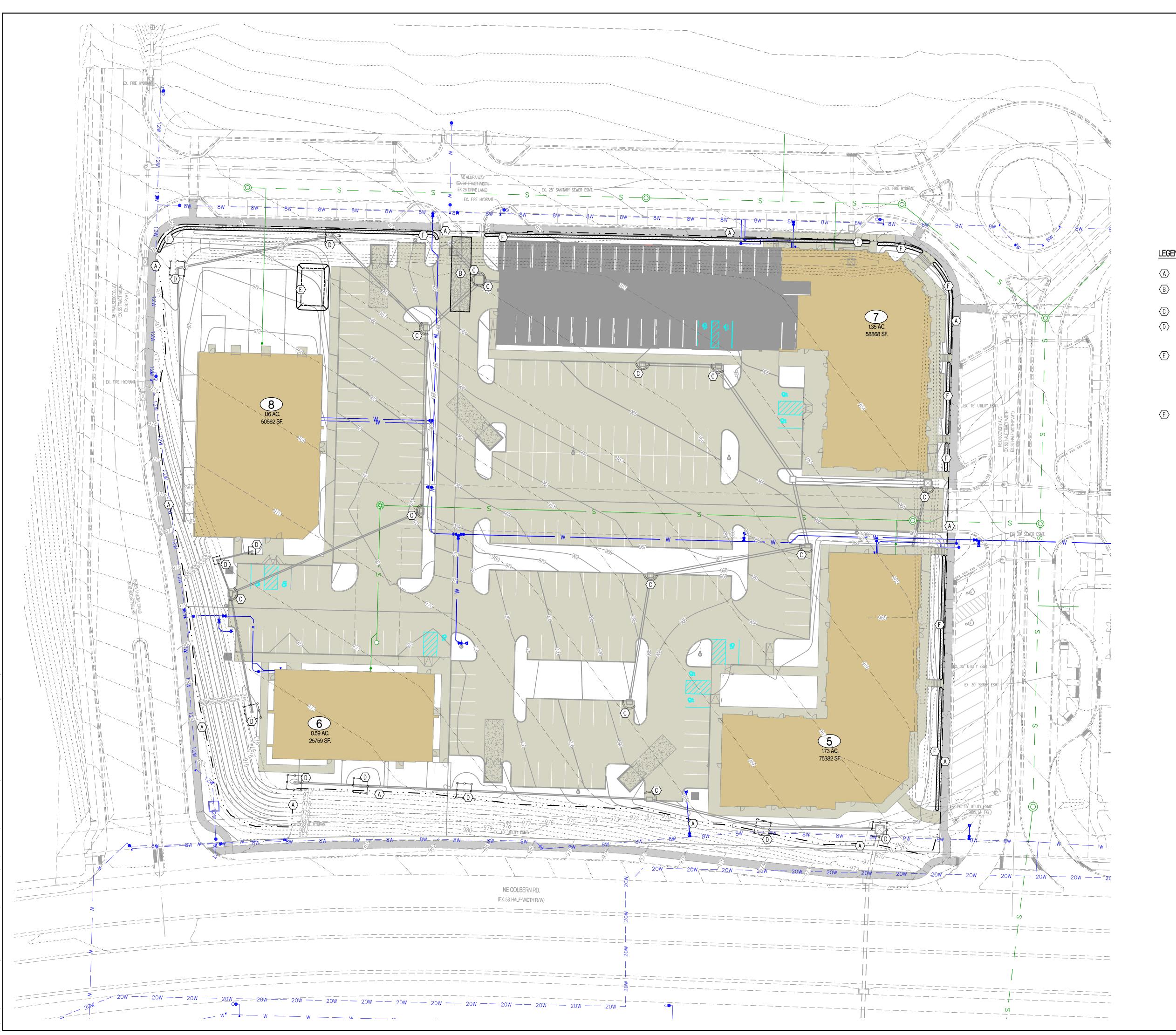
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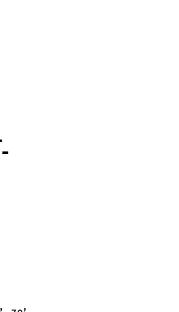
I DRAWING INCLUDES:

CIVIL SPECIFICATIONS

DESIGNED: NTE

NMD PROJECT NO.: 230286





#### LEGEND OF LABELS:

- $\langle A \rangle$  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.
- INSTALL 2" X 10" BOARD WRAPPED IN SILT FENCE AT THROAT OF INLET. REPLACE BOARD WITH GUTTERBUDDY (OR APPROVED EQUAL) AT THROAT OF INLET AFTER PAVING OPERATIONS ARE COMPLETE. REFER TO ESC-06 ON CE 2.2.
- 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:

ORIGINAL 05/22/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND

NATHAN THOMAS

NATHAN THOMAS

NATHAN THOMAS

PECKHOFF

NUMBER

NATHAN THOMAS

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NATHAN THOMAS ECKHOFF

MO LICENSE-2003014960

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Crockett Engineering Consultants. LLC
Missouri Certificate of Authority

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

THE VILLAGE AT DISCOVERY LOTS 5-8

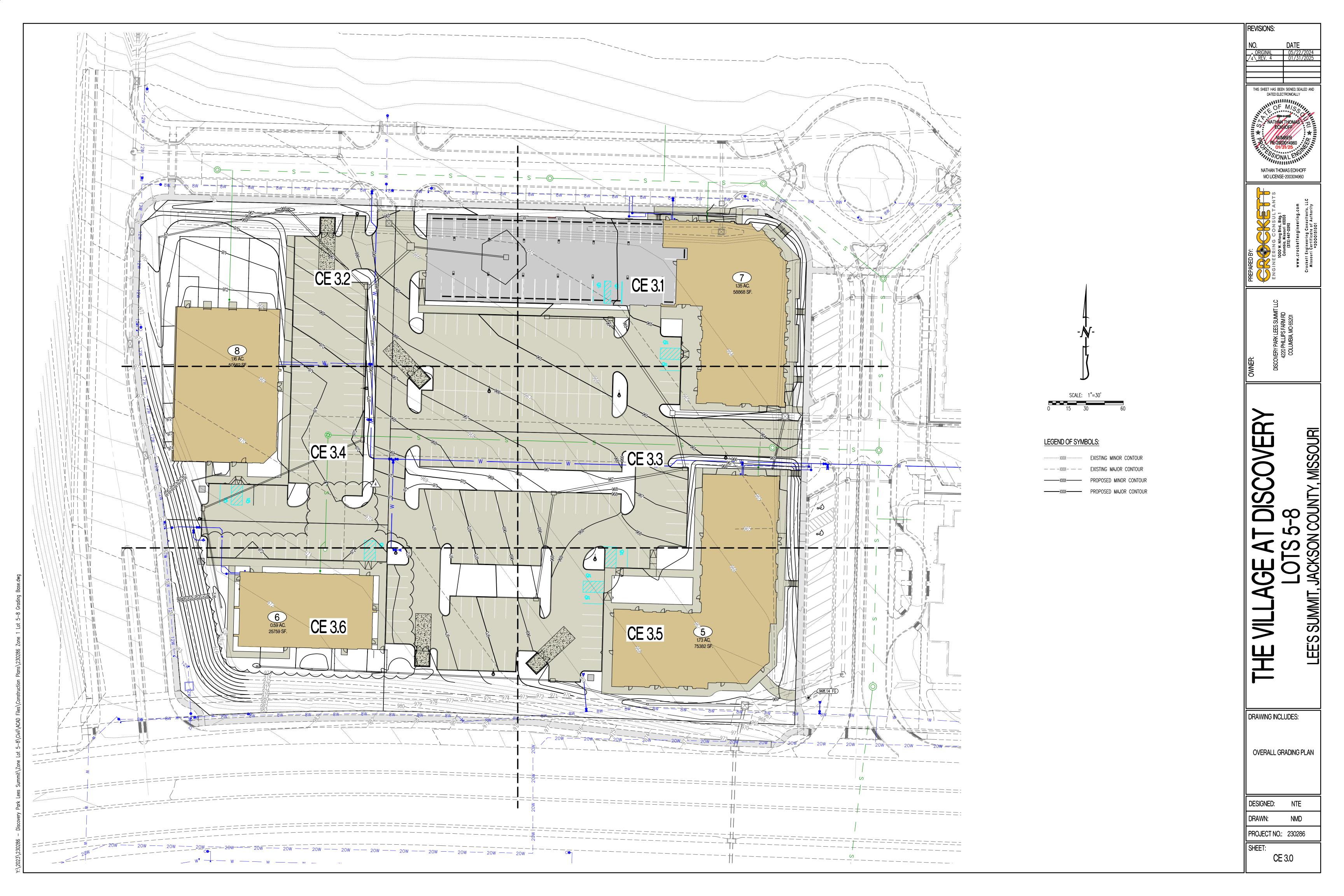
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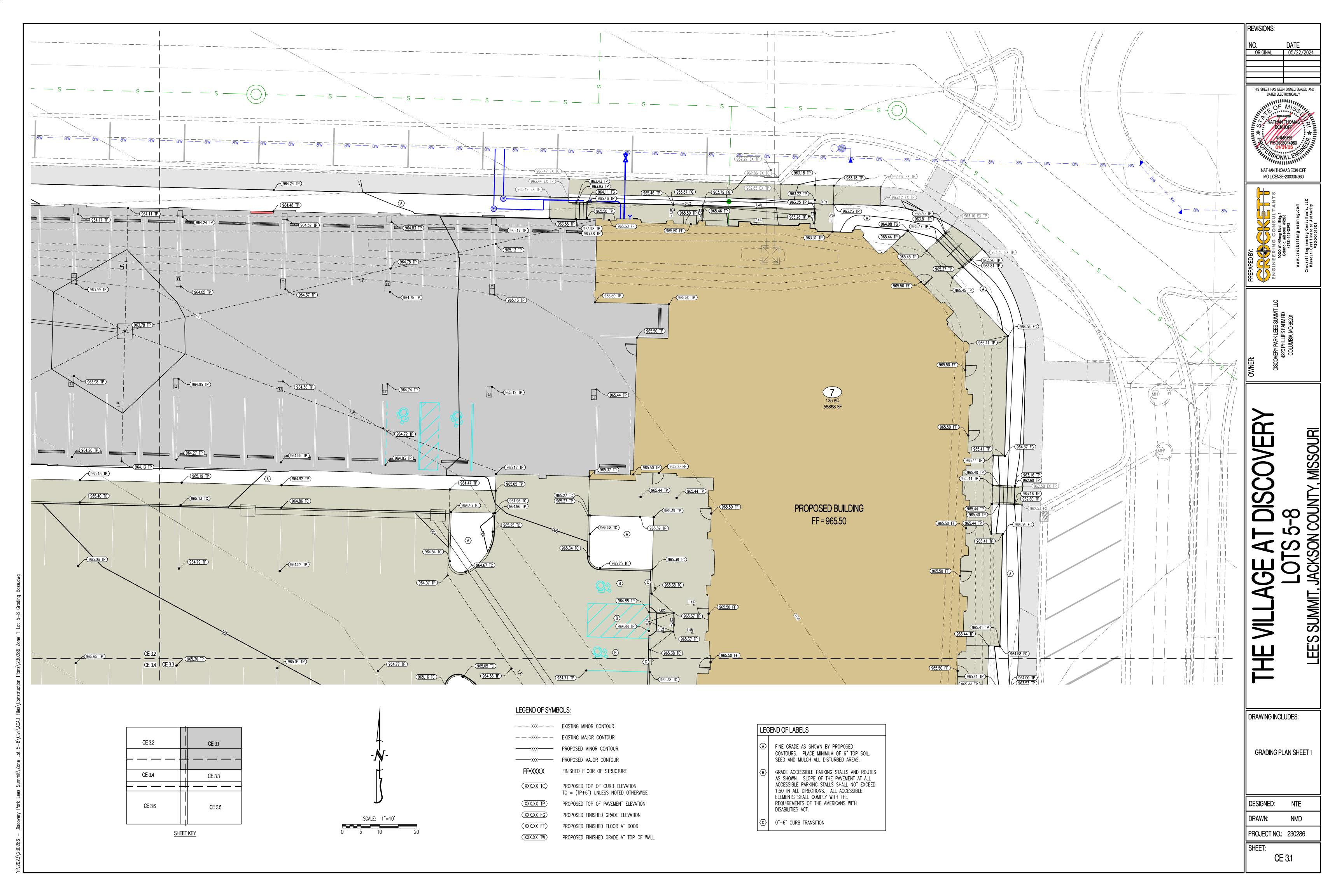
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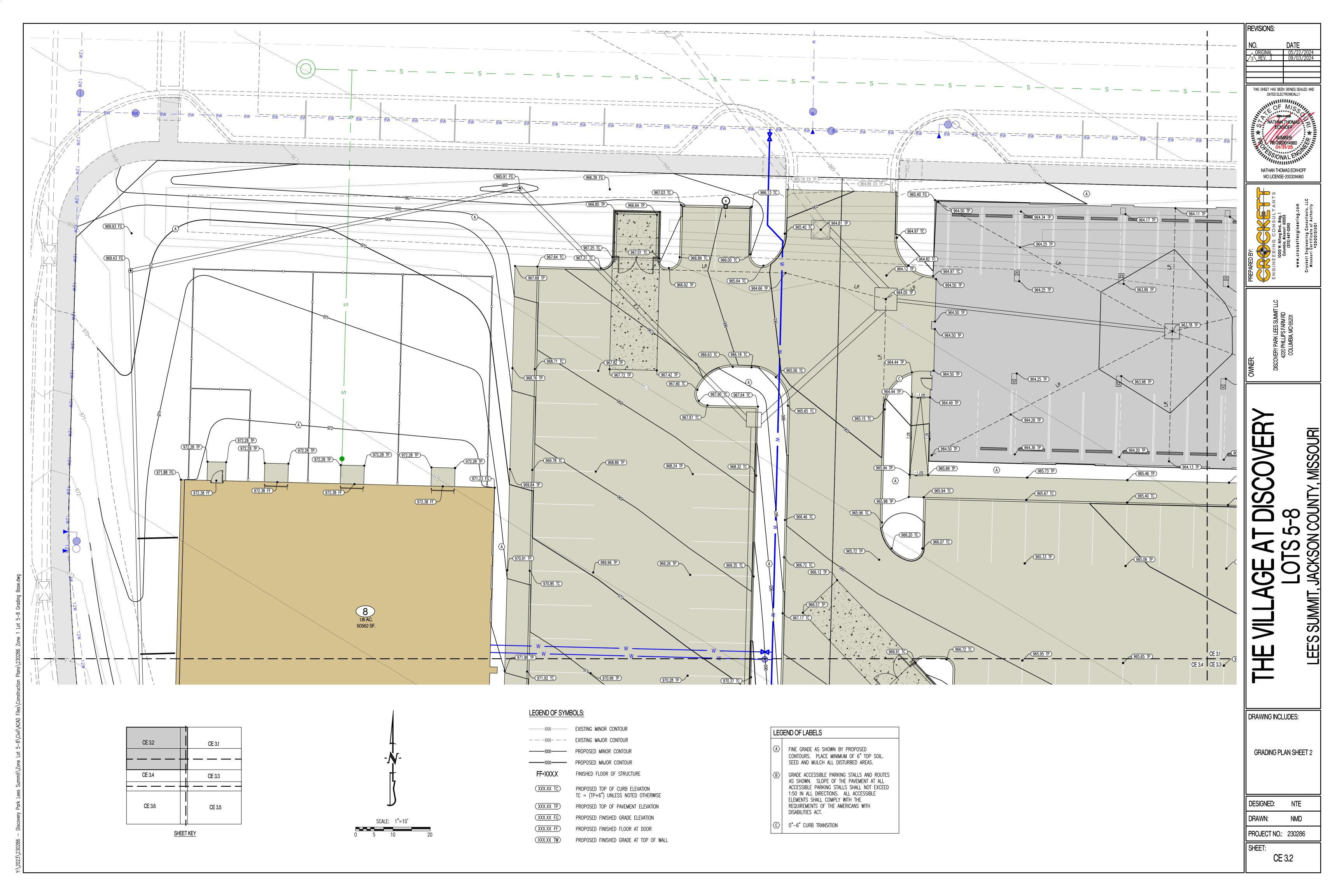
DESIGNED: NTE

