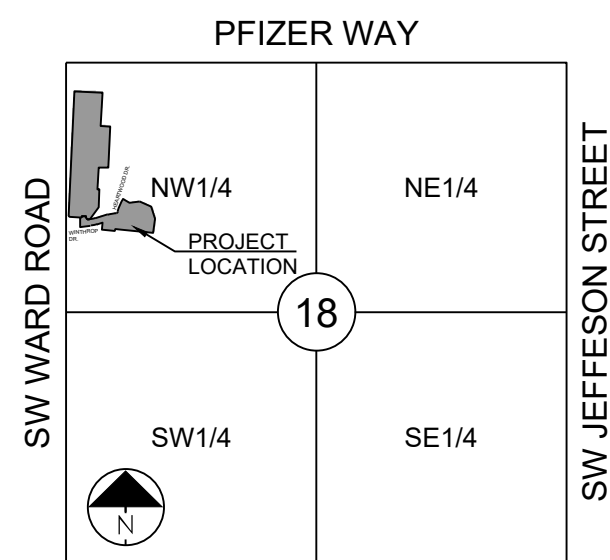


**LEGEND:**

- A/E - ACCESS EASEMENT
  - BC - BACK OF CURB
  - B/B - BACK TO BACK
  - BM - BENCHMARK
  - BL or B.L. - BUILDING LINE
  - CO - CLEANOUT
  - TJB - TELEPHONE JUNCTION BOX
  - C&G - CURB AND GUTTER
  - D/E - DRAINAGE EASEMENT
  - E/E - ELECTRICAL EASEMENT
  - EL - ELEVATION
  - FL - FLOW LINE
  - G/E - GAS LINE EASEMENT
  - HDPE - HIGH-DENSITY POLYETHYLENE
  - L/E - LANDSCAPE EASEMENT
  - MSFE - MINIMUM SERVICEABLE FLOOR ELEVATION
  - PVC - POLYVINYL CHLORIDE
  - P/L - PROPERTY LINE
  - PUB/E - PUBLIC EASEMENT
  - RCP - REINFORCED CONCRETE PIPE
  - ROW or RW - RIGHT-OF-WAY
  - S/E - SANITARY SEWER EASEMENT
  - SL - SERVICE LINE
  - S/W - SIDEWALK
  - TE - TOP ELEVATION
  - U/E - UTILITY EASEMENT
  - WSE - WATER SURFACE ELEVATION
  - W/E - WATERLINE EASEMENT
- 
- ASPHALT PAVEMENT - EXISTING
  - ASPHALT PAVEMENT - PROPOSED
  - CONCRETE PAVEMENT - EXISTING
  - CONCRETE PAVEMENT - PROPOSED
  - CONCRETE SIDEWALK - EXISTING
  - CONCRETE SIDEWALK - PROPOSED
  - CURB & GUTTER
  - CURB & GUTTER - EXISTING
  - TREELINE
  - EXISTING LOT AND RW LINES
  - EXISTING PLAT LINES
  - P/L PROPERTY LINES
  - ROW RIGHT-OF-WAY
  - SANITARY SEWER MAIN
  - SANITARY SEWER MAIN - EXIST.
  - STORM SEWER
  - STORM SEWER - EXISTING
  - CABLE TV - EXISTING
  - FIBER OPTIC CABLE - EXISTING
  - TELEPHONE LINE - EXIST.
  - ELECTRIC LINE - EXISTING
  - OVERHEAD POWER LINE - EXIST.
  - UNDERGROUND ELECTRIC - EX.
  - GAS LINE - EXISTING
  - WATERLINE - EXISTING
  - LIGHT - EXISTING
  - EXISTING MANHOLE
  - CLEANOUT
  - EXISTING SANITARY MANHOLE
  - PROPOSED SANITARY MANHOLE
  - EXISTING AREA INLET
  - EXISTING CURB INLET
  - EXISTING GRATE INLET
  - EXISTING JUNCTION BOX
  - EXISTING STORM MANHOLE



SECTION 18-47N-31W  
**LOCATION MAP**  
 SCALE 1" = 2000'

**UTILITY CONTACTS:**

**MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)**

Steve Holloway  
 600 NE Colbern Road  
 Lee's Summit, MO 64086  
 (816) 607-2186

**MISSOURI GAS ENERGY (MGE)**

Brent Jones  
 3025 SE Clover Drive  
 Lee's Summit, MO 64082  
 (816) 399-9633  
 brent.jones@spireenergy.com

**KANSAS CITY POWER & LIGHT COMPANY (KCP&L)**

Ron DeJarnette  
 1300 SE Hamblin Road  
 Lee's Summit, MO 64081  
 Office: (816) 347-4316  
 Cell: (816) 810-5234  
 ron.dejarnette@kcpl.com

