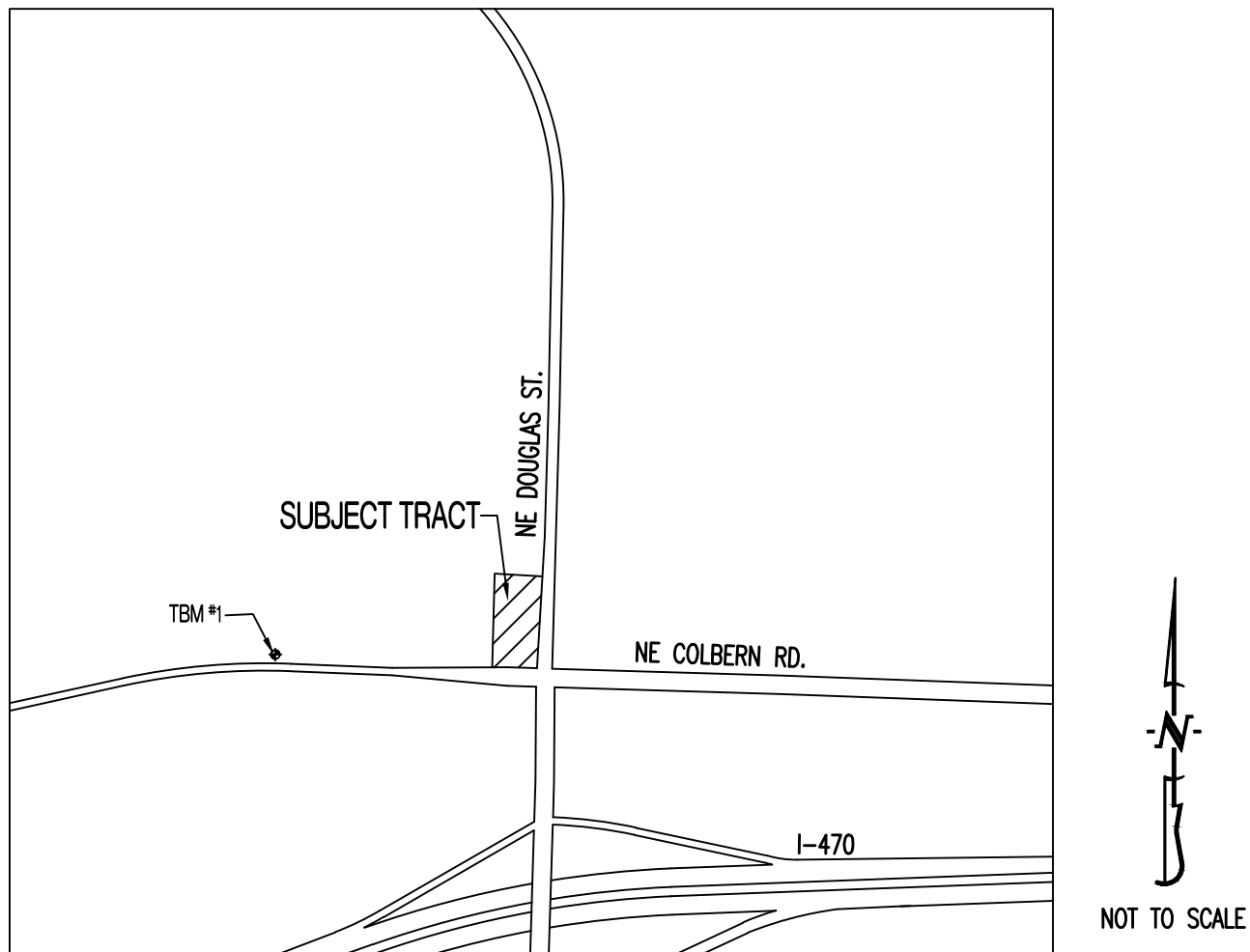


Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 1\A000 Files\Construction Plans\230286 Lot 1 Site Base.dwg

# THE VILLAGE AT DISCOVERY PARK

## LOT 1

### 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 1. A SUBDIVISION IN JACKSON COUNTY, LEE'S SUMMIT, MISSOURI.

### UTILITY COMPANIES:

#### LOCATES:

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



#### ELECTRIC:

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

#### NATURAL GAS:

SPIRE  
314-342-0500

#### FIBER:

GOOGLE FIBER  
877-454-6959

#### CABLE TELEVISION:

SPECTRUM  
877-772-2253

### GENERAL NOTES:

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

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

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

ALL CONCRETE MATERIALS SHALL CONFORM TO KCMMB STANDARDS AND SPECIFICATIONS.

THIS PLAT CONTAINS APPROXIMATELY 1.49 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 MDNR 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 HOLIDAY. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON A MONTHLY BASIS IF REQUESTED.

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

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

TOTAL DISTURBED AREA ON SITE = 1.82 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NUMBER MORA23630.

### DEVELOPER :

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

### SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE	ORIGINAL 10/18/24
CE 1.0	COVER SHEET	X
CE 1.1	CIVIL SPECIFICATIONS	X
CE 2.1	EROSION CONTROL PLAN	X
CE 2.2	EROSION CONTROL DETAILS	X
CE 3.0	OVERALL GRADING	X
CE 3.1	GRADING SHEET 1	X
CE 3.2	GRADING SHEET 2	X
CE 3.3	GRADING SHEET 3	X
CE 3.4	GRADING SHEET 4	X
CE 4.1	UTILITY PLAN	X
CE 5.1	STORM PROFILE & DETAILS	X
CE 5.2	STORM DETAILS CONTD	X
CE 5.3	25 YEAR STORM CALCS	X
CE 5.4	100 YEAR STORM CALCS	X
CE 6.1	SITE PLAN	X
CE 7.1	DETAILS SHEET 1	X
CE 7.2	DETAILS SHEET 2	X
CE 7.3	LEE'S SUMMIT DETAILS SHEET 1	X
CE 7.4	LEE'S SUMMIT DETAILS SHEET 2	X
CE 8.1	LANDSCAPING PLAN	

### LEGEND OF SYMBOLS:

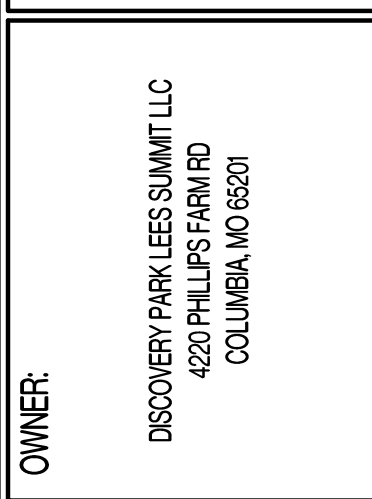
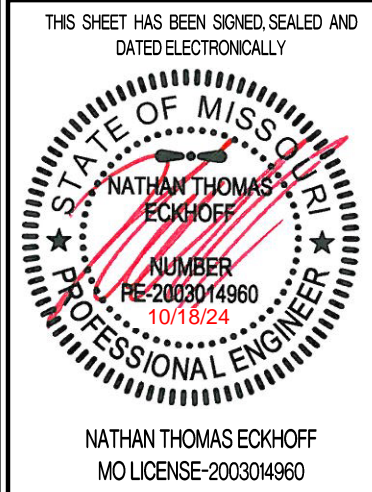
----	EXISTING CURB	FF=XXXX	FINISHED FLOOR OF STRUCTURE
=====	PROPOSED CURB	(XXX.XX TP)	PROPOSED TOP OF CURB ELEVATION
	RIP RAP	(XXX.XX TP)	PROPOSED TOP OF PAVEMENT ELEVATION
	EXISTING STRUCTURE	(XXX.XX FG)	PROPOSED FINISHED GRADE ELEVATION
	PROPOSED TREELINE	(XXX.XX TW)	PROPOSED TOP OF WALL
	EDGE OF WATERWAY	(XX)	LOT NUMBER
---W---	EXISTING WATERLINE		STORM SEWER STRUCTURE LABEL
---W---	PROPOSED WATERLINE		SANITARY SEWER STRUCTURE LABEL
---G---	EXISTING GAS LINE	H.P.	HIGH POINT
---G---	PROPOSED GAS LINE	L.P.	LOW POINT
---T---	EXISTING TELEPHONE		EXISTING SIGNS
---FO---	EXISTING FIBER OPTIC		EXISTING POWER POLE
---OE---	EXISTING OVERHEAD ELECTRIC		EXISTING GAS VALVE
---UE---	EXISTING UNDERGROUND ELECTRIC		EXISTING WATER VALVE
---UE---	PROPOSED UNDERGROUND ELECTRIC		EXISTING GAS METER
---OETV---	EXISTING OVERHEAD ELEC. & TV		EXISTING WATER METER
---OETV---	EXISTING OVERHEAD ELEC., TV & TELE.		EXISTING FIRE HYDRANT
---S---	EXISTING SANITARY SEWER		MANHOLE
---S---	PROPOSED SANITARY SEWER		EXISTING SANITARY SEWER LATERAL
.....XXX.....	EXISTING MINOR CONTOUR		PROPOSED SANITARY SEWER LATERAL
---XXX---	EXISTING MAJOR CONTOUR		PROPOSED TRACER WIRE TEST STATION BOX
---XXX---	PROPOSED MINOR CONTOUR		EXISTING AIR CONDITIONER
---XXX---	PROPOSED MAJOR CONTOUR		EXISTING TELEPHONE PEDESTAL
	100 YEAR FLOOD PLAIN		EXISTING ELECTRICAL TRANSFORMER
	FLOODWAY		EXISTING ELECTRIC METER
---.---.---	ORDINARY HIGH WATER MARK		EXISTING LIGHT POLE
---.---.---	STREAM SIDE BUFFER		EXISTING GUY WIRE
-----	OUTER STREAM BUFFER		PROPOSED CONCRETE PAVEMENT
			PROPOSED BUILDING FOOTPRINT
	PIPE EMBEDMENT UNDER PAVEMENT		PROPOSED HEAVY DUTY PAVEMENT

### STRUCTURAL FILL COMPACTION REQUIREMENTS

SOIL FILL THICKNESS	<ul style="list-style-type: none"><li>9-INCHES OR LESS WHEN USING HEAVY SELF-PROPELLED COMPACTION EQUIPMENT</li><li>6-INCHES OR LESS WHEN USING HAND GUIDED OR LIGHT SELF-PROPELLED EQUIPMENT</li></ul>
COMPACTION MOISTURE CONTENT REQUIREMENTS	<ul style="list-style-type: none"><li>LEAN TO FAT CLAY AND FAT CLAY<ul style="list-style-type: none"><li>2% BELOW STANDARD PROCTOR OPTIMUM MOISTURE CONTENT (OMC) TO 4% ABOVE THE STANDARD PROCTOR OPTIMUM MOISTURE CONTENT</li></ul></li><li>LEAN CLAY AND SILT<ul style="list-style-type: none"><li>2% BELOW TO 3% ABOVE STANDARD PROCTOR OMC</li></ul></li><li>GRANULAR<ul style="list-style-type: none"><li>WORKABLE MOISTURE CONTENT AND SHALL NOT PUMP WHEN PROOF-ROLLED</li></ul></li></ul>
COMPACTION REQUIREMENTS 1 & 2	<p>95% OF STANDARD PROCTOR DRY DENSITY (ASTM D-698)</p> <ol style="list-style-type: none"><li>WE RECOMMEND ENGINEERED FILL BE TESTED FOR MOISTURE CONTENT AND COMPACTION DURING PLACEMENT. SHOULD THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED.</li><li>AS STATED WITHIN ASTM D698, THIS PROCEDURE IS INTENDED FOR SOILS WITH 30% OR LESS MATERIAL LARGER THAN 3/4". ACCORDINGLY, WE RECOMMEND FULL TIME PROOF-ROLL OBSERVATION BE PERFORMED INSTEAD OF MOISTURE DENSITY TESTING FOR MATERIALS CONTAINING MORE THAN 30% AGGREGATE RETAINED ON THE 3/4" SIEVE.</li></ol>
<ol style="list-style-type: none"><li>IF LIMESTONE SCREENINGS ARE USED AS NEW STRUCTURAL FILL, THE CONTRACTOR SHOULD BE AWARE THIS MATERIAL IS EXTREMELY SUSCEPTIBLE TO DEGRADATION UPON WETTING WHICH CAN RESULT IN DEEP-SEATED PUMPING AND RUTTING.</li><li>LIMESTONE SCREENINGS THAT PUMP AND RUT ARE NOT ACCEPTABLE FOR USE AS NEW STRUCTURAL FILL OR FOR LOW VOLUME CHANGE MATERIAL AND WILL NEED TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.</li></ol>	

### REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024



## THE VILLAGE AT DISCOVERY LOT 1 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

### DRAWING INCLUDES:

COVER SHEET

DESIGNED: NTE

DRAWN: NMD

PROJECT NO.: 230286

SHEET:  
CE 10



SITE CLEARING & DEMOLITION :

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

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

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

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

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

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

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

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

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

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

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

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWN TO A MINIMUM DEPTH OF 2" WITH A TRUE 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 DRAWINGS.

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

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

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

ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE.

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

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

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

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

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

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

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

EARTHMOVING:

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

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

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

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

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:

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

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

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

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

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

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

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

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

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

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

- STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
- DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
- LANDSCAPE AREA FILL:
  - ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.
  - CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE, OWNER TO PLACE TOPSOIL AND ALL PLANTINGS.
- ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND FINISHED AREAS SHALL BE CHEROKEE 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 MATER.
- 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:

- 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
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
- CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
- 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.
- CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- 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.
- 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 FINISHED FINISHED FLOORS TO EXCEED 3%.
- 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.
- READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
- CONCRETE WORK EXECUTION
  - CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
  - 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 1/2 INCHES
  - PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
  - STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
  - 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.
- FUNT AND CHERY WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE. (CAST-IN-PLACE OR PRECAST). LIGHTWEIGHT WILL BE LIMITED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGHTWEIGHT 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:

- WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.
- WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.
- WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
- 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.

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

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

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

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

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

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

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

PAVEMENT MARKING :

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

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

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

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

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

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

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

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

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

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

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI

NATHAN THOMAS ECKHOFF

PE-2003014960

10-165

PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF  
MO LICENSE 2003014960

PREPARED BY:

CROCKETT

ENGINEERS & ARCHITECTS

ALL PLANTS

1000 W. Illinois Blvd., Ste. 200

Columbia, Missouri 65203

(314) 487-0592

www.crockettingeering.com

Crockett Engineering Consultants, LLC

Missouri Certificate of Authority

000000001

OWNER:

DISCOVERY PARK LEES SUMMIT LLC  
4420 PHILLIPS FARM RD  
COLUMBIA MO 65201

THE VILLAGE AT DISCOVERY

LOT 1

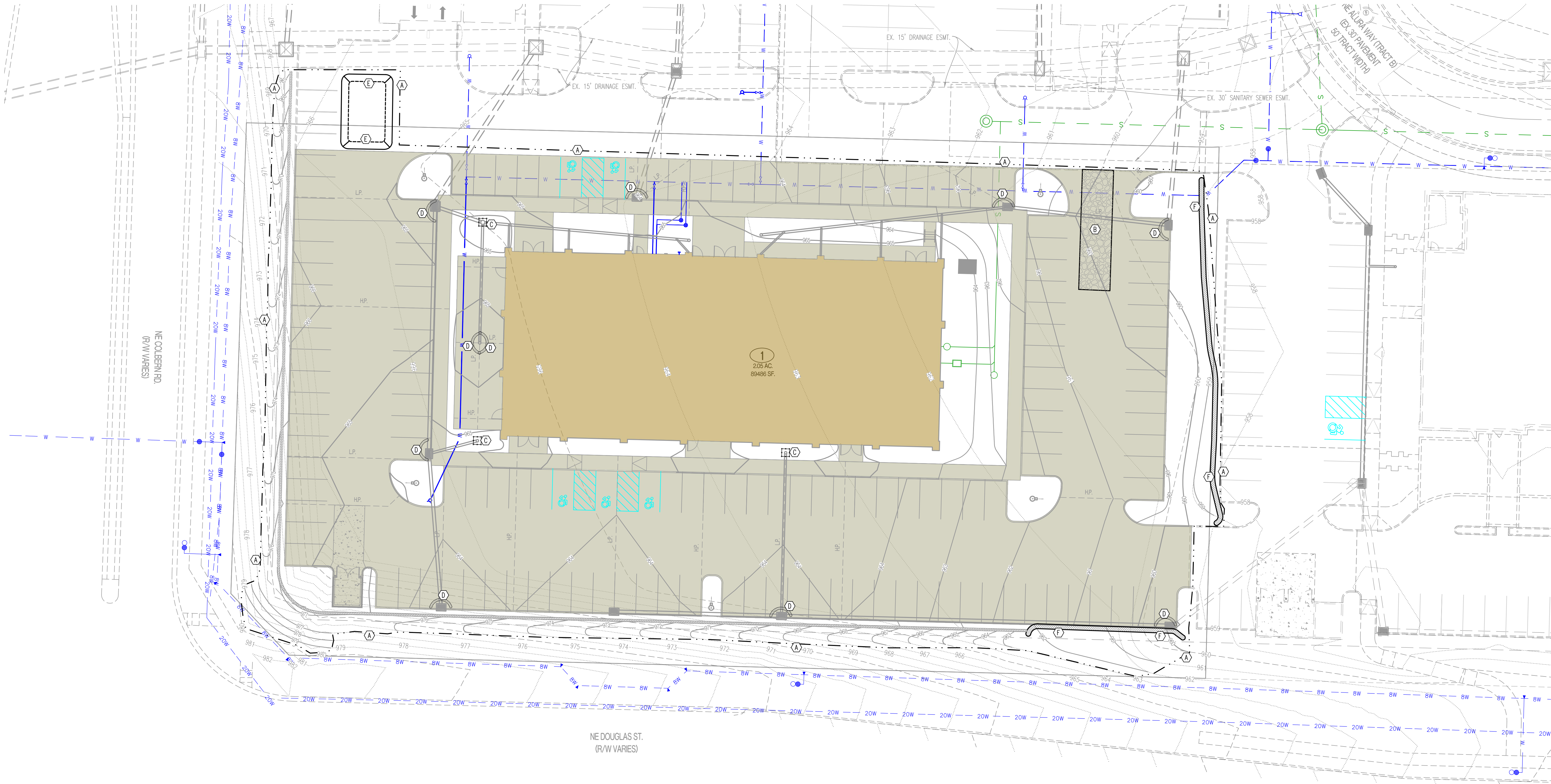
LEES SUMMIT, JACKSON COUNTY, MISSOURI

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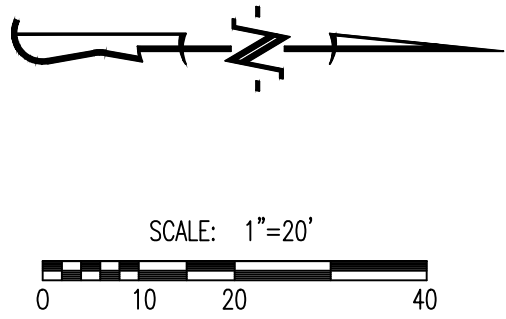
CIVIL SPECIFICATIONS

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 11





NE DOUGLAS ST.  
(R/W VARIES)



**LEGEND OF LABELS:**

- (A) LIMITS OF DISTURBANCE.
- (B) INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE. ALL CONSTRUCTION TRAFFIC SHALL LEAVE THE SITE VIA THIS EXIT. REFER TO ESC-01 ON CE 2.2.
- (C) INSTALL INLET PROTECTION AROUND THROAT OF INLET. REFER TO ESC-07 ON CE 2.2.
- (D) INSTALL 2" X 10" BOARD WRAPPED IN SILT FENCE AT THROAT OF INLET. REPLACE BOARD WITH 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 STRAW WATTLE AS SHOWN. REFER TO ESC-04 ON CE 2.2.

**REVISIONS:**

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**STATE OF MISSOURI**

**NATHAN THOMAS ECKHOFF**

PROFESSIONAL ENGINEER

NUMBER: PE-200304960

DATE: 10/18/24

NATHAN THOMAS ECKHOFF

MO LICENSE: 200304960

PREPARED BY:

**CROCKETT**

ENGINEERS & ARCHITECTS

1000 W. Illinois Blvd., Ste. 100

Columbia, Missouri 65203

(314) 487-0292

www.crockettingeering.com

Crockett Engineering Consultants, LLC

Missouri Certificate of Authority

4000000001

OWNER:

DISCOVERY PARK LEES SUMMIT LLC

4220 PHILLIPS FARM RD

COLUMBIA, MO 65201

# THE VILLAGE AT DISCOVERY

## LOT 1

### LEES SUMMIT, JACKSON COUNTY, MISSOURI

**DRAWING INCLUDES:**

EROSION CONTROL PLAN

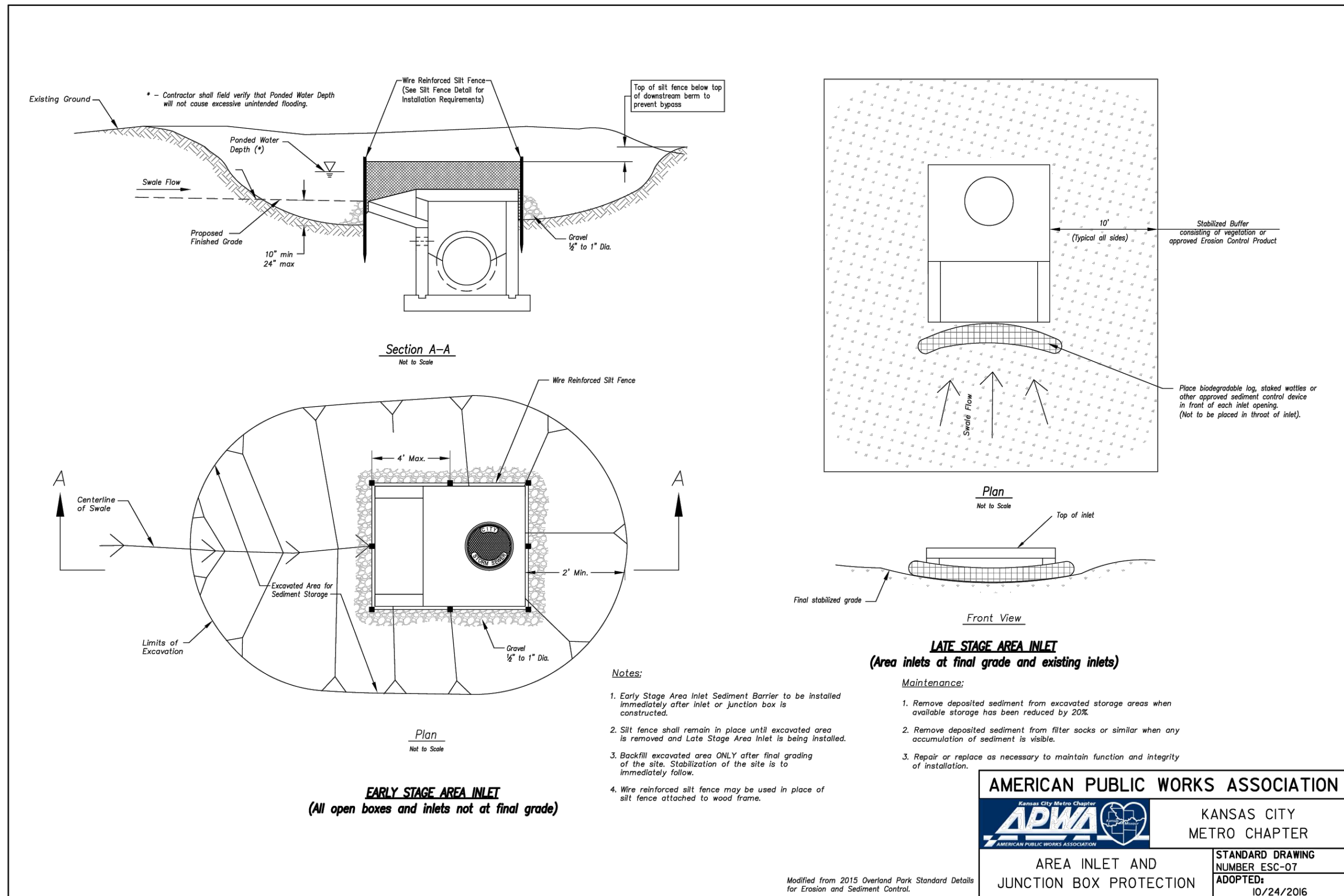
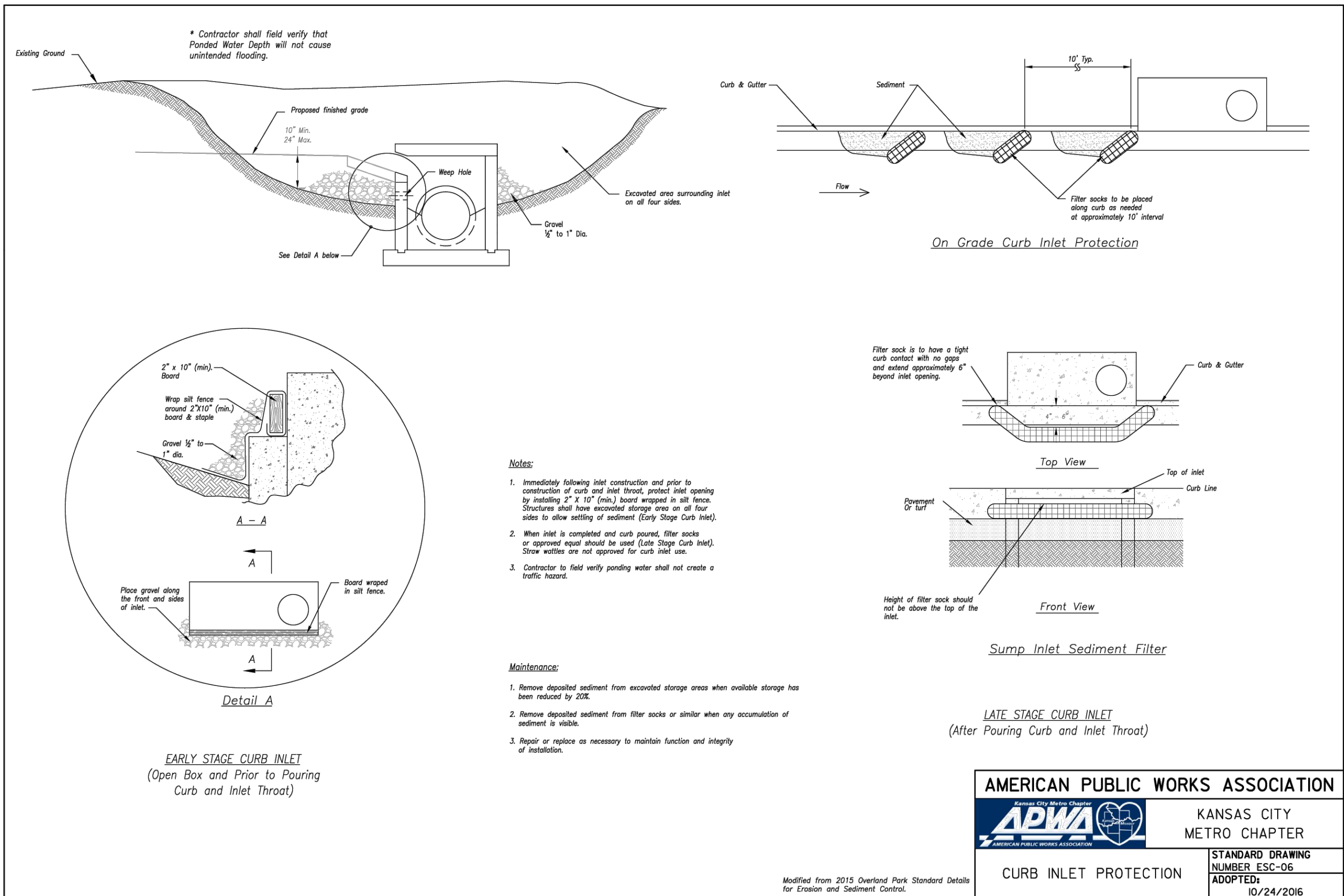
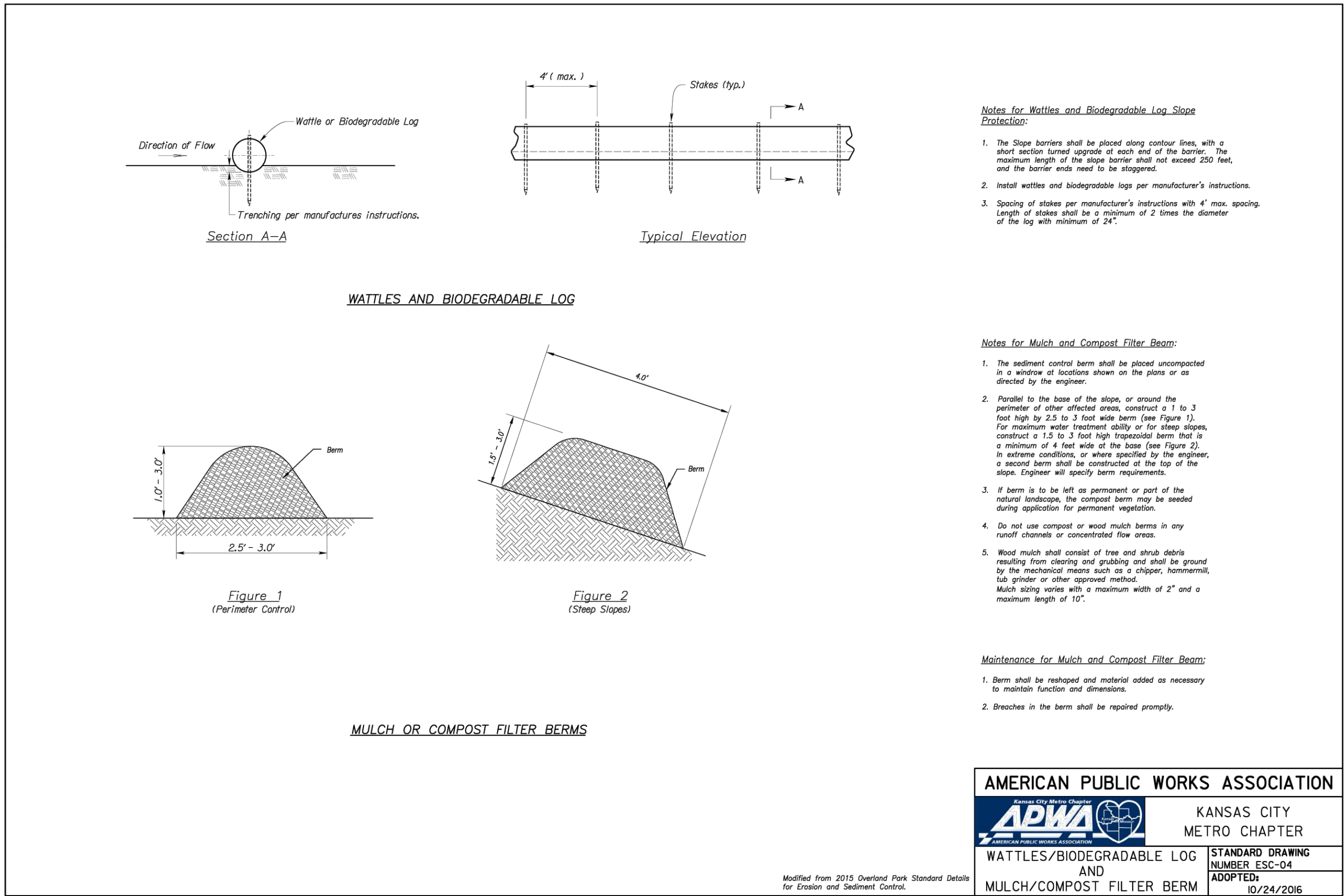
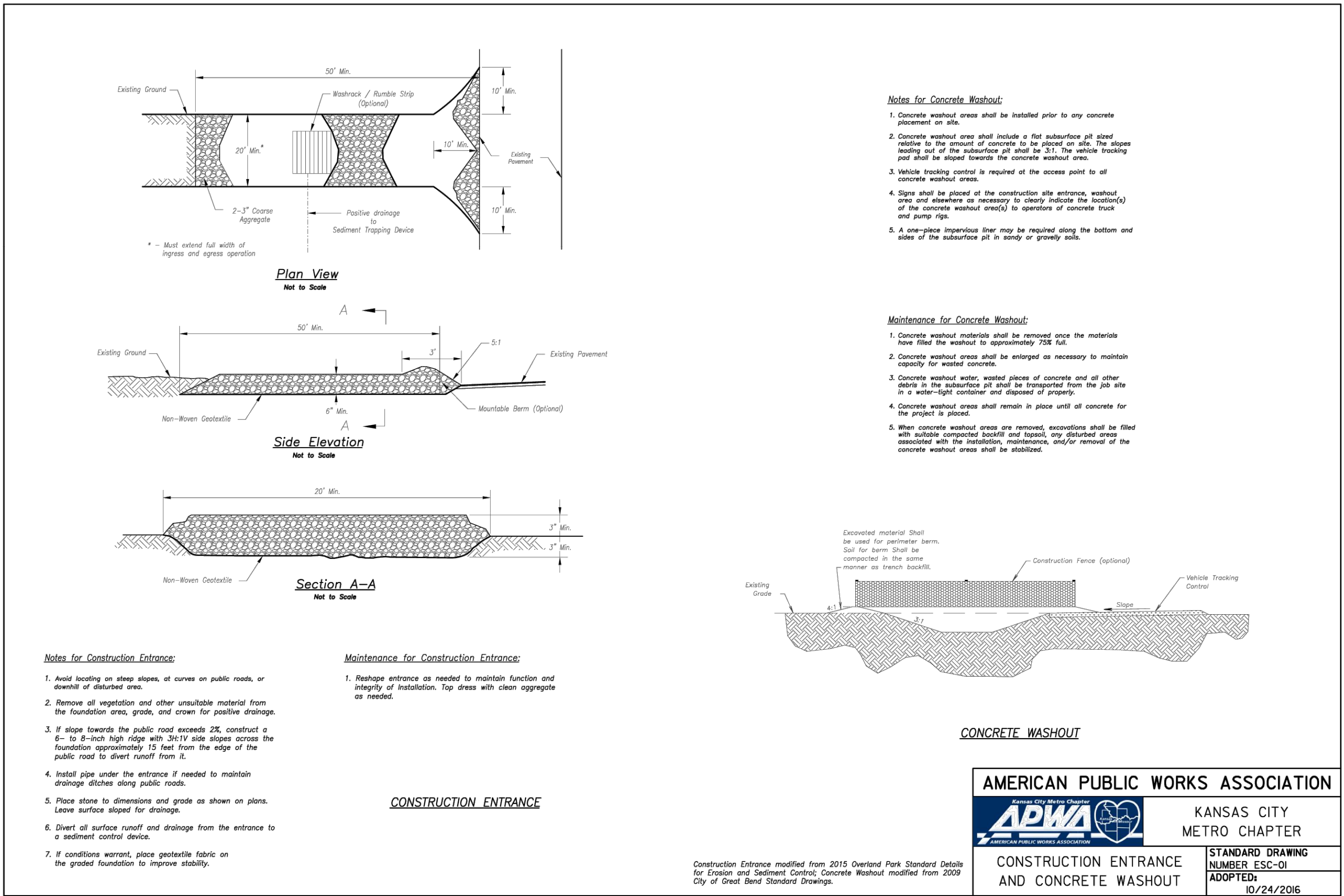
DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

