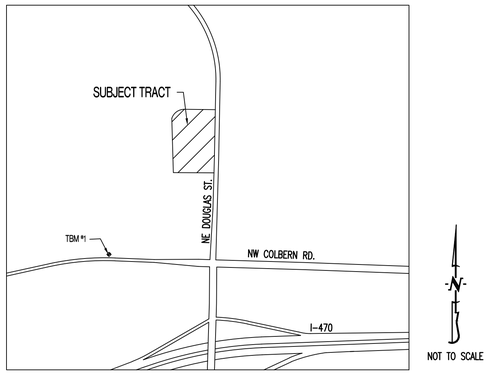
HOME2 SUITES BY HILTON

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
ELEVATION = 990.810

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

FLOOD PLAIN STATEMENT:

THIS LOT IS LOCATED IN ZONE X UNSHADED – AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE FLOOD AS SHOWN ON THE FEMA F.I.R.M. PANEL #29095C0409G, DATED JANUARY 20, 2017.

LEGAL DESCRIPTION:

VILLAGE AT DISCOVERY PARK, LOT 2. 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:

AT&T
800-286-8313

NATURAL GAS:

SPIRE
314-342-0500

CABLE TELEVISION:

SPECTRUM
877-772-2253

ELECTRIC:

EVERGY
816-524-3223

WATER/SANITARY SEWER:

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

FIBER:

GOOGLE FIBER
877-454-6959

GENERAL NOTES:

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

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

ALL PAVEMENT LOCATED WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO KCMMB STANDARDS AND SPECIFICATIONS.

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.

THIS PLAT CONTAINS APPROXIMATELY 2.28 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.

TOTAL DISTURBED AREA ON SITE = 2.61 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NUMBER TBD.

DEVELOPER :

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

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE	ORIGINAL 04/04/24	CITY COMMENTS 05/10/24
CE 1.0	COVER SHEET	X	X
CE 1.1	PROJECT SPECIFICATIONS	X	
CE 2.1	EROSION CONTROL PLAN	X	
CE 2.2	EROSION CONTROL DETAILS	X	
CE 3.0	OVERALL GRADING PLAN	X	
CE 3.1	GRADING PLAN SHEET 1	X	
CE 3.2	GRADING PLAN SHEET 2	X	X
CE 3.3	GRADING PLAN SHEET 3	X	
CE 3.4	GRADING PLAN SHEET 4	X	X
CE 4.1	UTILITY PLAN	X	X
CE 5.1	STORM PROFILE AND DETAILS	X	X
CE 5.2	STORM DETAILS CONT.	X	
CE 5.3	STORM CALCULATIONS		X
CE 7.1	SITE PLAN	X	X
CE 8.1	DETAILS SHEET 1	X	
CE 8.2	DETAILS SHEET 2	X	
CE 8.3	LEE'S SUMMIT SITE DETAILS		X
CE 8.4	LEE'S SUMMIT UTILITY DETAILS		X
CE 9.1	LANDSCAPE PLAN	X	X

LEGEND OF SYMBOLS:

- EXISTING CURB
- PROPOSED CURB
- RIP RAP
- EXISTING STRUCTURE
- EXISTING TREELINE
- PROPOSED TREELINE
- EDGE OF WATERWAY
- EXISTING WATERLINE
- PROPOSED WATERLINE
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELEC. & TV
- EXISTING OVERHEAD ELEC., TV & TELE.
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100 YEAR FLOOD PLAIN
- FLOODWAY
- ORDINARY HIGH WATER MARK
- STREAM SIDE BUFFER
- OUTER STREAM BUFFER

- FF=XXX.X — FINISHED FLOOR OF STRUCTURE
- XXX.XX TC — PROPOSED TOP OF CURB ELEVATION
- XXX.XX TP — PROPOSED TOP OF PAVEMENT ELEVATION
- XXX.XX FG — PROPOSED FINISHED GRADE ELEVATION
- XXX.XX TW — PROPOSED TOP OF WALL
- XX — LOT NUMBER
- X — STORM SEWER STRUCTURE LABEL
- X — SANITARY SEWER STRUCTURE LABEL
- H.P. — HIGH POINT
- L.P. — LOW POINT
- EXISTING SIGNS
- EXISTING POWER POLE
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING GAS METER
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- MANHOLE
- EXISTING SANITARY SEWER LATERAL
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED TRACER WIRE TEST STATION BOX
- AC — EXISTING AIR CONDITIONER
- EXISTING TELEPHONE PEDESTAL
- ET — EXISTING ELECTRICAL TRANSFORMER
- E — EXISTING ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING GUY WIRE

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Bldg 1
Lee's Summit, MO 64063
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015901

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

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
COVER SHEET

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 1.0

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg

SITE CLEARING & DEMOLITION :

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

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

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

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

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

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

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

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

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

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

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

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT 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 LEGAL MANNER.

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

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

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

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

EARTHMOVING:

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

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

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

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

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:
1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. PAVEMENTS, PLUS OR MINUS 1/2 INCH.
3. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

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

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

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

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

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS:
1. AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.
2. ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED.

MAINTAIN STABILITY OF EXCAVATIONS; CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. 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.
2. UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY.
3. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
4. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:
1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
3. LANDSCAPE AREA FILL:
   - 3.1. ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.
   - 3.2. CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS.
   - 3.3. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE 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:
   - FOUNDATIONS – 3,000 PSI
   - CAST-IN-PLACE WALLS – 3,500 PSI
   - FLOOR SLAB – 4,000 PSI
   - EXTERIOR SLABS, WALLS AND CURBS – 4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
    - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
    - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
      - CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
      - EXPOSED TO EARTH OR WEATHER.....2 INCHES
      - NOT EXPOSED TO WEATHER 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 JOINTS MINIMUM ¼" OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
    - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
    - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.
12. FLINT AND 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.

CONCRETE PAVING JOINT SEALANTS:

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

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

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

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

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE: SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 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 CAPABILITY.

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

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

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

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

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

PAVEMENT MARKING :

PAINT FOR PARKING LOT STRIPING SHALL BE CHLORINATED RUBBER CONFORMING TO TT-P115F EPOXY PAVEMENT MARKING MATERIAL WITHOUT GLASS BEADS. PAINT TYPE MUST BE COMPATIBLE WITH THE SURFACES TO BE PAINTED

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, 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 APPLYING THE NEXT COAT.
FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING. PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAINT. OWNERS REPRESENTATIVE SHALL APPROVE APPLICATION TECHNIQUES.

REMOVE PAINT 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:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003049960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003049960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, MO 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015100

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

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

PROJECT SPECIFICATIONS

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 1.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg

LEGEND OF LABELS:

(A) LIMITS OF DISTURBANCE.

(B) INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE. ALL CONSTRUCTION TRAFFIC SHALL LEAVE THE SITE VIA THIS EXIT. REFER TO ESC-01 ON CE 2.2.

(C) INSTALL SILT FENCE INLET PROTECTION AROUND THROAT OF INLET. REFER TO ESC-07 ON CE 2.2.

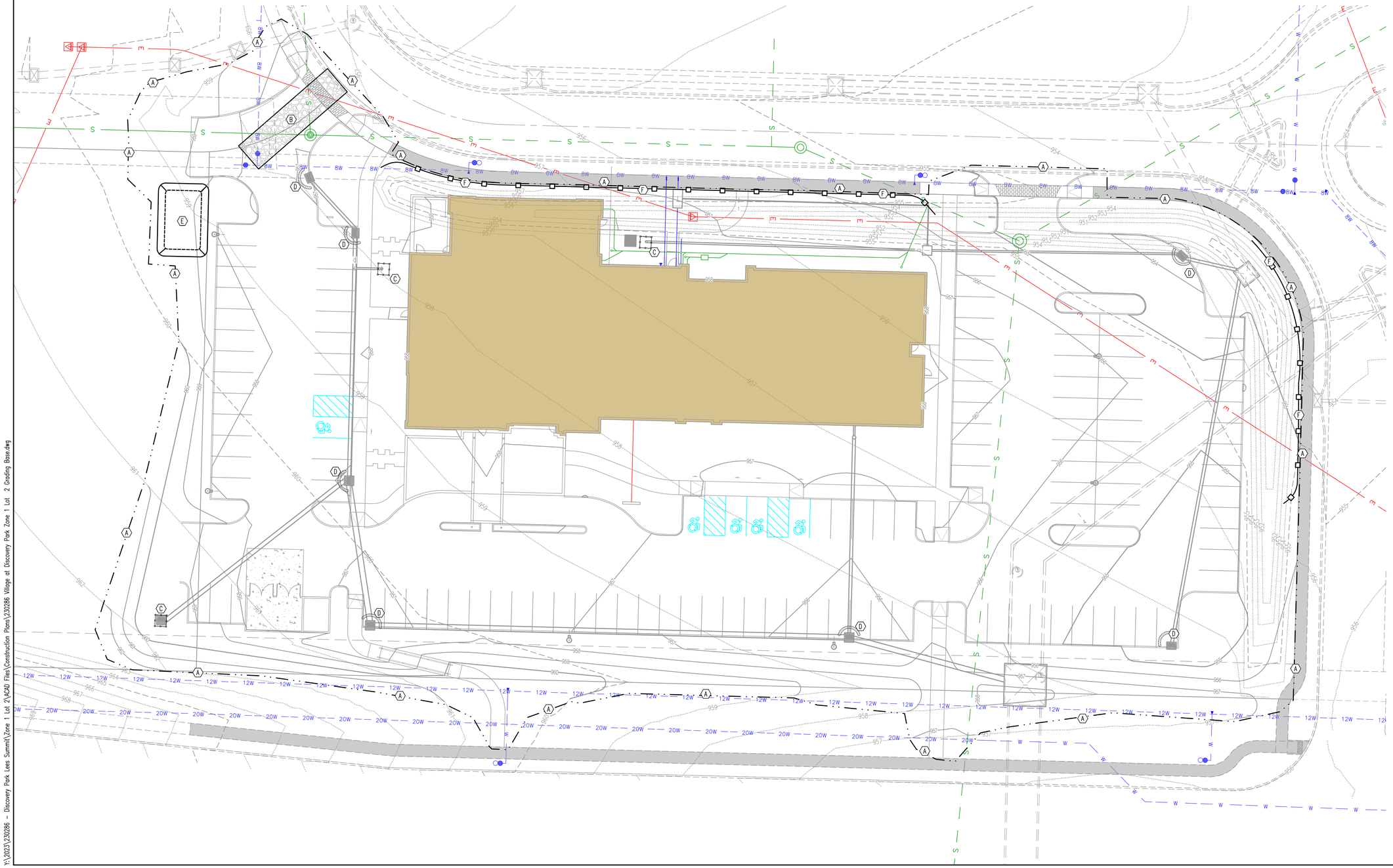
(D) INSTALL 2" X 10" BOARD WRAPPED IN SILT FENCE AT THROAT OF INLET. REPLACE BOARD WITH GUTTERBUDDY (OR APPROVED EQUAL) AT THROAT OF INLET AFTER PAVING OPERATIONS ARE COMPLETE. REFER TO ESC-06 ON CE 2.2.

(E) 20' X 30' X 3' MIN CONCRETE WASHOUT FACILITY.
THE WASHOUT FACILITY IS TO BE LINED WITH A PLASTIC LINING MATERIAL (10 MIL POLYETHYLENE SHEETING MIN.) FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COULD COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL. A SIGN SHALL BE INSTALLED ADJACENT TO FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. REFER TO ESC-01 ON CE 2.2 FOR CITY REQUIREMENTS.

(F) INSTALL SILT FENCE AS SHOWN. REFER TO ESC-03 ON CE 2.2.