**CITY OF LEE'S SUMMIT PUBLIC WORKS**

Dena Mezger  
 220 SE Green Street  
 Lee's Summit, MO 64063  
 (816) 969-1800

**AT&T**

Mark Manion or Marty Loper  
 500 E. 8th Street, Room 370  
 Kansas City, MO 64108  
 (816) 275-2341 or (816) 275-1550

**COMCAST CABLE**

Barbara Brown  
 3400 W. Duncan Road  
 Blue Springs, MO 64015  
 (816) 795-2255

**PUBLIC WATER SUPPLY DISTRICT**

Mark Schaulfer  
 220 SE Green Street  
 Lee's Summit, MO 64063  
 (816) 969-1900



**VICINITY MAP**  
 N.T.S.

# SANITARY SEWER MAIN EXTENSION FOR WOODLAND GLEN 2ND PLAT

## IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MISSOURI

Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	SAN EROS CONT PLAN
3	SAN EROS CONT PLAN
4	SAN EROS CONT PLAN
5	SAN EROS DET
6	SAN EROS DET
7	GENERAL LAYOUT
8	GRADING PLAN
9	LINE A PLAN AND PROFILE
10	LINE B PLAN AND PROFILE
11	LINE C-D PLAN AND PROFILE
12	SANITARY DETAILS

**GENERAL NOTES:**

- ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
- ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
- LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
- NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
- THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
- PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST.
- THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
- CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
- ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
- ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
- THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
- ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
- THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES INSPECTOR AT: 816-969-1200 PRIOR TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).

**APPROVED BY:**

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED FOR ONE YEAR FROM THIS DATE

**OWNER/DEVELOPER:**

ABP FUNDING, LLC  
 JOHN DUGGAN  
 9101 W. 110TH STREET, SUITE 200  
 OVERLAND PARK, KANSAS 66210  
 p 913-208-2283  
 JDUGGAN@KC-DSLAW.COM

**RECORD DRAWING**

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"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: **10/18/2022**  
 Certified by: **RPM**  
 Title: **Design Engineer**  
 Firm: **Schlager and Associates, P.A.**

**PROJECT BENCHMARK:**

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41

SUMMARY OF QUANTITIES			
	ITEM	QUANTITY	UNITS
1	CONNECT TO EXISTING MANHOLE	2	EA
2	CONNECT TO EXISTING MAIN	1	EA
3	STANDARD 4' DIA. MANHOLE	13	EA
4	8" PVC SDR-26	2160	LF
5	6" PVC SDR-26	1615	LF
6	8" X 6" WYE CONNECTION	48	EA
7	EXTRA DEPTH IN MANHOLE	131	VF
8	CLEANOUT	1	EA
9	EROSION CONTROL	1	LS
10	BONDS	1	LS
11	ROCK EXCAVATION (ESTIMATION)	500	CY
12	CLEAR AND GRUB	1	LS
13	COMPACTION TESTING	1	LS
14	PREBLAST SURVEY (IF REQUIRED)	1	LS

**UTILITIES:**

- EXISTING UTILITIES HAVE BEEN SHOWN TO THE GREATEST EXTENT POSSIBLE BASED UPON INFORMATION PROVIDED TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND FIELD LOCATING UTILITIES PRIOR TO CONSTRUCTION AND IDENTIFYING ANY POTENTIAL CONFLICTS. ALL CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY REQUIRED UTILITY RELOCATIONS. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL VERIFY FLOW-LINES AND STRUCTURE TOPS PRIOR TO CONSTRUCTION, AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. PROVIDE SHOP DRAWINGS FOR ALL PRECAST AND MANUFACTURED UTILITY STRUCTURES FOR REVIEW BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE STRUCTURES.
- UTILITY SEPARATION: WATERLINES SHALL HAVE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL SEPARATION FROM ALL STORM SEWER LINES. IF MINIMUM SEPARATIONS CAN NOT BE OBTAINED, CONCRETE ENCASUREMENT OF THE STORM SEWER LINE SHALL BE REQUIRED 10 FEET IN EACH DIRECTION OF THE CONFLICT.
- PAYMENT FOR TRENCHING, BACKFILLING, PIPE EMBEDMENT, FLOWABLE FILL, BACKFILL MATERIALS, CLEAN UP, SEEDING, SODDING AND ANY OTHER ITEMS NECESSARY FOR THE CONSTRUCTION OF THE UTILITY LINE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE UTILITY INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE UTILITY COMPANIES 48-HOURS IN ADVANCE FOR THE INSPECTION OF ANY PROPOSED UTILITY MAIN EXTENSION OR SERVICE LINE OR SERVICE CONNECTION TO ANY EXISTING MAIN.
- TRENCH SPOILS SHALL BE NEATLY PLACED ONSITE ADJACENT TO THE TRENCH, AND COMPACTED TO PREVENT SATURATION AND EXCESS SEDIMENT RUNOFF. UNSUITABLE MATERIALS, EXCESS ROCK AND SHALE, ASPHALT, CONCRETE, TREES, BRUSH ETC. SHALL BE PROPERLY DISPOSED OF OFFSITE. MATERIALS MAY BE WASTED ONSITE AT THE DIRECTION OF THE OWNER OR HIS APPOINTED REPRESENTATIVE.

