#### **PROJECT CONTACTS**

#### DEVELOPER:

SCENIC DEVELOMENT LLC 6731 W 121ST STREET STE 100 OVERLAND PARK, KS 66209 CONTACT: JORDAN ANDERSON PHONE: 913.730.1094 EMAIL: Jordan.Anderson@Scenic-Dev.com

**CIVIL ENGINEER:** 

OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.442.6044 EMAIL: JSELLERS@OLSSON.COM

SURVEYOR:

OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, PLS PHONE: 816.442.6059 EMAIL: JROUDEBUSH@OLSSON.COM

LANDSCAPE ARCHITECT: OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116

CONTACT: JACOB HODSON PHONE: 816.442.6030 EMAIL: JHODSON@OLSSON.COM



NO OIL OR GAS WELLS ARE LOCATED ON THE PROPERTY. INFORMATION VERIFIED VIA MISSOURI DNR https://dnr.mo.gov/geology/geosrv/oilandgas.htm

# RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

1501 SW ARBORWALK BLVD. LEE'S SUMMIT, MO



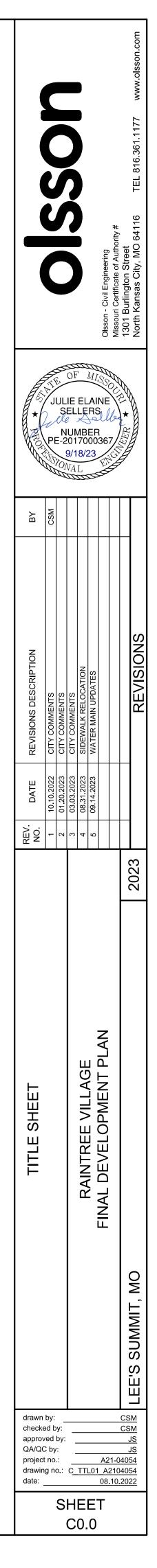
VICINITY MAP

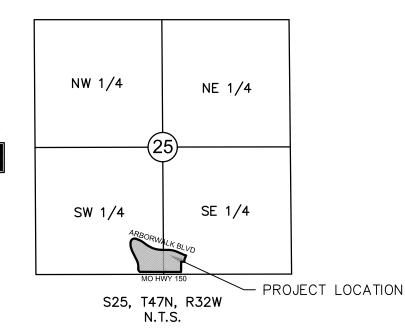
### PROPERTY DESCRIPTION:

A TRACT OF LAND IN THE SOUTHWEST AND SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY MISSOURI BEING BOUNDED AND DESCRIBED BY OR UNDER THE DIRECT SUPERVISION OF JASON S ROUDEBUSH, P.L.S. 2002014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER, ALSO BEING THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 87'53'43" EAST, 391.50 FEET TO THE SOUTHWEST CORNER OF AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, A MINOR SUBDIVISION IN SAID LEE'S SUMMIT RECORDED JANUARY 6, 2006 AS INSTRUMENT NUMBER 200610002453 IN BOOK 191 AT PAGE 53 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTH 02°06'17" EAST, ON THE WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A, 70.00 FEET; THENCE NORTH 02°05'48" EAST, ON SAID WESTERLY LINE, 7.33 FEET TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF MISSOURI STATE HIGHWAY NO. 150, AS ESTABLISHED BY A MISSOURI STATE HIGHWAY NO. 150 SURVEY RECORDED ON JULY 9, 2009 AS INSTRUMENT NUMBER 2009E0068194 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE AND ALSO BEING THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 88°02'15" WEST, ON SAID EXISTING NORTHERLY RIGHT-OF-WAY LINE, 864.32 FEET TO A POINT ON THE EXISTING EASTERLY RIGHT-OF-WAY LINE OF SW. ARBORIDGE DRIVE AS ESTABLISHED BY ARBORWALK 4TH PLAT, A-4 THRU K-4, RECORDED MAY 6, 2005 AS INSTRUMENT NUMBER 200510038320 IN BOOK 186 AT PAGE 73 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTHWESTERLY ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 63'56'56" WEST WITH A RADIUS OF 60.00 FEET, A CENTRAL ANGLE OF 66'03'30" AND AN ARC DISTANCE OF 69.18 FEET; THENCE NORTH 02'06'35" EAST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 43.75 FEET; THENCE NORTHERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 325.00 FEET, A CENTRAL ANGLE OF 26'31'46" AND AN ARC DISTANCE OF 150.48 FEET; THENCE NORTH 24'25'11" WEST, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, 240.58 FEET; THENCE NORTHERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE ON A CURVE TO THE RIGHT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 36'32'00" AND AN ARC DISTANCE OF 175.35 FEET; THENCE NORTHEASTERLY, ON SAID EXISTING EASTERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING A COMMON TANGENT WITH THE LAST DESCRIBED COURSE WITH A RADIUS OF 84.00 FEET, A CENTRAL ANGLE OF 100'32'29" AND AN ARC DISTANCE OF 147.40 FEET; TO A POINT ON THE EXISTING SOUTHERLY RIGHT-OF-WAY LINE OF SW. ARBORWALK BOULEVARD AS ESTABLISHED BY SAID ARBORWALK 4TH PLAT, A-4 THRU K-4; THENCE SOUTH 67'20'42" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 59.12 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 67°20'44" EAST WITH A RADIUS OF 420.00 FEET, A CENTRAL ANGLE OF 15'11'39" AND AN ARC DISTANCE OF 111.38 FEET; THENCE SOUTH 52'09'04" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 113.01 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 480.00 FEET, A CENTRAL ANGLE OF 35'42'22" AND AN ARC DISTANCE OF 299.13 FEET; THENCE SOUTH 87'51'25" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 157.54 FEET; THENCE EASTERLY, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, ON A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 87'51'23" EAST WITH A RADIUS OF 470.00 FEET, A CENTRAL ANGLE OF 22'40'59" AND AN ARC DISTANCE OF 186.07 FEET; THENCE SOUTH 65"10'24" EAST, ON SAID EXISTING SOUTHERLY RIGHT-OF-WAY LINE, 183.16 FEET; THENCE SOUTHEASTERLY, ON SAID EXISTING SOUTHERY RIGHT-OF-WAY LINE, ON A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 530.03 FEET, A CENTRAL ANGLE OF 02'47'35" AND AN ARC DISTANCE OF 25.84 FEET TO THE NORTHWEST CORNER OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; THENCE ALONG A LINE NON-TANGENT TO SAID CURVE, SOUTH 24'49'36" WEST, ON SAID WESTERLY LINE OF SAID AMENDED ARBORWALK - 6TH PLAT, LOTS 3001 THRU 3003 AND TRACT 6-A; 92.90 FEET; THENCE SOUTH 02°05'48" WEST, ON SAID WESTERLY LINE, 41.91 FEET; THENCE NORTH 87'54'12" WEST, ON SAID WESTERLY LINE, 66.85 FEET; THENCE SOUTH 02'05'48" WEST, ON SAID WESTERLY LINE, 217.62 FEET TO THE POINT OF BEGINNING. CONTAINING 516,669 SQUARE FEET OR 11.86 ACRES, MORE OR LESS.

Sheet Numbe
C0.0
C1.0
C2.0
C3.0
C3.1
C3.2
C3.3
C3.4
C3.5
C3.6
C4.0
C4.1
C4.2
C4.3
C4.4
C4.5
C4.6
C5.0
C6.0
C7.0
C7.1
C7.2
C7.3
C7.4
C7.5
C7.6
C7.8
C8.0
C9.0
C9.1
C9.2
C9.3
C9.4
C9.5
C10.0
C10.1
L1.0
L1.1
L1.2
L1.3
L1.4
A2.01
A2.02
A2.03
A2.04
E1.1

		$\mathbf{a}$
		SW 1/4 SE 1/4
		ARBORWILKBLVD
		I TALK BLVD
	L	MO HWY 150 S25, T47N, R32W
		N.T.S.
		LOCATION MAP
	Sheet List Table	
ber	Sheet Title	
	TITLE SHEET	
	GENERAL NOTES	
	EXISTING CONDITIONS & DEMOLITION PLAN	
	SITE PLAN	
	OVERALL DIMENSION PLAN	
	DIMENSION PLAN (A)	
	DIMENSION PLAN (B)	
	DIMENSION PLAN (C)	
	DIMENSION PLAN (D)	
	FIRE LANE PLAN	
	OVERALL GRADING PLAN	
	SPOT ELEVATIONS (A)	
	SPOT ELEVATIONS (B)	
	SPOT ELEVATIONS (C)	
	SPOT ELEVATIONS (D)	
	GRADING DETAILS	
	GRADING DETAILS	
	OVERALL UTILITY PLAN	
	STORMWATER MANAGEMENT PLAN	
	STORM PLAN & PROFILE	
	STORM PLAN - DOWNSPOUT CONNECTION A	
	STORM DESIGN TABLES	
	SANITARY SEWER PLAN	
	WATER PLAN & PROFILE	
	CONSTRUCTION DETAILS	
	CONSTRUCTION DETAILS	
	LANDSCAPE NOTES	
	LANDSCAPE PLAN	
	LANDSCAPE DETAILS	
	TRASH ENCLOSURE	
	GENERATOR SCREEN	
	ARCHITECTURAL ELEVATIONS	
	ELECTRICAL SITE PLAN	





<u>GENERAL NOTES</u>	<u>(</u>
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSU PLANS IN THEIR POSSESSION ARE THE MOST CURREN ARE FULLY COORDINATED WITH ALL SUBCONTRACTOR SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. D OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS,	NT VERSION ISSUED, S, AND PRESENT ON OLSSON MAY BE IRECT REQUESTS TO AGREEMENTS, 2
<ul> <li>AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR</li> <li>2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER</li> </ul>	DEVIATIONS FROM
DEVELOPER. 3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO IN APPROVAL BY THE OWNER OR THE OWNER'S REPRES	
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIO ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR	NAL PURPOSES
QUANTITIES AND ITEMS OF WORK. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRO MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE IN THE PLANS.	
<ol> <li>THE FLANS.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTA PERMITS, PAYING ALL FEES, AND FOR OTHERWISE CO APPLICABLE REGULATIONS GOVERNING THE WORK.</li> </ol>	
<ol> <li>THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES ENCROACH ON WATERS OF THE U.S., INCLUDING WET NECESSARY PERMITS MAY BE OBTAINED. THE CONTRA REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBE</li> </ol>	LANDS, UNTIL ANY ACTOR SHALL
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUD THE GENERAL PUBLIC, AND PROPERTY DURING PERFOR WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY PROJECT AND NOT BE LIMITED BY WORKING HOURS. OBSERVATION BY THE ENGINEER OF THE CONTRACTO IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQU CONTRACTOR'S SAFETY MEASURES.	OR CONDITIONS OF DING VISITORS AND DRMANCE OF THE Y THROUGHOUT THE ANY CONSTRUCTION R'S PERFORMANCE
9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTO AND COORDINATE WITH ALL UTILITY COMPANIES AND RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY D	DR SHALL NOTIFY OBTAIN ANY
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTEC BOUNDARY CORNERS AND SECTION CORNERS. ANY B AND/OR SECTION CORNER DISTURBED OR DAMAGED ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR L STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSI	TION OF ALL OUNDARY CORNER BY CONSTRUCTION LICENSED IN THE
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTEC PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NEO PREVENT DAMAGE DURING CONSTRUCTION. THE CONT RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTIN CONSTRUCTION ACTIVITIES.	CESSARY TO RACTOR IS ALSO 1
12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR S OWNER AND ENGINEER TO PERFORM A FINAL WALK- CONSTRUCTION SITE.	
REFERENCES	
1. ARCHITECTURAL AND STRUCTURAL ELEMENTS SHOWN ARE FOR REFERENCE ONLY. CONTRACTORS AND SUR' REFERENCE THEIR RESPECTIVE PLANS FOR DESIGN IN	VEYORS SHALL
2. THE CONTRACTOR SHALL ADHERE TO THE SITE PREP STRUCTURAL FILL RECOMMENDATIONS IN THE GEOTEC PROVIDED BY THE GEOTECHNICAL ENGINEER INCLUDIN ADDENDUMS. THE STANDARDS AND SPECIFICATIONS ( MISSOURI SHALL ALSO APPLY AND TAKE PRECEDENC THAN THE GEOTECHNICAL REPORT OR WHEN NO GEO IS GIVEN.	HNICAL REPORT AS IG ALL CURRENT DF LEE'S SUMMIT, E WHEN STRICTER
<ol> <li>UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN TH FOLLOWING SHALL APPLY;</li> <li>A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BE CONFORM TO THE LATEST CODES AND ORDINANC SUMMIT, MISSOURI.</li> <li>B. ALL CONSTRUCTION IN MoDOT RIGHT-OF-WAY SH THE LATEST SPECIFICATIONS ADOPTED BY U.S. D TRANSPORTATION AND MoDOT.</li> <li>C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM EDITION OF THE MANUAL FOR UNIFORM TRAFFIC (MUTCD).</li> </ol>	LOW, SHALL ES OF LEE'S IALL CONFORM TO EPARTMENT OF WITH THE CURRENT
<ul> <li>ALL UTILITY EXTENSIONS AND CONSTRUCTION SHATTHE STANDARDS AND SPECIFICATIONS OF THE UTE.</li> <li>ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) CONFORMANCE WITH THE SPECIFICATIONS OF LEE AND THE RECOMMENDATIONS OF THE GEOTECHNIC</li> </ul>	TILITY COMPANIES SHALL BE IN 'S SUMMIT, MISSOURI
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MANAGER AND COORDINATING ANY MAILBOXES THAT FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR BY THE FEDERAL GOVERNMENT.	MAY BE DISTURBED.
EXISTING CONDITIONS	
1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOM THE EXISTING CONDITIONS OF THE PROJECT AREA.	E FAMILIAR WITH
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERF INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTION SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUI AND CONSISTENCY OF ANY EXISTING ROCK LAYERS U PROJECT SITE. CONTACT THE ENGINEER REGARDING A THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM DESIGNED.	NS REGARDING SITE DES THE LOCATION JNDERLYING THE ANY DISCREPANCIES
3. EXISTING CONDITIONS WERE DETERMINED THROUGH A METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SI PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EX EXCAVATIONS AND LOCATE EXISTING UNDERGROUND SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT F WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.	RY, AVAILABLE ARE APPROXIMATE TE IMPROVEMENTS XPLORATION UTILITIES

#### CONSTRUCTION

- THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
- THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
- IN ADDITION TO THE CONDITIONS OF THE GEOTECHNICAL REPORT AND AS A MINIMUM THE CONTRACTOR SHALL PERFORM THE GRADING AS FOLLOWS:
- A. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL REMOVE EXCESS STRIPPINGS AND EXCESS EXCAVATION WITHIN 30 DAYS OF COMPLETION OF GRADING OPERATIONS.
- B. AREAS TO RECEIVE FILL AND AREAS CUT TO SUBGRADE LEVEL SHALL BE SCARIFIED AND THE TOP 8-INCH DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE SUBGRADE SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.
- C. FILL SHALL BE PLACED IN MAXIMUM OF 8 INCH LIFTS. D. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 6 INCHES OVER ALL AREAS DISTURBED BY THE WORK. LARGE STONES, STICKS AND LUMPS SHALL BE REMOVED OR BROKEN UP. AND THE TOPSOIL SHALL BE LEVELED AND RAKED. ALL DISTURBED AREAS SHALL BE LANDSCAPED PER LANDSCAPE PLANS OR SHALL BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED.
- E. CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS AS REQUIRED.
- THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
- ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
- THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

#### SHOP DRAWINGS

- THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION . CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED
- A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO
- B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK; C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES,
- SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO: D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND
- SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS. E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC
- WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.

#### SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO. THE FOLLOWING:

- A. ALL STORM SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT. B. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS
- PROJECT.
- C. ALL SITE FENCING AND RAILING INCLUDING ANY GATES. D. ALL LANDSCAPE AND RETAINING WALLS.
- E. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

SITE PLAN NOTES

- 1. ALL PAVEMENT DIMENSIONS ARE TO BACK OF CURB. OR EDGE OF PAVEMENT WHERE NO CURB IS PRESENT. UNLESS OTHERWISE NOTED. DIMENSIONED TIES BETWEEN PROPERTY LINES AND BUILDING FACES OR PAVEMENT ARE AS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ANY ADJUSTMENTS NECESSARY FOR FOUNDATIONS, BEDDING EXTENSIONS, SURCHARGING, ETC.
- 2. INSTALLED PAVEMENT SHALL MATCH EXISTING PAVEMENT IN GRADE AND ALIGNMENT TO PROVIDE SMOOTH SURFACE TRANSITIONS. INSTALLED CURB & GUTTER SHALL MATCH EXISTING CURB & GUTTER IN SIZE AND TYPE OR CONTRACTOR SHALL INCLUDE A TRANSITION FROM NEW TO EXISTING OF NO LESS THAN 5' AS MEASURED ALONG BACK OF CURB.
- 3 ALL ASPHALT PAVING SHALL BE IN CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. WHERE NOT COVERED BY THE ABOVE, ASPHALT PAVING SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF MoDOT.
- 4. ALL PCC PAVING SHALL BE IN CONFORMANCE WITH LOCAL CODES AND ORDINANCES AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. WHERE NOT COVERED BY THE ABOVE, PCC PAVING SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF MoDOT.
- 5. CONCRETE PAVEMENT JOINTS SHALL BE CONSTRUCTED AS FOLLOWS (REFER TO HARDSCAPE PLANS FOR SPECIFIC TREATMENT OF THESE ARFAS):
- A. CONTROL JOINTS SPACED AS SHOWN IN THESE PLANS OR AT INTERVALS NOT GREATER THAN 1.5x PANEL WIDTH OR 12 FEET (WHICHEVER IS SMALLER)
- CONTROL JOINTS SHALL BE TOOLED OR SAWCUT TO 1/4 THE SLAB THICKNESS. LOCAL STANDARDS AND SPECIFICATIONS SHALL TAKE PRECEDENCE WHERE MORE STRICT THAN THOSE LISTED HERE. CONSTRUCTION JOINTS PLACED AT THE END OF EACH POUR AND WHEN PAVING OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR
- MORF ISOLATION JOINTS PLACED WHERE THE PAVEMENT ABUTS THE BUILDING, DRAINAGE STRUCTURES AND OTHER FIXED STRUCTURES, CONSTRUCTED WITH A 1/2" NON-EXTRUDING FILLER, CLOSED-CELL FOAM RUBBER OR A BITUMEN-TREATED FIBER-BOARD, AND WITH A
- THICKENED EDGE, INCREASED BY 20 PERCENT, TAPERED TO THE REGULAR THICKNESS IN 5 FEET. E. ALL EXPANSION JOINTS SHALL BE FILLED AND SEALED WITH A PLASTIC JOINT SEALANT MATERIAL.
- 6. ACCESSIBLE PARKING
- A. STALLS SHALL BE SIGNED WITH CITY/ADA APPROVED SIGN AND CONSTRUCTED IN STRICT ACCORDANCE WITH CITY/ADA CODES AND ORDINANCES.
- ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 2.00 PERCENT IN ANY DIRECTION. ACCESSIBLE SIDEWALKS HAVE A MAXIMUM CROSS SLOPE OF 2 PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF 5 PFRCFNT
- C. STALLS SHALL BE MARKED BY THE INTERNATIONAL HANDICAPPED SYMBOL AT INDICATED PARKING SPACES. USE A SUITABLE TEMPLATE THAT WILL PROVIDE A PAVEMENT MARKING WITH SHARP EDGES AND ENDS.
- 7. PAVEMENT MARKINGS SHALL NOT BE APPLIED UNTIL LAYOUT, COLORS AND PLACEMENT HAVE BEEN VERIFIED WITH THE ARCHITECT AND ENGINEER. THE INSTALLED PAVEMENT IS ALLOWED TO AGE AS RECOMMENDED BY THE MANUFACTURER (MINIMUM OF 24 HOURS). AND THE PAVEMENT SURFACE HAS BEEN SWEPT AND CLEANED.
- 8. PAVEMENT MARKINGS SHALL INCLUDE TRAFFIC LANES, PARKING BAYS, AREAS RESTRICTED TO HANDICAPPED PERSONS, CROSSWALKS, AND OTHER DETAIL PAVEMENT MARKINGS SHOWN IN THESE PLANS.
- 9. ALL PARKING LOT STRIPING SHALL BE SINGLE LINE 4" WIDE WHITE STRIPES UNLESS OTHERWISE INDICATED WITHIN THESE PLANS. ALL ROAD STRIPING SHALL BE AS INDICATED WITHIN THESE PLANS.
- 10. CURBS AT FIRE LANES AS DESIGNATIONS BY THE FIRE MARSHAL SHALL BE PAINTED OR OTHERWISE INDICATED PER CITY OF CITY CODES AND ORDINANCES.
- 11. PAINT FOR MARKING PAVEMENT SHALL CONFORM TO FEDERAL HIGHWAY MARKING STANDARDS (FHMS) AND CITY OF CITY CODES AND ORDINANCES. USE FLAT BLACK, WHITE, OR YELLOW AS DIRECTED WITHIN PLANS OR IN CONFORMANCE WITH THE FHMS. UNLESS OTHERWISE SPECIFIED USE LATEX. WATER-BASE EMULSION, READY-MIXED, COMPLYING WITH FS TT-P-1952 WITH DRYING TIME OF LESS THAN 45 MINUTES.
- 12. APPLY ALL MARKINGS USING APPROVED MECHANICAL EQUIPMENT (WITH PROVISIONS FOR CONSTANT AGITATION OF PAINT). CAPABLE OF APPLYING THE MARKING WIDTHS AS SHOWN AND A MINIMUM WET FILM THICKNESS OF 15 MILS. USE PNEUMATIC SPRAY GUNS FOR HAND APPLICATION OF PAINT. ALL PAINTING EQUIPMENT AND OPERATIONS SHALL BE UNDER THE CONTROL OF EXPERIENCED TECHNICIANS THOROUGHLY FAMILIAR WITH EQUIPMENT AND MATERIALS AND MARKING LAYOUTS.

GRADING PLAN NOTES

- 1. THE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE, SURFACE OF PAVEMENT, TOP OF CURBS, ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT PAVEMENT DEPTH FROM ELEVATIONS SHOWN.
- 2. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
- 3. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING AND SIDEWALKS WHEN FINISH LANDSCAPE MATERIALS ARE IN PLACE.
- 4. SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, OR FINISHED GRADE UNLESS OTHERWISE INDICATED. (SEE LEGEND)

### STORM SEWER PLAN NOTES

- 1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH LEE'S SUMMIT, MISSOURI.
- 2. ALL PIPE LENGTHS AND ELEVATIONS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- 3. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE BOX DURING INSTALLATION.
- 4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF STORM SEWER.
- 5. STORM SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
- 6. STRUCTURE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE STRUCTURE.
- 7. PIPE PENETRATIONS SHALL BE GROUTED TO ENSURE WATERTIGHT SEALS.

SANITARY SEWER PLAN NOTES

- 1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH LEE'S SUMMIT, MISSOURI.
- 2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- 3. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.
- 4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
- 5. SANITARY SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
- 6. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE MANHOLE.
- 7. PIPE PENETRATIONS SHALL BE USE GASKETS TO ENSURE WATERTIGHT SEALS.
- 8. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
- 9. SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING SHALL INCLUDE A. MANDREL TEST OF ALL GRAVITY SEWERS. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.
- AIR PRESSURE TEST OF ALL GRAVITY SEWERS. VACUUM TEST OF ALL MANHOLES.
- 10. GRAVITY SANITARY SEWER AND WATER LINES SHALL BE SEPARATED BY A MINIMUM OF 10'HORIZONTALLY WHEN PARALLEL AND 2'VERTICALLY WHEN CROSSING. WATER LINES SHALL CROSS ABOVE SANITARY SEWERS.

WATER PLAN NOTES

- 1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
- 2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF FITTING OR WALL OF VAULT.
- 3. COORDINATES ARE PROVIDED ALONG PIPE CENTERLINE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING INSTALLATIONS.
- 4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF WATER.
- 5. WATER PIPE TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
- 6. ALL PRIVATE WATER LINES SHALL BE A MINIMUM OF 48 INCHES AND MAXIMUM OF 60 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN UNLESS OTHERWISE NOTED.
- 7. IF AN AS-BUILT OF A WATER LINE IS REQUIRED OR EXPECTED THE CONTRACTOR SHALL NOT BACKFILL THE TRENCH UNTIL AN AS-BUILT SURVEY IS CONDUCTED.
- 8. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR AND AS REQUIRED BY THE UTILITY OWNER.
- 9. 8ALL EXISTING FIRE HYDRANTS ON SITE OR IN THE RIGHT-OF-WAY BETWEEN PROPERTY AND ROADWAY SHALL BE REPAINTED PER LOCAL CODES AND ORDINANCES.
- 10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.

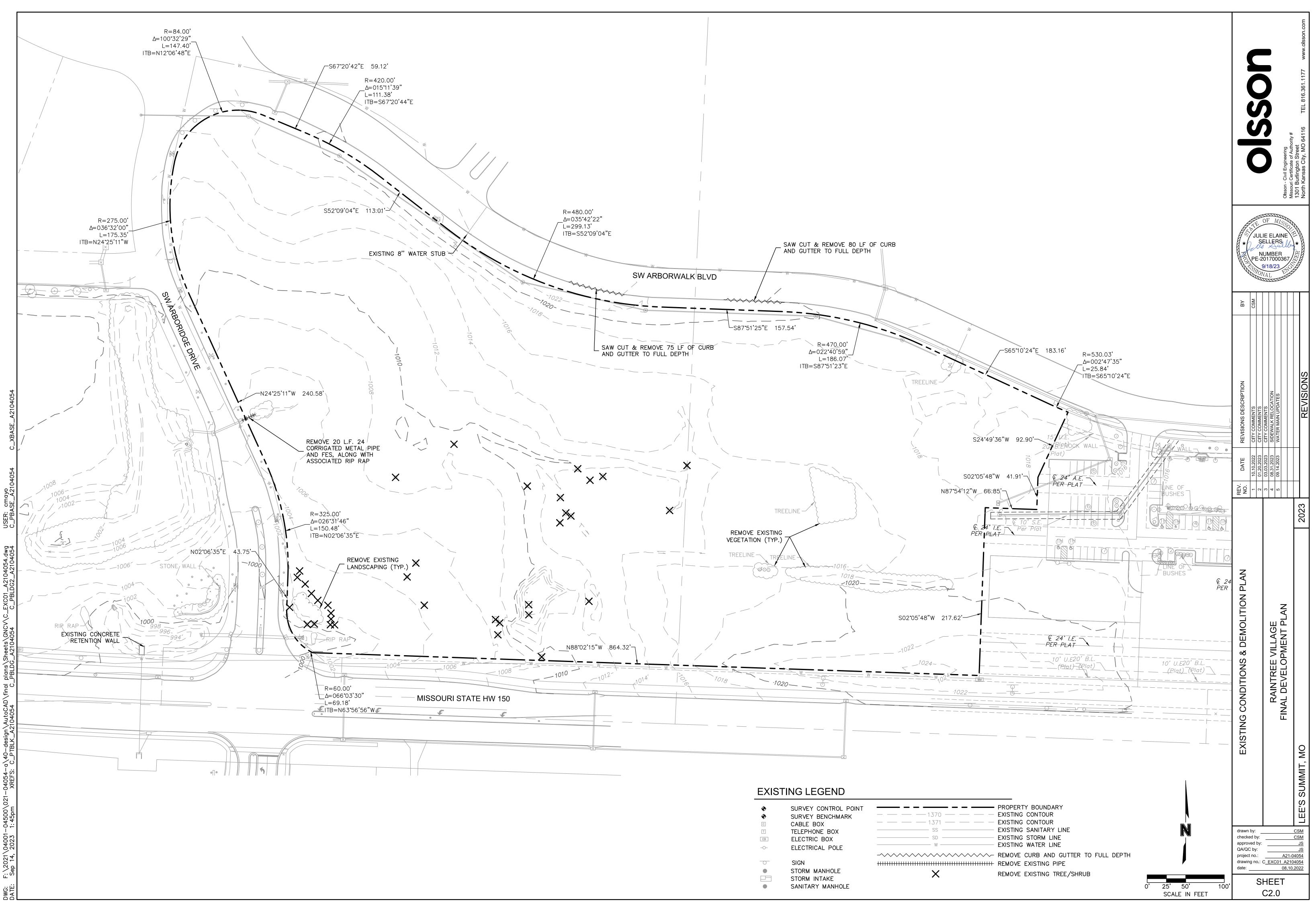
### **DEMOLITION PLAN NOTES**

- 1. ALL NECESSARY DEMOLITION IS EXPECTED TO BE PERFORMED AS INDICATED IN THE SITE DISTURBANCE. MASS GRADING. AND PUBLIC IMPROVMENT PLANS. CONTRACTOR SHALL CONTACT ENGINEER AND OWNER PRIOR TO PERFORMING ANY ADDITIONAL DEMOLITION ACTIVITIES.
- 2. THE CONTRACTOR SHALL COORDINATE ALL ITEMS TO BE SALVAGED AND/OR PROTECTED WITH SITE OWNER AND UTILITY OWNERS.
- 3. THE CONTRACTOR SHALL NOT INTERRUPT ANY UTILITY SERVICES TO ANY ADJACENT PROPERTIES. SHOULD ANY INTERRUPTIONS BECOME NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ADJACENT PROPERTY AND UTILITY OWNER AND MINIMIZE THE LENGTH OF TIME THE UTILITY IS INTERRUPTED TO THE GREATEST EXTENT POSSIBLE.
- 4. SECONDARY WIRING, SERVICES, IRRIGATION AND OTHER MINOR SITE IMPROVEMENTS THAT ARE NOT TO REMAIN IN SERVICE ARE TO BE DEMOLISHED AND REMOVED.
- 5. ALL PAVEMENT SAWCUTS ARE TO BE MADE IN STRAIGHT, CLEAN LINES LEAVING A CLEAN AND STABLE EDGE AT FULL PAVEMENT DFPTH
- 6. ALL PCC PAVEMENT AND ALL CURB SHALL BE REMOVED TO NEAREST JOINT.
- 7. ALL MATERIALS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN STRICT CONFORMANCE WITH LOCAL CODES AND ORDINANCES.
- 8. ALL TREE REMOVAL SHALL INCLUDE STUMPS AND ROOTS. DEPRESSIONS CREATED SHALL BE FILLED TO PROVIDE DRAINAGE.

