LOCATION MAP SECTION 30, TOWNSHIP 48N, RANGE 31W JACKSON COUNTY, MISSOURI SCALE=NTS

> NW 1/4 NE 1/4 SW 1/4 SE 1/4

LEGAL DESCRIPTION:

THE VILLAGE AT DISCOVERY PARK, LOT 9 THE VILLAGE AT DISCOVERY PARK, LOT 10 THE VILLAGE AT DISCOVERY PARK, LOT 12



UTILITY CONTACTS:

SANITARY & WATER: CITY OF LEE'S SUMMIT, MO 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PHONE: (816) 969-1900

PUBLIC ROADWAY: CITY OF LEE'S SUMMIT, MO 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PHONE: (816) 969-1800

POWER: EVERGY 1300 SE HAMBLEN RD LEE'S SUMMIT, MO 64081 PHONE: (816) 347-4320

STORMWATER: CITY OF LEE'S SUMMIT. MO 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PHONE: (816) 969-1800

PROJECT LOCATION

NATURAL GAS: SPIRE GAS ENERGY 3025 SW CLOVER DRIVE LEE'S SUMMIT, MO 64082 PHONE: (816) 985-8888

TELECOMMUNICATIONS: AT&T PHONE: 800-286-8313 SPECTRUM PHONE: 877-772-2253 GOOGLE FIBER PHONE: 877-454-6959

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FEMA FLOOD INFORMATION:

THE ENTIRE SITE IS LOCATED WITHIN ZONE X, "AREAS OF 0.2% ANNUAL CHANGE FLOOD: AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE (FIRM) MAP NUMBER 29095C0409G, REVISION DATE JANUARY 20, 2017.

OIL/GAS WELLS:

NO OIL OR GAS WELLS ARE LOCATED WITHIN PROJECT LIMITS. INFORMATION OBTAINED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY GEOSCIENCES TTECHNICAL RESOURCE ASEESMENT TOOL (GEOSTRAT).

PRIVATE SANITARY SEWER AND WATERMAIN EXTENSION PLANS **DISCOVERY PARK, ZONE 1, LOTS 9, 10, 11, AND 12** LEE'S SUMMIT, JACKSON COUNTY, MO SHEET LIST:

SECTION 30, T48N, R31W

DATE: 7/18/2024

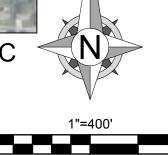


WATERSHED: LITTLE CEDAR CREEK - LITTLE BLUE RIVER

GENERAL NOTES:

- ALSO.
- AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED
- INSTALLATIONS.
- EXTRA WORK, ADDITIONAL PAYMENT OR DAMAGES
- CONDITIONS/INSTALLATIONS.

DISTURBED AREA: 1.71 AC



1. THE CONTRACTOR IS OBLIGATED TO INSPECT FOR EXISTING CONDITIONS/INSTALLATIONS AND AVAILABLE INFORMATION PRIOR TO SUBMITTING A BID, REFER TO SPECIFICATIONS

2. EXISTING INSTALLATIONS (SUCH AS WATER MAINS/LINES, GAS MAINS/LINES, SEWER MAINS/LINES, TELEPHONE LINES, POWER LINES, AND UTILITY STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE) ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT THAT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE ENGINEER IN PREPARING THE DRAWINGS. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR THE ACCURACY

3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING ALL EXISTING

4. ANY DELAY, ADDITIONAL WORK, FEES OR EXTRA COST TO THE CONTRACTOR CAUSED BY OR RESULTING FROM DAMAGE TO OR MODIFICATION OF EXISTING INSTALLATIONS BY THE CONTRACTOR OR AFFECTED UTILITY COMPANY SHALL NOT CONSTITUTE A CLAIM FOR

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION PRIOR TO SUBMITTING HIS BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING

PROJECT SPECIFICATIONS:

THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THE FOLLOWING:

- 1. MOST CURRENT VERSION OF THE DESIGN AND CONSTRUCTION MANUAL OF THE CITY OF LEE'S SUMMIT, MO.
- 2. MOST CURRENT VERSION OF THE AMERICAN PUBLIC WORKS ASSOCIATION -KANSAS CITY METRO CHAPTER

THE STANDARD SPECIFICATIONS THROUGH AND INCLUDING THE LATEST AMENDMENTS SHALL BE PART OF THESE PROJECT DRAWINGS AND SPECIFICATIONS AND ARE HEREIN BY REFERENCE. THE MORE STRINGENT OF THESE STANDARD SPECIFICATIONS AND THOSE PREPARED BY THE ENGINEER PREPARING THESE PLANS SHALL GOVERN.

CIVIL ENGINEER:

OWN, INC. 8455 COLLEGE BLVD OVERLAND PARK. KS 66210 EMAIL: JBARTZ@WEAREOWN.COM PHONE: (816) 777-0400

JEFFREY W. BARTZ. P.E. MISSOURI P.E. NO. 2012022594

C100	COVER SHEET
C101	GENERAL NOTES
C200	SITE PLAN
C300	SANITARY PLAN & PROFILE - 1
C301	SANITARY PLAN & PROFILE - 2
C302	DRAINAGE MAP
C303	SSWR CALCULATIONS
C400	WATER PLAN & PROFILE - 1
C401	WATER PLAN & PROFILE - 2
C402	WATER PLAN & PROFILE - 3
C403	WATER PLAN & PROFILE - 4
C500	SANITARY SEWER DETAILS
C501	WATER LINE DETAILS

SURVEY CONTROL:

	MA								
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION					
50	1012389.8190	2822108.7840	990.8100	CTL					
51	1011606.5710	2817819.8520	933.2990	CTL					
52	1009320.3430	2818811.2690	930.8920	CTL					
53	1011007.3400	2823445.2840	988.4360	CTL					
54	1014987.4060	2823402.9760	930.4780	CTL					
55	1015699.8100	2821686.0380	935.0540	CTL					

CP #50: 1/2" IB/CAP ON THE NORTH SIDE OF NW COLBERN ROAD. IT IS IN THE **1ST FIELD ENTRANCE WEST OF NE DOUGLAS STREET**

CP#51: SET 1/2" IB/CAP ON THE SW CORNER OF COLBERN ROAD AND MAIN STREET CP#52: SET 1/2" IB/CAP ON THE SOUTH SIDE OF MAIN STREET WHERE MAIN

STREET TURNS EAST ON THE SOUTH SIDE OF I-470 CP#53: SET 1/2" IB/CAP ON THE EAST SIDE OF DOUGLAS JUST SOUTH OF THE

I-470 INTERCHANGE. IN THE NW CORNER OF THE PARKING LOT TO THE OLD OUTBACK

CP#54: SET 1/2" IB/CAP ON THE SOUTH SIDE OF NE DOUGLAS ST. (OLD) WHERE IT BENDS BACK NORTH AT THE SE CORNER OF "THE CURE" CHURCH

CP#55: SET 1/2" IB/CAP ON THE EAST SIDE OF DOUGLAS AT DRIVEWAY FOR HOUSE 2545

200'

DEVELOPER:

INTRINSIC DEVELOPMENT 3622 ENDEAVOR AVE., STE. 101 COLUMBIA. MO 65201 CONTACT: JOHN ODLE PHONE: (573) 615-2252

PREPARED AND SUBMITTED BY:

May Bate

DATE 07/18/2024



Engineering beyond.