**Record Drawing**

**NOTE:**  
 TRENCH CHECKS TO BE INSTALL ON ALL SANITARY SEWER SERVICE LINES IN ACCORDANCE WITH CITY OF LEE'S SUMMIT STANDARDS.

**SCHLAGEL**  
 ENGINEERS, PLANNERS, SURVEYORS, LANDSCAPE ARCHITECTS  
 14920 West 107th Street • Lenexa, Kansas 66215  
 (913) 492-5158 • Fax: (913) 492-8400  
 WWW.SCHLAGELASSOCIATES.COM  
 Missouri State Certificate of Authority  
 #E200200360CF #LAC201005237 #S200200895F

WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	SCHLAGEL QUANTITIES
01/12/2021	SCH. REGRADE
05/10/2021	ESC SHEETS
06/03/2021	EX. MH 1-7 TIE IN
10/07/2021	MH/C1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

COVER

SHEET  
**1**

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LEGEND	
	TEMPORARY STORAGE AREA FOR EXCESS MATERIAL
	TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA
	CONCRETE WASHOUT AREA
	SILT FOAM DIKE OR STRAW WATTLE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	ROCK DITCH CHECK
	STRAW WATTLE OR COIL LOG STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (DURING CONSTRUCTION)
	SILT SOCK / ROCK SOCK / SOCK WATTLE
	LIMITS OF DISTURBANCE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY
	BMP PLAN REF. NO.

**DISTURBED AREA = 9.74 A.C.**

**SITE SPECIFIC NOTES:**

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0419G DATED JANUARY 20, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
- ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

EROSION AND SEDIMENT CONTROL STAGING CHART				
PROJECT STAGE	BMP PLAN REF. NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	2	SILT FENCE 1 (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	3	EXISTING INLET PROTECTION	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	4	FOAM SILT DIKE OR ROCK DITCH CHECK	E	PLACE WHERE INDICATED AT EXISTING SWALES AND DRAINAGE COURSES
B - MASS GRADING	5	SEDIMENT BASINS (REF. DETAIL ON SHEET 6)	E	TO BE INSTALLED PRIOR TO DISTURBING ENTIRE SITE.
	6	SILT FENCE 2 (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
C - UTILITY CONSTRUCTION	7	FOAM SILT DIKE OR STRAW WATTLE/COIL LOG CHECK	E	PLACE WHERE INDICATED AS SOON AS SWALE IS ESTABLISHED, REPAIR OR REPLACE AS NECESSARY
	8	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
D - AFTER PAVING OPERATIONS	9	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	10	INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT	11	SILT FENCE 2 (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	12	SEEDING AND MULCHING	E	ALL DISTURBED AREAS PRIOR TO 14 DAYS OF CONSTRUCTION INACTIVITY
	13			ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