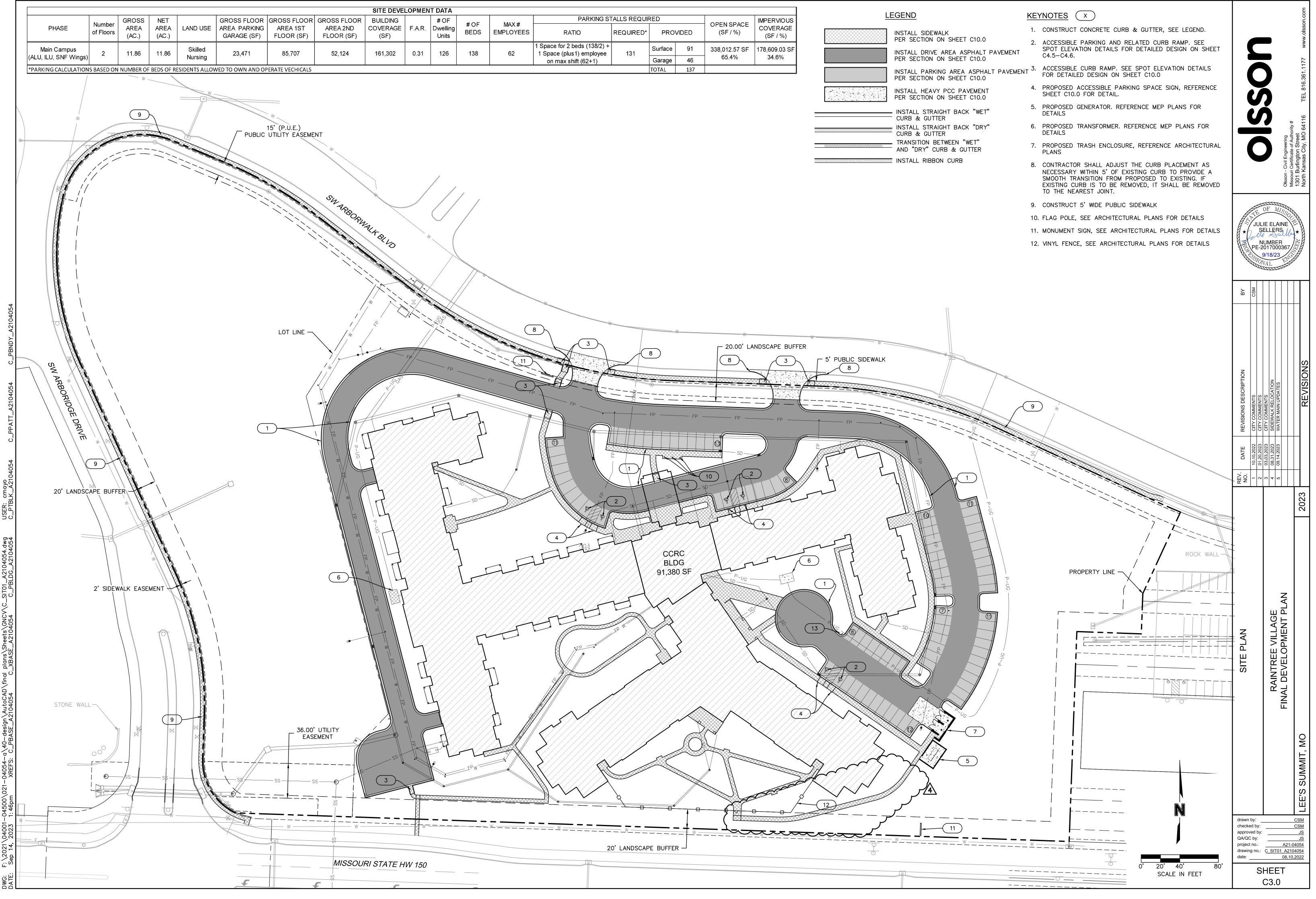
### DRY UTILITY PLAN NOTES

- 1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH UTILITY OWNER.
- 2. ALL ON-SITE WIRING AND CABLES SHALL BE PLACED UNDERGROUND AND WITHIN CONDUIT UNLESS OTHERWISE SPECIFIED IN THESE PLANS. IF NOT SPECIFIED, ALL CONDUIT SHALL BE IN CONFORMANCE WITH UTILITY OWNER STANDARDS AND SPECIFICATIONS.
- 3. TELEPHONE AND COMMUNICATION SERVICE ROUTING AND CONDUITS, IF SHOWN AT ALL, ARE SUGGESTED ALIGNMENTS ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AS REQUIRED BY MEP AND RELATED PLANS AS WELL AS SERVICE PROVIDER PRIOR TO PAVEMENT INSTALLATION.
- 4. ALL CONDUIT SHALL BE SCHEDULE 40 PVC PIPE AND SIZED PER MEP PLANS OR AS NOTED. CONDUIT SHALL BE SUFFICIENTLY FLEXIBLE TO ALLOW IT TO CONFORM TO MINOR CHANGES IN TRENCH DIRECTION OR ELEVATION. ALL OTHER BENDS SHALL BE MADE USING PRE-FORMED SWEEPS.

						Olsson - Civil Engineering	Missouri Certificate of Authority #	1301 Burlington Street	North Kansas City, MO 64116 TEL 816.361.1177 www.olsson.com
* DROED	PI ST			EL					
ВҮ	CSM								
REVISIONS DESCRIPTION	CITY COMMENTS	CITY COMMENTS	CITY COMMENTS	SIDEWALK RELOCATION	WATER MAIN UPDATES				REVISIONS
DATE	10.10.2022	01.20.2023	03.03.2023	08.31.2023	09.14.2023				
REV. NO.	-	2	с С	4	5				2023
GENERAL NOTES				RAINTRFF VII I AGF		FINAL DEVELOPMENT PLAN			LEE'S SUMMIT, MO
drawn checke approv QA/QC project drawin date:	ed b ed by no g n	by: :: :: S	Η	<u>т</u> Е	E.	<u>A</u> 08	<u>21-0</u> 210	CS CS 	M M JS JS 54 54

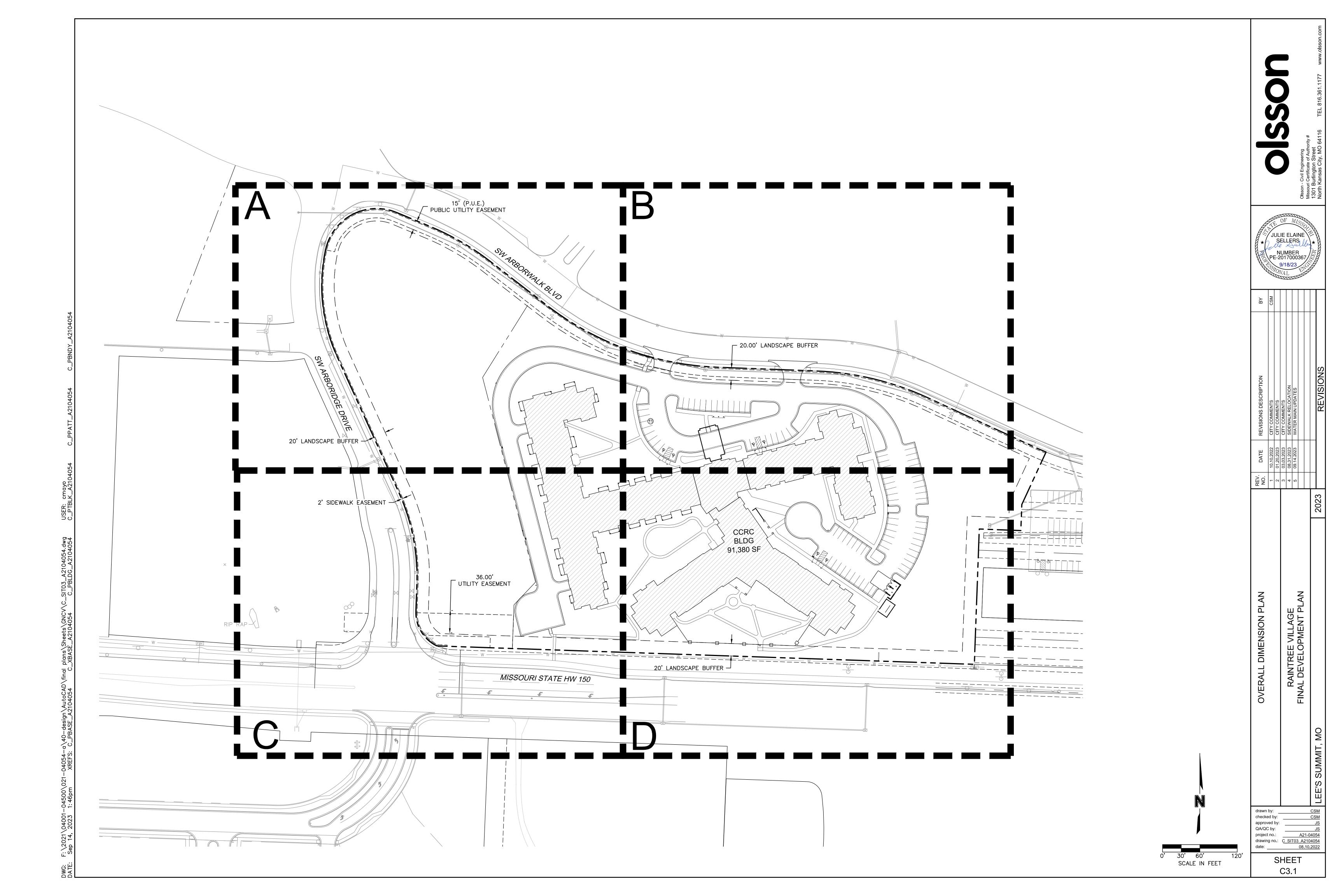


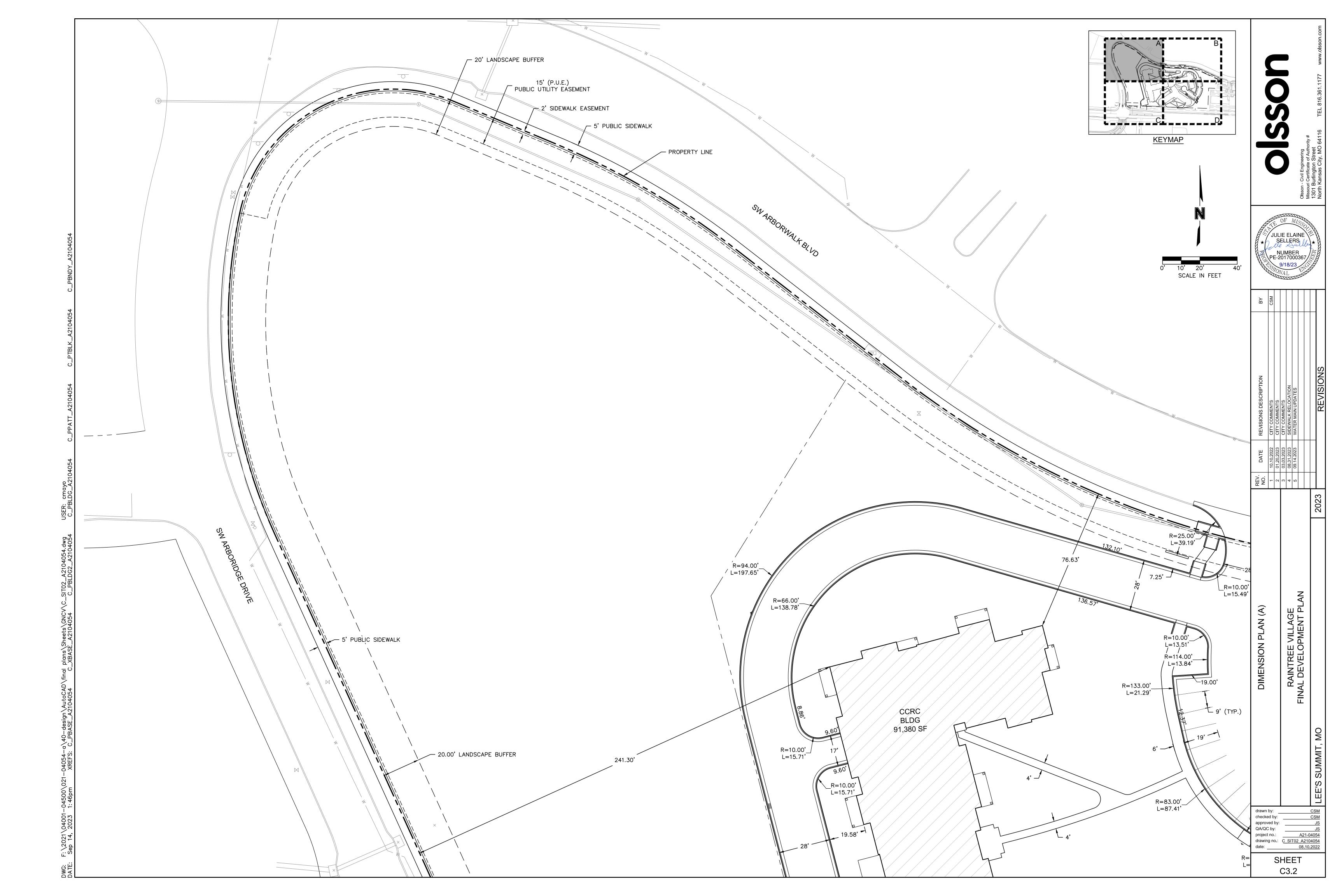
<b>+</b>	SURVEY CONTROL POINT	
<b>�</b>	SURVEY BENCHMARK	
С	CABLE BOX	
Т	TELEPHONE BOX	
EB	ELECTRIC BOX	
-0-	ELECTRICAL POLE	
0	SIGN	+++++++++++
•	STORM MANHOLE	
	STORM INTAKE	
•	SANITARY MANHOLE	

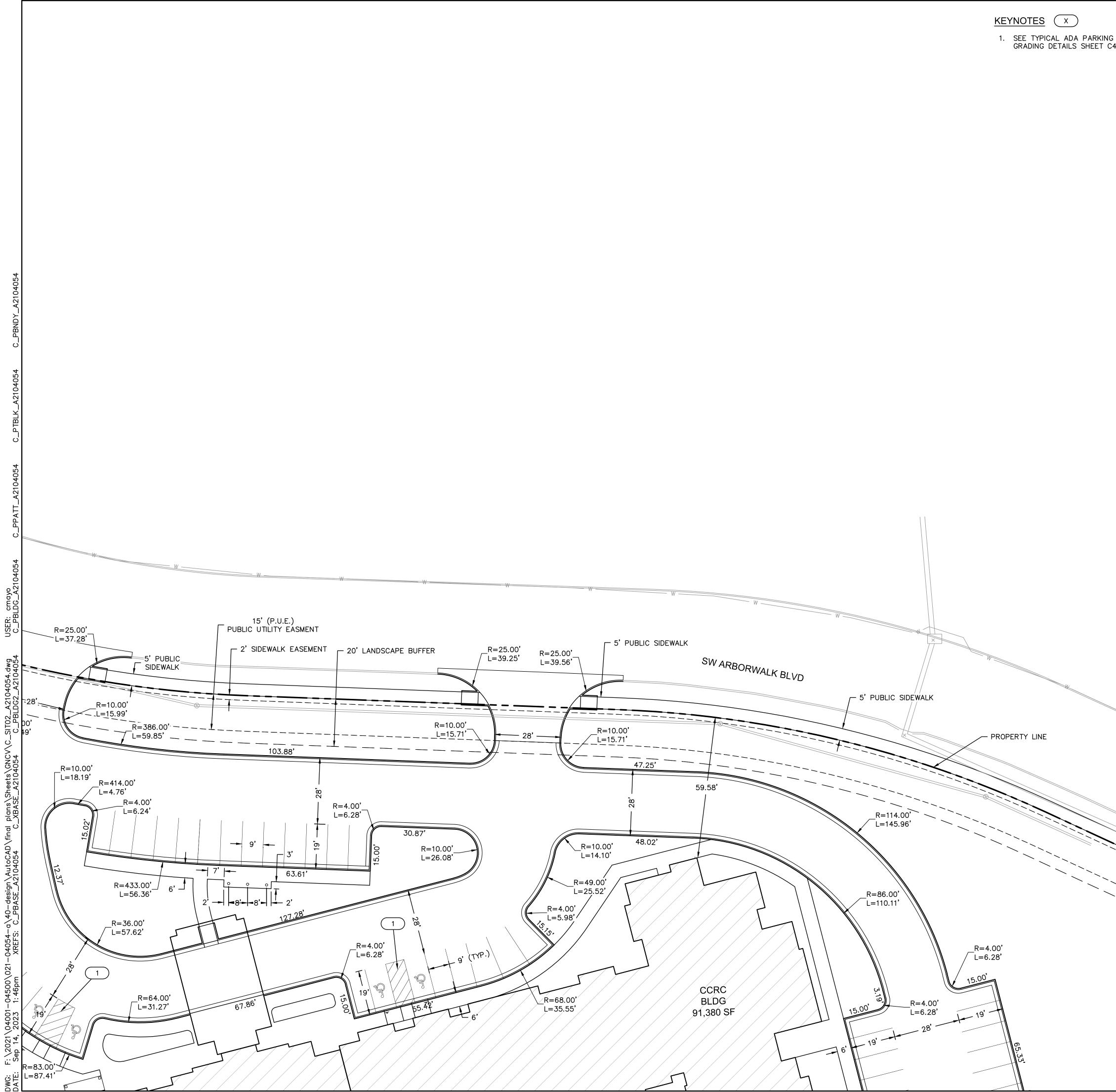


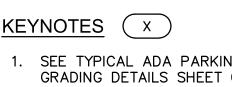
MEN	T DATA								
	#OF	#OF	MAX #	PARKING ST	TALLS REQUIF	RED		OPEN SPACE	IMPERVIOUS
4.R.	Dwelling Units	BEDS	EMPLOYEES	RATIO	REQUIRED*	PRO	VIDED	(SF / %)	COVERAGE (SF / %)
.31	126	138	62	1 Space for 2 beds (138/2) + 1 Space (plus1) employee	131	Surface	91	338,012.57 SF	178,609.03 SF
	120	100		on max shift (62+1)		Garage	46	65.4%	34.6%
						TOTAL	137		

<u>-</u>	
	INS <sup>-</sup> PER
888888888888888888888888888888888888888	
	<b>—</b>

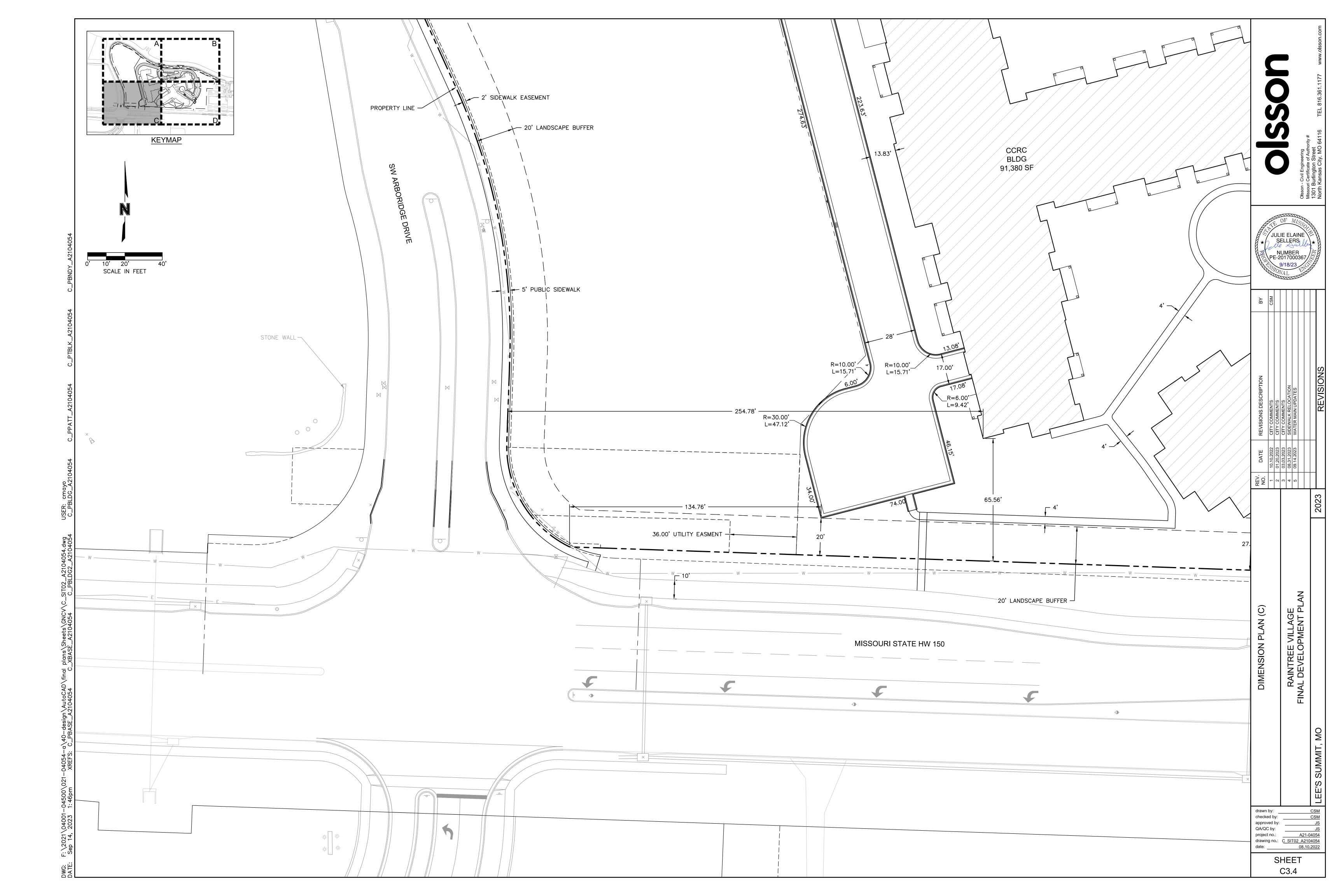


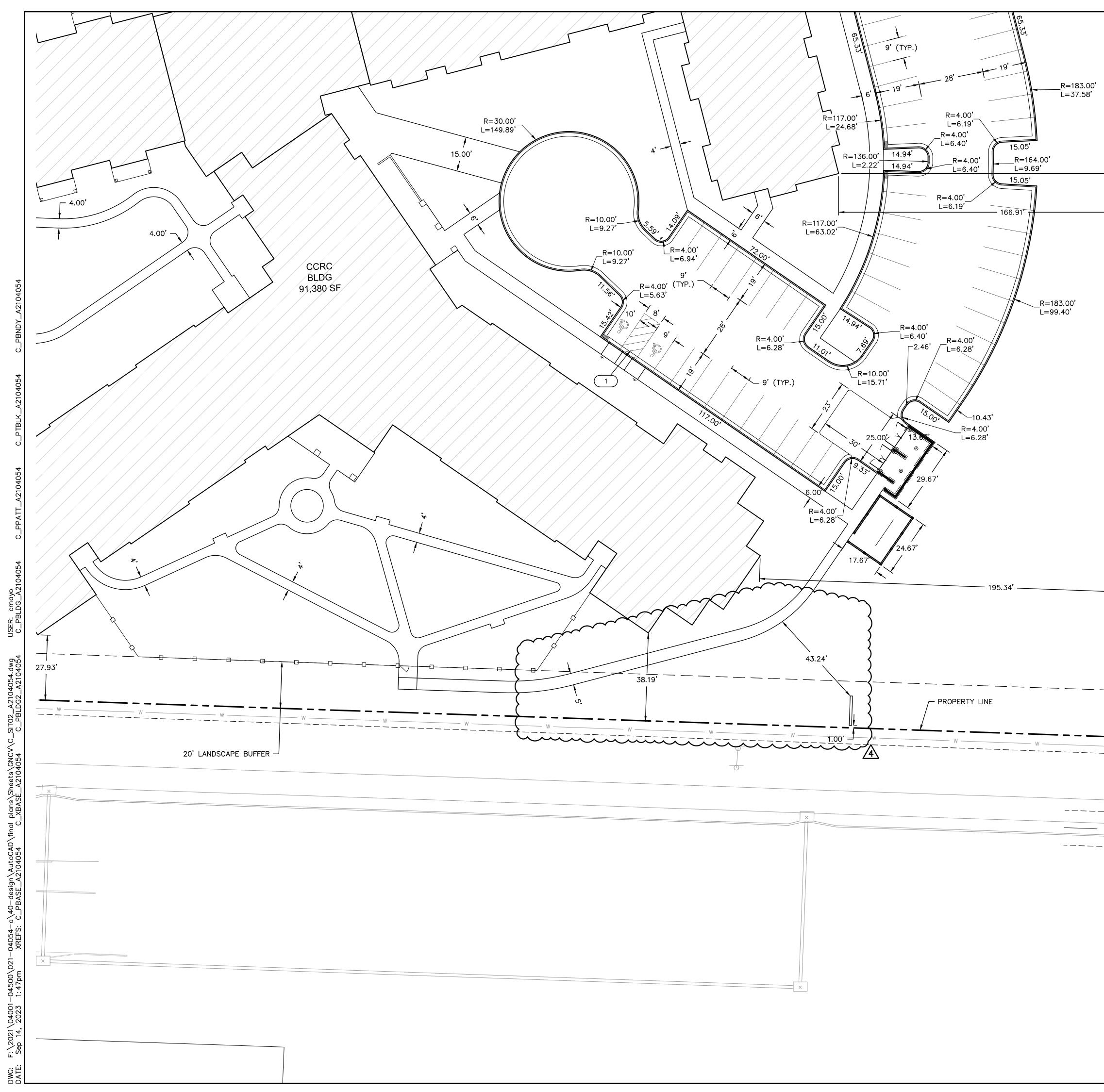




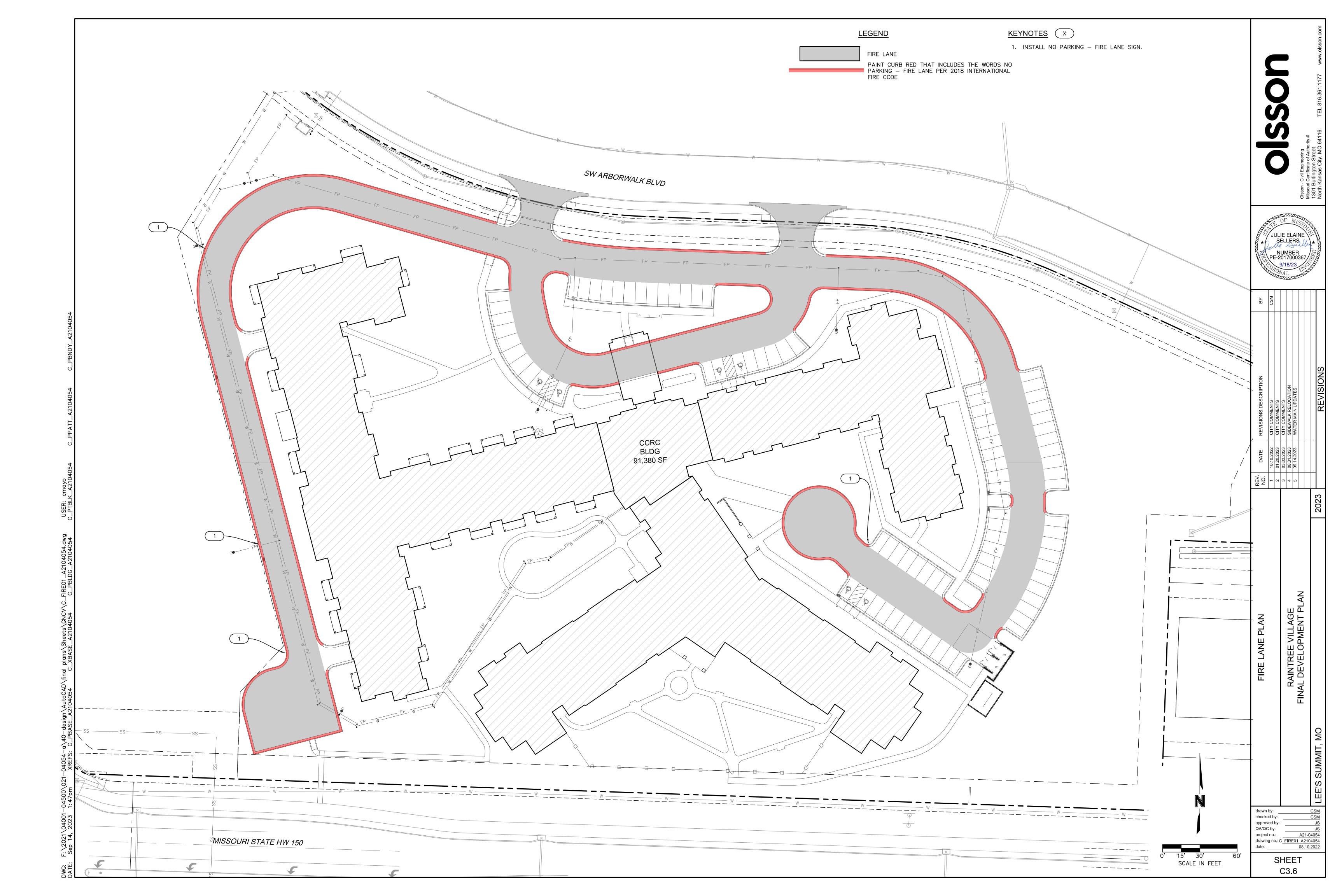


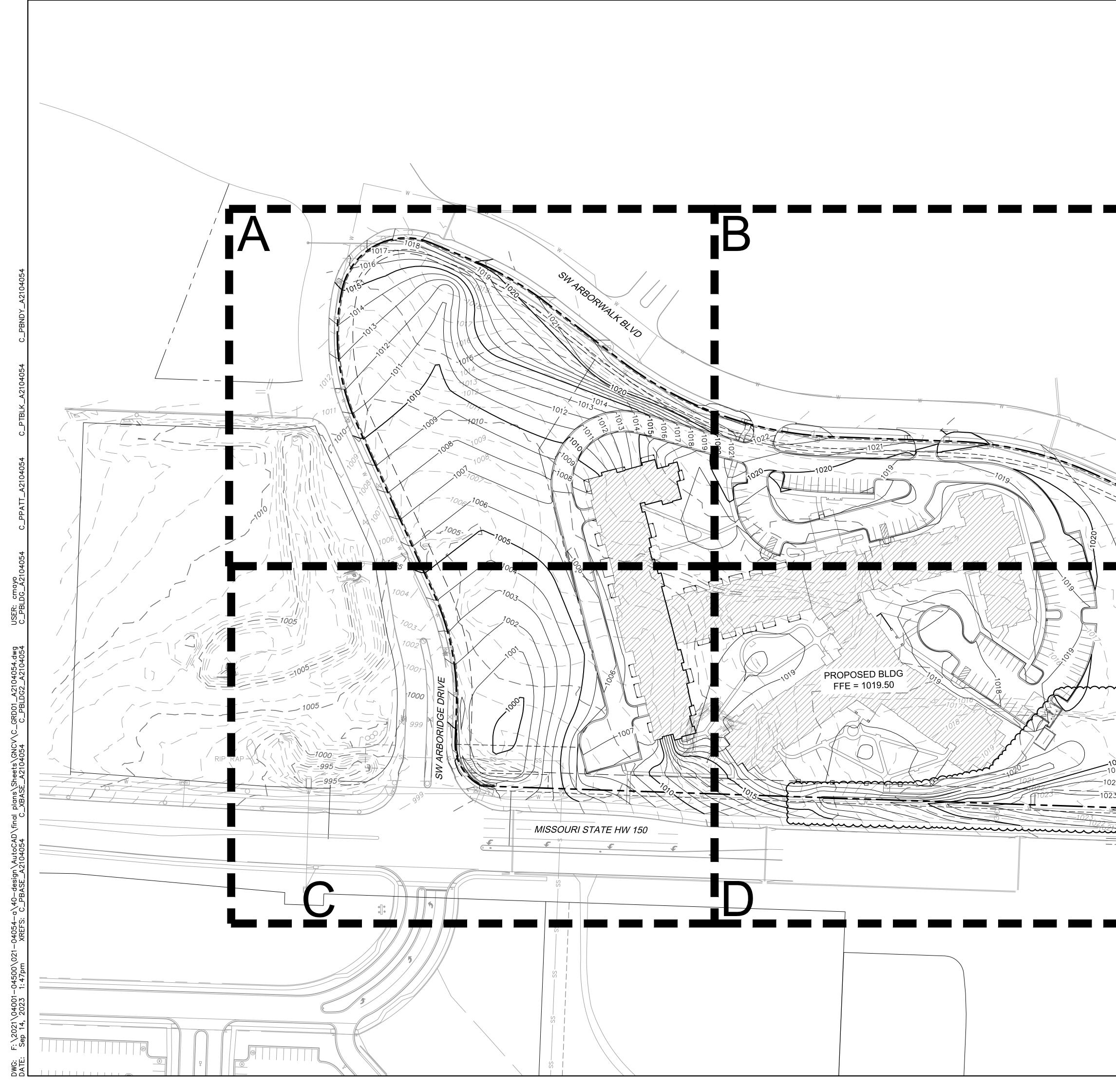
SPACE LAYOUT DETAIL ON SHEET C10.0 AND C.SC.4.6 FOR ADA DIMENSION DETAILS	× JUL × SI PE-2	Olsson - Civil Engineering Missouri Certificate of Authority #	North Kansas City, MO 64116 TEL 816.361.1177 www.olsson.com
SCALE IN FEET		VAL UNC	7
	BY		
	, DATE 10.10.2022 01.2023	3         03.03.2023         CITY COMMENTS           4         08.31.2023         SIDEWALK RELOCATION           5         09.14.2023         WATER MAIN UPDATES	REVISIONS
			2023
	DIMENSION PLAN (B)	RAINTREE VILLAGE FINAL DEVELOPMENT PLAN	
			LEE'S SUMMIT, MO
			<u>CSM</u> <u>CSM</u> <u>JS</u> <u>JS</u> )4054
		08.10 HEET C3.3	<u>2022</u>