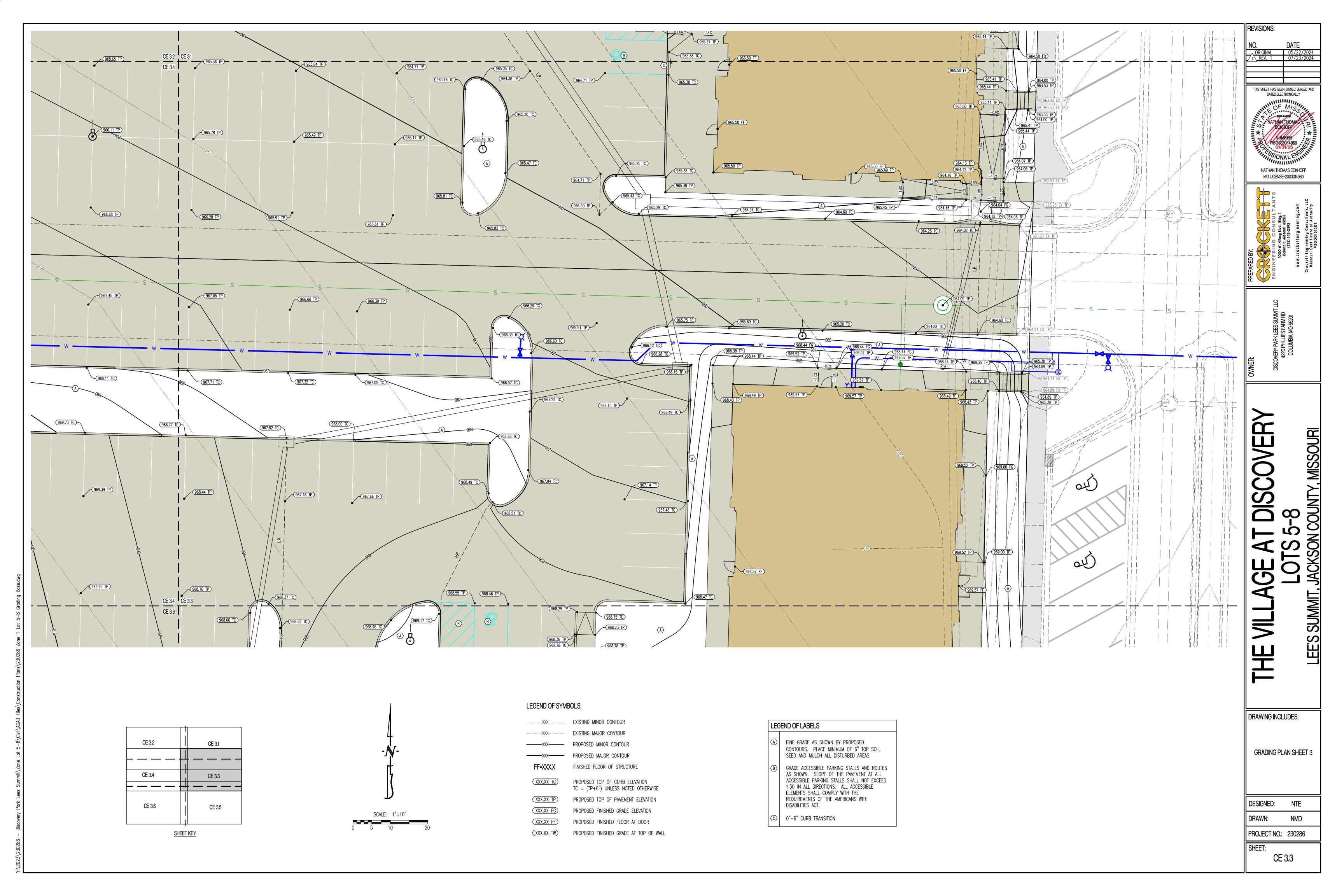
DRAWN: NMD
PROJECT NO.: 230286

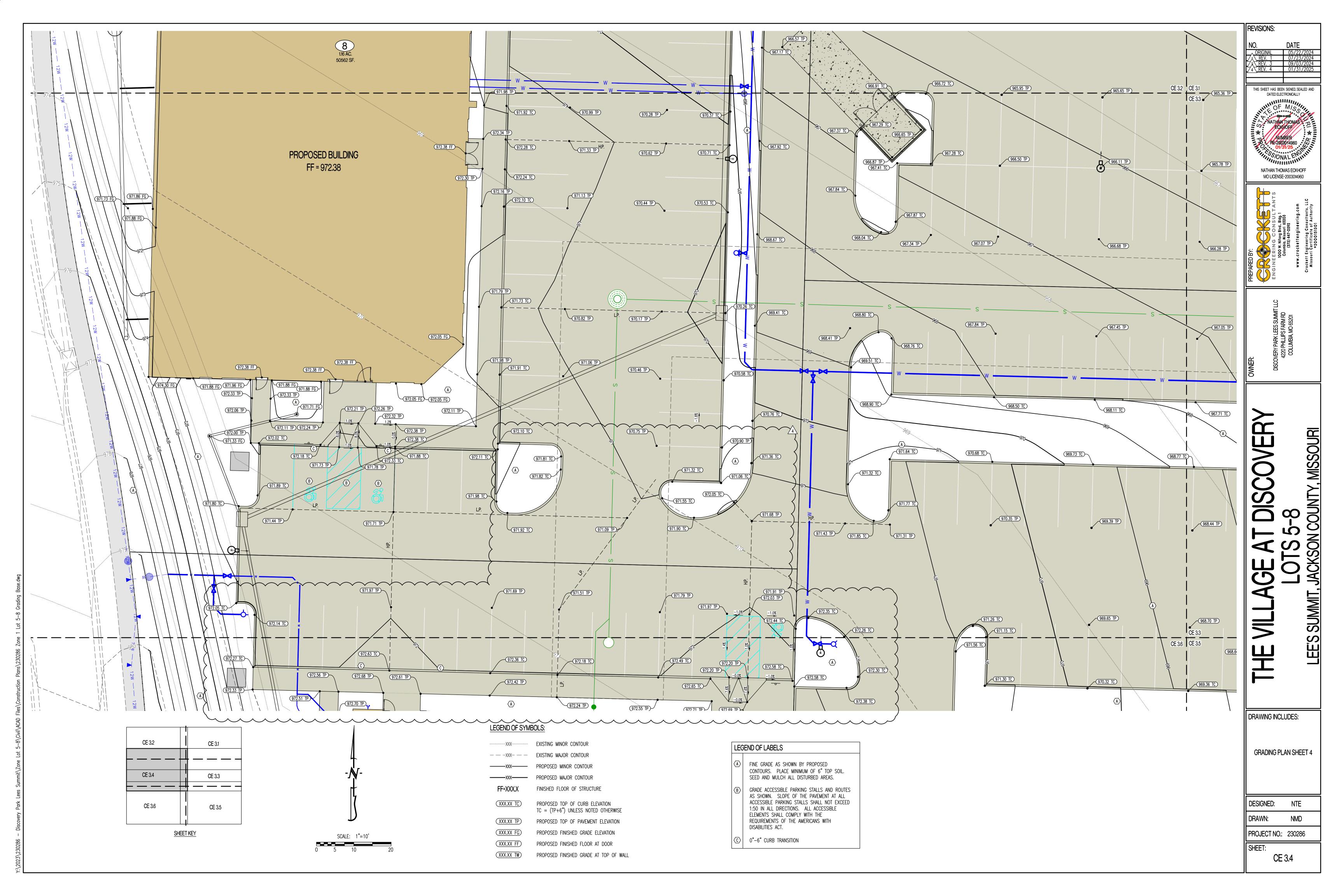
HEET: CE 2.1

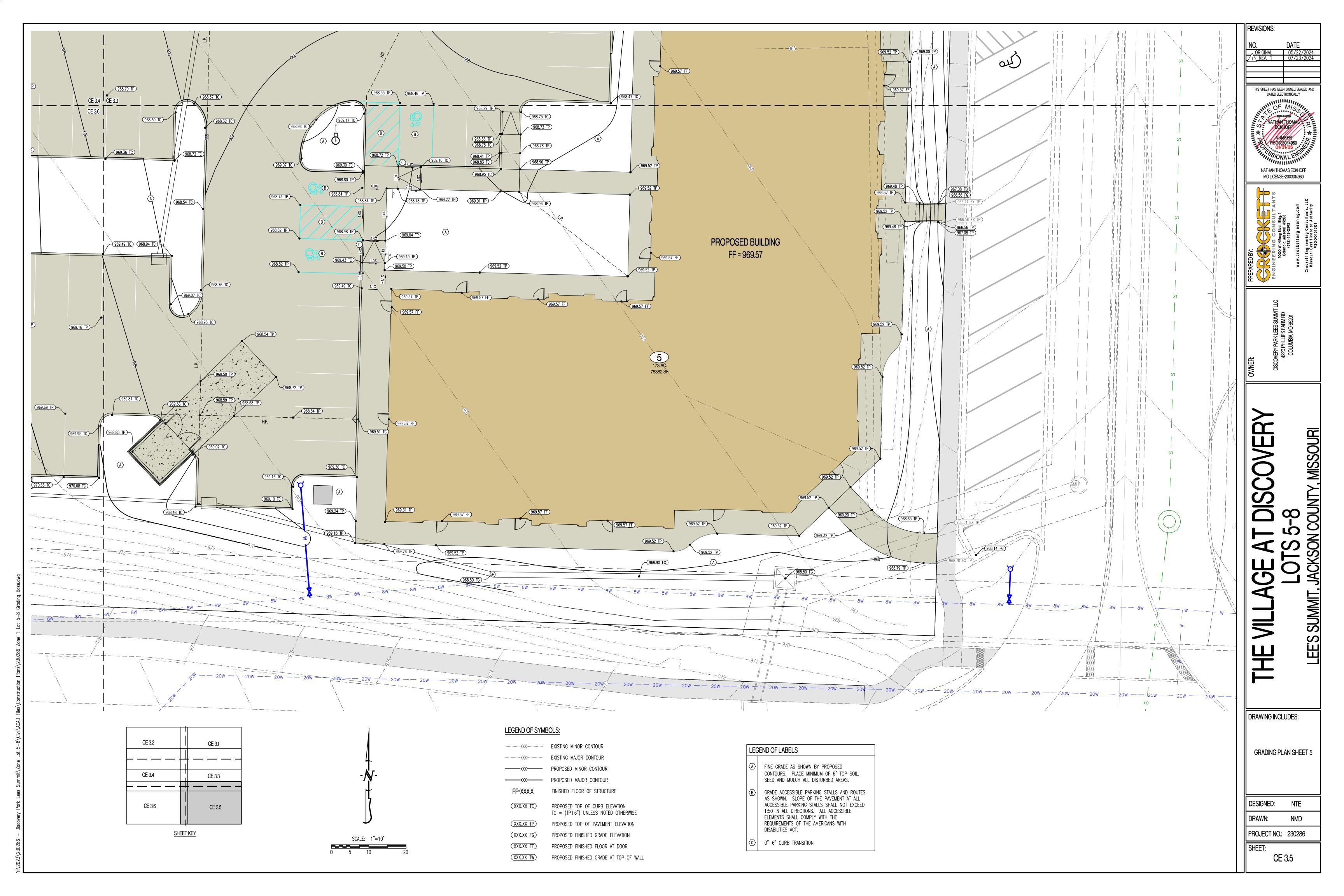


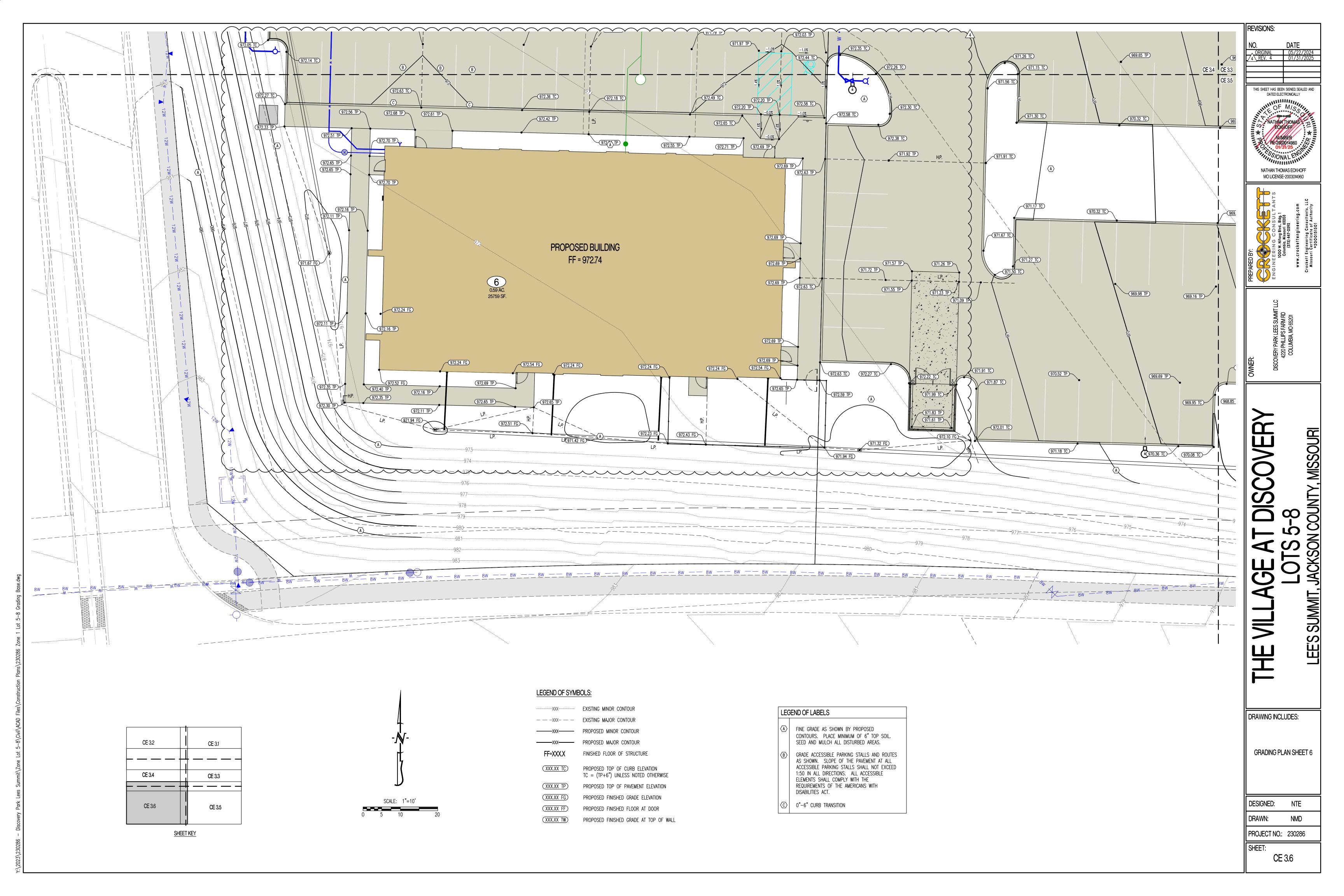


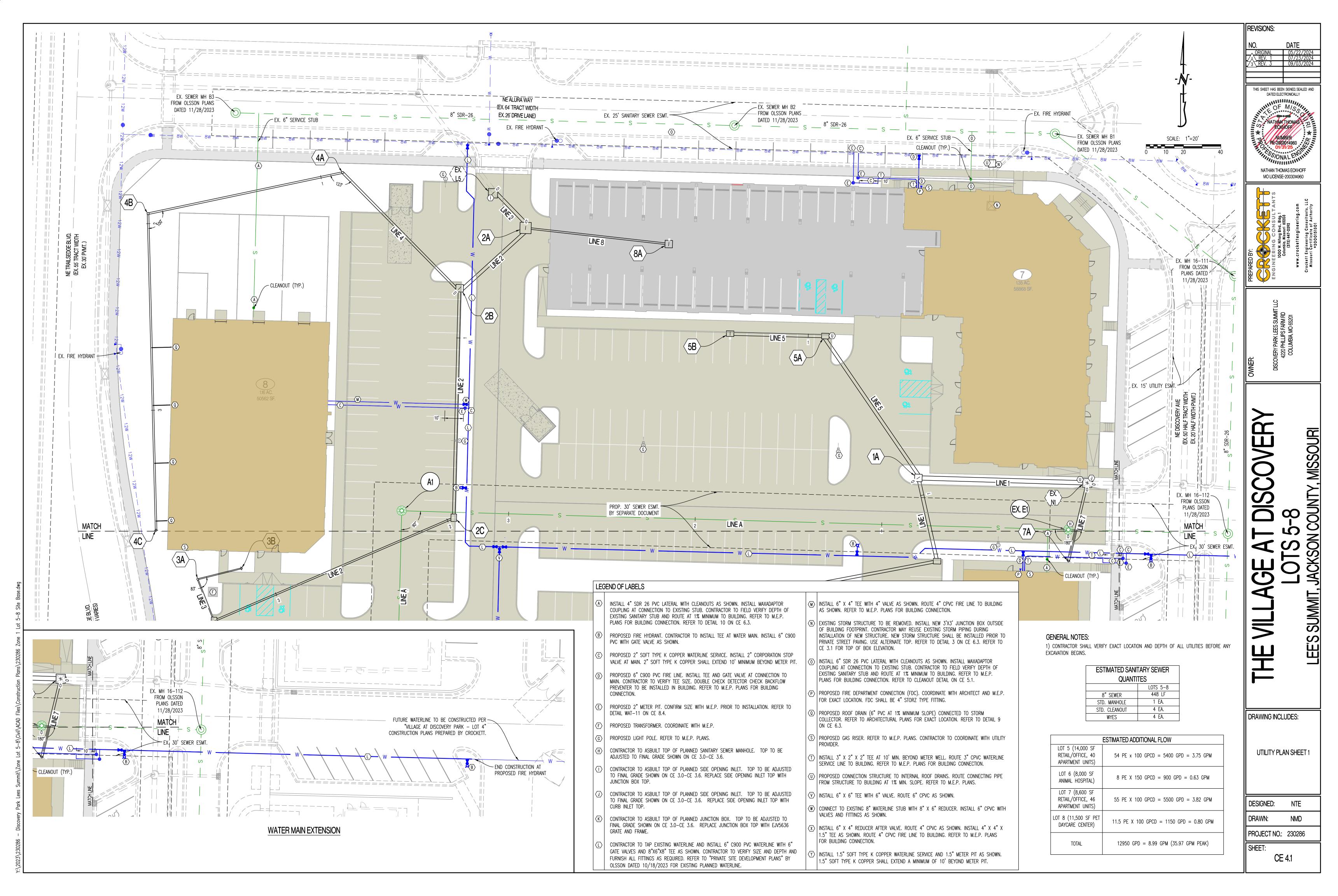


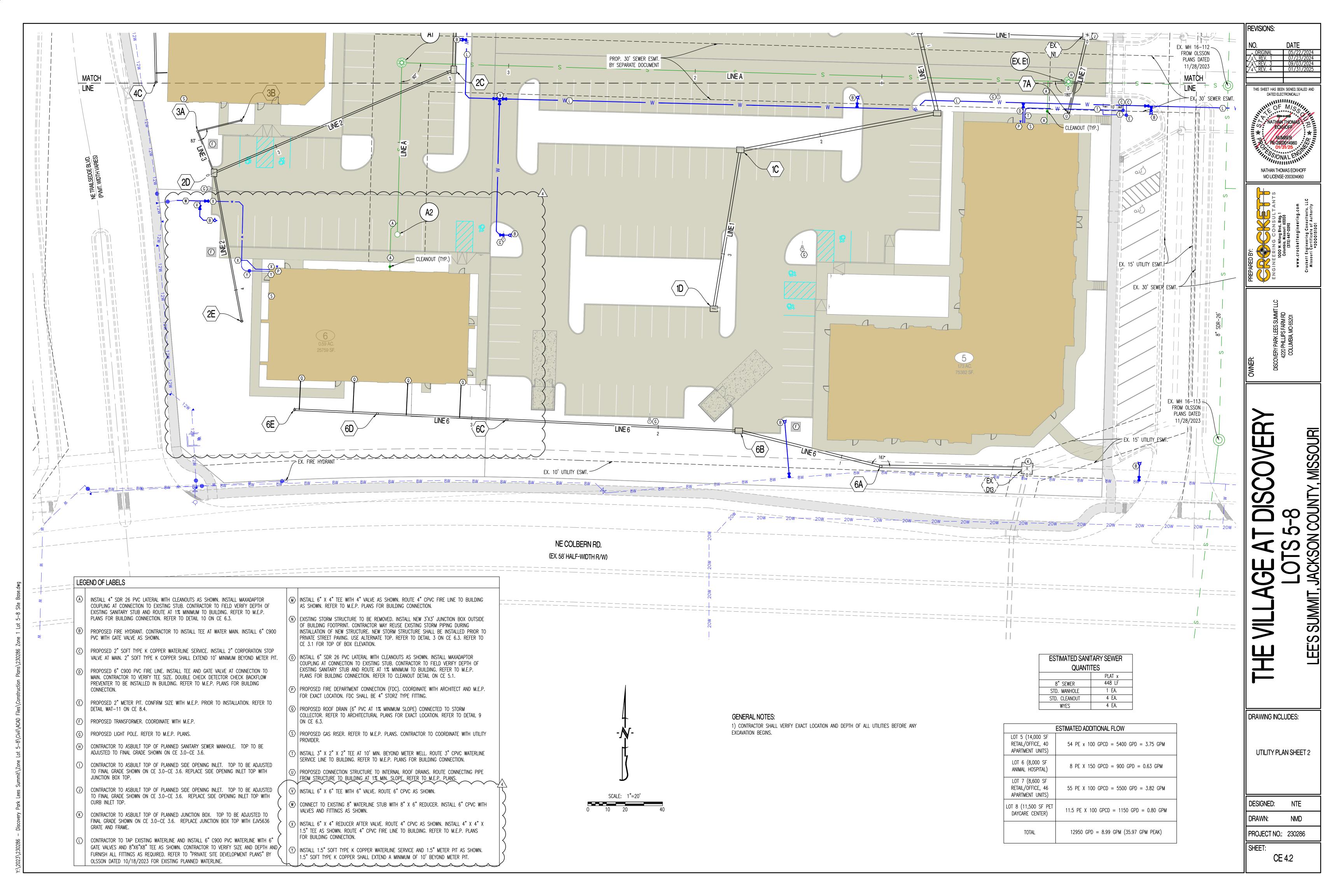


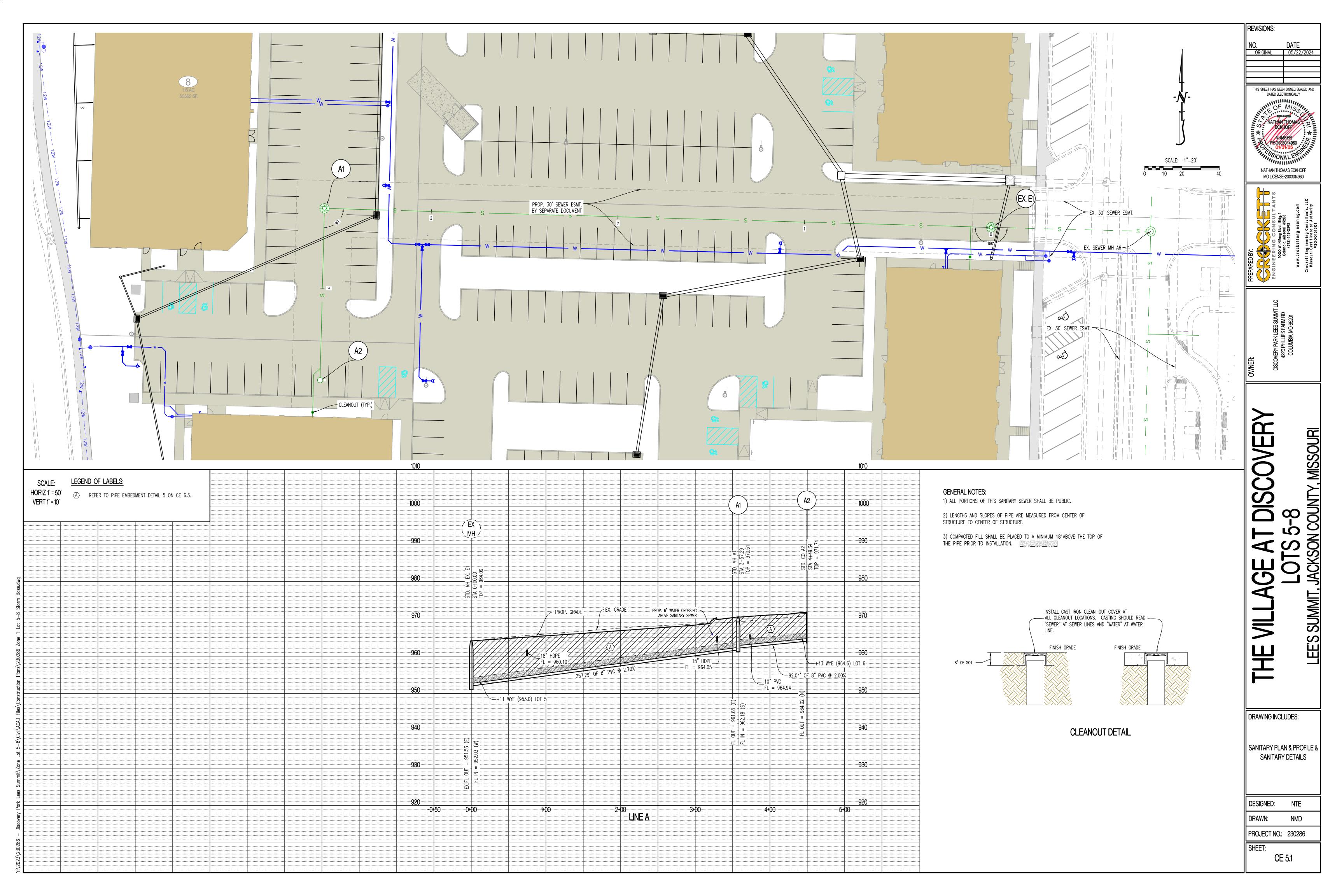


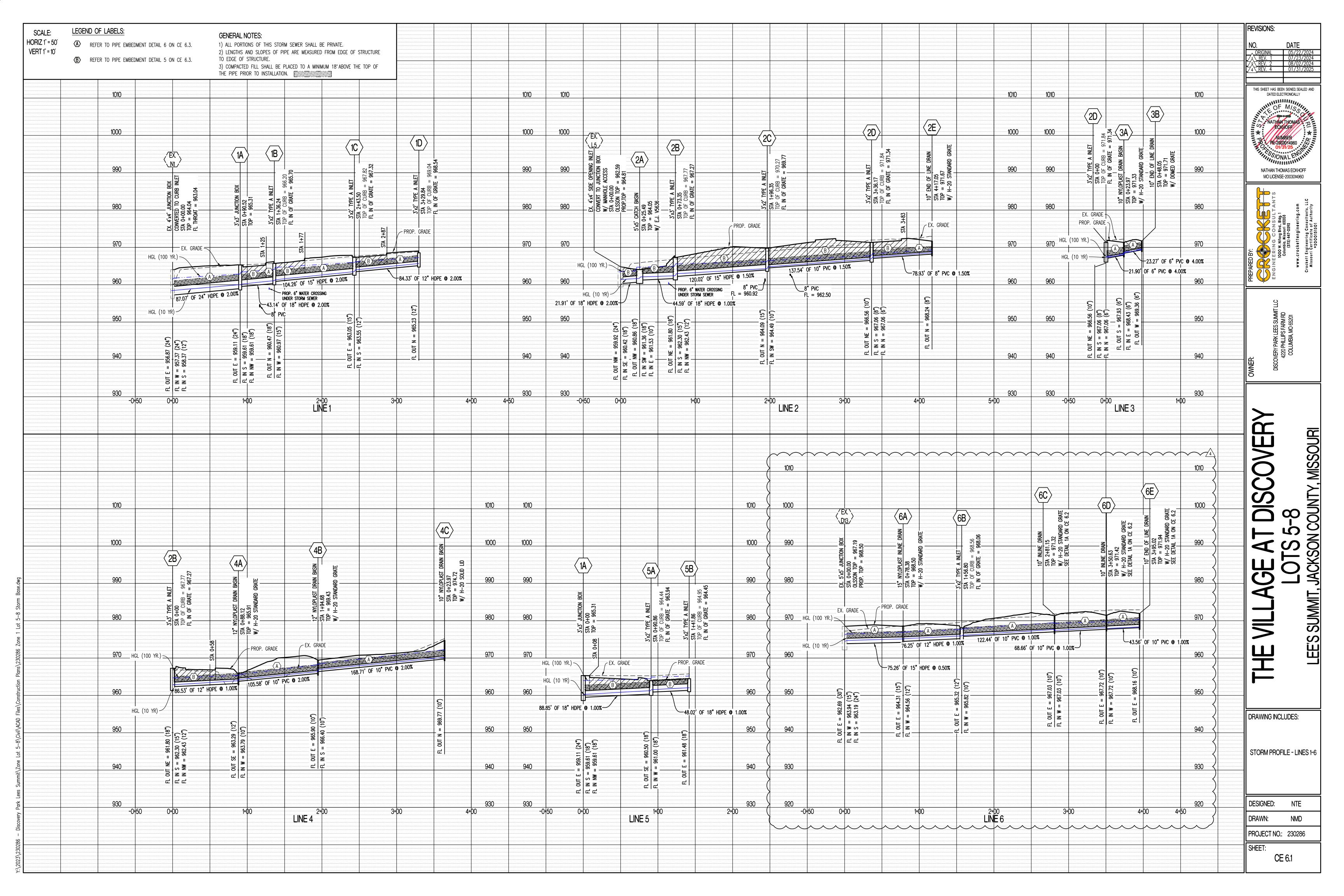


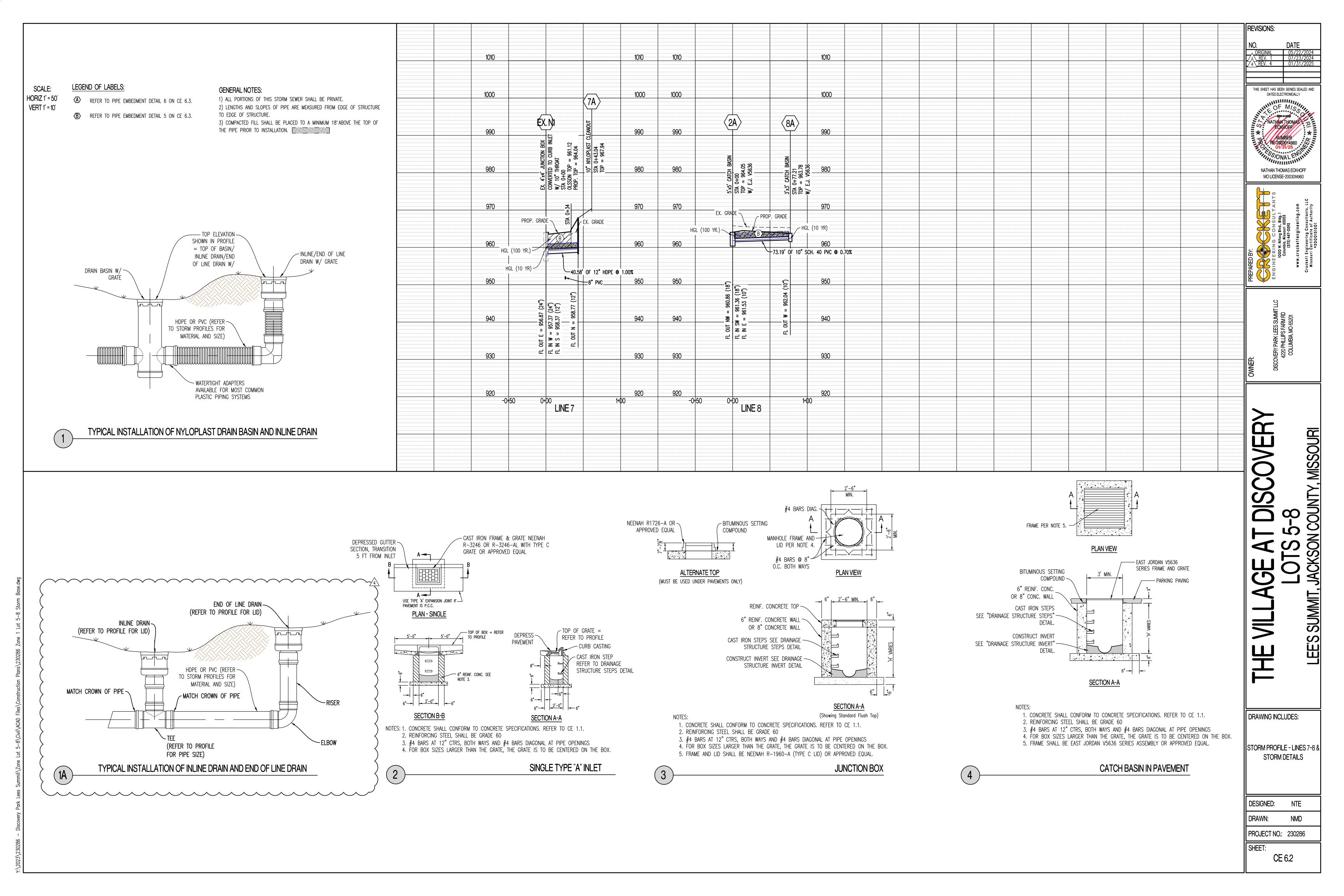












1. IF LIMESTOME SCREENINGS ARE USED AS NEW STRUCTURAL FILL, THE CONTRACTOR SHOULD BE AWARE THIS MATERIAL IS EXTREMELY SUSCEPTIBLE TO DEGRADATION UPON WETTING WHICH CAN RESULT IN DEEP-SEATED PUMPING AND RUTTING.

LIMESTONE SCREENINGS THAT PUMP AND RUT ARE NOT ACCEPTABLE FOR USE AS NEW STRUCTURAL FILL OR FOR LOW VOLUME CHANGE MATERAIL AND WILL NEED TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.