8455 College Boulevard Overland Park, KS 66210 816.777.0400 weareown.com

DRMERLY ANDERSON ENGINEERI

PRIVATE SANITARY SEWER AND WATER MAIN EXTENSION THE VILLAGE AT **DISCOVERY PARK**

LOTS 9, 10, 11, AND 12 THE VILLAGE AT DISCOVERY PARK W COLBERN RD & NE DOUGLAS ST

										
	REVISIONS									
NO.	DESCRIPTION	DATE								
1	INITIAL SUBMISSION	04/30/2024								
2	PER CITY COMMENTS	7/18/24								

DRAWING INFORMATION
PROJECT NO: 24KC10009
DRAWN BY: JGD
CHECK BY: JWB
ISSUED DATE: 7/18/2024
FIELD BOOK:
→ JEFFBEY W. BARTZ NUMBER PE-2012022594 07/18/2024
ISSUED BY: LICENSE NO:
A licensed Missouri Engineering Corporation COA# 00062
SHEET TITLE
COVER SHEET
SHEET NUMBER
C100
1 OF 13

GENERAL NOTES:

- PROPOSED MANHOLES SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DETAILS AND SPECIFICATIONS.
- 2. ALL WORK IN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ALL EROSION CONTROL WORK MUST COMPLY WITH THE LATEST EDITION OF THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF LEE'S SUMMIT, MISSOURI.
- WATER MAINS AND SANITARY SEWER MAINS/STRUCTURES SHALL HAVE AT LEAST 10' OF HORIZONTAL SEPARATION FROM EDGE OF WATER PIPE TO EDGE OF SEWER PIPE OR SEWER STRUCTURE.
- 4. WATER MAINS AND SANITARY SEWERS SHALL HAVE AT LEAST 18" OF VERTICAL SEPARATION FROM EDGE OF PIPE TO EDGE OF PIPE. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
- 5. ALL SEWER MANHOLES WITHIN PROPOSED ASPHALT PAVEMENT SHALL INCLUDE CONCRETE COLLAR TO MATCH MANHOLE RIM FLUSH WITH PAVEMENT PER THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD DETAIL.
- 6. ALL SANITARY SEWER LATERALS SHALL HAVE A TRENCH CHECK, CONSISTING OF FLOWABLE BACKFILL INSTALLED DURING CONSTRUCTION. TRENCH CHECK SHALL EXTEND TO BOTTOM OF TRENCH, TO WIDTH OF TRENCH TO 12 INCHES ABOVE PIPE, FOR A MINIMUM LENGTH OF 12 INCHES, TRENCH CHECK SHALL BE LOCATED AT LEAST 5 FEET FROM SANITARY SEWER MAIN.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, OR DEVELOPER.
- 9. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
- 10. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSED ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
- 11. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE

REFERENCE

1. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY;

- A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.
- B. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- C. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES.
- D. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF THE CITY OF LEE'S SUMMIT, MISSOURI.

EXISTING CONDITIONS:

- 1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKE THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDE THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
- 3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATED EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION:

- 1. THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
- 2. 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.
- 3. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROADS TO THE SITE AT THE CONCLUSION OF THE PROJECT.

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CONSTRUCTION:

- 1. THE CONTRACTOR SHALL SUB DATE OF APPROVAL.ENGINEEF THE DESIGN FOR THIS PROJECT **RESPONSIBLE FOR ERRORS O** NOT EXTEND TO MEANS OR M FOR ANY VARIATION FROM TH CONTRACTOR HAS NOTIFIED E AND OBTAIN ENGINEER'S WRIT EACH SHOP DRAWING OR SAM
- RESPECT THERETO;

- WORK AND THE CONTRACT DOCUMENTS.
- FOLLOWING:

SANITARY SEWER GENERAL NOTES:

- STRUCTURE.
- DURING INSTALLATION.
- PROPOSED PIPE.

- LOCAL CODES AND ORDINANCES.
- SHALL INCLUDE:
- B. AIR PRESSURE TEST OF ALL GRAVITY SEWERS.
- C. VACUUM TEST OF ALL MANHOLES.

- CROSS ABOVE SANITARY SEWERS.

WATER PLAN NOTES:

- ARE PER LOCAL CODE AND ORDINANCES OR AS AN AID WHEN ORIENTING INSTALLATIONS.

PROPOSED PIPE.

- LOCAL CODES AND ORDINANCES.

BMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUIRED
R SHALL REVIEW SHOP DRAWINGS OR SAMPLE CONFORMANCE WITH
CT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE
OF OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL
IETHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE
IE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS
ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION,
TTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING
MPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:

A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA. INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH

B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO 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

E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.

2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE

A. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THE PROJECT.

B. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH THE CITY OF LEE'S SUMMIT, MISSOURI.

2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF

3. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.

4. COORDINATES ARE PROVIDED AT CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID

5. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.

6. 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

7. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO $\frac{1}{2}$ 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.

8. PIPE PENETRATIONS SHALL USE GASKETS TO ENSURE WATERTIGHT SEALS.

9. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY

10. SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING

A. MANDEREL TEST OF ALL GRAVITY SEWERS. IN THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.

11. REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.

12. CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.

13. SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.

14. 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

15. RAIN WATER FROM ROOFS, STREETS, AND OTHER AREAS AND GROUNDWATER FROM FOUNDATION DRAINS SHALL BE EXCLUDED FROM ALL NEW SEWERS.

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH THE UTILITY OWNER AND THE CITY OF LEE'S SUMMIT, MISSOURI.

2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM ENTER OF FITTING OR WALL OF VAULT. 3. COORDINATED ARE PROVIDED ALONG PIPE CENTERLINE. ADDITIONAL COORDINATES PROVIDED

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

6. ALL PRIVATE WATER LINES SHALL BE A MINIMUM OF 42" AND MAXIMUM OF 60" 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 PREFORMED AND PAID FOR BY THE CONTRACTOR AND AS REQUIRED BY THE UTILITY OWNER.

9. ALL EXISTING FIRE HYDRANTS ON SITE OR IN THE RIGHT-OF-WAY BETWEEN PROPERTY AND ROADWAY SHALL BE REPAINTED PER LOCAL CODE AND ORDINANCES.

10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY

ESTIMATE OF QUANTITIES								
PRIVATE SANITARY SEWER - LINE F								
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT				
1	8" SANITARY PVC (SDR-26)	L.F.	780					
2	MANHOLE, STANDARD 4" DIA.	E.A.	3					
3	CONNECT TO EXISTING MANHOLE	E.A.	1					
4	REMOVAL OF VERTICAL MANHOLE SECTIONS ON EXISTING STRUCTURE	E.A.	1					
5	AS-BUILTS	E.A.	1					
	PRIVATE WATERMAIN - LINES	S A & B						
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT				
6	8" C900 PVC PIPE	L.F.	1275					
7	8" x 8" TEE	E.A.	3					
8	8" - 45° BEND	E.A.	10					
9	8" GATE VALVE	E.A.	6					
10	FIRE HYDRANT ASSEBMLY (INCLUDING TEE)	E.A.	6					
11	AIR RELEASE ASSEMBLY (NOT INCLUDING TEE)	E.A.	1					
12	CONNECTION TO EXISTING WATERMAIN	E.A.	2					
13	AS-BUILTS	E.A.	1					

SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.