KEYMAP		eering of Authority #	Street
25.72' 1. SEE TYPICAL ADA PARKING SPACE LAYOUT DETAIL ON SHEET C1.0.0 AND GRADING DETAILS SHEET C4.5-C4.6 FOR ADA DIMENSION DETAILS	× JUL NPE-2	OF MISSOU	1301 Burlington Street North Kansas City, MO 64116
	DATE 10.10.2022 01.20.2023	3         03.03.2023         CITY COMMENTS           1         08.31.2023         SIDEWALK RELOCATION           5         09.14.2023         WATER MAIN UPDATES	REVISIONS
	DIMENSION PLAN (D)	RAINTREE VILLAGE	2023
	drawn by: checked by: approved by: QA/QC by: project no.: drawing no.: date:		04054





### GRADING PLAN LEGEND

	FINISHED	GRADE	MAJOR	CONTOL
1021	FINISHED	GRADE	MINOR	CONTOU
— — —1020— — —	EXISTING	GRADE	MAJOR	CONTOU
<u> </u>	EXISTING	GRADE	MINOR	CONTOU
	PROPOSE	D PROP	ERTY LI	NE

#### **GRADING PLAN NOTES**

- 1. THE FINISHED GRADE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO SURFACE OF PAVEMENT, FINISHED GRADE EXCLUDING GRADES ADJACENT TO STRUCTURES ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT PAVEMENT DEPTH FROM ELEVATIONS SHOWN.
- THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
- 3. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING AND SIDEWALKS WHEN FINISH LANDSCAPE MATERIALS ARE IN PLACE. THE CONTRACTOR SHALL CONTACT THE ENGINEER REGARDING ANY LOCATIONS WHERE THIS MAY NOT BE FEASIBLE.
- SPOT ELEVATIONS ARE TO EDGE OF PAVEMENT, LIP OF CURB, OR FINISHED GRADE UNLESS OTHERWISE INDICATED. (SEE LEGEND)

#### EARTHWORK QUANTITIES

CUT (C.Y.)	FILL (C.Y.)	NET (C.Y.)
14,832	36,703	21,871 (FILL)

#### EARTHWORK QUANTITIES NOTES: 1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE

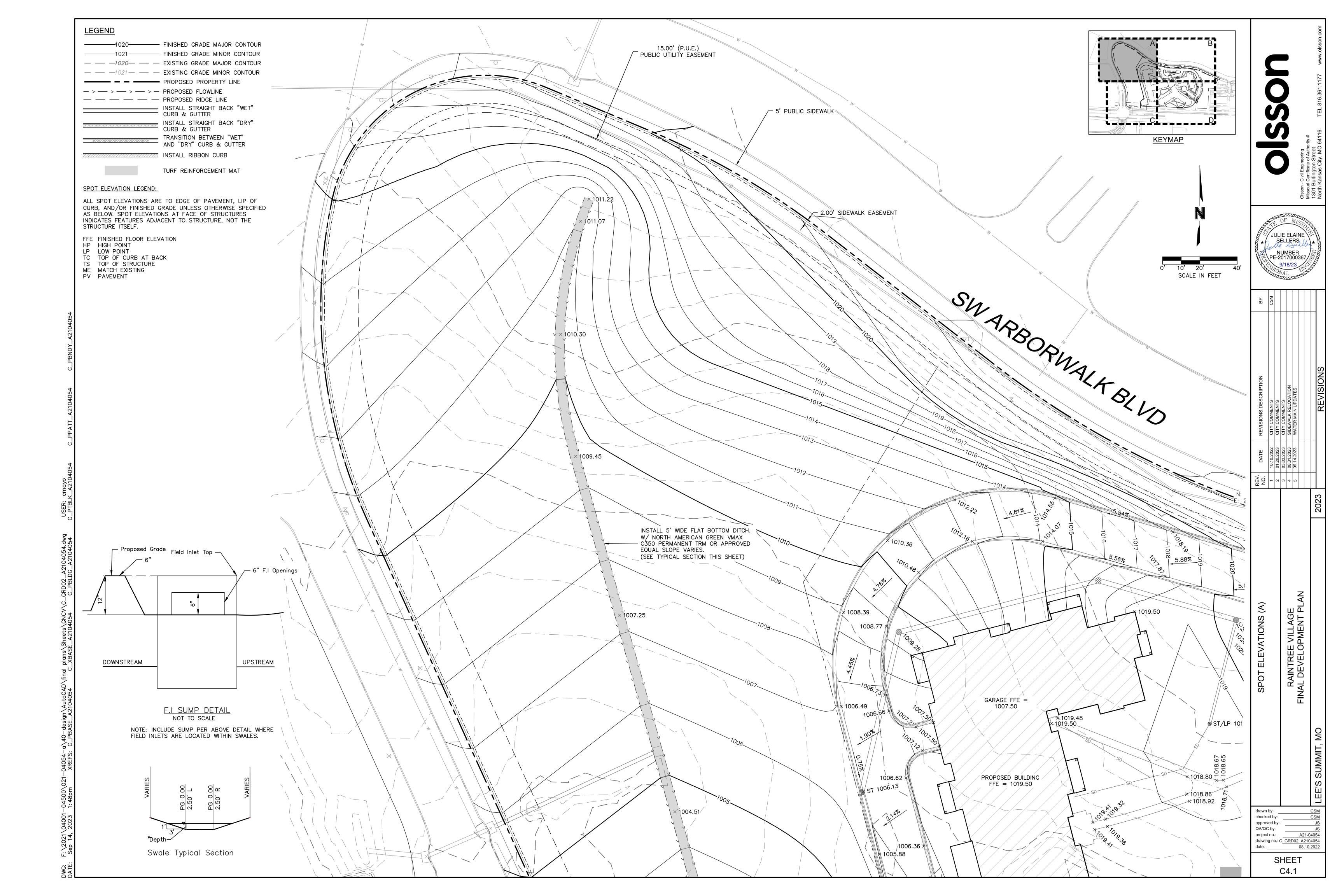
1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.

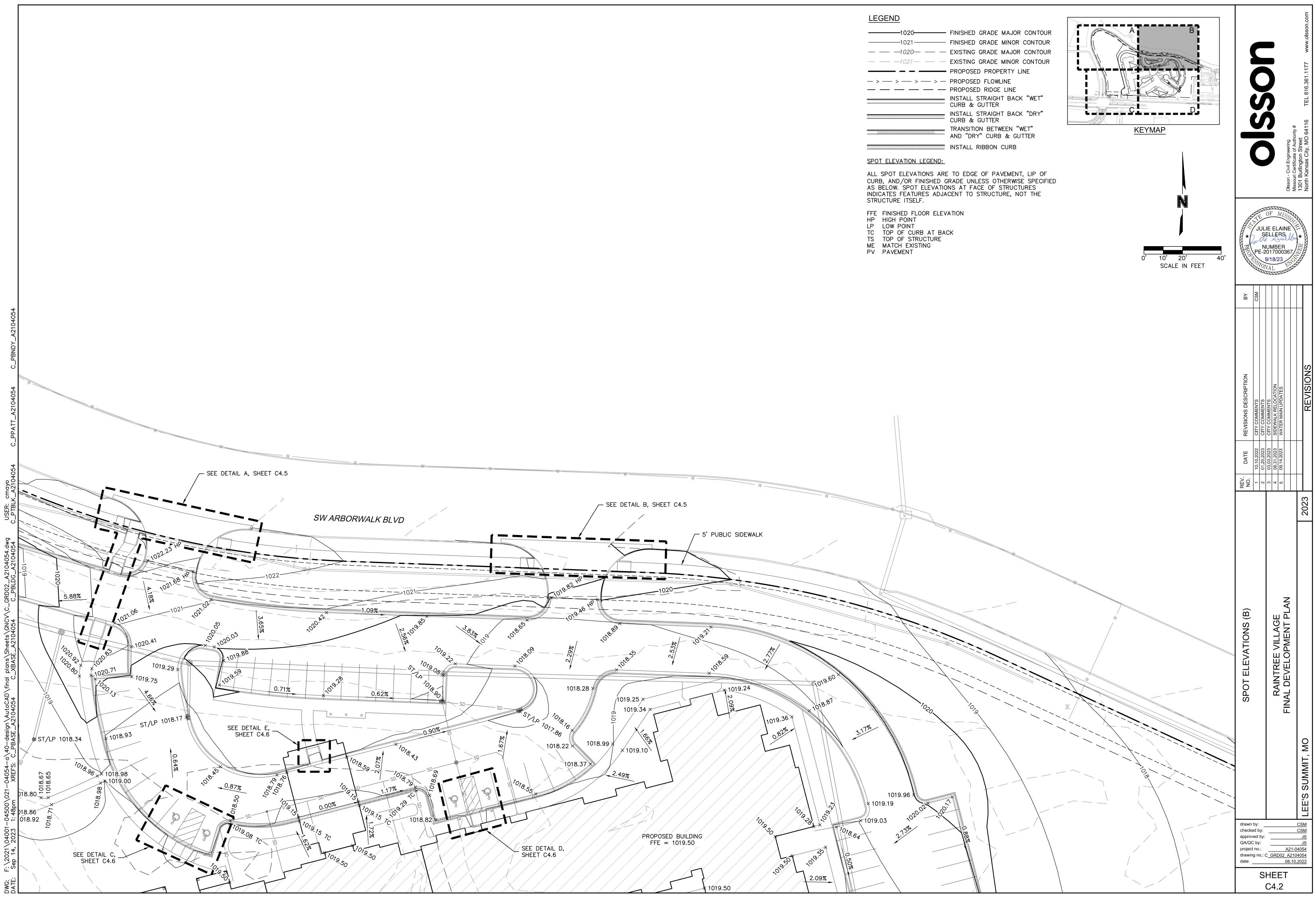
2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

SCALE IN FEET

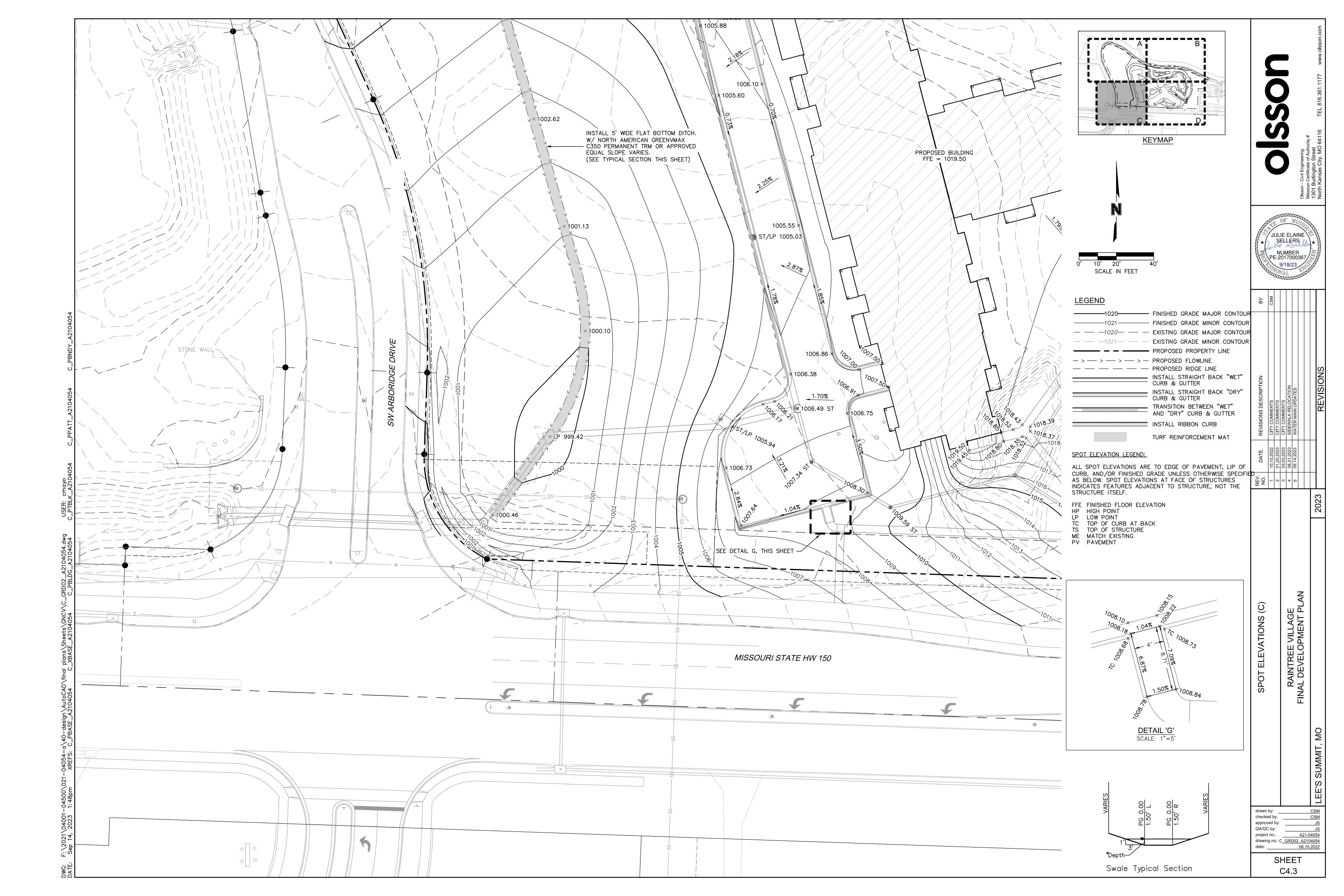
Rev. in the indication of the i
REV. INO.     Date Intensione     Revisions description       Intensione     Intensione     Intensione       Intensione
REV.     DATE     REV.     DATE     REVISION       NO.     NO.     DATE     REVISION     REVISION       NO.     NO.     DATE     REVISION     REVISION       REV.     NO.     NO.     DATE     REVISION       REV.     NO.     NO.     NO.     REVISION       REV.     REV.     NO.     NO.     REVISION       REV.     REV.     NO.     NO.     REV.       REV.     REV.     NO.     NO.     REV.       REV.     REV.     REV.     REV.     REV.
OVERALL GRADING PLAN OVERALL GRADING PLAN NO. NO. P RAINTREE VILLAGE FINAL DEVELOPMENT PLAN 2023 2023
OVERALL GRADING PLAN OVERALL GRADING PLAN RAINTREE VILLAGE FINAL DEVELOPMENT PLAN 2 2023
OVERALL GRADING PLAN RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