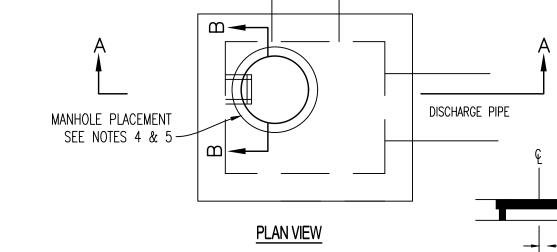
OVERFILL SOIL LEAN TO FAT CLAY OR TYPE 1 BASE COMPACTED TO 95% STANDARD PROCTOR. REFER TO TABLE 3/4" CLEAN ROCK\_ COMPACTED. UNDISTURBED EARTH HAUNCH AGGREGATE BASE COMPACTED OUTER BEDDING MATERIALS AND COMPACTION, SAME AS HAUNCH LOOSELY PLACED UNCOMPACTED 34" CLEAN ROCK

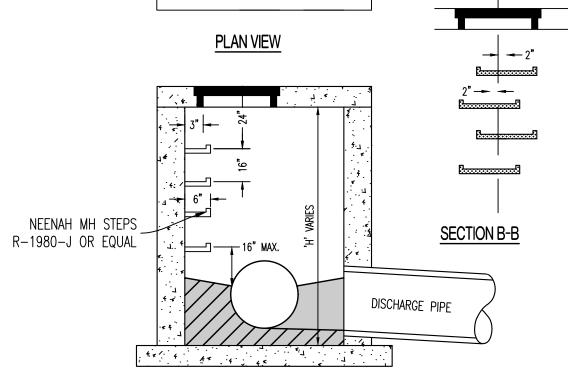






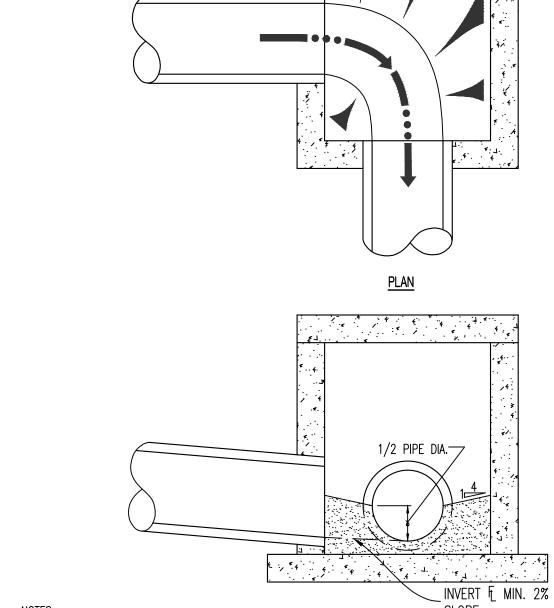






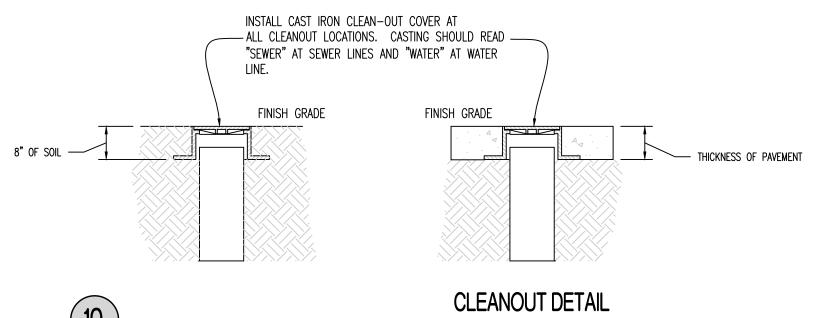
SECTION A-A 1. STEPS NOT REQUIRED WHERE H IS LESS THAN 4'. 2. CAST IRON STEPS STEPS SHALL BE AMERICAN ML-10-NCR OR EQUAL 3. STEPS SHALL BE PLACED ON VACANT WALL WHEN POSSIBLE 4. MANHOLE RING SHALL BE OFFSET TOWARD WALL WITH STEPS. 5. MANHOLE RING SHALL BE CENTERED ON CENTERLINE OF STEPS 6. STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF MANHOLE RING.

7. TOP STEP 24" BELOW TOP OF LID 8. STEP SPACING TO BE 16", BOTTOM STEP TO BE NO HIGHER THAN 16" FROM INVERT.



DRAINAGE STRUCTURE INVERT

DRAINAGE STRUCTURE STEPS



ROOF DRAIN DETAIL

STORM COLLECTOR

PIPE (VARIABLE

DEPTH & SIZE)

REFER TO ARCH. PLANS -FOR DOWNSPOUT SIZE.

FINISHED GRADE —

6" SDR 35 PIPE @ 2% — MINIMUM SLOPE

6" SDR 35

SADDLE WYE ~

45 BEND

DOWNSPOUT BOOT ~

6" SDR 35 ~

90 BEND

TOP OF FOOTING

|| REVISIONS:

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DATED ELECTRONICALLY

NATHAN THOMAS ECKHOFF

MO LICENSE-2003014960

DRAWING INCLUDES:

STORM DETAILS

DESIGNED: NTE DRAWN: NMD

PROJECT NO.: 230286

SHEET:

CE 6.3

1. FORM ALL INVERTS FOR SMOOTH FLOW THROUGH STRUCTURE. 2. INVERT SHALL BE FORMED UP TO 1/2 THE PIPE DIAMETER
3. INVERT SHALL BE CLASS E CONCRETE.

TYPE 1 BASE

COMPACTED

¾" CLEAN ROCK\_

UNDISTURBED

HAUNCH AGGREGATE

BASE COMPACTED.

OUTER BEDDING

COMPACTION, SAME

MATERIALS AND

AS HAUNCH

COMPACTED

EARTH

FILTER FABRIC

LOOSELY PLACED UNCOMPACTED

34" CLEAN ROCK

PIPE EMBEDMENT (UNDER PAVEMENT)

41 41

TO 95% STANDARD -

PROCTOR. REFER TO TABLE

THE VILLAGE AT DISCOVERY PARK LOTS 5-8 DRAINAGE AREA MAP SCALE: 1" = 60' (6C)

PREPARED BY:

ENGINEERING CONSULTANTS

1000 W. Nifong Blvd., Bldg. 1 Columbia, Missouri 65203 (573) 447-0292

www.crockettengineering.com

Crockett Engineering Consultants, LLC Missouri Certificate of Authority #2000151301



| PROJECT:       | The Vill | age at Discovery L | .ots 5-8 |
|----------------|----------|--------------------|----------|
| CALCULATED BY: | MWB      | CHECKED BY:        | NTE      |
| DATE:          | 07/19/24 | PROJECT NO:        | 230286   |

|          |                 |            |                         |                    |       | STO   | ORM H              | HYDRO      | OLOG           | Y / GI       | JTTE                     | R / INI                 | LET CA                        | ALCLU                    | JLATIO                  | ONS  |
|----------|-----------------|------------|-------------------------|--------------------|-------|-------|--------------------|------------|----------------|--------------|--------------------------|-------------------------|-------------------------------|--------------------------|-------------------------|--|
| DE       | SCRIPT          | ION        | OVERLAND FLOW HYDROLOGY |                    |       |       |                    |            |                | GUTT         | ER AND                   | INLET                   | Γ HYDR/                       | AULICS                   | NOTES                   |  |
| AREA NO. | STRUCTURE LABEL | INLET TYPE | TIME OF CONCENTRATION   | RUNOFF COEFFICIENT | AREA  | CA    | BAINFALL INTENSITY | RUNOFF     | GUTTER<br>FLOW | GUTTER SLOPE | WIDTH OF GUTTER.<br>FLOW | DEPTH OF<br>GUTTER FLOW | IHEORETICAL INLET<br>CAPACITY | DESIGN INLET<br>CAPACITY | INLET<br>BYPASS<br>FLOW |  |
|          |                 |            | min                     |                    | acres | acres | in/hr              | cfs        | cfs            | ft/ft        | ft                       | ft                      | cfs                           | cfs                      | cfs                     | Assertational Co. A Symptotic Science A        |
| 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              | Α          |                         | 0.81               | 0.14  | 0.11  | 7.4                | 0.83       |                |              |                          |                         | 9.80                          | 7.84                     | 0.00                    | TYPE A (IN SUMP)                               |
| 3        | 1B              | Α          |                         | 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              | Α          |                         | 0.81               | 0.27  | 0.22  | 7.4                | 1.61       |                |              |                          |                         | 9.80                          | 7.84                     | 0.00                    | TYPE A (IN SUMP)                               |
| 7        | 2C              | Α          |                         | 0.81               | 0.31  | 0.25  | 7.4                | 1.85       |                |              |                          |                         | 0.79                          | 0.63                     | 0.00                    | TYPE A (IN SUMP)                               |
| 8        | 2B              | Α          |                         | 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/ 0.6" OF HEAD |
| 11       | ЗА              | AREA       |                         | 0.30               | 0.03  | 0.01  | 7.4                | 0.07       | 3.             |              |                          |                         | 0.89                          | 0.71                     | 0.00                    | 10" NYLOPLAST (STANDARD GRATE) W/ 0.9" 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              | Α          |                         | 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              | Α          |                         | 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                        |
|          |                 |            |                         |                    |       |       |                    |            |                |              |                          |                         |                               |                          |                         |  |
|          |                 | ÷          |                         | 2                  |       |       |                    |            |                |              |                          |                         |                               |                          |                         |  |
|          |                 |            |                         | 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  |
|          |                 |            |                         |                    |       |       |                    | 300-000-00 |                |              |                          |                         |                               |                          |                         |  |
|          |                 |            |                         |                    |       |       |                    |            |                |              | -                        |                         |                               | _                        |                         |  |

| ~ D / D ~ V E T T       |
|-------------------------|
|                         |
| ENGINEERING CONSULTANTS |

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

|              |                          |                       |       |              |                    | S            | TORM D            | RAIN PI                    | PE SIZE      |                             |                             |       |
|--------------|--------------------------|-----------------------|-------|--------------|--------------------|--------------|-------------------|----------------------------|--------------|-----------------------------|-----------------------------|-------|
| DESCRIPTION  | ı                        |                       |       |              | STOF               | RM DRAIN     | HYDRAU            | JLICS                      |              |                             |                             | NOTES |
| AREA NO.     | UPSTREAM STRUCTURE LABEL | TIME OF_CONCENTRATION | ADDED | NUL.         | RAINFALL INTENSITY | RUNOFF       | STORM DRAIN SLOPE | STORM<br>DRAIN<br>DIAMETER | STORM DRAIN. | CAPACITY<br>FLOWING<br>FULL | VELOCITY<br>FLOWING<br>FULL |       |
|              | STRE                     |                       | ADC   | CUMUL        | Pan J.             |              |                   |                            | OR HDPE      |                             |                             |       |
|              | ₽                        | min                   | acres | acres        | in/hr              | cfs          | ft/ft             | in                         |              | cfs                         | fps                         |       |
| •            | 40                       |                       | 0.40  |              | LINE 1             | 0.00         | 0.000             | 40                         |              | F 40                        | 0.05                        |       |
| 1            | 1D                       | ·5                    | 0.12  | 0.12         | 7.35               | 0.89         | 0.020             | 12                         | HDPE         | 5.46                        | 6.95                        |       |
| 2<br>3       | 1C<br>1B                 | <b>.</b> 5            | 0.41  | 0.53<br>0.56 | 7.35<br>7.35       | 3.87<br>4.11 | 0.020             | 15<br>18                   | HDPE<br>HDPE | 9.89<br>16. <b>0</b> 9      | 8.06<br>9.11                |       |
| LINE 5       | 1A                       | -5<br>-5              |       | 1.23         | 7.35               | 9.05         | 0.020             | 24                         | HDPE         | 34.64                       | 11.03                       |       |
| LINE 5       | I IA                     | '0                    | 0.67  |              | INE 2              | 9.05         | 0.020             |                            |              | 34.04                       | 11.03                       |       |
| 5            | 2E                       | <b>√</b> 5            |       | 0.03         | 7.35               | 0.24         | 0.015             | 8                          | PVC          | 1.75                        | 5.01                        |       |
| 6+LINE3      | 2D                       | -5<br>-5              | 0.23  | 0.26         | 7.35               | 1.94         | 0.015             | 12                         | HDPE         | 4.72                        | 6.02                        |       |
| 7            | 2C                       | -5<br>-5              | 0.25  | 0.51         | 7.35               | 3.78         | 0.015             | 15                         | HDPE         | 8.57                        | 6.98                        |       |
| 8 + LINE 4   | 2B                       | -5                    | 0.38  | 0.89         | 7.35               | 6.56         | 0.010             | 18                         | HDPE         | 11.37                       | 6.44                        |       |
| 9+LINE 8     | 2A                       | -(5                   | 0.35  | 1.24         | 7.35               | 9.11         | 0.020             | 18                         | HDPE         | 16.09                       | 9.11                        |       |
| O S Eli VE O |                          |                       | 0.00  |              | INE 3              | 0.11         | 0.020             | 10                         | 1101 2       | 10.00                       | 0.11                        |       |
| 10           | 3B                       | <b>√</b> 5            |       | 0.00         | 7.35               | 0.02         | 0.040             | 6                          | PVC          | 1.33                        | 6.75                        |       |
| 11           | 3A                       | -(5                   | 0.01  | 0.01         | 7.35               | 0.09         | 0.040             | 6                          | PVC          | 1.33                        | 6.75                        |       |
|              | J                        | Ū                     | 0.01  |              | INE 4              | 0.00         | 0.0 .0            |                            |              |                             | 0.10                        |       |
| ROOF (LOT 8) | 4C                       | <b>√</b> 5            | 0.24  | 0.24         | 7.35               | 1.75         | 0.010             | 10                         | PVC          | 2.59                        | 4.75                        |       |
| 12           | 4B                       | <b>(</b> 5            | 0.04  | 0.27         | 7.35               | 2.01         | 0.020             | 10                         | PVC          | 3.66                        | 6.71                        |       |
| 13           | 4A                       | <b>(5</b>             | 0.05  | 0.32         | 7.35               | 2.36         | 0.010             | 12                         | HDPE         | 3.86                        | 4.91                        |       |
|              |                          |                       |       |              | INE 5              |              |                   |                            |              |                             |                             |       |
| 14           | 5A                       | <b>√</b> 5            | 0.67  | 0.67         | 7.35               | 4.94         | 0.010             | 18                         | HDPE         | 11.37                       | 6.44                        |       |
| 70.00        |                          |                       |       |              | INE 6              |              |                   |                            |              |                             |                             |       |
| ROOF (LOT 6) | 6D                       | <b>√</b> 5            | 0.15  | 0.15         | 7.35               | 1.09         | 0.010             | 10                         | PVC          | 2.59                        | 4.75                        |       |
| 15           | 6C                       | <b>(</b> 5            | 0.06  | 0.21         | 7.35               | 1.53         | 0.010             | 10                         | PVC          | 2.59                        | 4.75                        |       |
| 16           | 6B                       | <b>.</b> 5            | 0.11  | 0.32         | 7.35               | 2.37         | 0.010             | 12                         | HDPE         | 3.86                        | 4.91                        |       |
| 17           | 6A                       | <b>(</b> 5            | 0.02  | 0.34         | 7.35               | 2.50         | 0.005             | 15                         | HDPE         | 4.95                        | 4.03                        |       |
|              |                          |                       |       |              | INE 7              |              |                   |                            |              |                             |                             |       |
| ROOF (LOT 5) | 7A                       | <b>.</b> 5            |       | 0.32         | 7.35               | 2.33         | 0.010             | 12                         | HDPE         | 3.86                        | 4.91                        |       |
| •            |                          | -                     |       |              | INE 8              |              |                   |                            |              |                             |                             |       |
| 19           | 8A                       | <b>√</b> 5            |       | 0.16         | 7.35               | 1.18         | 0.007             | 10                         | PVC          | 2.17                        | 3.97                        |       |

REVISIONS:

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

NATHAN THOMAS ECKHOFF MO LICENSE-2003014960

DRAWING INCLUDES:

25-YR STORM CALCULATIONS

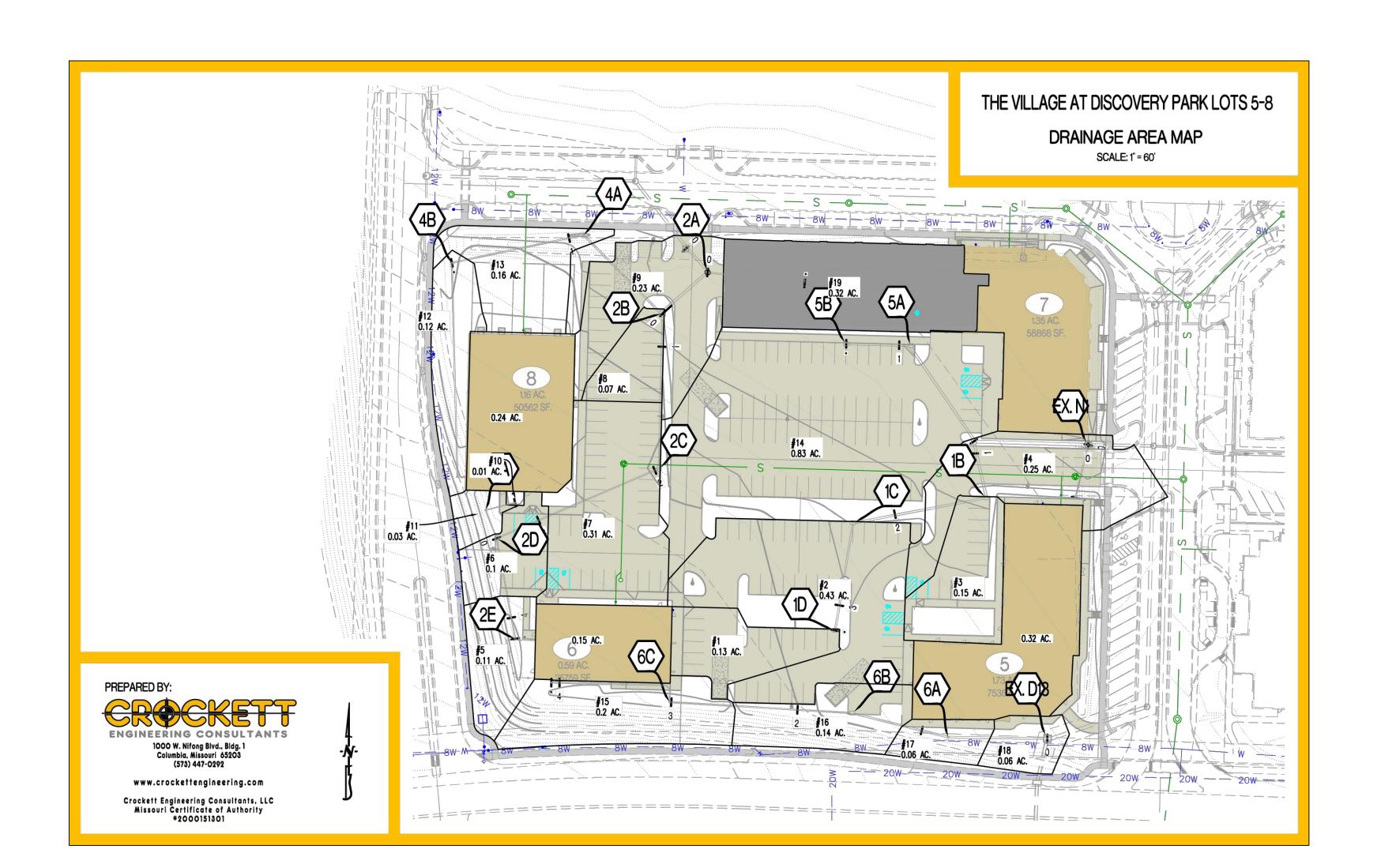
DESIGNED:

DRAWN: NMD PROJECT NO.: 230286

SHEET:

CE 6.4

LEE'S SUMMIT





| PROJECT: _       | The Vill | age at Discovery Lo | ots 5-8 |
|------------------|----------|---------------------|---------|
| CALCULATED BY: _ | MWB      | _ CHECKED BY: _     | NTE     |
| DATE:            | 07/19/24 | PROJECT NO:         | 230286  |

|          |                 |            |   |                    |       | STO   | ORM H              | HYDRO  | OLOG           | Y / GI       | JTTE                     | R / INL                 | ET CA                         | ALCLU                     | ILATIO                  | ONS  |
|----------|-----------------|------------|---|--------------------|-------|-------|--------------------|--------|----------------|--------------|--------------------------|-------------------------|-------------------------------|---------------------------|-------------------------|--|
| DE       | SCRIPT          | TON        | OVERLAND FLOW HYDROLOGY GUTTER AND INLET HYDRAULI |                    |       |       |                    |        |                |              |                          |                         |                               | AULICS                    | (i                      | NOTES  |
| AREA NO. | STRUCTURE LABEL | INLET TYPE | TIME OF CONCENTRATION                             | RUNOFF COEFFICIENT | AREA  | CA    | BAINFALL INTENSITY | RUNOFF | GUTTER<br>FLOW | GUTTER SLOPE | WIDTH OF GUTTER.<br>FLOW | DEPTH OF<br>GUTTER FLOW | THEORETICAL INLET<br>CAPACITY | DESIGN INLET.<br>CAPACITY | INLET<br>BYPASS<br>FLOW |  |
|          |                 |            | min   |                    | acres | acres | in/hr              | cfs    | cfs            | ft/ft        | ft                       | ft                      | cfs                           | cfs                       | cfs                     |  |
| 1        | 1D              | Α          |   | 0.99               | 0.13  | 0.13  | 10.3               | 1.33   |                |              |                          |                         | 9.80                          | 7.84                      | 0.00                    | TYPE A (IN SUMP)                               |
| 2        | 1C              | Α          |   | 0.99               | 0.14  | 0.14  | 10.3               | 1.43   | 3.             |              |                          |                         | 9.80                          | 7.84                      | 0.00                    | TYPE A (IN SUMP)                               |
| 3        | 1B              | Α          |   | 0.99               | 0.15  | 0.15  | 10.3               | 1.53   |                |              |                          |                         | 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              | Α          |   | 0.99               | 0.27  | 0.27  | 10.3               | 2.76   |                |              |                          |                         | 9.80                          | 7.84                      | 0.00                    | TYPE A (IN SUMP)                               |
| 7        | 2C              | Α          |   | 0.99               | 0.31  | 0.31  | 10.3               | 3.17   |                |              |                          |                         | 0.79                          | 0.63                      | 0.00                    | TYPE A (IN SUMP)                               |
| 8        | 2B              | Α          |   | 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/ 0.6" OF HEAD |
| 11       | ЗА              | AREA       |   | 0.99               | 0.03  | 0.03  | 10.3               | 0.31   |                |              |                          |                         | 0.89                          | 0.71                      | 0.00                    | 10" NYLOPLAST (STANDARD GRATE) W/ 0.9" OF HEAD |
| 12       | 4B              | AREA       |   | 0.38               | 0.12  | 0.05  | 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              | Α          |   | 0.99               | 0.83  | 0.82  | 10.3               | 8.48   |                |              |                          |                         | 9.80                          | 7.84                      | 0.00                    | TYPE A (IN SUMP)                               |
|          | 0.00            |            |   | 0 //               | 16.   |       | 100                |        |                |              |                          |                         |                               |                           |                         |  |

4.10 3.28 13.40 10.72

| ENGINEERING CONSULTANTS |
|-------------------------|

0.99 0.14 0.14 10.3 1.4

0.38 0.06 0.02 10.3

 0.38
 0.06
 0.02
 10.3
 0

 0.63
 0.32
 0.20
 10.3
 2

 0.99
 0.15
 0.15
 10.3
 1.53

 0.99
 0.24
 0.24
 10.3
 2.45

 0.99
 0.32
 0.32
 10.3
 3.27

0.99 0.57 0.56 10.3 5.82

16 6B A

17 6A AREA 18 EX. D13 CB 19 8A CB

| PROJECT:       | The Vil | lage at Discovery Lo | ots 5-8 |
|----------------|---------|----------------------|---------|
| CALCULATED BY: | MWB     | CHECKED BY:          | NTE     |
| DATE:          | 7/19/24 | PROJECT NO:          | 230286  |
| .,             |         |                      |         |
|                |         |                      |         |
|                |         | NOTES                |         |
|                |         |                      |         |

10" NYLOPLAST (DOMED GRATE) W/ 0.5" OF HEAD

TYPE A (IN SUMP)