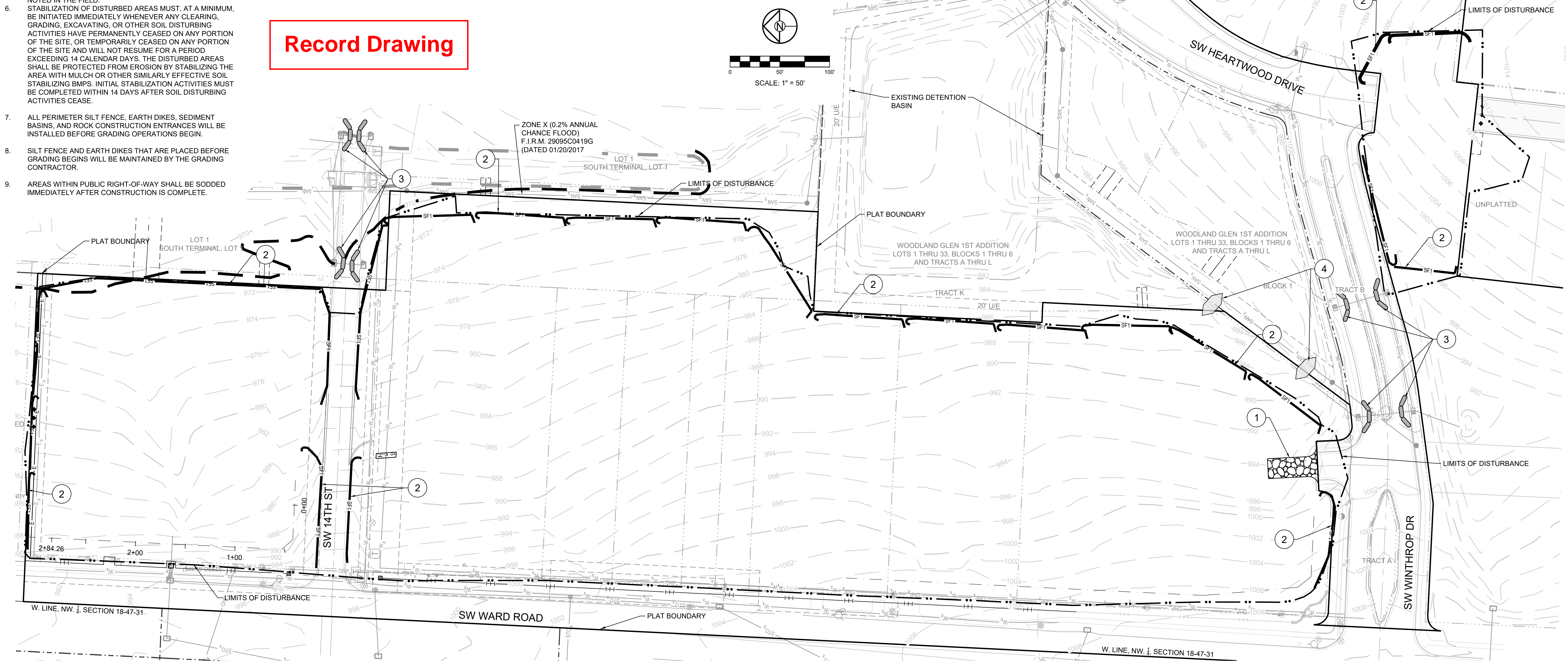
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Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

**Record Drawing**



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WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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SAN EROS CONT  
 PLAN  
 SHEET  
**2**

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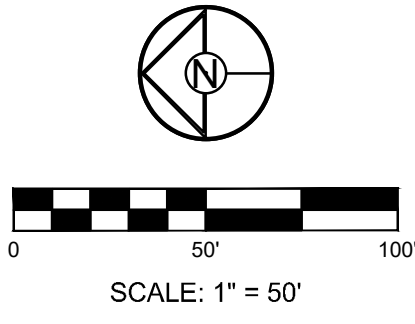
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- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

TOTAL DRAINAGE AREA TO TEMPORARY SEDIMENT TRAP  
 EDDB#1 AREA = 2.59 AC.  
 EDDB#2 AREA = 4.99 AC.  
 EDDB#3 AREA = 1.26 AC.

SEDIMENT VOLUME REQUIRED (3600 CU. FT./AC.)  
 EDDB#1 2.59 AC. \* 3600 CU.FT./AC. = 9,324 CU.FT.  
 EDDB#2 4.99 AC. \* 3600 CU.FT./AC. = 17,964 CU.FT.  
 EDDB#3 1.26 AC. \* 3600 CU.FT./AC. = 4,536 CU.FT.

SEDIMENT VOLUME PROVIDED  
 EDDB#1 VOLUME @ 986.90 = 9,537 CU.FT.  
 EDDB#2 VOLUME @ 972.10 = 18,904 CU.FT.  
 EDDB#3 VOLUME @ 971.70 = 5,225 CU.FT.