SCALE: 1"=20'

0 10 20 40



Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER
PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:

CROCKETT 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
#2004037000

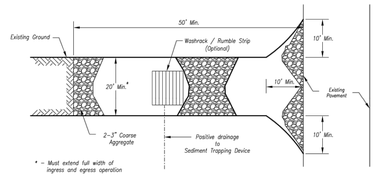
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

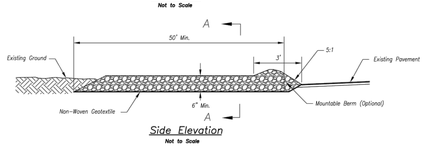
DRAWING INCLUDES:

EROSION CONTROL PLAN

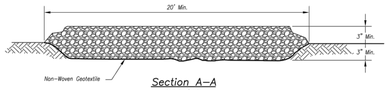
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 2.1



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

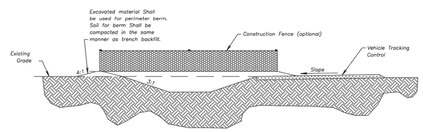
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

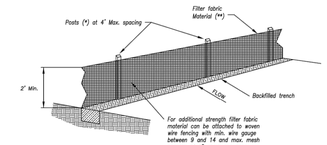
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris are not allowed to enter a stream or be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

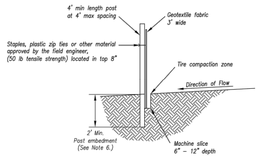
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 3/4" x 1 3/4"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288



SILT FENCE DETAILS
Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

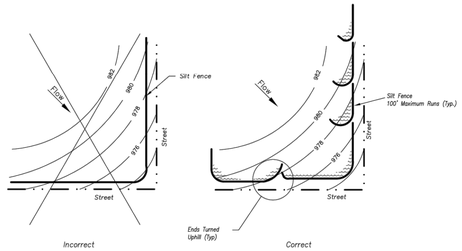
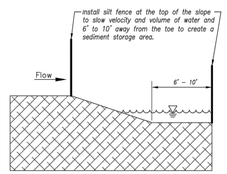
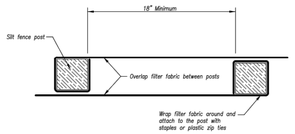


Figure A

SILT FENCE LAYOUT
Not to Scale

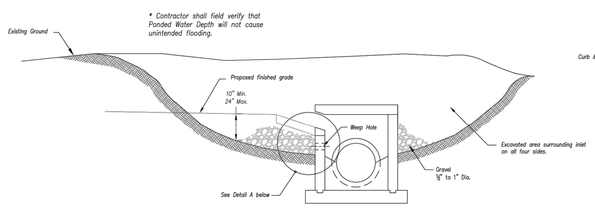


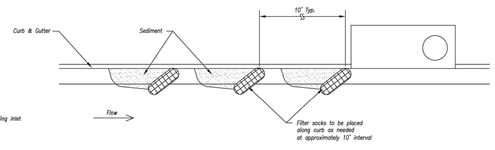


JOINING FENCE SECTIONS
Not to Scale

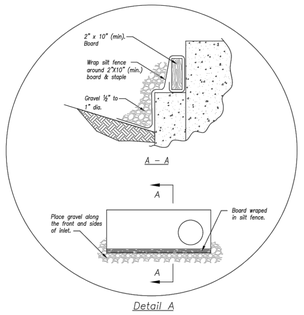
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
SILT FENCE
STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016





On Grade Curb Inlet Protection



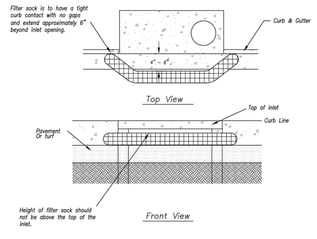
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

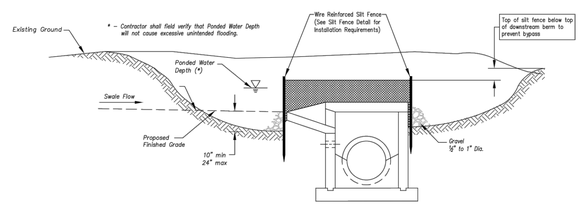


Sump Inlet Sediment Filter

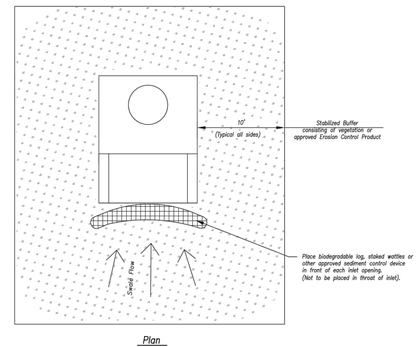
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

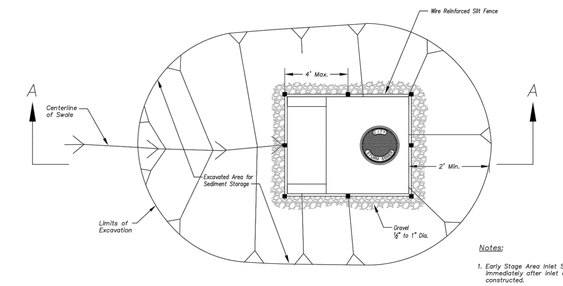
AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016



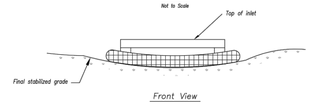
Section A–A
Not to Scale



Plan
Not to Scale



Plan
Not to Scale



Front View

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION
STANDARD DRAWING NUMBER ESC-07
ADOPTED: 10/24/2016

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Suite 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015100

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

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

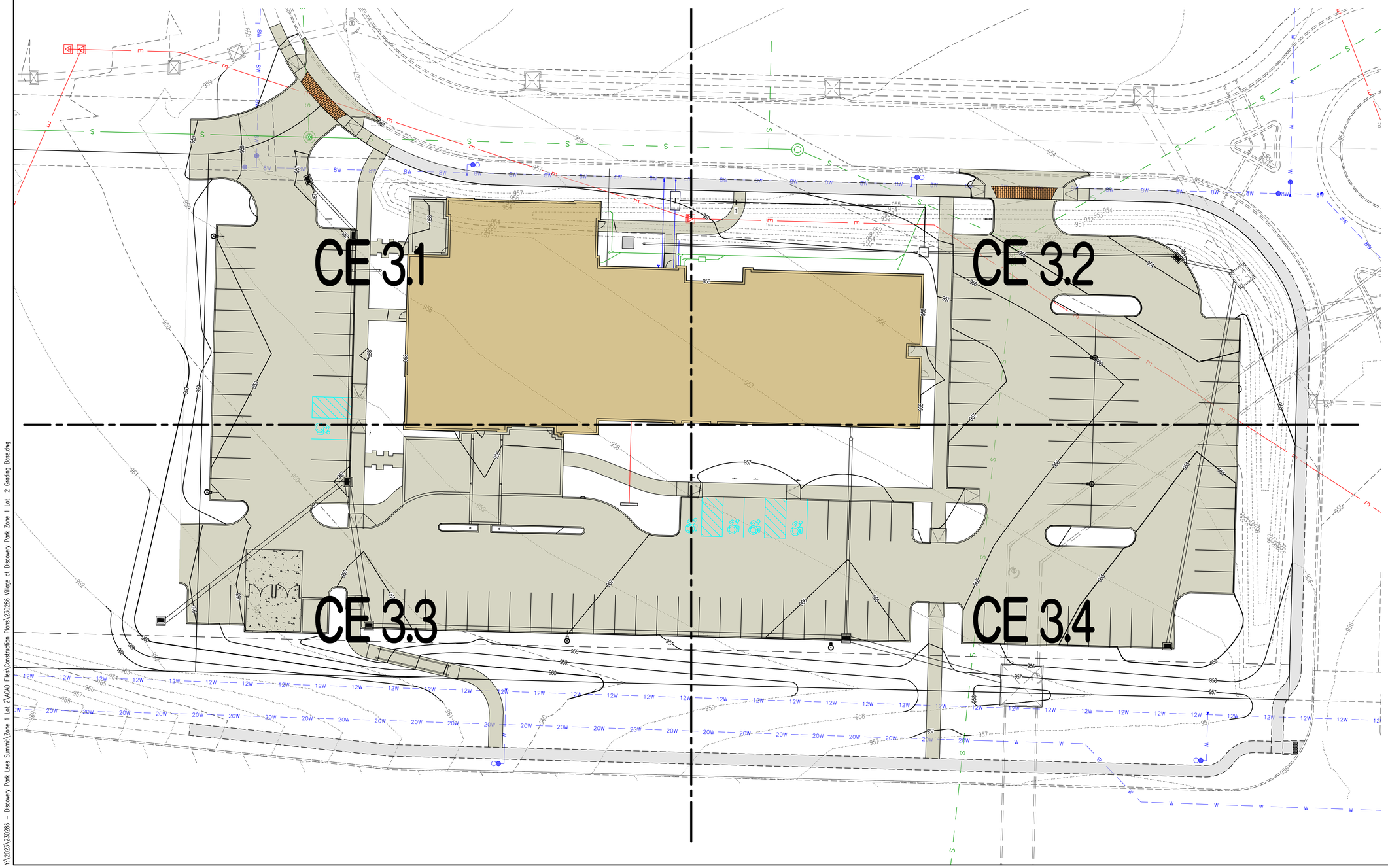
EROSION CONTROL DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 2.2

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg

SCALE: 1"=20'

0 10 20 40



REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER
PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE:2003014960

PREPARED BY:

CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Bldg 1
Blue Springs, MO 64015
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2001013001

OWNER:

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

HOME2 SUITES BY HILTON

251 NE ALURA WAY

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

OVERALL GRADING PLAN

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.0

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg

SCALE: 1"=10'

0 5 10 20

LEGEND OF SYMBOLS:

····XXX····	EXISTING MINOR CONTOUR
– – XXX – –	EXISTING MAJOR CONTOUR
——XXX——	PROPOSED MINOR CONTOUR
——XXX——	PROPOSED MAJOR CONTOUR
FF=XXX.X	FINISHED FLOOR OF STRUCTURE
XXX.XX TC	PROPOSED TOP OF CURB ELEVATION TC = (TP+6") UNLESS NOTED OTHERWISE
XXX.XX TP	PROPOSED TOP OF PAVEMENT ELEVATION
XXX.XX FG	PROPOSED FINISHED GRADE ELEVATION
XXX.XX FF	PROPOSED FINISHED FLOOR AT DOOR

LEGEND OF LABELS

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

PROPOSED BUILDING
FF = 958.10

CE 3.2

CE 3.3 | CE 3.4

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003049960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003049960

PREPARED BY:

CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilmington Blvd., Suite 1
Lees Summit, MO 64086
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015001

OWNER:

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

HOME2 SUITES BY HILTON

251 NE ALURA WAY

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

GRADING PLAN SHEET 1

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg

LEGEND OF SYMBOLS:

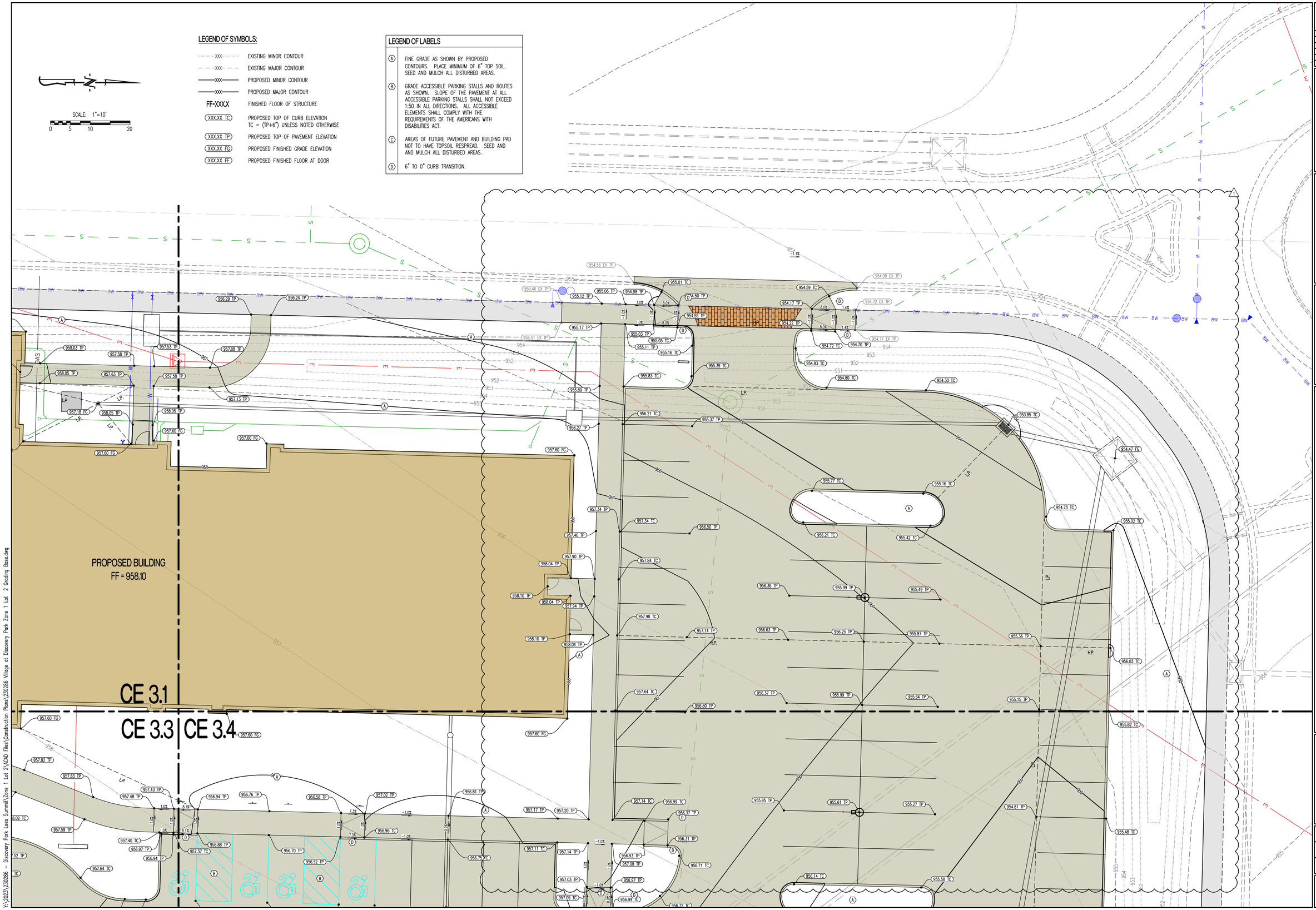
····XXX····	EXISTING MINOR CONTOUR
— — XXX — —	EXISTING MAJOR CONTOUR
——XXX——	PROPOSED MINOR CONTOUR
——XXX——	PROPOSED MAJOR CONTOUR
FF=XXXX	FINISHED FLOOR OF STRUCTURE
XXX.XX TC	PROPOSED TOP OF CURB ELEVATION TC = (TP+6") UNLESS NOTED OTHERWISE
XXX.XX TP	PROPOSED TOP OF PAVEMENT ELEVATION
XXX.XX FG	PROPOSED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