SHEET:  
CE 2.1





REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.  
  
NATHAN THOMAS ECKHOFF  
MO LICENSE 200304960

PREPARED BY:  
  
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Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#000000001

OWNER:  
DISCOVERY PARK LEES SUMMIT, LLC  
4020 PHILLIPS FARM RD  
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY  
LOT 1  
LEES SUMMIT, JACKSON COUNTY, MISSOURI

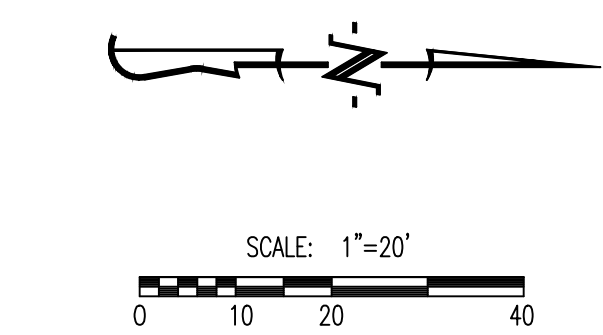
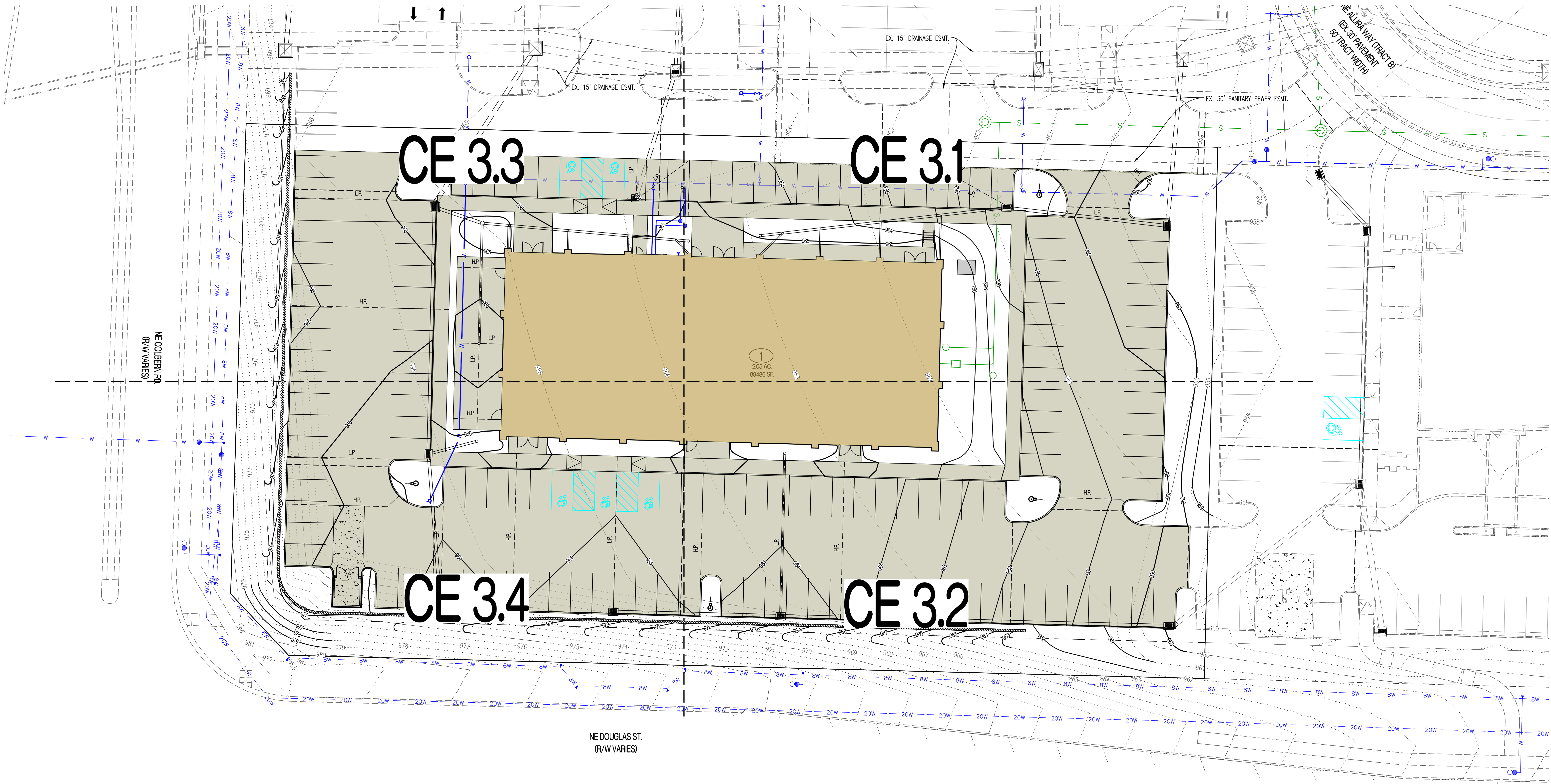
DRAWING INCLUDES:

EROSION CONTROL DETAILS

DESIGNED: NTE  
DRAWN: NMD  
PROJECT NO: 230286  
SHEET: CE 22



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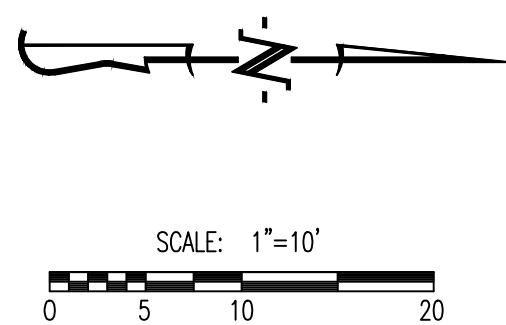
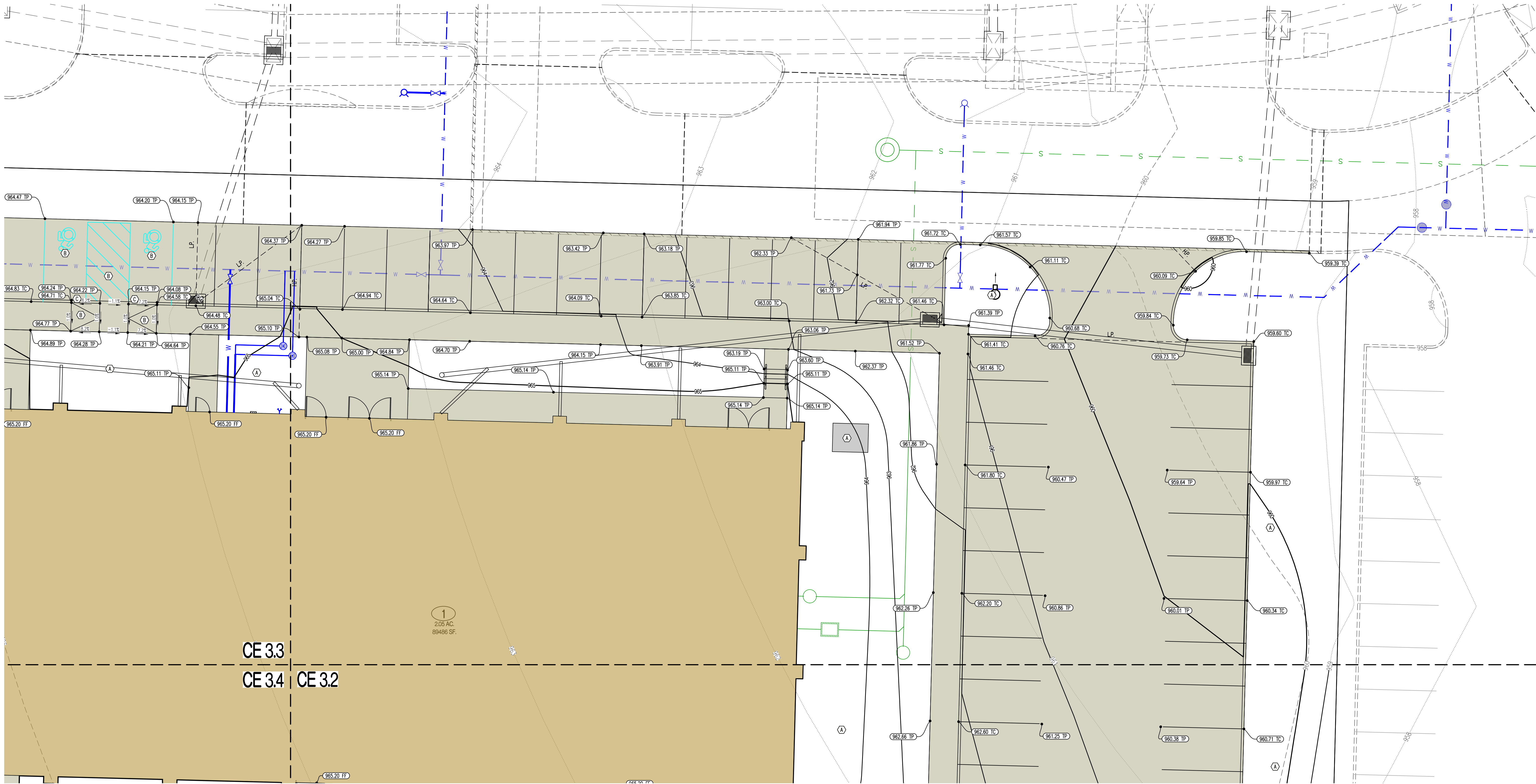


- LEGEND OF SYMBOLS:**
- XXX--- EXISTING MINOR CONTOUR
  - - -XXX- - - EXISTING MAJOR CONTOUR
  - XXX--- PROPOSED MINOR CONTOUR
  - XXX--- PROPOSED MAJOR CONTOUR
  - FF-XXXX FINISHED FLOOR OF STRUCTURE

<b>REVISIONS:</b>	
NO.	DATE
ORIGINAL	10/18/2024
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
	
NATHAN THOMAS ECKHOFF MO LICENSE 200304960	
<b>PREPARED BY:</b>  ENGINEERS & ARCHITECTS 1000 W. Illinois Blvd., Suite 100 Columbia, Missouri 65203 (314) 487-0292 www.crockettengineering.com Crockett Engineering Consultants, LLC Missouri Certificate of Authority #000000001	
<b>OWNER:</b> DISCOVERY PARK LEES SUMMIT LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201	
<b>THE VILLAGE AT DISCOVERY</b> <b>LOT 1</b> <b>LEES SUMMIT, JACKSON COUNTY, MISSOURI</b>	
<b>DRAWING INCLUDES:</b>  OVERALL GRADING	
<b>DESIGNED:</b> NTE	
<b>DRAWN:</b> NMD	
<b>PROJECT NO.:</b> 230286	
<b>SHEET:</b> CE 3.0	



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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)	TRANSITION FROM 6" CURB TO 0" CURB.

LEGEND OF SYMBOLS:

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

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI

NATHAN THOMAS ECKHOFF

PROFESSIONAL ENGINEER

NUMBER

PE-200304960

EXPIRATION DATE

10/18/2024

NATHAN THOMAS ECKHOFF

MO LICENSE 200304960

PREPARED BY:

CROCKETT

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Crockett Engineering Consultants, LLC

Missouri Certificate of Authority

200304960

OWNER:

DISCOVERY PARK LEES SUMMIT LLC

4220 PHILLIPS FARM RD

COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

LOT 1

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

GRADING SHEET 1

DESIGNED:

NTE

DRAWN:

NMD

PROJECT NO.:

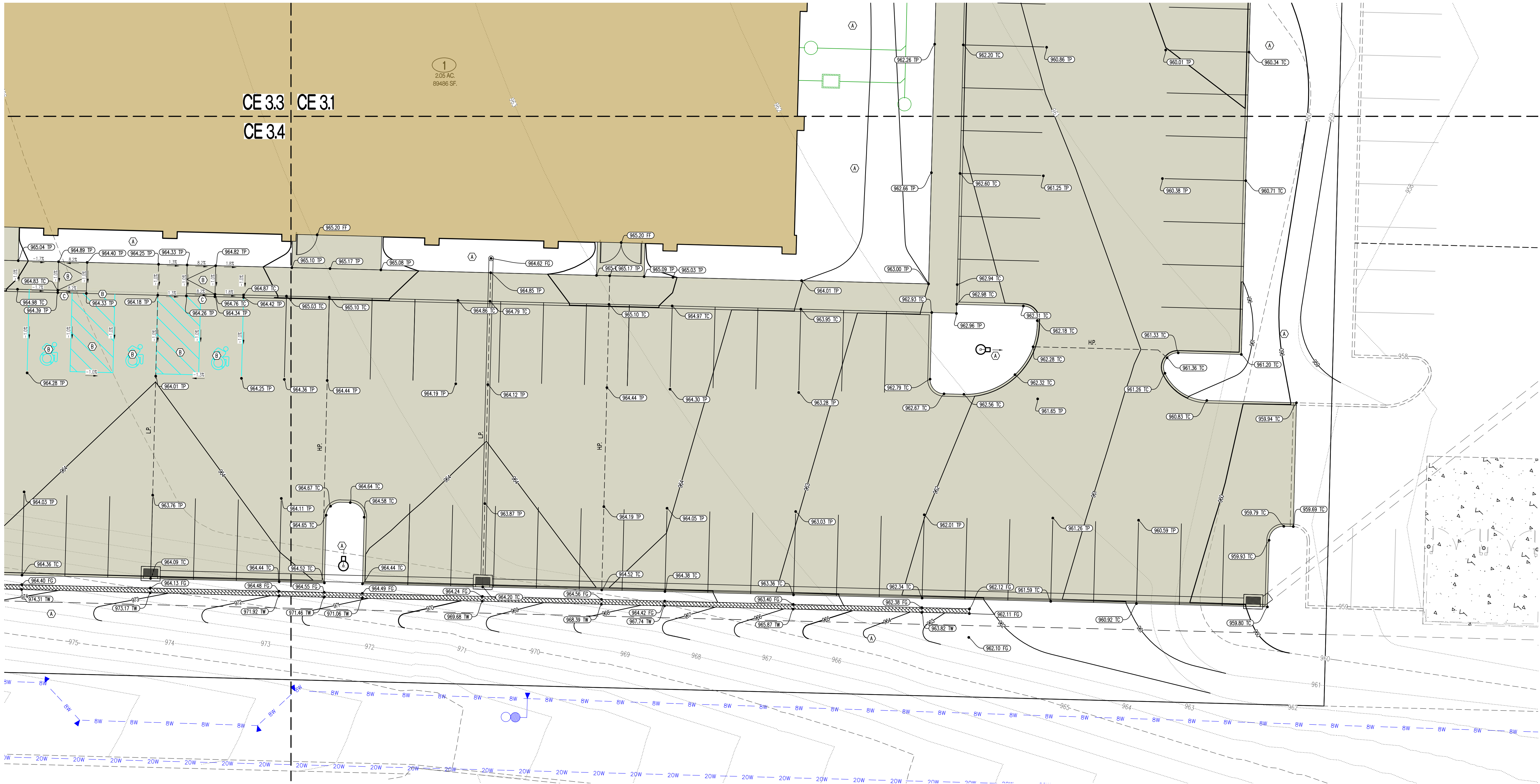
230286

SHEET:

CE 3.1



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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) TRANSITION FROM 6" CURB TO 0" CURB.

#### LEGEND OF SYMBOLS:

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

#### REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

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NATHAN THOMAS ECKHOFF  
MO LICENSE 200304960

PREPARED BY:  
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www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#000000001

OWNER:

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

# THE VILLAGE AT DISCOVERY LOT 1 LEES SUMMIT, JACKSON COUNTY, MISSOURI

#### DRAWING INCLUDES:

GRADING SHEET 2

DESIGNED: NTE

DRAWN: NMD

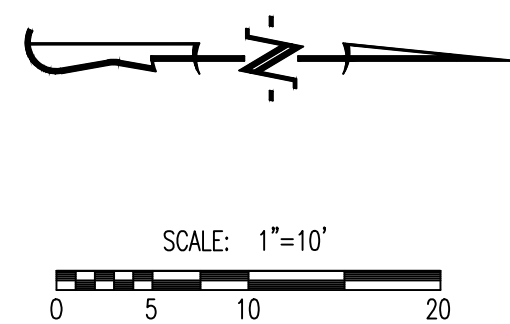
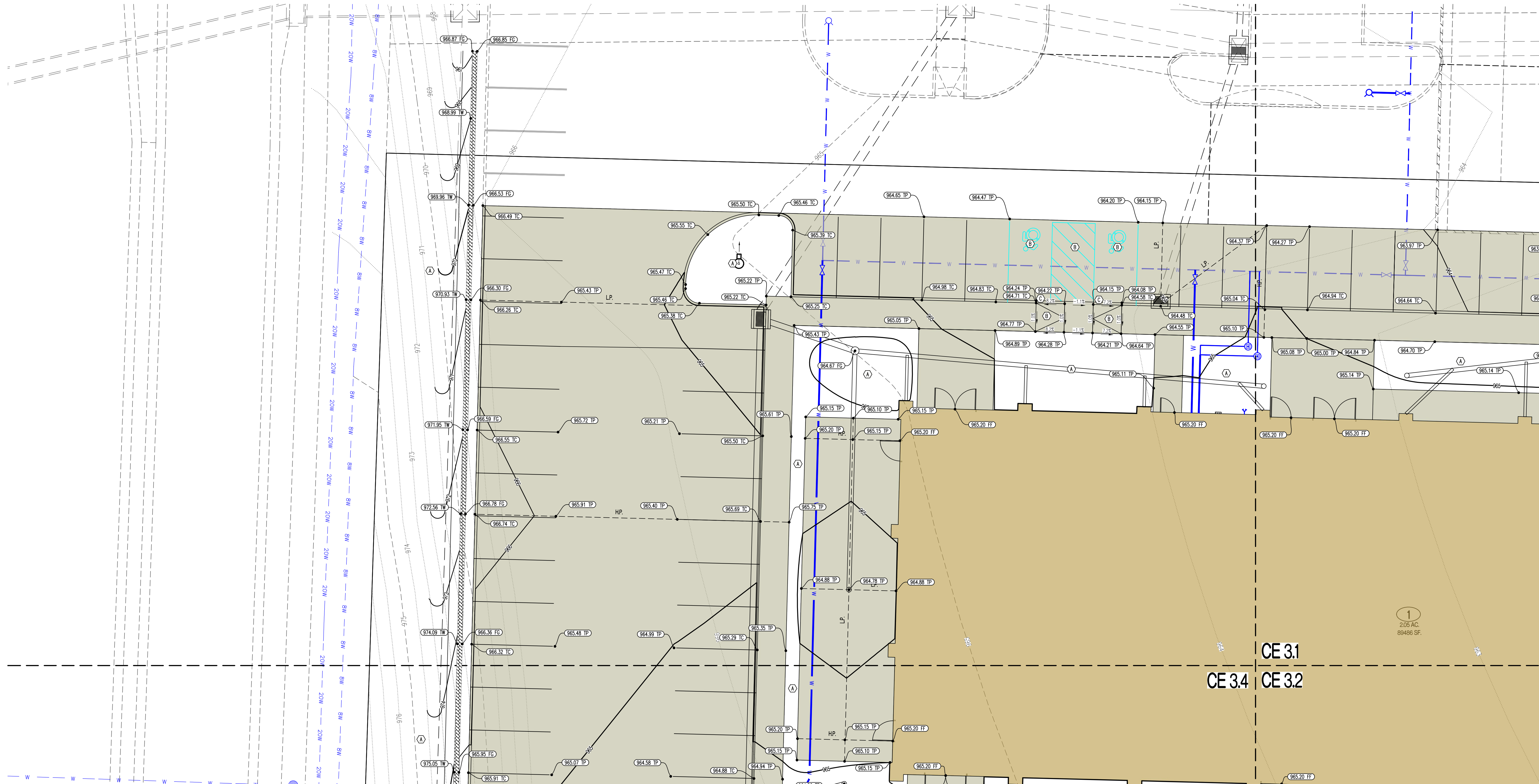
PROJECT NO.: 230286

SHEET:

CE 32



Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 1\A040 Files\Construction Plans\230286 Lot 1 Grading Base.dwg



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)	TRANSITION FROM 6" CURB TO 0" CURB.

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 TW)	PROPOSED FINISHED GRADE AT TOP OF WALL
(XXX.XX FF)	PROPOSED FINISHED FLOOR AT DOOR

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.  
  
NATHAN THOMAS ECKHOFF  
MO LICENSE 200304960

PREPARED BY:  
  
ENGINEERS & ARCHITECTS  
1000 W. Illinois Blvd., Suite 100  
Columbia, Missouri 65203  
(314) 487-0292  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#000000001

OWNER:

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

THE VILLAGE AT DISCOVERY  
LOT 1  
LEES SUMMIT, JACKSON COUNTY, MISSOURI

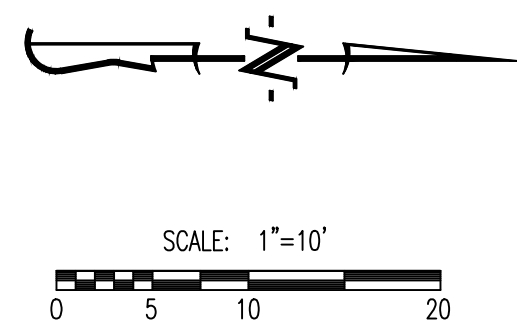
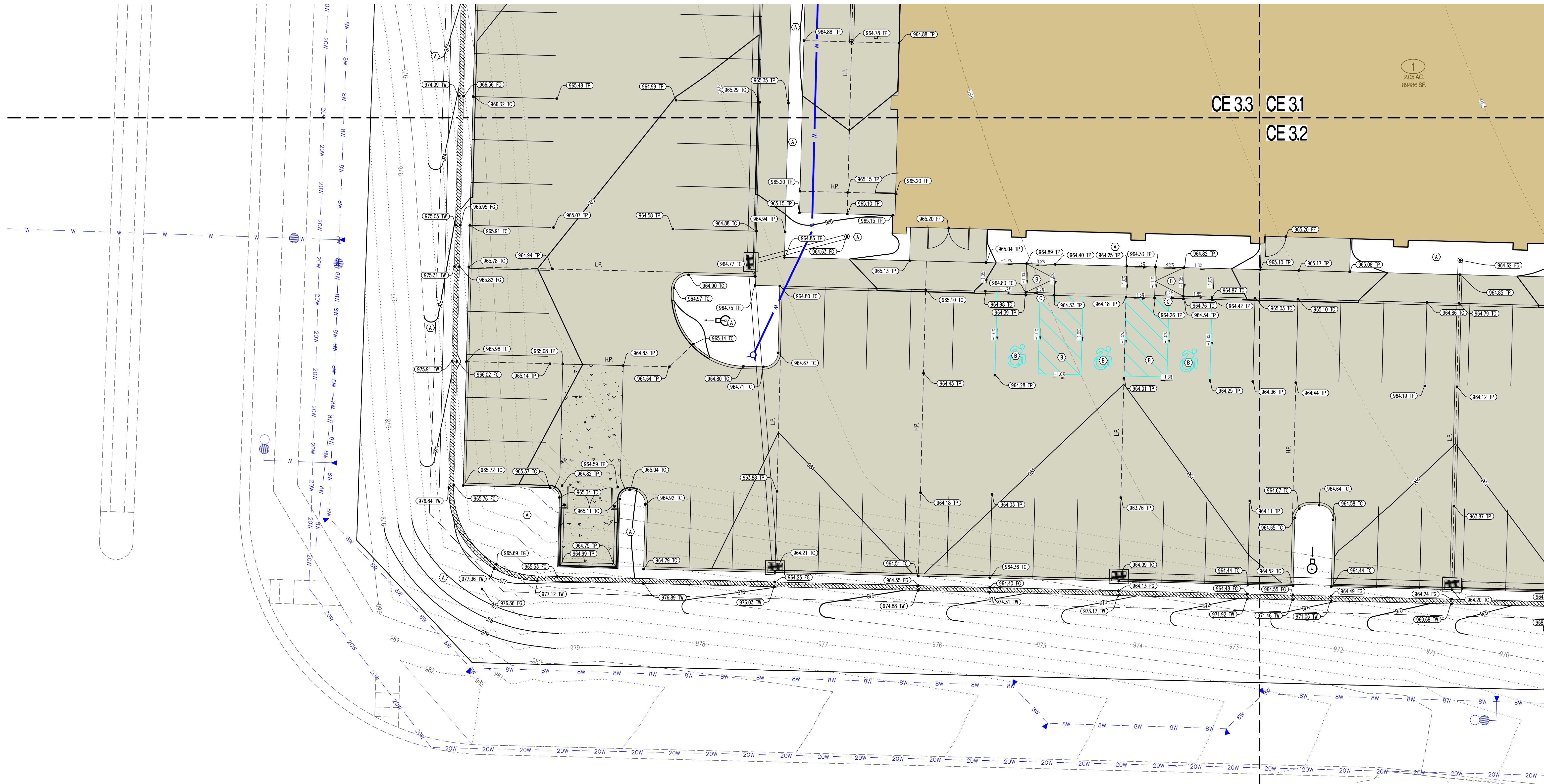
DRAWING INCLUDES:

GRADING SHEET 3

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



Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 1\A040 Files\Construction Plans\230286 Lot 1 Grading Base.dwg



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)	TRANSITION FROM 6" CURB TO 0" CURB.