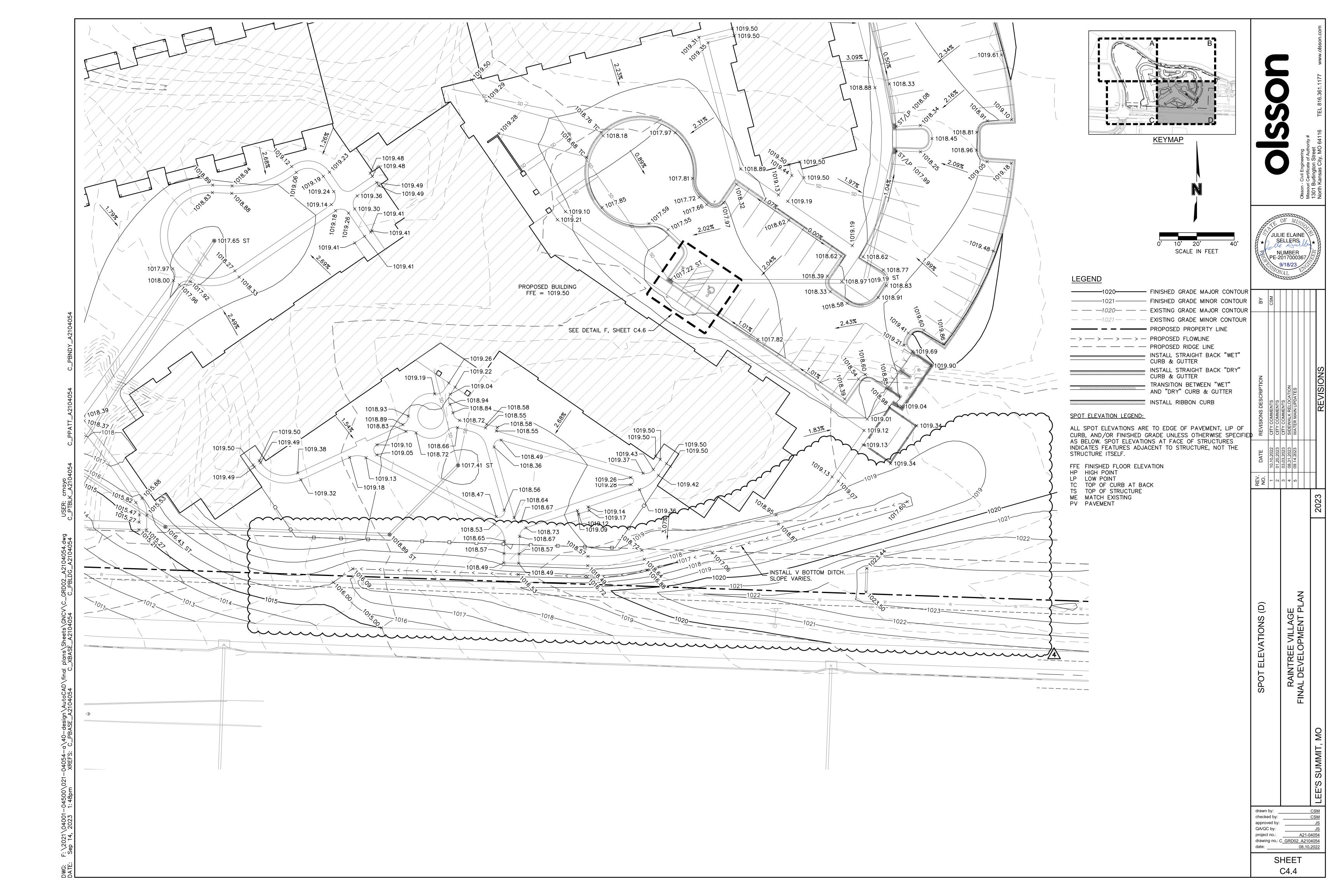
C4.0

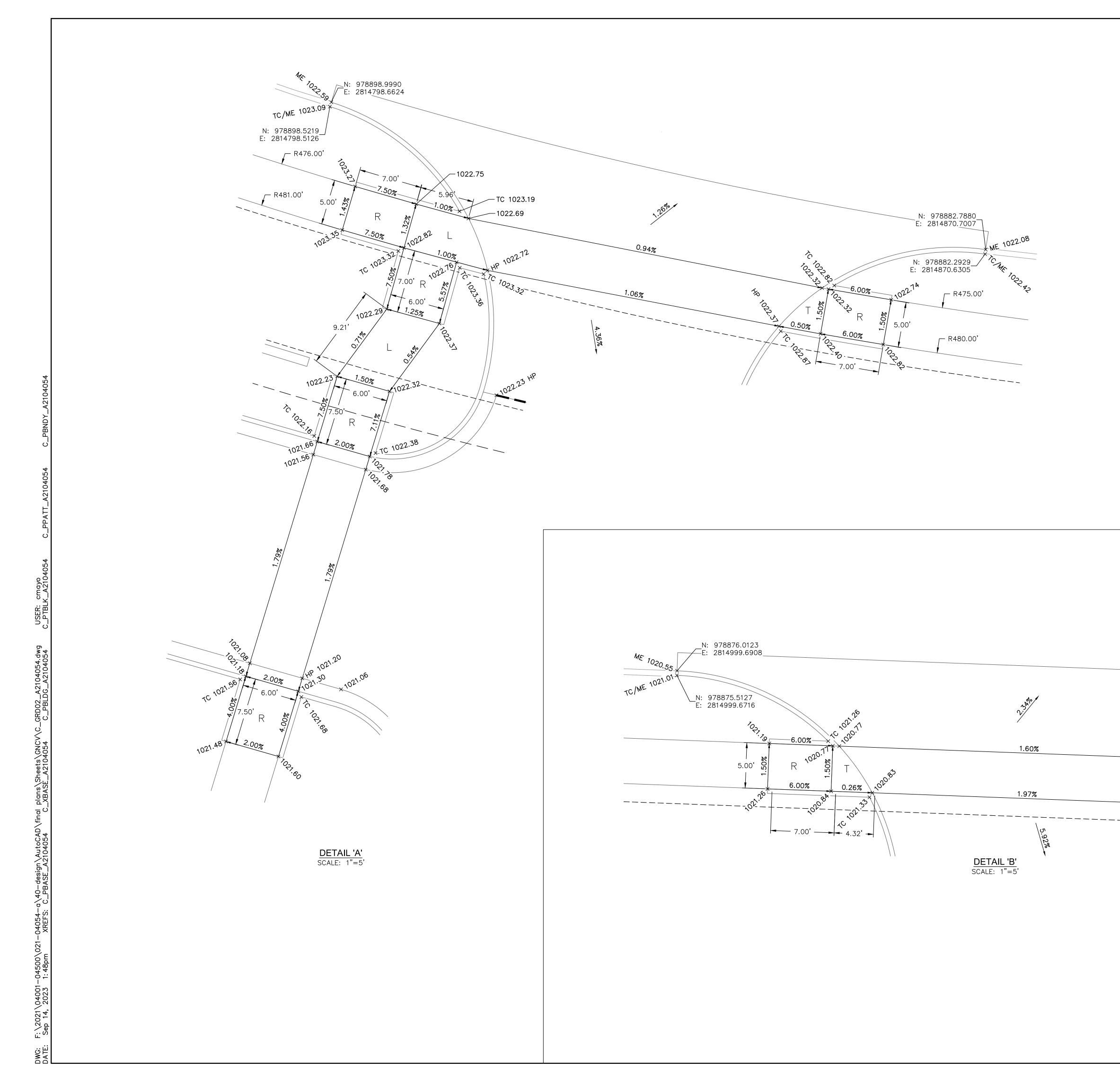


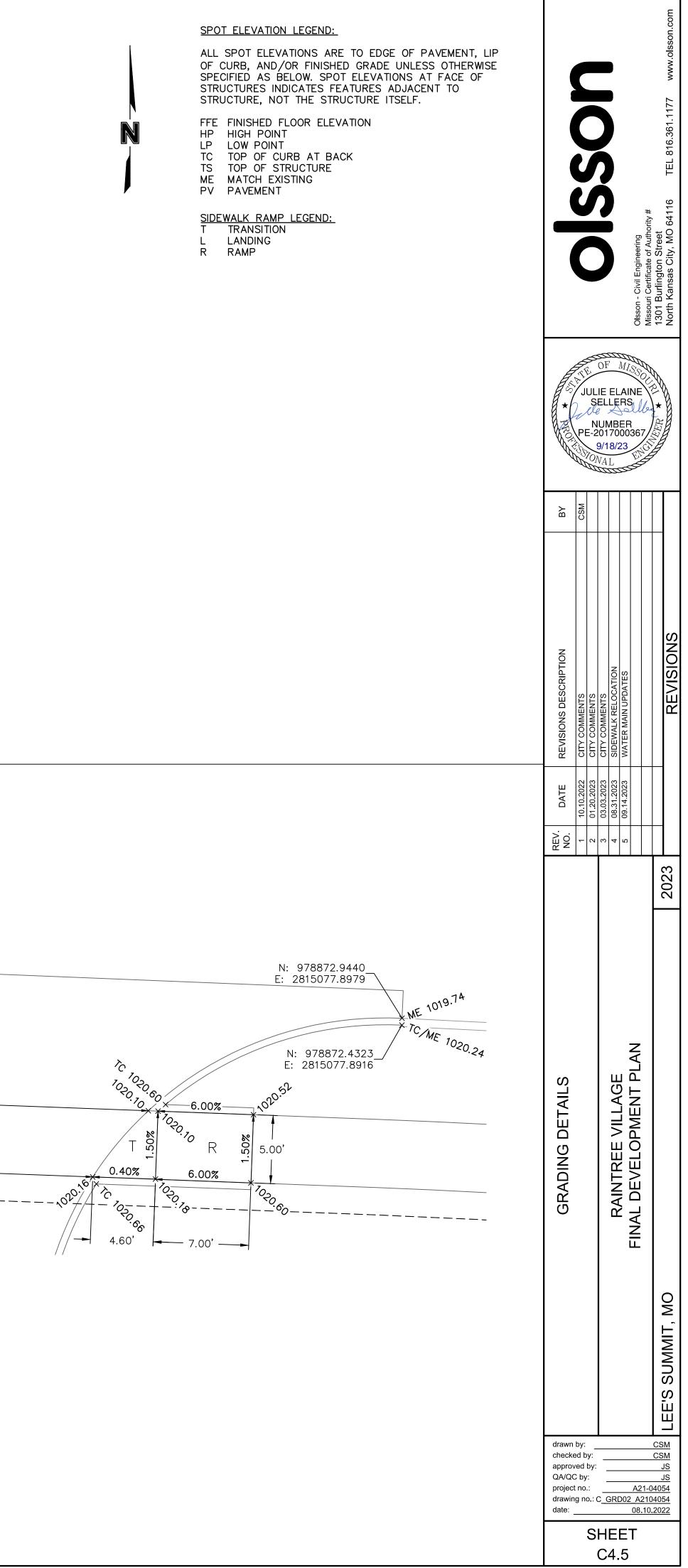


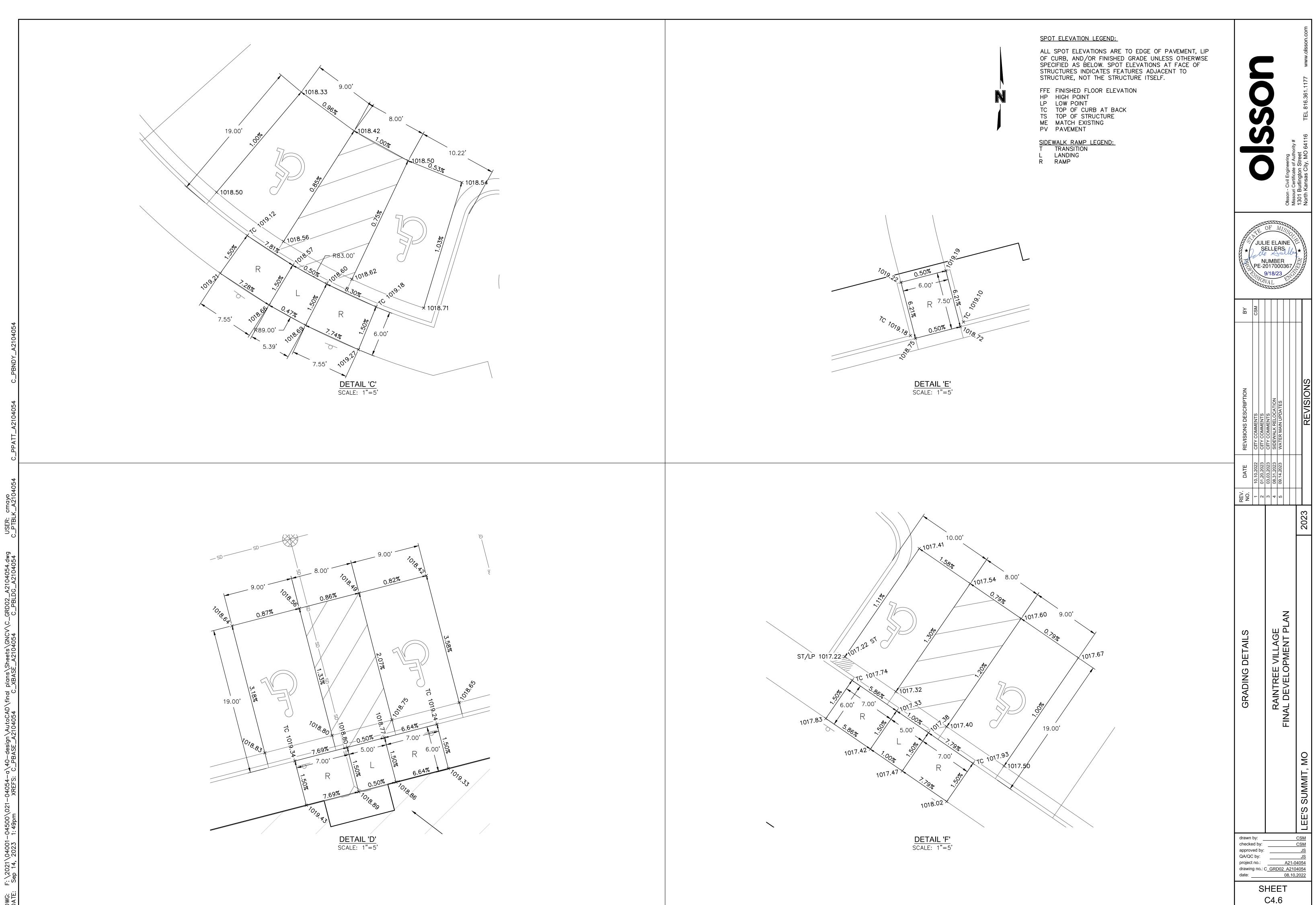
	—1
_	 —1

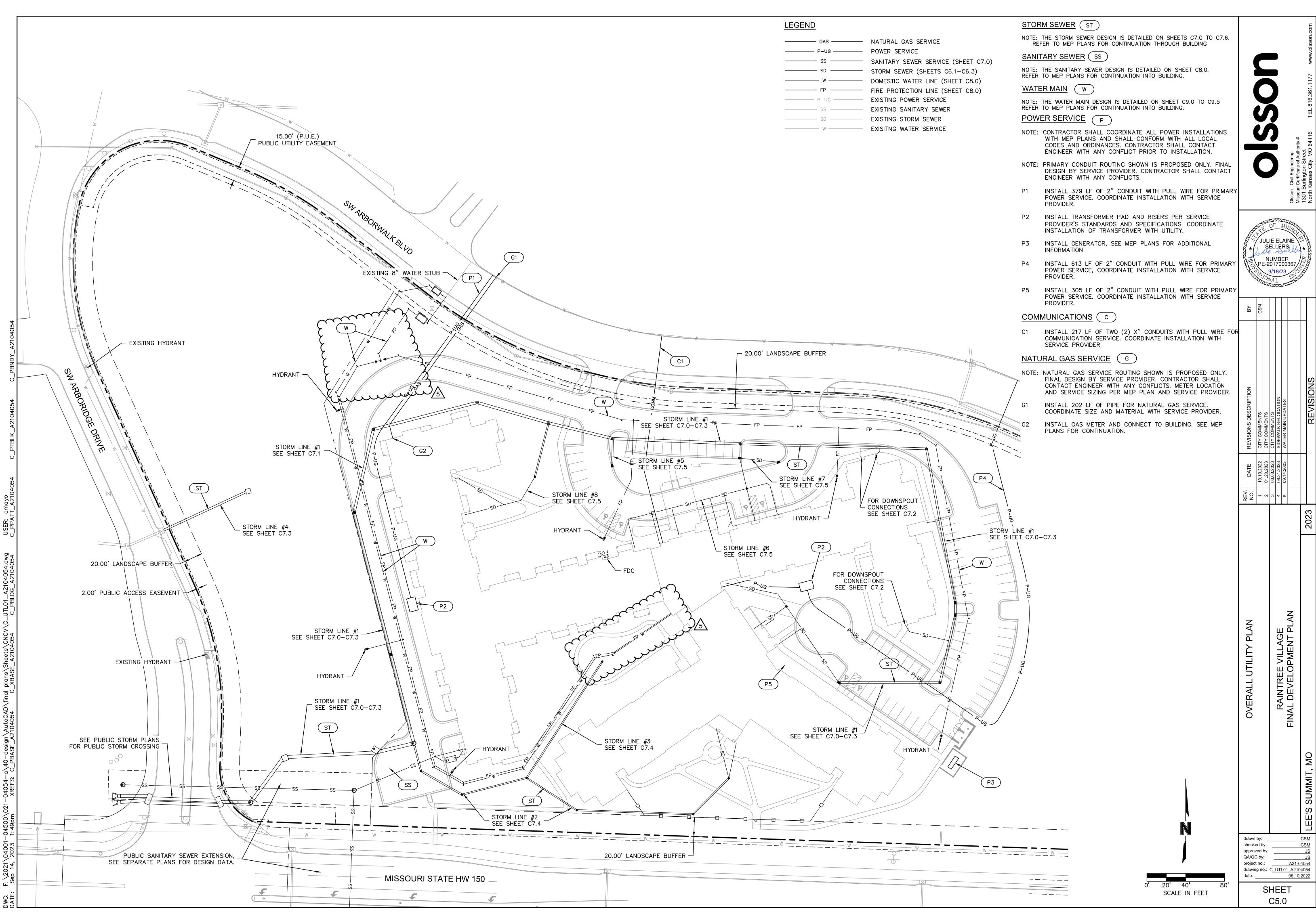




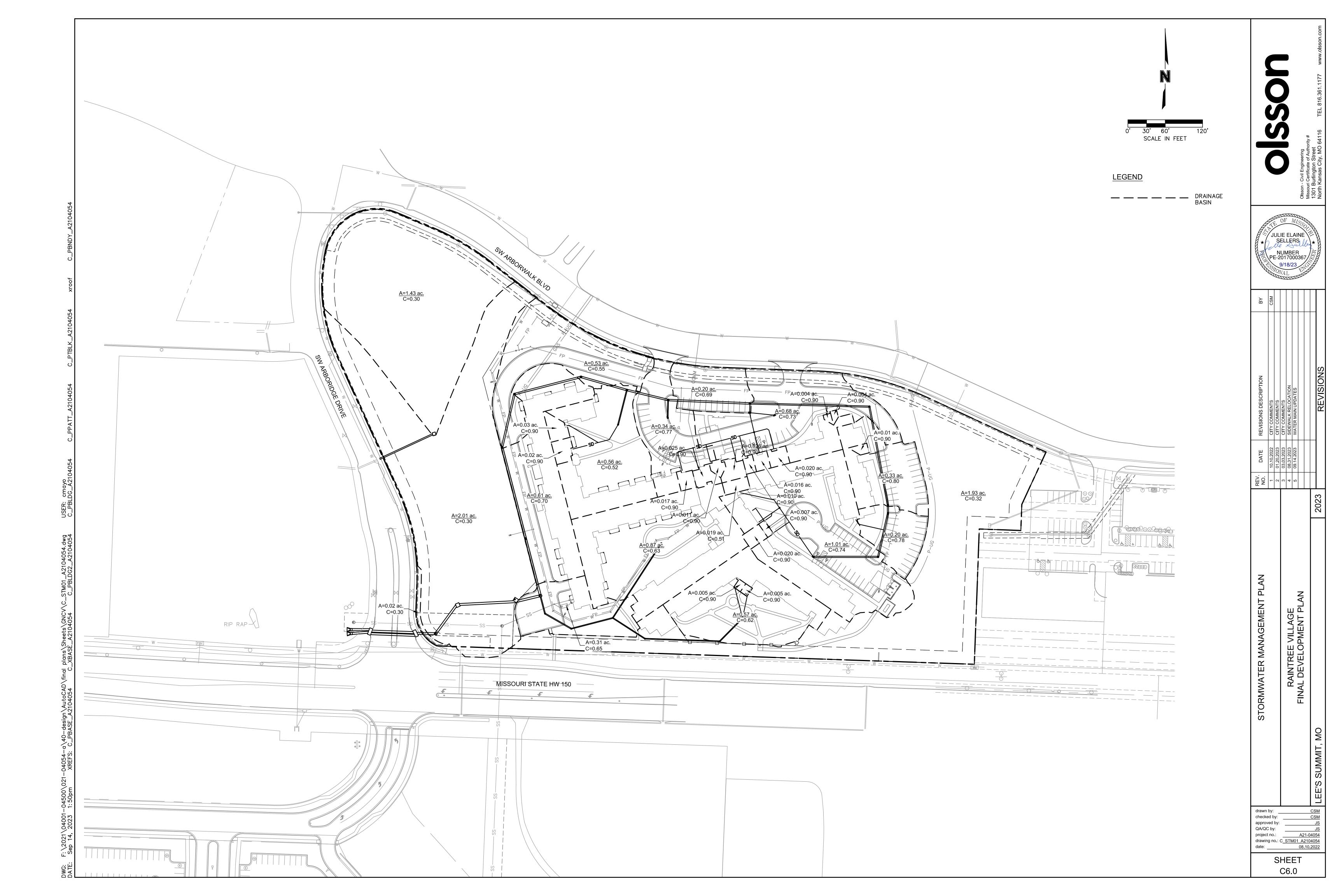


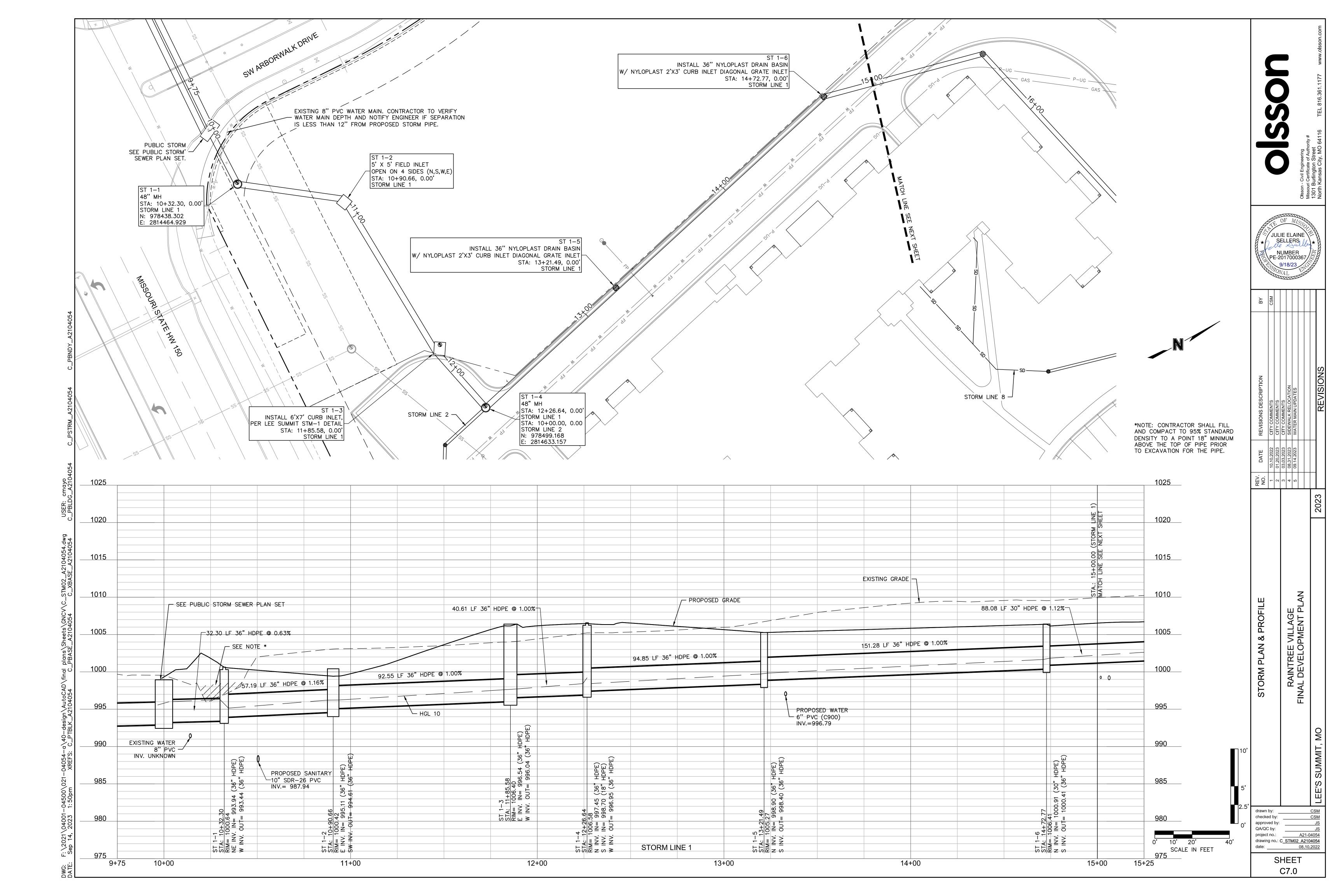


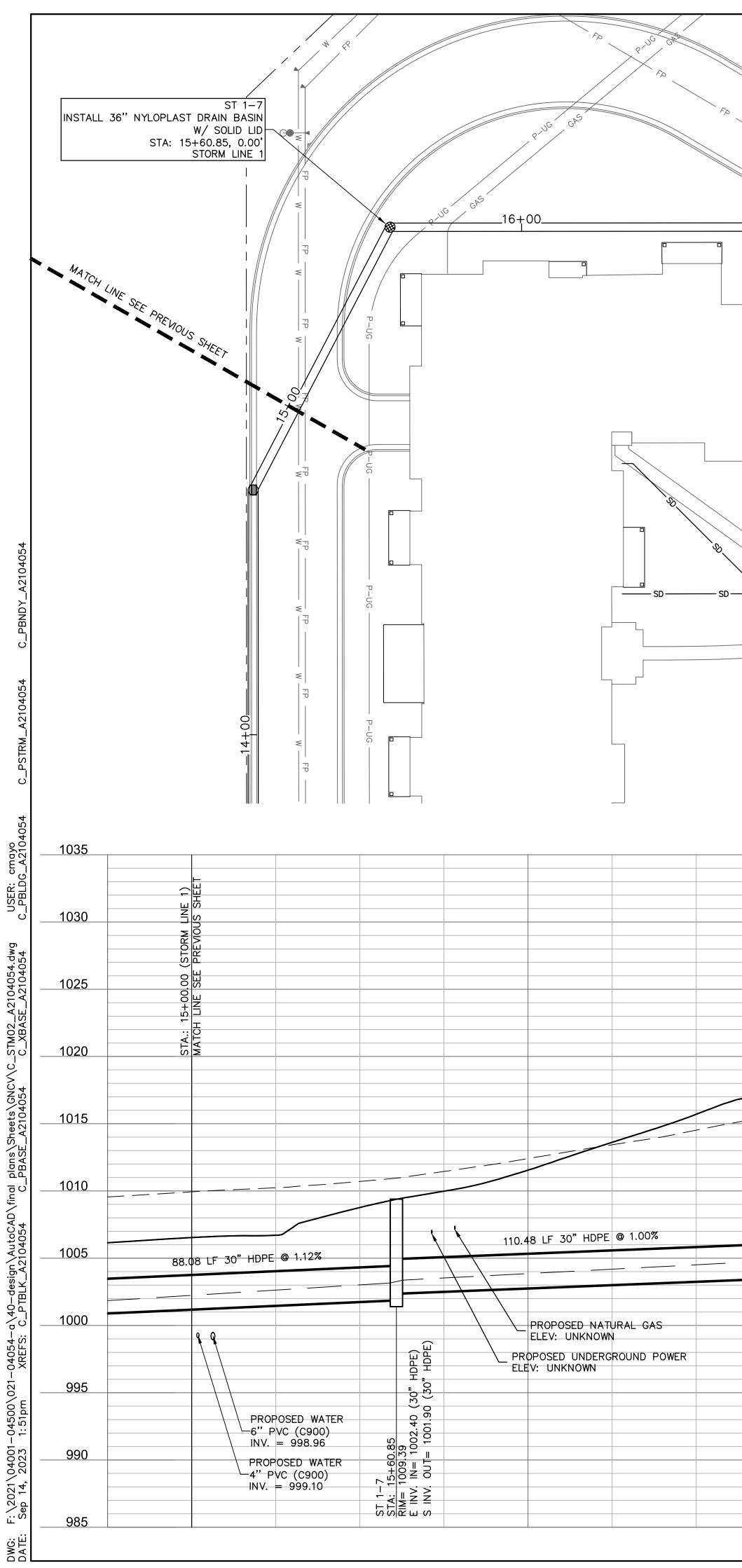




_	NATURAL GA
-	POWER SERV
_	SANITARY SE
_	STORM SEWE
-	DOMESTIC W
-	FIRE PROTEC
_	EXISTING PO
_	EXISTING SA
_	EXISTING STO
_	EXISITNG WA

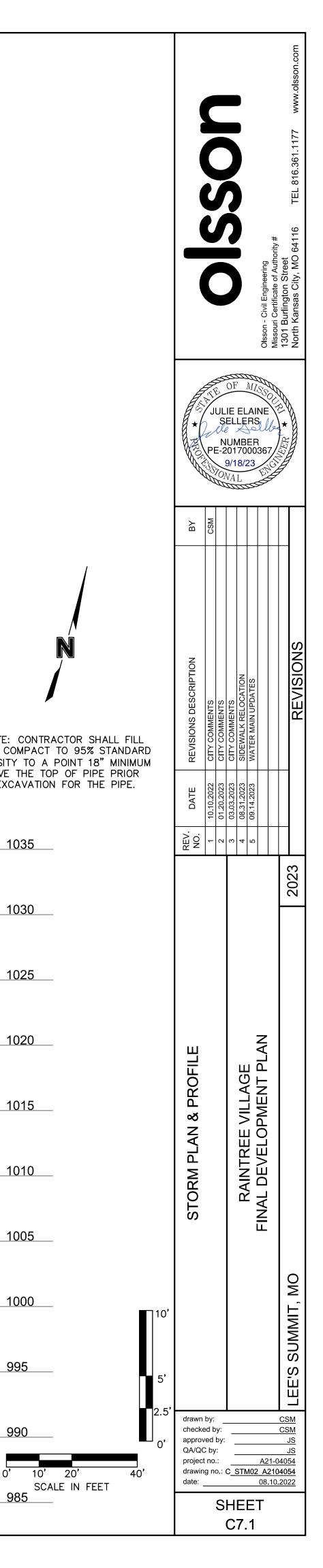


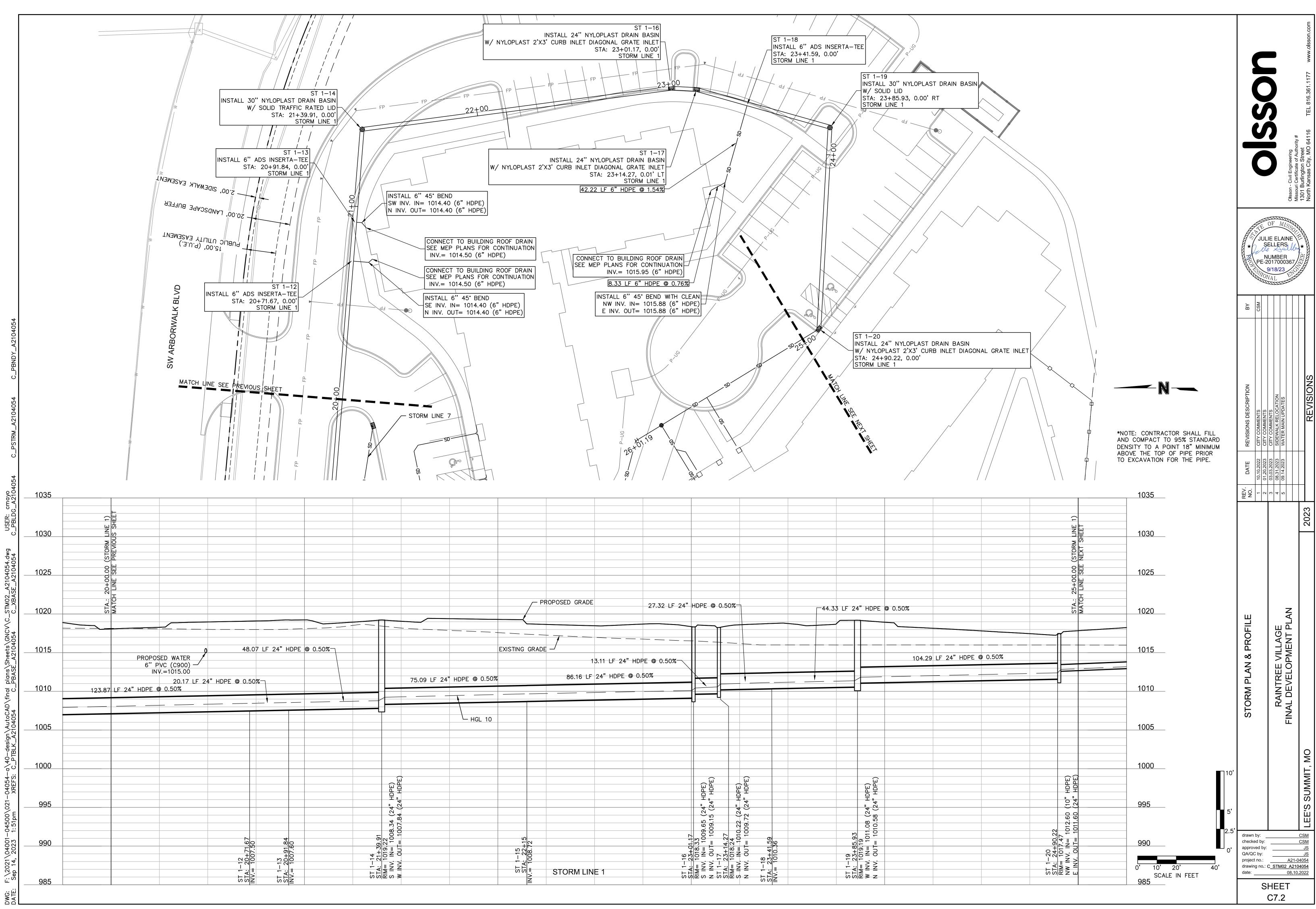


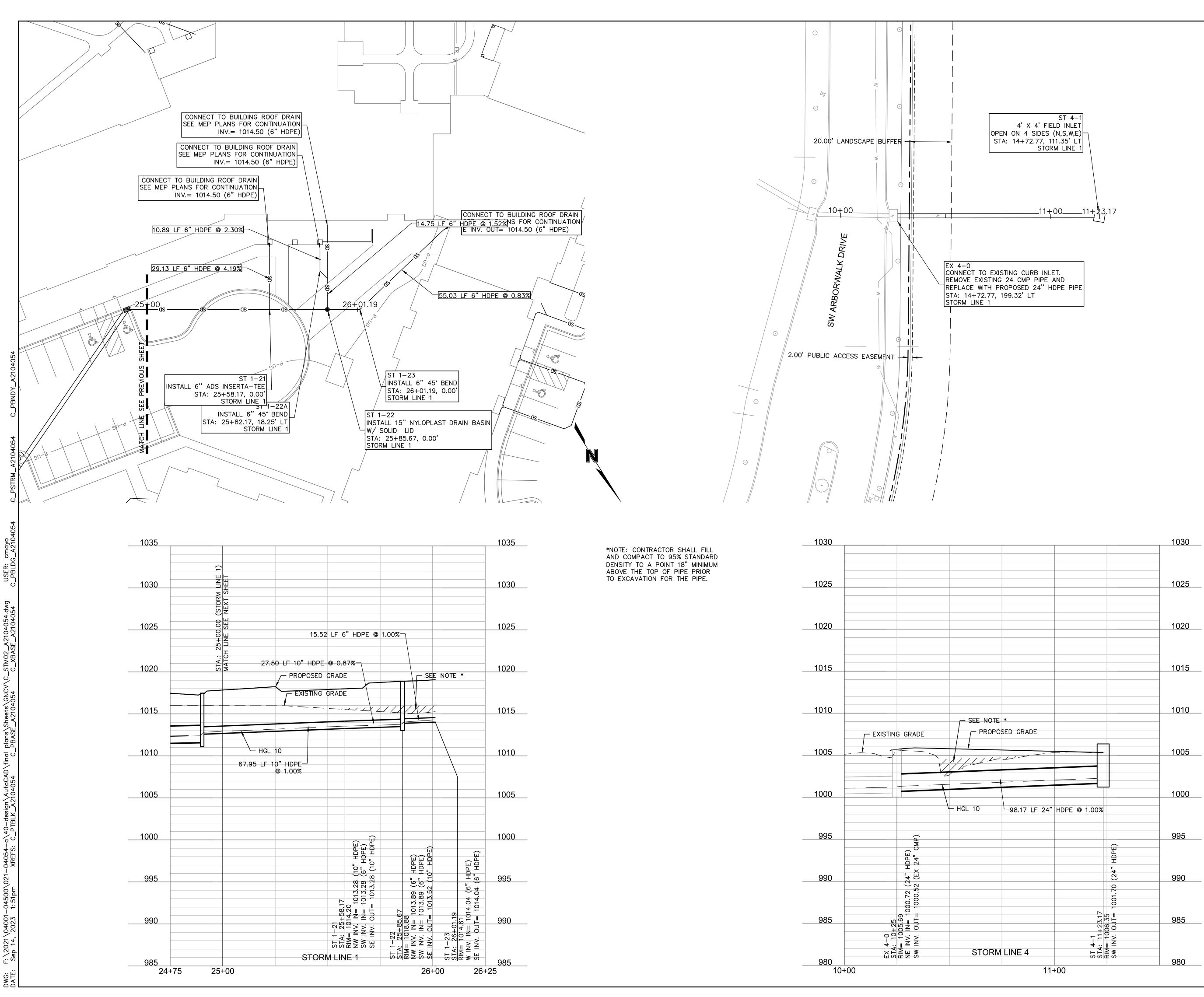


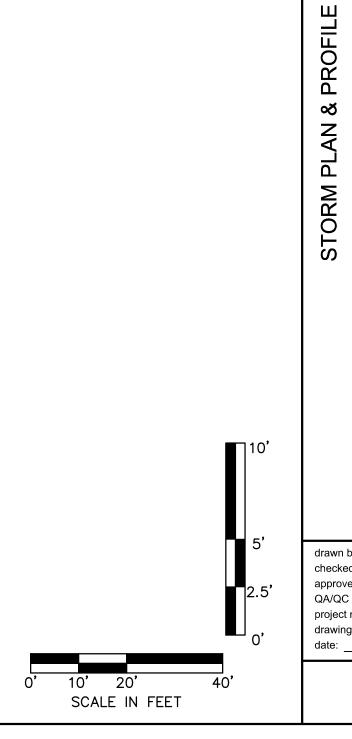
				<						
`	IS IS	T 1–8								
		ISTALL 36" NYL( / SOLID LID	OPLAST DRAIN BA	SIN	~					
	S S	, TA: 16+71.33, 0 TORM LINE 1	.00'				SW	ARBORWALK		
								BORWALL		
	X			`\`				~7	BLVD	
- Contraction of the second se				ST 1-9						
	17400		FP	∕-W∕ SOLID L	' NYLOPLAST DF	RAIN BASIN		COMM		
	500			STA: 17+48 STORM LINE	3.05, 0.00' 			$\rightarrow$		
				47						
						` ~ ( <b>f</b> ~ ~ ~ .				
							ST 1-10	NYLOPLAST DR		
							W/ SOLID LID STA: 18+16.2			
							STORM LINE	I		
					-18+00					<u> </u>
								STALL 36" NYL	OPLAST DRAIN E	1-11 3ASIN
	STORM LINE	8						W/ SOLIE	) TRAFFIC RATE TA: 19+47.80, STORM L	
				FORM LINE 5 -					STORM L	INE 1
								10		
$\backslash \backslash$	୍ବ					<u>d</u>			†00	
$\backslash$										
	- SD									
						2				$\downarrow$
									STORM LINE 6 -	~
				)   JO	A	- COMM				
					The C		SD		SD	- SD
										I
						(0	D S I			
							1			1
			PROPOSED GRA	DE						
								- <u> </u>		
- +					NG GRADE		0	PROPOSED ELEV: UNK		LINE
							<u> </u>	POSED WATER		
							6" P	VC (C900) =1014.27		
							111 V		30" HDPE @ 0.5	50%
	76.72 LF	30"HDPE @ 0	.50%	68.18 LF	30"HDPE @ 0.	50%				
					CI 10					
					GL 10					
	E D			E O			Ш			
	HDFE			HDPE DPE) HDF		IDPE)				
	30" + (30'			30" + 5" + (30 <sub>"</sub> H			(30, 20,			
ST 1-8 STA: 16+71.33 RIM= 1017.07	3.50			E INV. IN= 1004.88 (30" HDPE) S INV. IN= 1011.56 (15" HDPE) W INV. OUT= 1004.38 (30" HDPE)		ST 1-10 STA: 18+16.23 RIM= 1019.99 E INV. IN= 1005.72 (30" HDPE)	2.2			
2	004.( 100		<u>ک</u>	004. 011.5 100.		005.7	013.1			
+ 71.3 17.07			<u>+ 48. C</u> 20.61			+16.2   999				
1-8 101 101	≤ 0 ≥			≤ ≤ ♀ ≥ ≥ ⋛		 	2 0 2 2 2 2			
STA RIM=	<u>∠                                    </u>	STORM LI					<u>←</u>			
	1	I			Ι	1				1