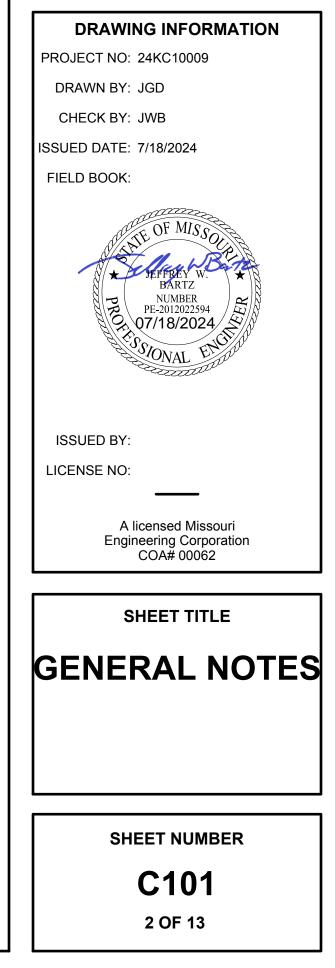
8455 College Boulevard Overland Park, KS 66210 816.777.0400 weareown.com

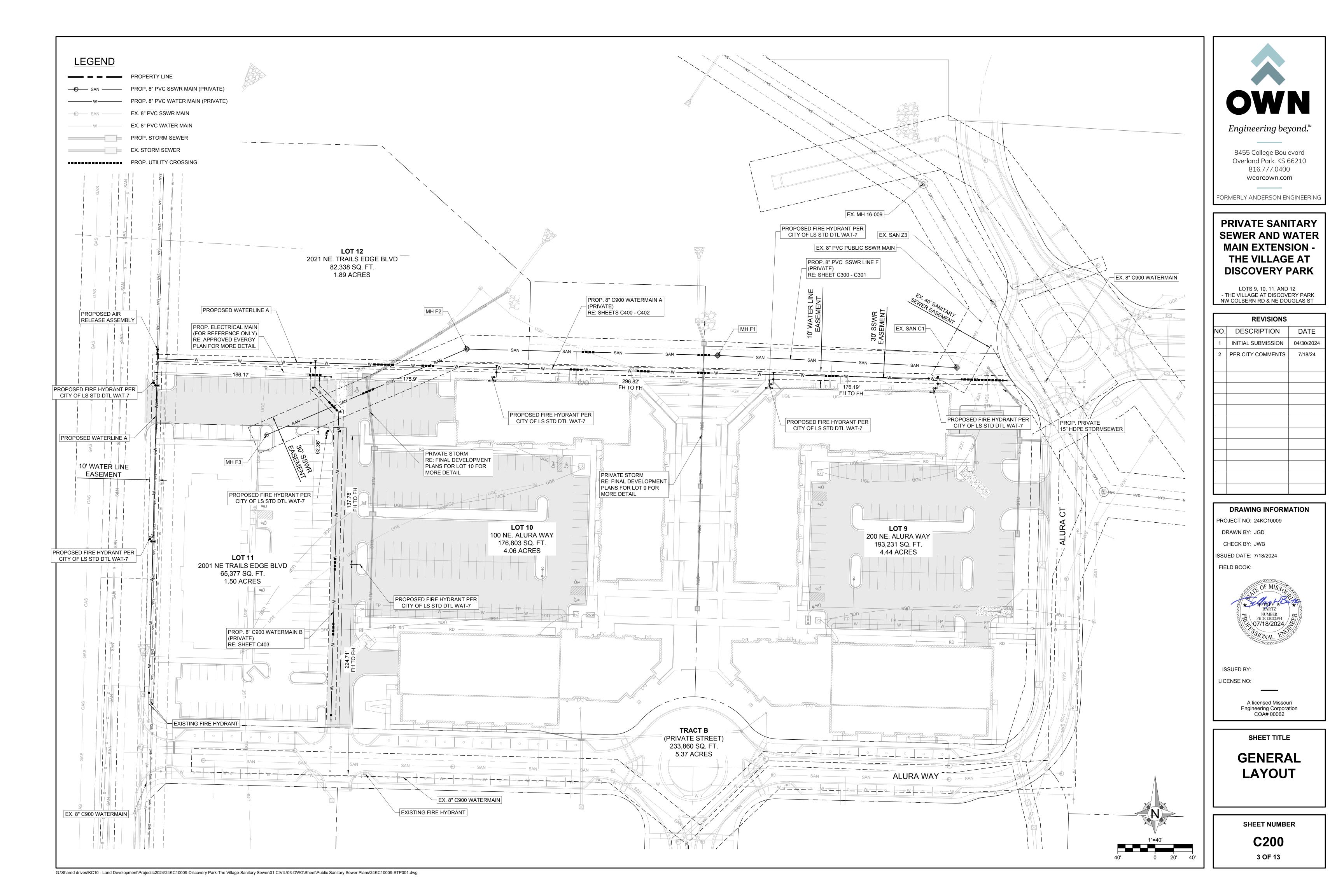
FORMERLY ANDERSON ENGINEERING

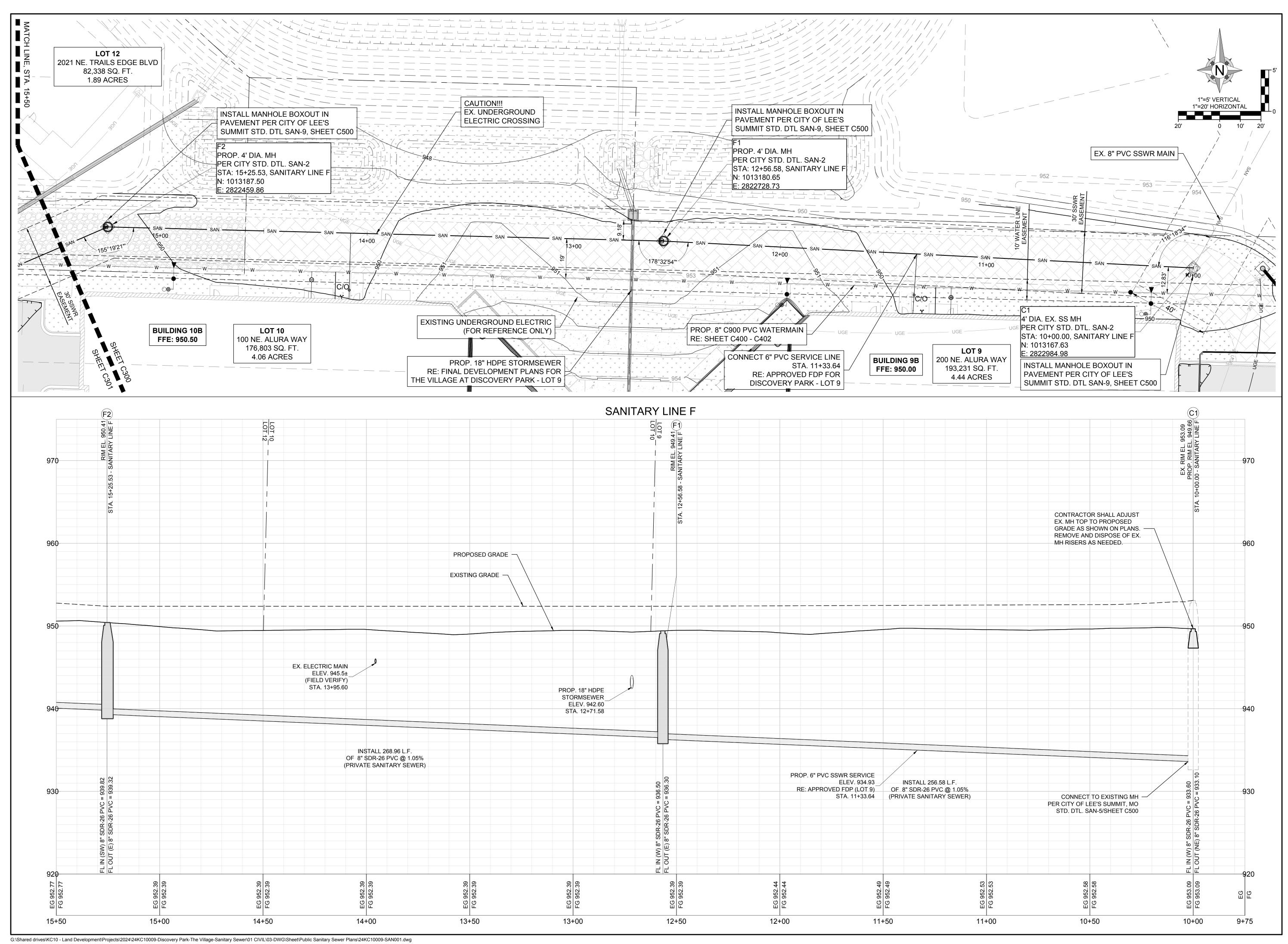
PRIVATE SANITARY SEWER AND WATER MAIN EXTENSION -THE VILLAGE AT **DISCOVERY PARK**