LEGEND OF SYMBOLS:

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

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI

NATHAN THOMAS ECKHOFF

NUMBER  
PE-2003014960  
10/18/24

PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF  
MO LICENSE: 2003014960

PREPARED BY:

CROCKETT

ENGINEERS & PLANNERS

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Missouri Certificate of Authority  
#000000001

OWNER:

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

THE VILLAGE AT DISCOVERY

LOT 1

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

GRADING SHEET 4

DESIGNED:

NTE

DRAWN:

NMD

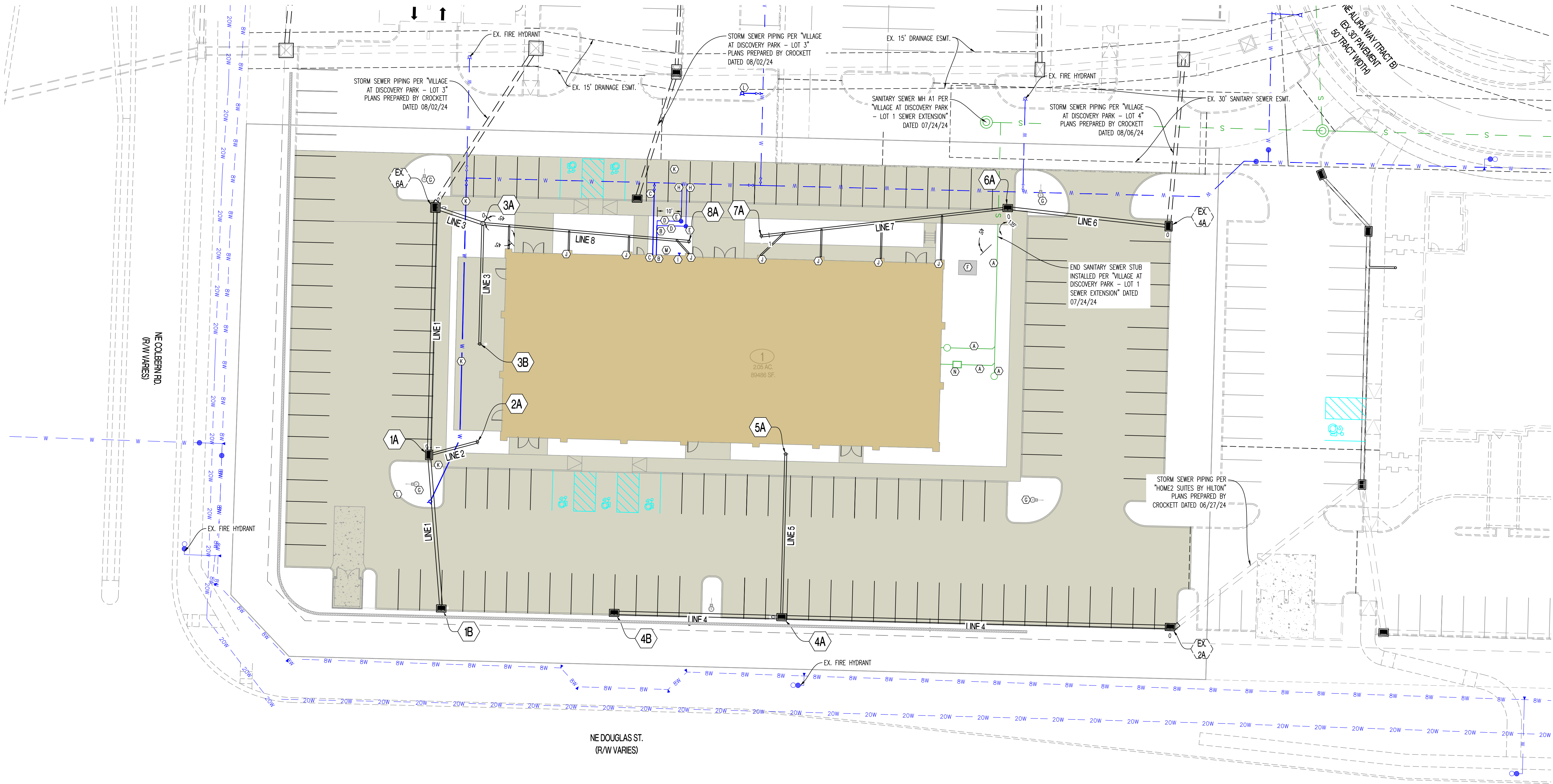
PROJECT NO.:

230286

SHEET:

CE 3.4





LEGEND OF LABELS	
(A)	INSTALL 6" SDR 26 PVC LATERAL WITH CLEANOUTS AS SHOWN. INSTALL MAX ADAPTER AND CONNECT TO EXISTING SANITARY SEWER STUB AS SHOWN. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING SANITARY STUB AND ROUTE AT 1% MINIMUM TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. REFER TO DETAIL 9 ON CE 5.2.
(B)	PROPOSED 3" CPVC WATERLINE SERVICE. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. CONFIRM SIZE AND MATERIAL WITH M.E.P. PLANS.
(C)	PROPOSED 6" CPVC FIRE LINE. CONNECT TO EXISTING WATERLINE INSTALLED PER "VILLAGE AT DISCOVERY PARK - LOT 3" PREPARED BY CROCKETT DATED 08/02/2024. CONTRACTOR TO VERIFY PIPE SIZE AND VALVE INSTALLATION AT MAIN. DOUBLE CHECK DETECTOR CHECK TO BE INSTALLED IN BUILDING. REFER TO M.E.P. PLANS. CONFIRM SIZE AND MATERIAL WITH SPRINKLER DESIGNER.
(D)	PROPOSED 2" TYPE K SOFT COPPER SERVICE LINE. USE 2" x 2" x 3" PIPE FITTING TO CONNECT SERVICE LINES A MINIMUM OF 10' BEYOND METER.
(E)	INSTALL 2" WATER METER AS SHOWN. CONTRACTOR TO VERIFY WITH M.E.P. PRIOR TO INSTALLATION. REFER TO CITY DETAIL WAT-11 ON CE 7.4.
(F)	PROPOSED TRANSFORMER. COORDINATE WITH M.E.P. AND UTILITY PROVIDER.
(G)	PROPOSED LIGHT POLE. REFER TO M.E.P. PLANS.
(H)	CONTRACTOR TO TAP EXISTING 6" WATERLINE AND INSTALL 2" TYPE K SOFT COPPER PIPE WITH 2" CORPORATION STOP VALVE AS SHOWN TO METER PIT. CONTRACTOR TO VERIFY SIZE AND DEPTH AND FURNISH ALL FITTINGS AS REQUIRED. REFER TO "THE VILLAGE AT DISCOVERY PARK LOT 3" BY CROCKETT DATED 08/02/2024 FOR EXISTING PLANNED WATERLINE. REFER TO CITY OF LEE'S SUMMIT DETAILS ON CE 7.4.
(I)	PROPOSED 4" STORZ FIRE DEPARTMENT CONNECTION (FDC). COORDINATE WITH ARCHITECT AND M.E.P.
(J)	PROPOSED 6" ROOF DRAIN. COORDINATE EXACT LOCATION WITH ARCHITECT. ROUTE 6" PVC TO COLLECTOR PIPE @ 1% MIN. SLOPE AS SHOWN. REFER TO CE 5.1 FOR PROFILE AND CONNECTION POINTS. REFER TO DETAIL 10 ON CE 5.2.
(K)	INSTALL 6" CPVC WITH VALVES AS SHOWN. CONTRACTOR TO INSTALL ALL BENDS, TEES, VALVES, AND THRUST BLOCKING AS REQUIRED BY CITY OF LEE'S SUMMIT STANDARDS.
(L)	PROPOSED FIRE HYDRANT. REFER TO DETAIL WAT-7 ON CE 7.4.
(M)	INSTALL GAS RISER FOR FUTURE GAS SERVICE. COORDINATE WITH UTILITY PROVIDER.
(N)	PROPOSED GREASE TRAP. REFER TO M.E.P. PLANS.

GENERAL NOTES:

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

2) ALL ITEMS ASSOCIATED WITH DOMESTIC WATERLINE CONSTRUCTION (INTERNAL OF VAULT/METER PIT) ARE SHOWN FOR CITY REVIEW ONLY. CONTRACTOR SHALL VERIFY ALL SIZES AND MATERIALS WITH M.E.P. BEFORE INSTALLATION.

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI

NATHAN THOMAS ECKHOFF

PROFESSIONAL ENGINEER

NUMBER  
PE-200304960

DATE  
10/18/24

NATHAN THOMAS ECKHOFF  
MO LICENSE 200304960

PREPARED BY:

CROCKETT

ENGINEERS & ARCHITECTS

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Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#000001001

OWNER:

DISCOVERY PARK LEES SUMMIT LLC

4420 PHILLIPS FARM RD

COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

LOT 1

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

UTILITY PLAN

DESIGNED: NTE

DRAWN: NMD

PROJECT NO.: 230286

SHEET: CE 4.1



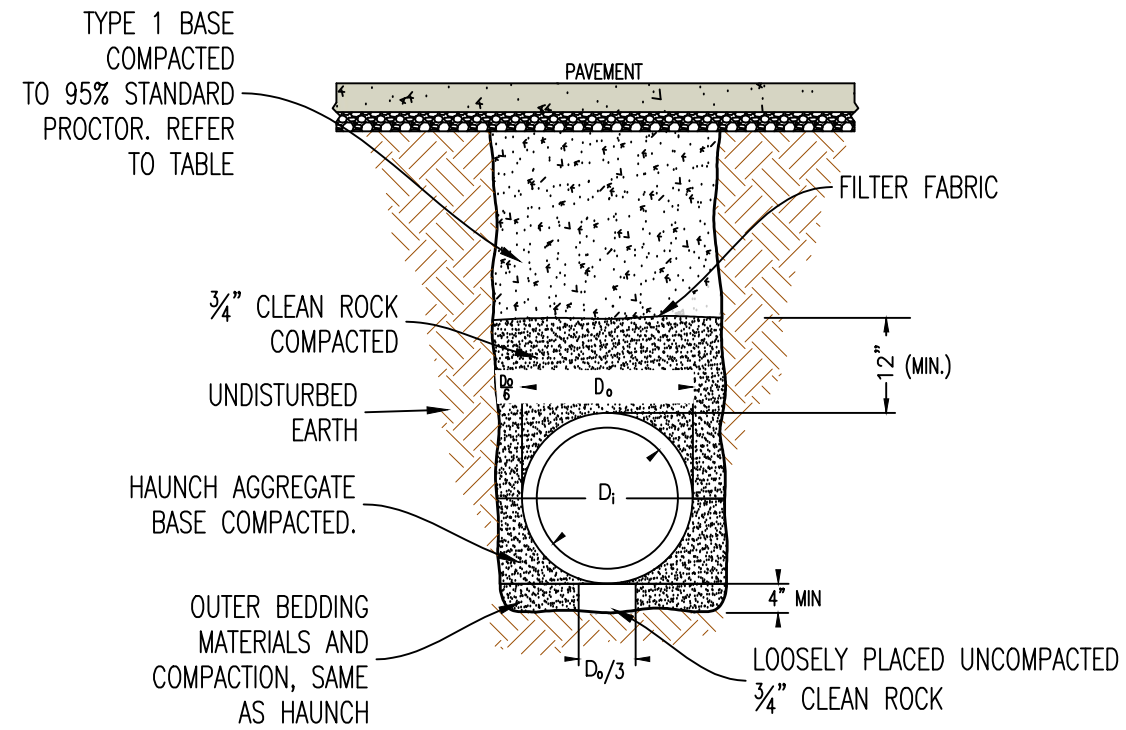
## CE 5.1



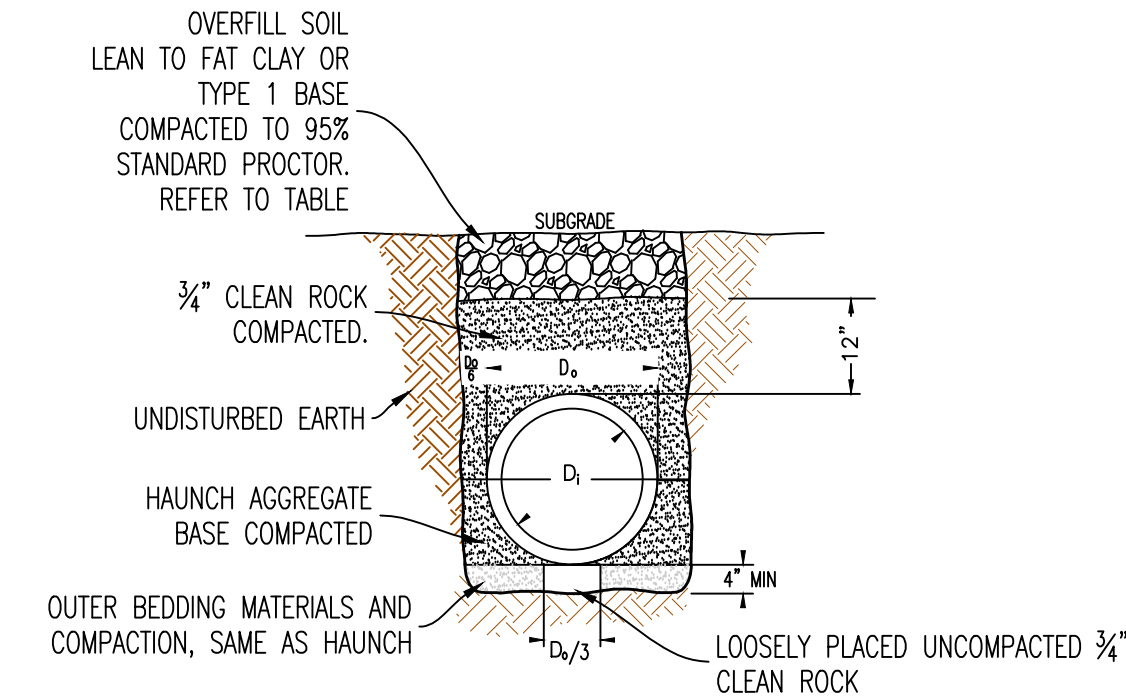
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## STRUCTURAL FILL COMPACTION REQUIREMENTS

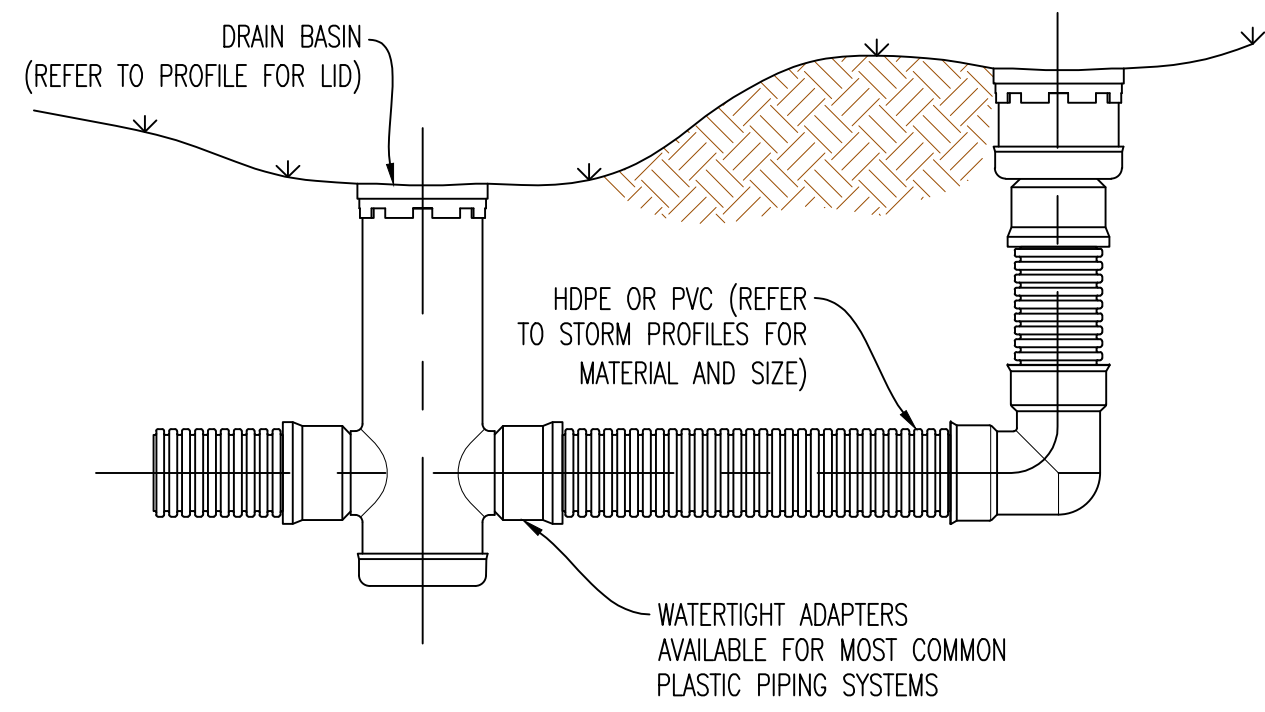
SOL FILL THICKNESS	<ul style="list-style-type: none"><li>9-INCHES OR LESS WHEN USING HEAVY SELF-PROPELLED COMPACTION EQUIPMENT</li><li>6-INCHES OR LESS WHEN USING HAND GUIDED OR LIGHT SELF-PROPELLED EQUIPMENT</li></ul>
COMPACTION/MOISTURE CONTENT REQUIREMENTS	<ul style="list-style-type: none"><li>LEAN TO FAT CLAY AND FAT CLAY<ul style="list-style-type: none"><li>2% BELOW STANDARD PROCTOR OPTIMUM MOISTURE CONTENT (OMC) TO 4% ABOVE THE STANDARD PROCTOR OPTIMUM MOISTURE CONTENT</li></ul></li><li>LEAN CLAY AND SILT<ul style="list-style-type: none"><li>2% BELOW TO 3% ABOVE STANDARD PROCTOR OMC</li></ul></li><li>GRANULAR<ul style="list-style-type: none"><li>WORKABLE MOISTURE CONTENT AND SHALL NOT PUMP WHEN PROOF-ROLLED <sup>1</sup></li></ul></li></ul>
COMPACTION REQUIREMENTS <sup>1, 2</sup>	<p>95% OF STANDARD PROCTOR DRY DENSITY (ASTM D-698)</p> <ol style="list-style-type: none"><li>WE RECOMMEND ENGINEERED FILL BE TESTED FOR MOISTURE CONTENT AND COMPACTION DURING PLACEMENT. SHOULD THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED.</li><li>AS STATED WITHIN ASTM D698, THIS PROCEDURE IS INTENDED FOR SOILS WITH 30% OR LESS MATERIAL LARGER THAN 3/4". ACCORDINGLY, WE RECOMMEND FULL TIME PROOF-ROLL OBSERVATION BE PERFORMED INSTEAD OF MOISTURE DENSITY TESTING FOR MATERIALS CONTAINING MORE THAN 30% AGGREGATE RETAINED ON THE 3/4" SIEVE.</li></ol>
<ol style="list-style-type: none"><li>IF LIMESTONE SCREENINGS ARE USED AS NEW STRUCTURAL FILL, THE CONTRACTOR SHOULD BE AWARE THIS MATERIAL IS EXTREMELY SUSCEPTIBLE TO DEGRADATION UPON WETTING WHICH CAN RESULT IN DEEP-SEATED PUMPING AND RUTTING.</li><li>LIMESTONE SCREENINGS THAT PUMP AND RUT ARE NOT ACCEPTABLE FOR USE AS NEW STRUCTURAL FILL OR FOR LOW VOLUME CHANGE MATERIAL AND WILL NEED TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.</li></ol>	



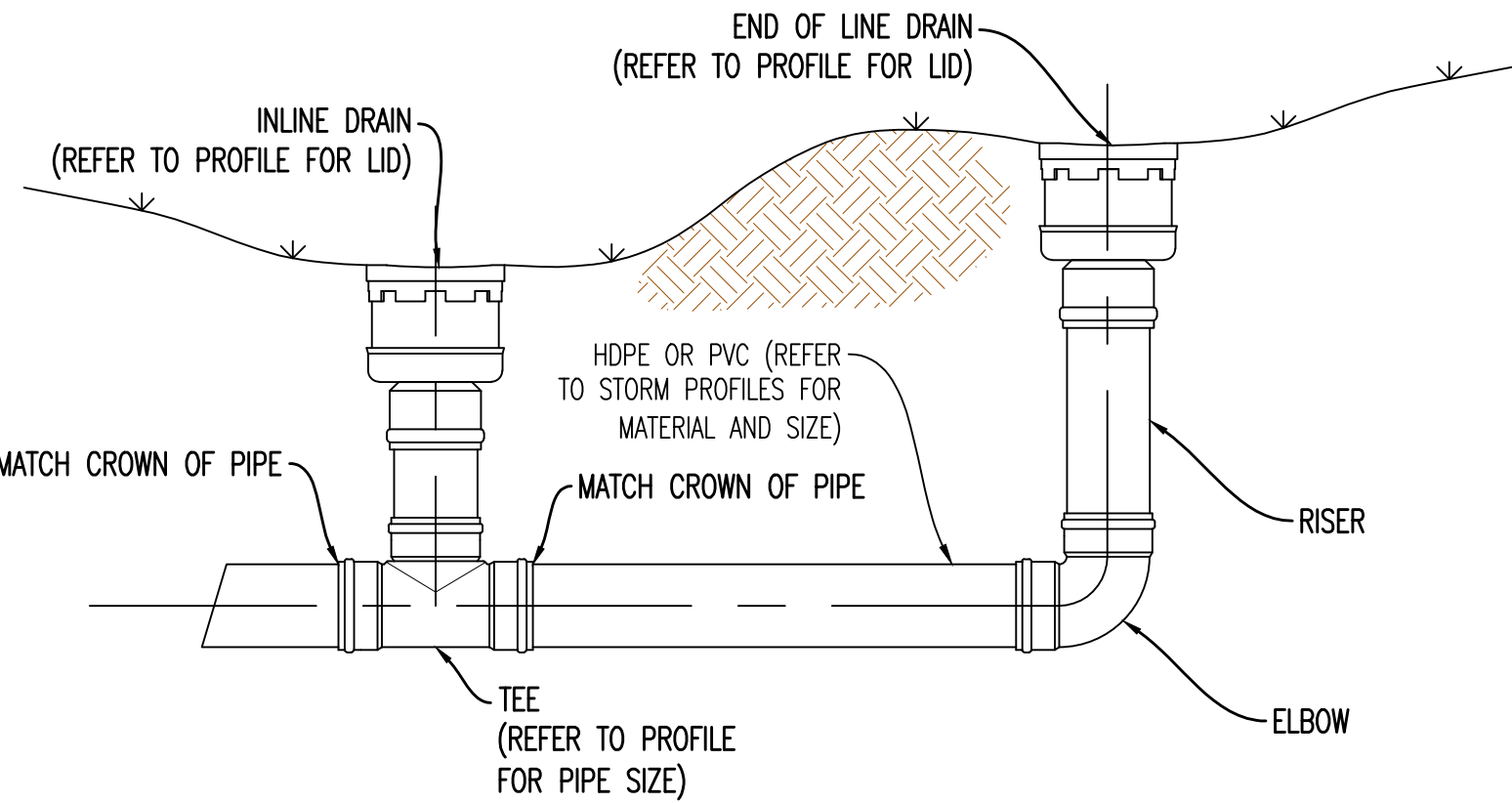
PIPE EMBEDMENT (UNDER PAVEMENT)



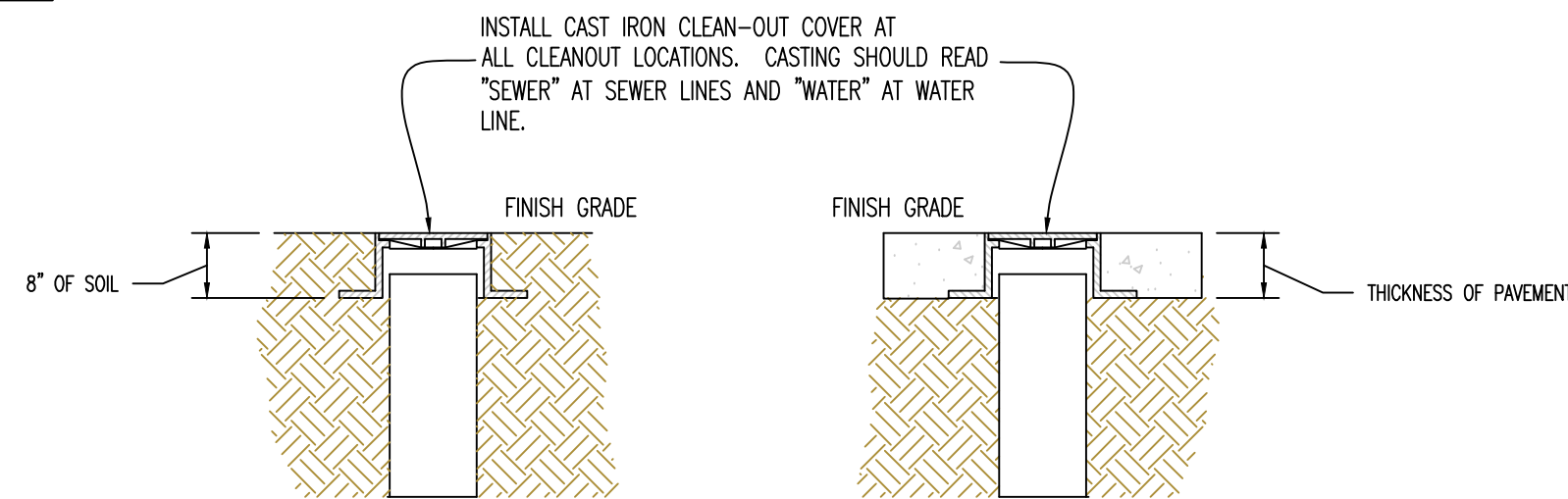
PIPE EMBEDMENT (NOT UNDER PAVEMENT)



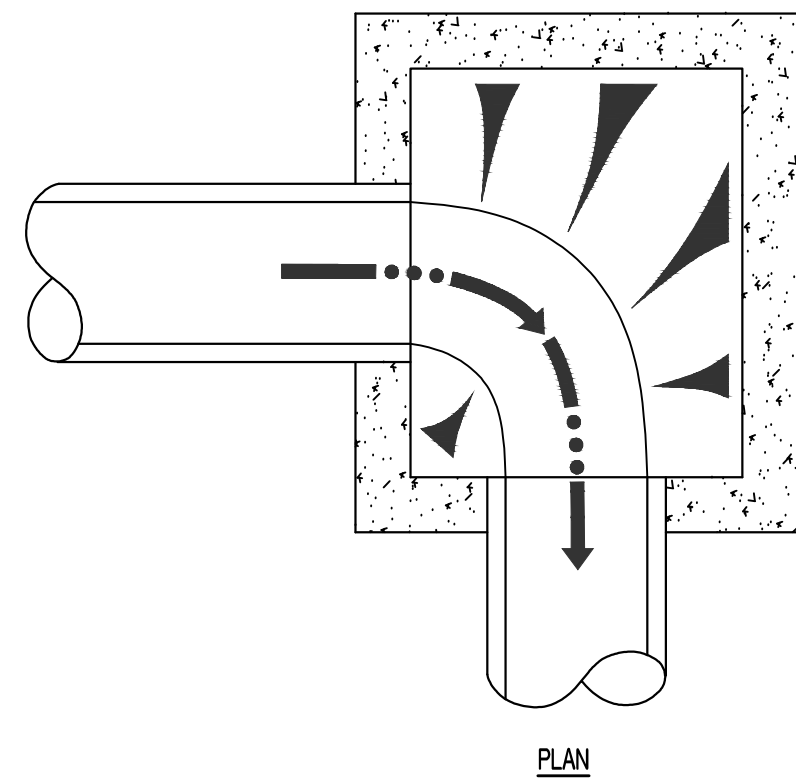
TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN



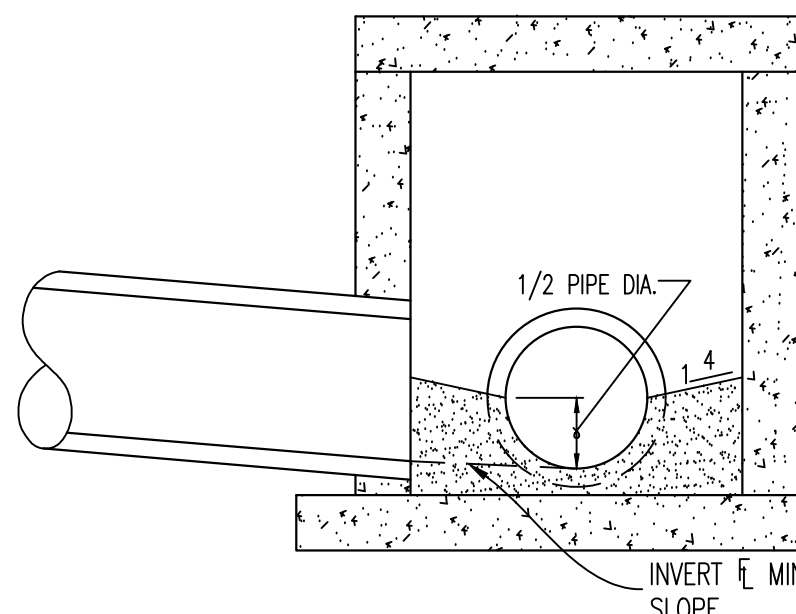
TYPICAL INSTALLATION OF INLINE DRAIN AND END OF LINE DRAIN



CLEANOUT DETAIL



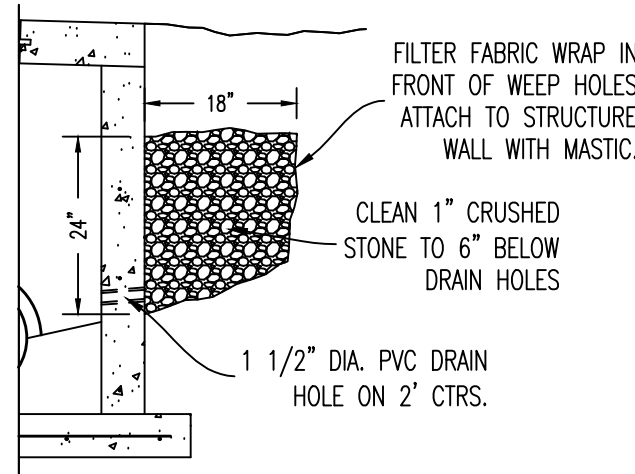
PLAN



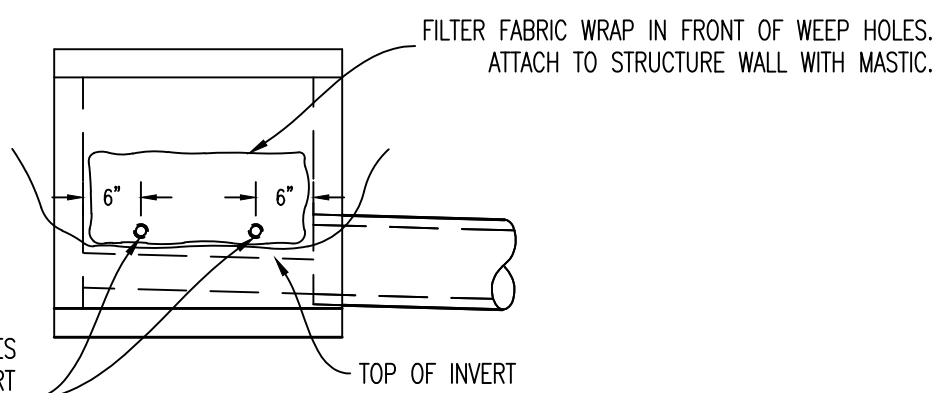
SECTION

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

DRAINAGE STRUCTURE INVERT



PARTIAL SECTION

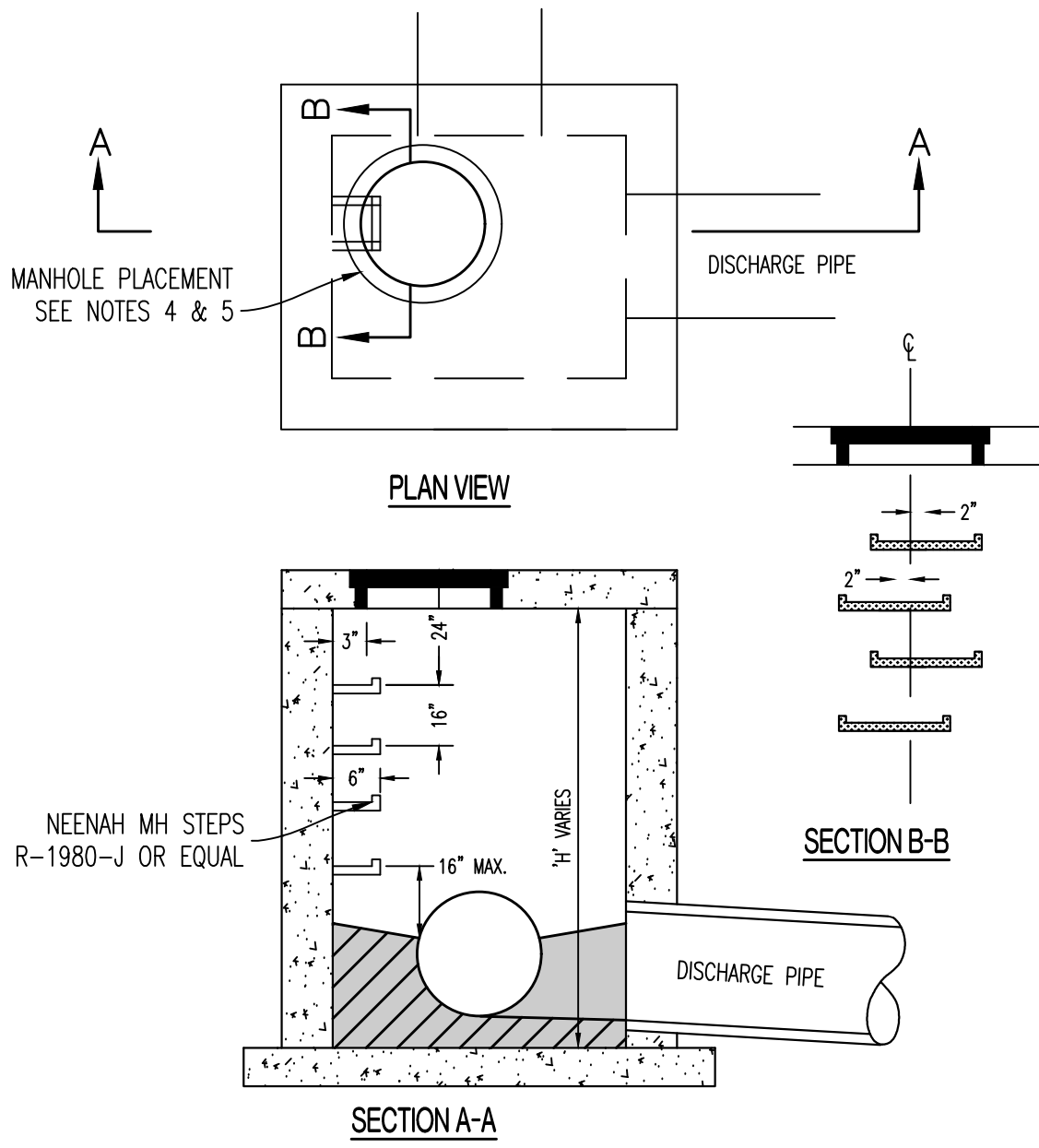


FRONT ELEVATION

### NOTE

- PLACE WEEP HOLES ON UPSTREAM FACE OF ALL STRUCTURES AND ALSO ON ROADWAY FACE OF CURB INLET STRUCTURES.
- WEEP HOLE FILTER FABRIC SHALL CONSIST OF A NON-WOVEN, POLYPROPYLENE TYPE FABRIC SUCH AS: AMOCO 4553 NON-WOVEN GEOTEXTILE FABRIC OR APPROVED EQUAL.

DRAINAGE STRUCTURE WEEP HOLES



PLAN VIEW

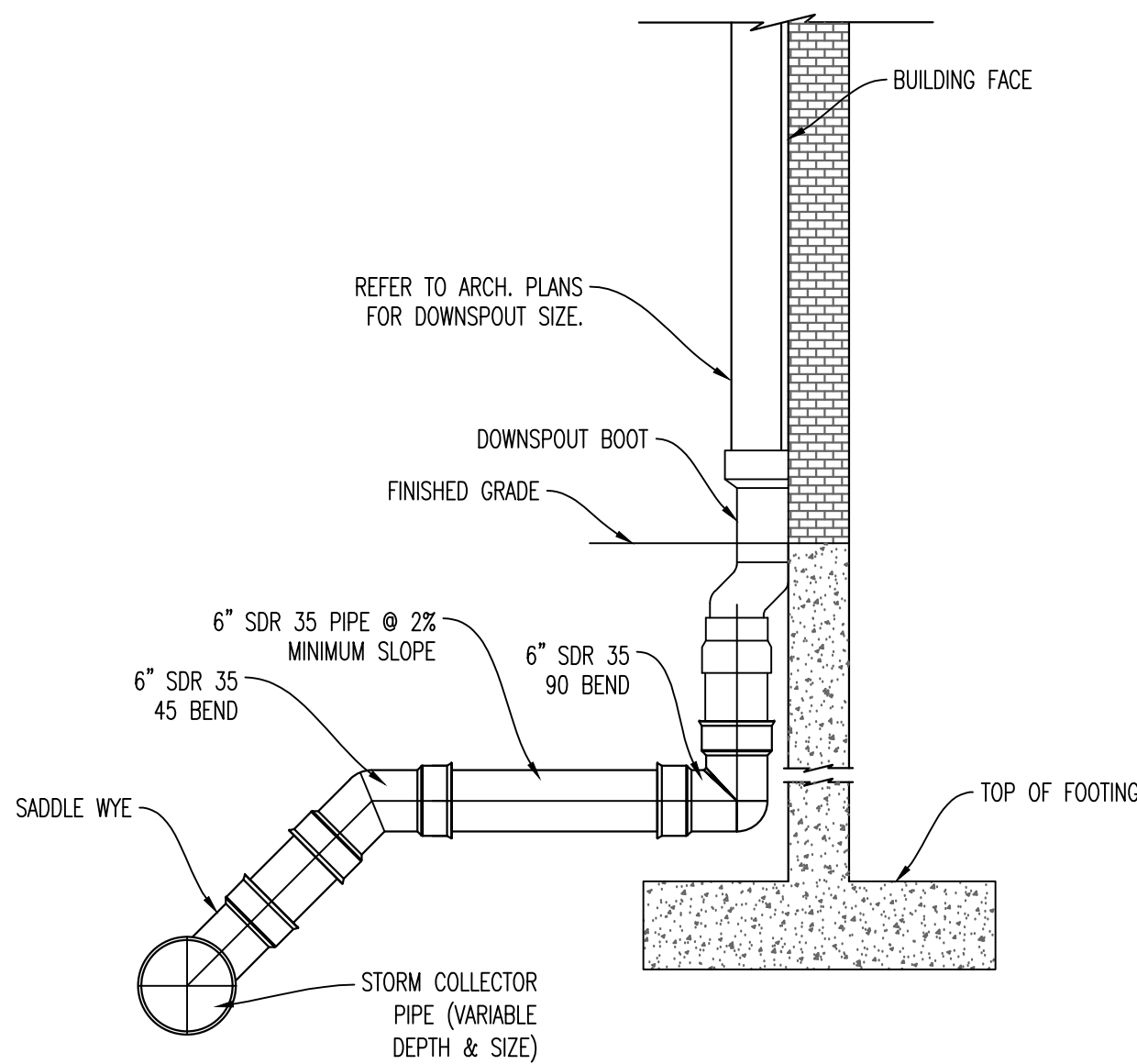
SECTION A-A

SECTION B-B

### NOTES:

- STEPS NOT REQUIRED WHERE H IS LESS THAN 4'.
- CAST IRON STEPS SHALL BE AMERICAN M&L-10-NCR OR EQUAL.
- STEPS SHALL BE PLACED ON VACANT WALL WHEN POSSIBLE.
- MANHOLE RING SHALL BE OFFSET TOWARD WALL WITH STEPS.
- MANHOLE RING SHALL BE CENTERED ON CENTERLINE OF STEPS.
- STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF MANHOLE RING.
- TOP STEP 24" BELOW TOP OF LID
- STEP SPACING TO BE 16", BOTTOM STEP TO BE NO HIGHER THAN 16" FROM INVERT.

DRAINAGE STRUCTURE STEPS

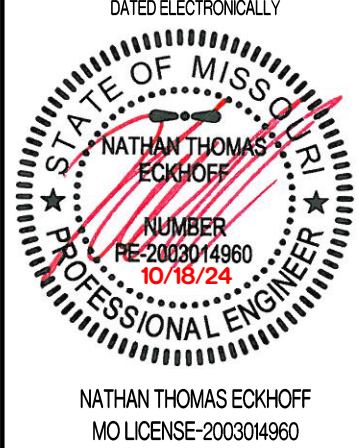


ROOF DRAIN DETAIL

## REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY



OWNER:  
DISCOVERY PARK LEES SUMMIT LLC  
4020 PHILLIPS FARM RD  
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY  
LOT 1  
LEES SUMMIT, JACKSON COUNTY, MISSOURI

## DRAWING INCLUDES:

STORM DETAILS CONTD

DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

SHEET:  
CE 5.2





4-N-13

PROJECT:		The Village at Discovery Park - Lot 1	
CALCULATED BY:		NMD	CHECKED BY: NTE
DATE:		10/16/24	PROJECT NO: 230286

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SOLELY SEALED AND  
DATED ELECTRONICALLY.

SEAL OF THE STATE OF MISSOURI  
NATHAN THOMAS ECKHOFF  
NUMBER  
PE-20030-4960  
10/18/24  
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF  
MO LICENSE# 20030-4960

**PREPARED BY:**  
**CROCKETT**  
ENGINEERING CONSULTANTS  
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Fax: 637-441-0722  
[www.crockettengineering.com](http://www.crockettengineering.com)  
Crockett Engineering Consultants, LLC  
Professional Engineering & Architecture  
Missouri License # 0000033160  
#0000033160

OWNER:

THE VILLAGE AT DISCOVERY  
LOT 1  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

## 25 YEAR STORM CALCS

SHEET: CE 5.3

PROJECT:	The Village at Discovery Park - Lot 1		
CALCULATED BY:	NMD	CHECKED BY:	NTE
DATE:	10/16/24	PROJECT NO:	230286

SHEET: CE 5.3





4  
-N-  
B

PROJECT: The Village at Discovery Park - Lot 1

CALCULATED BY: NMD CHECKED BY: NTE

DATE: 10/16/24 PROJECT NO: 230286

REVISIONS:	
NO.	DATE
ORIGINAL	10/17/2024

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

**NATHAN THOMAS ECKHOFF**  
**ENGINEER**  
**NUMBER**  
**FE-2003014960**  
**10/17/24**

**NATHAN THOMAS ECKHOFF**  
**MO LICENSE-2003014960**

**CRACKETT**  
**ENGINEERING CONSULTANTS**  
 1000 W. Niting Blvd., #200  
 Chester, MO 64003  
 Contact: Nathan Eckhoff  
 www.crockettingeering.com  
 Crckett Engineering Consultants, LLC  
 Equal Opportunity Employer  
 #52001013101

OWNER:

**THE VILLAGE AT DISCOVERY**  
**LOT 1**  
**LEE'S SUMMIT, JACKSON COUNTY, MISSOURI**

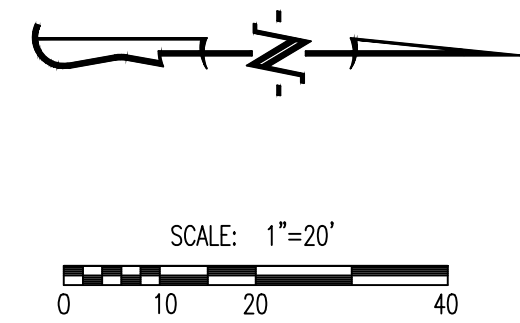
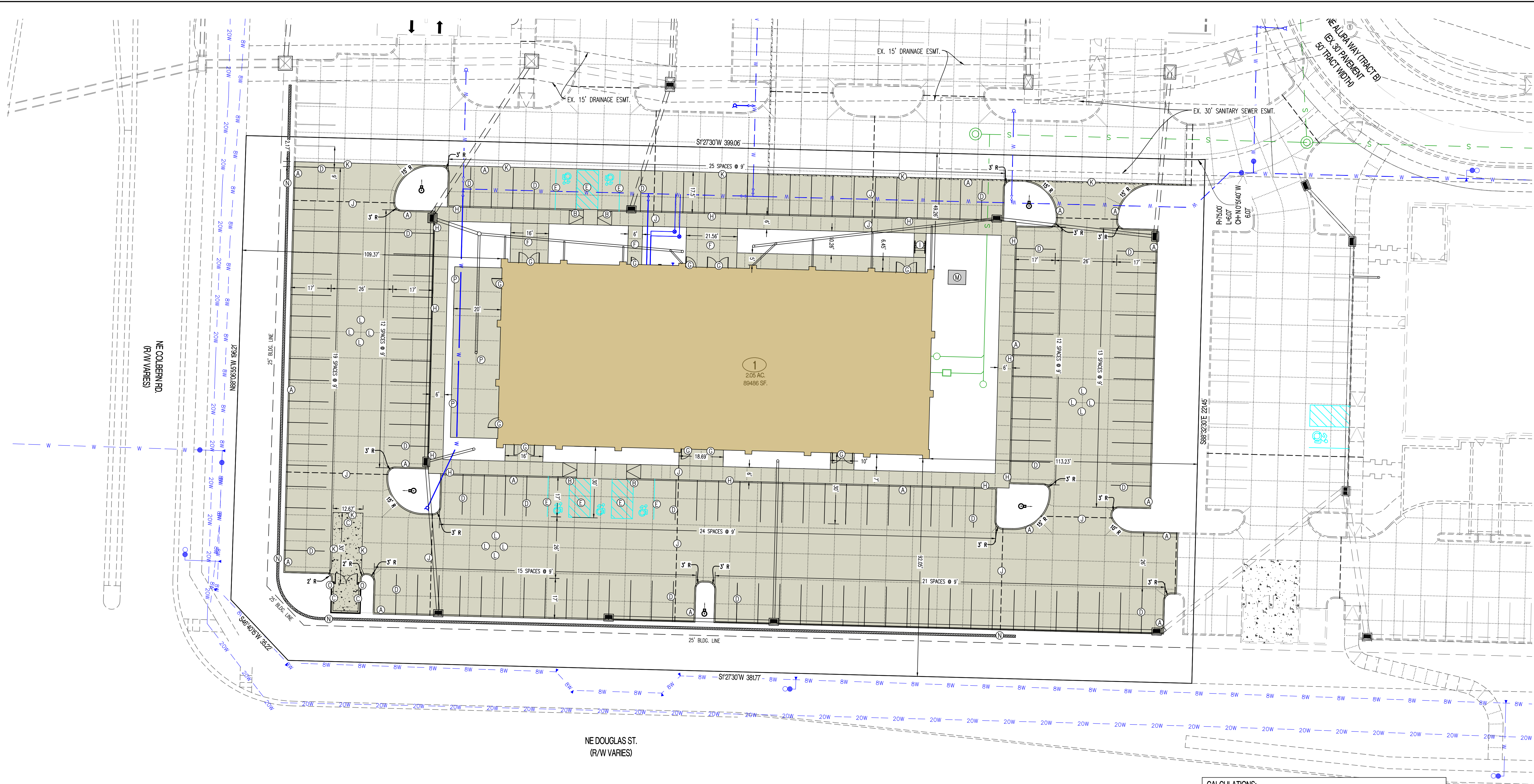
100 YEAR STORM CALCS

SHEET: CE 5.4

PROJECT:	The Village at Discovery Park - Lot 1		
CALCULATED BY:	NMD	CHECKED BY:	NTE
DATE:	10/16/24	PROJECT NO:	230286

STORM DRAIN PIPE SIZE													
DESCRIPTION		STORM DRAIN HYDRAULICS										NOTES	
AREA NO.	SYSTEM STRUCTURE LABEL	TIME OF CONCENTRATION			RAINFALL INTENSITY	RUNOFF	STORM DRAIN SLOPE	STORM DRAIN DIAMETER	STORM DRAIN MATERIAL	CLOSITY FLOWING FULL	VELOCITY FLOWING FULL		
		CA		CULVERT									
		RODDED	SLOPED										
													min
LINE 1													
1	1B	-5	0.20	0.20	10.32	2.04	0.010	12	HDPE	3.86	4.91	EX. 18" PIPE FROM DISCOVERY PARK LOT 3	
LINE 2 + 3	1A	-5	0.16	0.36	10.32	3.72	0.010	15	HDPE	6.99	5.70		
LINE 3 + 4	EX. 6A	-5	0.36	0.72	10.32	7.39	0.010	18	HDPE	11.37	6.44		
LINE 2													
2	2A	-5	0.00	0.00	10.32	0.04	0.010	10	PVC	2.59	4.75		
LINE 3													
ROOF (14) + 5	3B	-5	0.16	0.16	10.32	1.69	0.010	10	PVC	2.59	4.75		
6	3A	-5	0.00	0.17	10.32	1.73	0.010	12	HDPE	3.86	4.91		
LINE 4													
7	4B	-5	0.18	0.18	10.32	1.84	0.020	15	HDPE	9.89	8.06	EX. PIPE FROM HOME2 SUITES BY HILTON	
LINE 5 + 8	4A	-5	0.12	0.30	10.32	3.12	0.020	15	HDPE	9.89	8.06		
10	EX. 2A	-5	0.22	0.52	10.32	5.35	0.020	18	HDPE	16.09	9.11		
LINE 5													
9	1C	-5	0.00	0.00	10.32	0.04	0.010	10	PVC	2.59	4.75		
LINE 6													
ROOF (15) + 12	6A	-5	0.37	0.37	10.32	3.78	0.010	12	HDPE	3.86	4.91		
13	EX. 4A	-5	0.28	0.64	10.32	6.64	0.010	15	HDPE	6.99	5.70		
EX. STORM													
11	EX. 3A	-5	0.42	0.43	10.32	4.47	0.010	15	HDPE	6.99	5.70	EX. STORM LINE 3A FROM VILLAGE AT DISCOVERY PARK LOT 3 PLUS BYPASS	





LEGEND OF LABELS	
(A) CONSTRUCT LIGHT DUTY CONCRETE W/ INTEGRAL CURB AS SHOWN. REFER TO DETAIL 1 & 2 ON CE 7.1.	(1) INSTALL PCC STAIRS WITH HANDRAIL IN SIDEWALK. REFER TO DETAIL 10 ON CE 7.2 REFER TO CE 3.1-CE 3.4 FOR ELEVATIONS.
(B) TRANSITION FROM 6" CURB TO 0" CURB. REFER TO CE 3.1-CE 3.4.	(2) INSTALL TYPE A OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL 6 ON CE 7.1.
(C) DUMPSTER PAD AREA W/ INTEGRAL CURB AS SHOWN. REFER DETAIL 7 ON CE 7.1. REFER TO ARCHITECTURAL PLANS FOR PROPOSED DUMPSTER ENCLOSURE DETAILS.	(3) INSTALL TYPE B CONSTRUCTION JOINT WHERE PROPOSED CONCRETE PAVING ABUTS EXISTING CONCRETE PAVING. REFER TO DETAIL 6 ON CE 7.1.
(D) PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE (TYPICAL). ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.	(4) INSTALL TYPE C SAW JOINT IN PAVEMENT, MAXIMUM 12'X12' SQUARES (TYPICAL). REFER TO DETAIL 6 ON CE 7.1.
(E) CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AND ADA RAMPS. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAIL 8 ON CE 7.2.	(5) PROPOSED TRANSFORMER PAD. COORDINATE WITH M.E.P. FOR EXACT SIZE AND LOCATION.
(F) CONSTRUCT 4" THICK, PCC WALK PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER DETAIL 5 ON CE 7.1.	(6) CONSTRUCT RETAINING WALL WITH GUARDRAIL AS SHOWN. REFER TO CE 3.1-CE 3.4 FOR WALL HEIGHT. RETAINING WALL DESIGN BY OTHERS.
(G) CONSTRUCT THICKENED EDGE SIDEWALK/PAVEMENT ABUTTING BUILDING PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 7.1.	(7) INSTALL PIPE BOLLARD AS SHOWN. REFER TO DETAIL 9 ON CE 7.2.
(H) CONSTRUCT THICKENED EDGE SIDEWALK WALK AT BACK OF CURB PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 3 ON CE 7.1.	(8) PROPOSED PATIO AREA. REFER TO DETAIL 5 ON CE 7.1. REFER TO ARCHITECTURAL PLANS.

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:		2.05 AC
BUILDING DETAILS:		
1ST FLOOR:	14,112 SQ.FT.	
2ND FLOOR:	14,112 SQ.FT.	
TOTAL S.F. (2-STORIES)	28,224 SQ.FT.	
PARKING SUMMARY:		
SPACES REQUIRED:		
RESTAURANT - FAST-FOOD AND SIT-DOWN - 14 PER 1,000 S.F. (2,500 S.F.)	35 SPACES	
OFFICES - GENERAL AND PROFESSIONAL (NOT MEDICAL, DENTAL OR VETERINARY) - 4 PER 1,000 S.F. (25,724 S.F.)	103 SPACES	
STANDARD SPACES REQUIRED:	138 SPACES	
HANDICAP SPACES REQUIRED:	5 SPACES	
SPACES PROVIDED:		
STANDARD SPACES PROVIDED:	139 SPACES	
HANDICAP SPACES PROVIDED:	5 SPACES	
TOTAL SPACES PROVIDED:	142 SPACES	
LOT COVERAGES:		
NET LAND AREA:	89,486 SQ.FT.	100%
TOTAL IMPERVIOUS SURFACE AREA:	65,220 SQ.FT.	73%
TOTAL OPEN SPACE:	24,266 SQ.FT.	27%
FLOOR AREA RATIO:		31%

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI

NATHAN THOMAS ECKHOFF

PROFESSIONAL ENGINEER

NUMBER  
PE-200304960  
EX-18-24

NATHAN THOMAS ECKHOFF  
MO LICENSE 200304960

PREPARED BY:

CROCKETT ENGINEERS & ARCHITECTS

1000 W. Illinois Blvd., Suite 100  
Columbia, Missouri 65203  
(314) 487-0592  
www.crockettengineering.com  
Missouri Certificate of Authority #000001001

OWNER:

DISCOVERY PARK LEES SUMMIT LLC

4220 PHILLIPS FARM RD

COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY

LOT 1

LEES SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

SITE PLAN

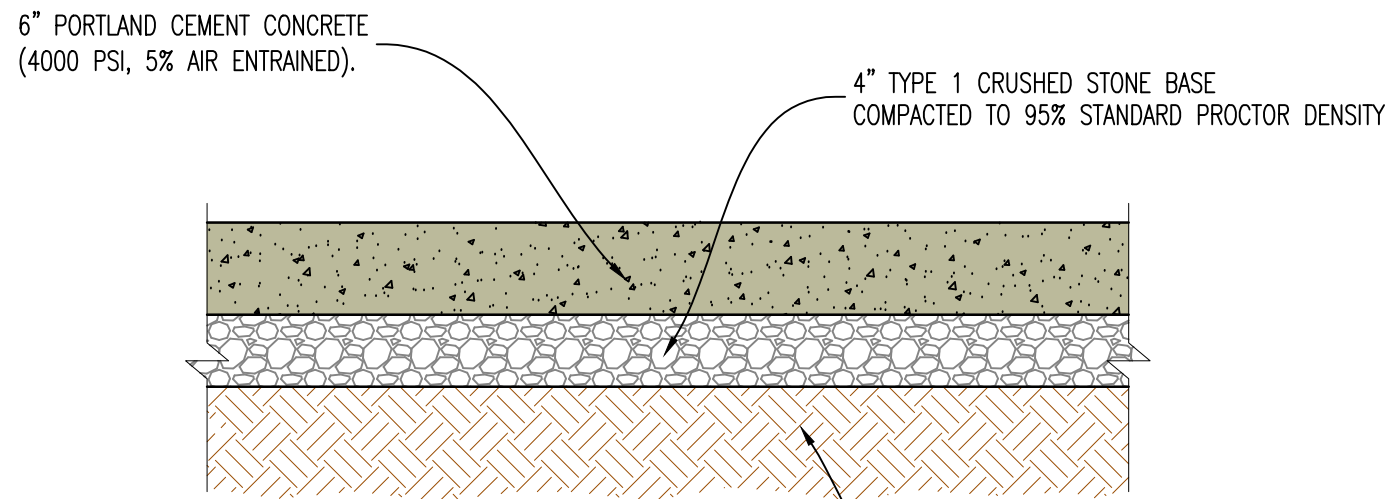
DESIGNED: NTE

DRAWN: NMD

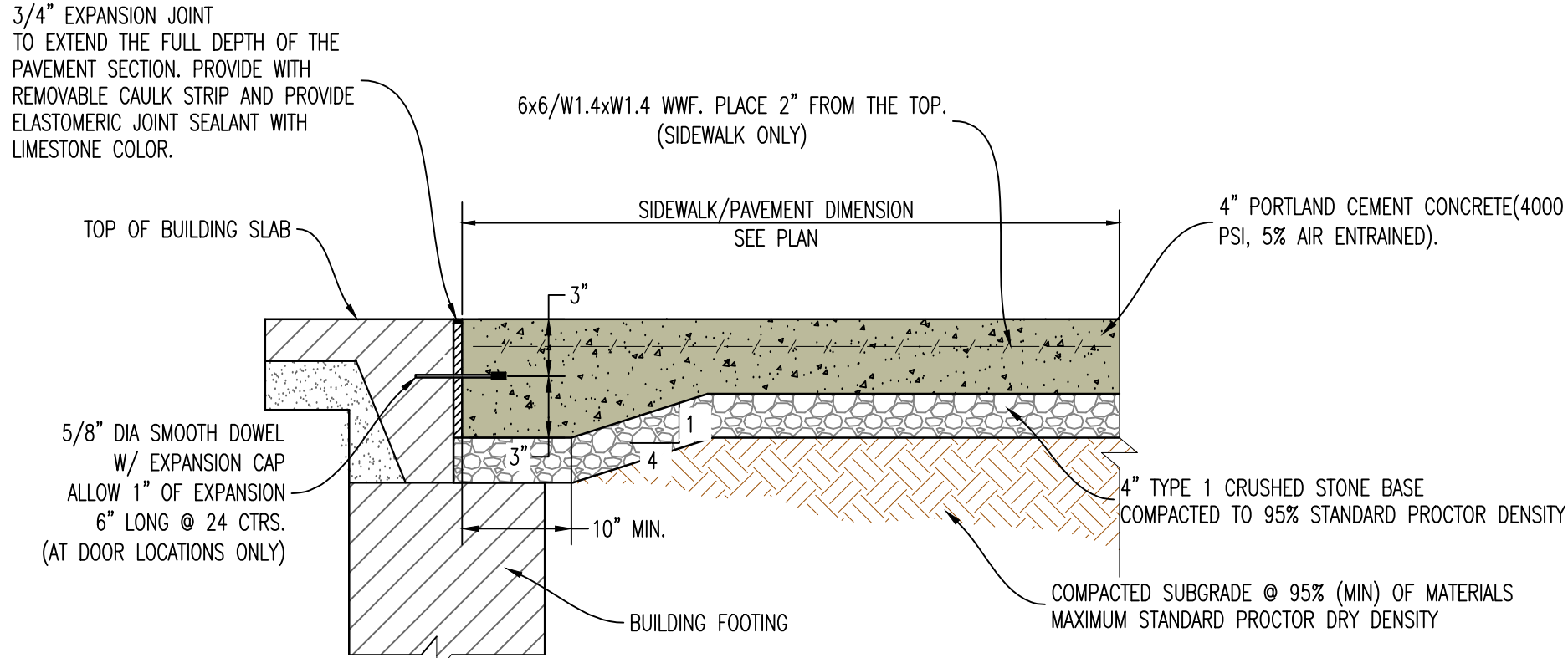
PROJECT NO: 230286

SHEET: CE 6.1

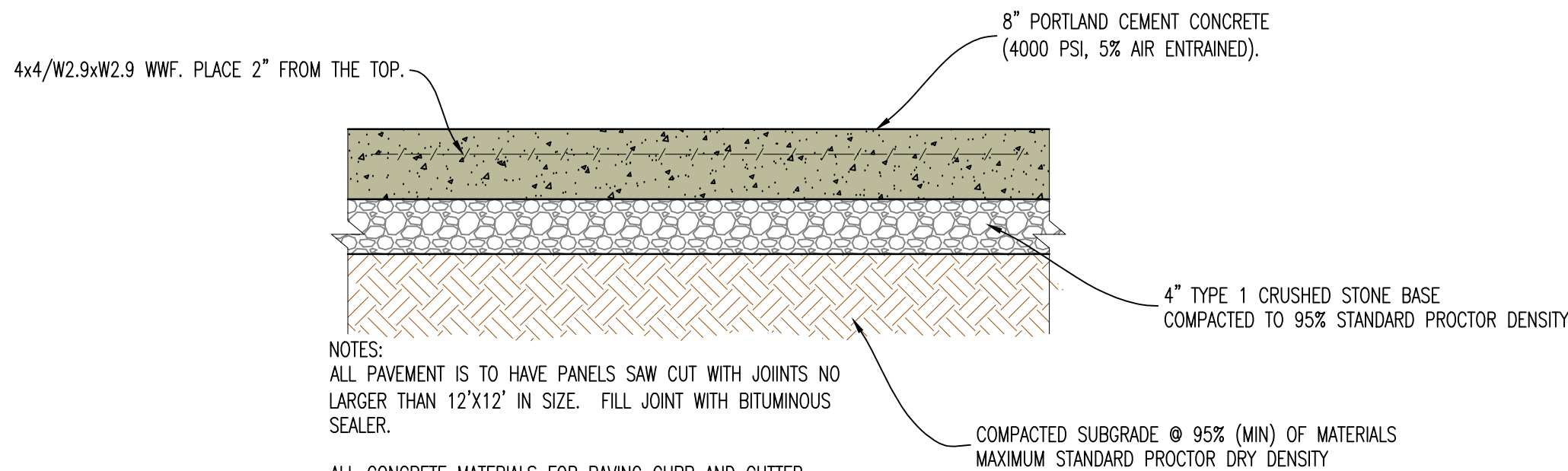




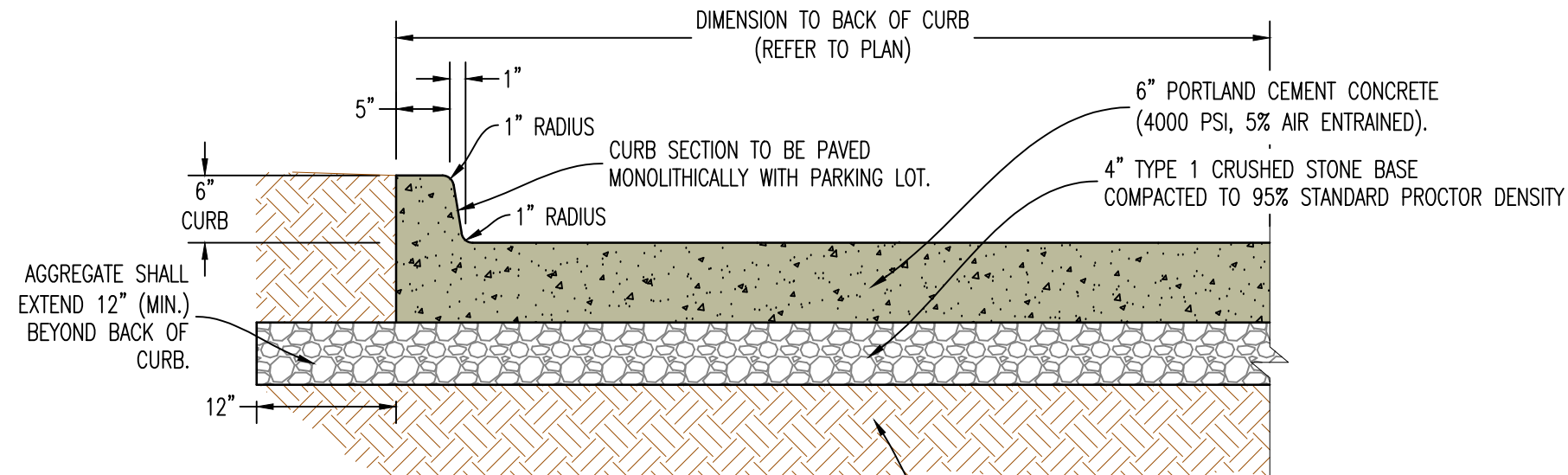
1 LIGHT DUTY CONCRETE PAVEMENT CROSS-SECTION



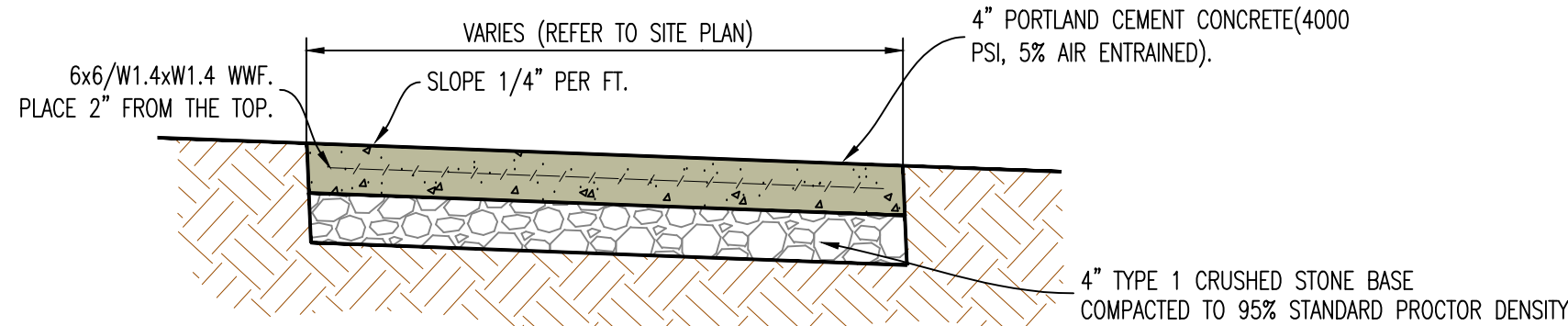
4 SIDEWALK/PAVEMENT ABUTTING BUILDING



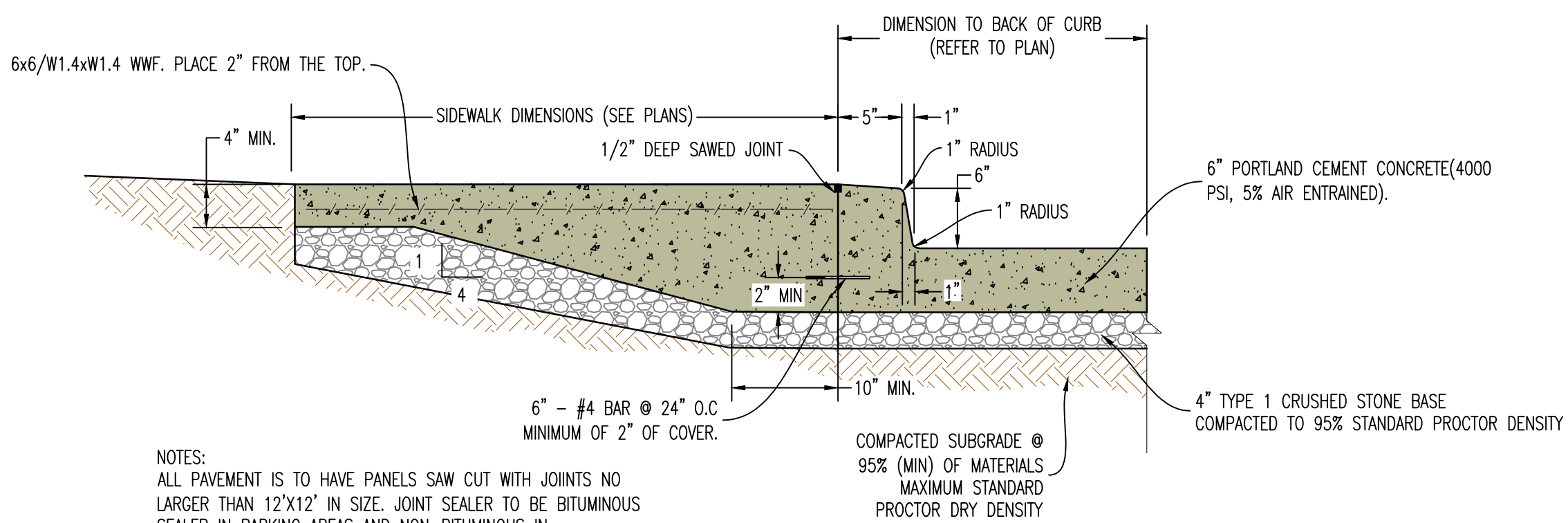
7 HEAVY DUTY CONCRETE PAVEMENT CROSS-SECTION (REINFORCED)



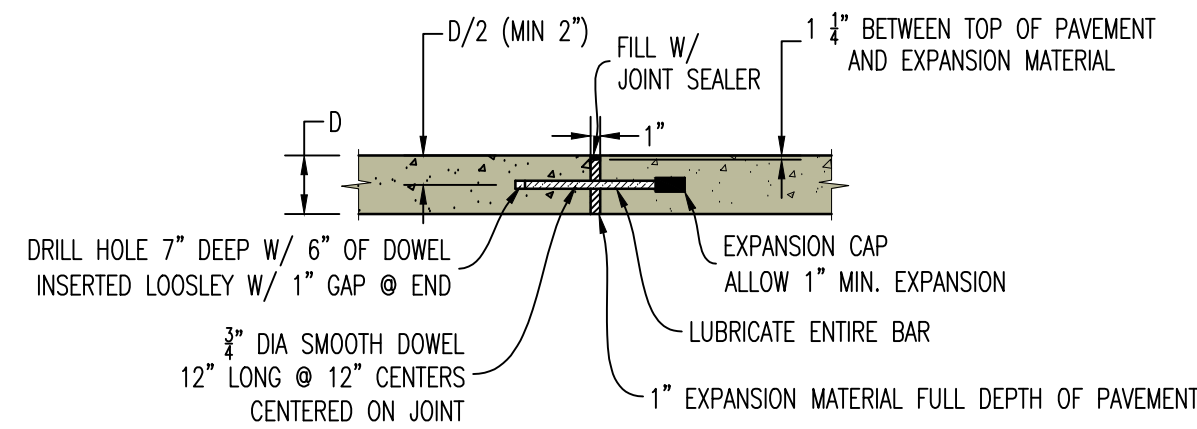
2 6" CONCRETE BARRIER CURB CROSS-SECTION



5 TYPICAL CONCRETE SIDEWALK



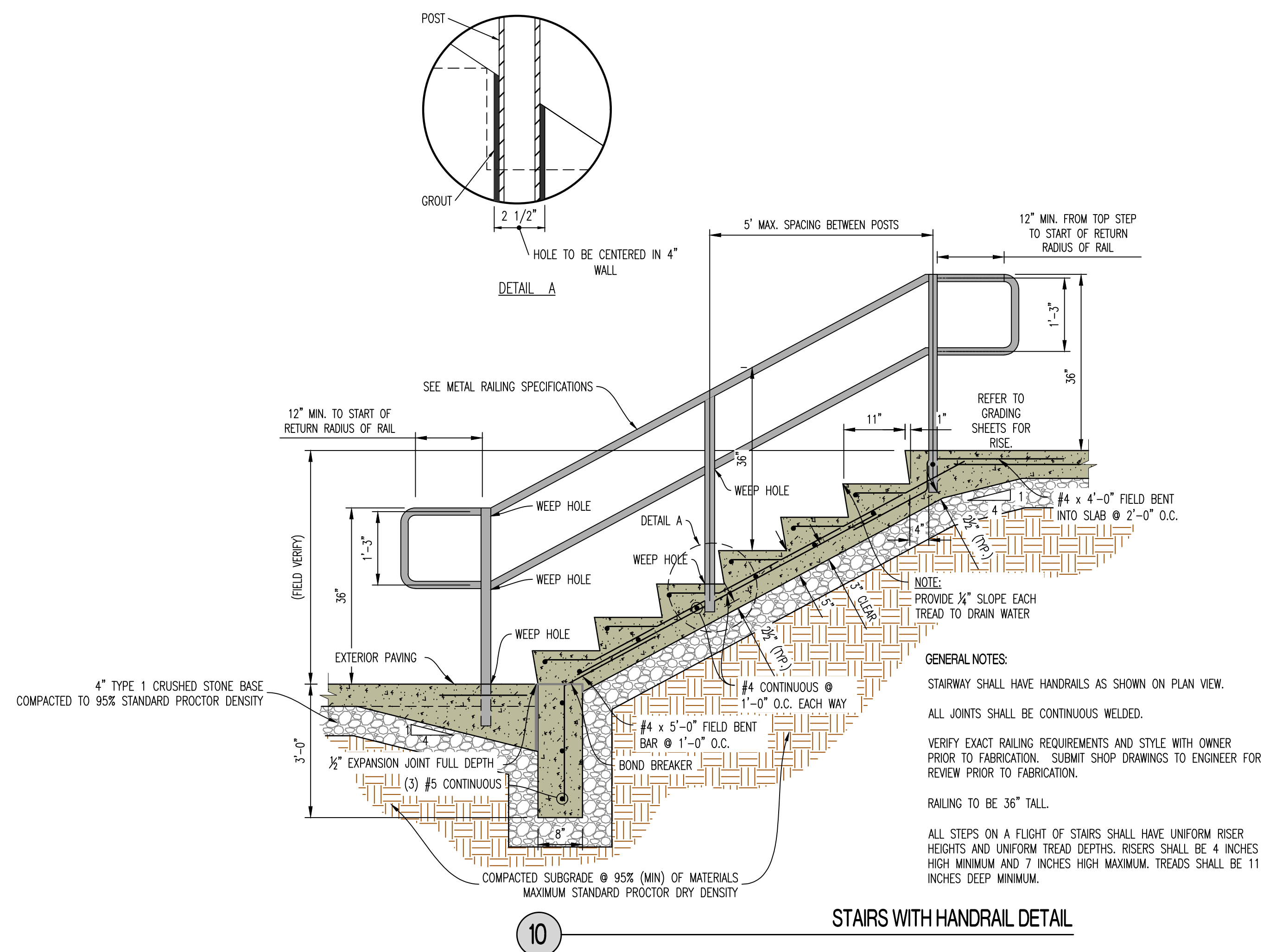
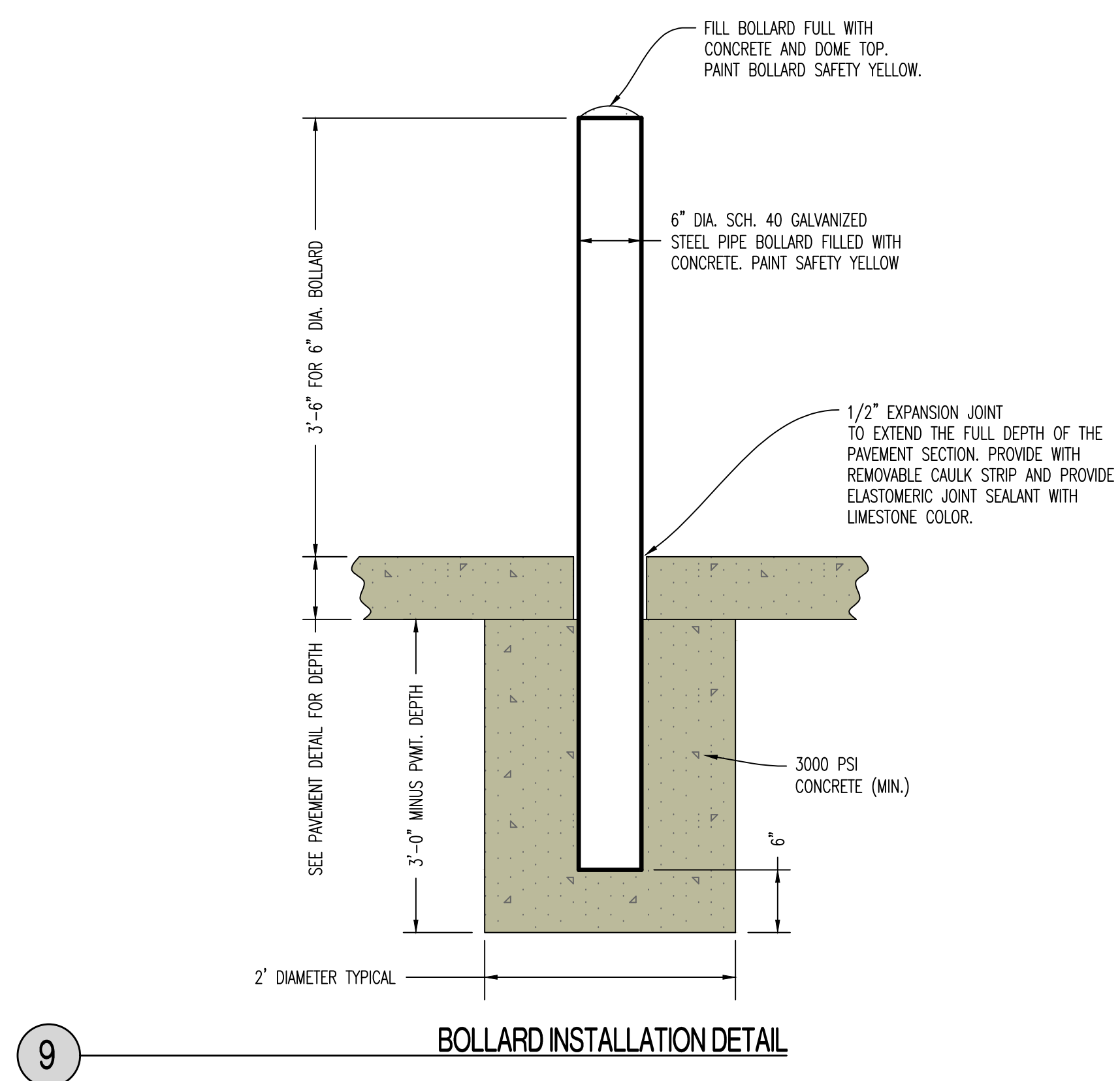
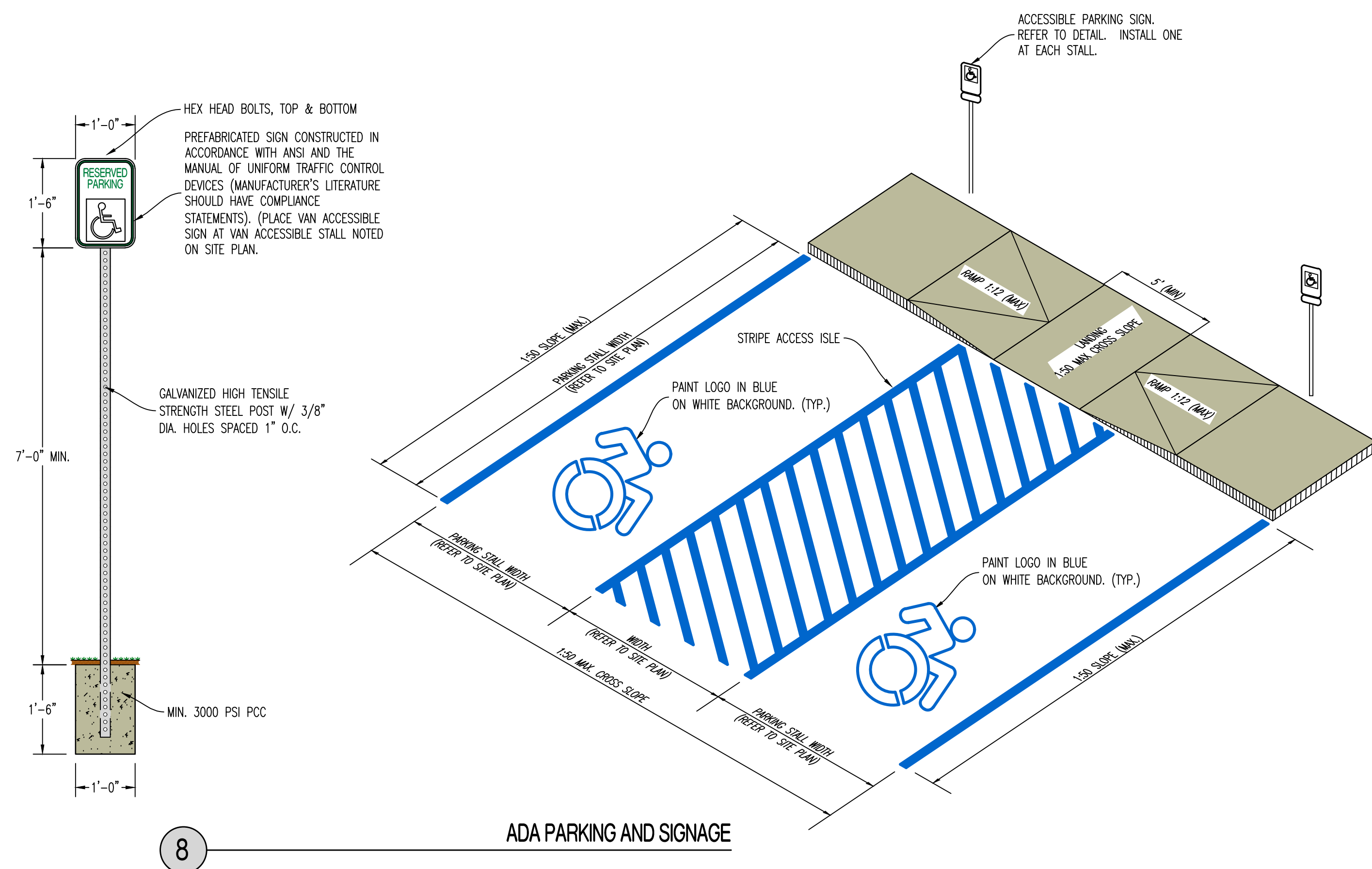
3 THICKENED EDGE SIDEWALK WITH INTEGRAL CURB & GUTTER



6 CONCRETE PAVEMENT JOINT DETAILS

REVISIONS:	
NO.	DATE
ORIGINAL	10/18/2024
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
NATHAN THOMAS ECKHOFF MO LICENSE 200304960	
PREPARED BY:	
ENGINEERS & ARCHITECTS 1000 W. Illinois Blvd., Suite 100 Columbia, Missouri 65203 (314) 487-0292 www.crockettengineering.com Missouri Certificate of Authority #000000001	
OWNER:	DISCOVERY PARK LEES SUMMIT LLC 4220 PHILLIPS FARMS RD COLUMBIA, MO 65201
THE VILLAGE AT DISCOVERY LOT 1 LEES SUMMIT, JACKSON COUNTY, MISSOURI	
DRAWING INCLUDES:	
DETAILS SHEET 1	
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 7.1



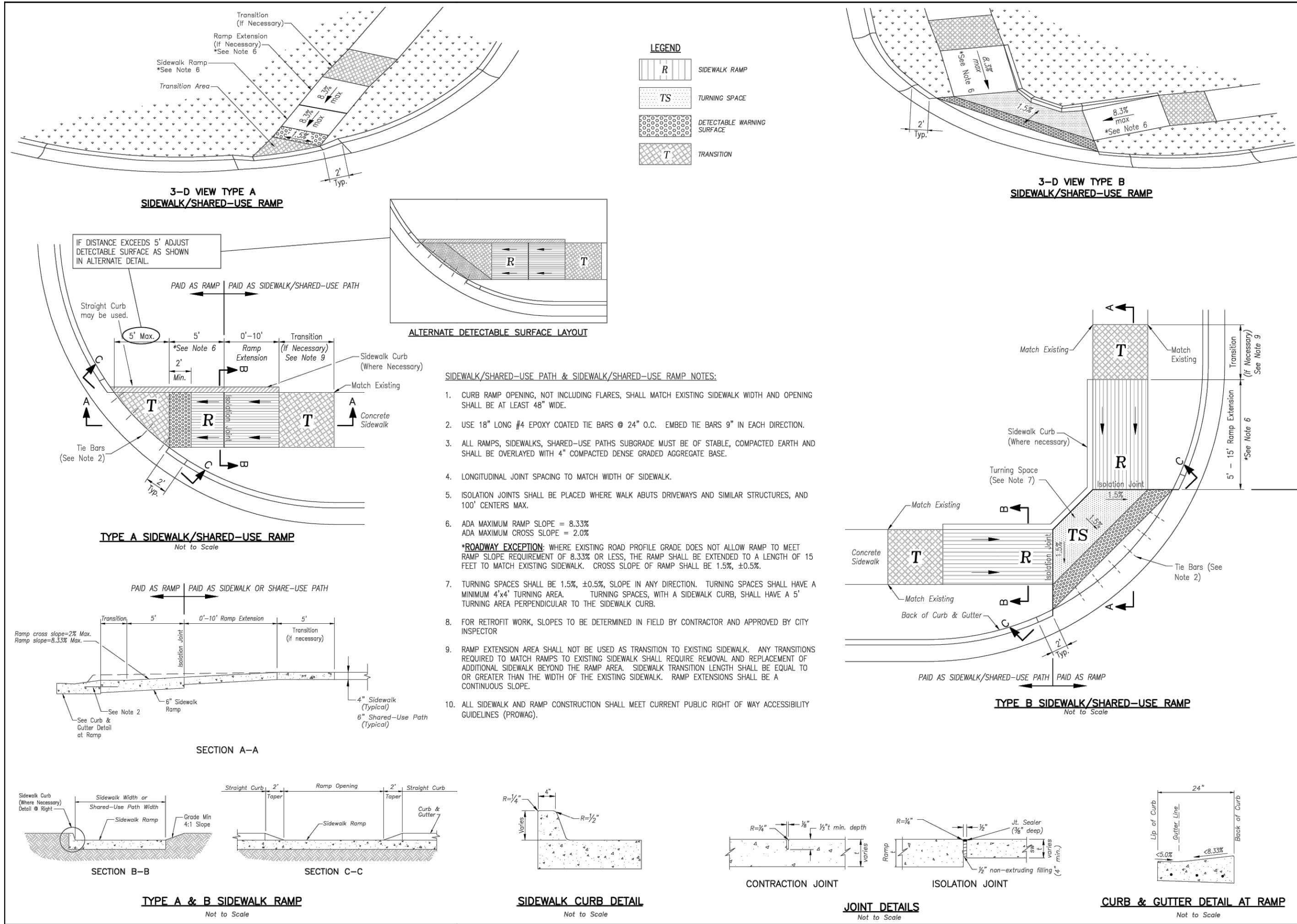


## METAL RAILING SPECIFICATIONS

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 PLUMB WITH A TOLERANCE OF  $\frac{1}{8}$ " IN 3 FEET. ALIGN RAILS NO 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.

REVISIONS:	
NO.	DATE
ORIGINAL	10/18/2024
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.	
	