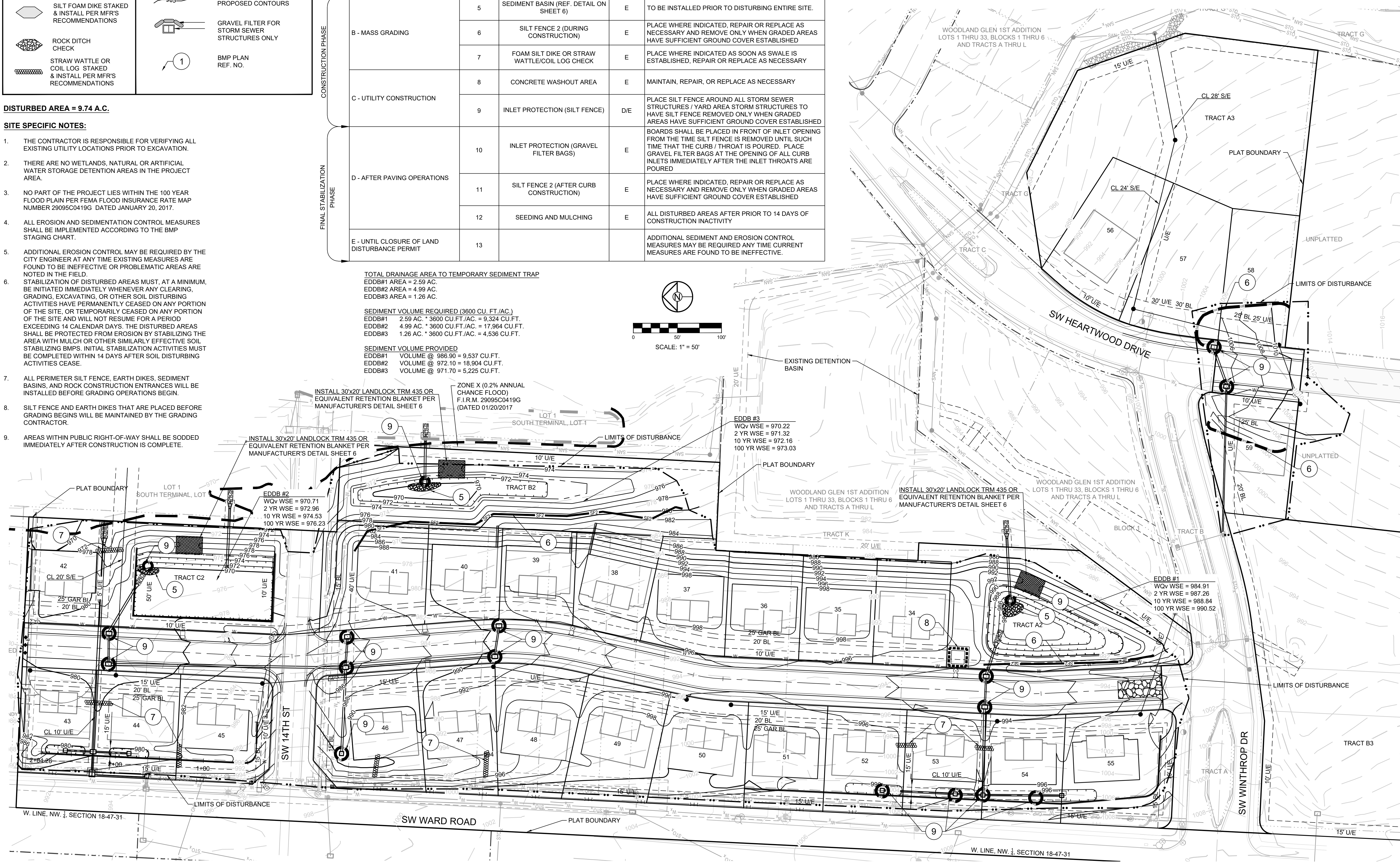
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Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

**Record Drawing**



**SCHLAGEL**  
 ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS  
 14920 West 107th Street • Lenexa, Kansas 66215  
 (913) 492-5158 • Fax: (913) 492-8400  
 WWW.SCHLAGELASSOCIATES.COM  
 Missouri State Certificates of Authority  
 #E200203690F #LAC201005237 #S200208959F

WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	CITY COMMENTS
01/12/2021	SCHLAGEL QUANTITIES
05/10/2021	SCH. REGRADE
06/03/2021	ESC SHEETS
10/07/2021	EX. MH 17 TIE IN
12/08/2021	MH C1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

SAN EROS CONT PLAN  
 SHEET  
**3**

I:\PROJECTS\2018\18-0773.0 Design\3.0 DWG\Plan\17.0 San Eros Cont Plan.dwg, 10/12/2022 2:23:32 PM, 11

LEGEND	
	TEMPORARY STORAGE AREA FOR EXCESS MATERIAL
	TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA
	CONCRETE WASHOUT AREA
	SILT FOAM DIKE OR STRAW WATTLE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	ROCK DITCH CHECK
	STRAW WATTLE OR COIL LOG STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (DURING CONSTRUCTION)
	SILT SOCK / ROCK SOCK / SOCK WATTLE
	LIMITS OF DISTURBANCE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY
	BMP PLAN REF. NO.