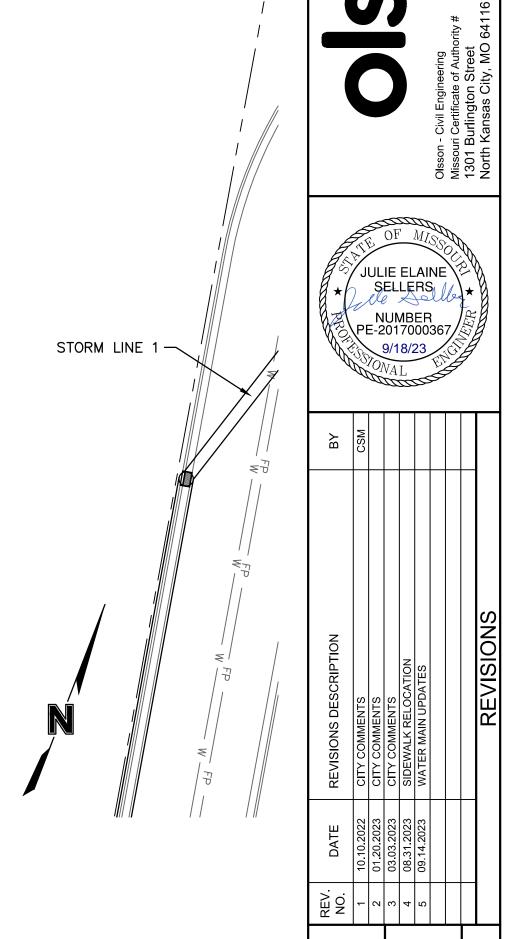
				_					
					MENT	F			
				EACT	SUFFER E.) ISFME				
				EWALK	APE (P.U.				
				NO' SID	15.00 C UTL				
					PUBLI				
Image: store         Image: store<									
1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1035           1036           1037           1038           1039           1030           1031           1032           1035           1036           1037           1038           1039           1030           1031           1032           1033           1034           1035           1035           1036           1037           1038           1039           1039           1039           1039           1039           1039           1039           1039           1039           1039           1039           1039           1039	 			1-7					
1035           1036           1037           1038           1039           1035           1036           1037           1038           1039           1030           1031           1032           1035           1036           1037           1038           1039           1030           1031           1032           1033           1030           1031           1032           1033           1034           1035           1036           1037           1038           1039           1030           1031           1032           1033           1034           1035           1036           1037           1038           1039           1030           1031           1032           1033           1034           1035           1036           1037			· · · ·	<i>f</i> _ <i>L</i> _					
	FP								
STORM LINE         NOTE: CONTRACT           SO         NOTE: CONTRACT           AND COMPACT         DENSITY: TO A P           AND COMPACT         DENSITY: TO A P           TO EXCAVATION         1035           Image: So         Image: So           Image: So         Image:		FP FP			2 2	` \	-		
ТОРКИ LINE STORM LINE SD SD SD SD SD SD SD SD SD SD					FP		X		
лоте: сонтекс ло сомраст и репотут области и репотут области и репотут области и репотут области и репотут области и репотут области области и области и о					1		FP		
SD         *NOTE: CONTRAC AND COMPACT DENSITY TO A P ABOVE THE TOP TO EXCAVATION           1035         1035           1035         1030           1035         1030           1035         1030           1035         1030           1036         1025           1037         1020           1038         1025           104         1015           105         1010           1036         1010           1037         1010           1038         1020           104         1015           1010         1005           1020         1010           1038         1020           1040         1005           105         1005           106         1000           107         1000           108         995           1090         996           1000         990           1000         990           1000         990           1000         990           1000         1000           1000         1000           1000         990           1000         <		ST	ORM LINE	207	00				
*NOTE: CONTRACT AND COMPACT TO AND COMPACT TO ABOVE THE TOP TO EXCAVATION 1035 1030 1030 1030 1030 1030 1030 1030 1025 1025 1020 1015 1020 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1010 1015 1010 1000									
SD         AND COMPACT           DANS COMPACT         DANS COMPACT           ABOVE THE TOP         TO EXCAVATION           1035         1036           1035         1030           1035         1030           1035         1030           1035         1030           1035         1030           1036         1025           1037         1025           1038         1020           1015         1015           1020         1015           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1005           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000			<b>NAM</b>	<i>.</i> <i>.</i>					
SD         AND COMPACT           DANS COMPACT         DANS COMPACT           ABOVE THE TOP         TO EXCAVATION           1035         1036           1035         1030           1035         1030           1035         1030           1035         1030           1035         1030           1036         1025           1037         1025           1038         1020           1015         1015           1020         1015           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1010           1020         1005           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000           1020         1000				1				<b>+N</b> 1/	
		- SD		!				AN	D COMPACT TO
Image: Second							2	AB TO	OVE THE TOP EXCAVATION
Image: Second	<i></i> //				/ //		/		
Image: Second		1							1035
Image: Second									
0       0       0       1025         0       0       0       1020         0       0       1015       1015         10       1015       1010       1010         1123.87 LF 24" HDPE ● 0.50%       1010       1005         1005       1005       1005       1005         1006       1005       1000       1000         123.87 LF 24" HDPE ● 0.50%       1000       1000         123.87 LF 24" HDPE ● 0.50%       1010       1005         1005       1000       1000       1000         13ddH + (5) %       995       995       995         1006       1000       1000       1000         124dH + (5) %       995       995       995         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       990       990         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       100						NE 1)	F		4000
0       0       0       1025         0       0       0       1020         0       0       1015       1015         10       1015       1010       1010         1123.87 LF 24" HDPE ● 0.50%       1010       1005         1005       1005       1005       1005         1006       1005       1000       1000         123.87 LF 24" HDPE ● 0.50%       1000       1000         123.87 LF 24" HDPE ● 0.50%       1010       1005         1005       1000       1000       1000         13ddH + (5) %       995       995       995         1006       1000       1000       1000         124dH + (5) %       995       995       995         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       990       990         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       1000       1000         1000       1000       100						LI RM	L SHE		1030
Image: Second						(STO	NEX.		
Image: Second						00.00	E		1025
1015           123.87 LF 24" НDPE @ 0.50%           1010           123.87 LF 24" НDPE @ 0.50%           1010           1005           1005           1000						20+(	H H		
1015           123.87 LF 24" НDPE @ 0.50%           1010           123.87 LF 24" НDPE @ 0.50%           1010           1005           1005           1000						STA.:	MATC		1020
123.87 LF 24" HDPE @ 0.50%     1010       123.87 LF 24" HDPE @ 0.50%     1010       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1000     1000			$\int$						
123.87 LF 24" HDPE @ 0.50%     1010       123.87 LF 24" HDPE @ 0.50%     1010       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1005       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1010     1000       1000     1000									4045
123.07 Li 24 Hor Li 6 6 6 6 6 7 7 7 7 10 10 5 6 6 6 6 7 7 7 7 10 10 5 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7									1015
123.07 Li 24 Hor Li 6 6 6 6 6 7 7 7 7 10 10 5 6 6 6 6 7 7 7 7 10 10 5 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7			1						
1000 1000			123.8	7 LF 24"	HDPE @	0.50%			1010
1000 1000						_			
00000000000000000000000000000000000000									1005
00000000000000000000000000000000000000									
00000000000000000000000000000000000000									4000
0, 10, 0 0, 0, 0 0,				<u>.</u>					1000
0, 10, 0 0, 0, 0 0,			DPE)						
0, 10, 10, 1006.88 000, 10, 10, 10, 10, 10, 10, 10, 10, 10,			24" 24" 18" 7						995
990 990 990 990 990 990 00, 10, 0, 10, 0, 10, 985 985			) 88 96 96						
			09 1006 1010						990
<sup>1</sup> · · · · · · · · · · · · · · · · · · ·		- 101 4	0101 	>					
985		STA-1-		<u>2</u> 2					0' 10' SCALE
									985











drawn by: checked by: approved by: QA/QC by: project no.: <u>A21-04054</u> drawing no.: C<u>STM02 A2104054</u> date: <u>08.10.2022</u>

SUMMIT,

S

CSM

CSM

RAINTREE VILLAGE FINAL DEVELOPMENT PLAN

SHEET C7.3

ੋ ਨੇ ਤ

Olsson - O Missouri C 1301 Bu

023

 $\mathcal{C}$ 

✓JULIE ELAINE

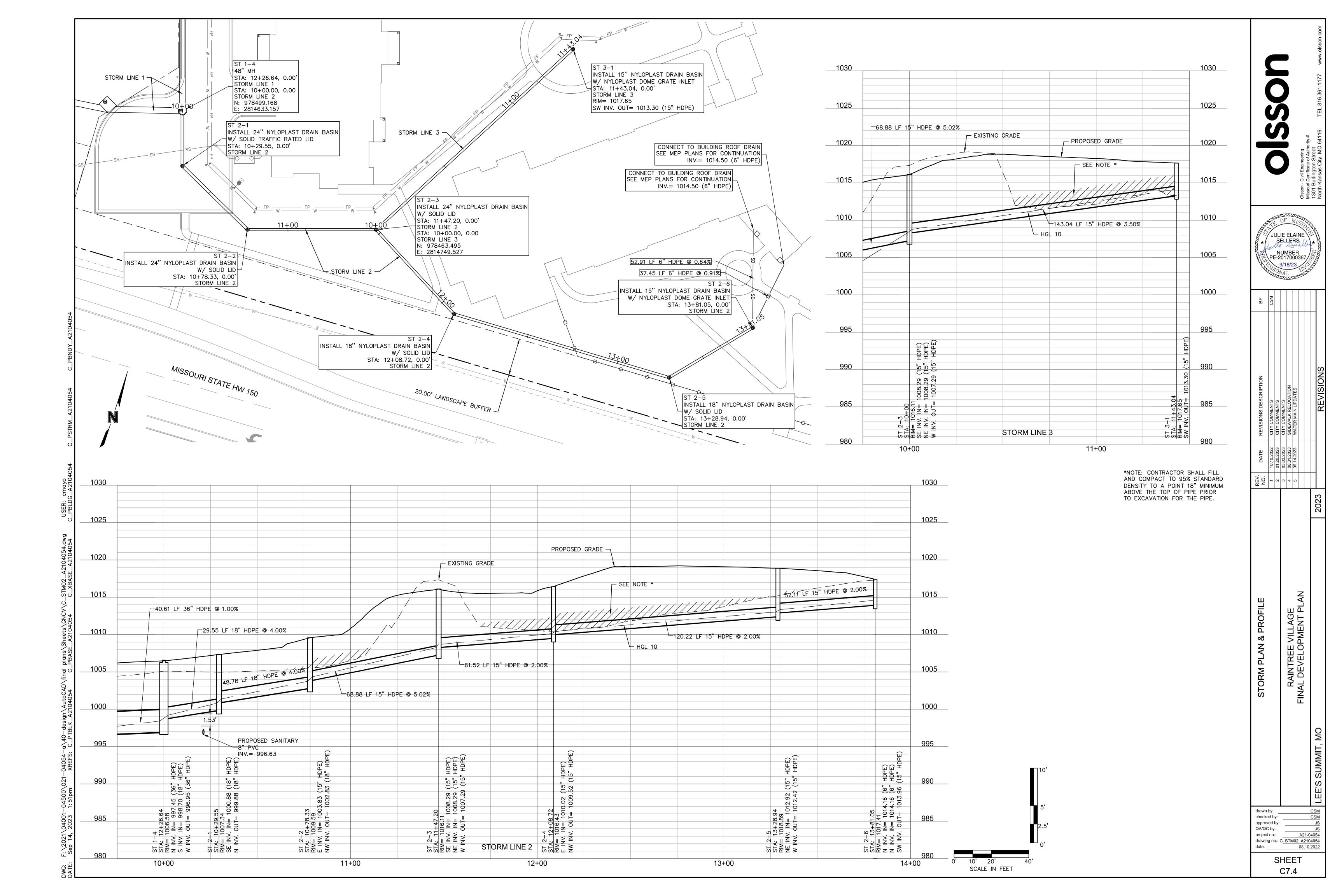
SELLERS /

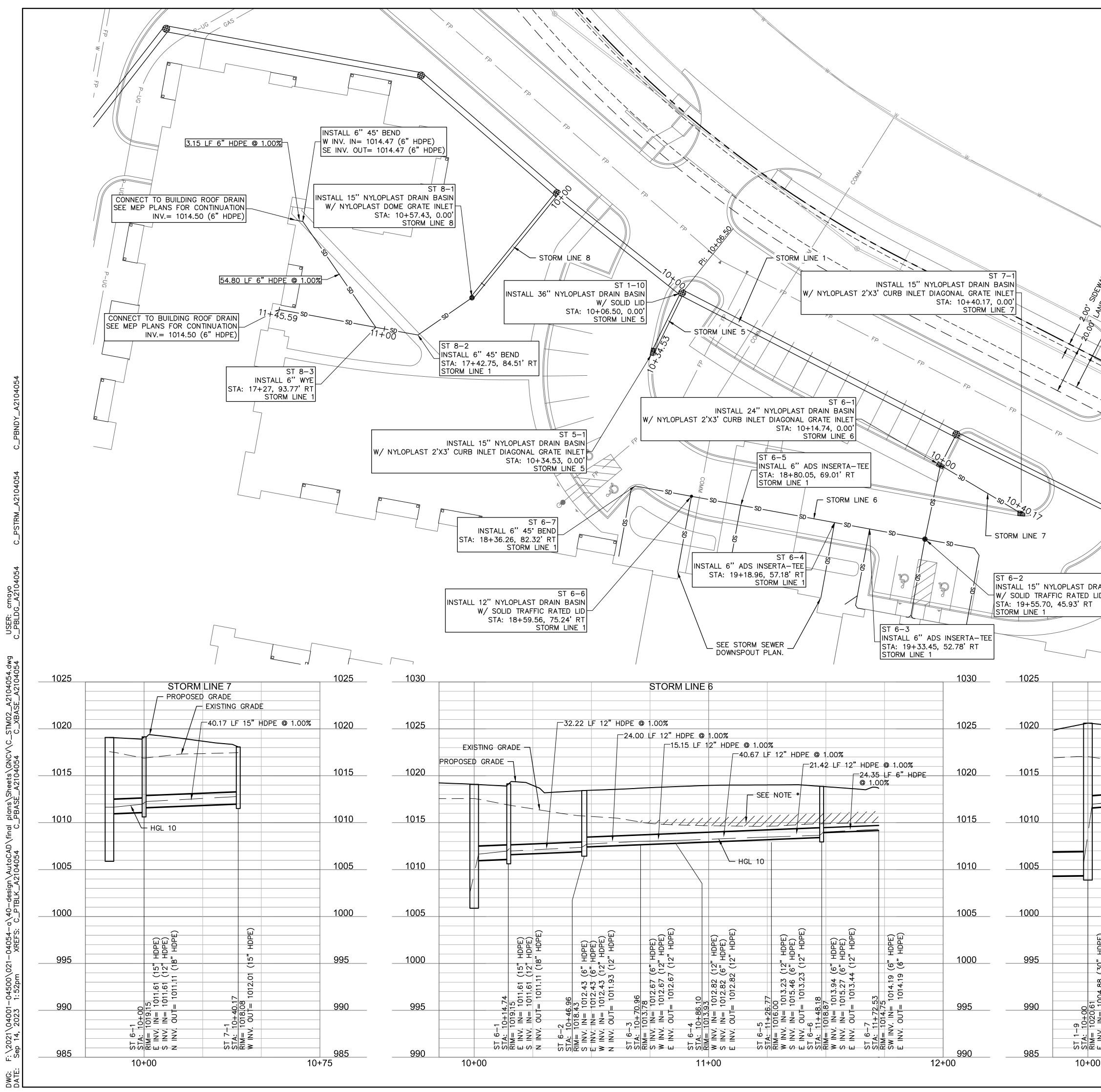
de Sell

NUMBER

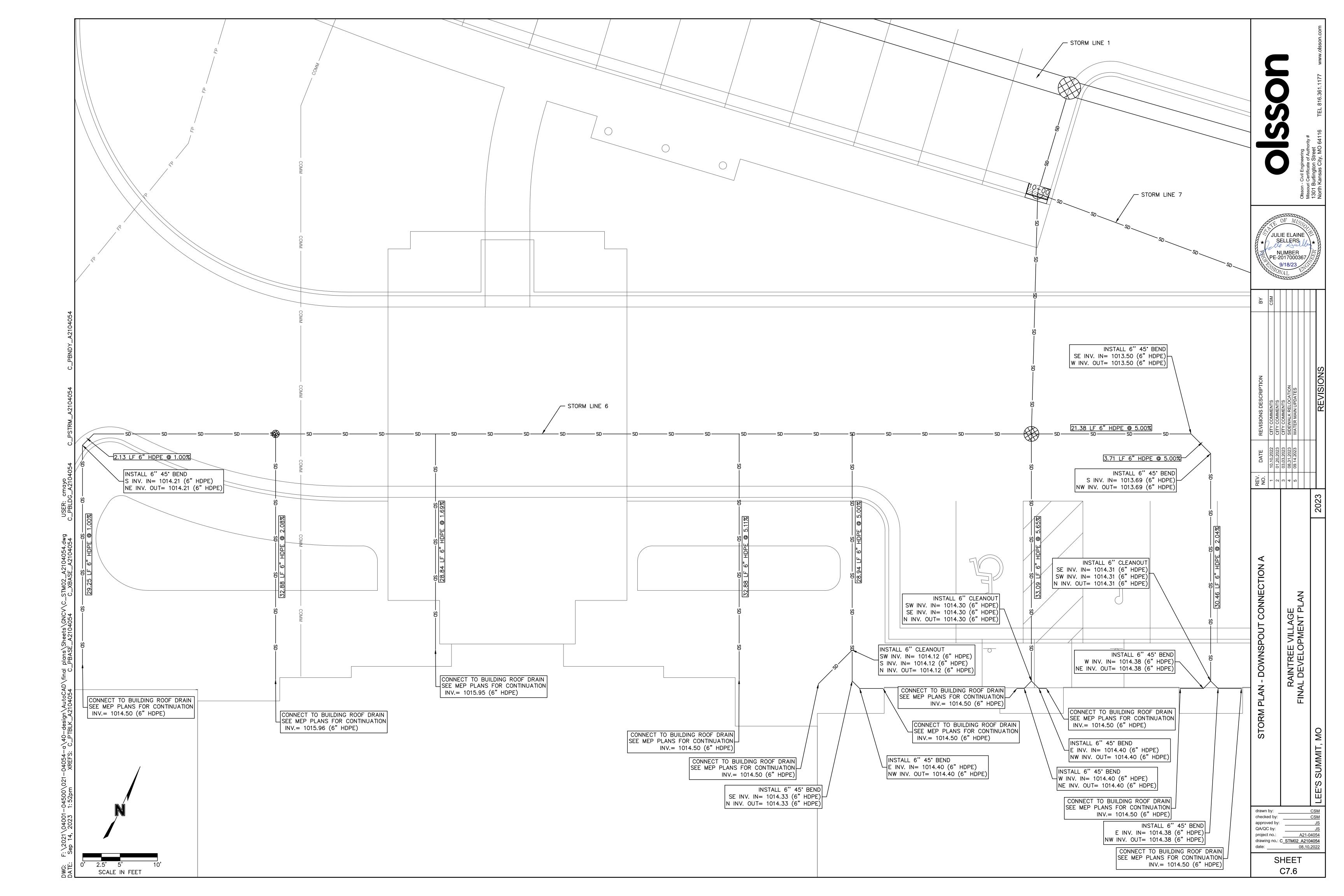
PE-2017000367

9/18/23



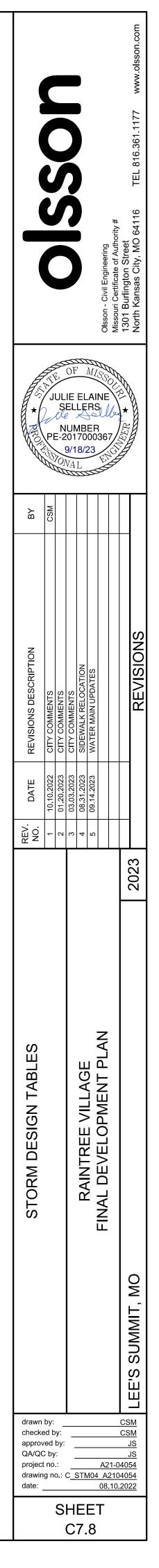


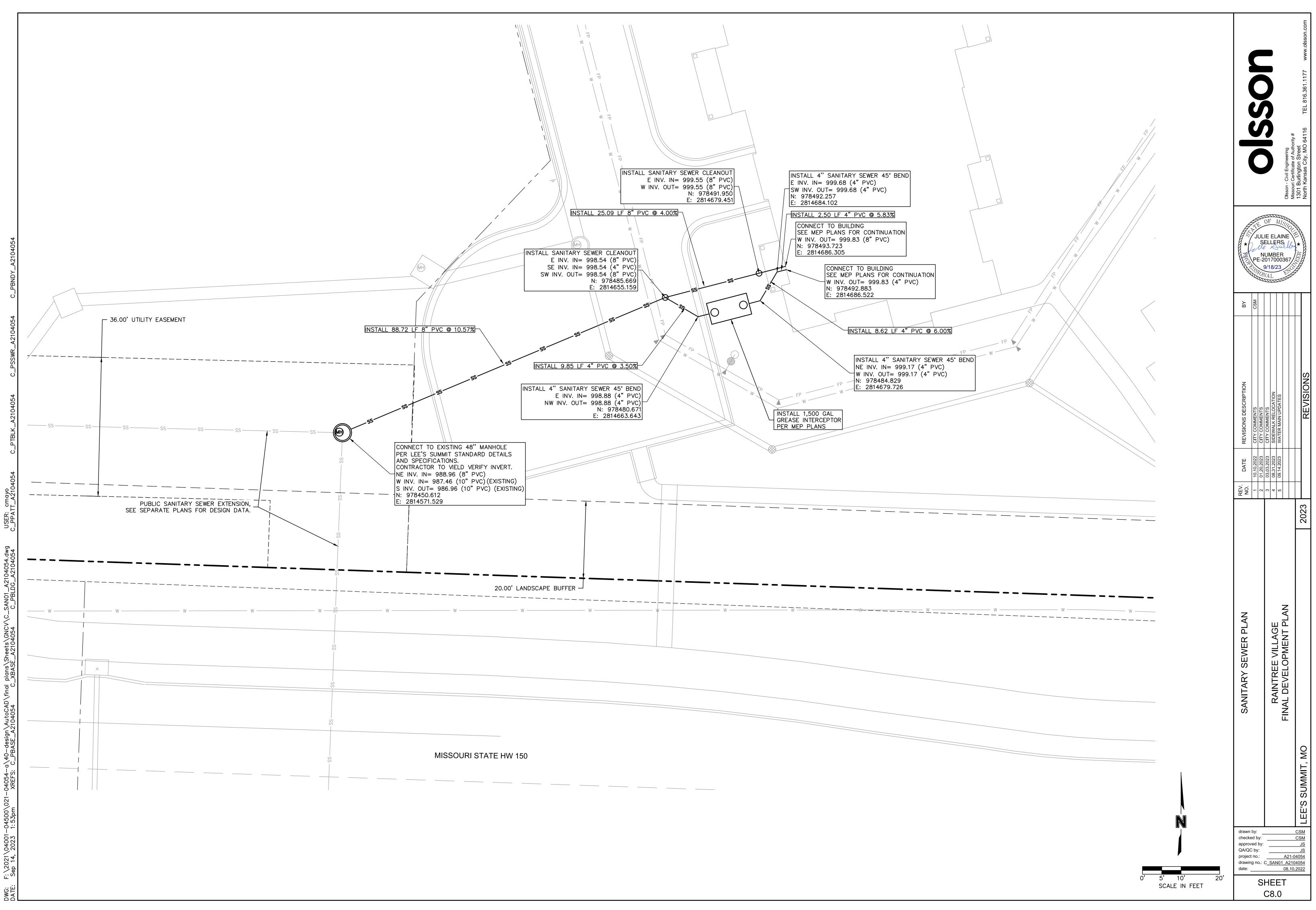
AN	990 985 OTE: CONTRACTOR SHALL ID COMPACT TO 95% STA NSITY TO A POINT 18" M BOVE THE TOP OF PIPE F O EXCAVATION FOR THE F	NDARD	10' 5' 2.5' 0'		2023 COMMENTS Page 2017 C
	STORM LINE 8	0' 10' 20' SCALE IN 7.99 LF 6" HDPE @ 1.00% 	1025 1025 1020 -	STORM PLAN & PROFILE	RAINTREE VILLAGE FINAL DEVELOPMENT PLAN SUMMIT, MO

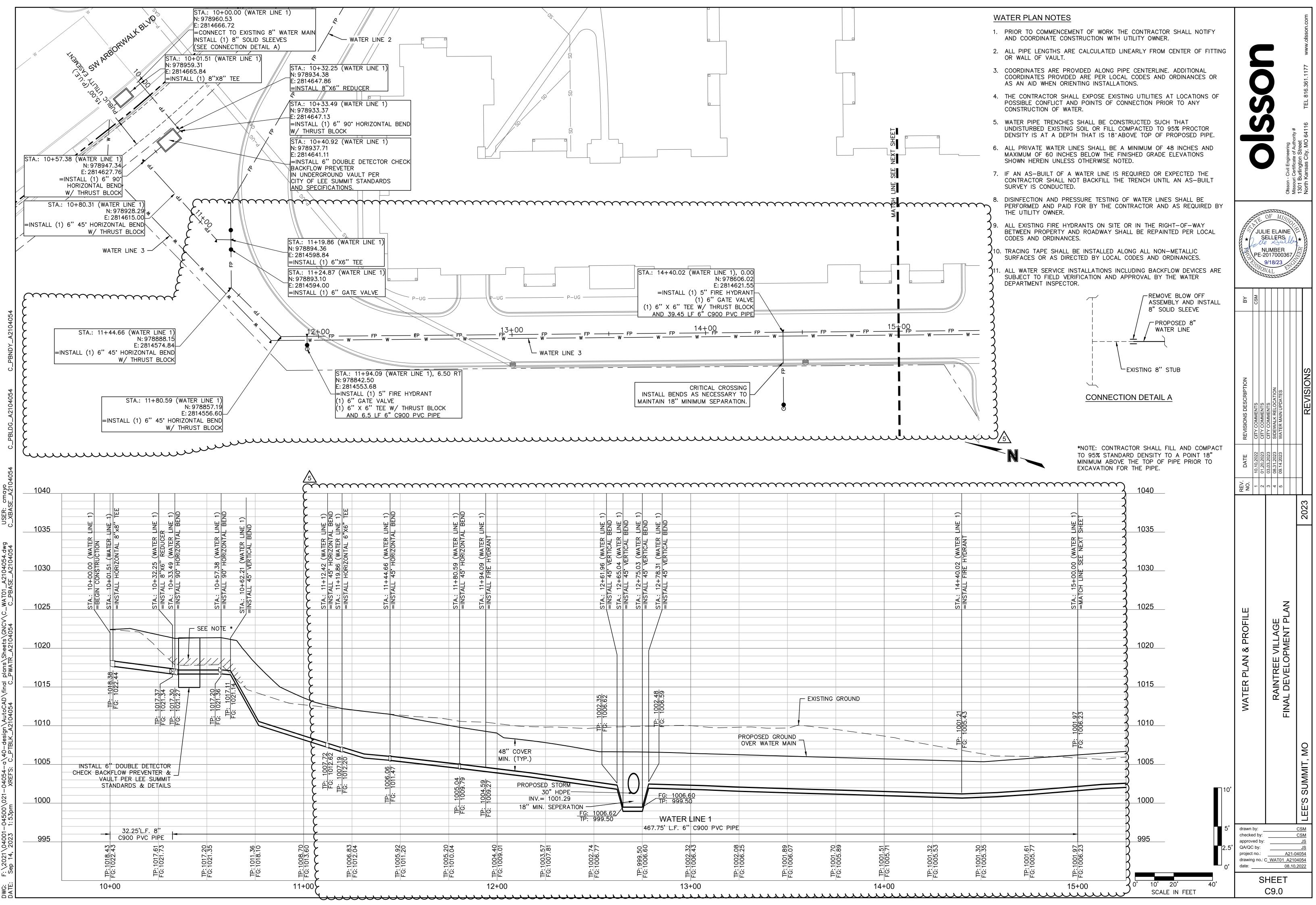


	Storm Sewer Design Calculation Table											
10	10 Year Return Frequency											
Upstream	Downstream		Upstream	Downstream			Manning's					Upstream
Structure	Structure	Length	Invert	Invert	Slope	Diameter	n	Total Flow	Velocity	Capacity	Flow Depth	Struct. HGL
Structure	Structure	(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(ft/s)	(cfs)	(ft)	(ft)
ST 1-1	ST P1-3	19.372	993.44	993.24	1.03	36	0.012	24.74	7.5	73.42	1.28	995.04
ST 1-2	ST 1-1	66.087	994.61	993.94	1.05	36	0.012	24.91	7.89	72.75	1.20	996.22
ST 1-3	ST 1-2	92.547	996.08	995.11	1.01	36	0.012	22.22	7.68	73.97	1.13	997.6
ST 1-4	ST 1-3	40.614	996.95	996.58	0.91	36	0.012	21.34	7.36	68.96	1.15	998.43
ST 1-5	ST 1-4	94.846	998.4	997.45	1	36	0.012	17.06	7.03	72.31	0.99	999.72
ST 1-6	ST 1-5	151.279	1000.41	998.9	1	36	0.012	15.33	6.81	72.31	0.94	1001.66
ST 1-7	ST 1-6	88.08	1001.9	1000.91	1.12	30	0.012	14	7.01	47.1	0.93	1003.16
ST 1-8	ST 1-7	110.483	1001.5	1002.4	1.12	30	0.012	14.21	6.86	44.33	0.97	1003.10
ST 1-9	ST 1-8	76.719	1003.3	1002.4	0.5	30	0.012	14.36	5.97	31.27	1.19	1004.77
ST 1-10	ST 1-9	68.177	1004.38	1004.88	0.5	30	0.012	12.7	5.76	31.37	1.15	1005.00
ST 1-10	ST 1-10	131.568	1005.22	1004.88	0.5	30	0.012	11.55	5.61	31.37	1.05	1000.42
ST 1-11 ST 1-12	ST 1-10	123.87	1000.38	1005.72	0.5	24	0.012	7.22	5.07	17.33	0.9	1007.32
ST 1-12 ST 1-13	ST 1-11	20.174	1007.6	1000.88	0.5	24	0.012	7.14	4.85	17.25	0.95	1008.45
ST 1-13	ST 1-12	48.072	1007.84	1007.6	0.5	24	0.012	7.14	4.85	17.25	0.95	1008.33
ST 1-14	ST 1-13	75.093	1007.84	1007.0	0.51	24	0.012	7.21	5.08	17.31	0.9	1008.73
ST 1-15	ST 1-14	86.161	1008.72	1008.34	0.51	24	0.012	7.21	4.92	17.43	0.95	1010.11
ST 1-10	ST 1-16	13.107	1009.13	1008.72	0.53	24	0.012	5.74	4.32	17.31	0.33	1010.11
ST 1-17	ST 1-18	27.321	1010.36	1010.22	0.55	24	0.012	4.85	4.81	17.54	0.78	1010.37
ST 1-18	ST 1-17	44.334	1010.58	1010.22	0.51	24	0.012	4.85	4.34	17.34	0.72	1011.14
ST 1-19	ST 1-18	104.293	1010.38	1010.30	0.5	24	0.012	5.02	4.56	17.20	0.77	1011.30
ST 1-20	ST 1-19 ST 1-20	67.95	1011.8	1011.08	1	10	0.012	0.36	2.8	2.37	0.74	1012.59
ST 1-21	ST 1-20	27.501	1013.28	1012.8	0.87	10	0.012	0.36	1.96		0.22	1013.34
ST 1-22		15.517	1013.32	1013.28	0.87	6	0.012	0.23	2.22	2.22 0.6		1013.74
	ST 1-22										0.16	
ST 2-1	ST 1-4	29.549	999.88	998.7	3.99 4	18 18	0.012	5.65	7.83	22.73	0.51	1000.8
ST 2-2	ST 2-1	48.776	1002.83	1000.88			0.012	5.69	7.85 8.7	22.75		1003.75
ST 2-3	ST 2-2	68.879	1007.29	1003.83	5.02 2	15 15	0.012	5.73	8.7 5.27	15.68 9.89	0.52	1008.26 1010.13
ST 2-4	ST 2-3	61.517	1009.52	1008.29			0.012	2.35			0.42	
ST 2-5	ST 2-4	120.22	1012.42	1010.02	2	15	0.012	2.43	5.32	9.88	0.42	1013.04
ST 2-6	ST 2-5	52.11	1013.96	1012.92	2	15	0.012	2.47	5.34	9.88	0.43	1014.59
ST 3-1	ST 2-3	143.036	1013.3	1008.29	3.5	15	0.012	4.03	7.08	13.09	0.48	1014.11
ST 4-1	EX 4-0	98	1001.7	1000.72	1	24	0.012	3.15	4.58	24.5	0.48	1002.32
ST 5-1	ST 1-10	28.026	1013.95	1013.11	3	15	0.012	1.92	5.45	12.11	0.34	1014.5
ST 6-1	ST 1-11	14.736	1011.11	1010.96	1.02	18	0.012	4.99	5.52	11.48	0.69	1011.97
ST 6-2	ST 6-1	32.221	1011.93	1011.61	0.99	12	0.012	1.12	3.77	3.84	0.37	1012.37
ST 6-3	ST 6-2	24	1012.67	1012.43	1	12	0.012	0.68	3.27	3.86	0.28	1013.01
ST 6-4	ST 6-3	15.147	1012.82	1012.67	0.99	12	0.012	0.46	2.23	3.84	0.34	1013.1
ST 6-5	ST 6-4	40.665	1013.23	1012.82	1.01	12	0.012	0.36	2.19	3.87	0.28	1013.48
ST 6-6	ST 6-5	21.415	1013.44	1013.23	0.98	12	0.012	0.25	1.9	3.82	0.25	1013.65
ST 6-7	ST 6-6	24.351	1014.19	1013.94	1.03	6	0.012	0.13	2.26	0.62	0.15	1014.37
ST 7-1	ST 6-1	40.175	1012.01	1011.61	1	15	0.012	3.65	5.17	6.98	0.64	1012.78
ST 8-1	ST 1-9	57.435	1012.71	1011.56	2	15	0.012	2.33	5.25	9.9	0.41	1013.32
ST 8-2	ST 8-1	27.994	1013.74	1013.46	1	6	0.012	0.31	2.93	0.61	0.26	1014.02
ST 8-3	ST 8-2	18.263	1013.92	1013.74	0.99	6	0.012	0.32	2.75	0.6	0.28	1014.21
ST 8-4	ST 8-3	41.897	1014.5	1013.92	1.38	6	0.012	0.13	1.61	0.71	0.28	1014.68