NATHAN THOMAS ECKHOFF MO LICENSE: 203024980	
PREPARED BY:	 1000 N. King Bird Road, Suite 1 Columbia, MO 65201 (373) 447-0292 <a href="http://www.crockettengineering.com">www.crockettengineering.com</a> Crockett Engineering Consultants, LLC Missouri Certificate of Authority
OWNER:	DISCOVERY PARK LEES SUMMIT LLC 4220 PHILLIPS FARM RD COLUMBIA, MO 65201
<h1>THE VILLAGE AT DISCOVERY</h1> <h2>LOT 1</h2> <h3>LEES SUMMIT, JACKSON COUNTY, MISSOURI</h3>	
DRAWING INCLUDES:	
DETAILS SHEET 2	
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	2302286
SHEET:	CE 7.2



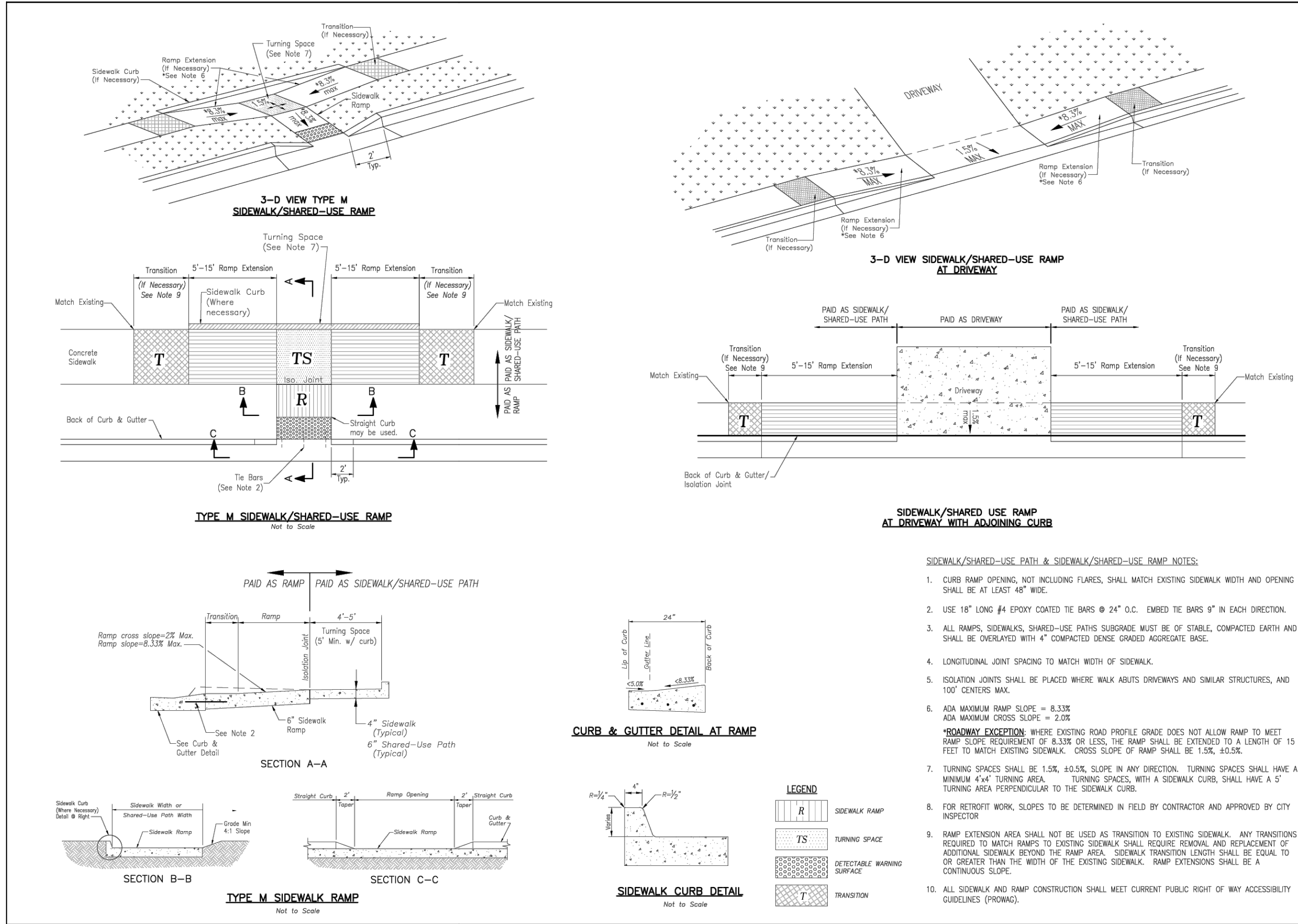


**IS LEE'S SUMMIT MISSOURI**

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

DESIGNED BY: MJP  
CHECKED BY: DL  
DATE: 08/2023  
PWS #

GEN-3A

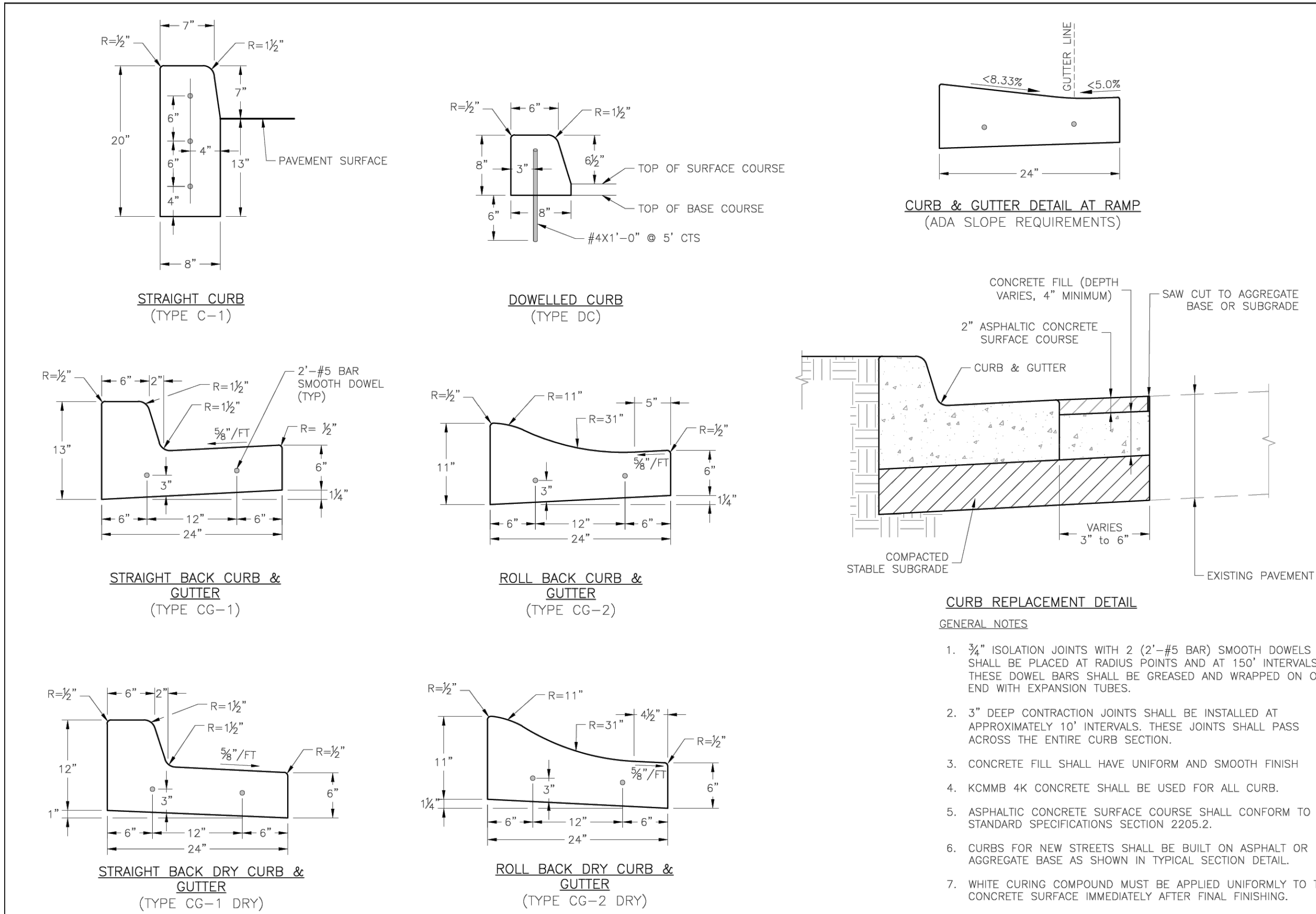


**IS LEE'S SUMMIT MISSOURI**

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

DESIGNED BY: MJP  
CHECKED BY: DL  
DATE: 08/2023  
PWS #

GEN-3B

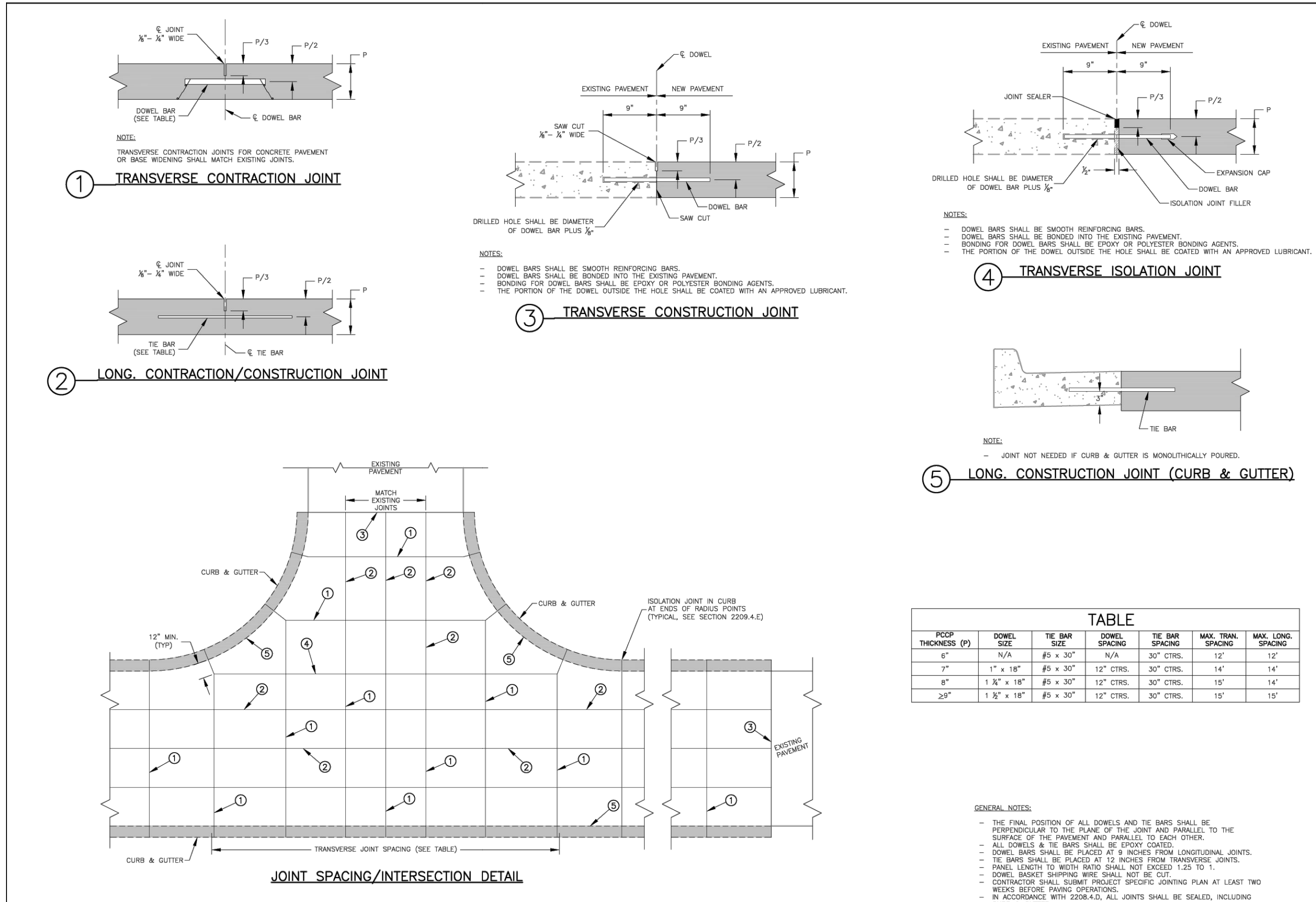


**IS LEE'S SUMMIT MISSOURI**

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

DESIGNED BY: MJP  
CHECKED BY: DL  
DATE: 08/2023  
PWS #

GEN-4



**IS LEE'S SUMMIT MISSOURI**

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

DESIGNED BY: MJP  
CHECKED BY: GMB  
DATE: 08/2023  
PWS #

GEN-10

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

**NATHAN THOMAS ECKHOFF**  
PROFESSIONAL ENGINEER  
NUMBER: PE-200304960  
EXPIRATION: 10/18/24  
MO LICENSE: 200304960

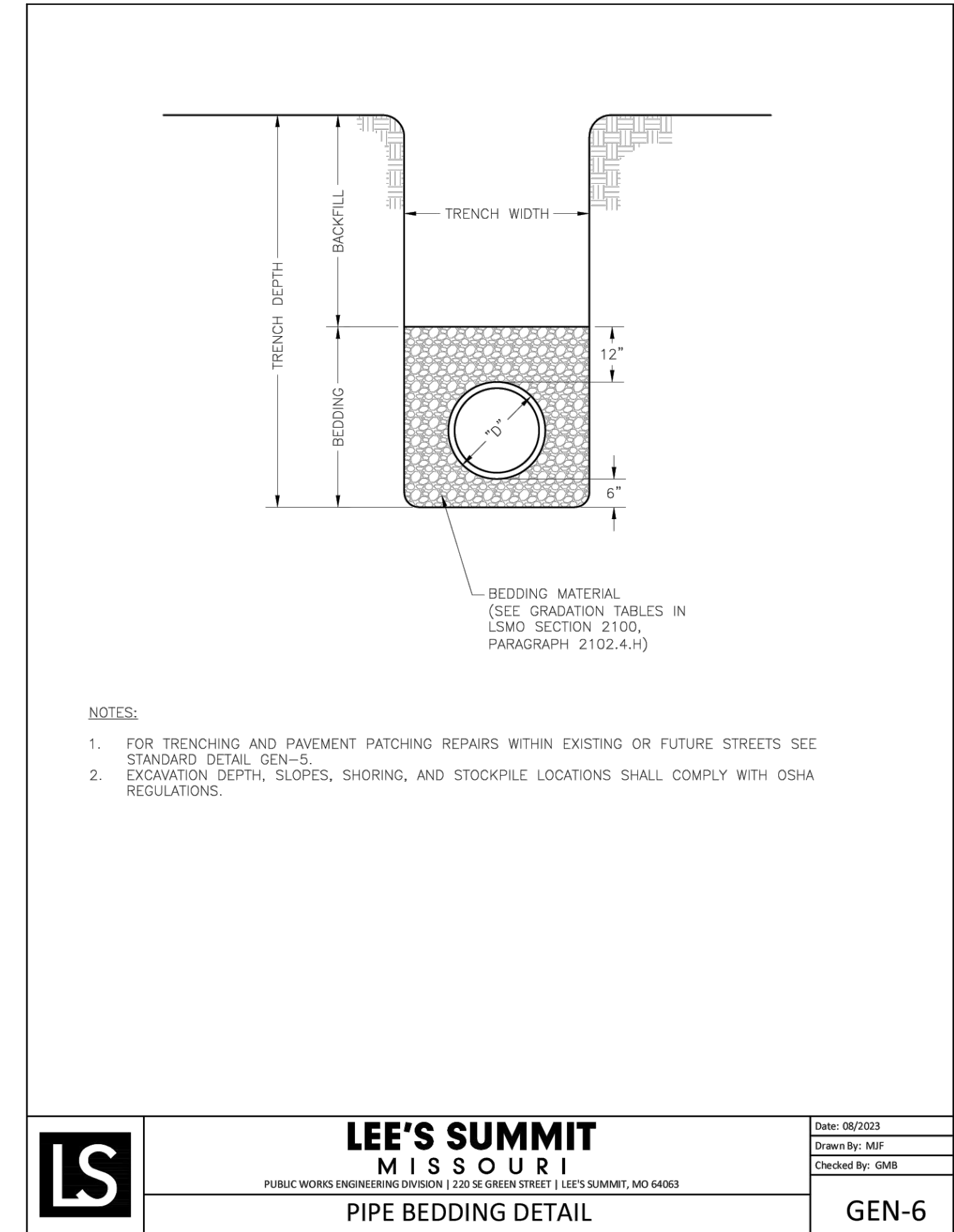
**NATHAN THOMAS ECKHOFF**  
Missouri Certificate of Authority

PREPARED BY: **CROCKETT ENGINEERS & ARCHITECTS**  
1000 W. Illinois Blvd., Suite 100  
Columbia, Missouri 65203  
(314) 487-0592  
www.crockettingeering.com

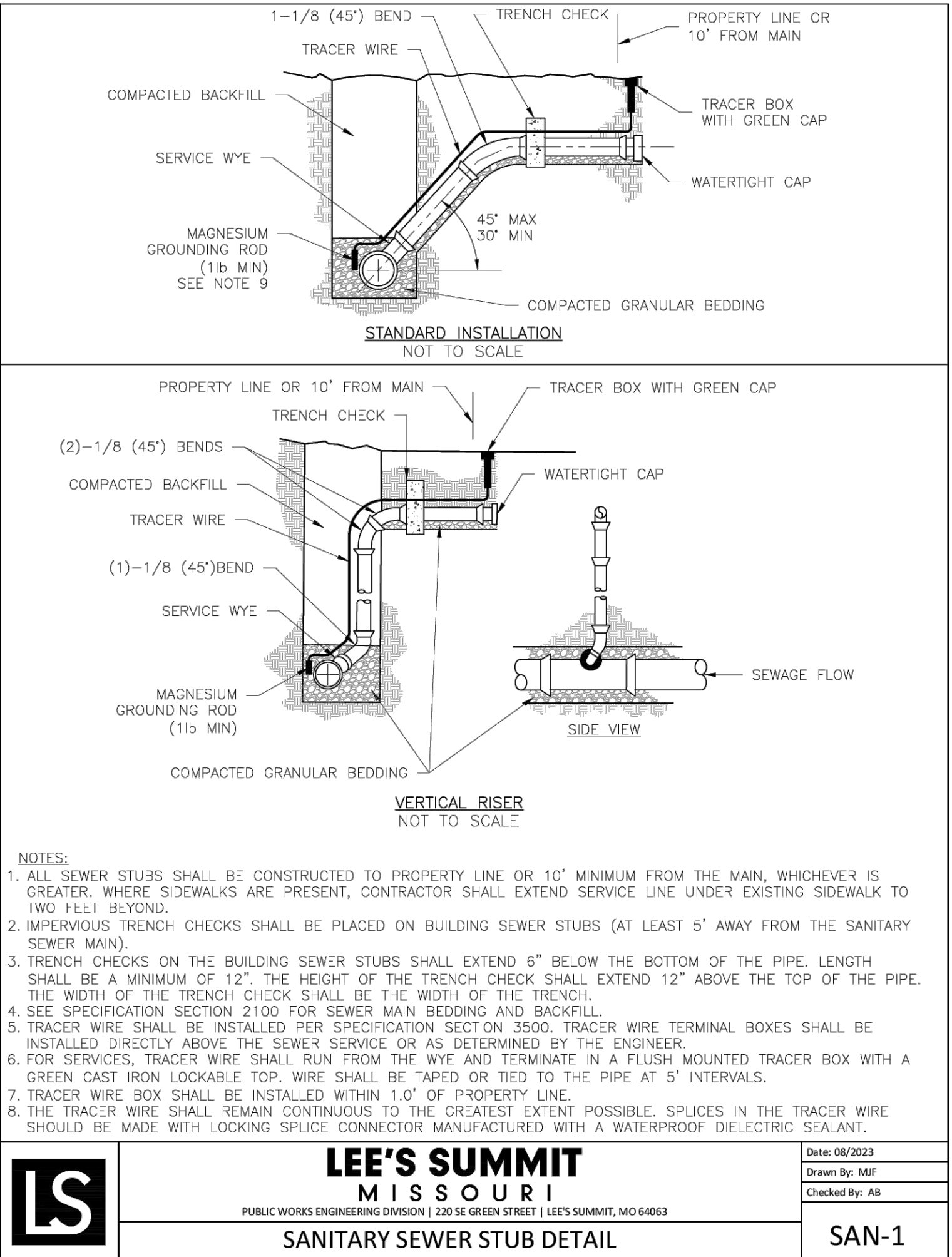
OWNER: DISCOVERY PARK LEE'S SUMMIT LLC  
4220 PHILLIPS FARM RD  
COLUMBIA, MO 65201

DESIGNED: NTE  
DRAWN: NMD  
PROJECT NO: 230286  
SHEET: CE 7.3

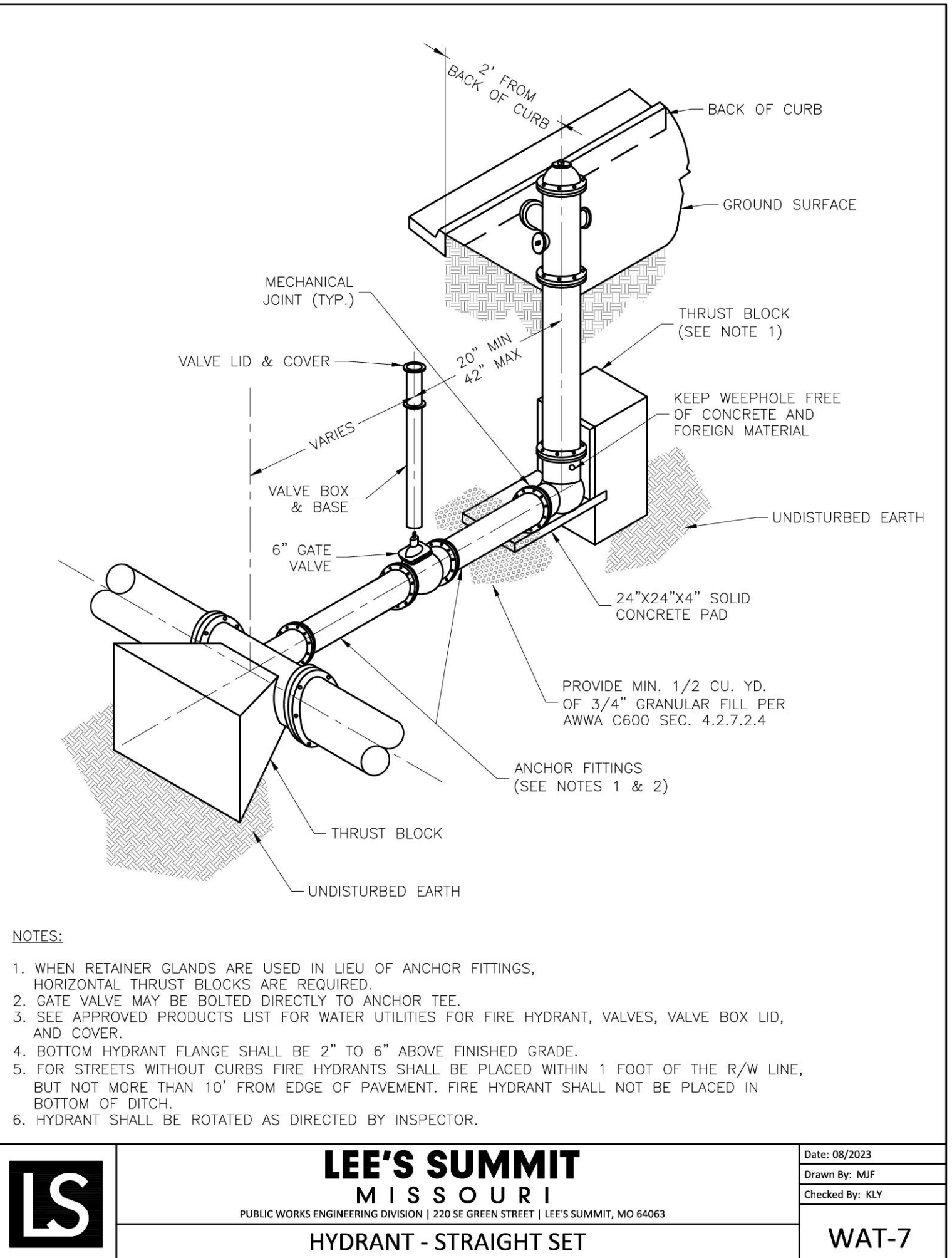
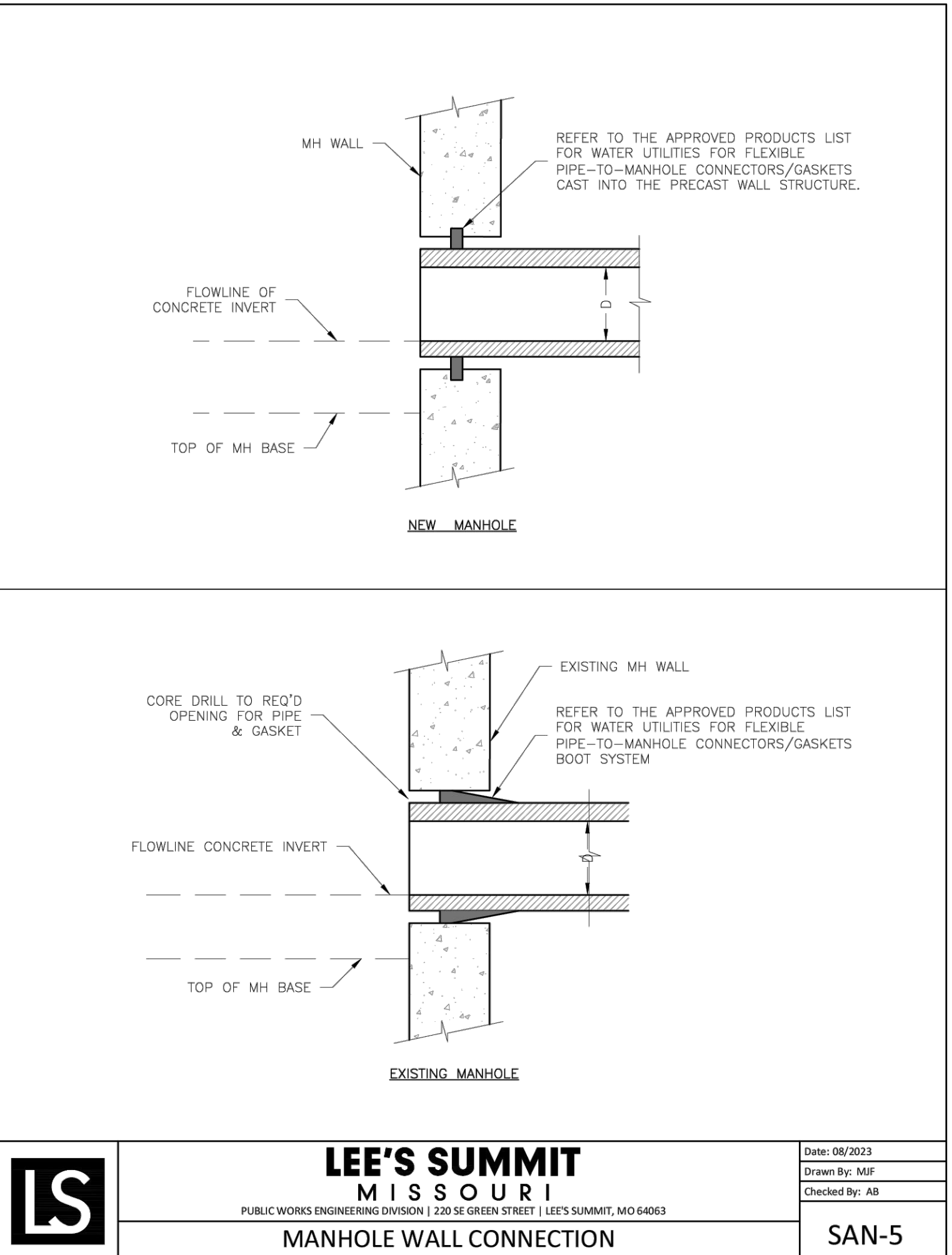




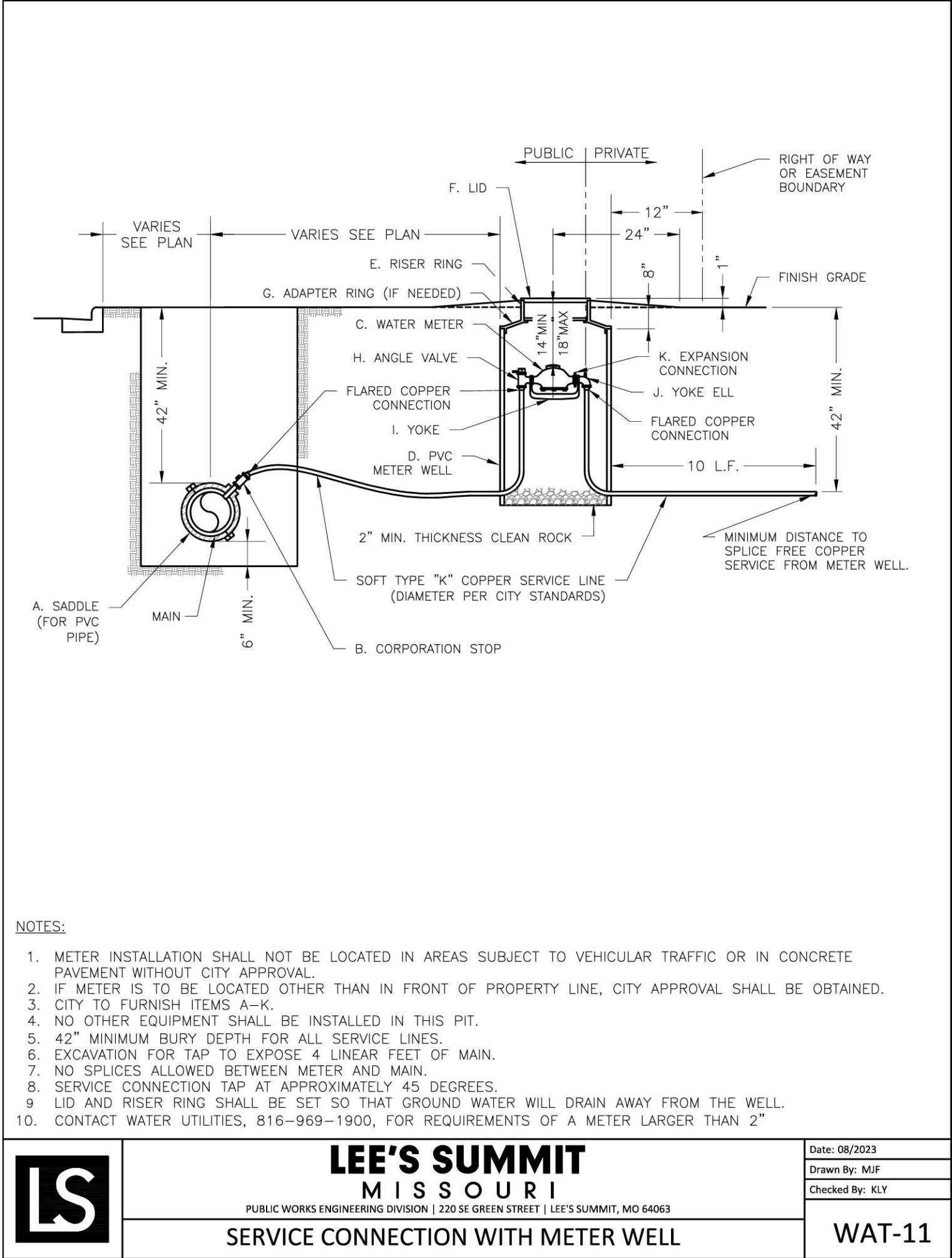
- NOTES:
- FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN-5.
  - EXCAVATION DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.