**DISTURBED AREA = 9.74 A.C.**

**SITE SPECIFIC NOTES:**

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0419G DATED JANUARY 20, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
- ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

EROSION AND SEDIMENT CONTROL STAGING CHART				
PROJECT STAGE	BMP PLAN REF. NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	2	SILT FENCE 1 (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	3	EXISTING INLET PROTECTION	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	4	FOAM SILT DIKE OR ROCK DITCH CHECK AND SEDIMENT TRAPS	E	PLACE WHERE INDICATED AT EXISTING SWALES AND DRAINAGE COURSES
B - MASS GRADING	5	SEDIMENT BASIN (REF. DETAIL ON SHEET 6)	E	TO BE INSTALLED PRIOR TO DISTURBING ENTIRE SITE.
	6	SILT FENCE 2 (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
C - UTILITY CONSTRUCTION	7	FOAM SILT DIKE OR STRAW WATTLE/COIL LOG CHECK	E	PLACE WHERE INDICATED AS SOON AS SWALE IS ESTABLISHED, REPAIR OR REPLACE AS NECESSARY
	8	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
D - AFTER PAVING OPERATIONS	9	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	10	INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
	11	SILT FENCE 2 (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT	12	SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER PRIOR TO 14 DAYS OF CONSTRUCTION INACTIVITY
	13			ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

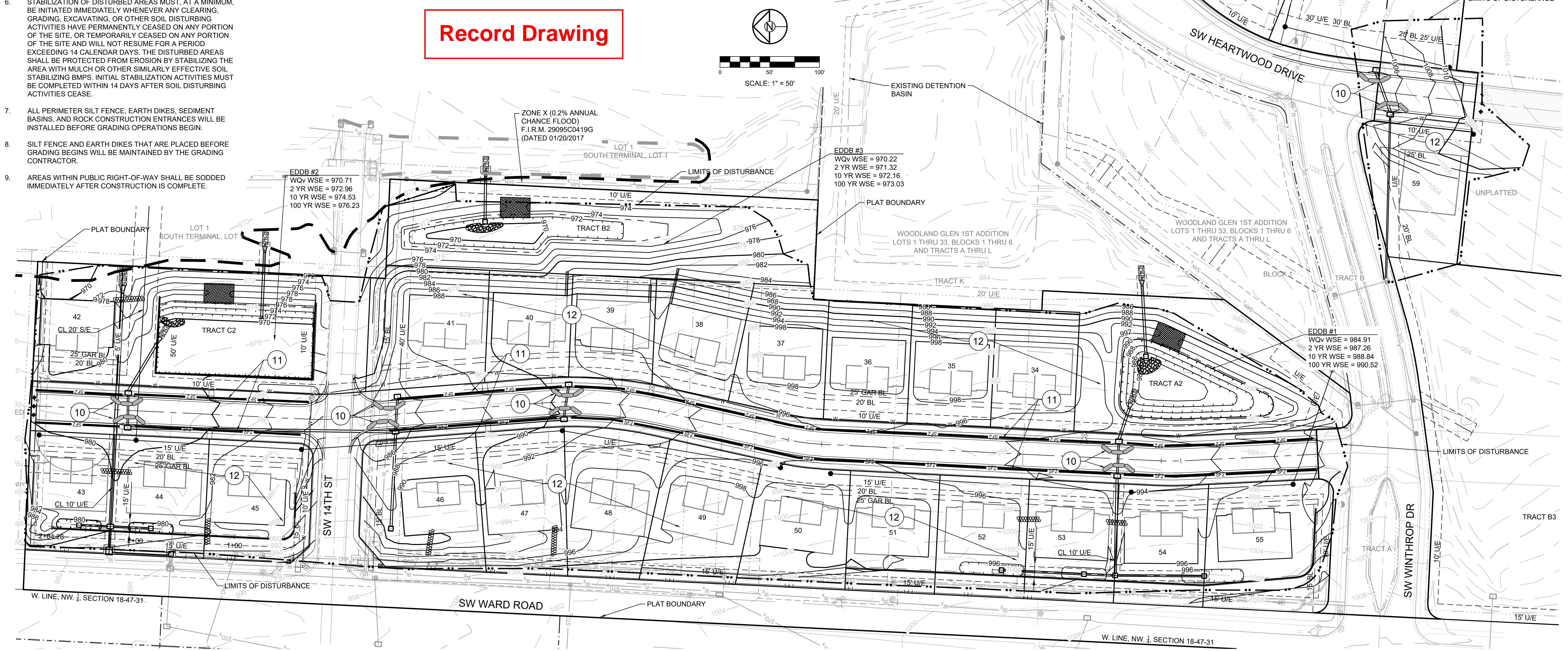
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Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

**Record Drawing**



REVISION DATE	DESCRIPTION
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5-20-2020	CITY COMMENTS
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10/07/2021	EX. MH 17 TIE IN
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01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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SAN EROS DET