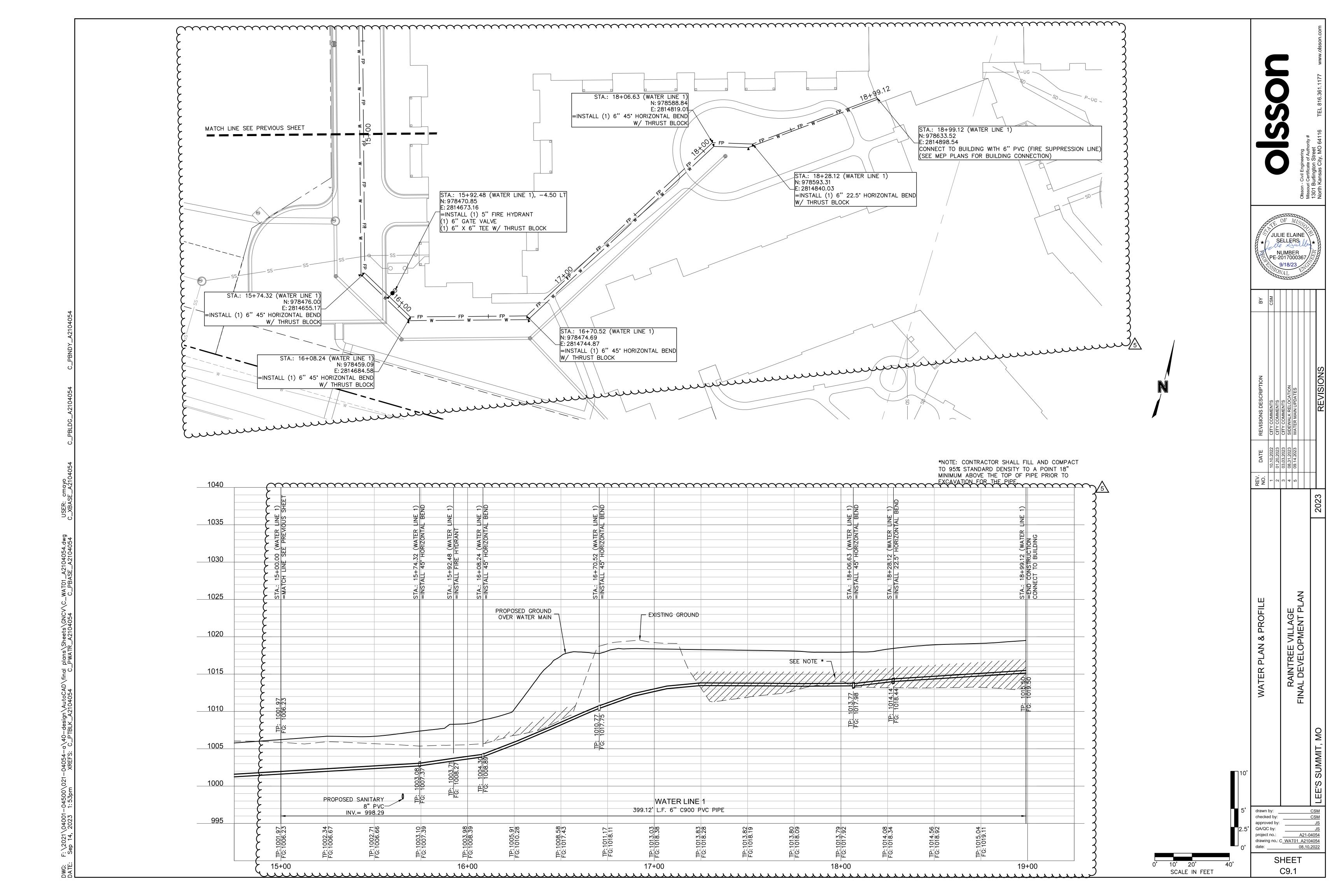
	Storm Sewer Design Calculation Table											
100	Year Return Freq	uency	1			1				1	1	
Upstream	Downstream		Upstream	Downstream			Manning's					Upstream
Structure	Structure	Length	Invert	Invert	Slope	Diameter	n	Total Flow	Velocity	Capacity	Flow Depth	Struct. HG
		(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(ft/s)	(cfs)	(ft)	(ft)
ST 1-1	ST P1-3	19.372	993.44	993.24	1.03	36	0.012	51.85	10.01	73.42	1.86	995.78
ST 1-2	ST 1-1	66.087	994.61	993.94	1.01	36	0.012	52.07	9.99	72.75	1.88	996.95
ST 1-3	ST 1-2	92.547	996.08	995.11	1.05	36	0.012	46.27	9.21	73.97	1.84	998.29
ST 1-4	ST 1-3	40.614	996.95	996.58	0.91	36	0.012	44.35	9.23	68.96	1.75	999.12
ST 1-5	ST 1-4	94.846	998.4	997.45	1	36	0.012	35.24	8.04	72.31	1.67	1000.33
ST 1-6	ST 1-5	151.279	1000.41	998.9	1	36	0.012	31.34	8.23	72.18	1.43	1002.22
ST 1-7	ST 1-6	88.08	1001.9	1000.91	1.12	30	0.012	28.49	8.75	47.1	1.4	1003.72
ST 1-8	ST 1-7	110.483	1003.5	1002.4	1	30	0.012	28.76	8.54	44.33	1.47	1005.33
ST 1-9	ST 1-8	76.719	1004.38	1004	0.5	30	0.012	28.94	7.23	31.27	1.9	1006.28
ST 1-10	ST 1-9	68.177	1005.22	1004.88	0.5	30	0.012	25.49	7.07	31.37	1.72	1006.94
ST 1-11	ST 1-10	131.568	1006.38	1005.72	0.5	30	0.012	22.97	6.89	31.47	1.59	1008.01
ST 1-12	ST 1-11	123.87	1007.5	1006.88	0.5	24	0.012	14.21	6.16	17.33	1.38	1008.88
ST 1-13	ST 1-12	20.174	1007.6	1007.5	0.5	24	0.012	14.04	5.27	17.25	1.61	1009.15
ST 1-14	ST 1-13	48.072	1007.84	1007.6	0.5	24	0.012	13.92	5.01	17.31	1.73	1009.43
ST 1-15	ST 1-14	75.093	1008.72	1008.34	0.51	24	0.012	14.04	6.18	17.43	1.36	1010.08
ST 1-16	ST 1-15	86.161	1009.15	1008.72	0.5	24	0.012	14.07	5.68	17.31	1.6	1010.52
ST 1-17	ST 1-16	13.107	1009.72	1009.65	0.53	24	0.012	11.08	5.83	17.9	1.14	1010.91
ST 1-18	ST 1-17	27.321	1010.36	1010.22	0.51	24	0.012	9.33	5.5	17.54	1.04	1011.45
ST 1-19	ST 1-18	44.334	1010.58	1010.36	0.5	24	0.012	9.3	5.32	17.26	1.09	1011.67
ST 1-20	ST 1-19	104.293	1011.6	1011.08	0.5	24	0.012	9.47	5.49	17.3	1.06	1012.7
ST 1-21	ST 1-20	67.95	1013.28	1012.6	1	10	0.012	0.66	3.34	2.37	0.3	1013.64
ST 1-22	ST 1-21	27.501	1013.52	1013.28	0.87	10	0.012	0.45	2.32	2.22	0.36	1013.81
ST 1-23	ST 1-22	15.517	1014.04	1013.89	0.97	6	0.012	0.23	2.64	0.6	0.21	1014.28
ST 2-1	ST 1-4	29.549	999.88	998.7	3.99	18	0.012	10.75	9.74	22.73	0.73	1001.14
ST 2-2	ST 2-1	48.776	1002.83	1000.88	4	18	0.012	10.8	9.76	22.75	0.73	1004.09
ST 2-3	ST 2-2	68.879	1007.29	1003.83	5.02	15	0.012	10.84	11.37	15.68	0.76	1008.49
ST 2-4	ST 2-3	61.517	1009.52	1008.29	2	15	0.012	4.42	6.4	9.89	0.59	1010.37
ST 2-5	ST 2-4	120.22	1012.42	1010.02	2	15	0.012	4.5	6.44	9.88	0.59	1013.28
ST 2-6	ST 2-5	52.11	1013.96	1012.92	2	15	0.012	4.54	6.45	9.88	0.59	1014.82
ST 3-1	ST 2-3	143.036	1013.3	1008.29	3.5	15	0.012	7.07	8.61	13.09	0.65	1014.36
ST 4-1	EX 4-0	98	1001.7	1000.72	1	24	0.012	5.53	5.39	24.5	0.65	1002.53
ST 5-1	ST 1-10	28.026	1013.95	1013.11	3	15	0.012	3.38	6.46	12.11	0.45	1014.69
ST 6-1	ST 1-11	14.736	1011.11	1010.96	1.02	18	0.012	9.51	6.79	11.48	1.04	1012.3
ST 6-2	ST 6-1	32.221	1011.93	1011.61	0.99	12	0.012	2.11	3.89	3.84	0.69	1012.55
ST 6-3	ST 6-2	24	1012.67	1012.43	1	12	0.012	1.28	3.93	3.86	0.4	1013.15
ST 6-4	ST 6-3	15.147	1012.82	1012.67	0.99	12	0.012	0.86	2.69	3.84	0.48	1013.21
ST 6-5	ST 6-4	40.665	1013.23	1012.82	1.01	12	0.012	0.66	2.59	3.87	0.39	1013.57
ST 6-6	ST 6-5	21.415	1013.44	1012.32	0.98	12	0.012	0.45	2.23	3.87	0.34	1013.72
ST 6-7	ST 6-6	24.351	1013.44	1013.94	1.03	6	0.012	0.45	2.23	0.62	0.21	1013.72
ST 7-1	ST 6-1	40.175	1014.19	1013.94	1.03	15	0.012	6.4	6.21	6.98	0.21	1013.03
ST 8-1	ST 1-9	57.435	1012.01	1011.56	2	15	0.012	4.2	6.3	9.9	0.57	1013.54
ST 8-2	ST 8-1	27.994	1012.71	1011.36	1	6	0.012	4.2 0.57	3.51	0.61	0.37	1013.34
ST 8-3	ST 8-1	18.263	1013.74	1013.48	0.99	6	0.012	0.57	3.49	0.6	0.39	1014.12
ST 8-4	ST 8-3	41.897	1013.92	1013.74	1.38	6	0.012	0.37	1.85	0.8	0.39	1014.31

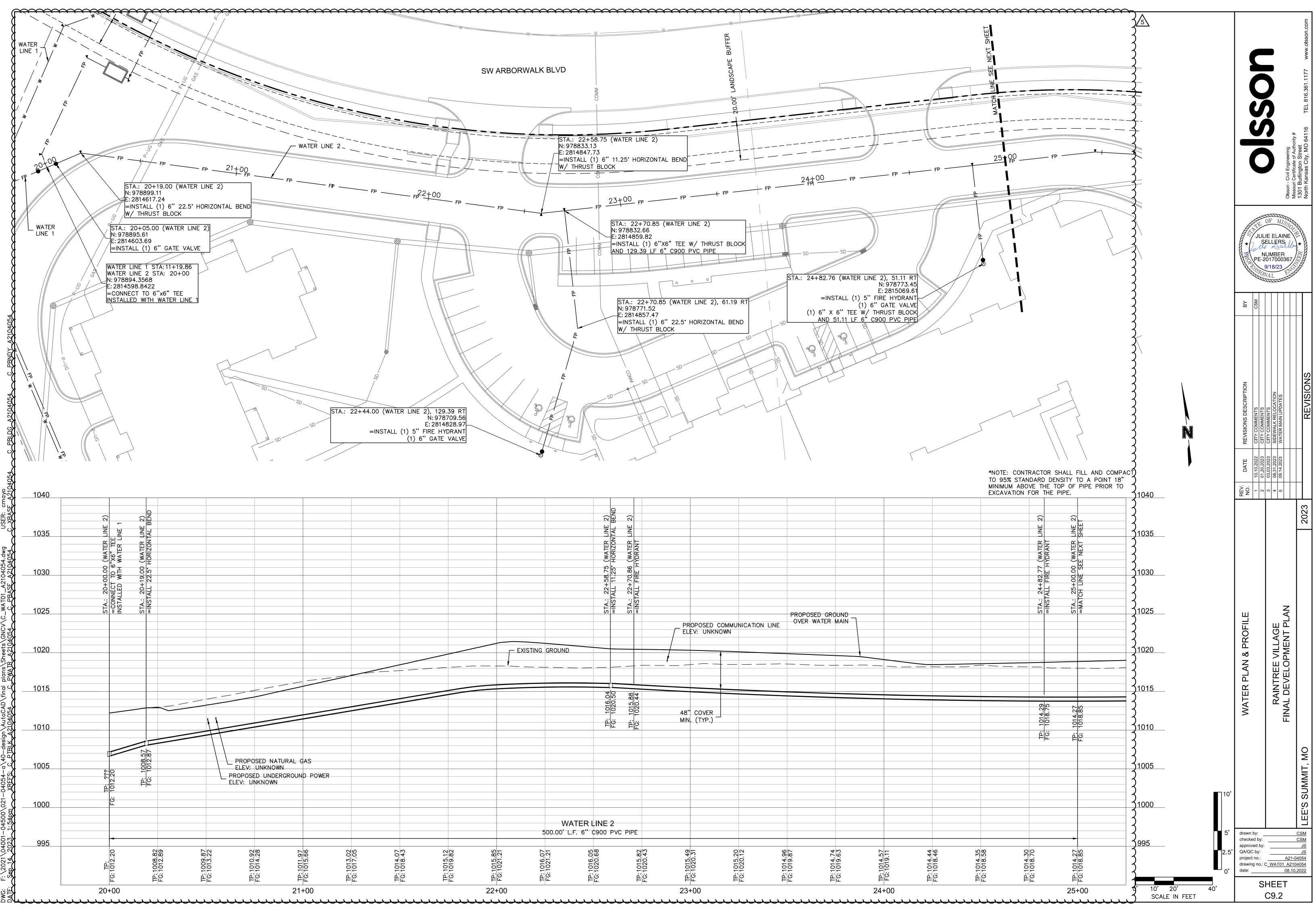


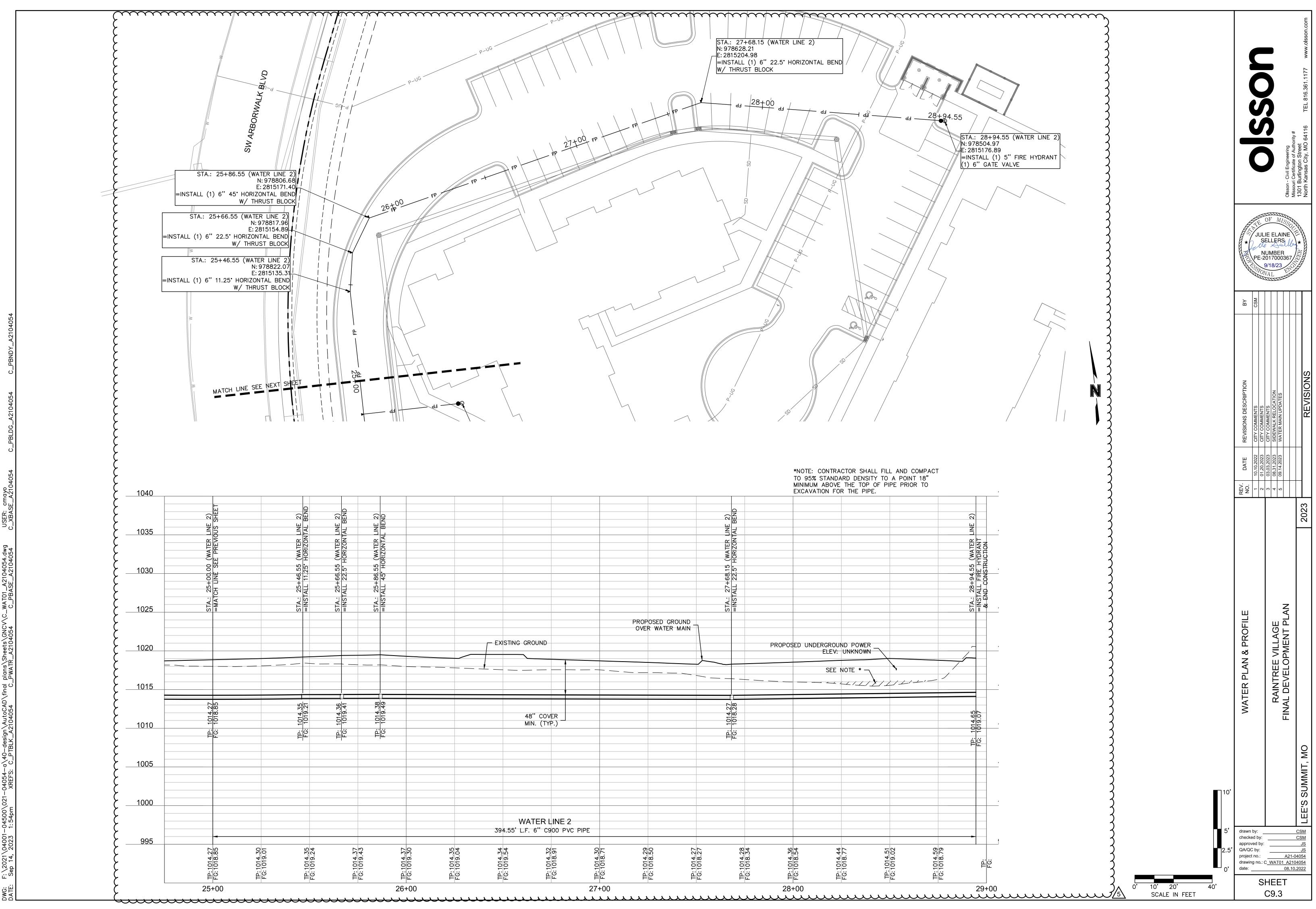




1	2	+	0	0

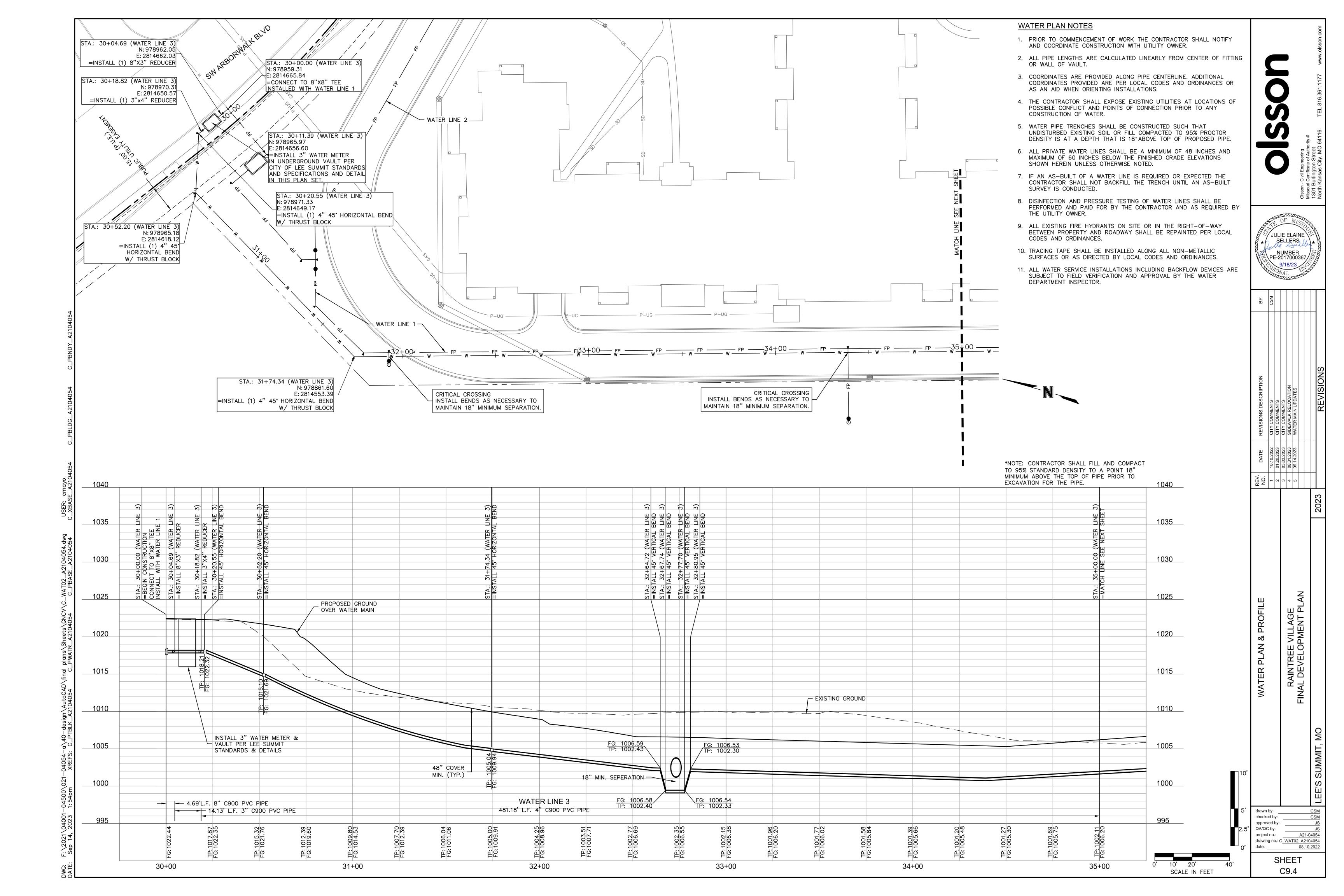


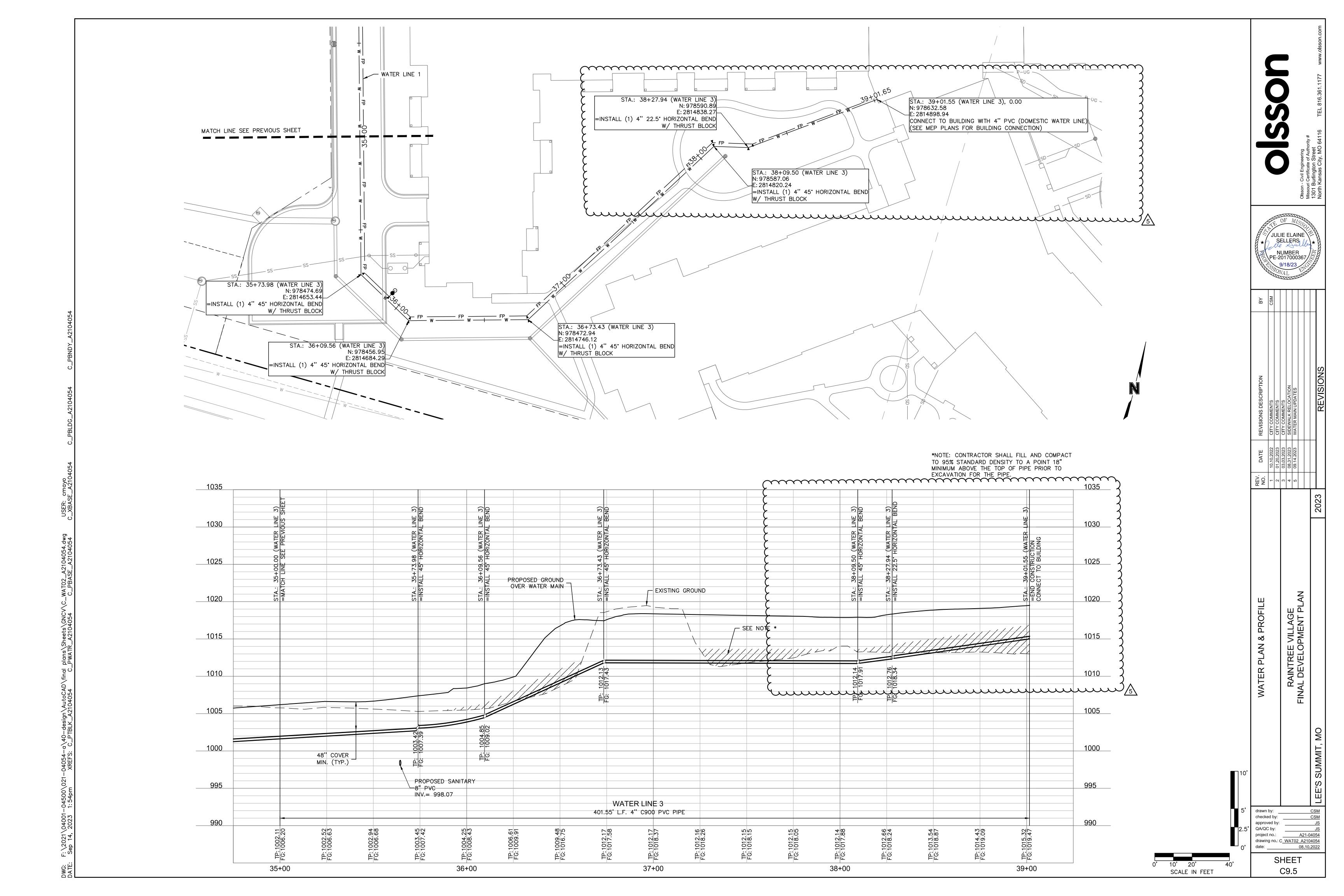


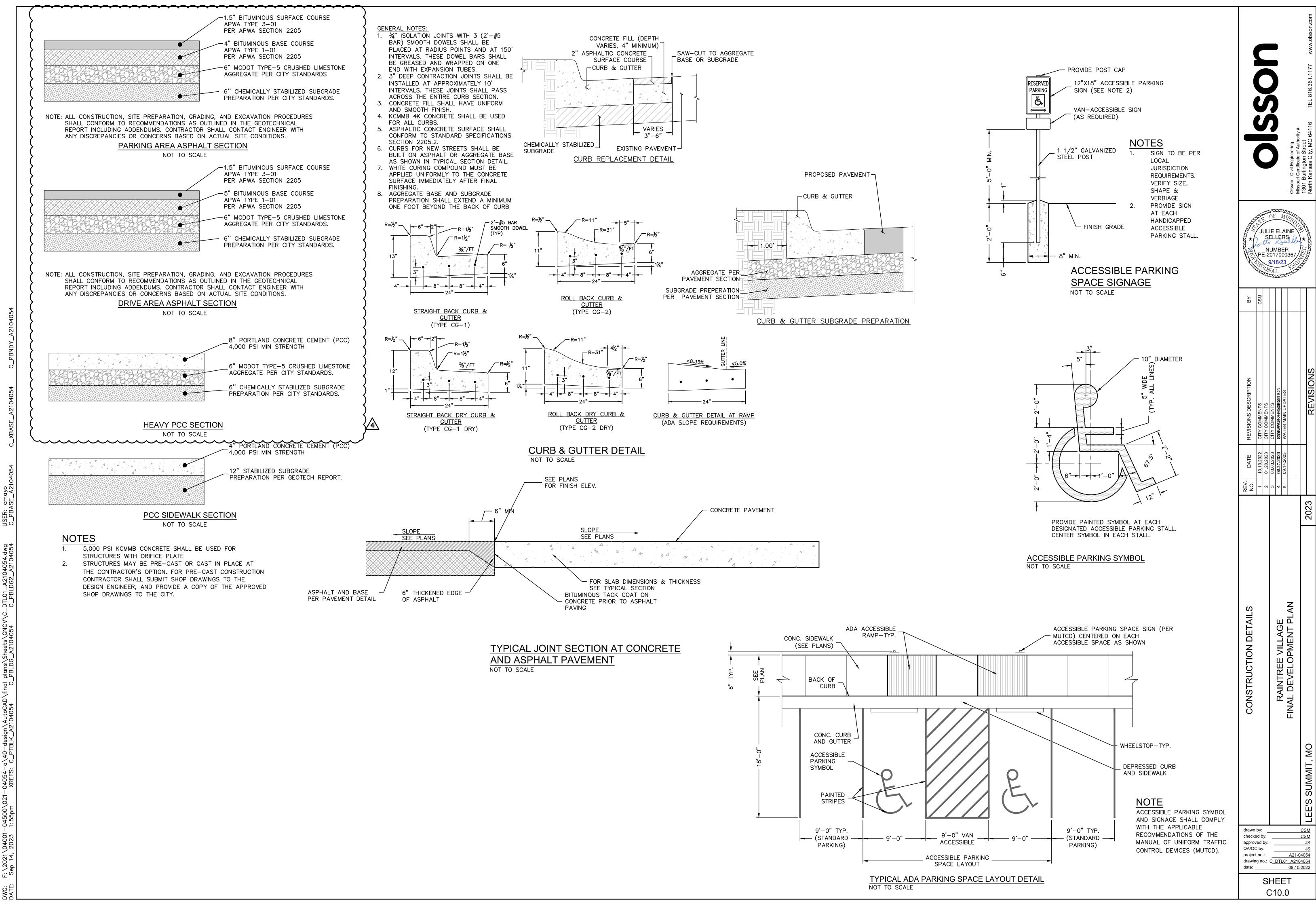


TO 95% STANDA	RD DENSITY TO THE TOP OF PI R THE PIPE.	A PO

						BEND			
						(WATER LINE HORIZONTAL I			
						ZOI			
						NRI N			
						<u>S</u> C			
						5.15			
						STA.: 27+68.15 =INSTALL 22.5*			
						ALI 2			
						·: S			
				PROPOSED GRO	DUND				
				PROPOSED GRO OVER WATER	MAIN 🗍 👘				
		GROUND					PROPOSED UNE	DERGROUND POWE	R
		_						DERGROUND POWE ELEV: UNKNOW	/N
									$\rightarrow$
								SEE NOTE * -	<b>\</b>
								SEL NOTE	$\rightarrow$
								LIL	1XILL
						<u> </u>			
						1014.27 1018.28			
		48" COVER				40			
		MIN. (TYP.)							
						I			
		WATER LINE 2							
	394.55	L.F. 6" C900 PVC F	1PE						
55	44	91	21	60		84	92	41	51
4 a 	טירא <u>א</u> ראיי	4.00	4.00	4 00 (7 10)	4.0	4.0 (12)	40	4.4	4.0 7.0
10	500	00	01.0	010	00	010	010	010	00
TP:1014.35 FG:1019.04	TP: 1014.34 FG: 1019.54	TP: 1014.32 FG: 1018.91	TP: 1014.30 FG: 1018.71	TP: 1014.29 FG: 1018.50	TP: 1014.27 FG: 1018.27	TP: 1014.28 FG: 1018.34	TP: 1014.36 FG: 1018.54	TP: 1014.44 FG: 1018.77	TP: 1014.51 FG: 1019.02
		ĔĔ	Ĕ		ĔĔ	변전		μщ	FF
· · ·			27+00			· ·	28+00		· ·