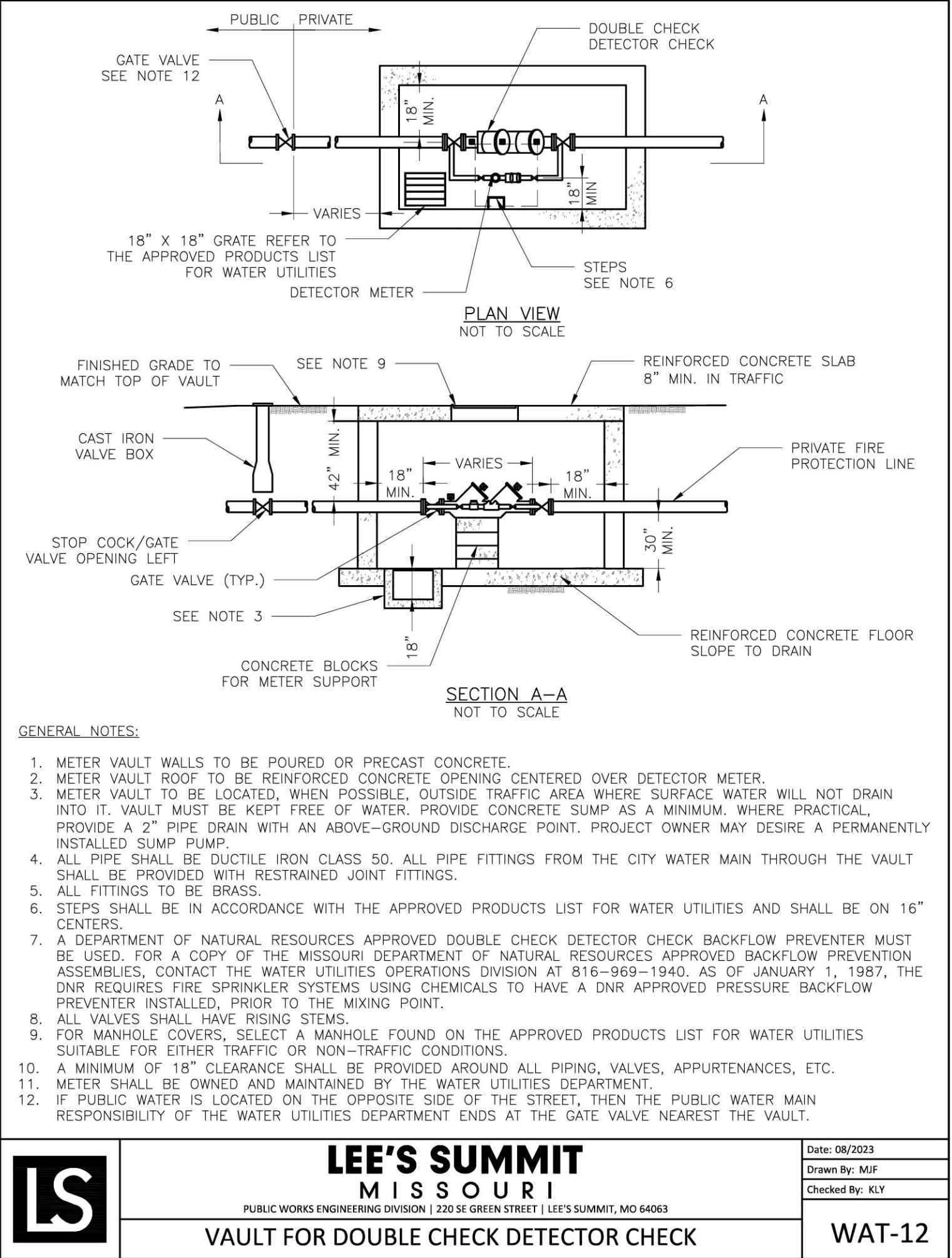
- NOTES:
- ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
  - IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
  - 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.
  - SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
  - 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.
  - 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.
  - TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
  - 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.



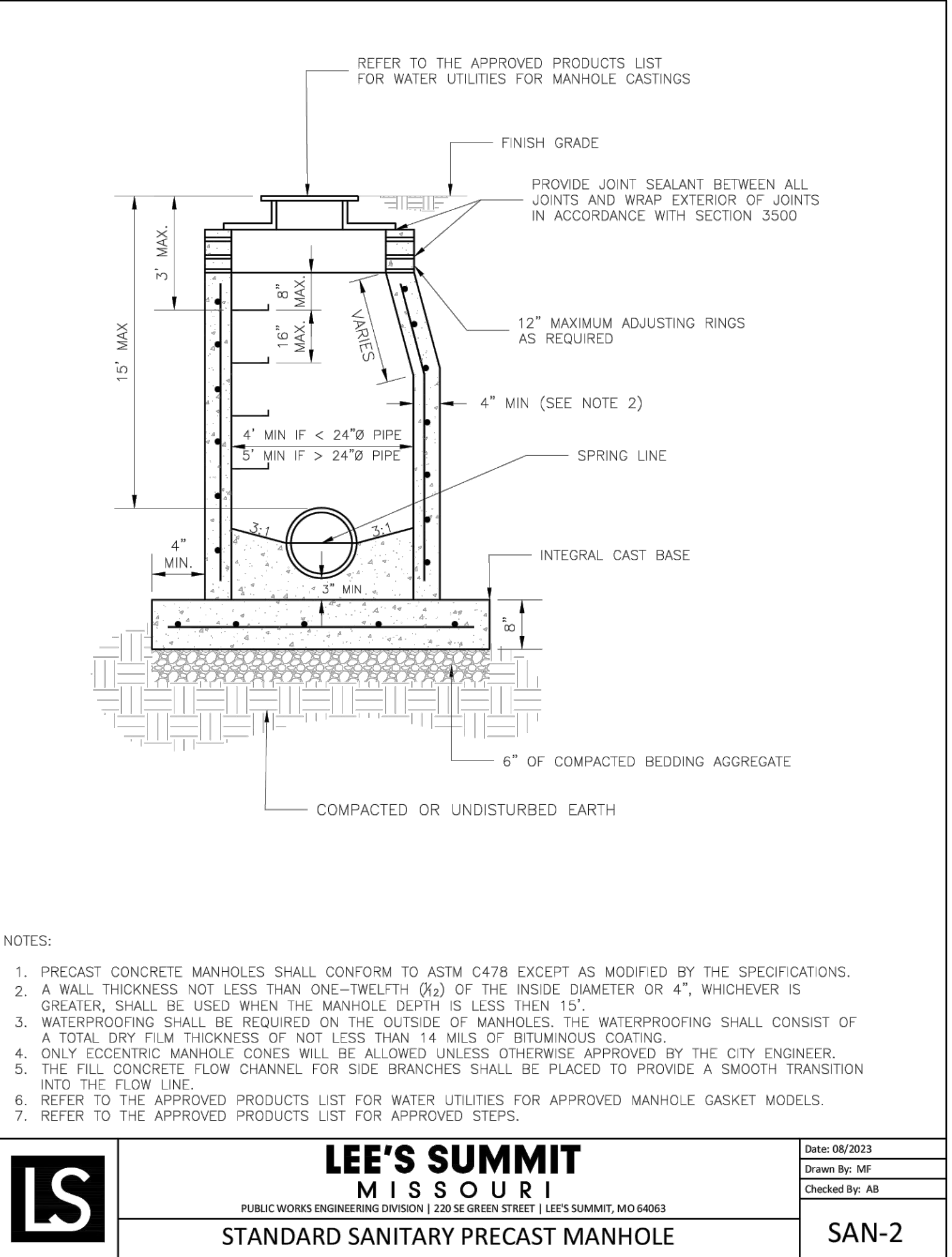
- NOTES:
- WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
  - GATE VALVE MAY BE BOLTED DIRECTLY TO ANCHOR TEE.
  - SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
  - BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
  - FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
  - HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.



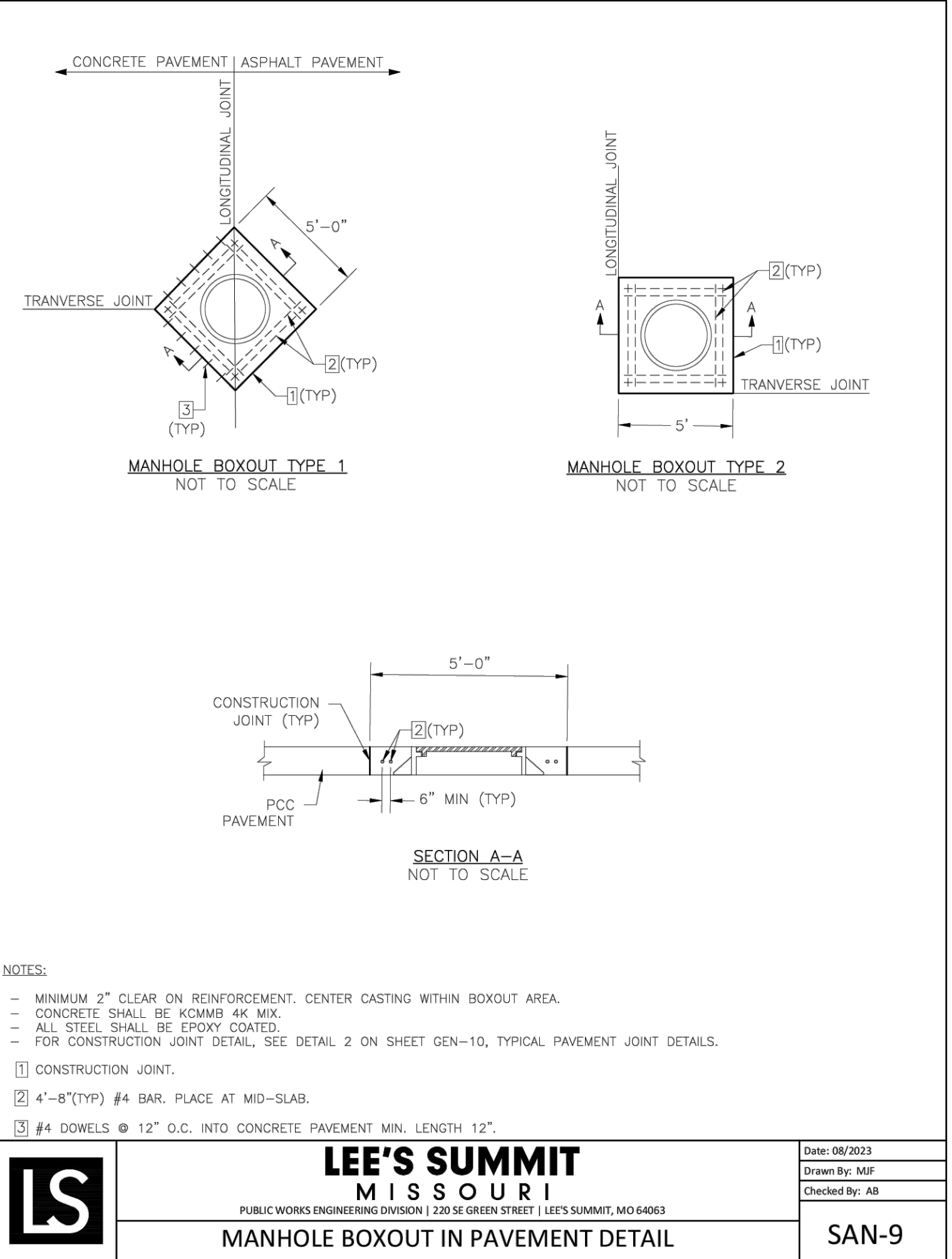
- NOTES:
- METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
  - IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
  - CITY TO FURNISH ITEMS A-K.
  - NO OTHER EQUIPMENT SHALL BE INSTALLED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



- GENERAL NOTES:
- METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
  - METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
  - 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.
  - 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.
  - ALL FITTINGS TO BE BRASS.
  - STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
  - 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.
  - ALL VALVES SHALL HAVE RISING STEMS.
  - FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON-TRAFFIC CONDITIONS.
  - A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
  - METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
  - 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.



- NOTES:
- PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
  - A WALL THICKNESS NOT LESS THAN ONE-TWELFTH ( $\frac{1}{12}$ ) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'.
  - WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS. OF BITUMINOUS COATING.
  - ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
  - THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
  - REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
  - REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.



- NOTES:
- MINIMUM 2" CLEAR ON REINFORCEMENT. CENTER CASTING WITHIN BOXOUT AREA.
  - CONCRETE SHALL BE KCMMB 4K MIX.
  - ALL STEEL SHALL BE EPOXY COATED.
  - FOR CONSTRUCTION JOINT DETAIL, SEE DETAIL 2 ON SHEET GEN-10, TYPICAL PAVEMENT JOINT DETAILS.
- 1 CONSTRUCTION JOINT.
- 2 4'-8"(TYP) #4 BAR. PLACE AT MID-SLAB.
- 3 #4 DOWELS @ 12" O.C. INTO CONCRETE PAVEMENT MIN. LENGTH 12".

REVISIONS:

NO.	DATE
ORIGINAL	10/18/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

**NATHAN THOMAS ECKHOFF**  
PROFESSIONAL ENGINEER  
NUMBER: PE-2003014360  
EXPIRATION: 10/18/2025  
NATHAN THOMAS ECKHOFF  
MO LICENSE 2003014360

PREPARED BY: **CROCKETT ENGINEERS & PLANNERS**  
1000 W. Illinois Blvd., Suite 100  
Columbia, Missouri 65203  
(314) 487-0292  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority #000000001

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

**THE VILLAGE AT DISCOVERY**  
**LOT 1**  
**LEES SUMMIT, JACKSON COUNTY, MISSOURI**

DRAWING INCLUDES:

LEE'S SUMMIT DETAILS SHEET 2

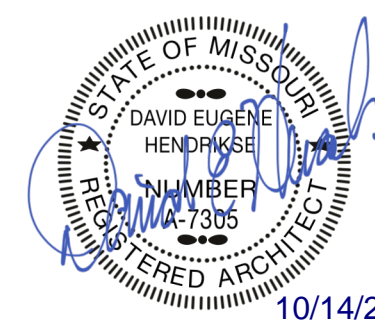
DESIGNED: NTE

DRAWN: NMD

PROJECT NO: 230286

SHEET: CE 7.4

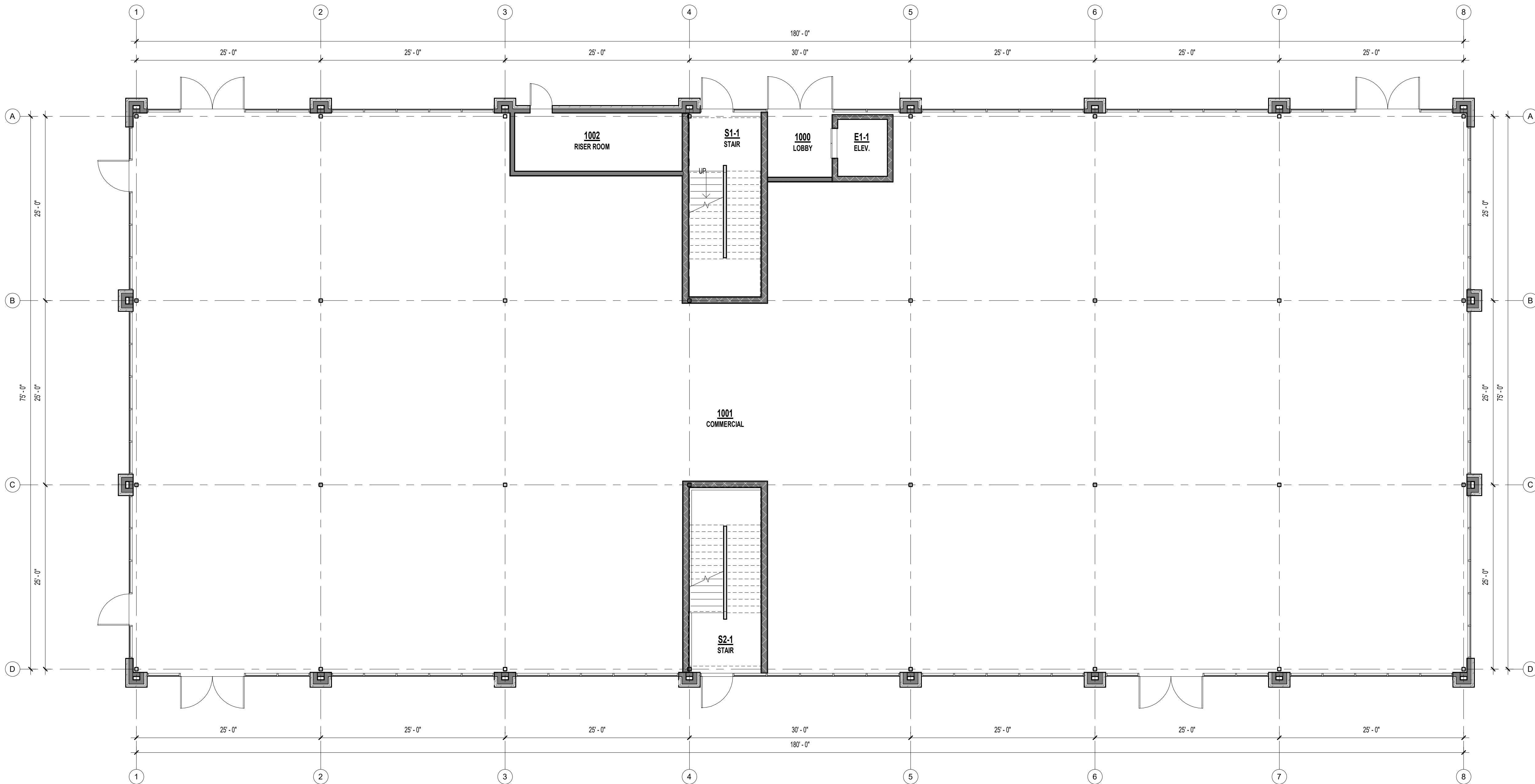




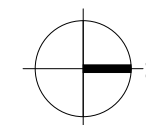
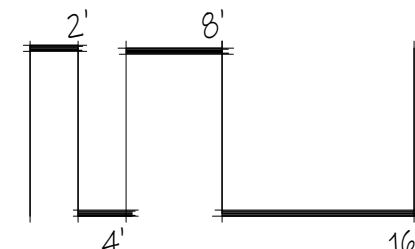
THE VILLAGE AT DISCOVERY -  
LOT 1  
LEE SUMMIT, MO 64064

SHEET TITLE  
FLOOR PLANS  
PROJECT NUMBER: 23096  
SHEET NUMBER:

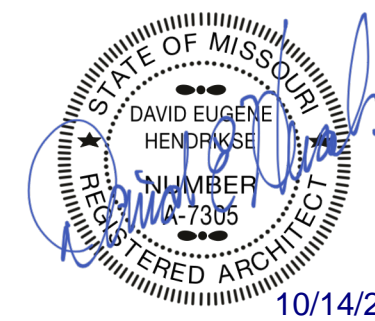
A1



1 FIRST FLOOR PLAN  
1/8" = 1'-0"



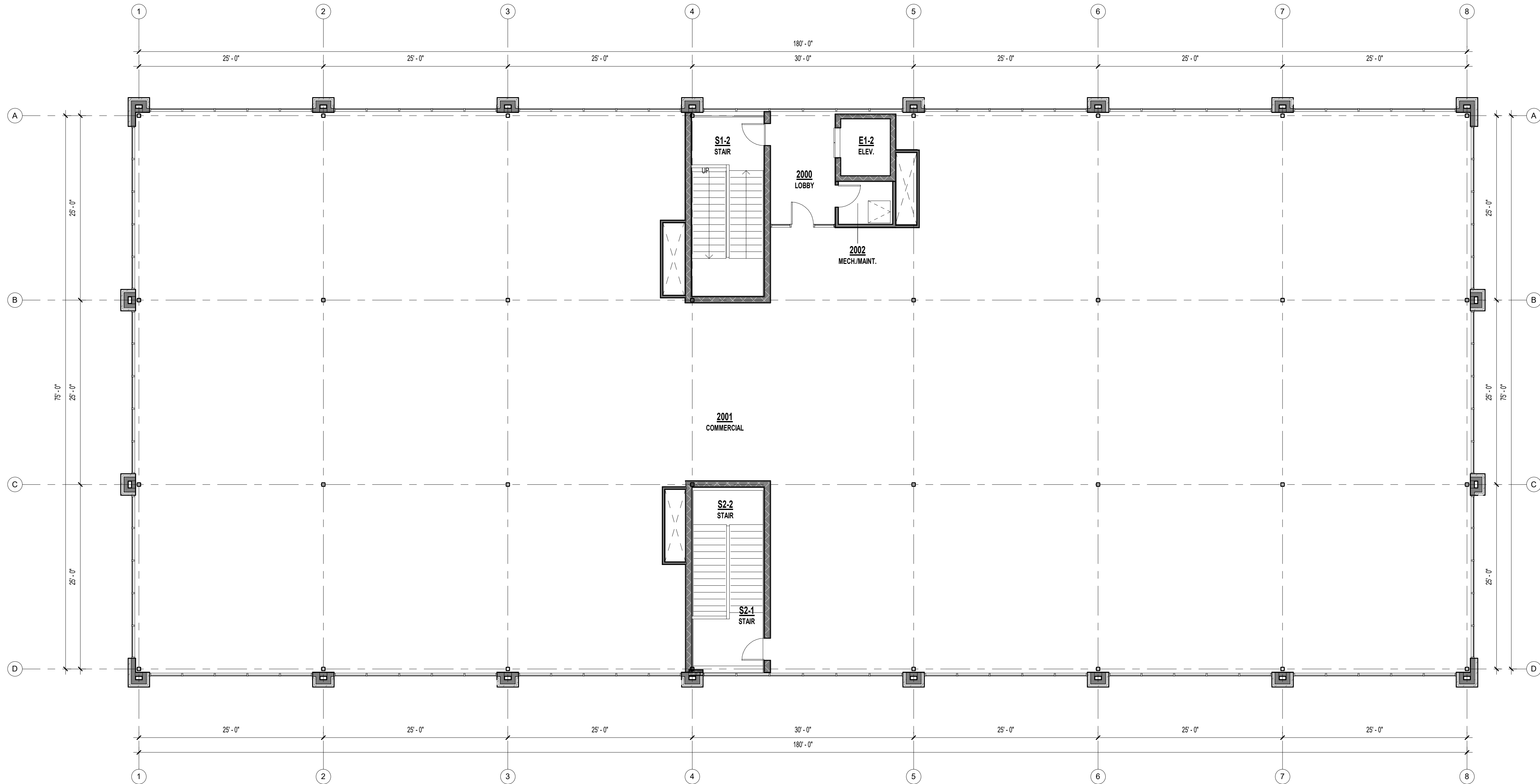




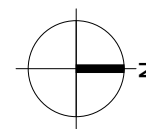
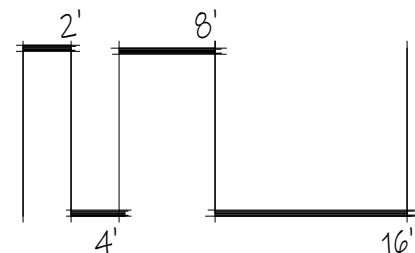
THE VILLAGE AT DISCOVERY -  
LOT 1  
LEE SUMMIT, MO 64064

SHEET TITLE  
FLOOR PLANS  
PROJECT NUMBER: 23096  
SHEET NUMBER:

A2



1 SECOND FLOOR PLAN  
1/8" = 1'-0"







4 NORTH ELEVATION  
1/8" = 1'-0"



3 SOUTH ELEVATION  
1/8" = 1'-0"



2 EAST ELEVATION  
1/8" = 1'-0"



1 WEST ELEVATION  
1/8" = 1'-0"

## MATERIAL LEGEND

	KING SIZE BRICK - COLOR 1 - ALLENDALE HILL
	KING SIZE BRICK - COLOR 2 - GLEN GERY SADDLE BROWN
	KING SIZE BRICK - COLOR 3 - CAVALRY GRAY
	STONE - ROUGH ASHLAR
	EIFS BANDING - ROUGH ASHLAR

PRINTS ISSUED

10/14/2024 - FDP

REVISIONS:

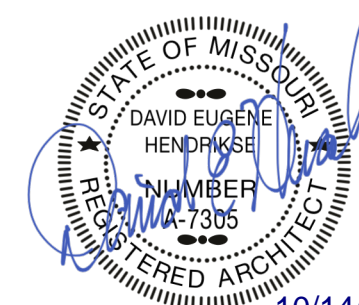
rosemann  
& ASSOCIATES P.C.

ARCHITECTURE  
INTERIOR DESIGN  
ENGINEERING  
PLANNING

1526 Grand Boulevard  
Kansas City, MO 64108-1404  
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w: www.rosemann.com

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



10/14/2024

THE VILLAGE AT DISCOVERY -  
LOT 1

LEE SUMMIT, MO 64064

SHEET TITLE  
COLORED ELEVATIONS

PROJECT NUMBER: 23096

SHEET NUMBER:

A3



3/A4  
ALURA

2/A4  
DOUGLAS

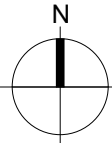
PRINTS ISSUED  
10/14/2024 - FDP

REVISIONS:

LOT 1  
BLDG

1/A4  
COLBERN

4 KEY PLAN  
1" = 50'-0"

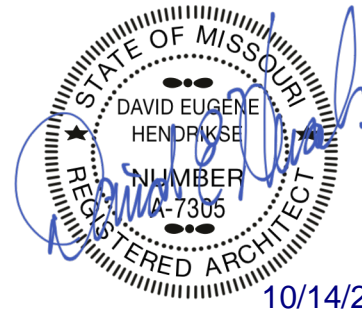


3 FROM ALURA

2 FROM NE DOUGLAS

1 FROM NE COLBERN

**rosemann & ASSOCIATES P.C.**  
ARCHITECTURE  
INTERIOR DESIGN  
ENGINEERING  
PLANNING  
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THE VILLAGE AT DISCOVERY -  
LOT 1  
LEE SUMMIT, MO 64064

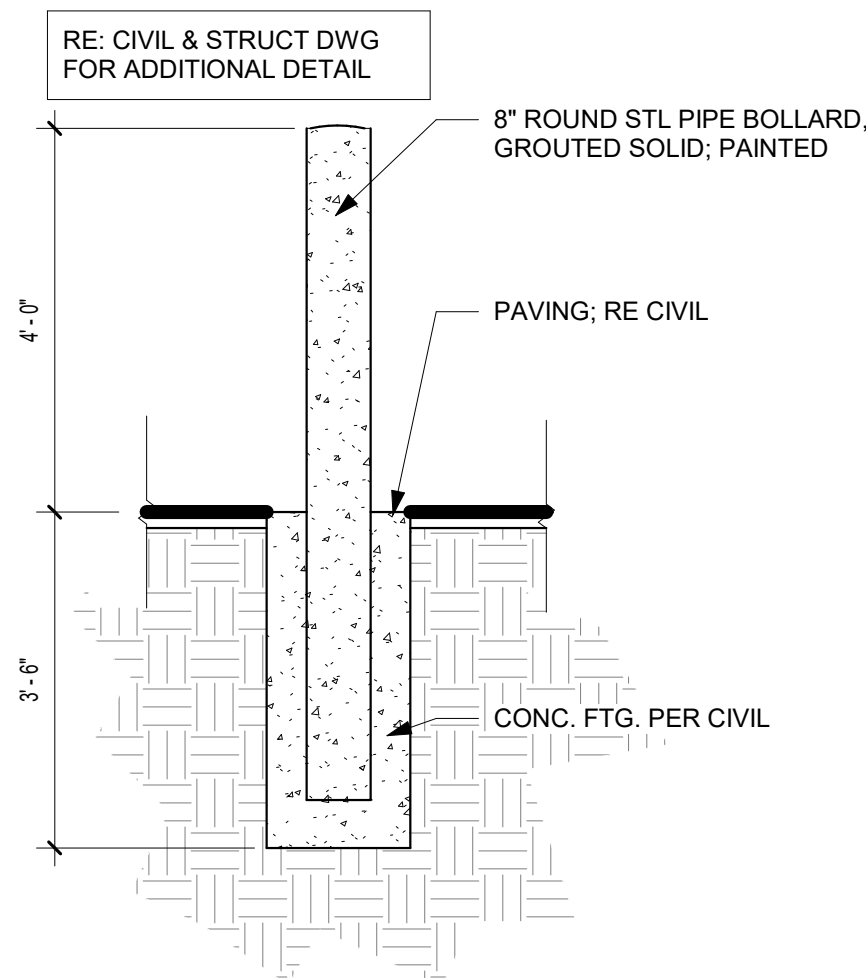
SHEET TITLE  
PERSPECTIVES

PROJECT NUMBER: 23096

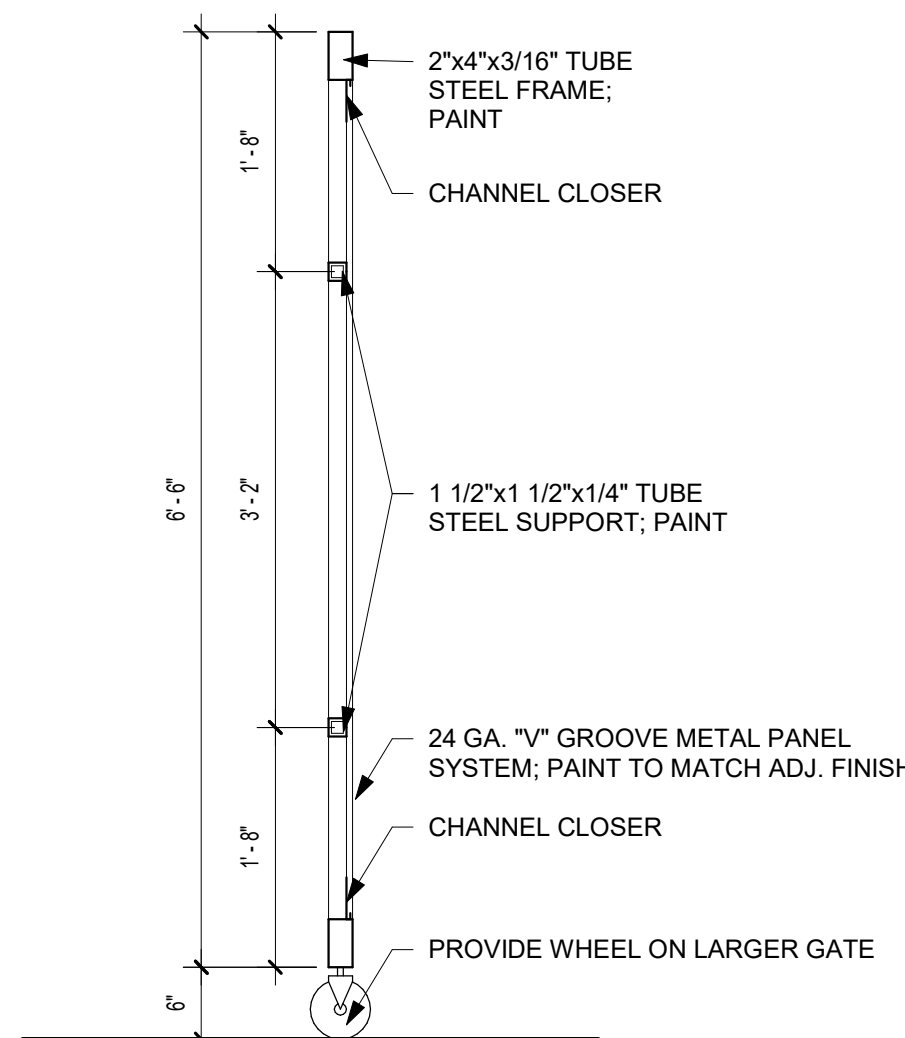
SHEET NUMBER:

A4

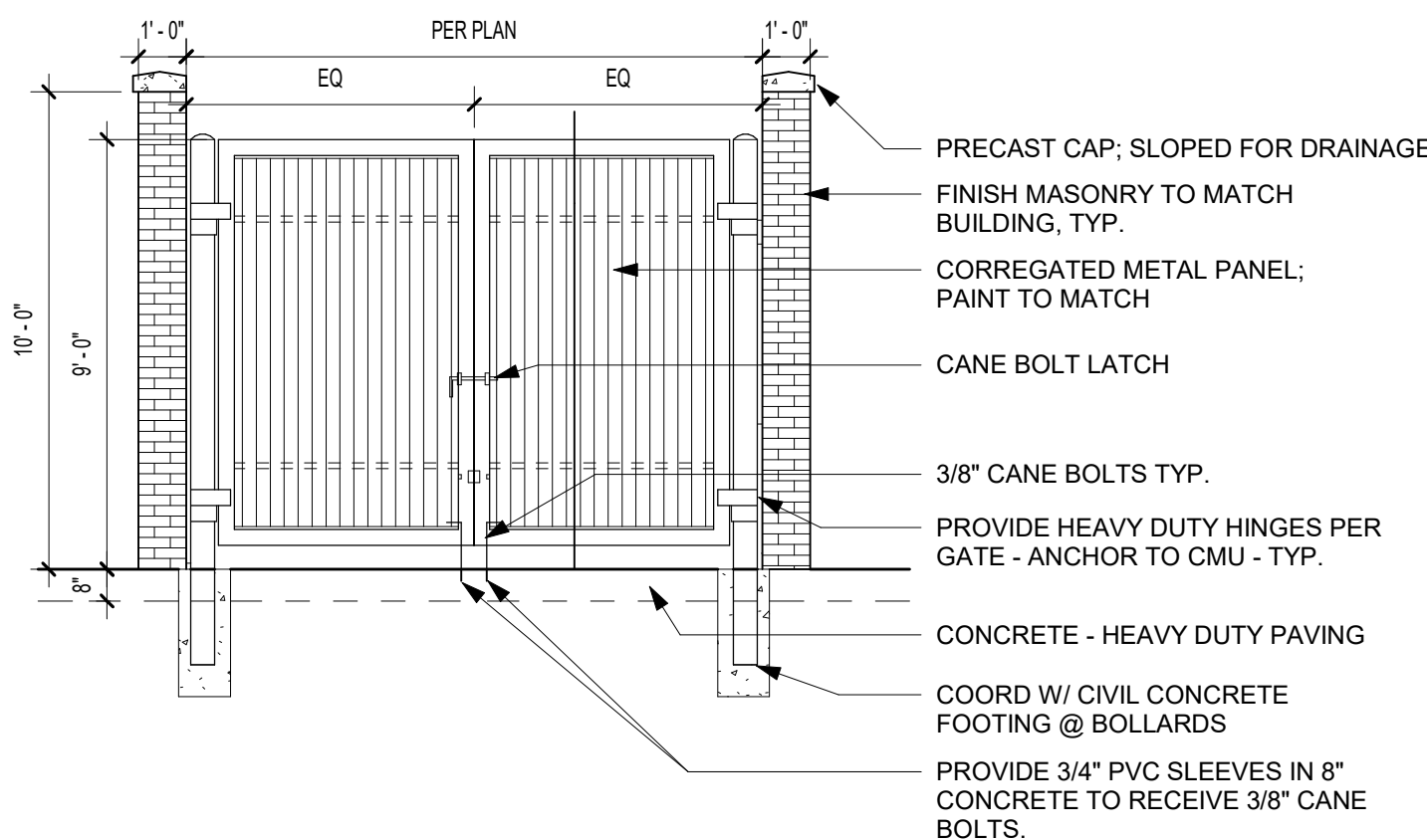




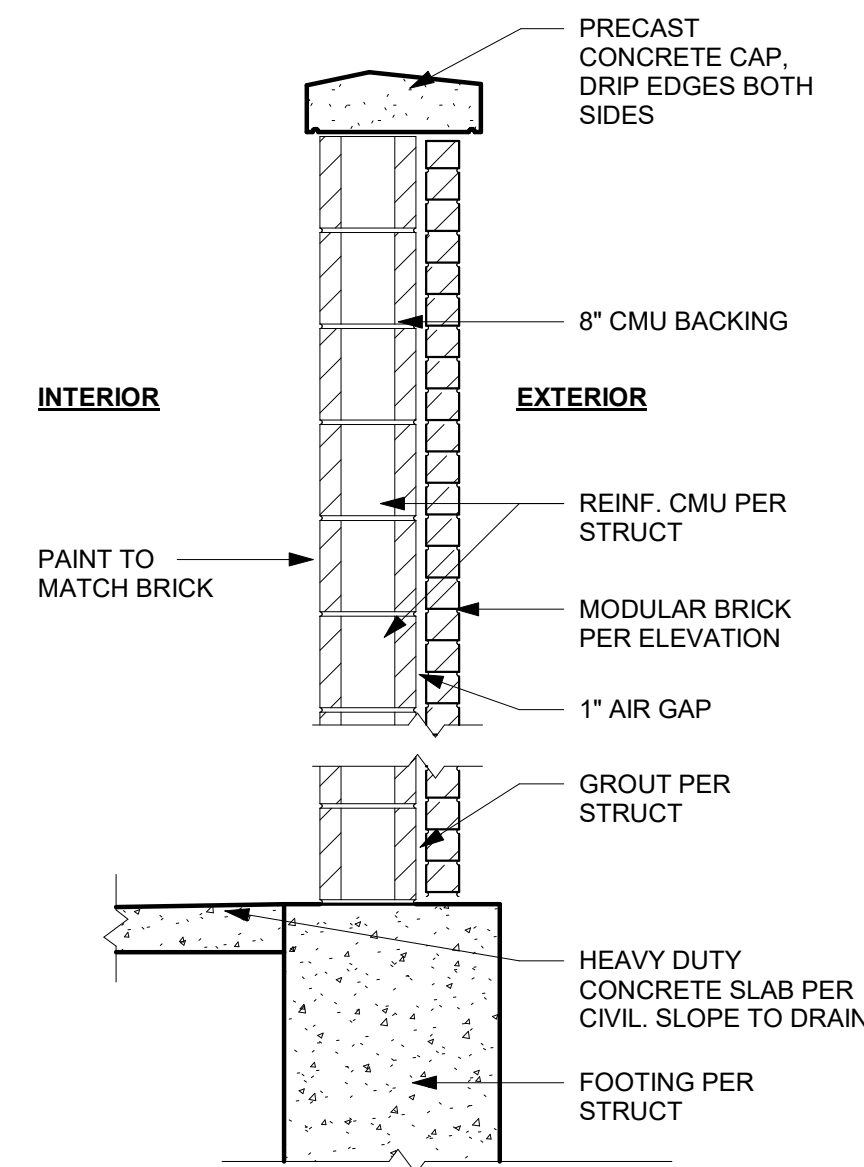
B3 SITE - BOLLARD - STEEL  
1/2" = 1'-0"



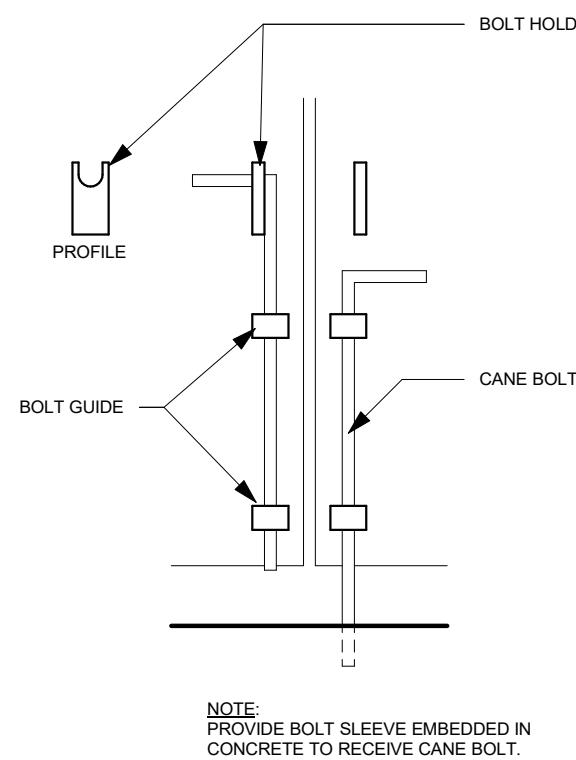
C2 TRASH GATE SECTION  
3/4" = 1'-0"



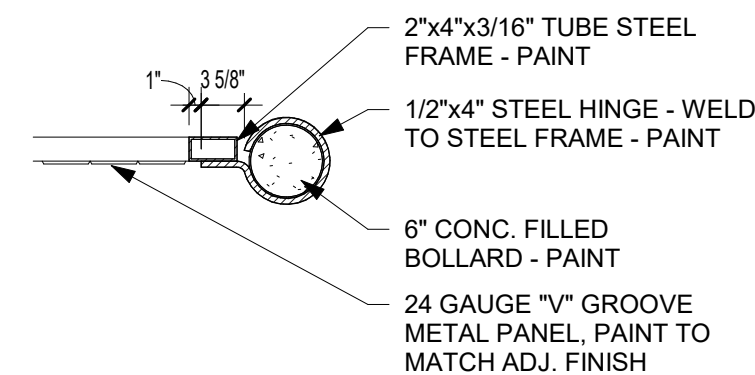
B2 ENCLOSURE FRONT ELEVATION  
1/4" = 1'-0"



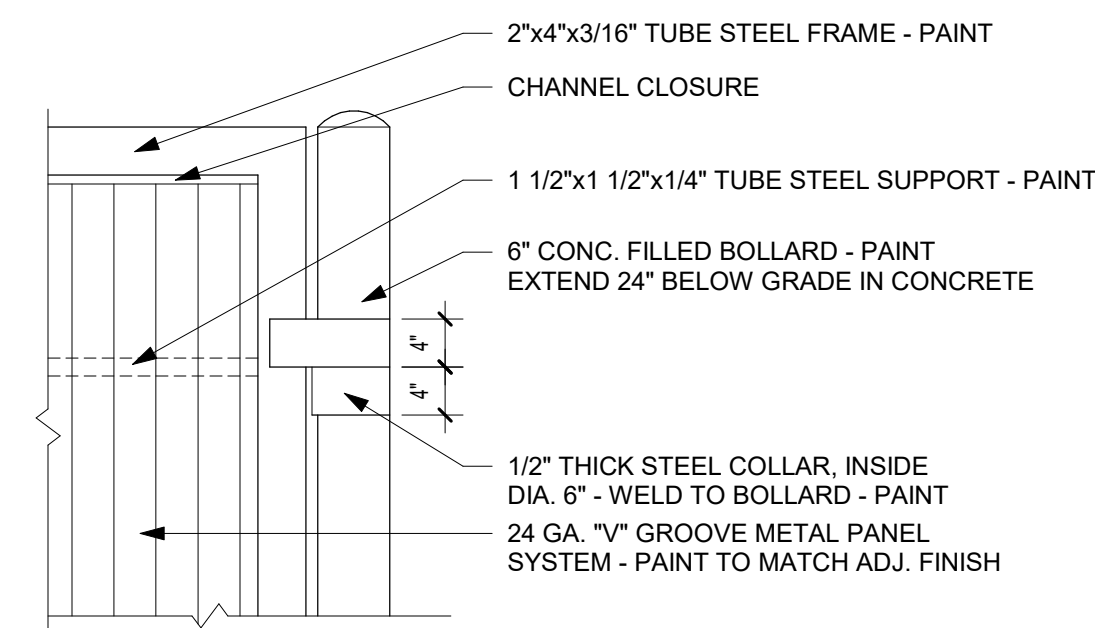
C1 SITE - ENCLOSURE - CMU - WALL SECTION  
3/4" = 1'-0"



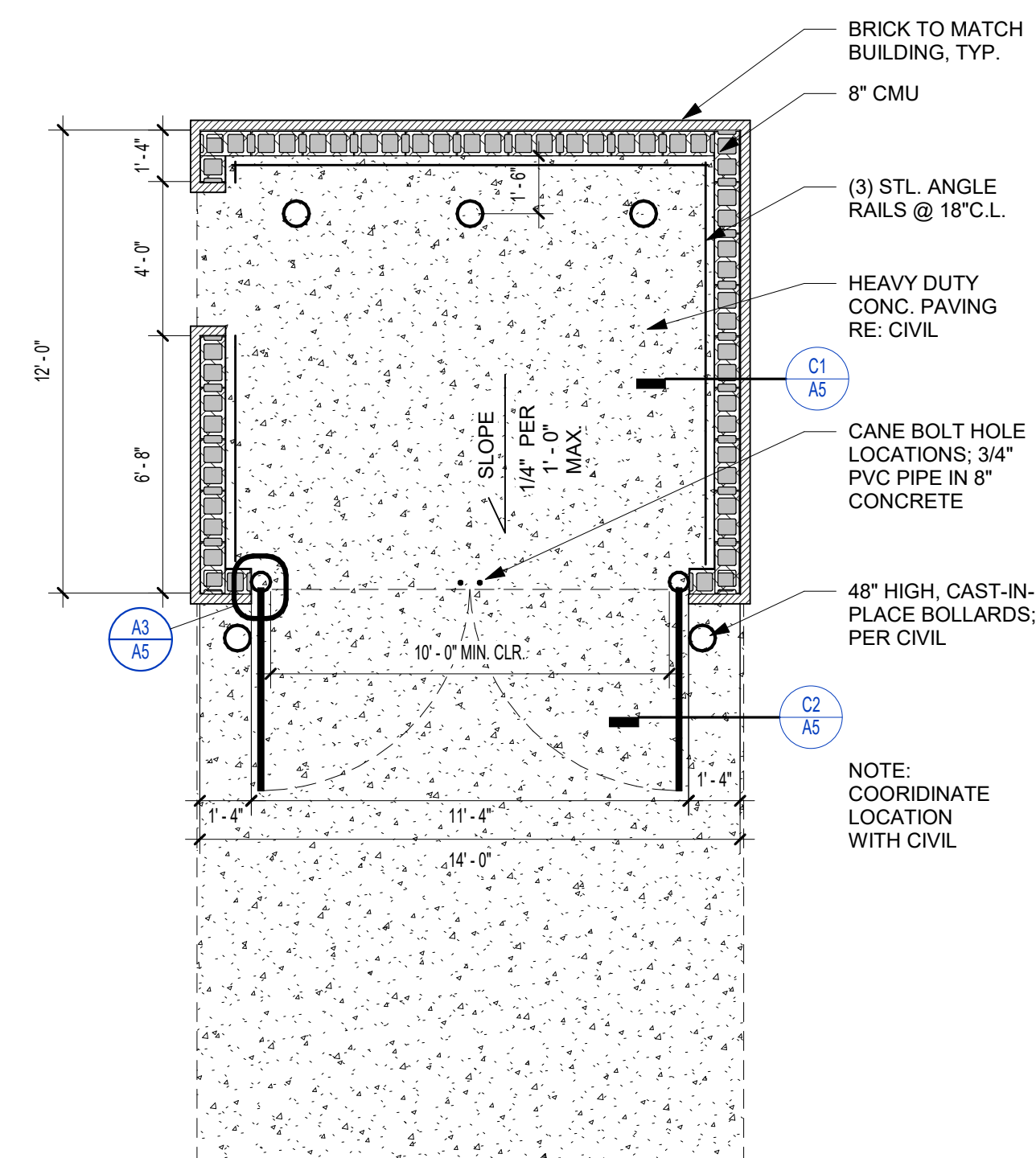
A4 SITE - CANE BOLT DETAIL  
3" = 1'-0"



A3 TRASH GATE CROSS SECTION  
3/4" = 1'-0"



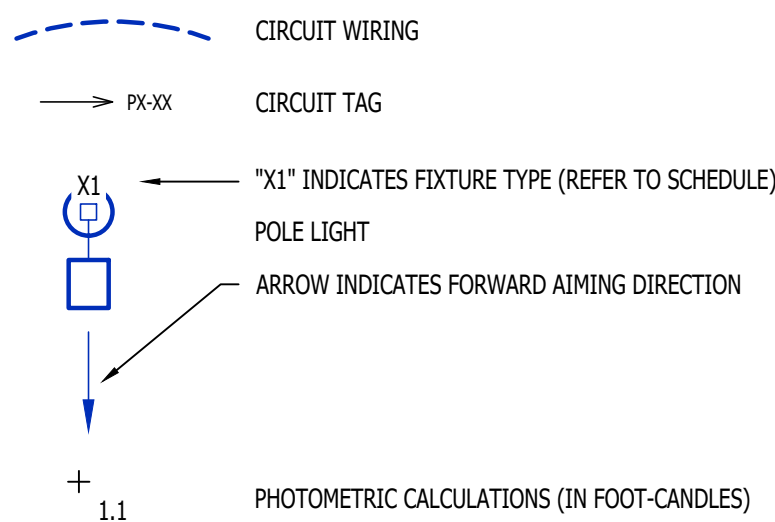
A2 TRASH GATE DETAIL  
3/4" = 1'-0"



A1 SINGLE DUMPSTER TRASH ENCLOSURE PLAN  
1/4" = 1'-0"

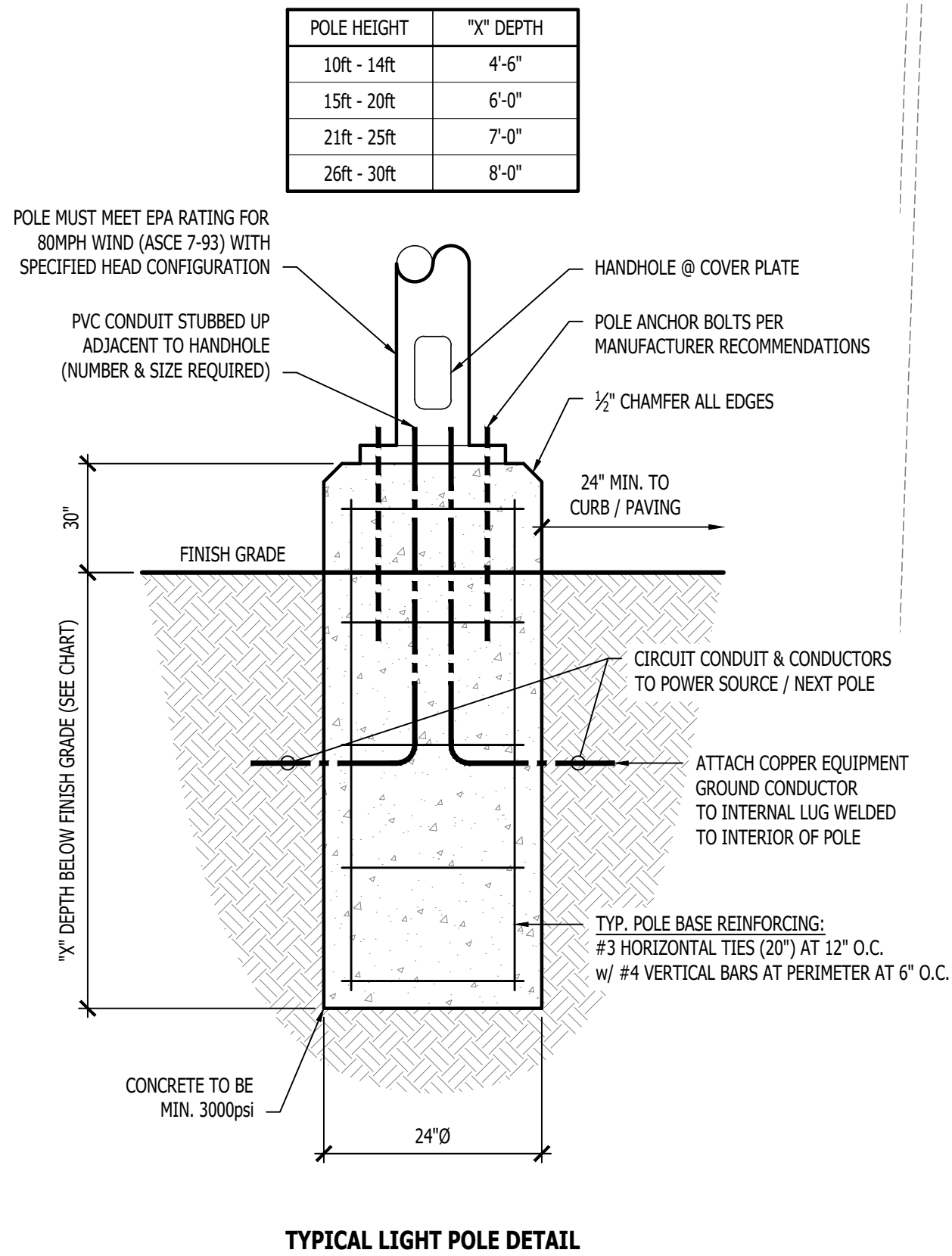


SITE LIGHTING PLAN SYMBOL LEGEND

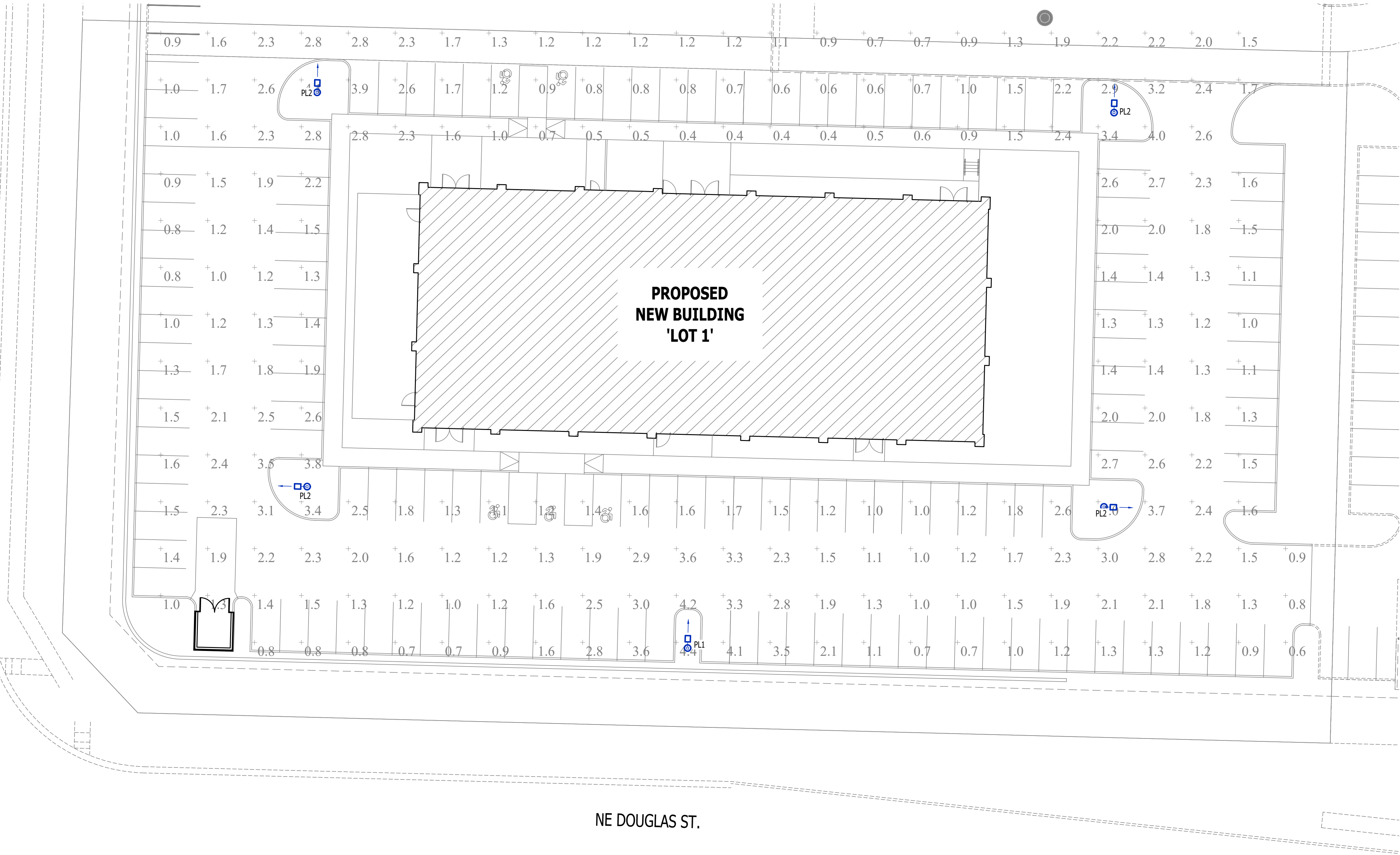


SITE LIGHTING PLAN GENERAL NOTES:

- SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
- PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.
- BUILDING-MOUNTED EXTERIOR LIGHTING IS NOT YET DESIGNED FOR PROPOSED BUILDING. ALL BUILDING-MOUNTED LIGHTING WILL BE INTENDED AS ACCENT LIGHTING AND NOT INTENDED TO PROVIDE GENERAL AREA LIGHTING. ALL BUILDING-MOUNTED LIGHTING SHALL COMPLY WITH CITY OF LEE'S SUMMIT UDO SECTIONS 8.220, 8.260, & 8.270.



NE COLBURN RD.



NE DOUGLAS ST.



SITE LIGHTING PLAN

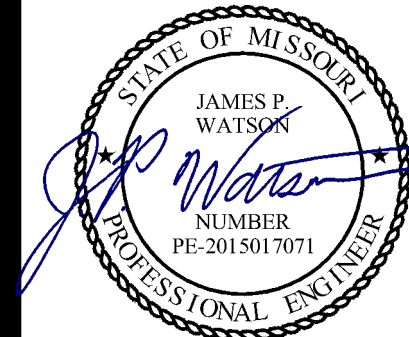
SCALE: 1" = 20 ft

SITE LIGHTING FIXTURE SCHEDULE

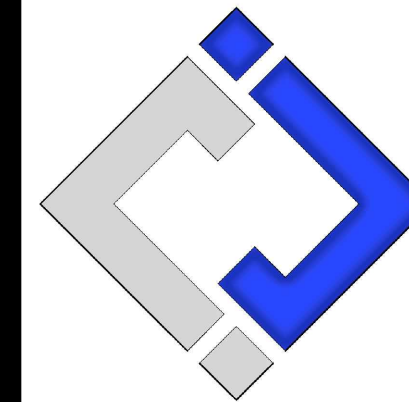
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
PL1	MCGRAW-EDISON	PRV-XL-PA3B-740-U-T4W-HSS	LED POLE LIGHT	20' #SSS POLE ON 30" BASE	30,161	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING
PL2	MCGRAW-EDISON	PRV-XL-PA3B-740-U-SWQ	LED POLE LIGHT	20' #SSS POLE ON 30" BASE	31,559	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING
NOTES: 1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO ORDERING.										

SITE LIGHTING CALCULATION SUMMARY

AREA / LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PARKING / DRIVE AISLES	ILLUMINANCE	FC	1.71	4.4	0.4	4.3	11.0
NOTES: 1. PHOTOMETRIC CALCULATIONS DO NOT INCLUDE EXISTING LIGHTING							



James Watson, P.E. October 17, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680



J-SQUARED  
ENGINEERING

2400 Bluff Creek Drive, Suite 101  
Columbia, Missouri 65201  
573.234.4492  
www.j-squaredeng.com

J2 PROJECT No: J21003

J2 DESIGN: ACW

ISSUE TITLE DATE

FDP SUBMITTAL 10 - 17 - 2024


MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

Village at Discovery Park Lot 1  
SITE LIGHTING

221 NE Alura Way  
Lee's Summit, Jackson County, MO 64064

AHJ APPROVAL STAMP

SHEET TITLE

SITE LIGHTING  
PLAN

SHEET NUMBER

SL1