SCALE: 1"=10'

0 5 10 20

LEGEND OF LABELS

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



REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:

CROCKETT 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
#2004015001

OWNER:

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

HOME2 SUITES BY HILTON

251 NE ALURA WAY

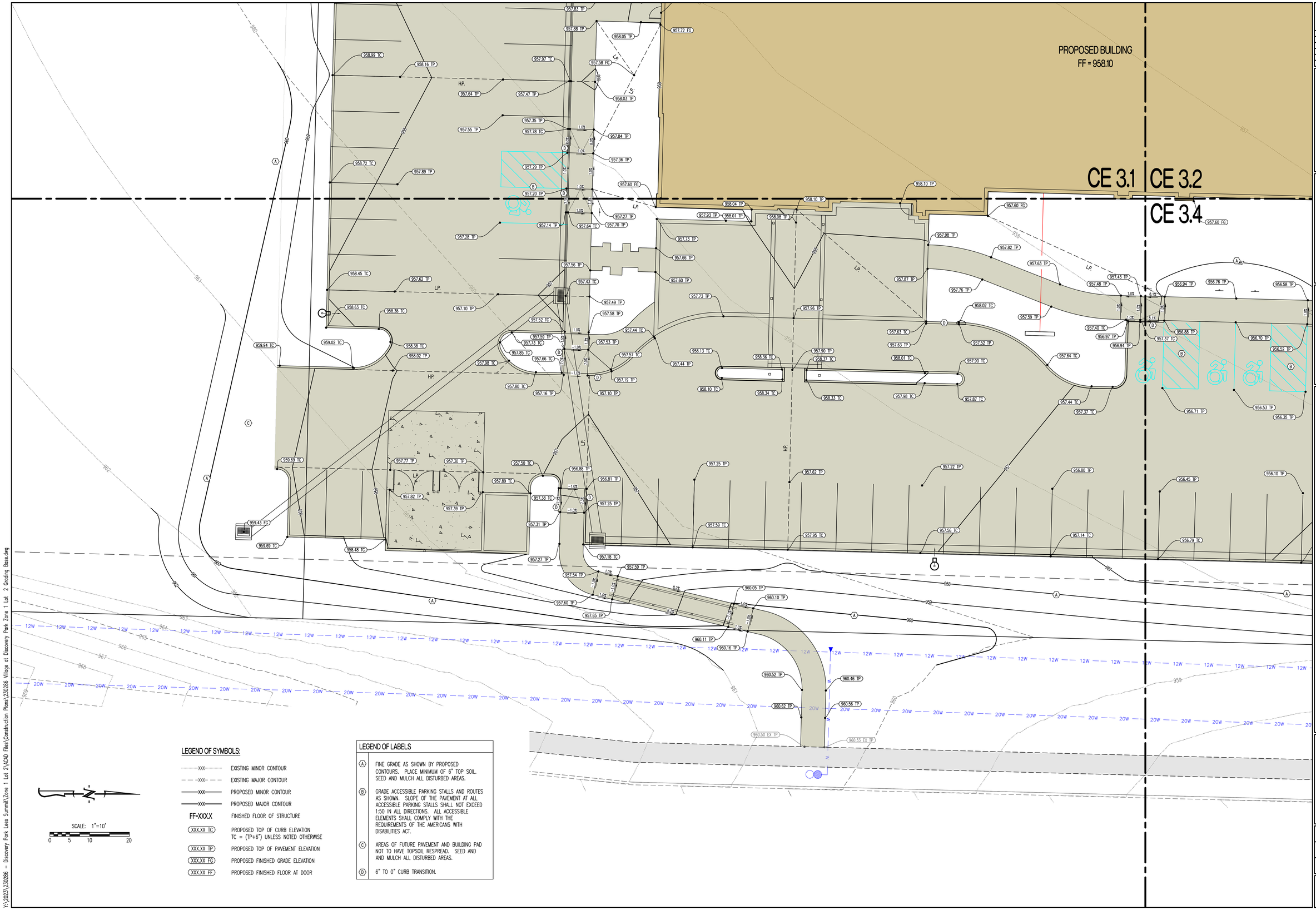
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

GRADING PLAN SHEET 2

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.2

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg



LEGEND OF SYMBOLS:

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

SCALE: 1"=10'

0 5 10 20

LEGEND OF LABELS

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

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT 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
#2004015001

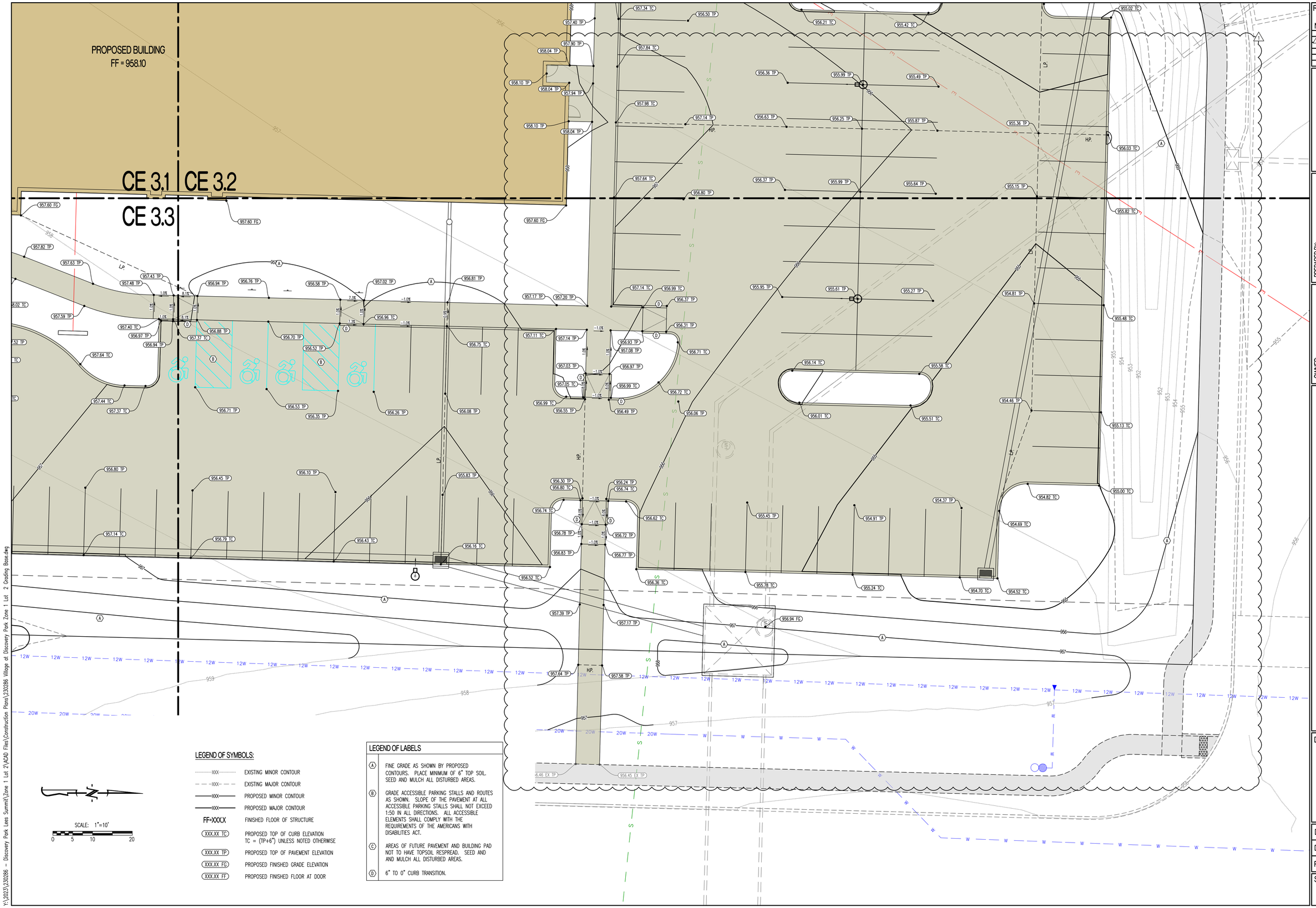
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 3

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.3

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg



LEGEND OF SYMBOLS:

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

SCALE: 1"=10'

0 5 10 20

LEGEND OF LABELS

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

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER
PE-2003049960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE:2003049960

PREPARED BY:

CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilmington Blvd., Bldg. 1
Lees Summit, Missouri 64086
(816) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015100

OWNER:

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

HOME2 SUITES BY HILTON

251 NE ALURA WAY

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

GRADING PLAN SHEET 4

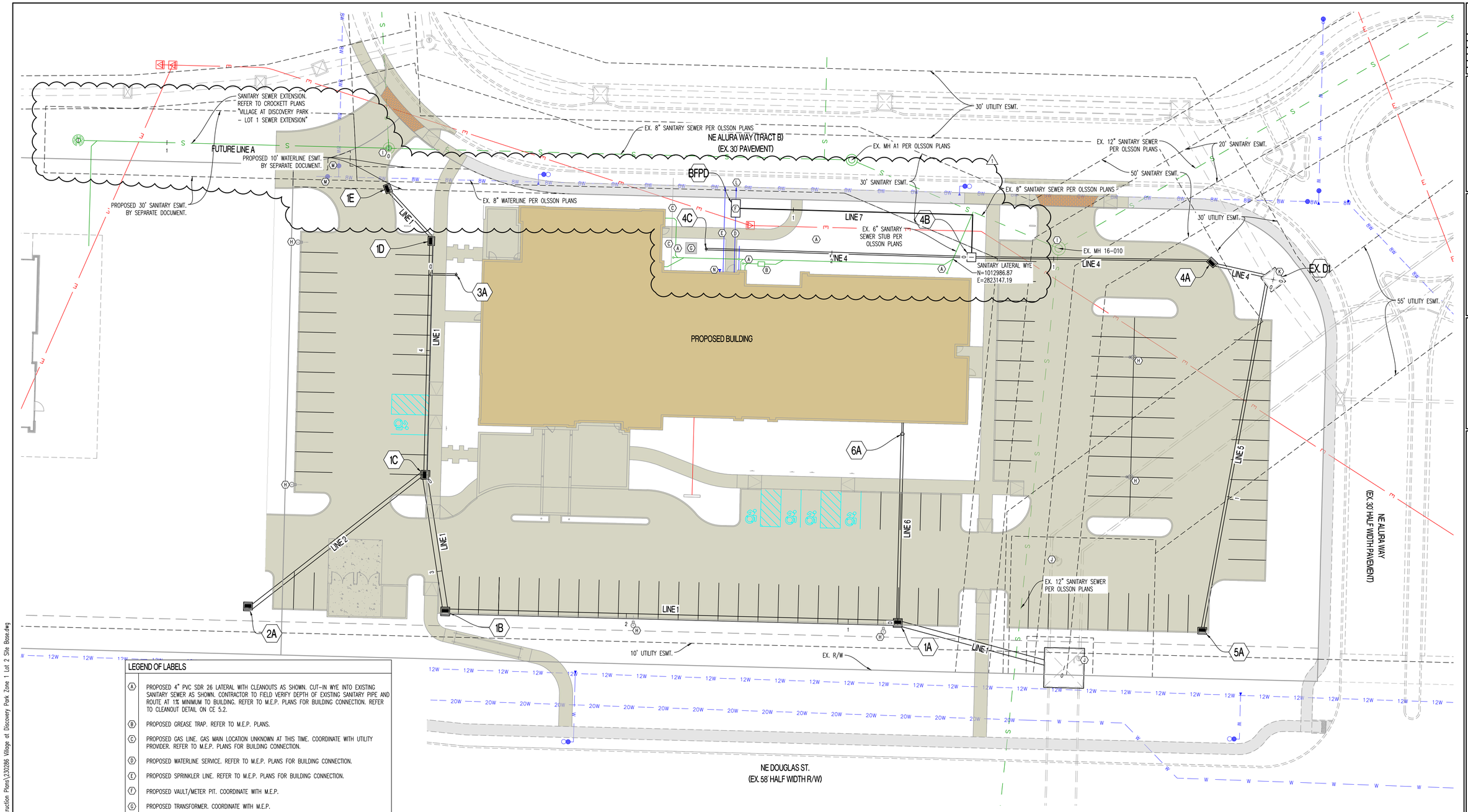
DESIGNED: NTE

DRAWN: NMD

PROJECT NO.: 230286

SHEET: CE 3.4

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Grading Base.dwg



LEGEND OF LABELS

- (A) PROPOSED 4" PVC SDR 26 LATERAL WITH CLEANOUTS AS SHOWN. CUT-IN WYE INTO EXISTING SANITARY SEWER AS SHOWN. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING SANITARY PIPE AND ROUTE AT 1% MINIMUM TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. REFER TO CLEANOUT DETAIL ON CE 5.2.
- (B) PROPOSED GREASE TRAP. REFER TO M.E.P. PLANS.
- (C) PROPOSED GAS LINE. GAS MAIN LOCATION UNKNOWN AT THIS TIME. COORDINATE WITH UTILITY PROVIDER. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (D) PROPOSED WATERLINE SERVICE. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (E) PROPOSED SPRINKLER LINE. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION.
- (F) PROPOSED VAULT/METER PIT. COORDINATE WITH M.E.P.
- (G) PROPOSED TRANSFORMER. COORDINATE WITH M.E.P.
- (H) PROPOSED LIGHT POLE. REFER TO M.E.P. PLANS.
- (I) CONTRACTOR TO ASBUILT TOP OF PLANNED SANITARY SEWER MANHOLE. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4.
- (J) CONTRACTOR TO ASBUILT TOP OF PLANNED STORM SEWER MANHOLE. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4.
- (K) CONTRACTOR TO ASBUILT TOP OF PLANNED SIDE OPENING INLET. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4. REPLACE SIDE OPENING INLET TOP WITH JUNCTION BOX TOP.
- (L) CONTRACTOR TO TAP EXISTING 8" WATERLINE AND INSTALL 6" WATERLINE WITH VALVES AS SHOWN TO VAULT/METER PIT. CONTRACTOR TO VERIFY SIZE AND DEPTH AND FURNISH ALL FITTINGS AS REQUIRED. REFER TO "PRIVATE SITE DEVELOPMENT PLANS" BY OLSSON DATED 10/18/2023 FOR EXISTING PLANNED WATERLINE.
- (M) CONTRACTOR TO ASBUILT TOP OF WATERLINE VALVES. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4.
- (N) PROPOSED FDC. CONTRACTOR TO COORDINATE WITH FIRE SPRINKLER DESIGNER.

SCALE: 1"=20'

0 10 20 40

GENERAL NOTES:

1) DETENTION AND WATER QUALITY FOR THIS PROJECT IS ADDRESSED WITH A DOWNSTREAM REGIONAL DETENTION FACILITY.

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:

CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, MO 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006015395

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

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

UTILITY PLAN

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 4.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg

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

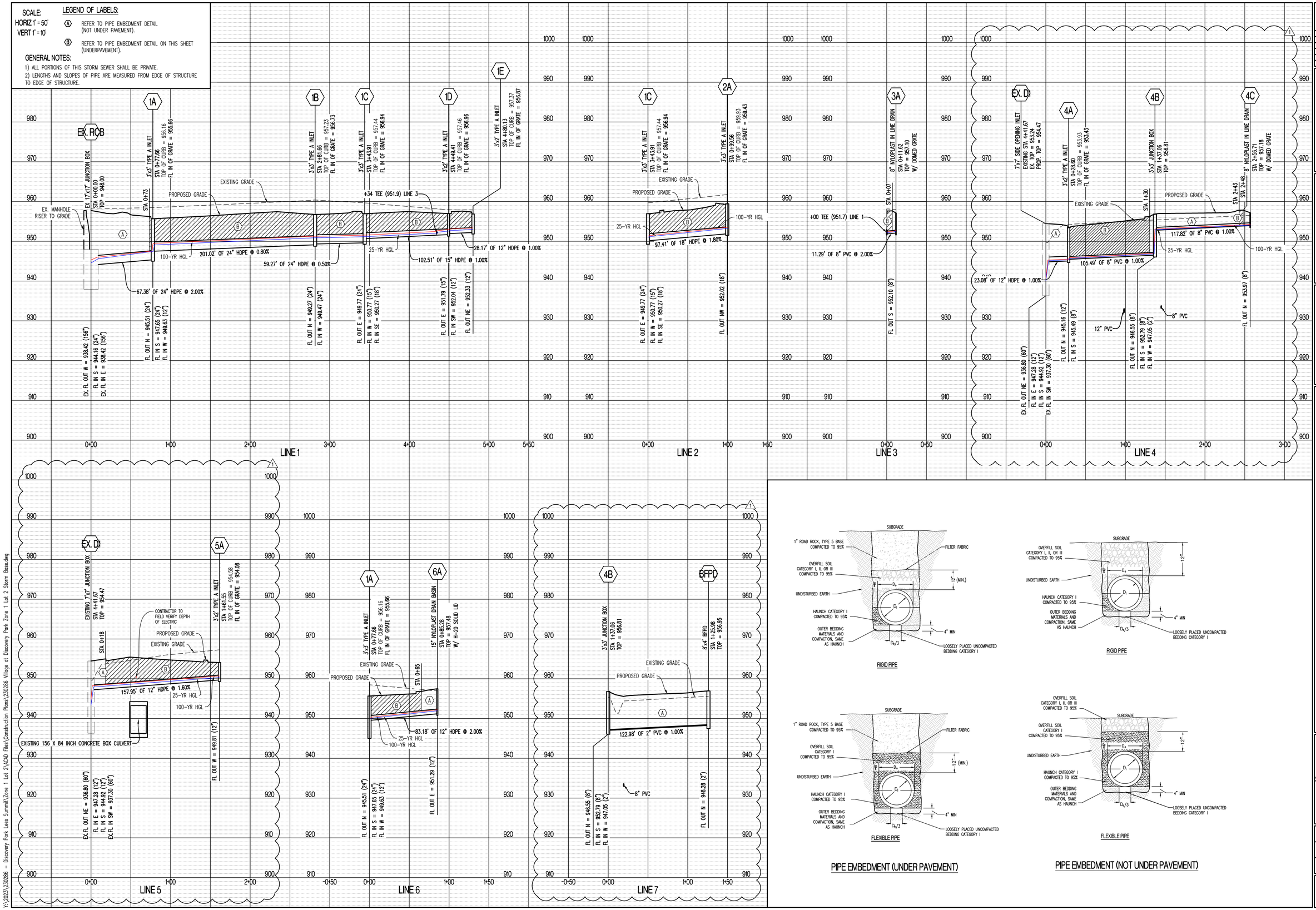
LEGEND OF LABELS:

(A) REFER TO PIPE EMBEDMENT DETAIL (NOT UNDER PAVEMENT).

(B) REFER TO PIPE EMBEDMENT DETAIL ON THIS SHEET (UNDERPAVEMENT).

GENERAL NOTES:

1) ALL PORTIONS OF THIS STORM SEWER SHALL BE PRIVATE.
2) LENGTHS AND SLOPES OF PIPE ARE MEASURED FROM EDGE OF STRUCTURE TO EDGE OF STRUCTURE.



PIPE EMBEDMENT (UNDER PAVEMENT)

PIPE EMBEDMENT (NOT UNDER PAVEMENT)

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1	05/11/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:

CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2003013061

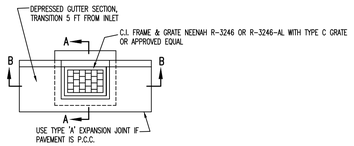
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

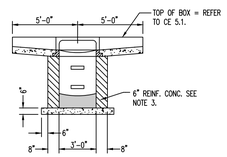
DRAWING INCLUDES:
STORM PROFILE AND DETAILS

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

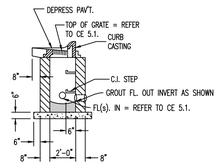
Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Storm Base.dwg



PLAN - SINGLE



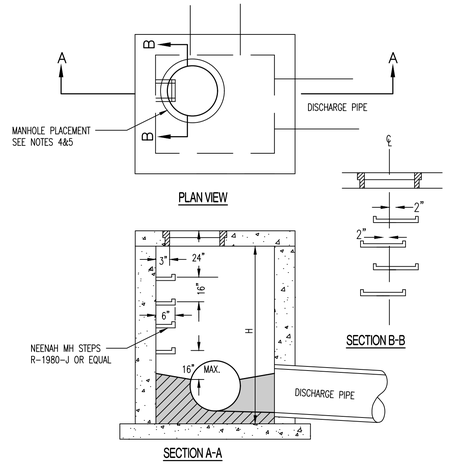
SECTION B-B



SECTION A-A

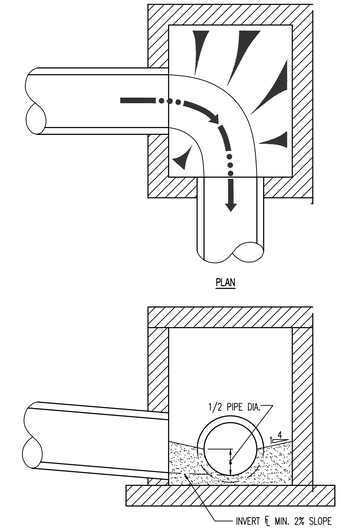
NOTES: 1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
2. REINFORCING STEEL SHALL BE GRADE 60
3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.

SINGLE TYPE "A" INLET



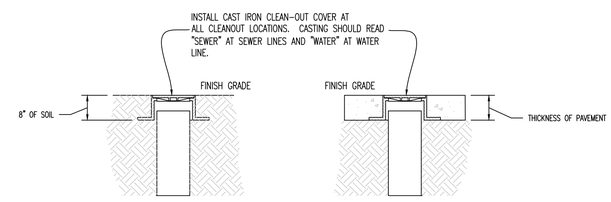
NOTES:
1. STEPS NOT REQUIRED WHERE H IS LESS THAN 4'.
2. CAST IRON STEPS STEPS SHALL BE AMERICAN ML-10-NCR OR EQUAL
3. STEPS SHALL BE PLACED ON VACANT WALL WHEN POSSIBLE
4. MANHOLE RING SHALL BE OFFSET TOWARD WALL WITH STEPS.
5. MANHOLE RING SHALL BE CENTERED ON CENTERLINE OF STEPS
6. STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF MANHOLE RING.
7. TOP STEP 24" BELOW TOP OF SLAB
8. STEP SPACING TO BE 16", BOTTOM STEP TO BE NO HIGHER THAN 16" FROM INVERT.

DRAINAGE STRUCTURE STEPS

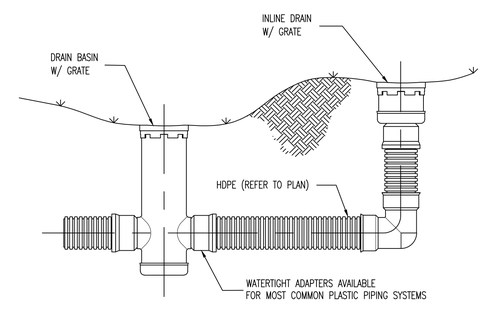


NOTES:
1. FORM ALL INVERTS FOR SMOOTH FLOW THRU STRUCTURE.
2. INVERT SHALL BE FORMED UP TO 1/2 THE PIPE DIAMETER.
3. INVERT SHALL BE CLASS CONCRETE.