10" NYLOPLAST (STANDARD GRATE) W/ 0.5" OF HEAD

5 SIDE OPEN INLET (0.82 CFS/FT) EJ V5636 W/ 0.4 OF HEAD

> Lot 6 Lot 8 Lot 5

> Lot 7

|              |                          |                       |       |        |                    | SI               | TORM D            | RAIN PI                    | PE SIZE                        |                             |                             |       |
|--------------|--------------------------|-----------------------|-------|--------|--------------------|------------------|-------------------|----------------------------|--------------------------------|-----------------------------|-----------------------------|-------|
| DESCRIPTION  | N .                      |                       |       |        | STOF               | RM DRAIN         | HYDRAU            | JLICS                      |                                |                             |                             | NOTES |
| AREA NO.     | UPSTREAM STRUCTURE LABEL | TIME OF CONCENTRATION | ADDED | CUMUL. | BAINFALL INTENSITY | RUNOFF           | STORM DRAIN SLOPE | STORM<br>DRAIN<br>DIAMETER | STORM DRAIN.  3 3 4 A MATERIAL | CAPACITY<br>FLOWING<br>FULL | VELOGITY<br>FLOWING<br>FULL |       |
|              | IPST                     |                       |       |        |                    | 500 <b>*</b> 410 | ft/ft             | in                         | OR HDPE                        | cfs                         | fps                         |       |
|              |                          | min                   | acres | acres  | in/hr<br>_INE 1    | cfs              | 11711             | ın                         |                                | CIS                         | ips                         |       |
| 1            | 1D                       | <b>√</b> 5            | 0.15  | 0.15   | 10.32              | 1.53             | 0.020             | 12                         | HDPE                           | 5.46                        | 6.95                        |       |
| 2            | 1C                       | <b>(5</b>             | 0.50  | 0.64   | 10.32              | 6.64             | 0.020             | 15                         | HDPE                           | 9.89                        | 8.06                        |       |
| 3            | 1B                       | <b>√</b> 5            | 0.04  | 0.68   | 10.32              | 7.07             | 0.020             | 18                         | HDPE                           | 16.09                       | 9.11                        |       |
| LINE 5       | 1A                       | <b>√</b> 5            | 0.82  | 1.51   | 10.32              | 15.55            | 0.020             | 24                         | HDPE                           | 34.64                       | 11.03                       |       |
|              |                          |                       |       | Į.     | INE 2              |                  |                   |                            |                                |                             |                             |       |
| 5            | 2E                       | <b>.</b> 5            |       | 0.04   | 10.32              | 0.43             | 0.015             | 8                          | PVC                            | 1.75                        | 5.01                        |       |
| 6+LINE3      | 2D                       | <b>.</b> 5            | 0.30  | 0.34   | 10.32              | 3.53             | 0.015             | 12                         | HDPE                           | 4.72                        | 6.02                        |       |
| 7            | 2C                       | <b>.</b> 5            | 0.31  | 0.65   | 10.32              | 6.70             | 0.015             | 15                         | HDPE                           | 8.57                        | 6.98                        |       |
| 8 + LINE 4   | 2B                       | <b>√</b> 5            | 0.41  | 1.06   | 10.32              | 10.95            | 0.010             | 18                         | HDPE                           | 11.37                       | 6.44                        |       |
| 9 + LINE 8   | 2A                       | <b>5</b>              | 0.43  | 1.49   | 10.32              | 15.36            | 0.020             | 18                         | HDPE                           | 16.09                       | 9.11                        |       |
|              |                          |                       |       |        | INE 3              |                  |                   |                            |                                |                             |                             |       |
| 10           | 3B                       | <b>.</b> 5            |       | 0.00   | 10.32              | 0.04             | 0.040             | 6                          | PVC                            | 1.33                        | 6.75                        |       |
| 11           | ЗА                       | <b>.</b> 5            | 0.03  | 0.03   | 10.32              | 0.35             | 0.040             | 6                          | PVC                            | 1.33                        | 6.75                        |       |
|              |                          |                       |       |        | INE 4              |                  |                   |                            |                                |                             |                             |       |
| ROOF (LOT 8) | 4C                       | ٠5                    | 0.24  | 0.24   | 10.32              | 2.45             | 0.010             | 10                         | PVC                            | 2.59                        | 4.75                        |       |
| 12           | 4B                       | ٠5                    | 0.05  | 0.28   | 10.32              | 2.92             | 0.020             | 10                         | PVC                            | 3.66                        | 6.71                        |       |
| 13           | 4A                       | <b>4</b> 5            | 0.06  | 0.34   | 10.32              | 3.54             | 0.010             | 12                         | HDPE                           | 3.86                        | 4.91                        |       |
|              |                          |                       |       |        | INE 5              |                  |                   |                            |                                |                             |                             |       |
| 14           | 5A                       | ر5                    | 0.82  | 0.82   | 10.32              | 8.48             | 0.010             | 18                         | HDPE                           | 11.37                       | 6.44                        |       |
|              |                          |                       |       |        | INE 6              | 0.52             |                   |                            |                                |                             |                             |       |
| ROOF (LOT 6) | 6D                       | <b>√</b> 5            | 0.15  | 0.15   | 10.32              | 1.53             | 0.010             | 10                         | PVC                            | 2.59                        | 4.75                        |       |
| 15           | 6C                       | <b>√</b> 5            | 0.08  | 0.22   | 10.32              | 2.31             | 0.010             | 10                         | PVC                            | 2.59                        | 4.75                        |       |
| 16           | 6B                       | <b>√</b> 5            | 0.14  | 0.36   | 10.32              | 3.74             | 0.010             | 12                         | HDPE                           | 3.86                        | 4.91                        |       |
| 17           | 6A                       | <b>4</b> 5            | 0.02  | 0.38   | 10.32              | 3.97             | 0.005             | 15                         | HDPE                           | 4.95                        | 4.03                        |       |
|              |                          |                       |       |        | INE 7              |                  |                   |                            | <del>_</del>                   |                             | _ =                         |       |
| ROOF (LOT 5) | 7A                       | <b>√</b> 5            |       | 0.32   | 10.32              | 3.27             | 0.010             | 12                         | HDPE                           | 3.86                        | 4.91                        |       |
|              |                          |                       |       |        | INE 8              |                  |                   |                            |                                |                             |                             |       |
| 19           | 8A                       | <b>√</b> 5            |       | 0.20   | 10.32              | 2.06             | 0.007             | 10                         | PVC                            | 2.17                        | 3.97                        |       |

LEE'S SUMMIT

REVISIONS:

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

NATHAN THOMAS ECKHOFF MO LICENSE-2003014960

DRAWING INCLUDES:

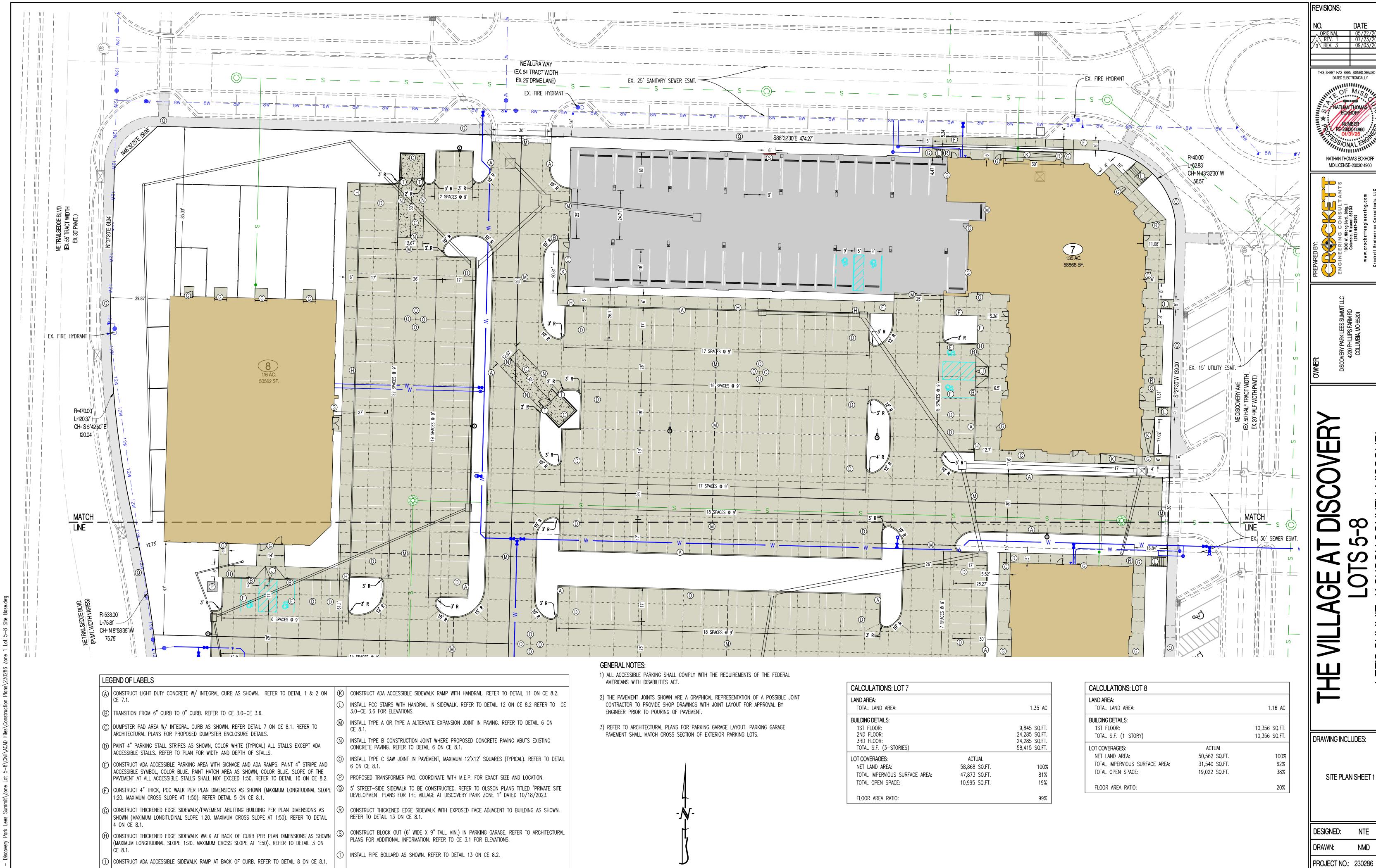
100-YR STORM CALCULATIONS

DRAWN: NMD PROJECT NO.: 230286

DESIGNED:

SHEET:

CE 6.5



SCALE: 1"=20'

) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH FLARE AT BACK OF CURB. REFER TO DETAIL 9

ON CE 8.1.

THIS SHEET HAS BEEN SIGNED, SEALED AND

MO LICENSE-2003014960

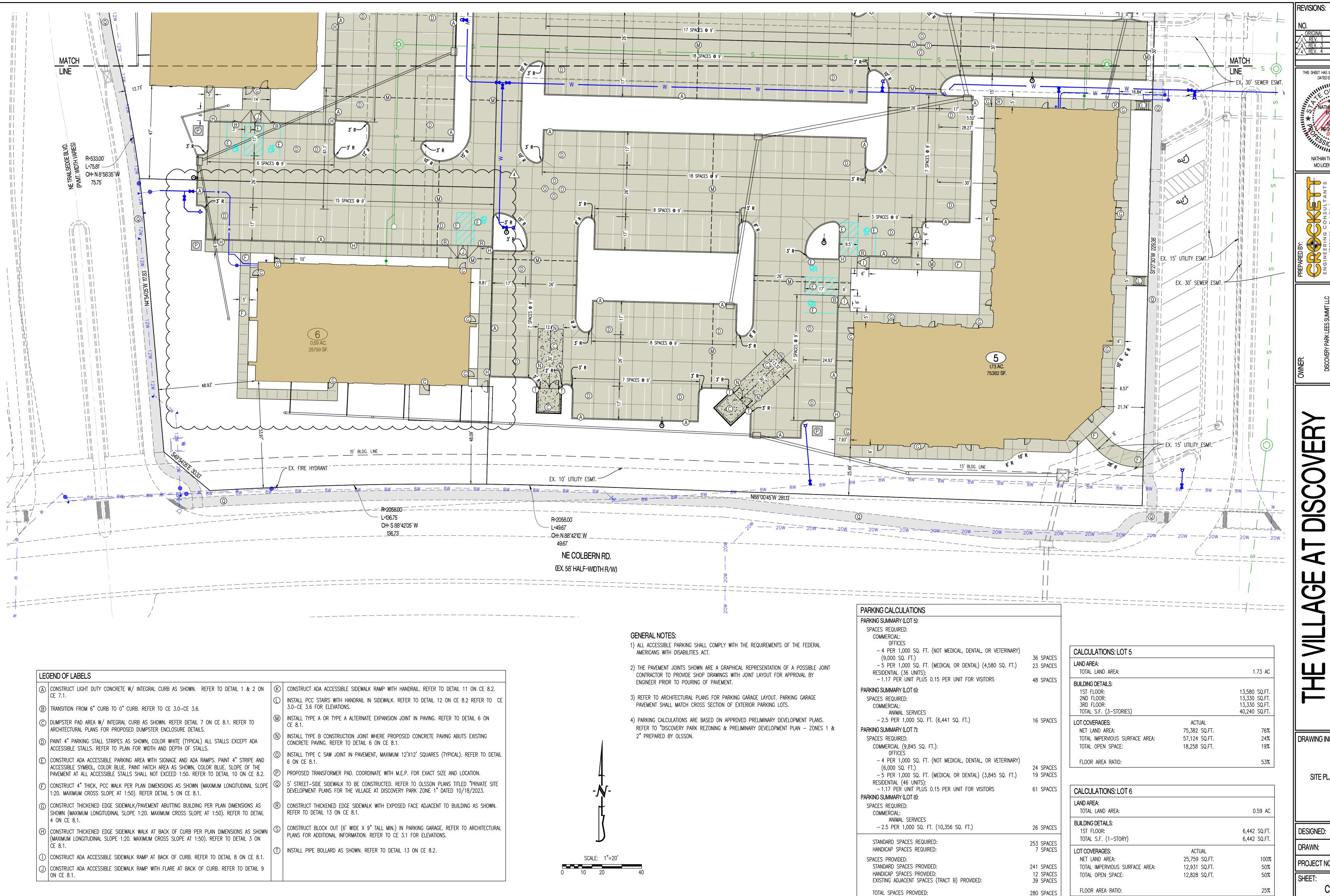
SUMMIT

DRAWING INCLUDES:

SITE PLAN SHEET 1

NMD

SHEET: CE 7.1



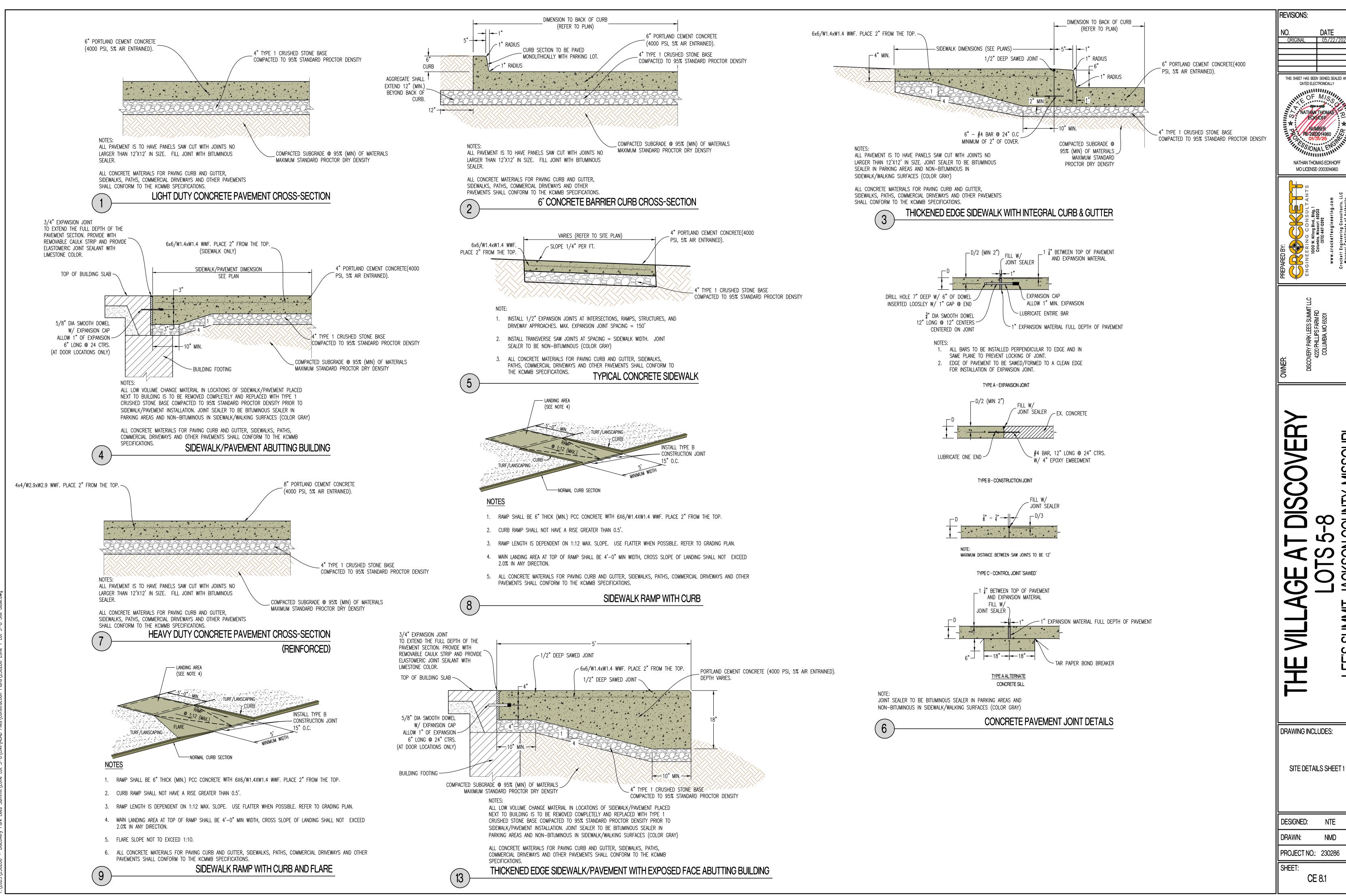
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

NATHAN THOMAS ECKHOFF MO LICENSE-2003014960

DRAWING INCLUDES:

SITE PLAN SHEET 2

NTE NMD PROJECT NO.: 230286



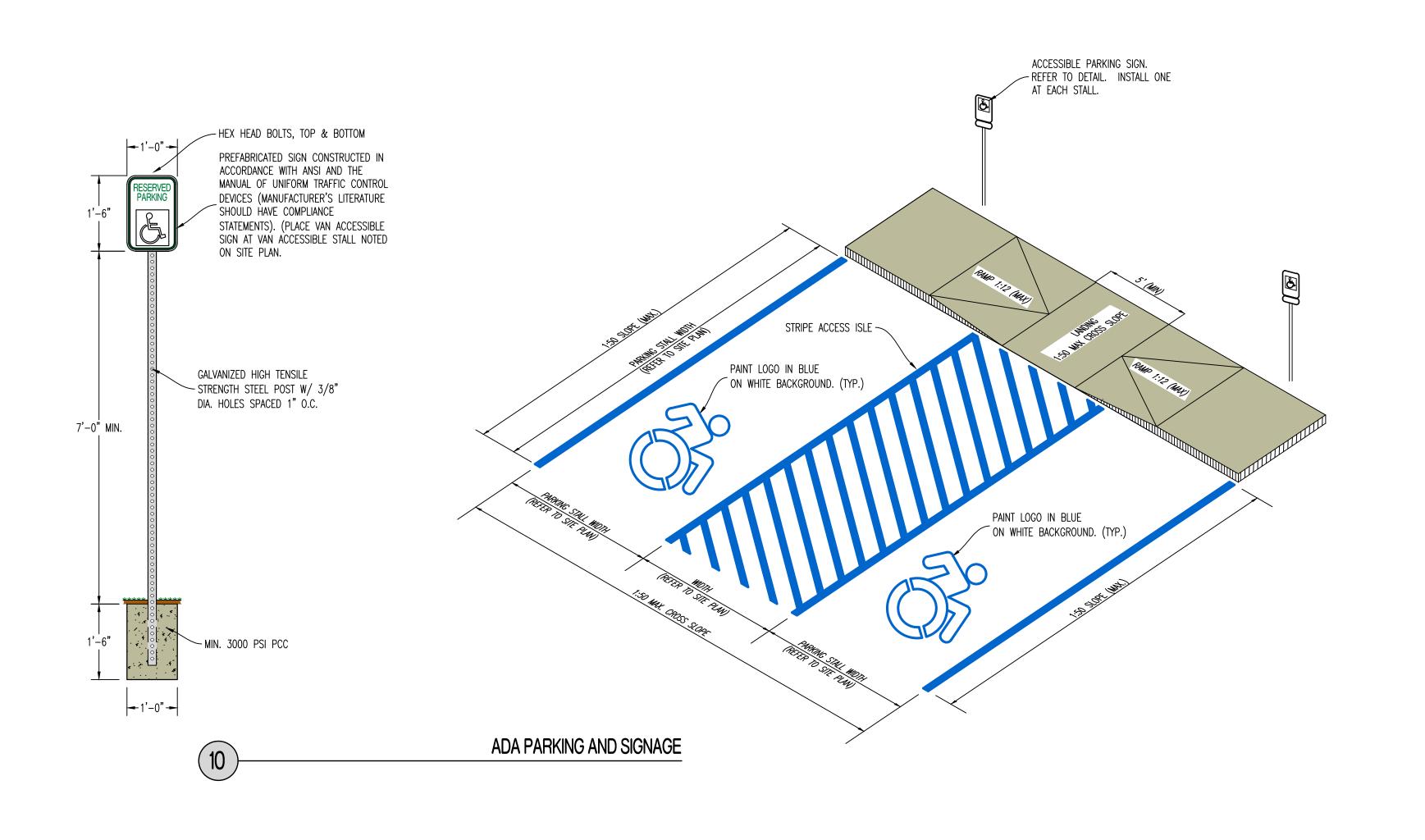
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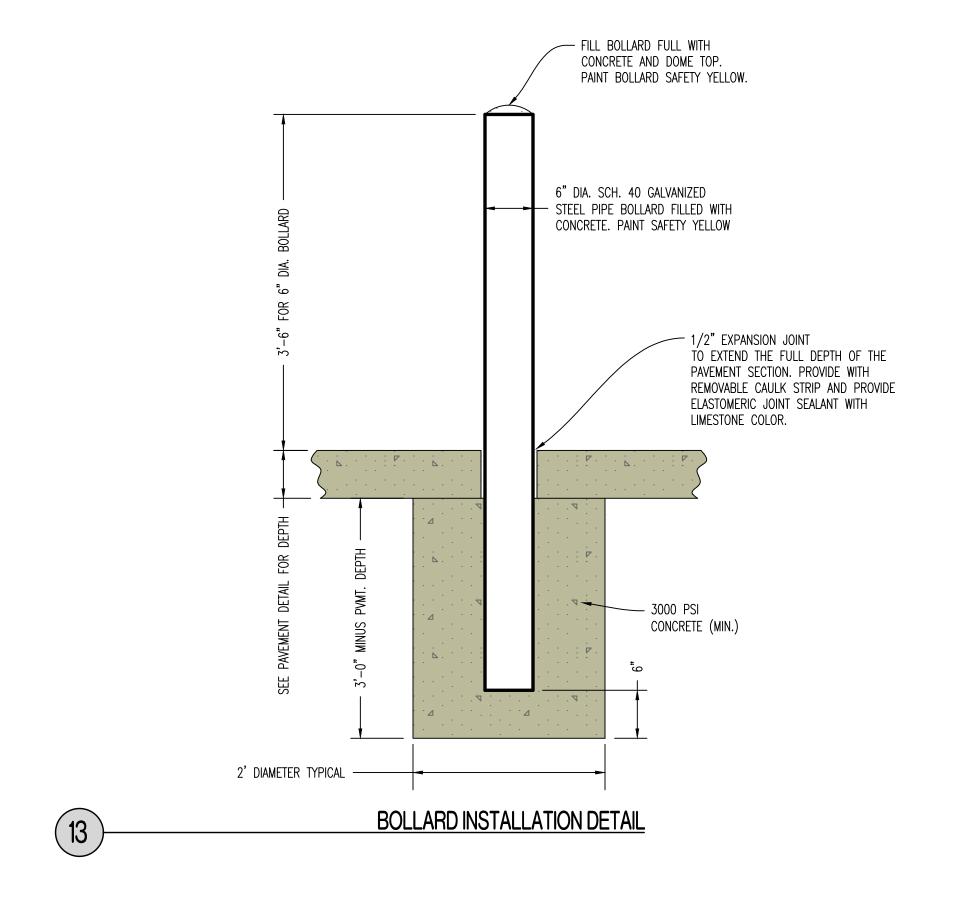
NATHAN THOMAS ECKHOFF MO LICENSE-2003014960