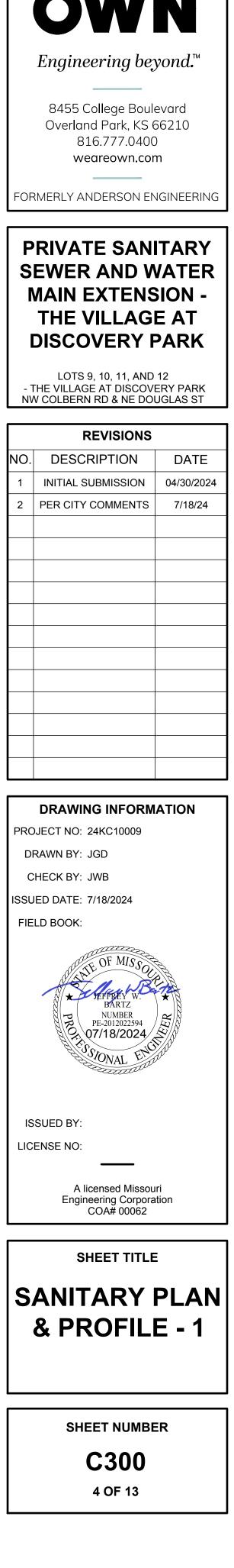
LOTS 9, 10, 11, AND 12 THE VILLAGE AT DISCOVERY PARK NW COLBERN RD & NE DOUGLAS ST

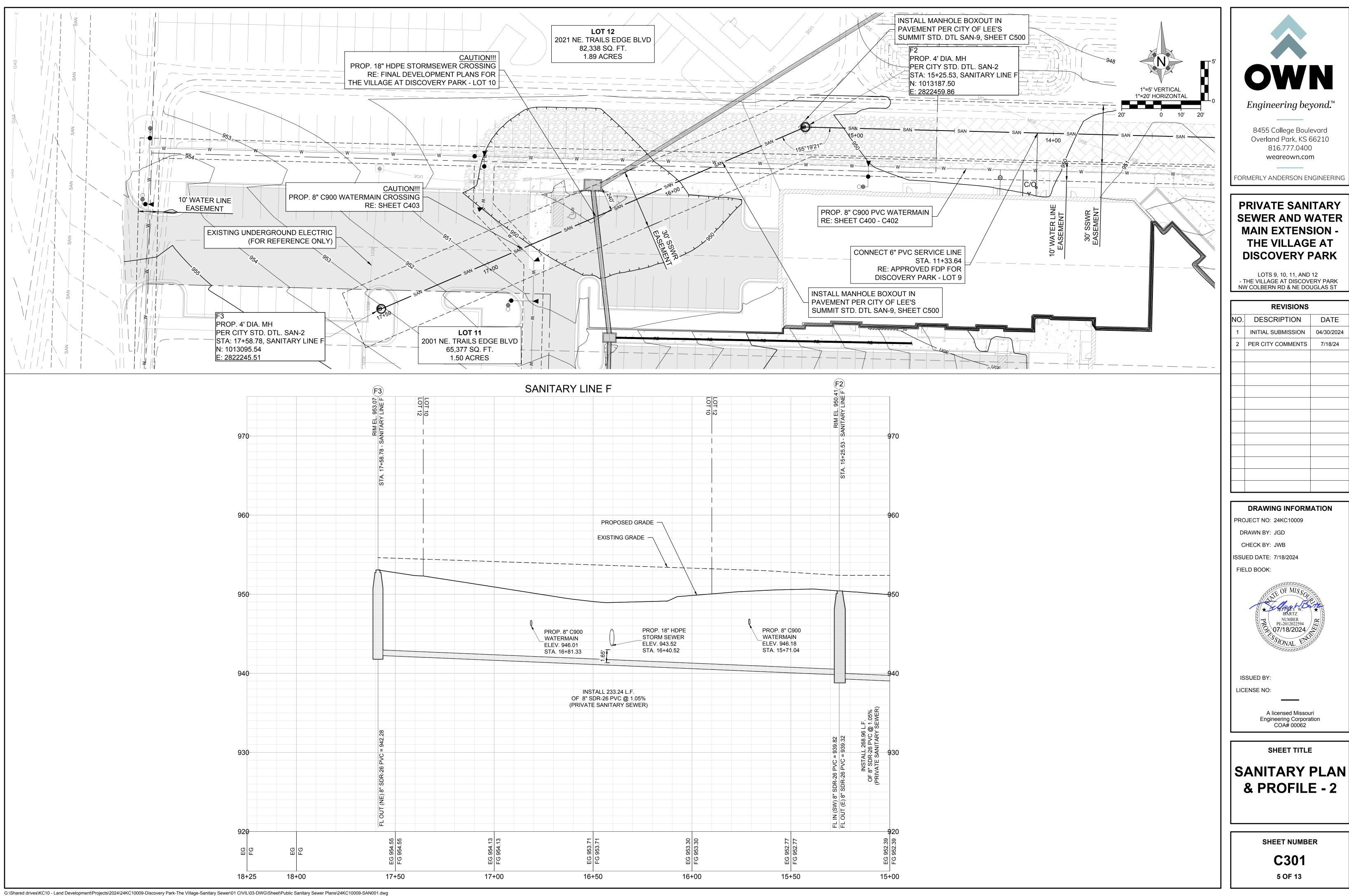
	REVISIONS								
NO.	DESCRIPTION	DATE							
1	INITIAL SUBMISSION	04/30/2024							
2	PER CITY COMMENTS	7/18/24							