DRAINAGE STRUCTURE INVERT



CLEANOUT DETAIL



TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT 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
#2006015190

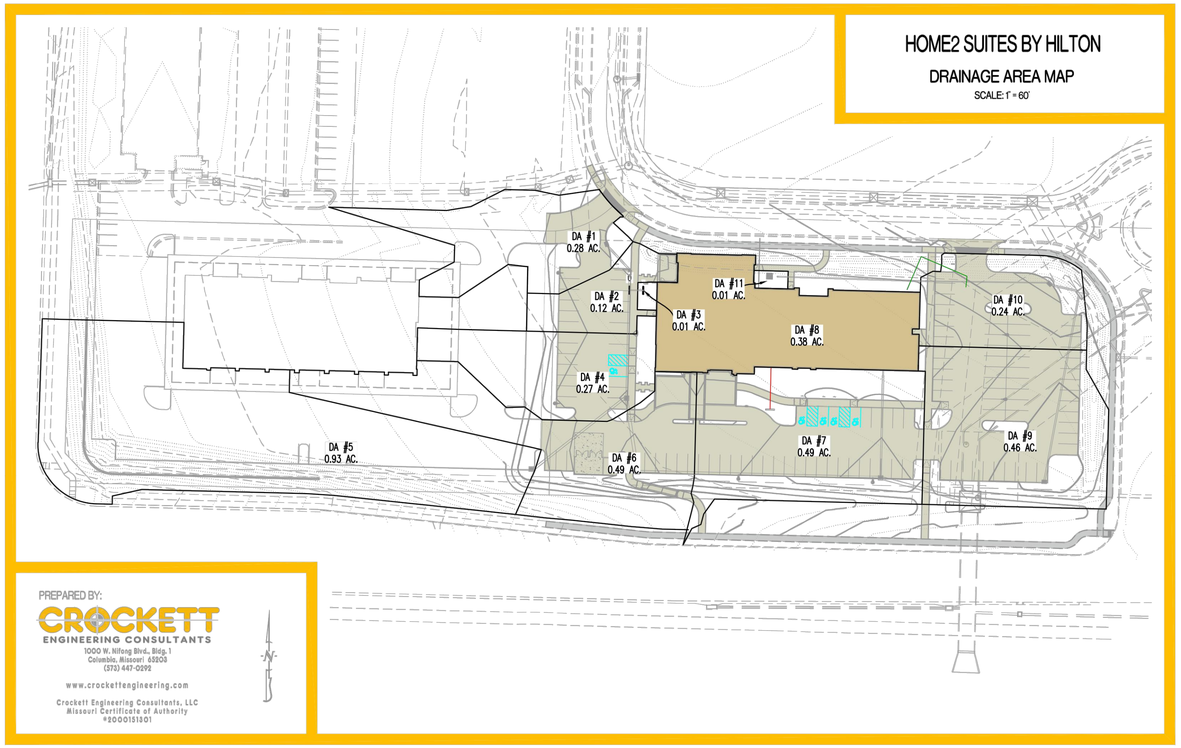
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
STORM DETAILS CONT.

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 5.2

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Storm Base.dwg



25-YEAR STORM CALCULATIONS

CROCKETT ENGINEERING CONSULTANTS

PROJECT: Home2 Suites By Hilton
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 05/09/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCLULATIONS

DESCRIPTION			OVERLAND FLOW HYDROLOGY						GUTTER AND INLET HYDRAULICS							NOTES
AREA NO.	STRUCTURE LABEL	INLET TYPE	TIME OF CONCENTRATION	RUNOFF COEFFICIENT	AREA	CA	RAINFALL INTENSITY	RUNOFF	GUTTER FLOW	GUTTER SLOPE	WIDTH OF GUTTER FLOW	DEPTH OF GUTTER FLOW	THEORETICAL INLET CAPACITY	DESIGN INLET CAPACITY	INLET BYPASS FLOW	
			min		acres	acres	in/hr	cfs	cfs	ft/ft	ft	ft	cfs	cfs	cfs	
1	1E	A		0.89	0.28	0.25	8.5	2.13					9.80	7.84		TYPE A IN SUMP
2	1D	A		0.89	0.12	0.11	8.5	0.91					9.80	7.84		TYPE A IN SUMP
3	3A	DB		0.89	0.01	0.01	8.5	0.08					0.70	0.56		8' NYLOPLAST DRAIN W/ 0.5' PONDING (DOMED GRATE)
4	1C	A		0.89	0.27	0.24	8.5	2.05					9.80	7.84		TYPE A IN SUMP
5	2A	A		0.89	0.93	0.83	8.5	7.06					9.80	7.84		TYPE A IN SUMP
6	1B	A		0.89	0.49	0.44	8.5	3.72					9.80	7.84		TYPE A IN SUMP
7	1A	A		0.89	0.49	0.44	8.5	3.72					9.80	7.84		TYPE A IN SUMP
8	6A	DB		1.00	0.38	0.38	8.5	3.24								ROOF RUNOFF
9	5A	A		0.89	0.46	0.41	8.5	3.49					9.80	7.84		TYPE A IN SUMP
10	4A	A		0.89	0.24	0.21	8.5	1.82					9.80	7.84		TYPE A IN SUMP
11	4B	DB		0.89	0.01	0.01	8.5	0.08					0.70	0.56		8' NYLOPLAST DRAIN W/ 0.5' PONDING (DOMED GRATE)

CROCKETT ENGINEERING CONSULTANTS

PROJECT: Home2 Suites By Hilton
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 5/9/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE

DESCRIPTION		STORM DRAIN HYDRAULICS										NOTES
AREA NO.	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION	CA ADDED	CA CUMUL.	RAINFALL INTENSITY	RUNOFF	STORM DRAIN SLOPE	STORM DRAIN DIAMETER	STORM DRAIN MATERIAL RCP, CMP, OR HDPE	CAPACITY FLOWING FULL	VELOCITY FLOWING FULL	
		min	acres	acres	in/hr	cfs	ft/ft	in		cfs	fps	
LINE 1												
1	1E	<5		0.25	8.53	2.13	0.010	12	HDPE	3.86	4.91	
2+3	1D+3A	<5	0.12	0.36	8.53	3.11	0.010	12	HDPE	3.86	4.91	
4+5	2A+1C	<5	1.07	1.43	8.53	12.22	0.005	24	HDPE	17.32	5.52	
6	1B	<5	0.44	1.87	8.53	15.94	0.008	24	HDPE	21.91	6.98	
7+8	1A+6A	<5	0.82	2.69	8.53	22.90	0.020	24	HDPE	34.64	11.03	
LINE 2												
5	2A	<5	-	0.83	8.53	7.06	0.018	18	HDPE	15.26	8.64	
LINE 3												
3	3A	<5		0.01	8.53	0.08	0.020	8	PVC	2.02	5.79	
LINE 4												
11	4C	<5		0.01	8.53	0.08	0.010	8	PVC	1.43	4.09	
	4A	<5		0.01	8.53	0.09	0.010	8	PVC	1.43	4.09	
10	4A	<5	0.21	0.22	8.53	1.90	0.010	12	HDPE	3.86	4.91	
LINE 5												
9	5A	<5		0.41	8.53	3.49	0.016	12	HDPE	4.88	6.22	
LINE 6												
8	6A	<5		0.38	8.53	3.24	0.020	12	HDPE	5.46	6.95	

100-YEAR STORM CALCULATIONS

CROCKETT ENGINEERING CONSULTANTS

PROJECT: Home2 Suites By Hilton
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 05/09/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCLULATIONS

DESCRIPTION			OVERLAND FLOW HYDROLOGY						GUTTER AND INLET HYDRAULICS							NOTES
AREA NO.	STRUCTURE LABEL	INLET TYPE	TIME OF CONCENTRATION	RUNOFF COEFFICIENT	AREA	CA	RAINFALL INTENSITY	RUNOFF	GUTTER FLOW	GUTTER SLOPE	WIDTH OF GUTTER FLOW	DEPTH OF GUTTER FLOW	THEORETICAL INLET CAPACITY	DESIGN INLET CAPACITY	INLET BYPASS FLOW	
			min		acres	acres	in/hr	cfs	cfs	ft/ft	ft	ft	cfs	cfs	cfs	
1	1E	A		1.00	0.28	0.28	10.3	2.89					9.80	7.84		TYPE A IN SUMP
2	1D	A		1.00	0.12	0.12	10.3	1.24					9.80	7.84		TYPE A IN SUMP
3	3A	DB		1.00	0.01	0.01	10.3	0.10					0.70	0.56		8' NYLOPLAST DRAIN W/ 0.5' PONDING (DOMED GRATE)
4	1C	A		1.00	0.27	0.27	10.3	2.79					9.80	7.84		TYPE A IN SUMP
5	2A	A		1.00	0.93	0.93	10.3	9.60					9.80	7.84		TYPE A IN SUMP
6	1B	A		1.00	0.49	0.49	10.3	5.06					9.80	7.84		TYPE A IN SUMP
7	1A	A		1.00	0.49	0.49	10.3	5.06					9.80	7.84		TYPE A IN SUMP
8	6A	DB		1.00	0.38	0.38	10.3	3.92								ROOF RUNOFF
9	5A	A		1.00	0.46	0.46	10.3	4.75					9.80	7.84		TYPE A IN SUMP
10	4A	A		1.00	0.24	0.24	10.3	2.48					9.80	7.84		TYPE A IN SUMP
11	4B	DB		1.00	0.01	0.01	10.3	0.10					0.70	0.56		8' NYLOPLAST DRAIN W/ 0.5' PONDING (DOMED GRATE)

CROCKETT ENGINEERING CONSULTANTS

PROJECT: Home2 Suites By Hilton
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 5/9/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE

DESCRIPTION		STORM DRAIN HYDRAULICS										NOTES
AREA NO.	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION	CA ADDED	CA CUMUL.	RAINFALL INTENSITY	RUNOFF	STORM DRAIN SLOPE	STORM DRAIN DIAMETER	STORM DRAIN MATERIAL RCP, CMP, OR HDPE	CAPACITY FLOWING FULL	VELOCITY FLOWING FULL	
		min	acres	acres	in/hr	cfs	ft/ft	in		cfs	fps	
LINE 1												
1	1E	<5		0.28	10.32	2.89	0.010	12	HDPE	3.86	4.91	
2+3	1D+3A	<5	0.13	0.41	10.32	4.23	0.010	15	HDPE	6.99	5.70	
4+5	2A+1C	<5	1.20	1.61	10.32	16.62	0.005	24	HDPE	17.32	5.52	
6	1B	<5	0.49	2.10	10.32	21.67	0.008	24	HDPE	21.91	6.98	
7+8	1A+6A	<5	0.87	2.97	10.32	30.65	0.020	24	HDPE	34.64	11.03	
LINE 2												
5	2A	<5	-	0.93	10.32	9.60	0.018	18	HDPE	15.26	8.64	
LINE 3												
3	3A	<5		0.01	10.32	0.10	0.020	8	PVC	2.02	5.79	
LINE 4												
11	4C	<5		0.01	10.32	0.10	0.020	8	PVC	2.02	5.79	
	4A	<5		0.01	10.32	0.10	0.020	8	PVC	2.02	5.79	
10	4A	<5	0.24	0.25	10.32	2.58	0.020	12	HDPE	5.46	6.95	
LINE 5												
9	5A	<5		0.46	10.32	4.75	0.016	12	HDPE	4.88	6.22	
LINE 6												
8	6A	<5		0.38	10.32	3.92	0.020	12	HDPE	5.46	6.95	

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1	05/11/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT 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