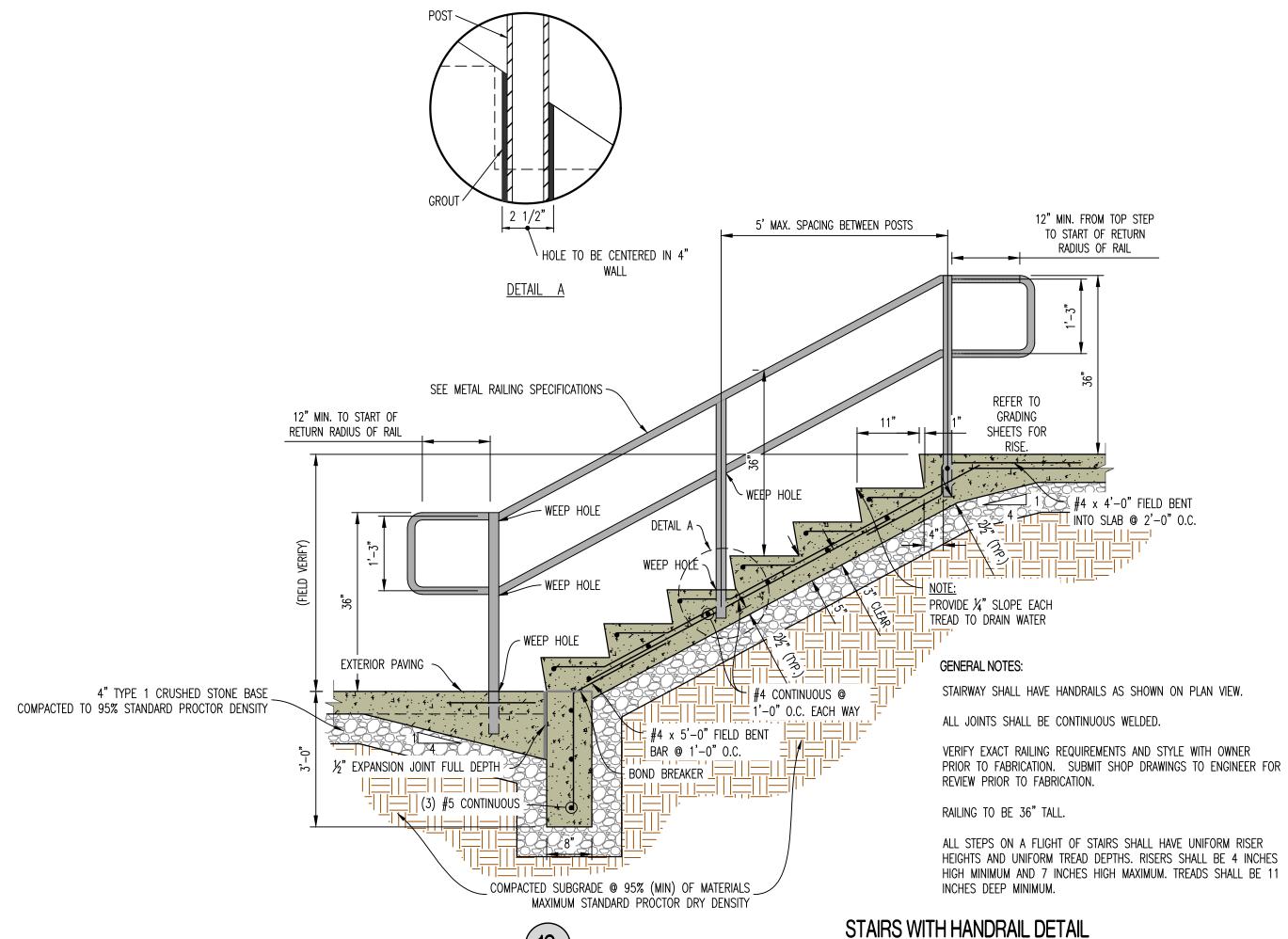
DRAWING INCLUDES:

NTE

PROJECT NO.: 230286

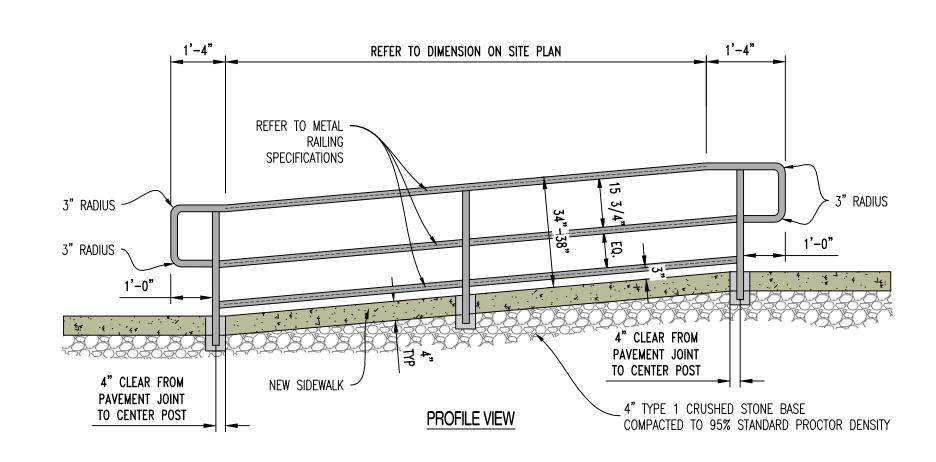


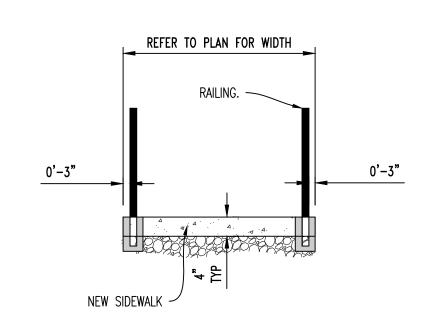




#### METAL RAILING SPECIFICATIONS

- 1. PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION.
- 2. RAILINGS AND POSTS SHALL BE 1-1/2" DIAMETER ROUND STEEL PIPING IN COMPLIANCE WITH ASTM A53, TYPE F OR TYPE S, GRADE A SCHEDULE 40 PIPING.
- 3. RAILINGS SHALL BE 34"-38" TALL FROM FINISH PAVEMENT GRADE (OR STAIR NOSING) TO THE TOP OF THE TOP
- 4. MAIN RAILS AND POSTS SHALL RESIST 50 POUNDS PER LINEAL FOOT LATERALLY AT THE TOP RAIL, AND 200 POUNDS OF CONCENTRATED LOAD LATERALLY.
- 5. INTERMEDIATE RAILS SHALL RESIST A CONCENTRATED LOAD OF 50 POUNDS LATERALLY.
- 6. CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A MINIMUM RADIUS OF  $\frac{1}{32}$ ", UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
- 7. COPE COMPONENTS AT CONNECTIONS TO PROVIDE CLOSE FIT, OR USE FITTINGS DESIGNED FOR THIS PURPOSE. WELD ALL AROUND AT CONNECTIONS, INCLUDING FITTINGS.
- 8. PROVIDE CHANGES IN RAILING DIRECTION BY USING PREFABRICATED ELBOW AND RADIUS FITTINGS.
- 9. PROVIDE WEEP HOLES AT THE BASE OF ALL POSTS AND ANYWHERE WATER OR CONDENSATION MAY ACCUMULATE INSIDE RAILING SECTIONS
- 10. PROVIDE SHOP PRIMER FORMULATED FOR GALVANIZED STEEL. PROVIDE HOT-DIP GALVANIZED FINISH IN COMPLIANCE WITH ASTM A123. FOR ALL COMPONENTS. POWDER COATED BLACK WITH HIGH GLOSS ENAMEL PAINT. VERIFY FINAL COLOR WITH OWNER PRIOR TO PAINTING.
- 11. CLEAN FIELD WELDS AND REPAIR GALVANIZING TO COMPLY WITH ASTM A780.
- 12. POSTS SHALL BE SET PLUMB WITH A TOLERANCE OF  $\frac{1}{16}$ " IN 3 FEET. ALIGN RAILS SO VARIATIONS FROM LEVEL FOR HORIZONTAL MEMBERS AND VARIATIONS FROM PARALLEL WITH RAKE OF STEPS AND RAMPS FOR SLOPING MEMBERS DO NOT EXCEED  $\frac{1}{4}$  INCH IN 12 FEET.
- 13. PROVIDE 4" SLEEVES OR CORE DRILL CONCRETE. MINIMUM 4" RAIL EMBEDMENT BELOW PAVEMENT SECTIONS SHOWN TO RECEIVE POSTS. GROUT AROUND AROUND POSTS WITH NON-SHRINK GROUT. MIN 2" OF GROUT BELOW BOTTOM OF POST. SLOPE TOP OF GROUT OF DRAIN.
- 14. CAULK JOINT BETWEEN GROUT AND METAL POST WITH APPROVE JOINT SEALANT. COORDINATE COLOR WITH OWNER.





**CROSS SECTION** 

ADA RAMP HANDRAIL DETAIL

REVISIONS:

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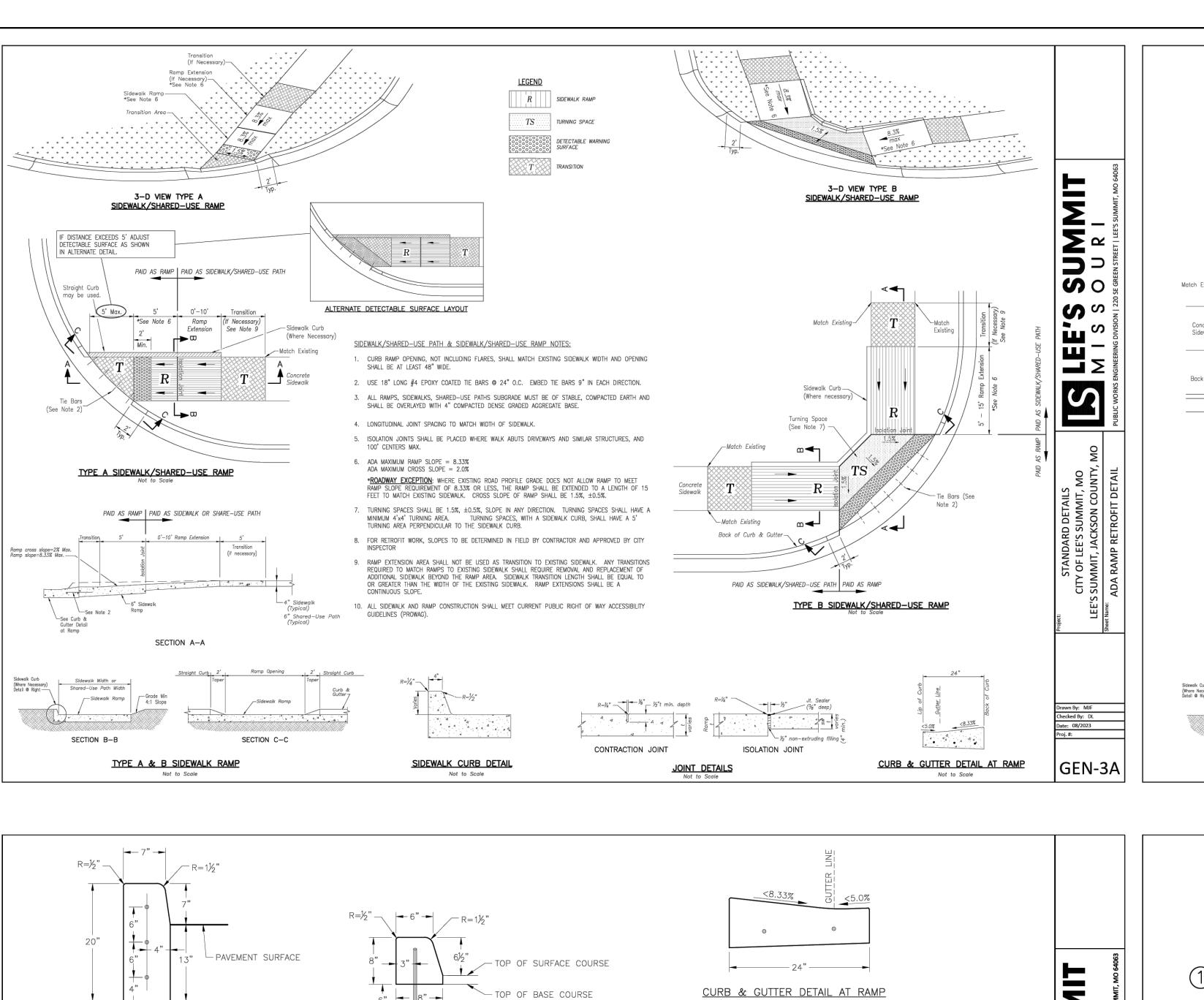
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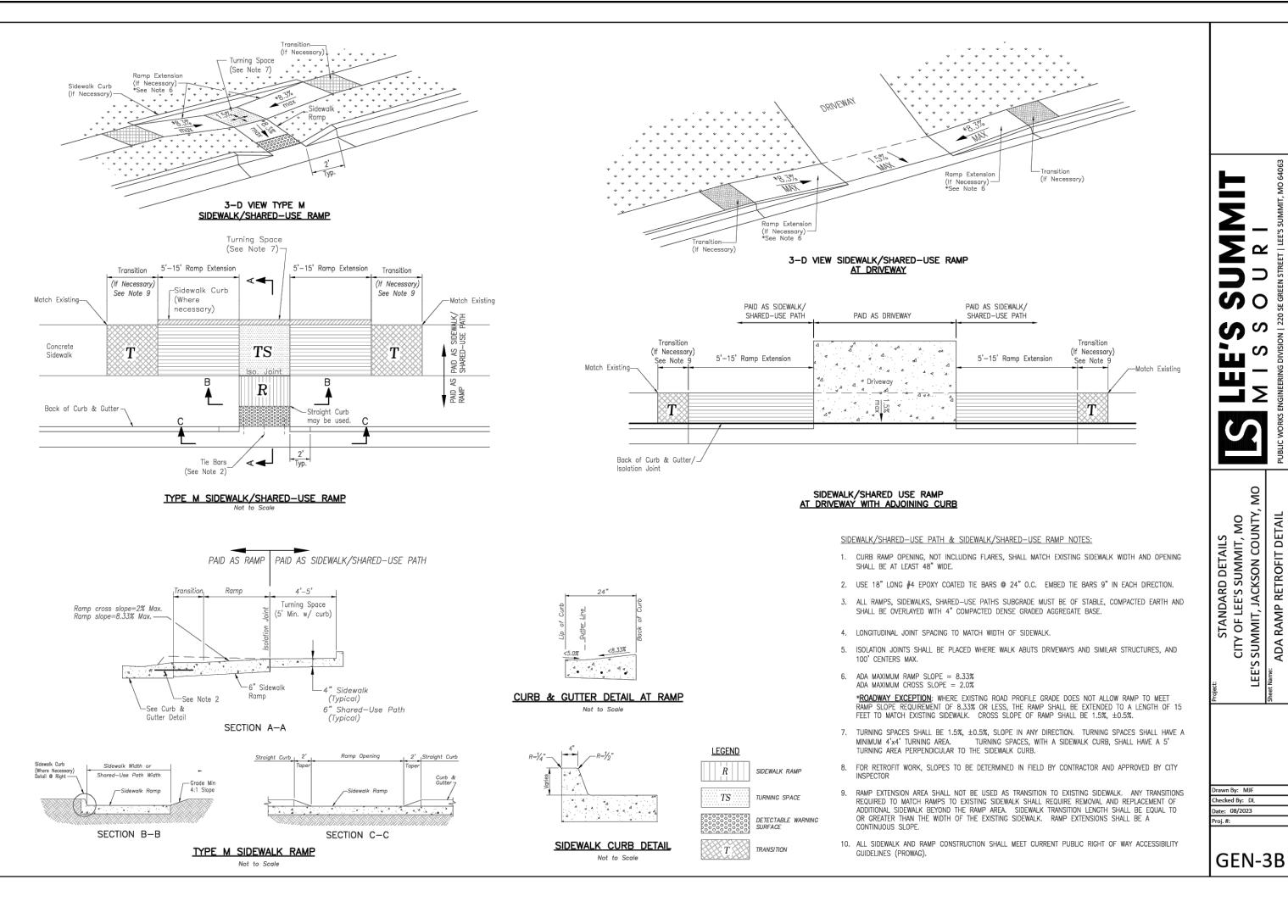
SITE DETAILS SHEET 2

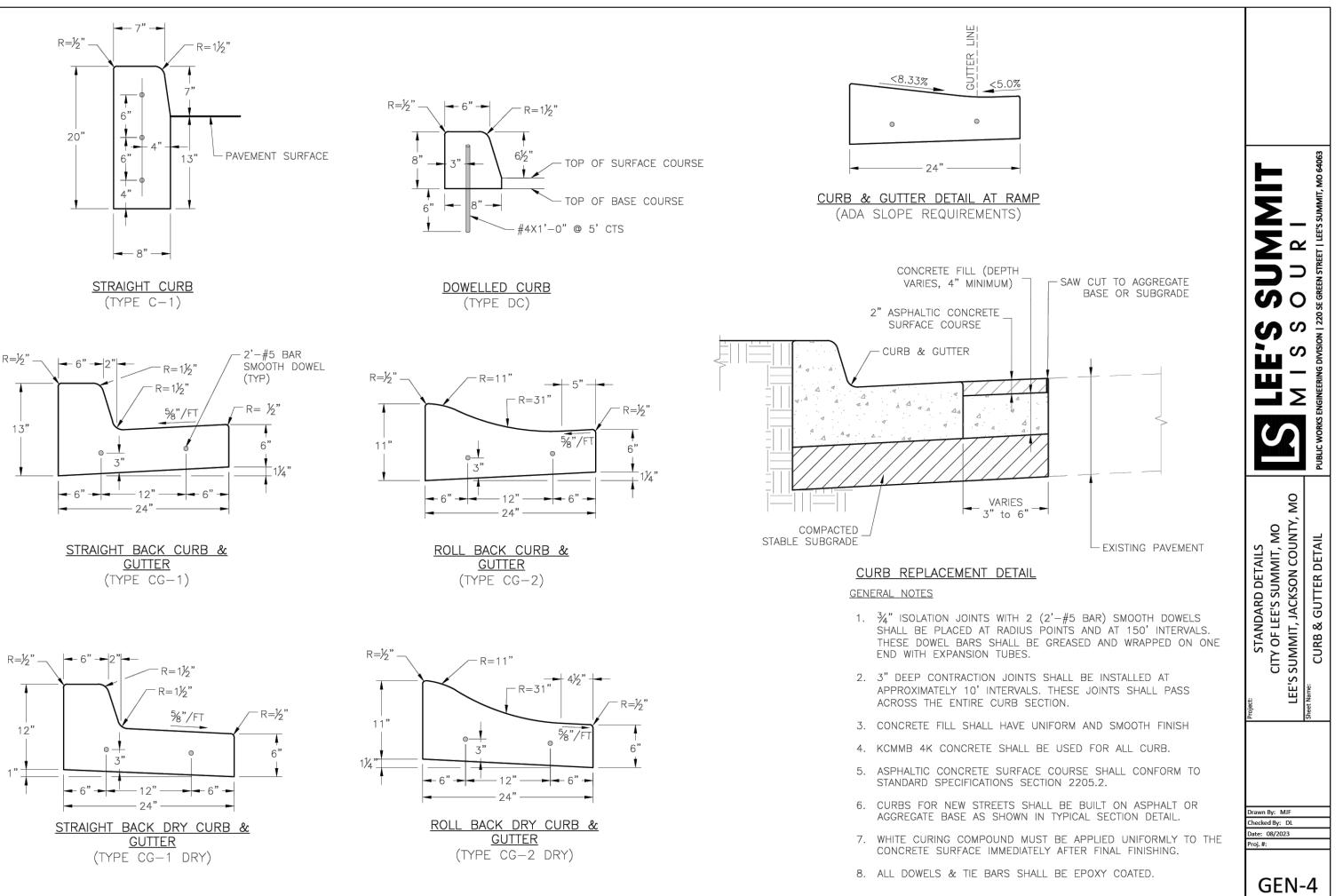
DESIGNED: NTE DRAWN: NMD

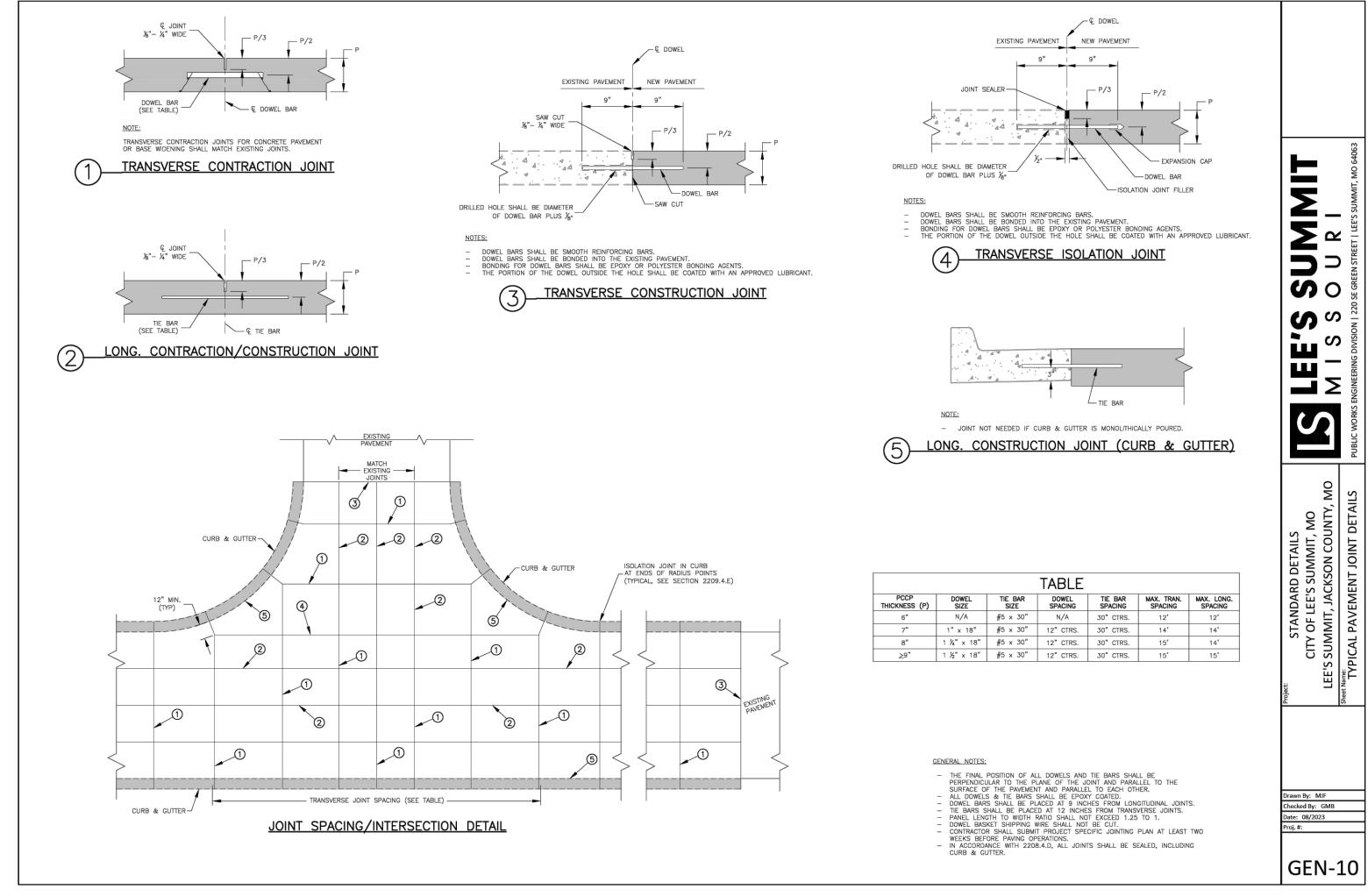
PROJECT NO.: 230286

SHEET: CE 8.2









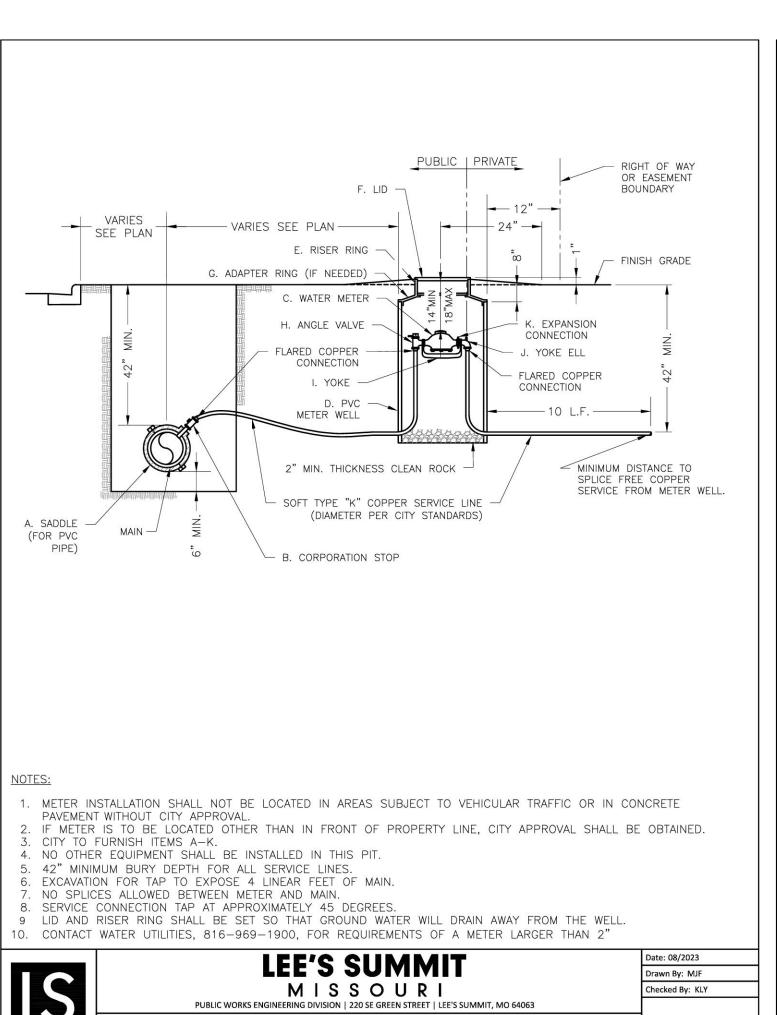
DRAWING INCLUDES: LEE'S SUMMIT SITE DETAILS DESIGNED: NMD PROJECT NO.: 230286 SHEET: CE 8.3

REVISIONS:

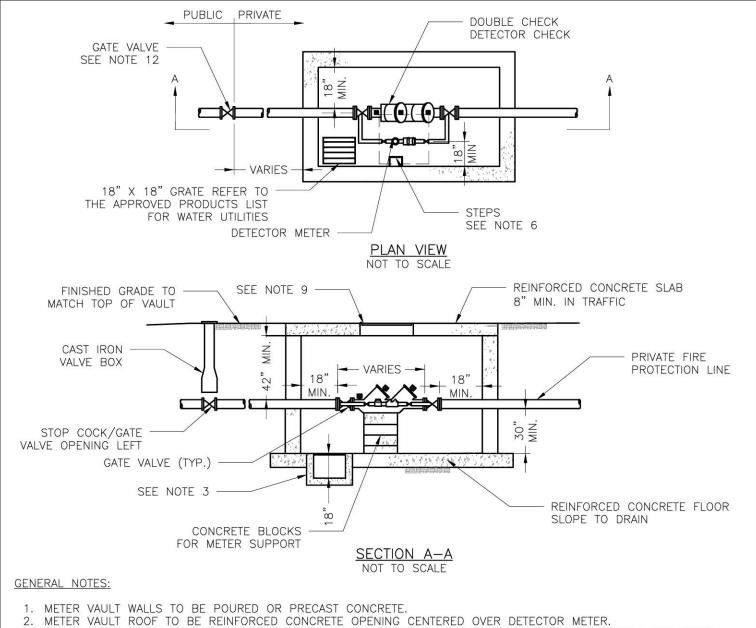
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MO LICENSE-2003014960



SERVICE CONNECTION WITH METER WELL



METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN

. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT

. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" . A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST

BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816-969-1940. AS OF JANUARY 1, 1987, THE

DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW

9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES

**LEE'S SUMMIT** 

MISSOURI

VAULT FOR DOUBLE CHECK DETECTOR CHECK

A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.

IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN

RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

PROVIDE A 2" PIPE DRAIN WITH AN ABOVE-GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY

INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL,

INSTALLED SUMP PUMP.

. ALL FITTINGS TO BE BRASS.

SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.

PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.

SUITABLE FOR EITHER TRAFFIC OR NON-TRAFFIC CONDITIONS.

METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.

. ALL VALVES SHALL HAVE RISING STEMS.

# REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE CASTINGS ---- FINISH GRADE PROVIDE JOINT SEALANT BETWEEN ALL JOINTS AND WRAP EXTERIOR OF JOINTS IN ACCORDANCE WITH SECTION 3500 12" MAXIMUM ADJUSTING RINGS AS REQUIRED 4" MIN (SEE NOTE 2) MIN IF < 24"Ø PIPI 'MIN IF > 24"Ø PIPE SPRING LINE - INTEGRAL CAST BASE ----- 6" OF COMPACTED BEDDING AGGREGATE ---- COMPACTED OR UNDISTURBED EARTH

rawn By: MJF

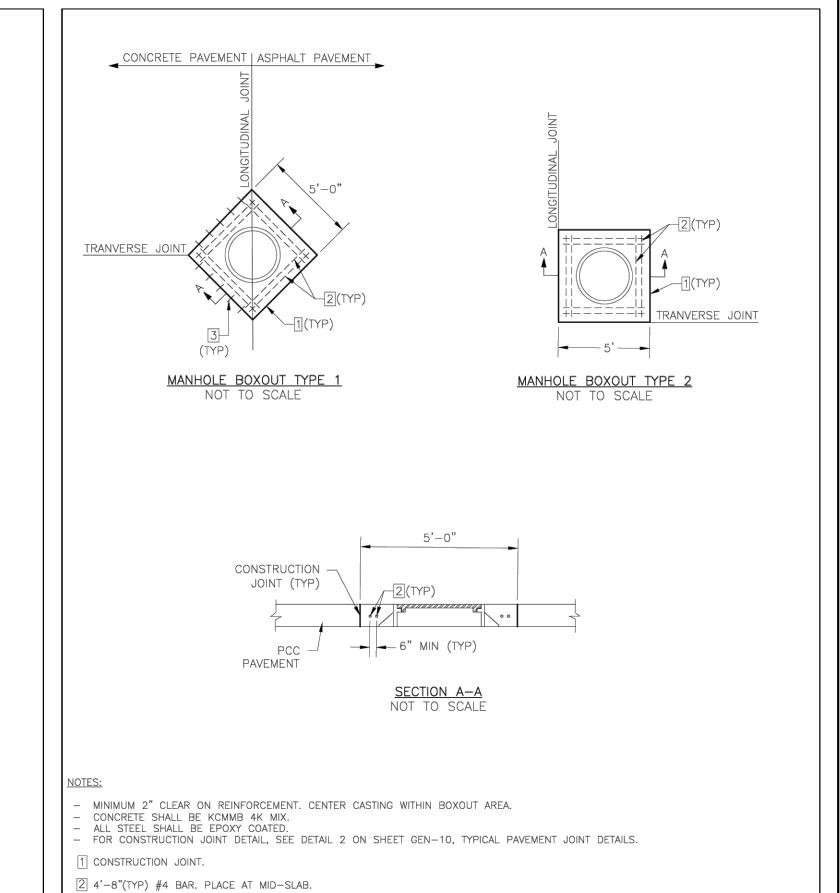
hecked By: KLY

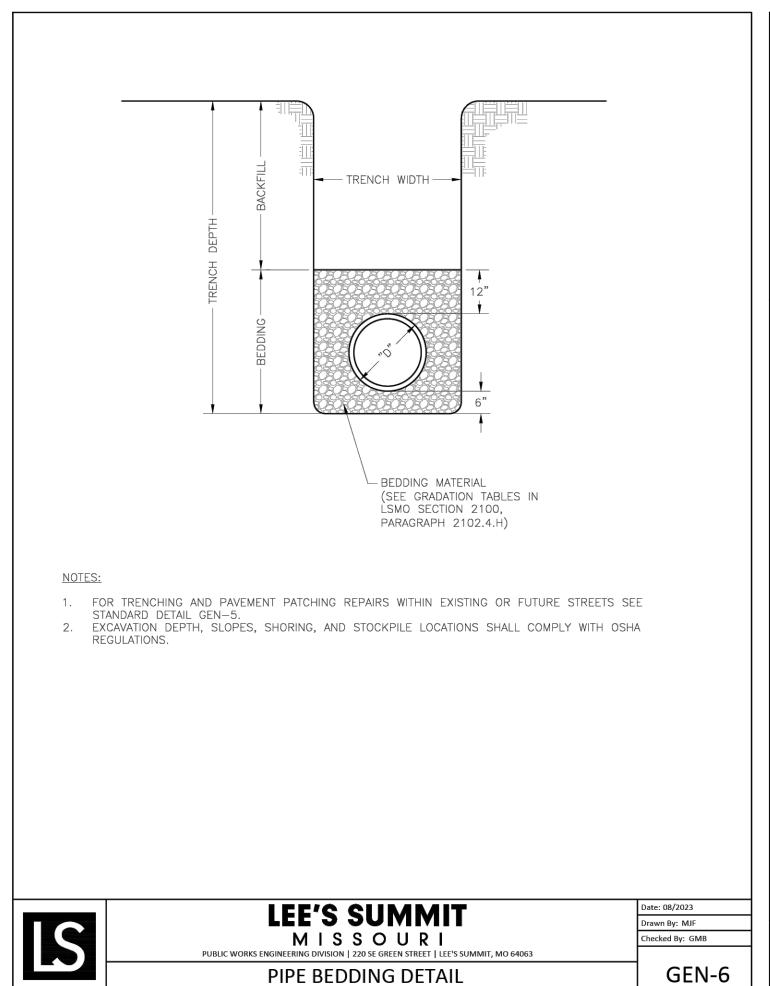
Drawn By: MJF

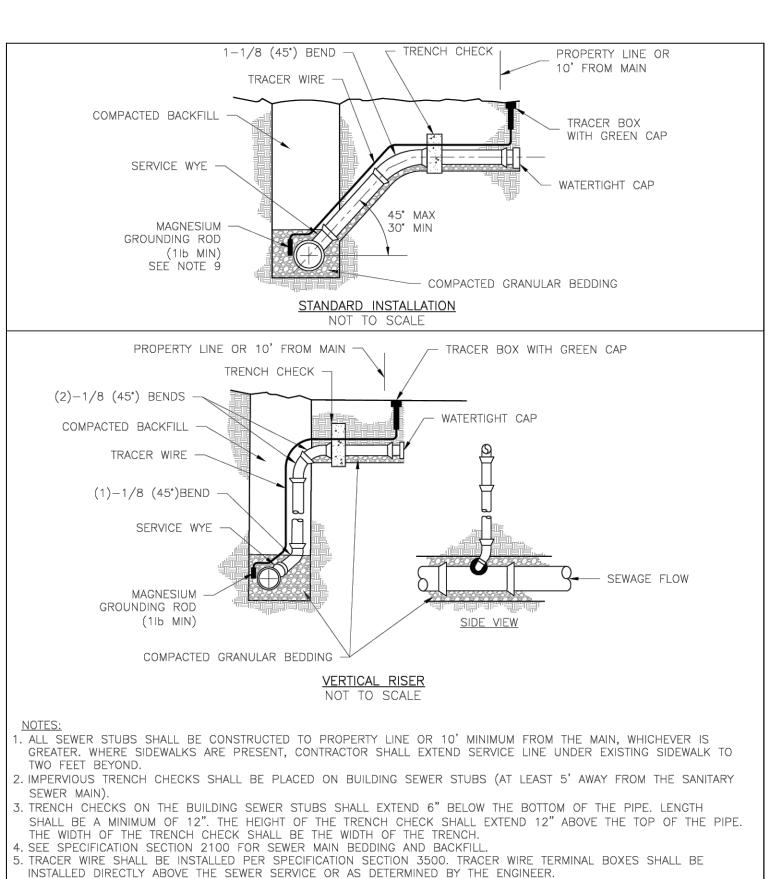
Checked By: AB

- PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS. . A WALL THICKNESS NOT LESS THAN ONE-TWELFTH  $(rac{1}{2})$  OF THE INSIDE DIAMETER OR 4 , WHICHEVER IS
- GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
- 4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. 5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION
- . REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.

| 0 | I FF'S SIIMMII  | Date: 08/2023  |
|---|---|----------------|
|   |   | Drawn By: MF   |
|   | MISSOURI  | Checked By: AB |
|   | DUBLIC WORKS THIS INTERING DIVISION I 200 SE CREEN STREET I LESS SUMMET MO CAGO |                |







GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.

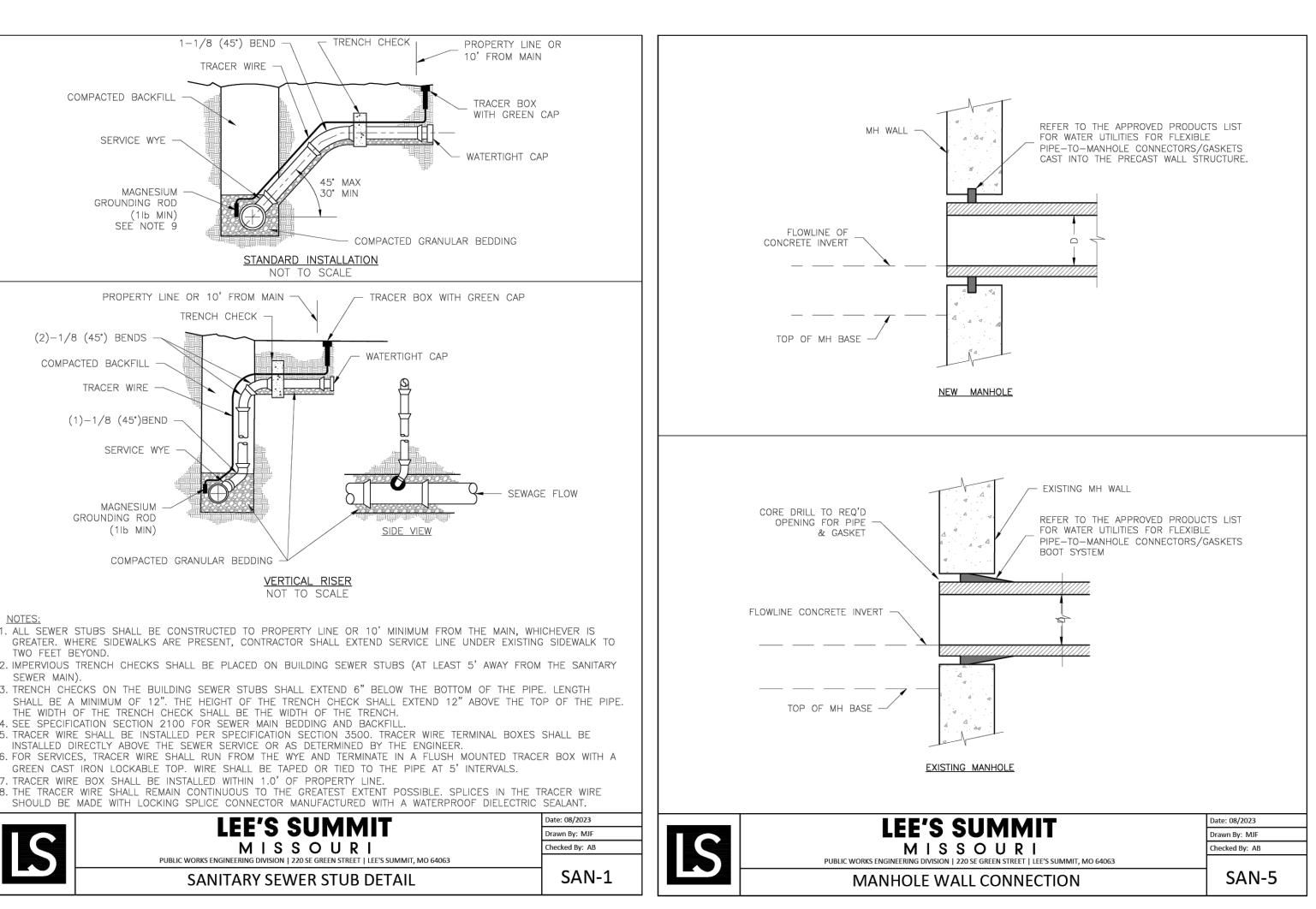
SHOULD BE MADE WITH LOCKING SPLICE CONNECTOR MANUFACTURED WITH A WATERPROOF DIELECTRIC SEALANT.

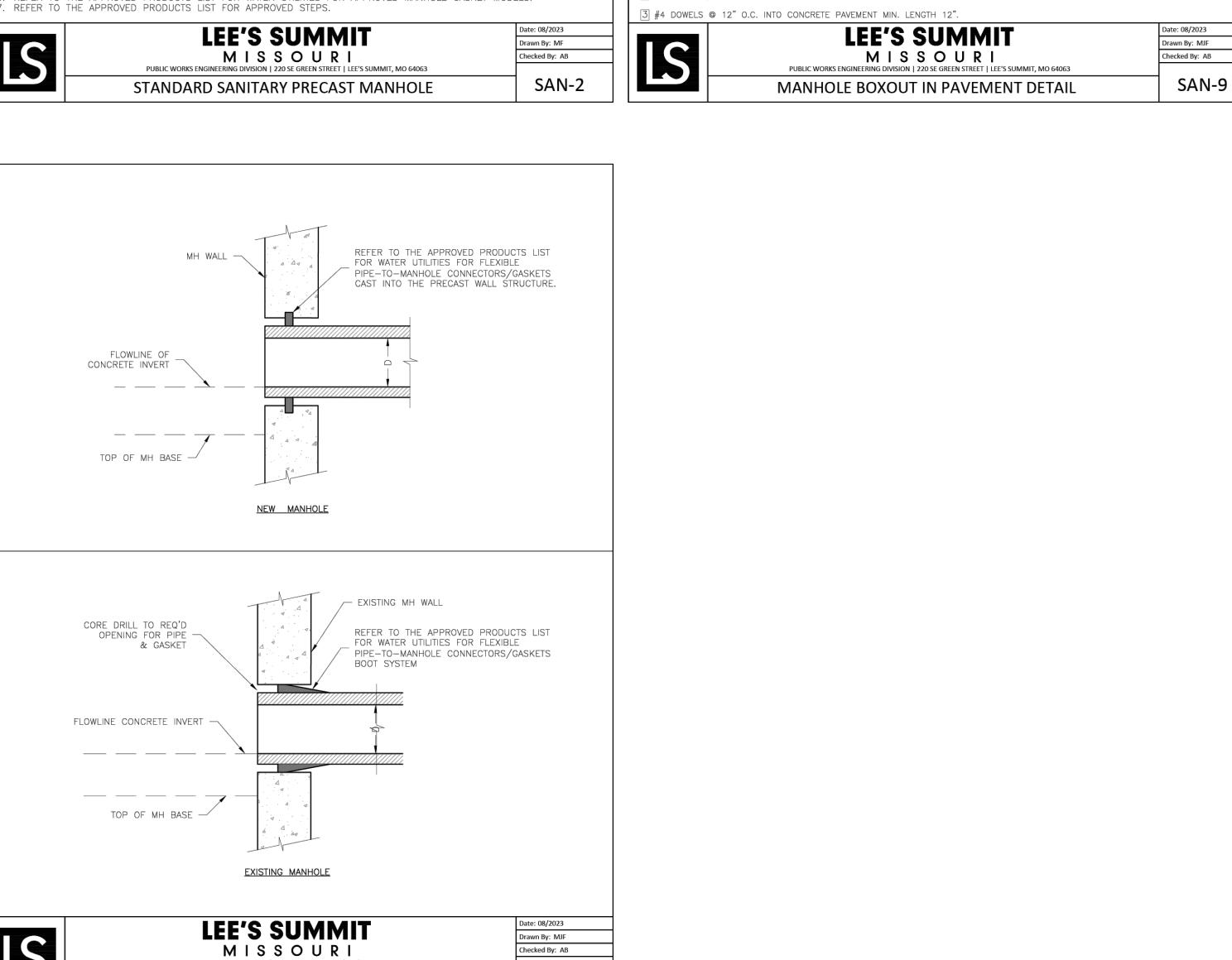
**LEE'S SUMMIT** 

MISSOURI

SANITARY SEWER STUB DETAIL

TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.







||REVISIONS:

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AE-2003014960

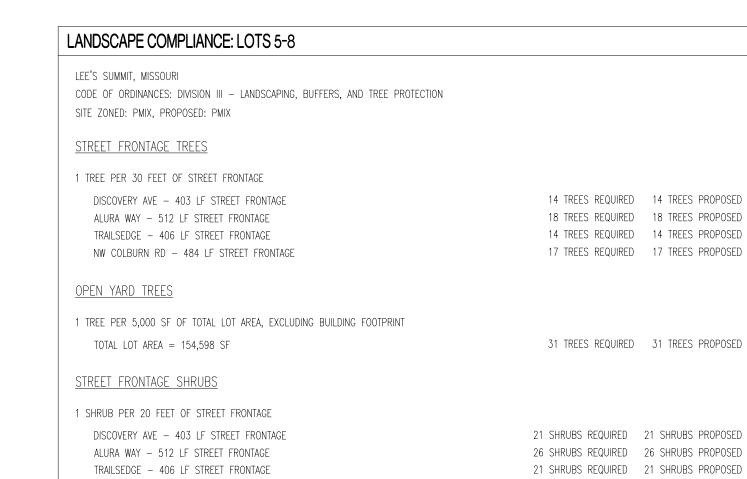
NATHAN THOMAS ECKHOFF

MO LICENSE-2003014960



25 SHRUBS REQUIRED 25 SHRUBS PROPOSED

62 SHRUBS REQUIRED 62 SHRUBS PROPOSED



NW COLBURN RD - 484 LF STREET FRONTAGE

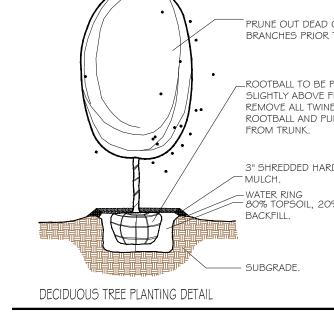
2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT

<u>OPEN YARD SHRUBS</u>

TOTAL LOT AREA = 154,598 SF

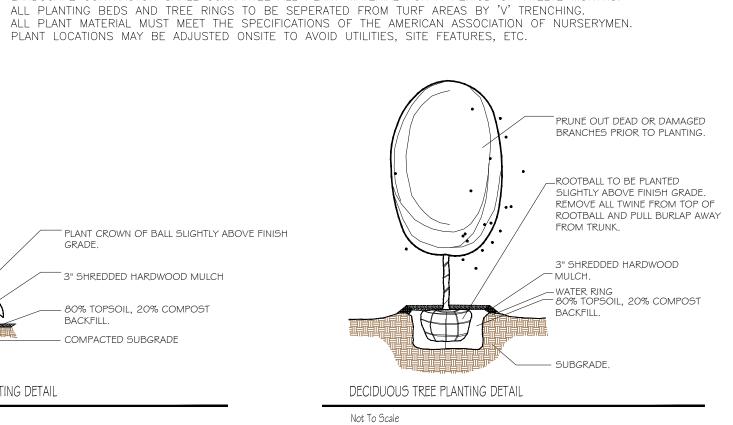
| QUANTITY | SYMBOL | PLANT NAME                     | PLANT TYPE          | SIZE |
|----------|--------|--------------------------------|---------------------|------|
| 15       | EF     | ELM 'FRONTIER'                 | MEDIUM / LARGE TREE | 3"   |
| 8        | ZGV    | ZELKOVA 'GREEN VASE'           | 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 SPIRE'            | MEDIUM / LARGE TREE | 3'   |
| 10       | HEA    | HORNBEAM 'EMERALD AVE'         | MEDIUM / LARGE TREE | 3'   |
| 3        | MRP    | MAPLE 'RED POINTE'             | MEDIUM / LARGE TREE | 3'   |
| 5        | CST    | CRABAPPLE 'SUGARTYME'          | ORNAMENTAL TREE     | 2    |
| 15       | CRR    | CRABAPPLE 'ROYAL RAINDROPS'    | 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       | BGV    | BOXWOOD '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  $\pm$ 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 SEPERATED FROM TURF AREAS BY 'V' TRENCHING.



PLANT CROWN OF BALL SLIGHTLY ABOVE FINISH 3" SHREDDED HARDWOOD MULCH - 80% TOPSOIL, 20% COMPOST - COMPACTED SUBGRADE SHRUB / PERENNIAL PLANTING DETAIL

Not To Scale



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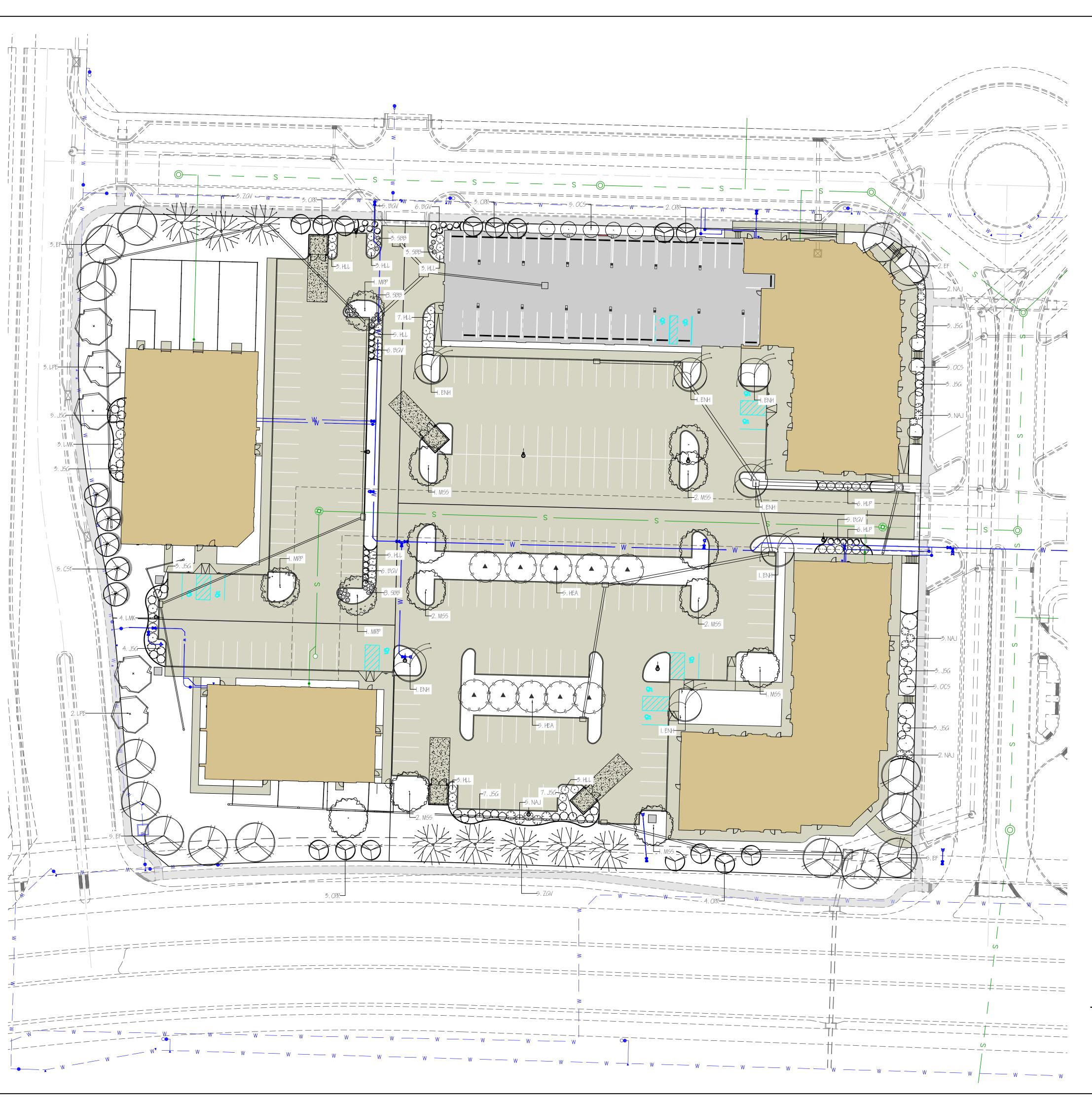
REVISIONS:

DRAWING INCLUDES:

LANDSCAPING PLAN

DESIGNED: DRAWN:

PROJECT NO.: 230286



PRINTS ISSUED 05/10/2024 - FDP PLAN LEGEND REVISIONS: PARTIAL HEIGHT PARTITION NON-RATED PARTITION; SEE ASSEMBLIES 1 HR RATED PARTITION; SEE ASSEMBLIES ☐ A1 ☐ WINDOW TYPE; SEE WINDOW SCHEDULE DOOR TYPE; SEE DOOR SCHEDULE OSemanr & ASSOC

P7 PARTITION TYPE; SEE ASSEMBLIES FRAMING DIMENSIONS 6'-0" LAYOUT LAYOUT LAYOUT LAYOUT LINE DIMENSIONS

+/- 61' - 0"

A-203 4>

A-203 2>

A1 1ST FLOOR PLAN - FDP 1/16" = 1'-0"

A-203

+/- 70' - 0"

A-203

<2 A-202

A-202

PRELIMINARY NOT FOR CONSTRUCTION

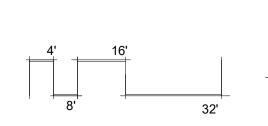
LEE'S

SHEET TITLE FIRST FLOOR PLAN

SHEET NUMBER:

PROJECT NUMBER: 23102

A-101.