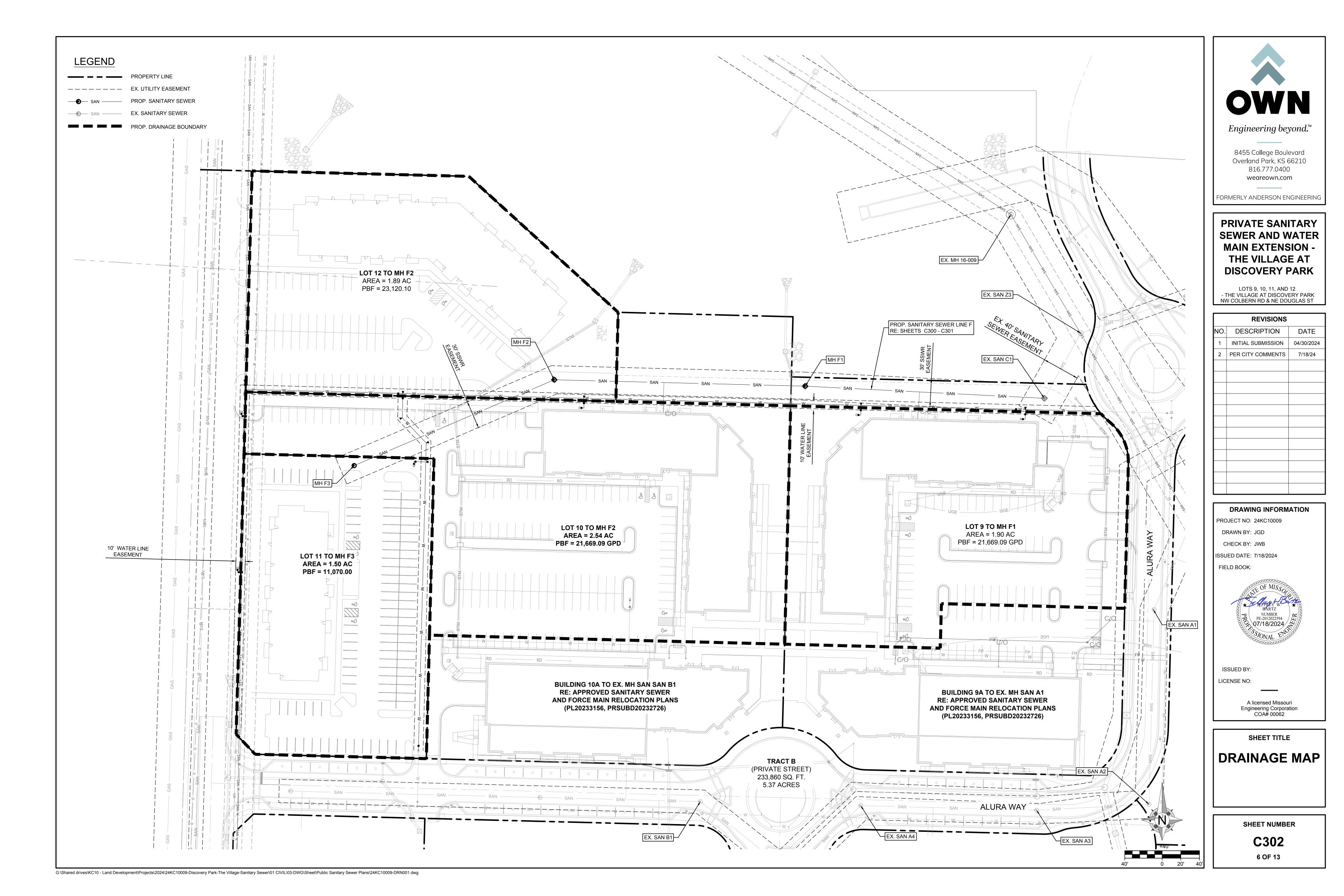








	REVISIONS								
NO.	DESCRIPTION	DATE							
1	INITIAL SUBMISSION	04/30/2024							
2	PER CITY COMMENTS	7/18/24							



	10-yr Peak Flow Calculation Table (Inflow & Infiltration)								
Upstream Manhole	к	Тс	Intensity (in/hr)	Q	А	W	R		
		(min)	(10-yr)	(cfs)	(sf)	(ft)	(ft)		
F-3	0.004	20.56	4.75	0.029	0.247	1.273	0.194		
F-2	0.004	27.02	4.63	0.082	0.247	1.273	0.194		
F-1	0.004	21.82	4.09	0.031	0.247	1.273	0.194		
SAN. C1	0.004	29.57	3.83	0.097	0.247	1.273	0.194		
MH 16-009	0.004	29.57	3.83	0.097	0.247	1.273	0.194		

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Peak Base Flow Calculation Table									
9B Reside	ntial	10B Re	sidential	11 Res	sidential	12 Re	12 Residential		
EDU (per 1000 SF)	1.00	EDU (per 1000 SF)	1.00	EDU (per room)	1.00	EDU (per room)	1.00		
Area (1000 SF)	24.08	Area (1000 SF)	24.08	Area (1000 SF)	11.06	Area (1000 SF)	19.27		
Stories	3.00	Stories	3.00	Stories	3.00	Stories	3.00		
gpd	300.00	gpd	300.00	gpd	300.00	gpd	300.00		
PBFNon-Res	21669.09	PBFRes	21669.09	PBFNon-Res	9951.30	PBFRes	17340.08		

	Sanitary Sewer Design Information (10-yr)											
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow	Peak Infiltration Flow	Peak Inflow	Total Peak Flow	Cum. Peak Flow	Downstream Pipe Manning N	Downstream Pipe Capacity (2/3 full)	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(gpd)	(gpd)	(cfs)	(cfs)	(cfs)		(cfs)	(fps)
F-3	1.05%	8	1.50	0.00	9951.30	750.00	0.029	0.05	0.05	0.014	0.90	3.64
F-2	1.05%	8	4.43	0.00	39009.17	2215.00	0.082	0.15	0.19	0.014	0.90	3.64
F-1	1.05%	8	1.90	0.00	21669.09	950.00	0.031	0.07	0.21	0.014	0.90	3.64
SAN. C1	4.43%	8	6.33	0.00	89160.00	3165.00	0.097	0.24	0.31	0.014	1.85	7.49
MH 16-009	1.24%	8	6.33	0.00	347130.00	3165.00	0.097	0.64	0.88	0.014	0.98	3.96