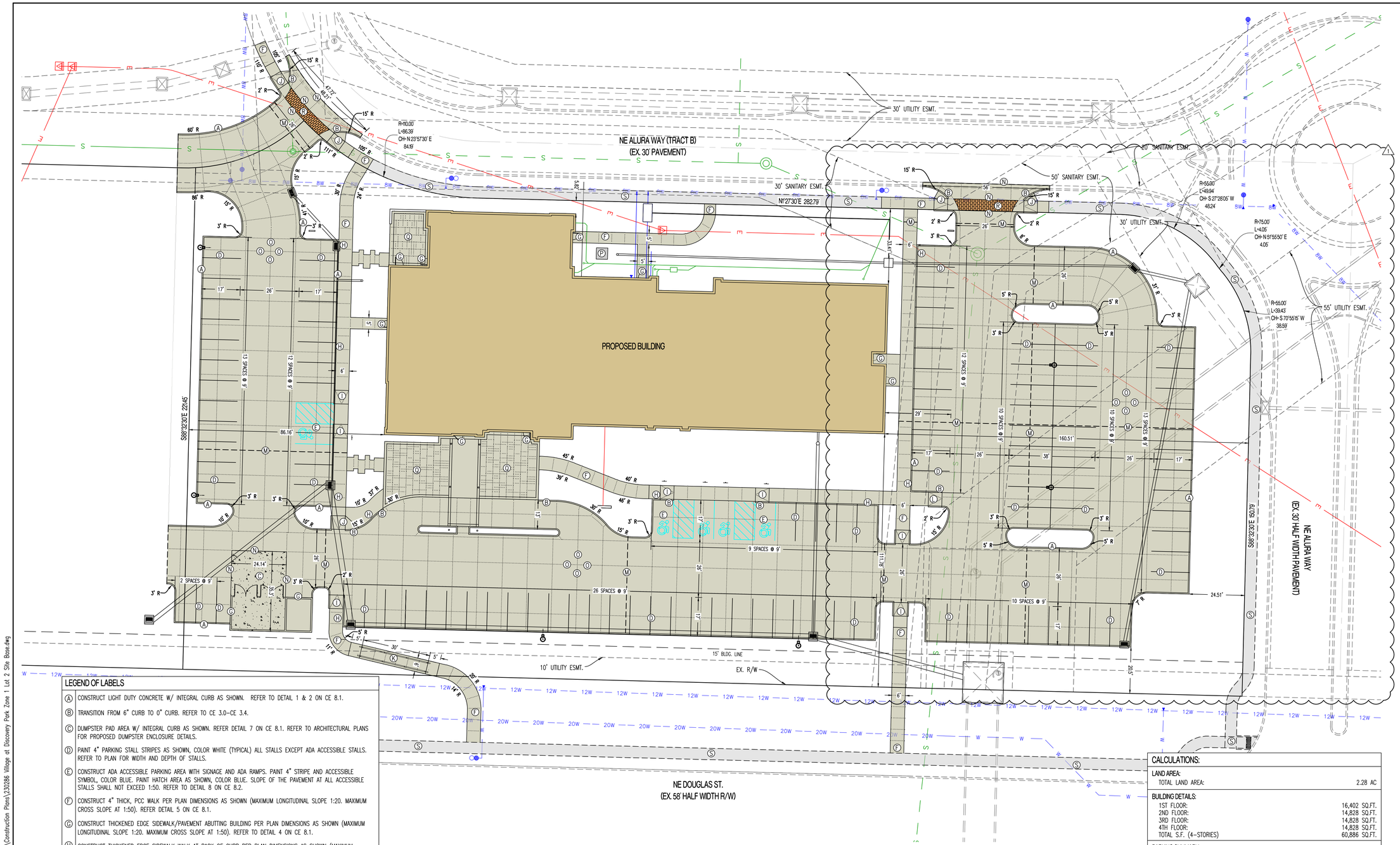
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
STORM CALCULATIONS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 5.3

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\CAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Storm Base.dwg



LEGEND OF LABELS

Ⓐ	CONSTRUCT LIGHT DUTY CONCRETE W/ INTEGRAL CURB AS SHOWN. REFER TO DETAIL 1 & 2 ON CE 8.1.
Ⓑ	TRANSITION FROM 6" CURB TO 0" CURB. REFER TO CE 3.0–CE 3.4.
Ⓒ	DUMPSTER PAD AREA W/ INTEGRAL CURB AS SHOWN. REFER DETAIL 7 ON CE 8.1. REFER TO ARCHITECTURAL PLANS FOR PROPOSED DUMPSTER ENCLOSURE DETAILS.
Ⓓ	PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE (TYPICAL) ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.
Ⓔ	CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AND ADA RAMPS. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAIL 8 ON CE 8.2.
Ⓕ	CONSTRUCT 4" THICK, PCC WALK PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER DETAIL 5 ON CE 8.1.
Ⓖ	CONSTRUCT THICKENED EDGE SIDEWALK/PAVEMENT ABUTTING BUILDING PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 8.1.
Ⓗ	CONSTRUCT THICKENED EDGE SIDEWALK WALK AT BACK OF CURB PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 8.1.
Ⓘ	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP AT BACK OF CURB. REFER TO DETAIL 9 ON CE 8.2.
Ⓙ	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH FLARE AT BACK OF CURB. REFER TO DETAIL 10 ON CE 8.2.
Ⓚ	CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH HANDRAIL. REFER TO DETAIL 11 ON CE 8.2.
Ⓛ	INSTALL NON-ADA SIDEWALK RAMP. REFER TO CE 3.0–CE 3.4. 1
Ⓜ	INSTALL TYPE A OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL 6 ON CE 8.1.
Ⓝ	INSTALL TYPE B CONSTRUCTION JOINT WHERE PROPOSED CONCRETE PAVING ABUTS EXISTING CONCRETE PAVING. REFER TO DETAIL 6 ON CE 8.1.
Ⓞ	INSTALL TYPE C SAW JOINT IN PAVEMENT, MAXIMUM 12'X12' SQUARES (TYPICAL). REFER TO DETAIL 6 ON CE 8.1.
Ⓟ	PROPOSED TRANSFORMER PAD. COORDINATE WITH M.E.P. FOR EXACT SIZE AND LOCATION.
Ⓠ	PROPOSED PATIO AREA. REFER TO ARCHITECTURAL PLANS.
Ⓡ	CROSSWALK CONCRETE PAVEMENT TO BE INTEGRALLY COLORED AND STAMPED. COLOR AND PATTERN TO BE CHOSEN BY OWNER. PAVEMENT SHALL BE REINFORCED PER DETAIL 7 ON CE 8.1. 1
Ⓢ	5' STREET-SIDE SIDEWALK TO BE CONSTRUCTED. REFER TO OLSSON PLANS TITLED "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" DATED 10/18/2023.

GENERAL NOTES:

1) ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE REQUIREMENTS OF THE FEDERAL AMERICANS WITH DISABILITIES ACT.

2) THE PAVEMENT JOINTS SHOWN ARE A GRAPHICAL REPRESENTATION OF A POSSIBLE JOINT CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH JOINT LAYOUT FOR APPROVAL BY ENGINEER PRIOR TO POURING OF PAVEMENT.

CALCULATIONS:

LAND AREA:		
TOTAL LAND AREA:		2.28 AC
BUILDING DETAILS:		
1ST FLOOR:		16,402 SQ.FT.
2ND FLOOR:		14,828 SQ.FT.
3RD FLOOR:		14,828 SQ.FT.
4TH FLOOR:		14,828 SQ.FT.
TOTAL S.F. (4–STORIES)		60,886 SQ.FT.
PARKING SUMMARY:		
SPACES REQUIRED:		
HOTEL OR MOTEL WITH NO RESTAURANT OR LOUNGE; OR WITH A RESTAURANT OR LOUNGE PROVIDED FOR GUESTS ONLY – 1 PER ROOM		
STANDARD SPACES REQUIRED (107 UNITS):		107 SPACES
HANDICAP SPACES REQUIRED:		5 SPACES
SPACES PROVIDED:		
STANDARD SPACES PROVIDED:		112 SPACES
HANDICAP SPACES PROVIDED:		5 SPACES
TOTAL SPACES PROVIDED:		117 SPACES
LOT COVERAGES:	ACTUAL	
NET LAND AREA:	99,487 SQ.FT.	100%
TOTAL IMPERVIOUS SURFACE AREA:	68,125 SQ.FT.	68%
TOTAL OPEN SPACE:	31,362 SQ.FT.	32%
FLOOR AREA RATIO:		61%

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT 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
#2004015901

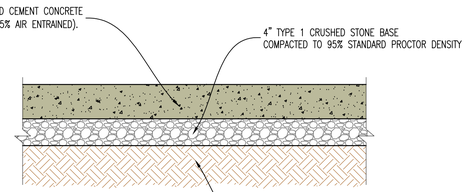
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
SITE PLAN

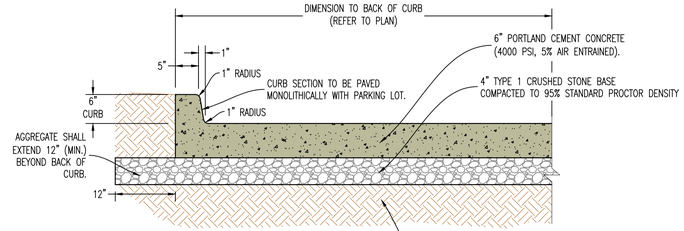
DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 7.1

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg



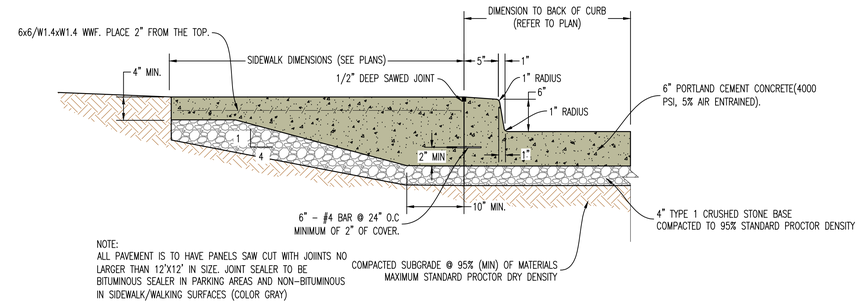
NOTE:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

1 LIGHT DUTY CONCRETE PAVEMENT CROSS-SECTION



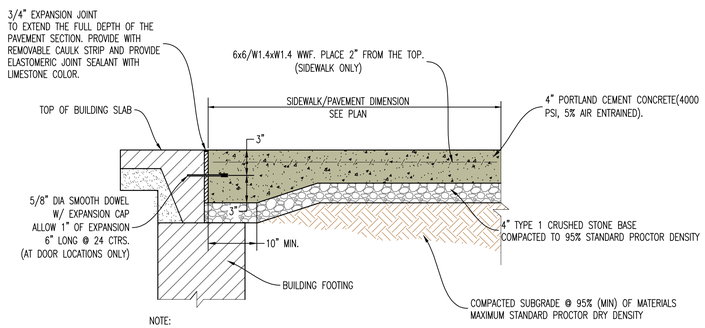
NOTE:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

2 6" CONCRETE BARRIER CURB CROSS-SECTION



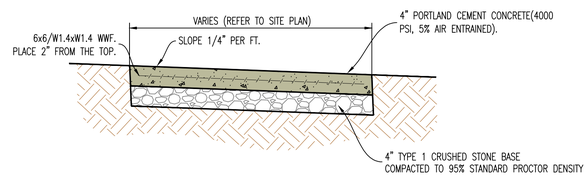
NOTE:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

3 THICKENED EDGE SIDEWALK WITH INTEGRAL CURB & GUTTER



NOTE:
ALL LOW VOLUME CHANGE MATERIAL IN LOCATIONS OF SIDEWALK/PAVEMENT PLACED NEXT TO BUILDING IS TO BE REMOVED COMPLETELY AND REPLACED WITH TYPE 1 CRUSHED STONE BASE COMPACTED TO 95% STANDARD PROCTOR DENSITY PRIOR TO SIDEWALK/PAVEMENT INSTALLATION. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

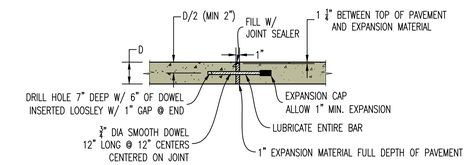
4 SIDEWALK/PAVEMENT ABUTTING BUILDING



NOTE:

1. INSTALL 1/2" EXPANSION JOINTS AT INTERSECTIONS, RAMPS, STRUCTURES, AND DRIVEWAY APPROACHES. MAX. EXPANSION JOINT SPACING = 150'
2. INSTALL TRANSVERSE SAW JOINTS AT SPACING = SIDEWALK WIDTH. JOINT SEALER TO BE NON-BITUMINOUS (COLOR GRAY)

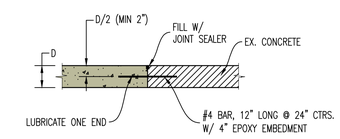
5 TYPICAL CONCRETE SIDEWALK



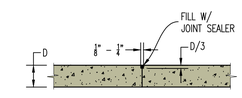
NOTES:

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

TYPE A - EXPANSION JOINT

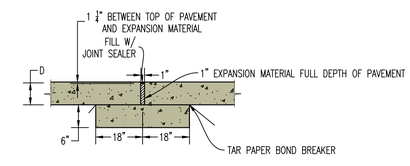


TYPE B - CONSTRUCTION JOINT



NOTE:
MAXIMUM DISTANCE BETWEEN SAW JOINTS TO BE 12'

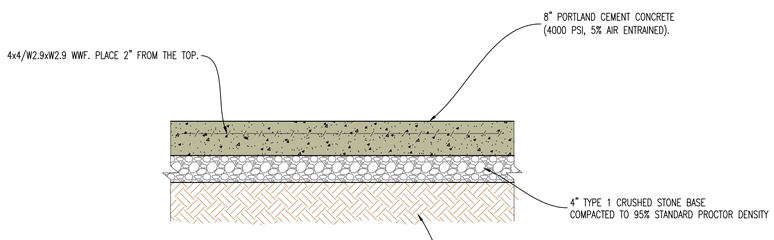
TYPE C - CONTROL JOINT 'SAWED'