PRINTS ISSUED

05/10/2024 - FDP

**REVISIONS:** 

PLAN LEGEND NON-RATED PARTITION; SEE ASSEMBLIES 1 HR RATED PARTITION; SEE ASSEMBLIES ☐ A1 ☐ WINDOW TYPE; SEE WINDOW SCHEDULE DOOR TYPE; SEE DOOR SCHEDULE P7 PARTITION TYPE; SEE ASSEMBLIES FRAMING DIMENSIONS 6'-0"LAYOUT LAYOUT LAYOUT LAYOUT LINE DIMENSIONS

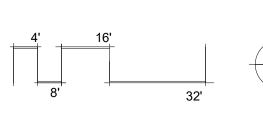
> PRELIMINARY NOT FOR CONSTRUCTION

OSemanr & ASSOC

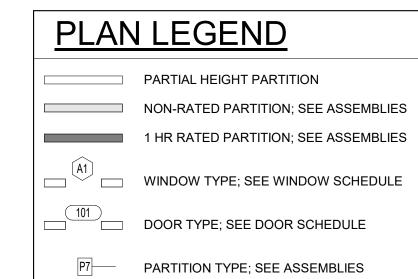
SHEET TITLE SECOND FLOOR PLAN PROJECT NUMBER: 23102

SHEET NUMBER:

A-102.



REFERENCE G-003 FOR GENERAL NOTES REFERENCE A-101 FOR PLAN LEGEND



FRAMING DIMENSIONS

6'-0"LAYOUT LAYOUT LAYOUT LINE DIMENSIONS

PRINTS ISSUED 05/10/2024 - FDP

REVISIONS:



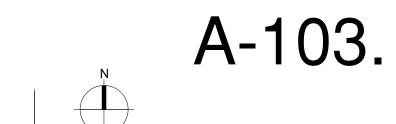
PRELIMINARY NOT FOR CONSTRUCTION

# DISCOVERY LEE'S THE VILL

SHEET NUMBER:

PROJECT NUMBER: 23102

SHEET TITLE THIRD FLOOR PLAN





PRINTS ISSUED

05/10/2024 - FDP **REVISIONS:** 

OSemanr & ASSOCI

PRELIMINARY

NOT FOR

CONSTRUCTION

DISCOVERY UMMIT, MO S **LEE'S** 

SHEET TITLE **EXTERIOR ELEVATIONS COLOR** 

SHEET NUMBER:

뽀

PROJECT NUMBER: 23102

KING SIZE BRICK - COLOR 1 - ALLENDALE HILL

KING SIZE BRICK - COLOR 2 - GLEN GERY SADDLE BROWN

KING SIZE BRICK - COLOR 3 - CAVALRY GRAY

STONE CAP - ROUGH ASHLAR

LARGE FORMAT MASONRY - ROUGH ASHLAR

PRINTS ISSUED

05/10/2024 - FDP

REVISIONS:



BRICK BAND, TYP. TRUSS BEARING 138' - 3" BRICK - COLOR 2 @ RECESS, TYP. T.O. 3rd SUBFLOOR 128' - 1 7/8" BRICK - COLOR 3, \_\_\_\_ TYP. T.O. 3rd BEARING 126' - 1 1/8" KING SIZE BRICK, TYP. TOP OF 2nd FLOOR 116' - 0" BRICK BAND, TYP. PRE-FAB METAL CANOPY W/ RECESSED LIGHTING, TYP. **EXTERIOR** LIGHTING, TYP. LARGE FORMAT T.O. 1st FLOOR SLAB 100' - 0" MASONRY

NORTH ELEVATION 1 - COLOR

EXTERIOR ——LIGHTING, TYP. PRE-FAB METAL BALCONY & RAILING, TYP. BRICK BAND, TYP. TRUSS BEARING 138' - 3" T.O. 3rd SUBFLOOR 128' - 1 7/8" EXTERIOR -LIGHTING, TYP.\_ T.O. 3rd BEARING 126' - 1 1/8" BRICK BAND — SURROUNDING BRICK - COLOR 3, TYP. KING SIZE BRICK, TOP OF 2nd FLOOR 116' - 0" BRICK BAND, TYP. PRE-FAB METAL 
CANOPY W/
RECESSED LIGHTING, TYP. LARGE FORMAT MASONRY

BRICK BAND, TYP. TRUSS BEARING 138' - 3" BRICK - COLOR 2 @ RECESS, TYP. BRICK BAND — SURROUNDING BRICK - COLOR 3, TYP. BRICK - COLOR 3, T.O. 3rd SUBFLOOR 128' - 1 7/8" EXTERIOR ——LIGHTING, TYP. T.O. 3rd BEARING 126' - 1 1/8" KING SIZE BRICK, TYP. PRE-FAB METAL BALCONY & RAILING, TYP. TOP OF 2nd FLOOR 116' - 0" BRICK BAND, TYP. PRE-FAB METAL 

CANOPY W/
RECESSED LIGHTING, TYP. LARGE FORMAT MASONRY

THE VILLAGE AT DISCOVERY LOT 5
LEE'S SUMMIT, MO

OSemann & ASSOCIA

PRELIMINARY

NOT FOR

CONSTRUCTION

SHEET TITLE
EXTERIOR ELEVATIONS COLOR

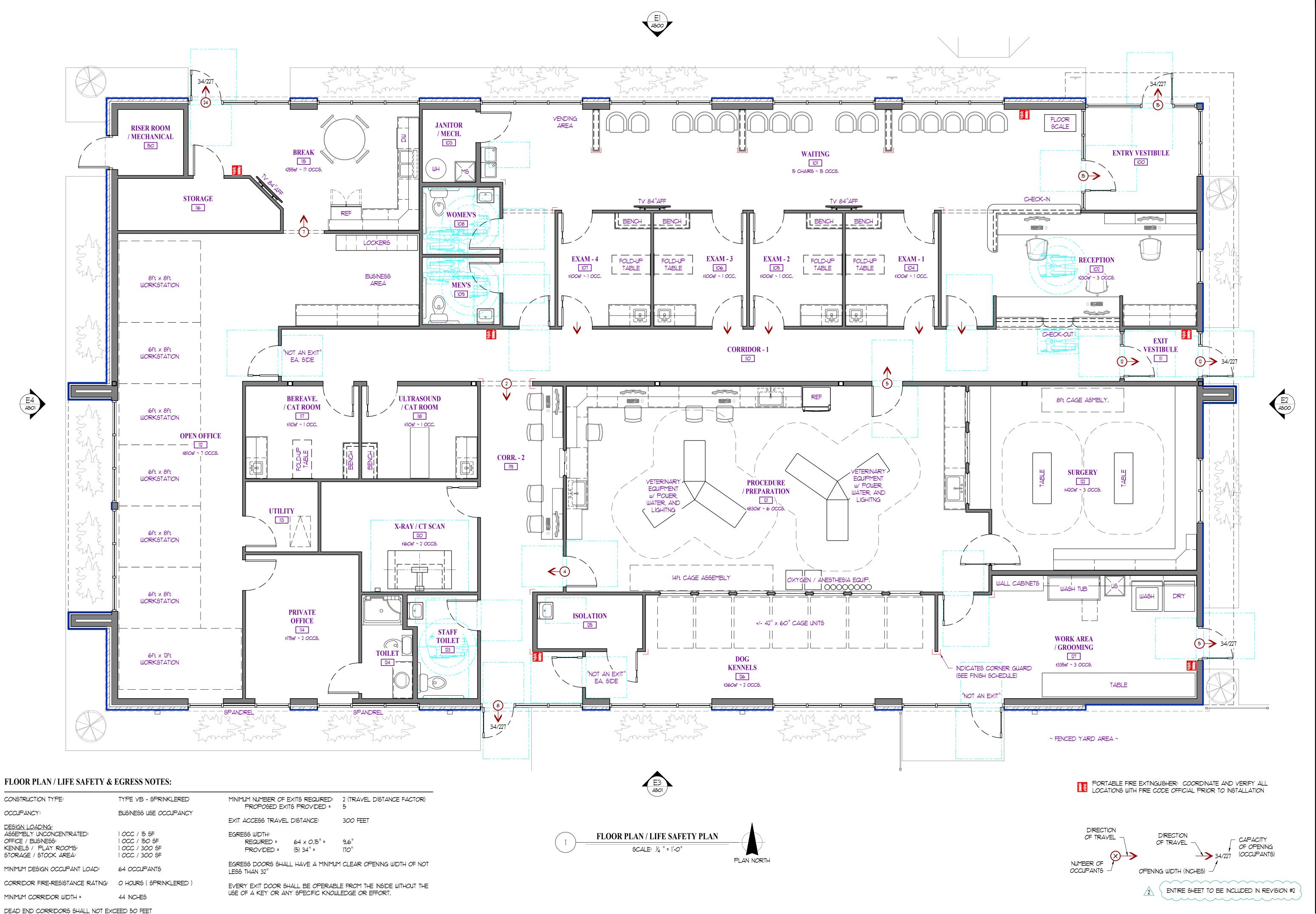
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SHEET NUMBER:

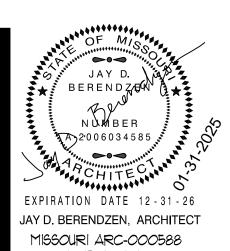
A-203

2 WEST ELEVATION 1 - COLOR

WEST ELEVATION 2 - COLOR

1 SOUTH ELEVATION - COLOR





EXP. 12/31/25

Hospital hiscovery Park
Animal Edge son Cc iscovery

ISSUE ID DESCRIPTION DATE REVISION - 1 8/16/2024 REVISION - 2 01/31/2025

PROJECT NO.

SHEET TITLE

FLOOR PLAN

SHEET NUMBER

LIFE SAFETY / EGRESS

#### **ROOF PLAN GENERAL NOTES:**

1. VERIFY AND COORDINATE ALL BLOCKING, NAILERS, INSULATION STOPS, CRICKETS, FLASHING, ETC. FOR COMPLETE INSTALLATION OF ROOFING SYSTEM,

2. ROOFING SYSTEM TO BE WARRANTED AND WATERTIGHT. 3. VERIFY AND COORDINATE ALL ROOFTOP EQUIPMENT, CURBS, GAS

LINES, PLUMBING PENETRATIONS, ETC. (12" MIN. ABOVE FINISH ROOF) 4. EXHAUST FANS & VENTING TO DISCHARGE A MIN, OF 10'-0" FROM

ROOFTOP UNITS. 5. PROVIDE MOLDED ROOF WALK PADS TO AND AROUND ROOFTOP UNITS & OTHER EQUIPMENT AS NECESSARY,

**ROOF PLAN** SCALE: 1/4 " = 1'-0"

PLAN NORTH

ROOF DRAINAGE CALCULATIONS:

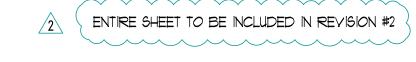
TOTAL ROOF DRAINAGE AREA:

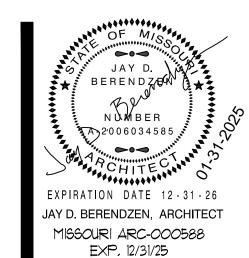
PROPOSED ROOF DRAINS: (4) @ 2,130 SF MAX, DRAINAGE AREA

RAINFALL RATE: 3.5" / HOUR

14 "W  $\times$  10"T  $\times$  12"D CONDUCTOR HEAD: 4,600 SF OF DRAINAGE AREA CAPACITY (EXTEND TOP OF CONDUCTOR TO CONCEAL SCUPPER OPENING, INSTALL OVERFLOW IN CONDUCTOR AT SCUPPER ELEVATION)

± 7,210 SF





e Boulevard County, Missouri Hospital iscovery Park
Animal iscovery

ID DESCRIPTION DATE PERMIT 6/14/2024 REVISION - 1 8/16/2024 REVISION - 2 01/31/2025

PROJECT NO. PBA2417

SHEET TITLE

**ROOF PLAN** 

SHEET NUMBER

#### **ELEVATOIN GENERAL NOTES:**

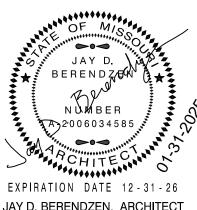
- 1. FOR REFERENCE ONLY, VERIFY AND COORDINATE ALL MATERIALS
- AND FINISHES WITH OWNER PRIOR TO ANY WORK,
- 2. DO NOT SCALE THIS DRAWING, REFER TO DIMENSIONS AND MEMBER SIZES GIVEN AS INDICATED ON FLOOR PLANS, SECTIONS, & DETAILS.



SCALE: 3/6" = 1'-0"



ENTIRE SHEET TO BE INCLUDED IN REVISION #2 



JAY D. BERENDZEN, ARCHITECT MISSOURI ARC-000588 EXP. 12/31/25

Discovery Park

// Animal Hospital 1901 NE Trails Edge Boulevard Lee's Summit, Jackson County, Missouri

Discovery

ISSUE ID DESCRIPTION DATE REVISION - 1 8/16/2024 REVISION - 2 01/31/2025

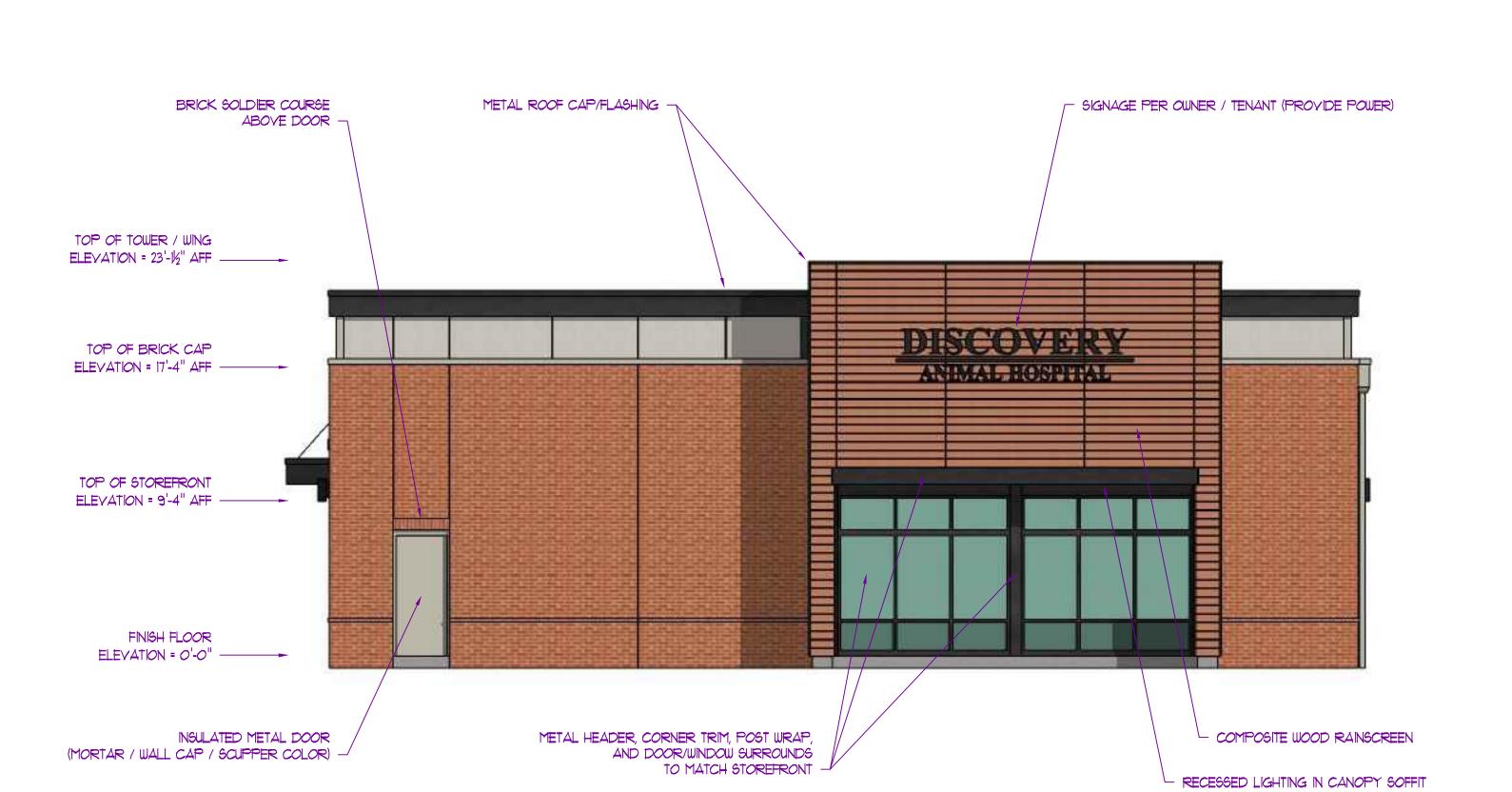
PROJECT NO. PBA2417

SHEET TITLE

**EXTERIOR ELEVATIONS** 

SHEET NUMBER

A500



WEST ELEVATION

SCALE: 36" = 1'-0"

E4 Aloo

BRICK HEADER COURSE -

BRICK VENEER



- BANDING SYSTEM TO TIE INTO CANOPY

AND MIMIC ROOF OVERHANG ABOVE

**ELEVATOIN GENERAL NOTES:** 

1, FOR REFERENCE ONLY, YERIFY AND COORDINATE ALL MATERIALS

2. DO NOT SCALE THIS DRAWING, REFER TO DIMENSIONS AND MEMBER SIZES GIVEN AS INDICATED ON FLOOR PLANS, SECTIONS, & DETAILS.

AND FINISHES WITH OWNER PRIOR TO ANY WORK.

- SOLID LOWER PANEL

TO MATCH FRAME

ALUMINUM STOREFRONT SYSTEM, TINTED GLAZING / SOLID LOWERS

METAL OVER HEADER TO MATCH FRAME



**SOUTH ELEVATION** 

SCALE: 36" = 1'-0"

WALL UP/DOWN LIGHTING

E3 Aloo

PER MEP DESIGN DRAWINGS -

BERENDZ/ÐW NUMBER

EXPIRATION DATE 12-31-26 JAY D. BERENDZEN, ARCHITECT MISSOURI ARC-000588 EXP. 12/31/25

Hospital

Trails Edge Boulevard, Jackson County, Miss Discovery Park
Animal Discovery

ISSUE ID DESCRIPTION DATE REVISION - 1 8/16/2024 REVISION - 2 01/31/2025

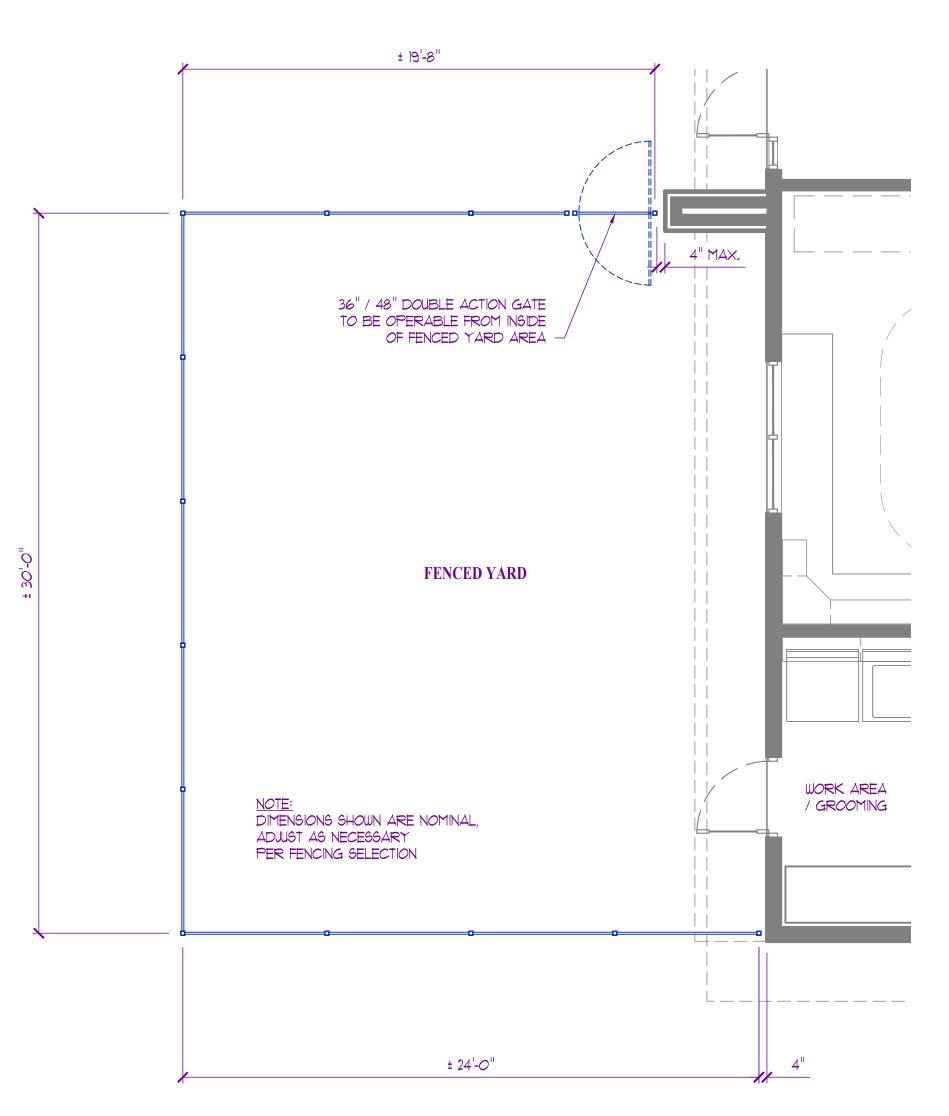
PROJECT NO.