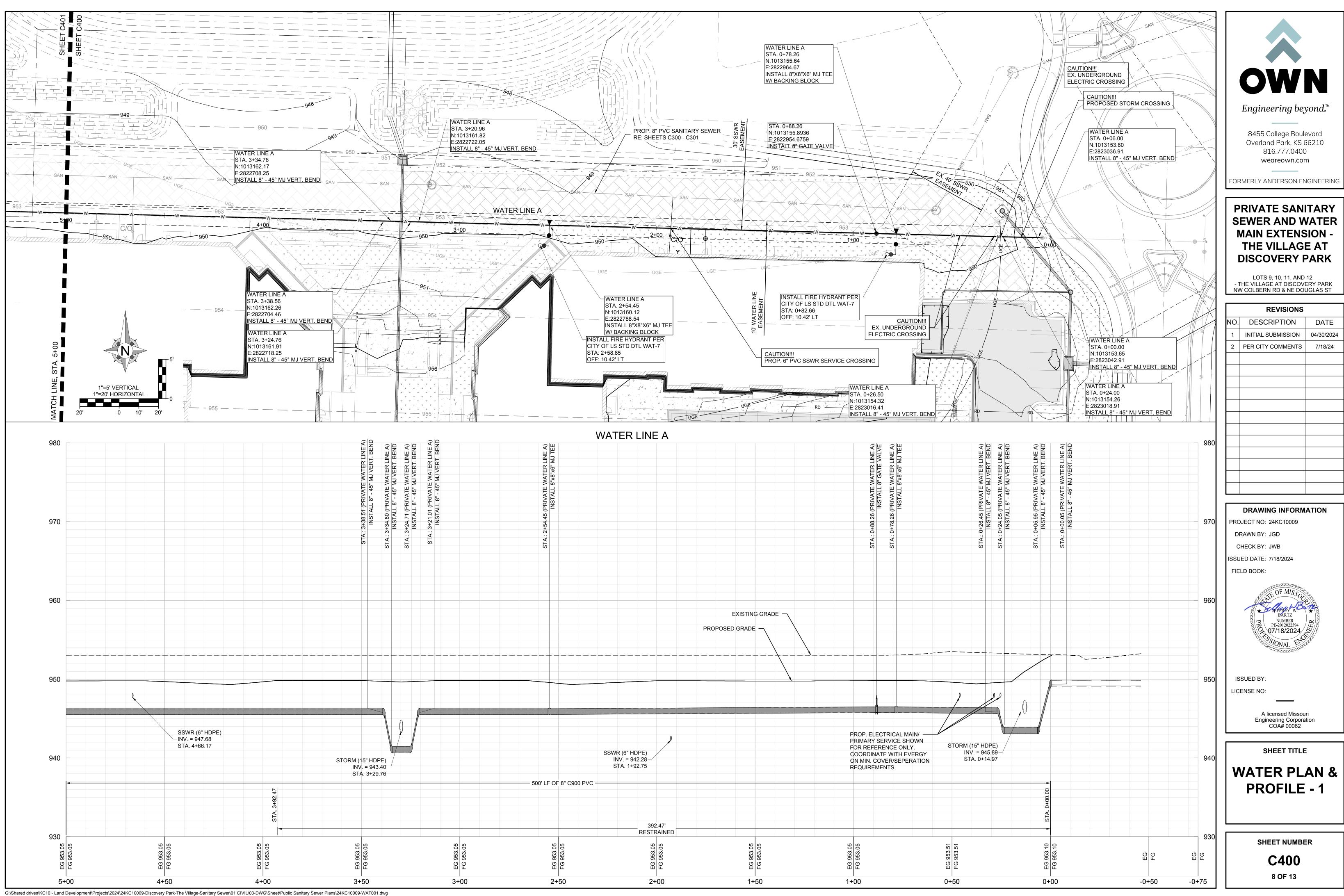


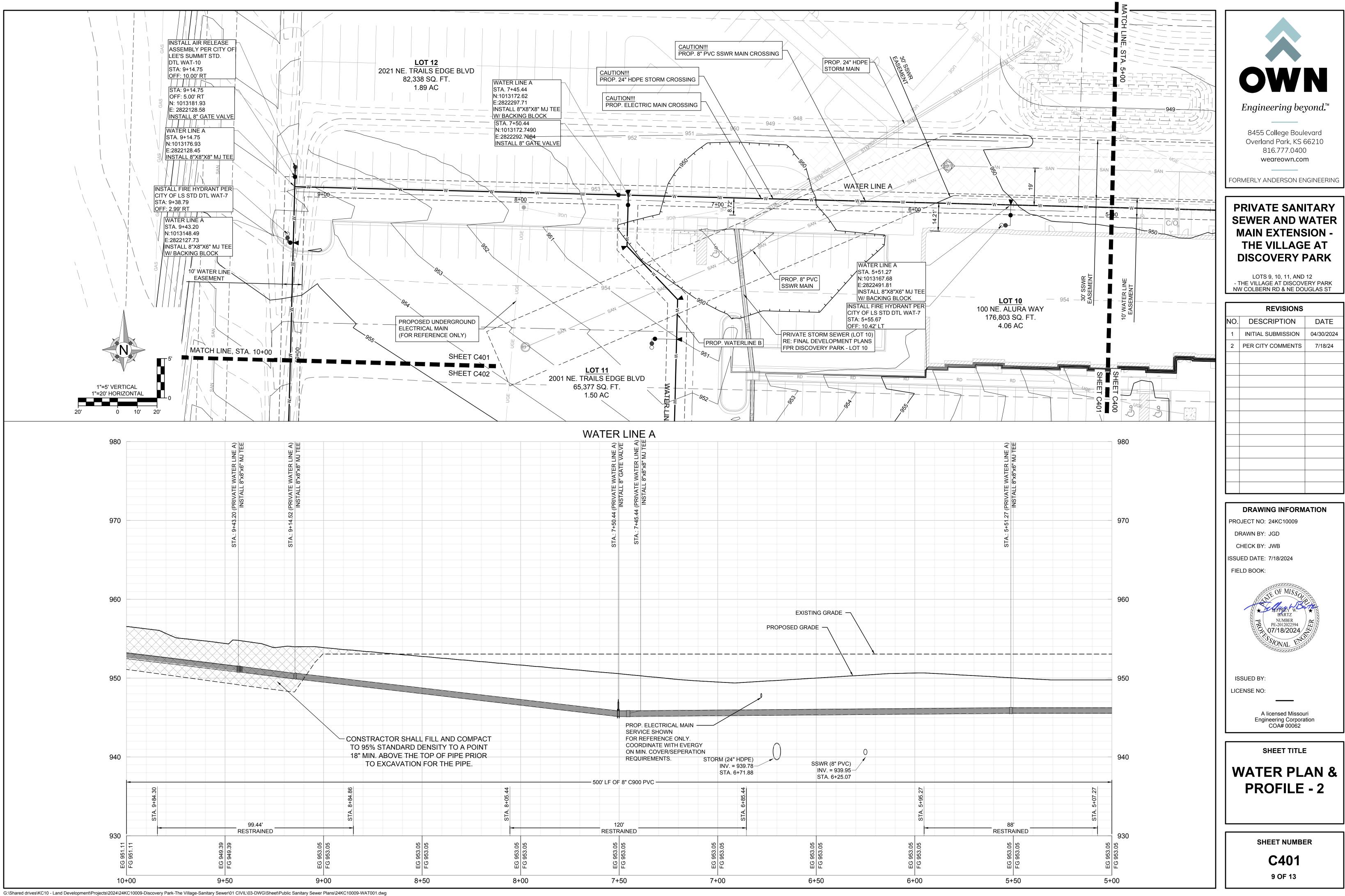
PRIVATE SANITARY SEWER AND WATER MAIN EXTENSION -THE VILLAGE AT DISCOVERY PARK

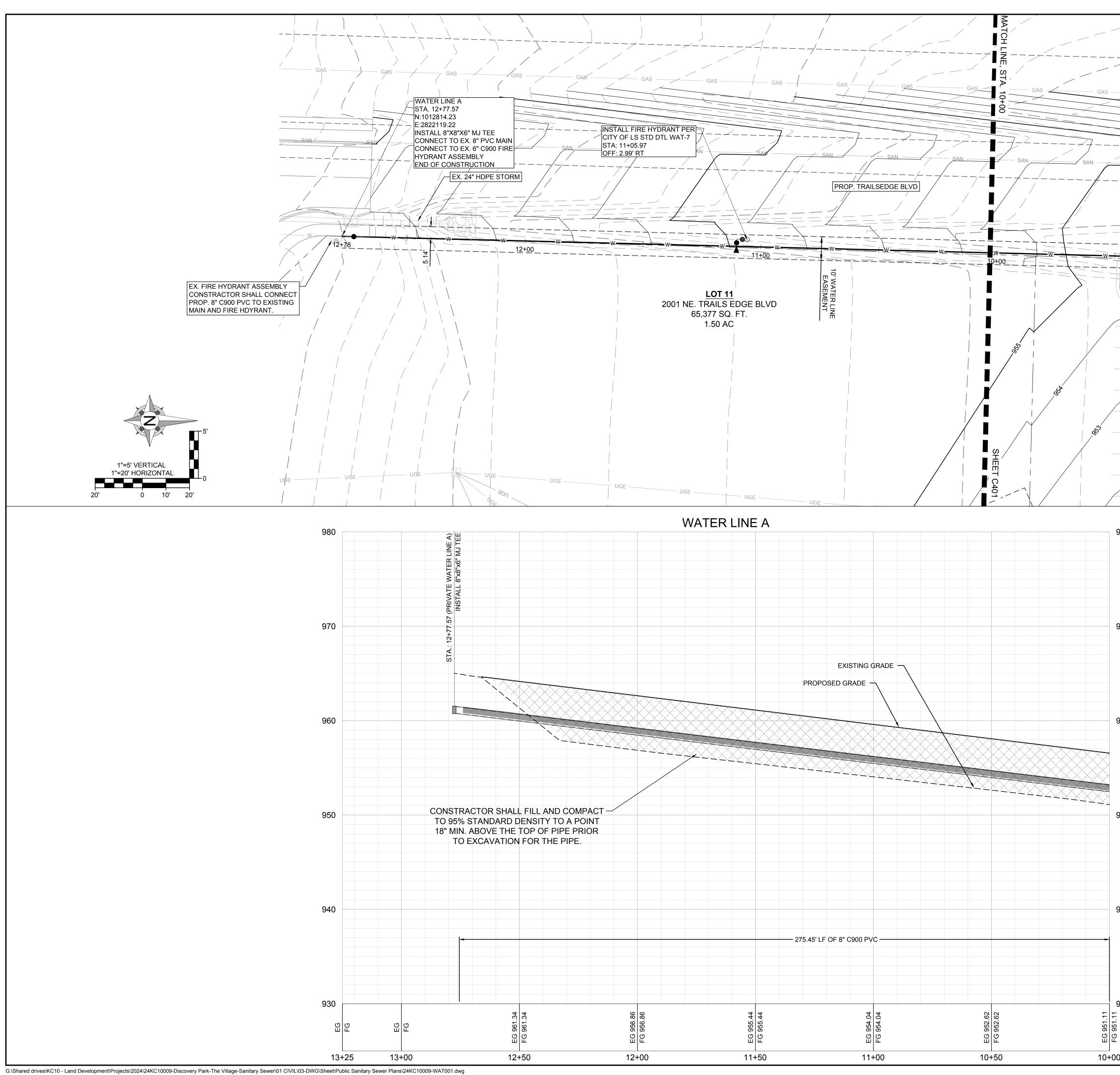
LOTS 9, 10, 11, AND 12 - THE VILLAGE AT DISCOVERY PARK NW COLBERN RD & NE DOUGLAS ST