TYPE A ALTERNATE
CONCRETE SILL

NOTE:
JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

6 CONCRETE PAVEMENT JOINT DETAILS



NOTE:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER

7 HEAVY DUTY CONCRETE PAVEMENT CROSS-SECTION (REINFORCED)

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003049960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003049960

PREPARED BY:
CROCKETT 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
#2006015001

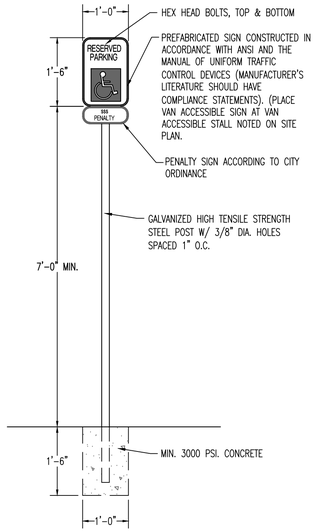
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

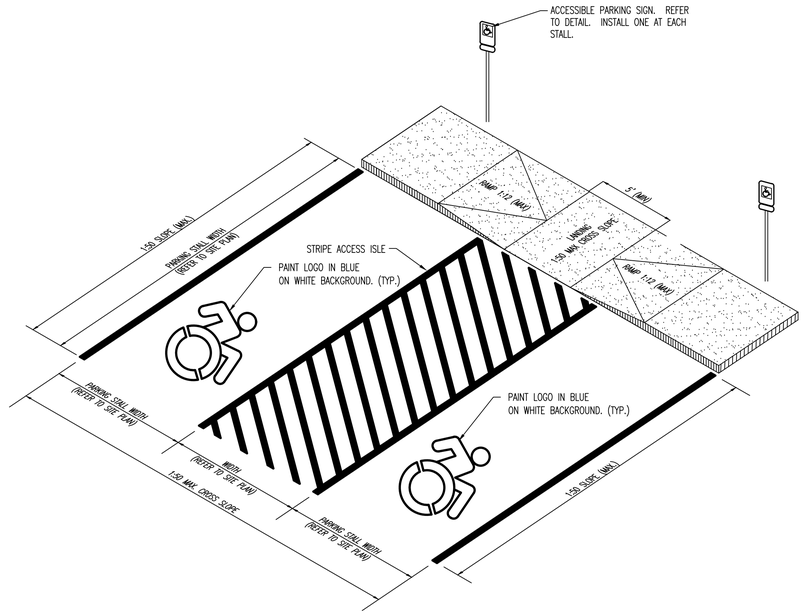
HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
DETAILS SHEET 1

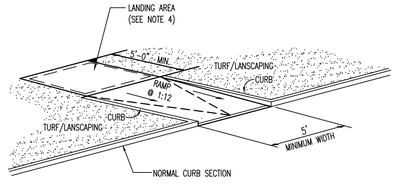
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 8.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg





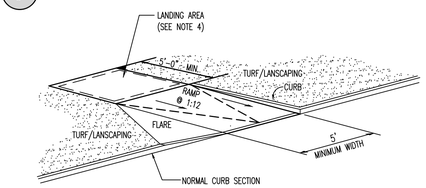
8 ADA PARKING AREA AND SIGNAGE



NOTES

1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.

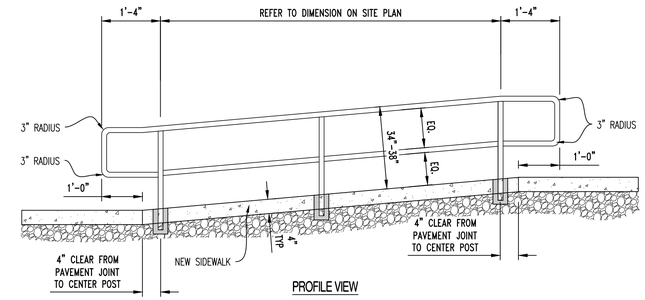
9 SIDEWALK RAMP WITH CURB



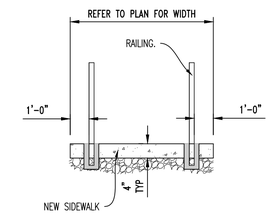
NOTES

1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
5. FLARE SLOPE NOT TO EXCEED 1:10.

10 SIDEWALK RAMP WITH CURB AND FLARE



PROFILE VIEW



CROSS SECTION

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 RAIL.
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 PLUM 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.

11 HANDRAIL DETAIL

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT 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
#2006015507

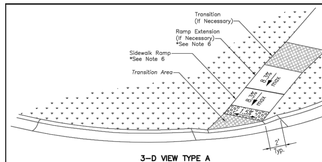
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

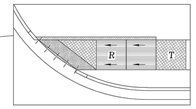
DRAWING INCLUDES:
DETAILS SHEET 2

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 8.2

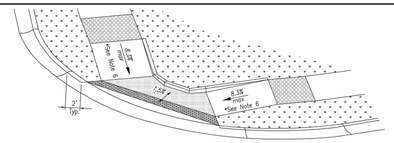
Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg



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



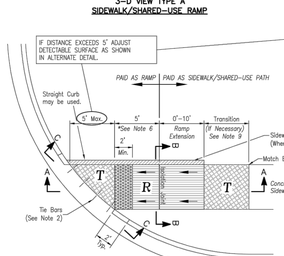
ALTERNATE DETECTABLE SURFACE LAYOUT



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

LEGEND

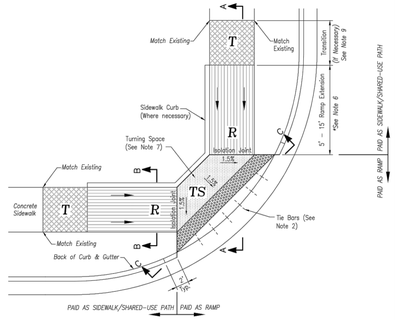
R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION



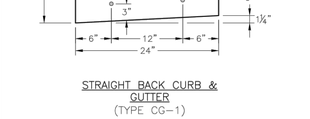
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

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

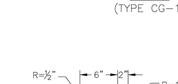
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL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



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



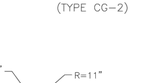
SECTION A–A



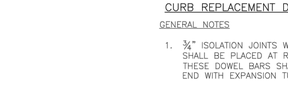
SECTION B–B

SECTION C–C

TYPE A & B SIDEWALK RAMP
Not to Scale



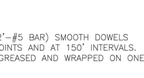
SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT

ISOLATION JOINT

JOINT DETAILS
Not to Scale



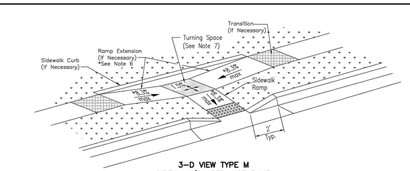
CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

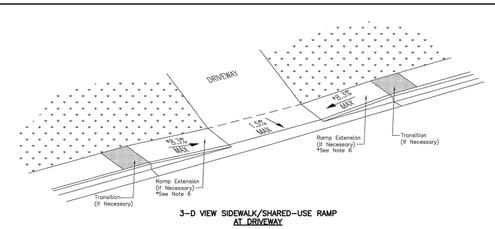
PROJECT: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
SHEET TITLE: ADA RAMP RETROFIT DETAIL

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

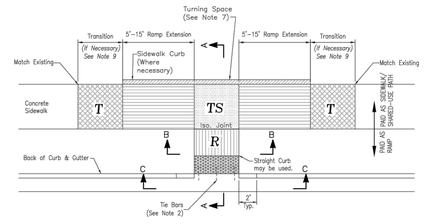
GEN-3A



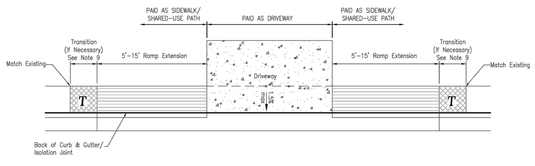
3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



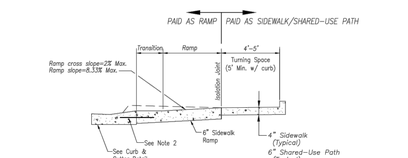
3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



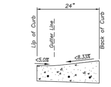
TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB



SECTION A–A

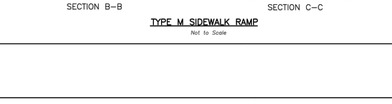


CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

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

CURB & GUTTER DETAIL AT RAMP
Not to Scale



SECTION B–B

SECTION C–C

TYPE M SIDEWALK RAMP
Not to Scale

SIDEWALK CURB DETAIL
Not to Scale

LEGEND

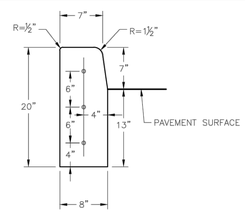
R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION

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

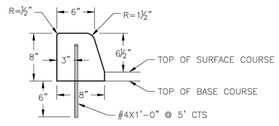
PROJECT: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
SHEET TITLE: ADA RAMP RETROFIT DETAIL

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

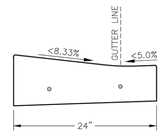
GEN-3B



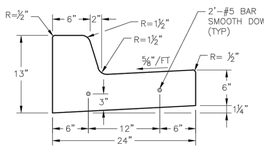
STRAIGHT CURB
(TYPE C–1)



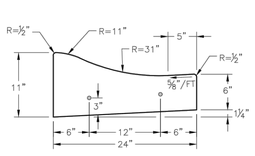
DOWELLED CURB
(TYPE DC)



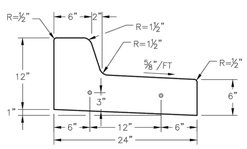
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



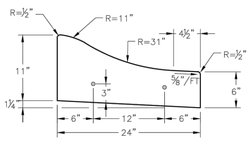
STRAIGHT BACK CURB & GUTTER
(TYPE CG–1)



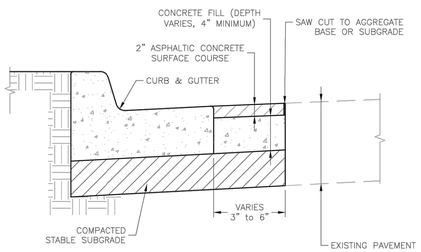
ROLL BACK CURB & GUTTER
(TYPE CG–2)



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



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



CURB REPLACEMENT DETAIL

GENERAL NOTES

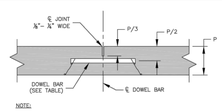
1. ¾" ISOLATION JOINTS WITH 2 (2'–#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS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

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

PROJECT: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
SHEET TITLE: CURB & GUTTER DETAIL

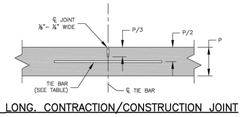
Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

GEN-4

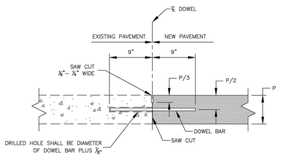


NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

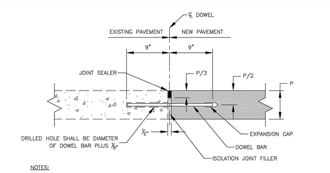


2 LONG. CONTRACTION/CONSTRUCTION JOINT



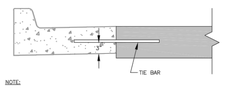
NOTES:
– DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
– DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
– BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
– THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT



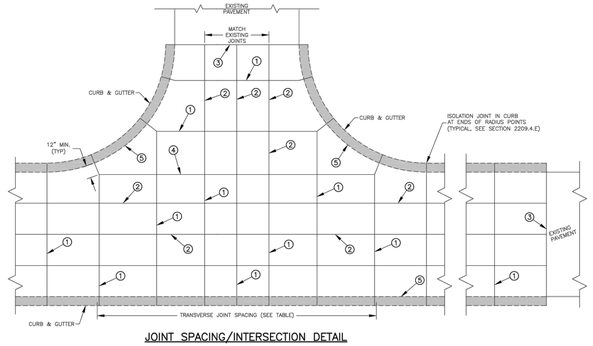
NOTES:
– DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
– DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
– BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
– THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

4 TRANSVERSE ISOLATION JOINT



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

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)



JOINT SPACING/INTERSECTION DETAIL

TABLE

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

GENERAL NOTES:
– THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PLACED AT MIDDLE OF THE PAVEMENT AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND PARALLEL TO EACH OTHER.
– ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.
– DOWEL BARS SHALL BE PLACED AT 9 INCHES FROM LONGITUDINAL JOINTS.
– TIE BARS SHALL BE PLACED AT 12 INCHES FROM TRANSVERSE JOINTS.
– PANEL LENGTH TO WIDTH RATIO SHALL NOT EXCEED 1.25 TO 1.
– DOWEL BASKET SHIPPING WIRE SHALL NOT BE CUT.
– CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
– IN ACCORDANCE WITH 2208.4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