SHEET

5

**Notes for Concrete Washout:**

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

**Maintenance for Concrete Washout:**

- Concrete washout materials shall be removed once the materials have dried the washout to approximately 75% full.
- Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
- Concrete washout water, wetted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
- Concrete washout areas shall remain in place until all concrete for the project is placed.
- When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topped, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

**Notes for Construction Entrance:**

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

**Maintenance for Construction Entrance:**

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

**CONCRETE WASHOUT**

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

**Notes:**

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

**Maintenance:**

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

**SILT FENCE**

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

**Notes:**

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

**Maintenance:**

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

**CONCRETE WASHOUT**

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

**Notes for Wattles and Biodegradable Log Slope Protection:**

- The Slope barriers shall be placed along contour lines, with a short section turned up/drift at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
- Install wattles and biodegradable logs per manufacturer's instructions.
- Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

**Notes for Mulch and Compost Filter Berms:**

- The sediment control berm shall be placed uncompact in a window of localities shown on the plans or as directed by the engineer.
- Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
- If berm is to be left as permanent or part of the natural landscape, the compost berm may be needed during application for permanent vegetation.
- Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
- Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

**Maintenance for Mulch and Compost Filter Berms:**

- Berm shall be reshaped and material added as necessary to maintain function and dimensions.
- Reaches in the berm shall be repaired promptly.

**MULCH OR COMPOST FILTER BERMS**

AMERICAN PUBLIC WORKS ASSOCIATION  
 KANSAS CITY METRO CHAPTER  
 WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM  
 STANDARD DRAWING NUMBER ESC-04  
 ADOPTED: 10/24/2016