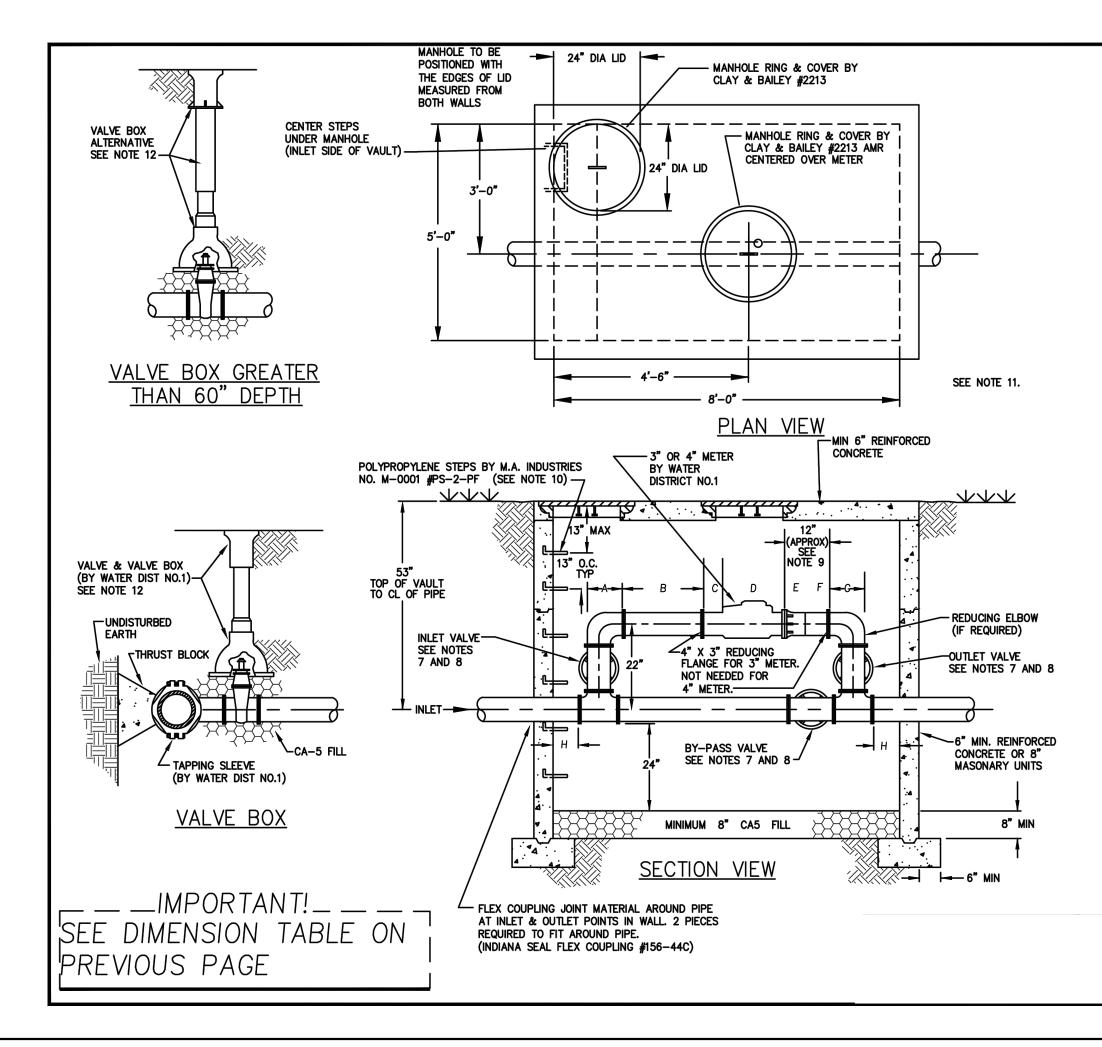






<u>р</u>4 ΟO **Ξ**Ο 200

<b>3" METER LAYOUT DIMENSIONS</b>	Α
Meter (and strainer) Lay Length	4x3 90
3" Compound Sensus	6.5
3" Compound Neptune	6.5
3" Compound Badger	6.5
3" Turbine Sensus	6.5
3" Turbine Neptune	6.5
3" Turbine Badger	6.5
4" METER LAYOUT DIMENSIONS	Α
Meter (and strainer) Lay Length	4" 90
4" Compound Sensus	6.5
4" Compound Neptune	6.5
4" Compound Badger	6.5
4" Turbine Sensus	6.5
4" Turbine Neptune	6.5
4" Turbine Badger	6.5



									Approx
В	С	D	E	F	G	н	Total Laying Length	Vault	OD Pipe
						Edge			
						Vault To			
Upstream	Strainer	Meter	FxMJ SB911	15" Spool	4x3 90	Risers	C/L Inlet to Outlet	Inside Length	to C/L
15	0	17	7.88	12	6.5	13.2	64.9	96	4.8
15	6	17	7.88	12	6.5	10.2	70.9	96	4.8
15	7	17	7.88	12	6.5	9.7	71.9	96	4.8
15	0	19	7.88	12	6.5	12.2	66.9	96	4.8
15	6	12	7.88	12	6.5	12.7	65.9	96	4.8
15	7	12	7.88	12	6.5	12.2	66.9	96	4.8
									Approx
В	С	D	E	F	G	Edge Vault	Total Laying Length	Vault	OD Pipe
Upstream	Strainer	Meter	FxMJ SB911	15" Spool	6"90	To Risers	C/L Inlet to Outlet	Inside Length	to C/L
20	0	20	7.88	12	6.5	9.2	72.9	96	4.8
20	7.5	20	7.88	12	6.5	5.4	80.4	96	4.8
20	9	20	7.88	12	6.5	4.7	81.9	96	4.8
20	0	23	7.88	12	6.5	7.7	75.9	96	4.8
20	7.5	14	7.88	12	6.5	8.4	74.4	96	4.8
20	9	14	7.88	12	6.5	7.7	75.9	96	4.8

NOTES:

- 1. VAULT WILL BE LOCATED IN NON-TRAFFIC, NON-PEDESTRIAN AREA. VAULT LID AT GRADE AND FULLY EXPOSED PRE APPROVAL OF THE VAULT LOCATION WILL BE OBTAINED FROM THE SITE INSPECTION BY WATER DIST. NO. 1 PERSONNEL
- 2. THE SERVICE LINE FROM MAIN TO PROPERTY LINE SHALL BE 6" CML DUCTILE IRON PIPE PC350 WRAPPED WITH 8 MIL POLYWRAP, OR DR18 C900 OR 4710 DR11 C906 HDPE (IF USING LARGER THAN 4" PIPE FOR A 4" METER, THEN REDUCER ELBOWS ARE REQUIRED AS SHOWN, AND PROPER SIZE OF METER VAULT TO BE USED FOR SIZE OF PIPE).
- 3. STRUCTURAL MEMBERS OF THE VAULT SHALL BE DESIGN BY A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER AND PRE APPROVED BY DISTRIBUTION ENGINEERING
- 4. PRECAST CONCRETE VAULT AND LID DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IS ACCEPTABLE. SHOP DRAWINGS OF THE VAULT SHALL BE SUBMITTED FOR APPROVAL TO WATER DIST. NO.1 DISTRIBUTION SERVICES DEPT. 5. ALL MATERIAL FOR THE INSTALLATION WILL BE PROVIDED BY THE APPLICANT
- EXCEPT MATERIAL NOTED ON DRAWING BY (WATER DIST. NO.1), PAID FOR BY THE APPLICANT
- 6. ALL PIPE AND FITTINGS SHALL BE CEMENT MORTAR LINED, FLANGED, DUCTILE IRON PIPE.
- VALVES INSIDE VAULT SHALL BE MUELLER 2360 SERIES, AMERICAN FLOW CONTROL 2500 SERIES, AMERICAN AVK 65 SERIES, EAST JORDAN FLOWMASTER SERIES, OR CLOW 2638 SERIES, OPEN LEFT. CANNOT USE RISING STEM VALVES.
- 8. BY PASS VALVE, METER INLET VALVE, AND OUTLET VALVE TO BE ROTATED 90° TOWARD MANHOLE SIDE OF VAULT.
- 9. FLANGED COUPLING ADAPTOR AT METER OUTLET FLANGE SUPPLIED BY WATER DIST. NO.1 (FLANGE IS APPROX. 5" IN LENGTH. A 12" SPOOL PIECE CUT TO SIZE AS REQUIRED TO CONNECT FROM FLANGE COUPLING ADAPTOR TO ELBOW)
- 10. STEPS SHALL BE ON FLOW INLET END OF VAULT. (5 STEPS REQUIRED) POLYPROPYLENE STEPS SHALL BE CAST IN PLACE OR GROUTED IN PLACE IN PRE-DRILLED HOLES, NOT DRIVEN IN PLACE.
- 11. IF METER VAULT CANNOT BE PLACED AT PROPERTY LINE, WITHIN AN EASEMENT OR AT A MAXIMUM DISTANCE OF 15' FROM THE MAIN, THEN A SECOND VALVE SHALL BE REQUIRED BETWEEN TAP AND METER VAULT.
- 12. (THE MATERIAL ORIGINALLY SUPPLIED IS FOR A MAIN WITH A DEPTH BETWEEN 42"-60"). IF THE MAIN IS MORE THAN 60" DEEP, THEN A VALVE BOX ALTERNATIVE WILL BE NEEDED BY FOLLOWING THE STEPS LISTED BELOW:
- A. RETURN LID, LONG TOP AND SHORT BOTTOM OF THE STANDARD VALVE BOX ISSUED, TO WATER DIST. MATERIAL MANAGEMENT DEPARTMENT FOR EXCHANGE.
  B. MATERIAL MANAGEMENT DEPARTMENT WILL ISSUE ALTERNATIVE VALVE BOX MATERIALS (58-A VALVE BOX EXTENSION AND CLAY & BAILEY #2194 LID) USED WITH A PVC RISER PIPE. (COST DIFFERENCE MUST BE PAID AT TIME OF EVOLUMED)
- OF EXCHANGE) C. RISER PIPE FOR VALVE BOX TO BE 6" CLASS 200 PVC PIPE CUT TO FIT FINAL GRADE. (RISER PIPE SUPPLIED BY CONTRACTOR)
- 13. APPLICANT WILL EXCAVATE TAP HOLE ACCORDING TO OSHA REGULATION 29 C.F.R. XVII PART 1926 AS AMENDED P-EXCAVATION 14. NO OTHER EQUIPMENT OF ANY DESCRIPTION SHALL BE INSTALLED OR STORED IN VAULT.
- 15. SUBJECT TO REVISION WITHOUT NOTICE.

### **3" & 4" METER SERVICE CONNECTION** STANDARD INSTALLATION

						Olsson - Civil Engineering	Missouri Certificate of Authority #	1301 Burlington Street	North Kansas City, MO 64116 TEL 816.361.1177 www.olsson.com
* PROFESS	PI SO			EL			A COLORINA A	A TON	
ВҮ	CSM								
DATE REVISIONS DESCRIPTION	10.10.2022 CITY COMMENTS	01.20.2023 CITY COMMENTS	03.03.2023 CITY COMMENTS	08.31.2023 SIDEWALK RELOCATION	09.14.2023 WATER MAIN UPDATES				REVISIONS
REV NO.	1	2	e	4	5				2023
CONSTRUCTION DETAILS				RAINTRFF VII I AGF		FINAL DEVELOPMENT PLAN			LEE'S SUMMIT, MO
drawn checke approv QA/QC project	ed b ed ; by no	by: /: .:					1-0		M M JS JS JS 54
drawing date:		S	Н	E	E.	08. T	<u>210</u> .10.		
C10.1									

	LE				
TREES	<u>CODE</u> AX	<u>QTY</u> 23	BOTANICAL / COMMON NAME ACER TRUNCATUM X PLATANOIDES 'WARRENRED' TM	<u>SIZE</u> B & B	<u>CALIPEF</u> 3"
			PACIFIC SUNSET MAPLE		
	GA	15	GINKGO BILOBA 'AUTUMN GOLD' TM AUTUMN GOLD MAIDENHAIR TREE	B & B	3"
	LS	9	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE' SLENDER SILHOUETTE SWEET GUM	B & B	3"
	ТМ	11	TILIA AMERICANA 'MCKSENTRY' TM AMERICAN SENTRY LINDEN	B & B	3"
	ZG	10	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE SAWLEAF ZELKOVA	B & B	3"
ORNAMENTAL TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CALIPER
$\left( \cdot \right)$	AG	11	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' AUTUMN BRILLIANCE APPLE SERVICEBERRY	B & B	3"
$\bigcirc$	CE	12	CERCIS CANADENSIS EASTERN REDBUD MULTI-TRUNK	B & B	3"
en e	СК	13	CORNUS KOUSA KOUSA DOGWOOD	B&B, 8` HT.	
EVERGEEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	
	PA	4	PICEA ABIES NORWAY SPRUCE	B&B, 8` HT.	
	PC	7	PICEA PUNGENS COLORADO SPRUCE	B&B, 8` HT.	
Josephilic Contraction of the second	PS	9	PINUS STROBUS WHITE PINE	B&B, 8` HT.	
SHRUBS +	<u>CODE</u> BB2	<u>QTY</u> 11	BOTANICAL / COMMON NAME BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION BLUE GRAMA	<u>SIZE</u> 1 GAL	
(+)	BB	14	BUDDLEJA X 'BLUE CHIP JR.' TM BLUE CHIP JR. LO & BEHOLD BUTTERFLY BUSH	2 GAL	
	BG2	34	BUXUS X 'GREEN VELVET' GREEN VELVET BOXWOOD	3 GAL	
(+)	CK2	87	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS	1 GAL	
Ê	DD	17	DEUTZIA X 'NCDX2' TM YUKI CHERRY BLOSSOM DEUTZIA	2 GAL	
$\rightarrow$	Hem oro	34	HEMEROCALLIS X 'STELLA DE ORO' STELLA DE ORO DAYLILY	4" POT	
$\begin{pmatrix} + \\ + \end{pmatrix}$	HJ	18	HYDRANGEA PANICULATA 'JANE' TM LITTLE LIME PANICLE HYDRANGEA	3 GAL	
	IS	29	ITEA VIRGINICA 'SPRICH' TM LITTLE HENRY SWEETSPIRE	3 GAL	
	JF	49	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	3 GAL	
(+)	JO	24	JUNIPERUS VIRGINIANA 'GREY OWL' GREY OWL EASTERN REDCEDAR	3 GAL	
$\langle + \rangle$	PL	27	PHYSOCARPUS OPULIFOLIUS 'LITTLE DEVIL' TM LITTLE DEVIL DWARF NINEBARK	3 GAL	
(+)	ST	23	SPOROBOLUS HETEROLEPIS 'TARA' TARA PRAIRIE DROPSEED	1 GAL	
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	
	TD	25,163 SF	TURF SEED (SANITARY SEWER EXTENSION RESEED)	SEED	
$\checkmark$	TD2	230,971 SF	TURF SEED DROUGHT TOLERANT DWARF FESCUE BLEND	SEED	
	TS	79,815 SF	TURF SOD DROUGHT TOLERANT FESCUE BLEND	N/A	
		5,170 SF	MISSOURI RAINBOW ROCK MULCH (1"-3") -		
		15,232 SF	DOUBLE GROUND HARDWOOD MULCH		

	RAINTREE VILLAGE PDP - LANDSCAPE CALCULATIONS												
BUILDING COVERAGE (SF)	PARKING SPACES	LANDSCAPE ISLANDS AREA (SF)	PARKING LOT AREA (SF)	PARKING AREA LANDSCAPE ISLAND % (5% MIN.)	R/W LENGTH (LF)		(1) LANDSCAPE STRIP BETWEEN PARKING/LOADING AREA AND R/W	(1) STREET FRONTAGE TREES	(2) STREET FRONTAGE SHRUBS	(3) OPEN YARD AREA PROVIDED (SF)			
149,439	137	6,015	6,015 73,049	8.23%	1,190	REQUIRE	20' WIDE	40	106	367,229			
110,100	107	0,010	10,010	0.2070	1,100	PROVIDE	20' WIDE	40	109	001,220	55		

LANDSCAPE REQUIREMENTS DESCRIPTIONS (1) ANY PARKING OR LOADING AREA VISIBLE FROM A STREET SHALL BE SEPARATED FROM THE STREET RIGHT-OF-WAY WITH A LANDSCAPE STRIP AT LEAST 20' WIDE, PLANTED WITH 1 TREE (2) ANY PARKING OF LOADING AREA LANDSCAPE STRIP SHALLL BE PLANTED WITH ONE (1) SHRUB FOR EVERY 20 LF OF STREET FRONTAGE. (3A) IN ADDITION TO STREET FRONTAGE TREES, ONE (1) TREE SHALL BE PROVIDED FOR EVERY 5,000 SF OF OPEN YARD AREA (3B) OPEN YARD AREAS SHALL BE LANDSCAPED WITH TWO (2) SHRUBS PER 5,000 SF OF TOTAL LOT AREA.

(4) A 20' WIDE BUFFER SCREEN SHALL BE PROVIDED PER PLAN, IN THE FORM OF (4A) 1 SHADE TREE PER 1,000 SF; 1 ORNAMENTAL TREE PER 500 SF; 1 EVERGREEN TREE PER 500; AND (4B) (5) A HEDGE CONSISTING OF AT LEAST 12 SHRUBS PER 40 LINEAR FEET

#### PART 1 - GENERAL

#### 1.1 PROJECT CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings
- and construction contiguous with new plantings by field measurements before proceeding with planting work. B. Site Examination: Contractor shall verify all conditions, dimensions, and elevations in the field before starting work, and notify the project
- engineer or Landscape Architect immediately of any discrepancies between drawings and field conditions if encountered
- C. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated: 1. Notify Landscape Architect no fewer than seven (7) days in advance of proposed interruption of each service or utility. 2. Do not proceed with interruption of services or utilities without Landscape Architect's written permission.
- D. Site Conditions:
- 1. Contractor shall keep the premises clean and free from rubbish and all debris associated with the work at all times. All unused materials and debris shall be removed from the site.
- 2. Contractor is responsible for repairs or damage to any existing improvements during construction such as but not limited to: drainage utilities, pavement, striping, curb, etc. Any repair work in the city R.O.W. shall be equal to or better than existing conditions.
- 3. Contractor shall comply with specifications prior to commencement of any type of work. 4. All disturbed areas outside of the project limits as shown on the plans are to be restored back to the original conditions with turf-type, tall
- fescue seed. 5. Contractor shall not commence with work until the site is free of debris caused by ongoing construction operations. Removal of debris shall be the responsibility of the General Contractor.
- 6. Contractor shall coordinate all work with other Contractors on site throughout the construction.

#### E. Safety:

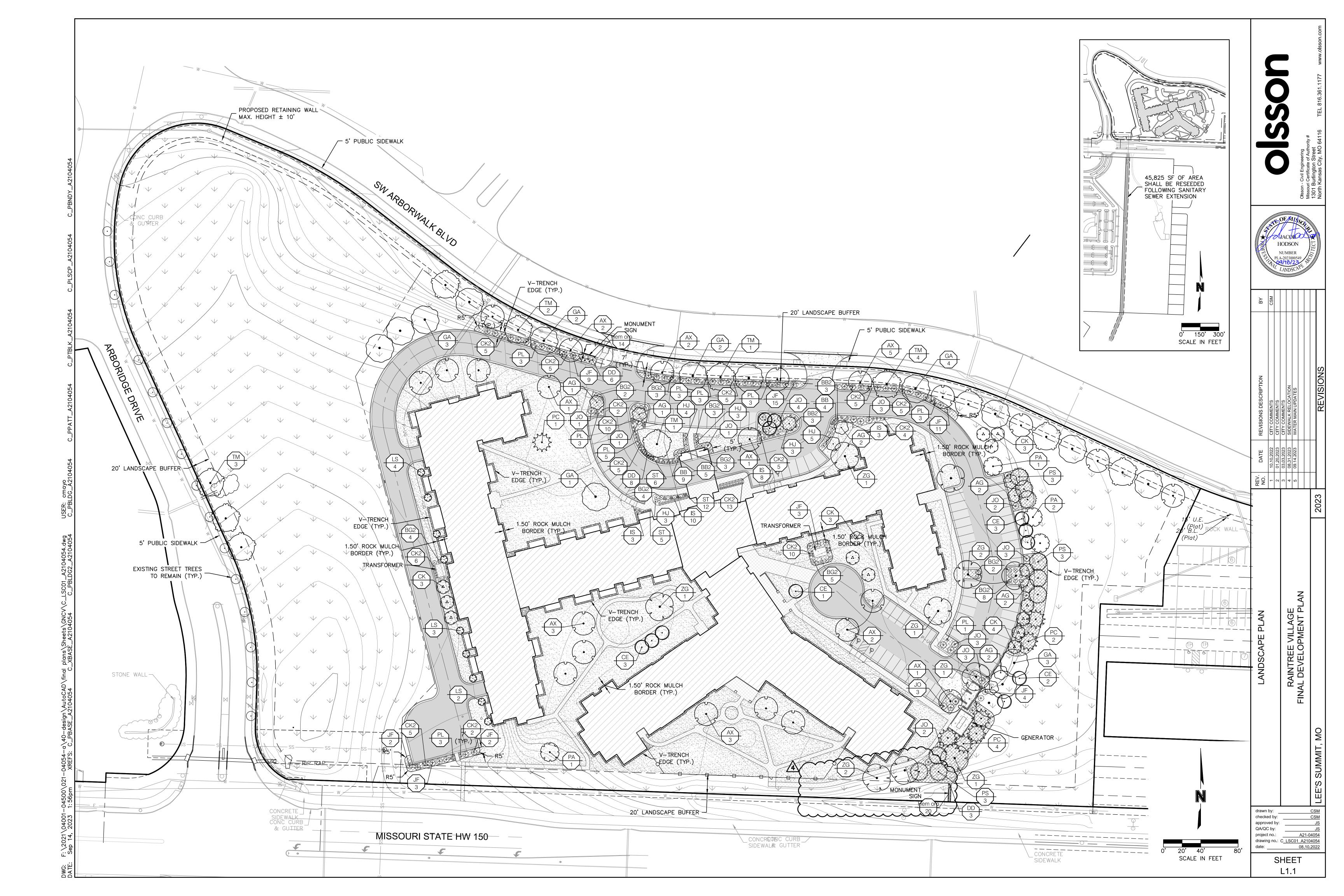
- 1. Neither the Owner nor the Landscape Architect will enforce safety measures or regulations. The Contractor shall design, construct and maintain all safety devices, and shall be solely responsible for conforming to all local, state and federal safety and health standards, laws and regulations.
- F. Utilities: 1. Contractor shall take all necessary precautions and responsibility to locate and protect any and all public and private underground or concealed conduit, plumbing or other utilities where new work is being performed. Contractor is responsible for repairing any and all damage to utilities, structures, site appurtenances, etc., which occur as a result of the landscape construction. Contractor shall maintain stakes set by others until all parties concerned mutually agree upon removal. In no case shall landscape material be planted in a way which will interfere with or cause damage to overhead or underground utilities.
- 2. MISSOURI one call system: 1-800-344-7483
- G. Requirements: 1. All work shall conform to all federal, state, and local requirements for installation and maintenance.
- 2. The final, approved landscape plan must be available for onsite inspection at all times.
- H. Clearzone:
- 1. The clearzone shall be maintained at all intersections that ingress and egress to the site. It is the Owner's responsibility to maintain the plant material at a height of not over thirty (30) inches above pavement and provide unobstructed sight distance for drivers in vehicles approaching the intersection. 2. Vertical clearance of at least eighty (80) inches must be provided above walks at all times. It is the Owner's responsibility to maintain
- trees and other overhanging objects to provide adequate headroom to comply with ADA guidelines. Conflicts
- 1. Should a conflict arise between specifications, codes, standards, ordinances and plans, the most stringent requirements shall apply. 2. Where no construction details are shown or noted for any part of the work, such details shall be the same as for similar work shown on the drawing and shall meet with Manufacturer's specifications.
- Measurements:
- 1. Before commencing work or ordering any materials, the Contractor shall verify all measurements and shall be responsible for their accuracy. Any discrepancies shall be reported to the project Landscape Architect. The Contractor shall be responsible for the differences between actual dimensions and measurements indicated
- 2. Written dimensions shall prevail. In no case shall working dimensions be scaled from plans, sections or details on the drawing. 3. Landscape Contractor shall supply bid to Olsson Associates for review. Bid shall include unit costs for all materials.
- Plan Changes: 1. All drawings, specifications, and other work products developed by Olsson Associates are instruments of service for this project only and shall remain the property of Olsson Associates. Instruments of service may not be used, reproduced or changed in any form without the prior written permission of Olsson Associates.
- 2. In the event any changes are made to the plans and specifications by Owner or persons other than Olsson Associates, any liability arising out of such changes is waived against Olsson Associates. Owner assumes full responsibility for such changes unless Owner has given Olsson Associates prior notice and has received written consent for such changes
- L. Substitutions:
- 1. Any changes or deviations from these plans must be approved in writing by Owner, Olsson Associates and the Local Municipal Agencies. Changes shall possess the same characteristics as indicated on the plans and specifications.
- M. Delegated design irrigation system:
- 1. If an irrigation system is not provided with the Landscape Plans, the Contractor is to design a 100 percent coverage irrigation system, including comprehensive engineering analysis by a qualified Professional Engineer, using performance requirements and design criteria indicated per Owner's direction.
- 2. Irrigation Contractor to design and install irrigation system and shall include all required components including, but not limited to, rain shut off sensor, controller, taps, backflow preventers, all approvals, and all fees required by city. 3. Irrigation Contractor shall submit a copy of plan to Owner's Representative or Project Landscape Architect for review prior to installation of
- 4. Irrigation Contractor shall conduct a training session with the owner (or representatives) demonstrating the operation of the system and
- the controller. As part of this training, Contractor shall provide one spring start-up and one fall shut-down of the system. 5. Landscape Contractor to provide cost estimates for irrigation system for all plant material indicated on plans.
- 6. Irrigation system shall be tested and approved by Owner's Representative or Landscape Architect prior to backfilling trenches. Irrigation system shall be fully operational prior to the installation of any plant materials.
- 7. All planting beds shall be watered by drip and micro mist irrigation system. 8. General Contractor to supply all power required to operate irrigation system.
- 9. Irrigation Contractor shall notify Owner's Representative or Project Landscape Architect of any changes to irrigation conduit locations or
- 10. It is the Landscape Contractor's responsibility to determine water application rates and timer cycling. The Irrigation Contractor will instruct the Owner on the operation and programming of the controller. 11. All zones and main lines will be pressure-tested at the time of installation and again prior to building turnover. Results shall be submitted in
- writing to Project Landscape Architect and Owner or Owner's Representative. 12. Irrigation shall not spray on building, sidewalks, and drives.
- 13. Irrigation controller location shall be coordinated with other wall-mounted service panels per Owner's approval.
- 14. Landscape Contractor shall hand-water all trees, turf grass areas, and native seed mix areas until substantial completion. 15. Treegator bags (or approved equal) shall be used for all proposed trees on site.
- 1.2 SUBMITTALS
- A. Qualification Data for qualified Landscape Installers: Include list of similar projects completed by Landscape Contractor demonstrating Landscape Contractor's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of Owners' contact persons.
- B. Samples shall be approved by Landscape Architect prior to installation on project.
- C. Product Data: Provide for each type of product indicated, including soils.
- 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
- 2. Pesticides and Herbicides: Include product label and Manufacturer's application instructions specific to the Project. 3. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to the Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
- D. Samples for Verification: Provide as listed for each of the following: 1. Trees and Shrubs: Three samples of each variety and size must be delivered to the site for review. Maintain approved samples on-site as a standard for comparison.
- 2. Hardwood Mulch, Leaf Compost Mulch, & Rock Mulch: 1-quart volume of each organic mulch, in sealed plastic bags labeled with composition of materials by percentage weight and source of mulch, is required. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup. Weed Control Barrier: 12 by 12 inches.
- E. Product Certificates: Each type of manufactured product, from Manufacturer, shall comply with the following:
- 1. Manufacturer's certified analysis of standard products.
- 2. All plant material inspection certificates required by federal, state or other governing authorities will accompany each shipment and be turned over to the Owner's Representative upon delivery. 3. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical
- Chemists, where applicable. Invoice:
- a. Vendor or Grower's invoice for each shipment of plants shall show sizes, quantities, and root treatment of plants, i.e. containerized, balled and burlapped, or plug.
- b. Invoice for each shipment of soil amendments and seed mixtures. 5. Label data substantiating that plants, trees, shrubs, perennials, seed and planting materials comply with specifications.
- 6. Seed Vendor's certified statement for each seed mixture required stating botanical and common name, percentages by weight, and percentages of purity, germination, and weed seed for each seed mixture.
- F. Material Test Reports: For standardized ASTM D5268 topsoil, existing native surface topsoil, existing in-place surface soil and imported or manufactured topsoil.