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2	PER CITY COMMENTS	7/18/24							

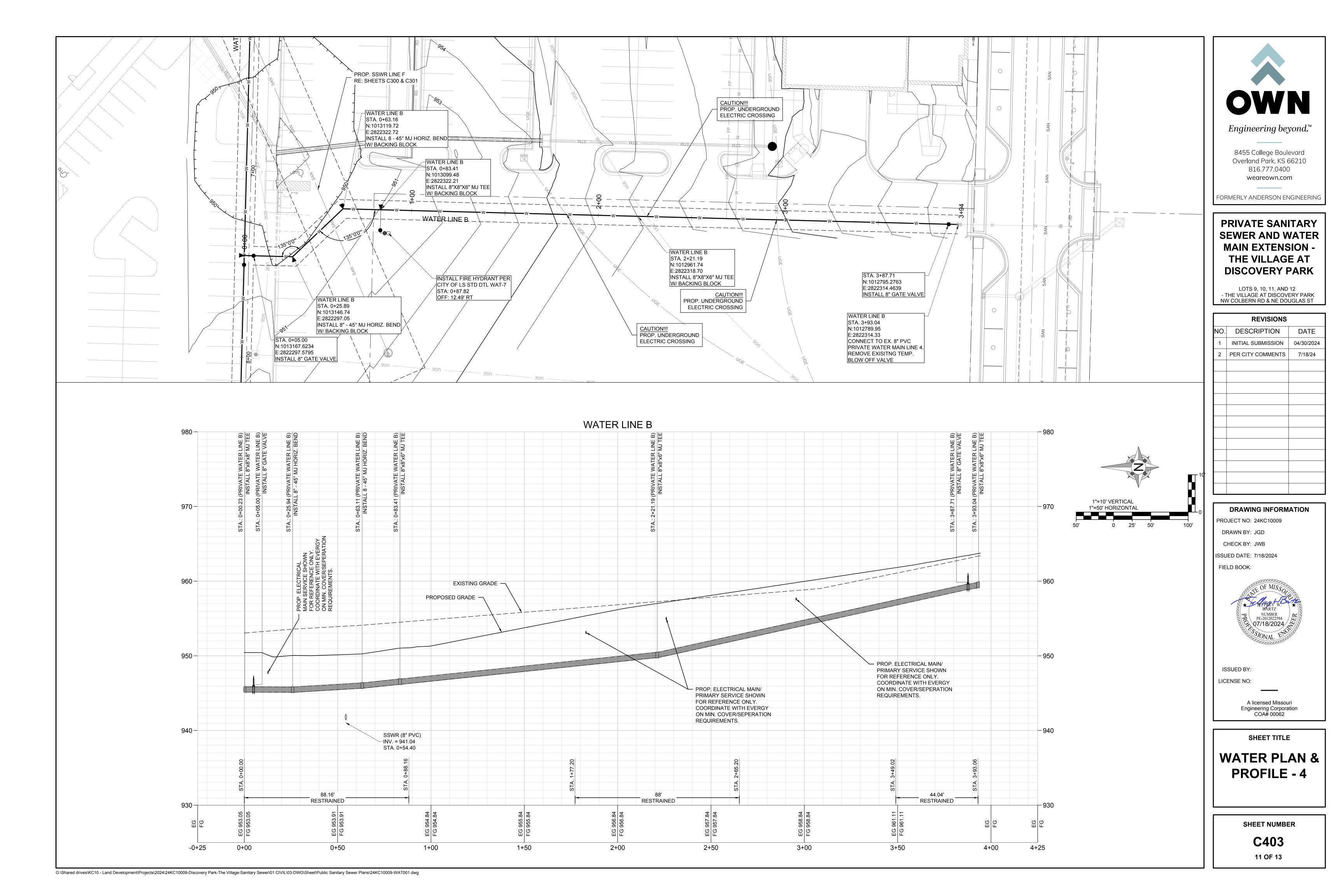
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DRAWN BY: JGD		
CHECK BY: JWB		
ISSUED DATE: 7/18/2024		
FIELD BOOK:		
★ HEFFREY W. BARTZ NUMBER PE-2012022594 07/18/2024		
ISSUED BY:		
LICENSE NO:		
A licensed Missouri Engineering Corporation COA# 00062		
SHEET TITLE		
SSWR CALCULATIONS		
SHEET NUMBER		
C303		
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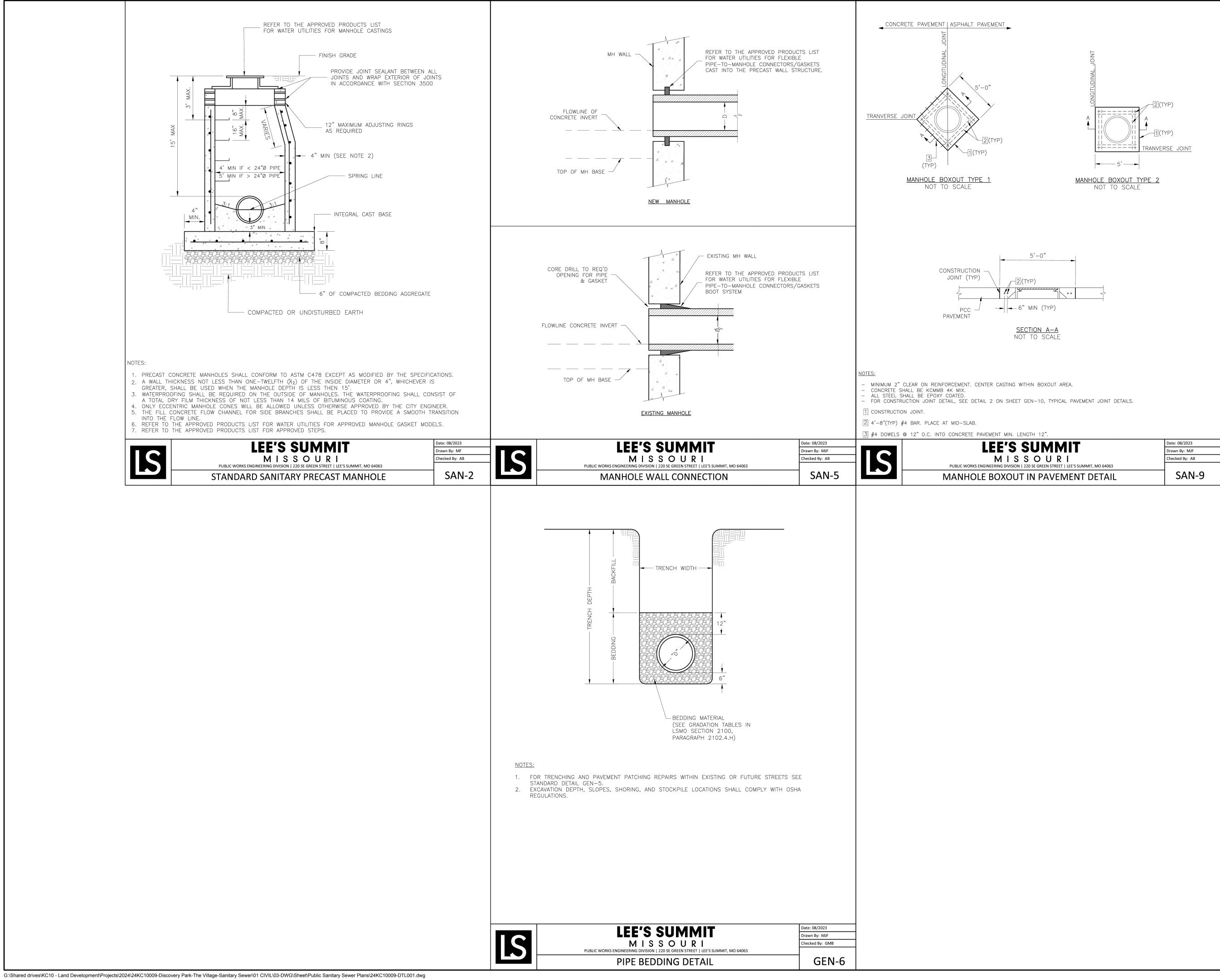