PBA2417 SHEET TITLE

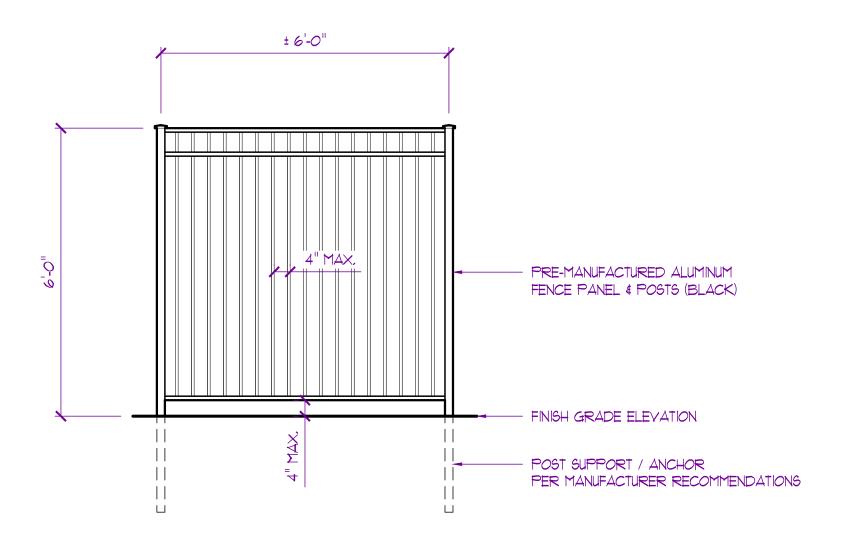
> **EXTERIOR ELEVATIONS**

SHEET NUMBER

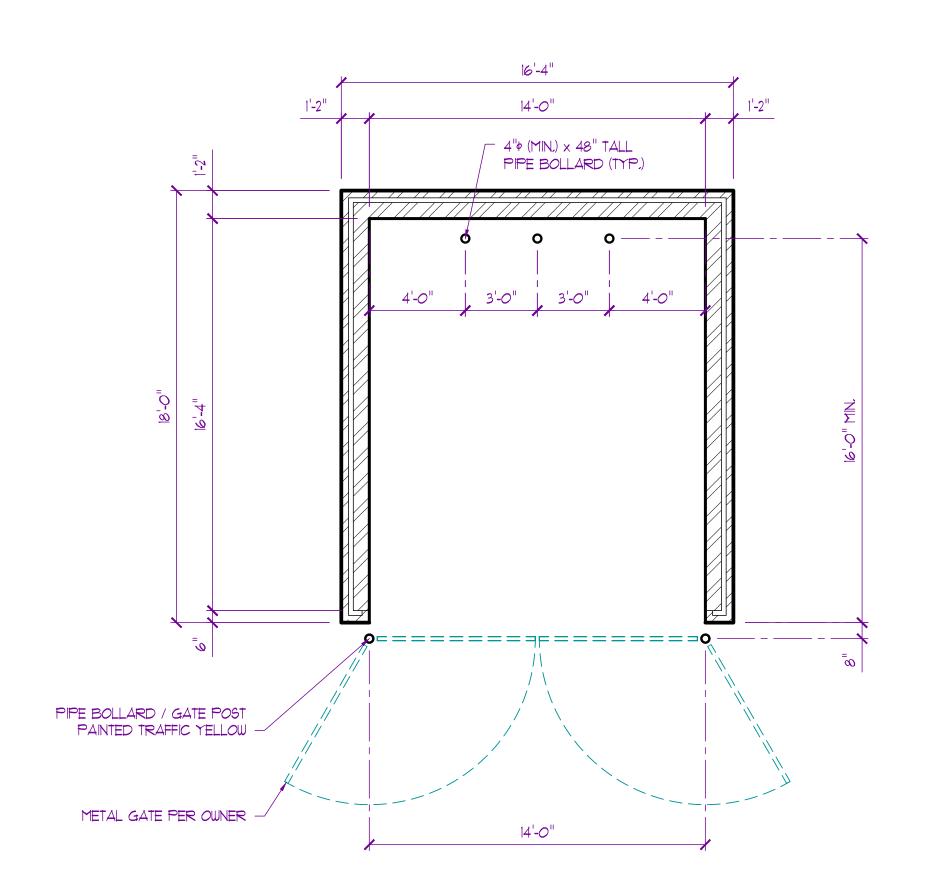
A500



FENCED YARD PLAN SCALE: 1/4" = 1'-0"



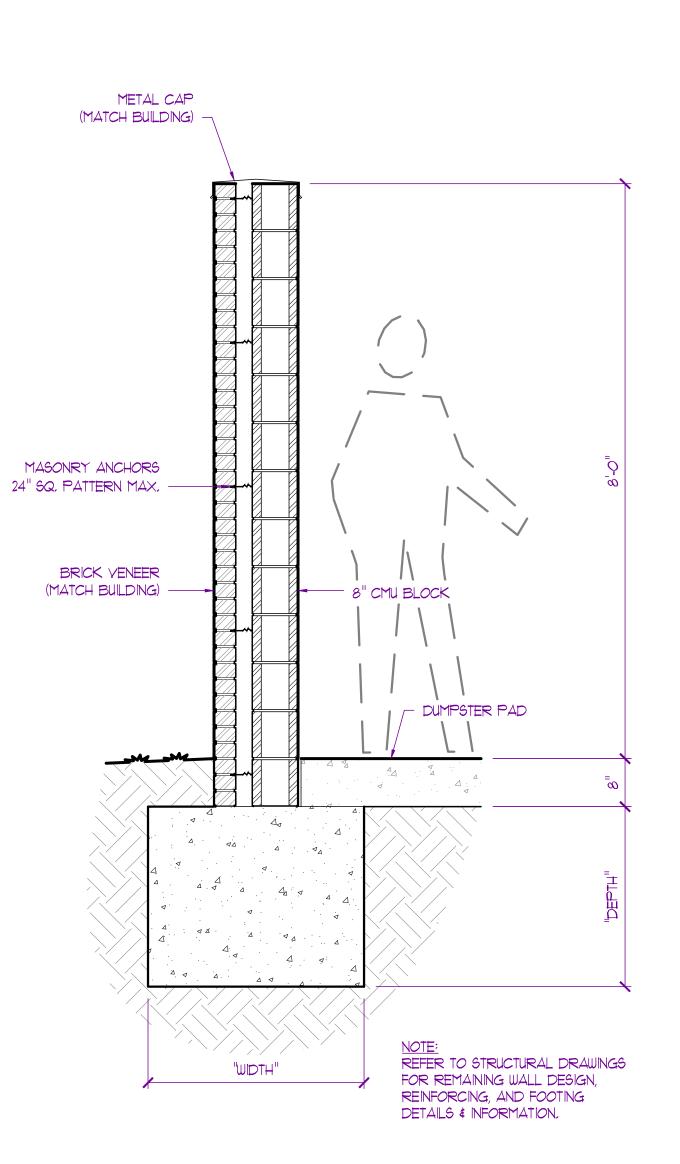
TYP. FENCE PANEL



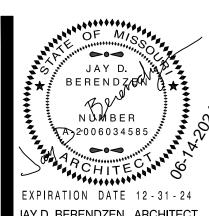
DUMPSTER ENCLOSURE PLAN (6) A800 SCALE: 1/4" = 1'-0"

#### SITE DETAIL GENERAL NOTES:

1. FOR REFERENCE ONLY, REFER TO CIVIL DRAWINGS FOR LOCATIONS 2. ALL MATERIALS & FINISHES TO BE SELECTED AND APPROVED BY OWNER / TENANT PRIOR TO ANY WORK



TYP. ENCLOSURE WALL SECTION



JAY D. BERENDZEN, ARCHITECT MISSOURI ARC-000588 EXP. 12/31/25

PROJECT

iscovery Park Animal Hospital 1901 NE Trails Edge Boulevard Lee's Summit, Jackson County, Missouri Discovery

ISSUE ID DESCRIPTION DATE 6/14/2024

PBA2417 SHEET TITLE

SITE DETAILS

PROJECT NO.

SHEET NUMBER

PLAN LEGEND PARTIAL HEIGHT PARTITION NON-RATED PARTITION; SEE ASSEMBLIES 1 HR RATED PARTITION; SEE ASSEMBLIES 2 HR RATED PARTITION; SEE ASSEMBLIES WINDOW TYPE; SEE WINDOW SCHEDULE DOOR TYPE; SEE DOOR SCHEDULE P7 PARTITION TYPE; SEE ASSEMBLIES FRAMING DIMENSIONS 6'-0"LAYOUT LAYOUT LAYOUT LINE DIMENSIONS

PRELIMINARY

mann & ASSOCIATES

PRINTS ISSUED 05/10/2024 - FDP

REVISIONS:

NOT FOR CONSTRUCTION

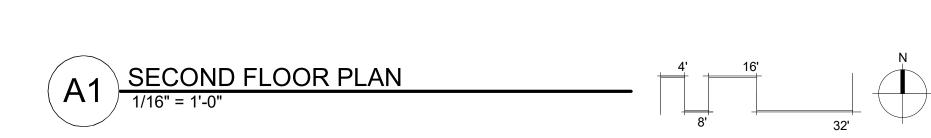
LEE'S SUMMIT, MO

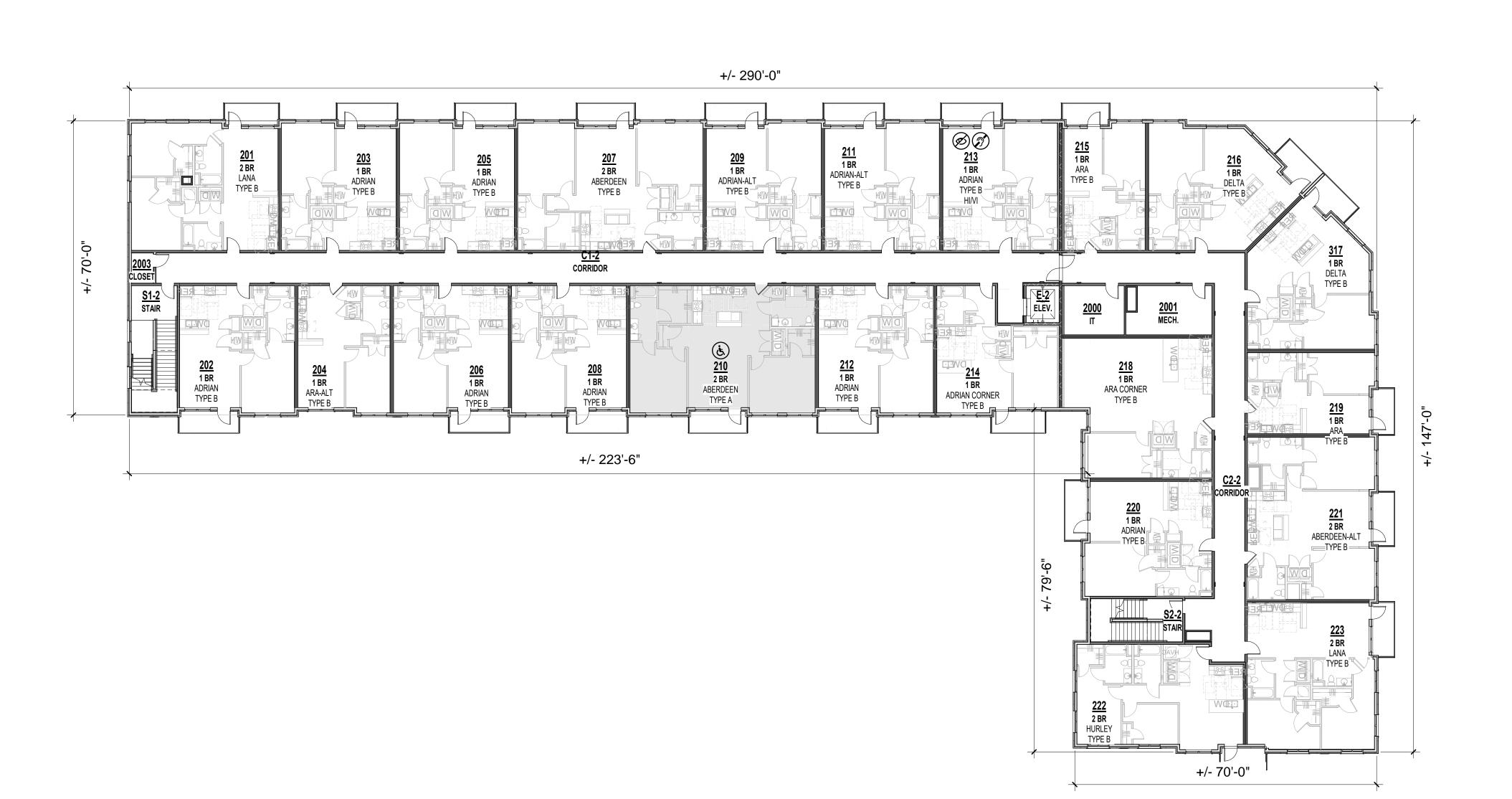
SHEET TITLE FIRST FLOOR PLAN

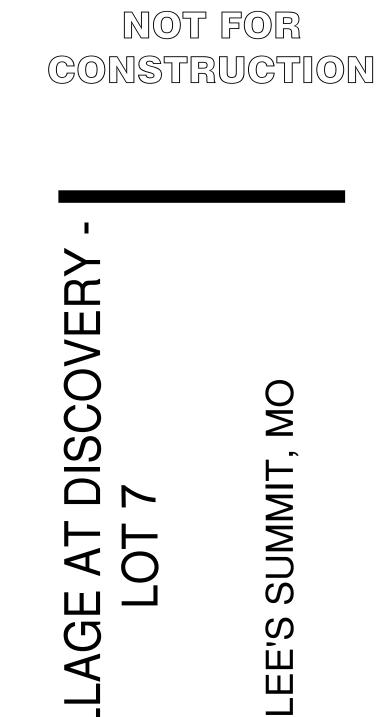
PROJECT NUMBER: 23099 SHEET NUMBER:

A-101

A1 <u>1ST FLOOR PLAN - FDP</u> 1/16" = 1'-0"







PRELIMINARY

PRINTS ISSUED

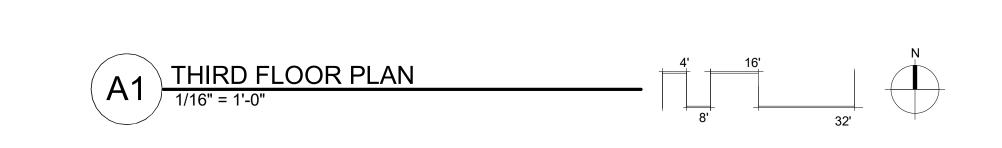
REVISIONS:

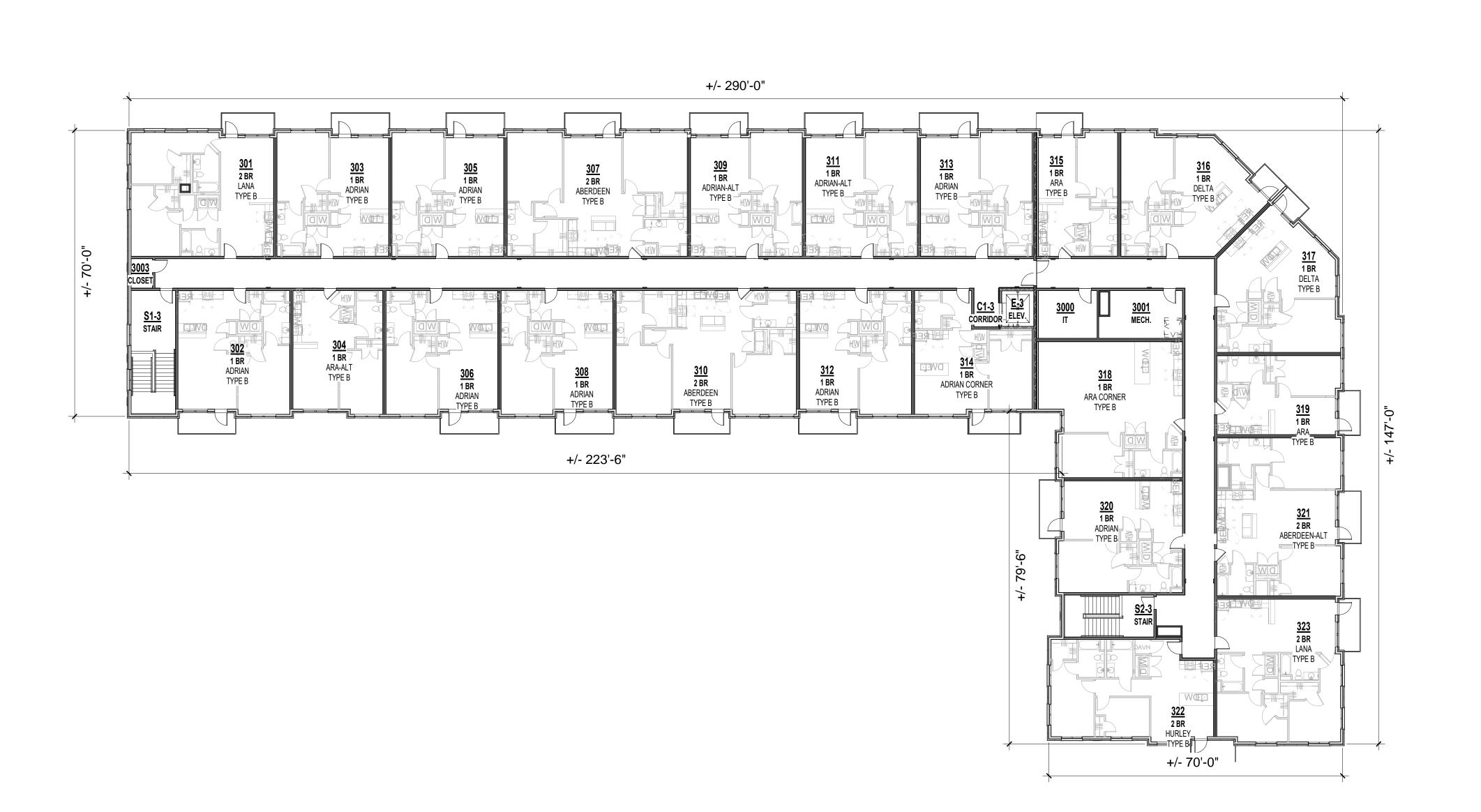
05/10/2024 - FDP

SHEET TITLE SECOND FLOOR PLAN

PROJECT NUMBER: 23099 SHEET NUMBER:

A-102







PRELIMINARY

NOT FOR

CONSTRUCTION

PRINTS ISSUED

REVISIONS:

05/10/2024 - FDP

SHEET TITLE THIRD FLOOR PLAN

PROJECT NUMBER: 23099 SHEET NUMBER:

A-103

LEE'S SUMMIT, MO



PARAPET 4 BRICK - COLOR 2 @ RECESS, TYP. 146' - 6" PRE-FAB METAL BALCONY & RAILING, TYP. PARAPET 3 KING SIZE BRICK, TYP. - ACCENT BRICK - COLOR 3 144' - 4" PARAPET 2 142' - 1" BRICK BAND, TYP. EXTERIOR LIGHTING, TYP. ACCENT BRICK - COLOR 3 T.O. 3rd SUBFLOOR 126' - 11 7/8" T.O. 3rd BEARING 125' - 1 1/8" PRE-FAB METAL CANOPY W/ RECESSED LIGHTING, TYP. RE: ELEC. T.O. CONCRETE SLAB 116' - 0" LARGE FORMAT MASONRY T.O. 1st FLOOR SLAB 100' - 0"

PRELIMINARY
NOT FOR
CONSTRUCTION

mann & ASSOCIATES

2 EAST ELEVATION - COLOR
3/32" = 1'-0"



NORTH ELEVATION - COLOR

3/32" = 1'-0"

THE VILLAGE AT DISCOVERY

SHEET TITLE

EXTERIOR COLOR ELEVATIONS

PROJECT NUMBER: 23099

SHEET NUMBER:

coal Cache/2023/23099\_Lot 4 Apartments\_Central\_R23\_24-0123\_coartr

A-202

mann & ASSOCIATES

O

PRELIMINARY

NOT FOR

CONSTRUCTION

LEE'S SUMMIT, MO



3 CORNER ELEVATION - COLOR
3/32" = 1'-0"

PARAPET 4 146' - 6"

144' - 4"

PARAPET 2 142' - 1"

TRUSS BEARING 136' - 1"

T.O. 3rd SUBFLOOR 126' - 11 7/8"

T.O. 3rd BEARING 125' - 1 1/8"

T.O. CONCRETE SLAB 116' - 0"

T.O. 1st FLOOR SLAB 100' - 0"

2 WEST ELEVATION - COLOR
3/32" = 1'-0"



1 SOUTH ELEVATION - COLOR
3/32" = 1'-0"

THE VILLAGE AT DISCOVERY
LOT 7

SHEET TITLE
EXTERIOR COLOR ELEVATION

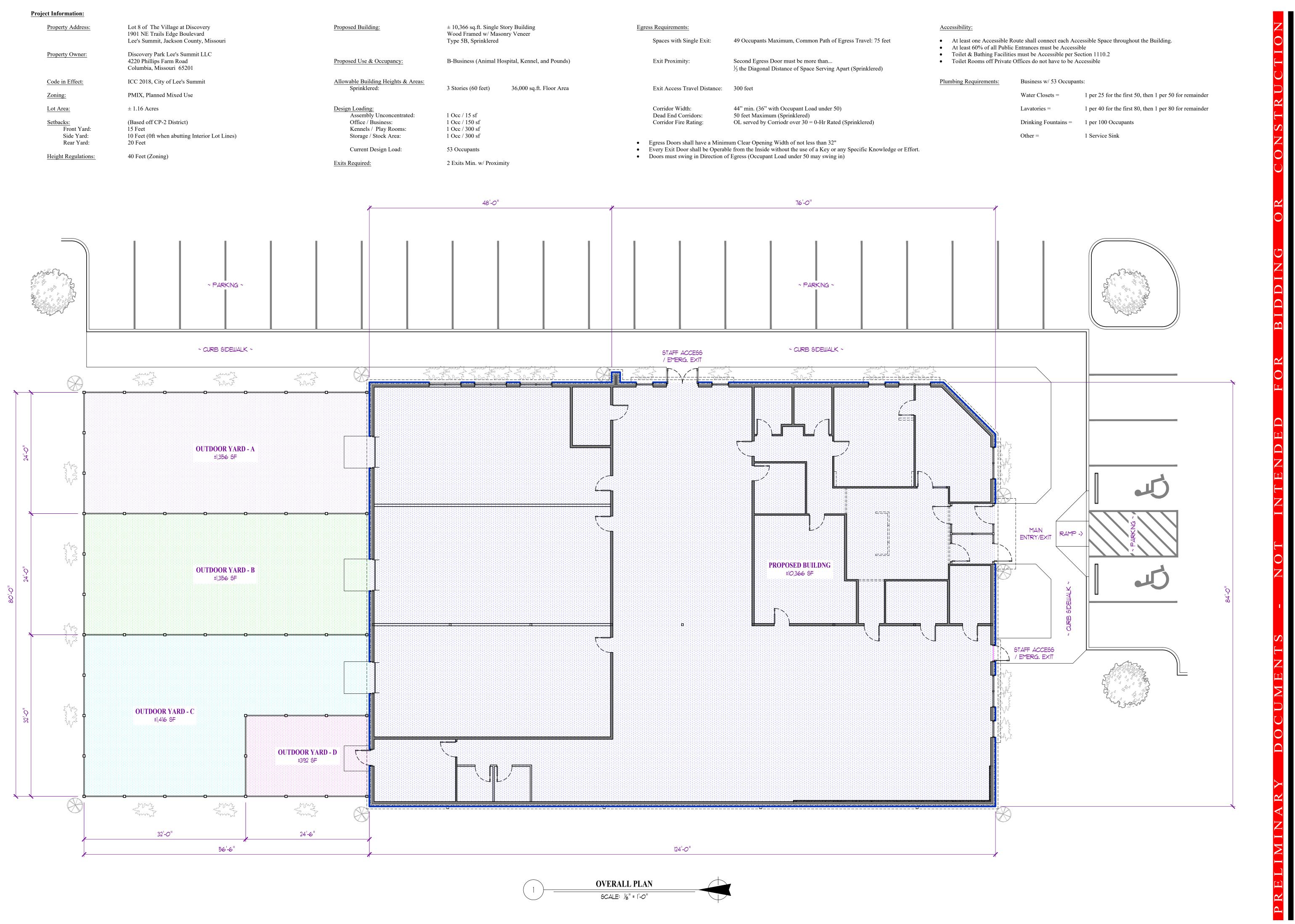
EXTERIOR COLOR ELEVATIONS

PROJECT NUMBER: 23099
SHEET NUMBER:

A-203

/2024 10:38:50 AM Pevit Local Cache/2023/23099\_Lot 4 Apartments\_Central\_R23\_24-0123\_ccartm

PERFORATED SCREEN AT OPEN PARKING, TYP.



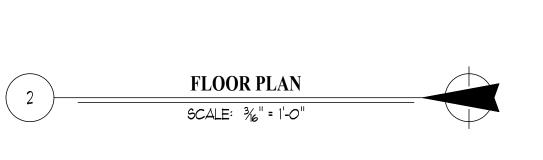
MISSOURI ARC-000588 EXP. 12/31/25

1901 NE Trails Edge Boulevard ee's Summit, Jackson County, Missouri

ID DESCRIPTION DATE PROGRESS 8/26/2024

OVERALL PLAN PRELIMINARY CODE REVIEW





MISSOURI ARC-000588 EXP. 12/31/25

Pet Spa Discovery

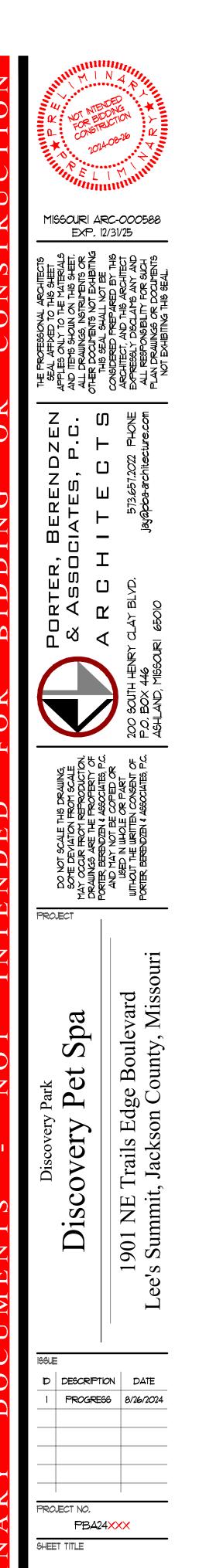
1901 NE Trails Edge Boulevard Lee's Summit, Jackson County, Missouri

ID DESCRIPTION DATE PROGRESS 8/26/2024

FLOOR PLAN



SHEET NUMBER



EXTERIOR ELEVATIONS

SHEET NUMBER

 
 ID
 DESCRIPTION
 DATE

 1
 PROGRESS
 8/26/2024
 SHEET TITLE

1901 NE Trails Edge Boulevard Lee's Summit, Jackson County, Missouri

Discovery Pet Spa

EXTERIOR RENDERINGS

**A202**