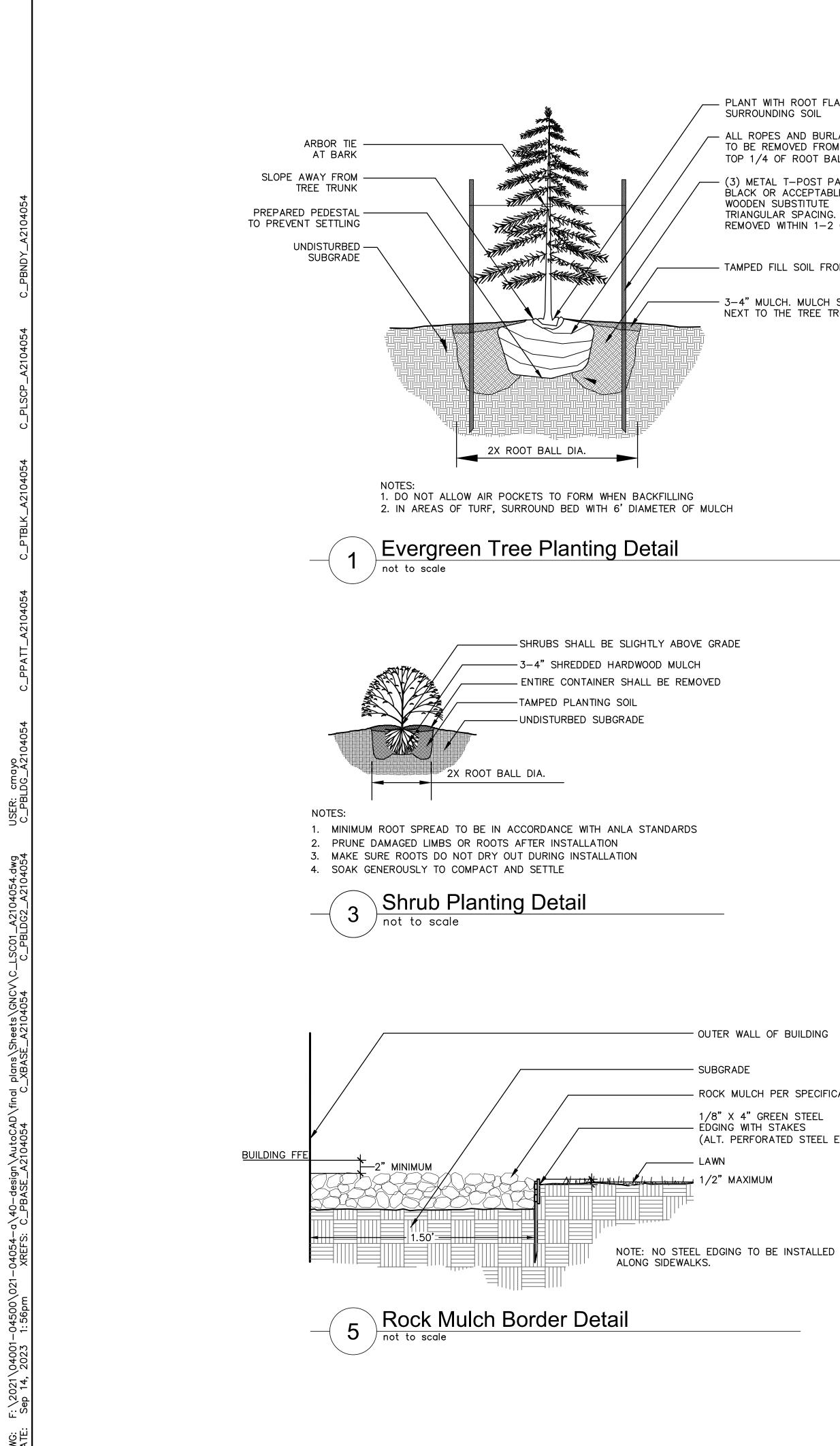
- G. Maintenance Instructions: Recommended typewritten instructions and procedures to be established by the Owner during a calendar year. Submit before start of required maintenance periods and prior to final acceptance of lands H. Warranty: Sample of special warranty.
- 1.3 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of pla 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare N
- Nursery and Landscape Association. 2. Experience: A minimum of five (5) years experience on projects similar in characteristics and size. Contractor specializing in landscape installation.
- 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on project site w 4. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories f
- Landcare Network: a. Certified Landscape Technician - Exterior, with designated CLT-Exterior.
- b. Certified Ornamental Landscape Professional, designated COLP. 5. Pesticide Applicator: State licensed, commercial.
- B. Soil Testing

- 1. Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agric and capability to conduct the testing indicated and that specializes in the types of tests to be performed.
- 2. The Contractor shall be responsible for having both the topsoil and existing soil tested for proposed plant mate be tested by an independent soil testing agency. The Contractor shall furnish one (1) copy of the soil analysis
- amendments prepared to meet the desired pH and nutritional and organic levels determined to be adequate for Extension Agent or approved independent soil testing agency to the Landscape Architect prior to application o
- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil testing la of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; dele mineral and plant-nutrient content of the soil.
- 1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60. 2. The soil testing laboratory shall oversee soil sampling with depth, location, and number of samples to be take
- Landscape Architect. A minimum of three representative samples shall be taken from varied locations for each amended for planting purposes. 3. Report suitability of tested soil for plant growth.
- a. Based upon the test results, state the recommendations for soil treatments and soil amendments to be in recommendations in weight per 1000 sq. ft. or volume per cubic yard for nitrogen, phosphorus, and potas amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
- b. Report presence of problem salts, minerals, or heavy metals including aluminum, arsenic, barium, cadm lithium, and vanadium. If such problem materials are present, provide additional recommendations for co
- D. Measurements: Measure according to ANSI Z60.1 American Standard for Nursery Stock. Do not prune to obtain 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measure of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for heig measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to inches above the root flare for larger sizes.
- 2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- E. Quality and Size:
- 1. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements Standard for Nursery Stock. 2. Required plant materials shall conform to type stated on the plant list. Sizes shall be the minimum stated on the
- installation and measurements shall be in accordance with the latest editions of the American Standard for Nu and with the general planting specifications as set forth by the local municipal agency's landscape ordinance. 3. Landscape plant material shall satisfy AAN American Standards, be State Department of Agriculture inspected,
- straight, unscarred trunk and well developed uniform crown (park grade trees will not be accepted). 4. The plant material shall be nursery grown and inspected by the Owner's Representative before planting.
- 5. Plants designated "b&b" shall be balled and burlapped, with firm balls of earth.
- 6. All installed plant materials shall be certified by the State to be disease-free and pest-free and not of a species to destructive pathogens or pests. Plants shall be healthy, vigorous stock, grown in a recognized nursery in a horticultural practices, free of disease, insects, eggs, larvae and defects such as knots, sun-scald, injuries, ab
- All trees shall have a central leader and a radial branching structure 8. Plant materials delivered to site and not planted within 24 hours of delivery shall be "heeled" and watered in a s weather, mechanical damage and dehydration prior to planting.
- 9. Each tree and shrub shall be securely labeled with a waterproof tag indicating the botanical name, common na 10. Provide healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice
- eggs, larvae and defects such as knots, sun-scald, injuries, abrasions or disfigurement. Place all plants in sha weather, mechanical damage and dehydration prior to planting.
- 11. All plant surfaces shall receive emulsion type, film-forming anti-desiccant agent designed to permit transpiration of moisture from plants. Anti-desiccant to be delivered in Manufacturer's fully identified containers and mixed Manufacturer's specifications.
- F. Plant Material Observation: Landscape Architect may observe plant material either at place of growth or at site befor with requirements for genus, species, variety, cultivar, size, and quality. Landscape Architect retains right to observ for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject material at any time during progress of work. Remove rejected trees or shrubs immediately from project site. 1. Notify Landscape Architect of sources of planting materials seven (7) days in advance of delivery to site.
- 2. Inspections and Testing:
- a. The Landscape Architect reserves the right to inspect and/or tag plants at place of growth with Landscape b. All plants must be inspected and approved by the Landscape Architect before they are planted. Inspection Landscape Architect at place of growth or upon delivery shall be for quality, size, and variety only and sha right of rejection for failure to meet other requirements during progress of work. Plants damaged during d
- 3. All site work, including plant locations, shall be staked by the Landscape Contractor and shall be approved by the prior to installation. Any walks, walls or edging shall be installed in a manner consistent with the plans as show free of kinks, bends or abrupt curves. 4. All dead plant materials shall be removed and replaced as required in order to maintain an attractive landscape
- G. Quantities 1. Contractor is responsible for verifying all quantities shown on these plans before pricing the work. Any differe
- brought to the attention of the Landscape Architect for clarification. 2. Quantities listed in the plant list schedule are for estimates only. Trees, shrubs, and groundcover of contract of number of items shown on the drawings. Contractor shall supply the quantities necessary to complete the wor drawings. Quantities listed on the plant list are approximate only. Any difference in quantities should be brough Project Landscape Architect for clarification.
- 3. Contractor shall provide trees, shrubs, and plants of quantity, size, genus, species and variety shown and sche H. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance per maintenance from date of Substantial Completion.
- 1. Spring Planting: April 1st to June 15th 2. Fall Planting: August 15th to November 1st
- I. Weather Limitations: Proceed with plant material installation and sodding only when existing and forecasted weather to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather of Manufacturer's written instructions and warranty requirements.
- J. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and unless otherwise indicated 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair operations.
- 1.4 DELIVERY, STORAGE, AND HANDLING

RAINTRE	E VILLAGE PDP - LA	NDSCAPE C	ALCULATIONS	3								com
(1) LANDSCAPE STRIP BETWEEN PARKING/LOADING AREA AND R/W	(1) STREET FRONTAGE TREES	(2) STREET FRONTAGE SHRUBS	(3) OPEN YARD AREA PROVIDED (SF)	(3A) OPEN YARE	) AREA TREES	(3B) OPEN YARD AREA SHRUBS	(4A) BUFFER TREES: DECIDUOUS / ORNAMENTAL / EVERGREEN	(4B) BUFFER SHRUBS	(5) PARKING LOT SCREENING SHRUBS			uossio.www
20' WIDE 20' WIDE	40 40	106 109		73 55 (18 WITH TO BE PL		147 151	8/15/15 8/15/15	15 15	45 47			816.361.1177
L T-OF-WAY WITH A LANDSCA	LANDSCAPE REQUIREM PE STRIP AT LEAST 20'			E PER 30 LF OF STREET								816.36
Y 20 LF OF STREET FRONTA OPEN YARD AREA											ת	TEL
00 SF; 1 ORNAMENTAL TREE	E PER 500 SF; 1 EVERG	REEN TREE F	PER 500; AND (4	B) 1 SHRUB PER 500 SF							<b>N</b>	;# ;116
<ul> <li>b. Certified Ornamental Land</li> <li>5. Pesticide Applicator: State lice</li> <li>B. Soil Testing <ol> <li>Laboratory Qualifications: An and capability to conduct the t</li> <li>The Contractor shall be respondent so amendments prepared to mee Extension Agent or approved i fertilizer.</li> </ol> </li> <li>C. Soil Analysis: For each unamender of organic matter, gradation of san mineral and plant-nutrient content of 1. Testing methods and written respondent or and previous and written respondent or and previous content or the second se</li></ul>	fore start of required maintenance anty. landscape Installer whose work h staller shall be a member in good ciation. re (5) years experience on project: allation. Require Installer to maintain an exp aller's field supervisor shall have c unician - Exterior, with designated dscape Professional, designated C ensed, commercial. independent or university laborate testing indicated and that specializ nsible for having both the topsoil a oil testing agency. The Contracto et the desired pH and nutritional an independent soil testing agency to d soil type, furnish soil analysis an d, silt, and clay content; cation ex- of the soil. recommendations shall comply with	periods and prior to as resulted in succe standing of either the s similar in character berienced full-time su ertification in one of CLT-Exterior. COLP. bry, recognized by th tes in the types of test and existing soil test r shall furnish one (1 nd organic levels det the Landscape Arch and a written report by change capacity; so th USDA's Handbool	final acceptance of lar ssful establishment of Professional Landcar istics and size. Contra upervisor on project sit the following categorie the following categorie sto be performed. ad for proposed plant r ) copy of the soil anal ermined to be adequat itect prior to applicatio y a qualified soil testing dium absorption ratio; < No. 60.	ndscape material. plants. e Network or the American ctor shall be a company the when work is in progress. as from the Professional Agriculture, with the experience material locations. Topsoil shall ysis plus recommended the for the area by the County on of any amendments or g laboratory stating percentages deleterious material; pH; and	<ul> <li>Turfgrass Sod Transpl hours of harvesting. F</li> <li>1.5 WARRANTY</li> <li>A. Special Warranty: Insi warranty period.</li> <li>1. Failures include, t</li> <li>a. Death, unhea Representative beyond Cont</li> <li>b. Structural fai</li> <li>c. Faulty periods</li> <li>a. Trees, Shrub</li> <li>b. Ground Cove</li> <li>c. Annuals: Tw</li> <li>3. Include the follow</li> <li>a. Immediately</li> <li>b. Replace plan Substantial C</li> <li>c. A limit of one</li> <li>d. Provide exter</li> <li>1.6 MAINTENANCE SERV</li> <li>A. Installation Maintenance</li> <li>1. Maintenance shal vigorous, thriving</li> </ul>	anting and Installation' Protect sod from breaka taller agrees to repair of put are not limited to, th lithy condition, plant m ve, except for defects r ractor's control. lures including planting mance of tree stabilizat from Date of Substant s, Vines, and Ornamer ers, Biennials, Perennia vo months. ing remedial actions as remove dead plants ar ts that are not in good completion and at end e replacement of each nded warranty for perior <b>ICE</b> ce: I begin immediately aft condition until all plan	or replace plantings and accessories that he following: naterial with more than 25% die back and resulting from abuse, lack of adequate m gs falling or blowing over. tion. tial Completion: ntal Grasses: 12 months. als, and Other Plants: 12 months. s a minimum: nd replace unless required to plant in the condition or in an unhealthy condition as of the warranty period at no additional co plant will be required except for losses of od equal to original warranty period for re ter installation of each plant, sod or turf. /	fgrass Sodding." Deliver sod fail in materials, workmanshi I unsatisfactory growth as det haintenance, or neglect by Ow succeeding planting season. s judged by the Owner's Repro- set to the Owner. In replacements due to failure is placed plant material.	in time for planting within 24 p, or growth within specified ermined by the Owner's ner, or incidents that are esentative prior to to comply with requirements.	AB	OF MIS OF MIS HODSON NUMBER PLA-202300054 4/ LANDSCN	
<ol> <li>The soil testing laboratory sha Landscape Architect. A minin amended for planting purpose</li> <li>Report suitability of tested soil a. Based upon the test resul recommendations in weig amendments to be added b. Report presence of proble lithium, and vanadium. If</li> <li>Measurements: Measure accordin</li> <li>Trees and Shrubs: Measure v of the root flare for field-grown measure branches or roots tip inches above the root flare for</li> <li>Other Plants: Measure with st</li> <li>E. Quality and Size:         <ol> <li>Provide quality, size, genus, sj Standard for Nursery Stock.</li> <li>Required plant materials shall installation and measurements and with the general planting s</li> <li>Landscape plant material shall straight, unscarred trunk and v</li> <li>The plant material shall be nur</li> <li>Plants designated "b&amp;b" shall</li> <li>All installed plant materials shall</li> <li>All installed plant materials shall</li> </ol> </li> </ol>	Ill oversee soil sampling with dept num of three representative sampling. If or plant growth. Its, state the recommendations for ght per 1000 sq. ft. or volume per to produce satisfactory planting is em salts, minerals, or heavy meta is such problem materials are press g to ANSI Z60.1 - American Stan vith branches and trunks or canes in stock and container-grown stoc to tip. Take caliper measuremen larger sizes. tems, petioles, and foliage in their pecies, and variety of plants indic conform to type stated on the pla is shall be in accordance with the l specifications as set forth by the l I satisfy AAN American Standards well developed uniform crown (pa rsery grown and inspected by the be balled and burlapped, with firm all be certified by the State to be c ests. Plants shall be healthy, vigo disease, insects, eggs, larvae and	h, location, and num les shall be taken fro r soil treatments and r cubic yard for nitro- soil suitable for healt ls including aluminu ent, provide additiona dard for Nursery Sto in their normal position dard for Nursery Sto is A measure main bo ts 6 inches above th normal position. ated, complying with nt list. Sizes shall be atest editions of the local municipal agend , be State Department rk grade trees will no Owner's Representain balls of earth. tisease-free and pest rous stock, grown in I defects such as knowners and the sources in the sources and the sources and the sources of the sources and the sources and the sources of the sources and the sources and the sources and the sources of the sources and t	ber of samples to be t m varied locations for soil amendments to b gen, phosphorus, and hy, viable plants. m, arsenic, barium, ca al recommendations for ck. Do not prune to of tion. Take height meas dy of tree or shrub for e root flare for trees up applicable requirement the minimum stated o American Standard for cy's landscape ordinan nt of Agriculture inspect to be accepted). tive before planting.	each soil to be used or e incorporated. State potash nutrients and soil dmium, chromium, cobalt, lead, or corrective action. otain required sizes. surements from or near the top height and spread; do not to to 4-inch caliper size, and 12 nts in ANSI Z60.1 - American in the plant list or larger. All Nursery Stock (ANSI Z60.1) ce. sted, and no. 1 grade with cies known to carry or be host in accordance with good	<ol> <li>Maintain turf, mat</li> <li>Maintenance activ regrading and rep Owner.</li> <li>Maintenance activ weeding, cultivati restoration of the vigorous, and hea</li> <li>Initial Maintenance Ser Part 3. Begin mainter for not less than the m</li> <li>Maintenance Perio</li> <li>Initial Maintenance Ser required in Part 3. Be established but for not</li> <li>Maintenance Perio</li> <li>Initial Maintenance Ser required in Part 3. Be established but for not</li> <li>Maintenance Perio</li> <li>Initial Maintenance Ser Begin maintenance im periods:         <ol> <li>Sodded Turf: Two</li> <li>Continuing Maintenance on date initial maintenance options.</li> </ol> </li> <li>PART 2 - PRODUCTS</li> <li>Can PLANT MATERIAL</li> <li>General: Furnish nurso</li> </ol>	erial and plants until Si vities of turf or sod sha lanting as required to e vities of plant material ng, mulching, adjusting planting saucer, and a althy growth. vice for Trees and Shr nance immediately afte naintenance period beld od: Twelve (12) month vice for Ground Cover gin maintenance immediately after less than the maintenance iless th	ubstantial Completion or until Owner acc all include watering, fertilizing, weeding, n establish a smooth sodded surface, free g of stakes, removal of dead materials, re iny other procedures consistent with goor rubs: Provide maintenance by skilled em er plants are installed and continue until p ow. hs from date of Substantial Completion. and Other Plants: Provide maintenance ediately after plants are installed and cont ance period below. hs from date of Substantial Completion. full maintenance by skilled employees of rea is planted and continue until acceptate of date of Substantial Completion. full maintenance by skilled employees of rea is planted and continue until acceptate of date of Substantial Completion. taller to Owner, in the form of a standard ded. State services, obligations, condition	nowing, trimming, and other of of eroded or bare areas, free ennials, annuals, and groundc esetting plants to proper grad d horticultural practices neces ployees of Landscape Installe lantings are acceptably health by skilled employees of Land tinue until plantings are accept f Landscape Installer. Maintai ble turf is established but for r l yearly (or other period) main ons, and terms for agreement form, shearing, and other fea	of weeds and acceptable by cover - include watering, es or upright positions, ssary to insure normal, er. Maintain as required in ny and well established but scape Installer. Maintain as tably healthy and well in as required in Part 3. not less than the following tenance agreement, starting period and for future renewal	. DATE REVI	10.10.2022         CITY COMMENTS           01.20.2023         CITY COMMENTS           03.03.2023         CITY COMMENTS           08.31.2023         SIDEWALK RELOCATION           09.14.2023         WATER MAIN UPDATES	REVISIONS
8. Plant materials delivered to sit weather, mechanical damage	and not planted within 24 hours and dehydration prior to planting. securely labeled with a waterproof	of delivery shall be '			root pruning. Provide	well-shaped, fully bran	gs and complying with ANSI Z60.1; and hched, healthy, vigorous stock, densely fo I, injuries, abrasions, and disfigurement.	, <u>,</u>		REV NO	2 4 3 7	
<ul> <li>site.</li> <li>10. Provide healthy, vigorous stoceggs, larvae and defects such weather, mechanical damage</li> <li>11. All plant surfaces shall receive of moisture from plants. Anti-Manufacturer's specifications.</li> <li>F. Plant Material Observation: Landsc with requirements for genus, specifor size and condition of balls and material at any time during progres</li> <li>1. Notify Landscape Architect of</li> <li>2. Inspections and Testing: <ul> <li>a. The Landscape Architect at pl right of rejection for failur rejected.</li> </ul> </li> </ul>	ck, grown in a recognized nursery as knots, sun-scald, injuries, abr and dehydration prior to planting, e emulsion type, film-forming anti- desiccant to be delivered in Manu- cape Architect may observe plant ies, variety, cultivar, size, and qua root systems, pests, disease sym so of work. Remove rejected trees sources of planting materials sev reserves the right to inspect and/ ted and approved by the Landsca lace of growth or upon delivery sh re to meet other requirements duri	in accordance with g asions or disfigurem desiccant agent des facturer's fully identi material either at pla lity. Landscape Arch ptoms, injuries, and or shrubs immediat en (7) days in advan or tag plants at place pe Architect before t iall be for quality, siz ng progress of work.	good horticultural prac ent. Place all plants in igned to permit transpi fied containers and mi ce of growth or at site itect retains right to ol latent defects and to ri- rely from project site. ce of delivery to site. e of growth with Lands hey are planted. Inspec- e, and variety only and . Plants damaged durir and shall be approved	tices, free of disease, insects, a shaded area, protected from iration, but retard excessive loss xed in accordance with before planting for compliance bserve trees and shrubs further eject unsatisfactory or defective cape Contractor. ction and approval by the I shall not in any way impair the ng delivery or at job site shall be	<ul> <li>branch and trunk rejected.</li> <li>2. Collected Stock: nursery unless of</li> <li>B. Provide plants of sizes size may be used if ac</li> <li>C. Root Ball Depth: Furni ANSI Z60.1. Root flat</li> <li>D. Labeling: Label each f name and full scientific shown on Drawings.</li> <li>E. If formal arrangements labels to assure symm</li> <li>F. Perennials: Provide he the container to mainta outdoor conditions bet</li> </ul>	("included bark"); cros Do not use plants harv herwise indicated. Par , grades, and ball or cr ceptable to Landscape ish trees and shrubs w re shall be visible befor plant of each variety, si c name, including genu s or consecutive order hetry in planting. althy, disease-free plan ain a firm ball, but not	ble leaders; tight vertical branches where ssing trunks; cut-off limbs more than 3/4 vested from the wild, from native stands, rk Grade material is not acceptable. ontainer sizes complying with ANSI Z60. e Architect, with a proportionate increase vith root balls measured from top of root to re planting. ize, and caliper with a securely attached, us and species. Include nomenclature fo of plants is shown on Drawings, select s nts of species and variety shown or listed with excessive root growth encircling the	inch in diameter; or with sten from an established landscap .1 for types and form of plant in size of roots or balls. ball, which shall begin at root , waterproof tag bearing legibl or hybrid, variety, or cultivar, if stock for uniform height and s d, with well-established root s	n girdling roots will be be planting, or not grown in a s required. Plants of a larger flare according to e designation of common i applicable for the plant as pread, and number the systems reaching to sides of			AN 2023
free of kinks, bends or abrupt					2.2 NATIVE SEED A. All disturbed areas, fill	s and embankments sl	hall be seeded and fertilized as specified	on the plans.		ပ္သ	Ш	
<ol> <li>Quantities listed in the plant lis number of items shown on the</li> </ol>	Landscape Architect for clarificat st schedule are for estimates only, e drawings. Contractor shall suppl the plant list are approximate onlor clarification. shrubs, and plants of quantity, si one of the following periods. Coo tial Completion. une 15th	ion. Trees, shrubs, and ly the quantities nece y. Any difference in ze, genus, species a	groundcover of contra ssary to complete the quantities should be b nd variety shown and	act quantities shall be the work as shown on the rought to the attention of the scheduled for landscape work.	<ul> <li>2.3 TURF SEED</li> <li>A. All disturbed areas, fill</li> <li>B. Grass seed shall have 1.75%</li> <li>2.4 TURF SOD</li> <li>A. Sod shall be grown from</li> </ul>	s and embankments sl a rating of 6.0 or bette om a seed with a rating d of fescue blend free	specified on plans or approved alternate s hall be seeded and fertilized as specified er in the Kansas State Turf Grass Test, wi g of 6.0 or better in the Kansas State Turf from insects, disease, weeds and other g	on the plans. ith the following characteristic f Grass Test.		ANDSCAPE NOTE	AINTREE VILL	L DEVELOPMENT
<ol> <li>Weather Limitations: Proceed with to be performed when beneficial ar Manufacturer's written instructions</li> </ol>	nd optimum results may be obtain		•		2.5 PLANTING SOILS							
<ul> <li>J. Coordination with Turf Areas (Lawn unless otherwise indicated.</li> <li>1. When planting trees, shrubs, a operations.</li> </ul>	ns): Plant trees, shrubs, and othe and other plants after planting turf				2. Landscape Contra 3. Landscape Contra B. Planting Soil:	actor to verify and guar actor to recommend so	e and provide results to the Owner and La rantee that the onsite topsoil will support oil amendments if soil test is not accepta	grass seed, sod, and plant m ble.	aterial.			
<ol> <li>DELIVERY, STORAGE, AND HAND</li> <li>A. Packaged Materials: Deliver packa Manufacturer, and indication of cor</li> <li>Bulk Materials:         <ol> <li>Do not dump or store bulk ma</li> <li>Provide erosion-control measu airborne dust reaching adjacei</li> <li>Accompany each delivery of the</li> </ol> </li> <li>C. Deliver bare-root stock plants fresh material to keep root system moist</li> <li>Do not prune trees and shrubs befor whipping, and other handling and the provide protective covering of plan</li> </ol>	iged materials in original, unopene nformance with state and federal l terials near structures, utilities, we ures to prevent erosion or displace nt properties, water conveyance s pulk fertilizers, lime, and soil ame nly dug. Immediately after digging cuntil planting. pre delivery. Protect bark, branch ying damage. Do not bend or bin	aws if applicable. alkways and paveme ement of bulk materi- ystems, or walkway- ndments with approp up bare-root stock, es, and root systems d-tie trees or shrubs	nts, or on existing turf als, discharge of soil-b s. priate certificates. pack root system in w s from sun scald, dryin in such a manner as t	areas or plants. bearing water runoff, and ret straw, hay, or other suitable rg, wind burn, sweating, o destroy their natural shape.	<ul> <li>clods, clay lumps extraneous material</li> <li>2. ASTM D5268 top any dimension an and other foreign analysis.</li> <li>3. Topsoil shall be for the vicinity that pr admixture of subs matter that may b</li> <li>2.6 MULCHES</li> </ul>	c, pockets of coarse sa ials harmful to plant gr psoil, with pH range of id other extraneous ma materials. Mix ASTM ertile, friable, natural to roduce heavy growth o soil or slag and shall be harmful to plant grow e from deleterious mate edded hardwood	5.5 to 7, a minimum of five (5) percent of aterials harmful to plant growth. Soil shal D5268 topsoil with the following soil am opsoil, typical of the locality, obtained from or grasses and other vegetative material. I e free of subsoil, stones, lumps, sticks, p wth. erials and suitable as a top dressing for tr	hunks, cement, plaster, buildi organic material content; free Il be free from clay lumps, co- nendments and fertilizers as re m well-drained areas possess Stockpiled topsoil may be use plants or their roots, toxic sub-	ng debris, and other of stones 1 inch or larger in arse sand, plant roots, sticks ecommended by soil sing characteristics of soils in ed. It shall be without stances or other extraneous			LEE'S SUMMIT, M
•	ir appropriate aspect (sun, filtered	l sun, or shade), prof water for two hours. sawdust, or other ac	Reject dried-out plant	mechanical damage, and keep	<ol> <li>Color: Dark brown</li> <li>Leaf Compost Mulch:</li> <li>Mineral Mulch: Hard, c</li> <li>Type: Washed Co</li> <li>Size Range: 8-inc</li> </ol>	n Free from deleterious r Jurable stone, washed Jbble Jh maximum, 4-inch m	materials and suitable as a top dressing f free of loam, sand, clay, and other foreig		-	drawn b checked approve QA/QC project r drawing date:	l by: d by: by: no.: no.: C <u>LSC01</u>	CSM CSM JS JS A21-04054 A2104054 08.10.2022
•	stored on-site deeply and thoroug		spray. Water as often a	as necessary to maintain root		J					SHEE	г

L1.0





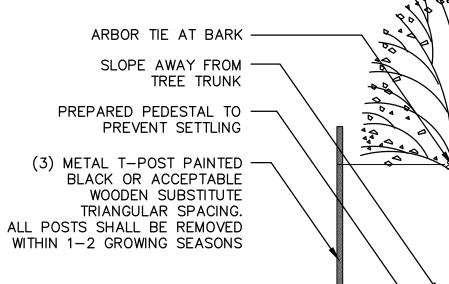
- PLANT WITH ROOT FLARE LEVEL WITH SURROUNDING SOIL

— ALL ROPES AND BURLAP TO BE REMOVED FROM TOP 1/4 OF ROOT BALL.

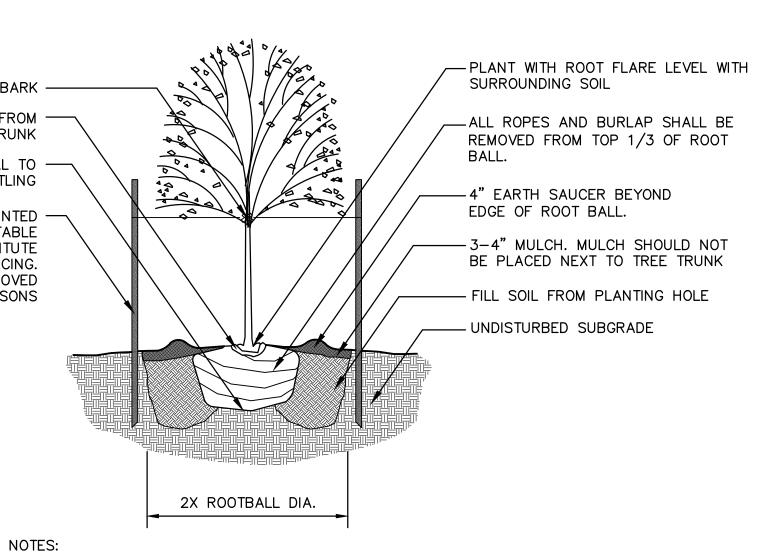
(3) METAL T-POST PAINTED BLACK OR ACCEPTABLE WOODEN SUBSTITUTE TRIANGULAR SPACING. ALL POSTS SHALL BE REMOVED WITHIN 1-2 GROWING SEASONS

- TAMPED FILL SOIL FROM PLANTING HOLE

- 3-4" MULCH. MULCH SHOULD NOT BE PLACED NEXT TO THE TREE TRUNK



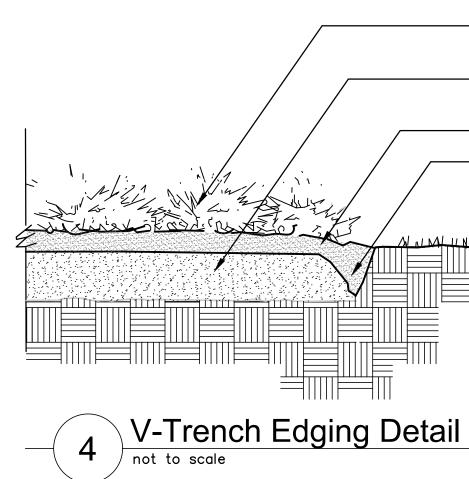
2 not to scale

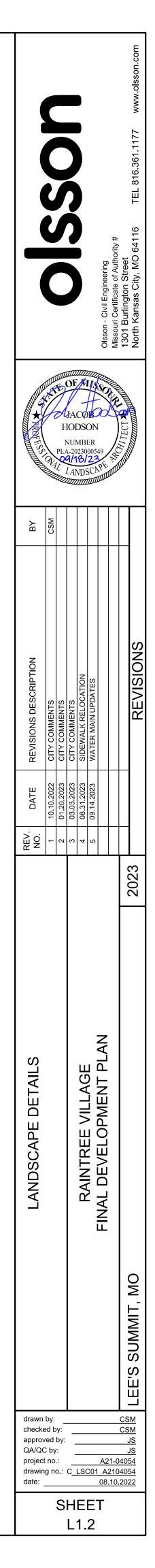


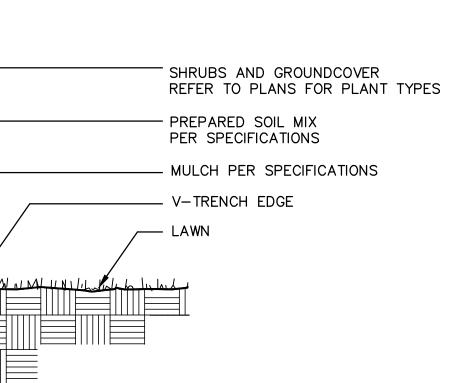
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING 2. IN AREAS OF TURF, SURROUND BED WITH 6' DIAMETER OF MULCH

- OUTER WALL OF BUILDING

ROCK MULCH PER SPECIFICATIONS 1/8" X 4" GREEN STEEL - EDGING WITH STAKES (ALT. PERFORATED STEEL EDGING)







## Deciduous Tree Planting Detail