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

PROJECT: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
SHEET TITLE: TYPICAL PAVEMENT JOINT DETAILS

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

GEN-10

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Suite 1
Blue Springs, MO 64015
(573) 441-0292
www.crocketteng.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority #2004015302

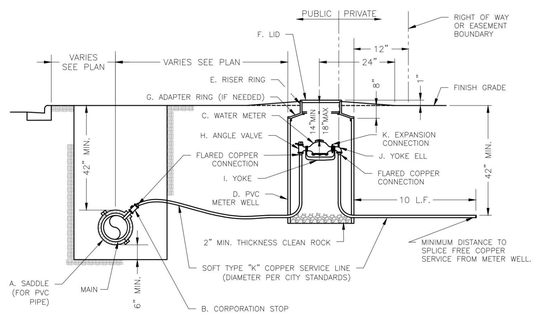
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
LEE'S SUMMIT SITE DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 8.3

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg



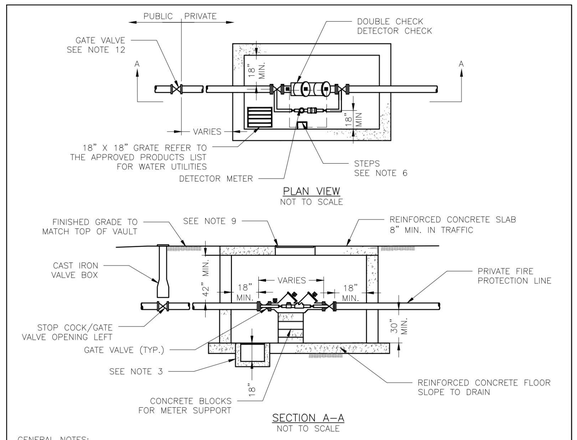
NOTES:

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

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

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

SERVICE CONNECTION WITH METER WELL — WAT-11



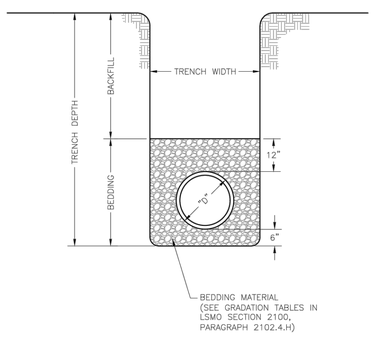
GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. 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 PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. 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.

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

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

VAULT FOR DOUBLE CHECK DETECTOR CHECK — WAT-12



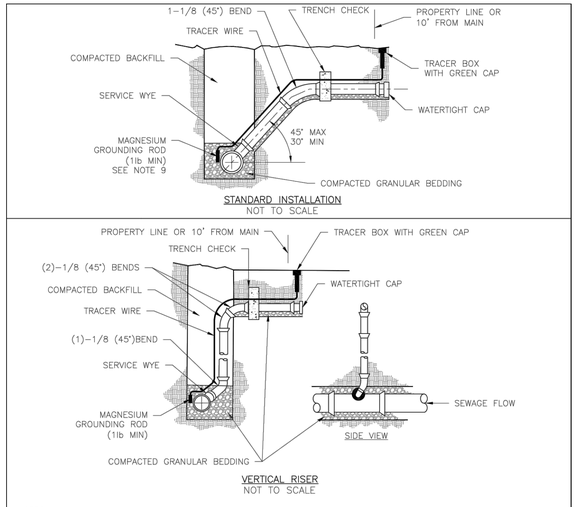
NOTES:

1. FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN–5.
2. EXCAVATION DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.

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

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

PIPE BEDDING DETAIL — GEN-6



NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. TRACER WIRE SHALL BE INSTALLED PER SPECIFICATION SECTION 3500. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH LOCKING SPLICE CONNECTOR MANUFACTURED WITH A WATERPROOF DIELECTRIC SEALANT.

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

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

SANITARY SEWER STUB DETAIL — SAN-1

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI — NATHAN THOMAS ECKHOFF — NUMBER PE-2003014960 — PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE:2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 441-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015001

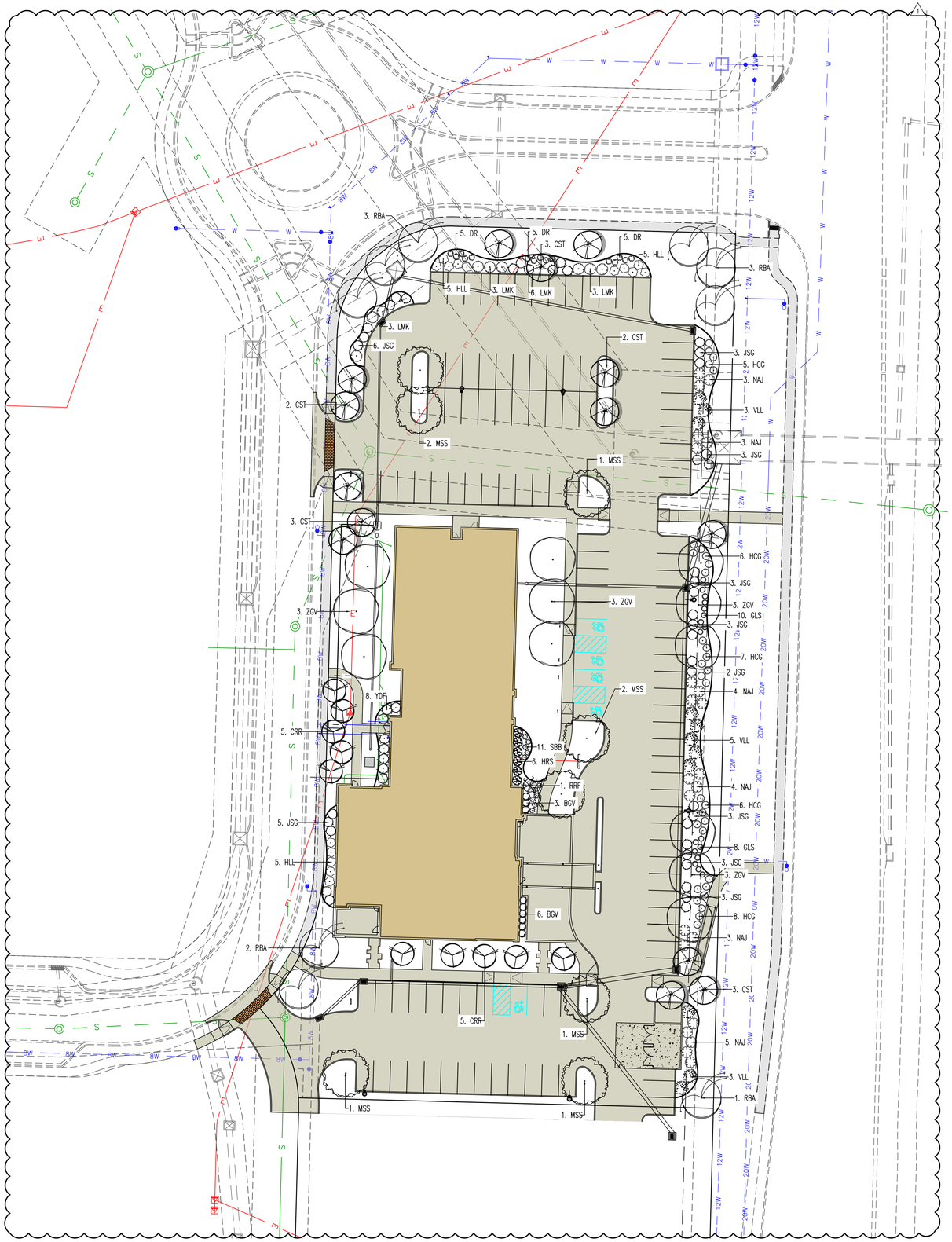
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

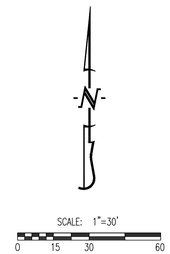
HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
LEE'S SUMMIT UTILITY DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 8.4

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Village at Discovery Park Zone 1 Lot 2 Site Base.dwg





LANDSCAPE COMPLIANCE: LOT 2

LEE'S SUMMIT, MISSOURI
CODE OF ORDINANCES: DIVISION III – LANDSCAPING, BUFFERS, AND TREE PROTECTION
SITE ZONED: CP-2, PROPOSED: PMX

STREET FRONTAGE TREES

1 TREE PER 30 FEET OF STREET FRONTAGE

NE DOUGLAS STREET – 467 LF STREET FRONTAGE	16 TREES REQUIRED	16 TREES PROPOSED
ALURA WAY – 611 LF STREET FRONTAGE	21 TREES REQUIRED	21 TREES PROPOSED

OPEN YARD TREES

1 TREE PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT

TOTAL LOT AREA = 82,775 SF	17 TREES REQUIRED	17 TREES PROPOSED

STREET FRONTAGE SHRUBS

1 SHRUB PER 20 FEET OF STREET FRONTAGE

NE DOUGLAS STREET – 467 LF STREET FRONTAGE	24 SHRUBS REQUIRED	24 SHRUBS PROPOSED
ALURA WAY – 611 LF STREET FRONTAGE	31 SHRUBS REQUIRED	31 SHRUBS PROPOSED

OPEN YARD SHRUBS

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

TOTAL LOT AREA = 82,775 SF	34 SHRUBS REQUIRED	34 SHRUBS PROPOSED

PARKING LOT SCREENING

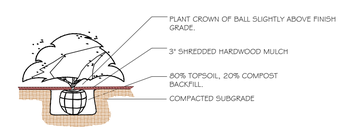
12 SHRUBS PER 40 LF OF PARKING LOT PARKING SPACES ALONG PUBLIC ROADWAY	141 SHRUBS REQUIRED	143 SHRUBS PROPOSED
TOTAL PARKING FRONTAGE LF = 468 LF		

*PARKING LOT SCREENING AND OPEN YARD SHRUBS COMBINED TO ACHIEVE REQUIRED TOTALS

PLANTING SCHEDULE:

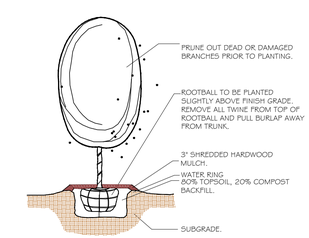
QUANTITY	SYMBOL	PLANT NAME	PLANT TYPE	SIZE
12	ZGV	ZELKOVA "GREEN VASE"	MEDIUM / LARGE TREE	3"
8	MSS	MIYABI MAPLE "STATE STREET"	MEDIUM / LARGE TREE	3"
9	RBA	REDBUD "APPALACHIAN"	ORNAMENTAL TREE	2"
14	CST	CRABAPPLE "SUGARTYME"	ORNAMENTAL TREE	2"
10	CRR	CRABAPPLE "ROYAL RAINDROPS"	ORNAMENTAL TREE	2"
1	RRF	REDBUD "RUBY FALLS"	ORNAMENTAL TREE	2"
22	NAJ	NINEBARK "AMBER JUBILEE"	DECIDUOUS SHRUB	#5
11	VLL	VIBURNUM "LEATHERLEAF"	DECIDUOUS SHRUB	#5
15	HLL	HYDRANGEA "LITTLE LIME"	DECIDUOUS SHRUB	#5
9	LMK	LILAC "MISS KIM"	DECIDUOUS SHRUB	#5
6	HRS	HYDRANGEA "RUBY SLIPPERS"	DECIDUOUS SHRUB	#5
11	SBB	SPIREA "BIG BANG"	DECIDUOUS SHRUB	#5
32	HCC	HYPERICUM "COBALT N GOLD"	DECIDUOUS SHRUB	#5
15	DR	DRIFT ROSE	DECIDUOUS SHRUB	#5
9	BGV	BOXWOOD "GREEN VELVET"	EVERGREEN SHRUB	#5
41	JSG	JUNIPER "SEA GREEN"	EVERGREEN SHRUB	#5
8	YDF	YEW "DENSI"	EVERGREEN SHRUB	#5
18	GLS	FEATHER REED GRASS "LIGHTING STRIKE"	ORNAMENTAL GRASS	#5

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



SHRUB / PERENNIAL PLANTING DETAIL

Not To Scale



DECIDUOUS TREE PLANTING DETAIL

Not To Scale

ROST INC

REVISIONS:

NO.	DATE
ORIGINAL	04/04/2024
1 REV. 1	05/10/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003049960
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003049960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wilsog Blvd., Bldg. 1
Lee's Summit, MO 64063
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004015901

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

HOME2 SUITES BY HILTON
251 NE ALURA WAY
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

LANDSCAPE PLAN

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

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 2\ACAD Files\Construction Plans\230286 Landscape Base.dwg