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	PRIVATE SANITARY SEWER AND WATER		
	MAIN EXTENSION -		
	THE VILLAGE AT		
	DISCOVERY PARK		
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	NW COLBERN RD & NE DOUGLAS ST		
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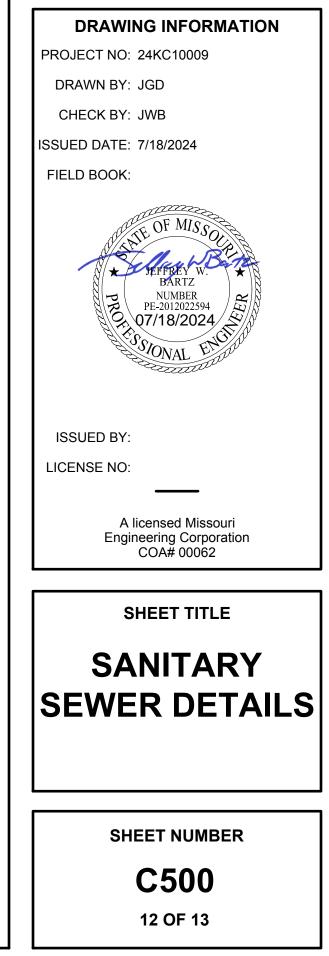
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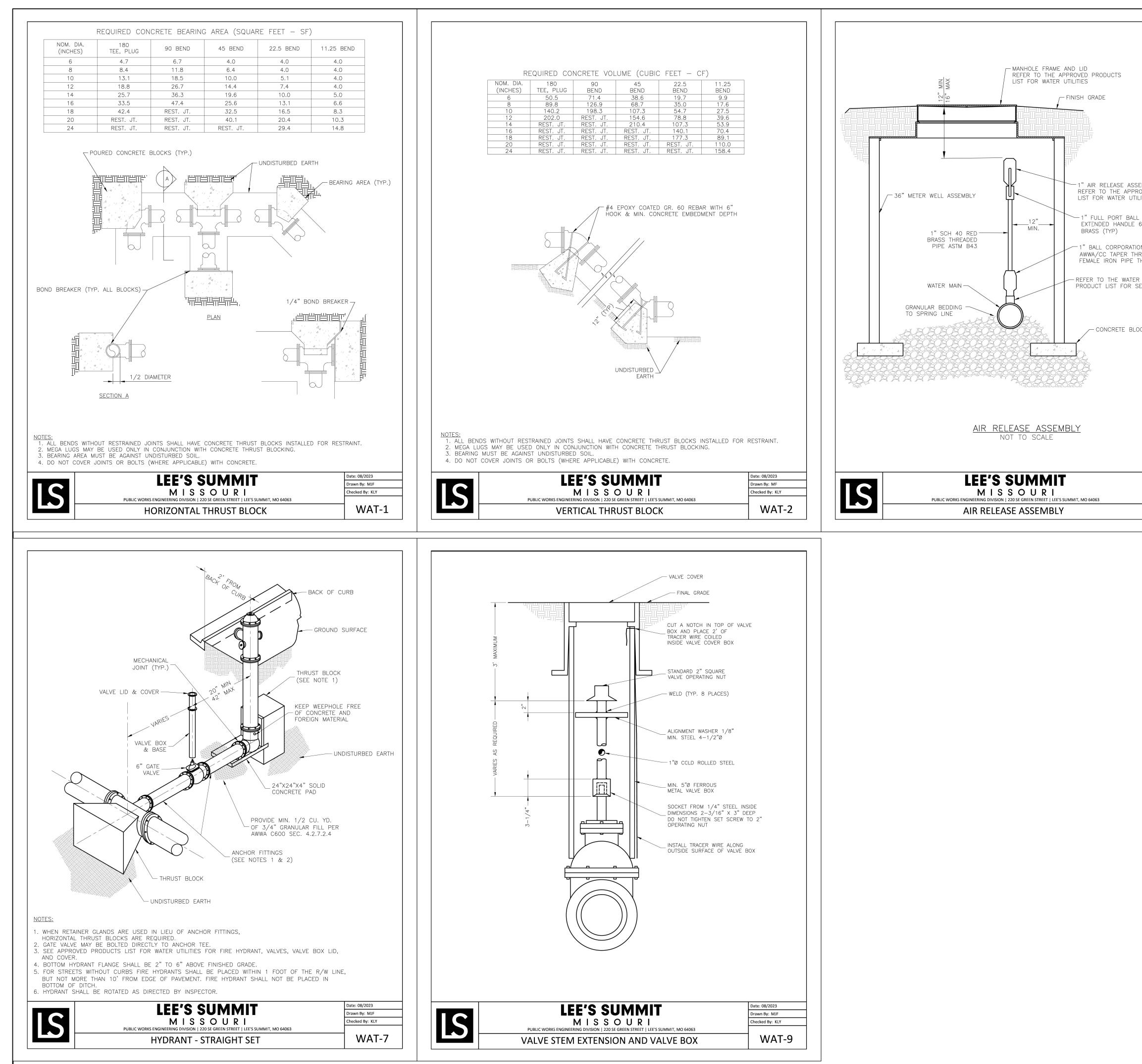
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PRIVATE SANITARY SEWER AND WATER MAIN EXTENSION -THE VILLAGE AT **DISCOVERY PARK**

LOTS 9, 10, 11, AND 12 - THE VILLAGE AT DISCOVERY PARK NW COLBERN RD & NE DOUGLAS ST

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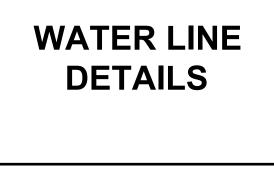




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