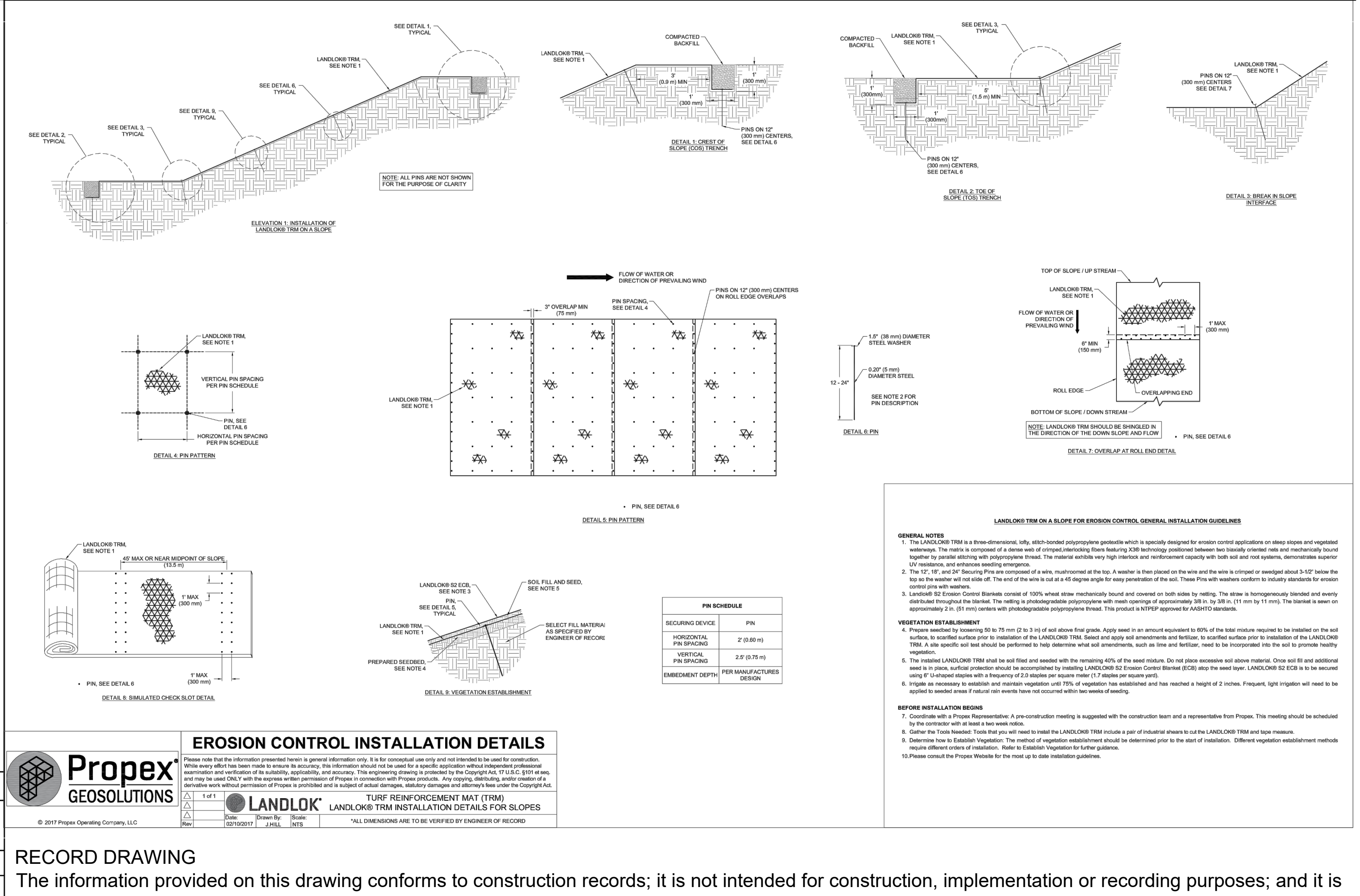
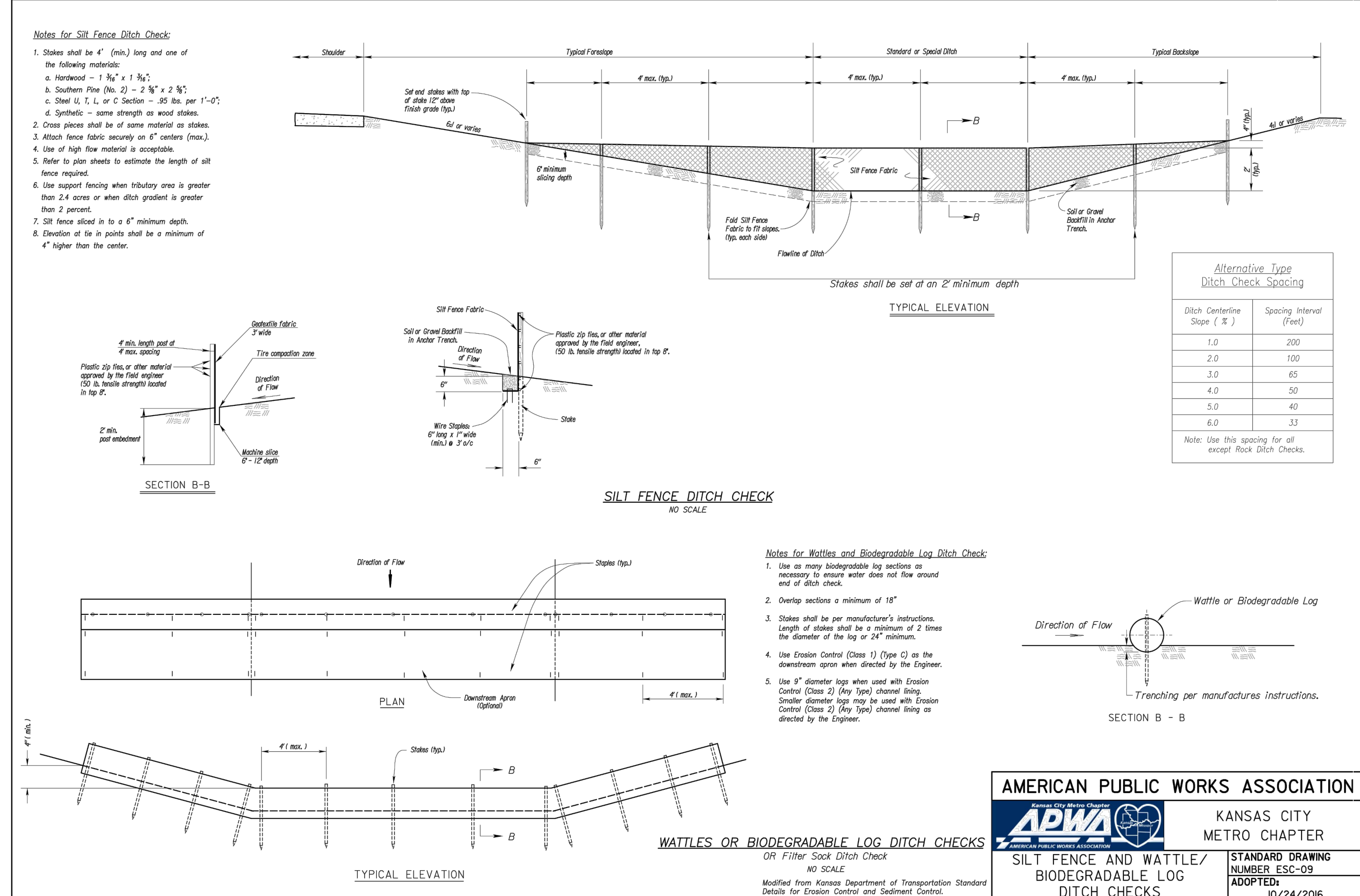
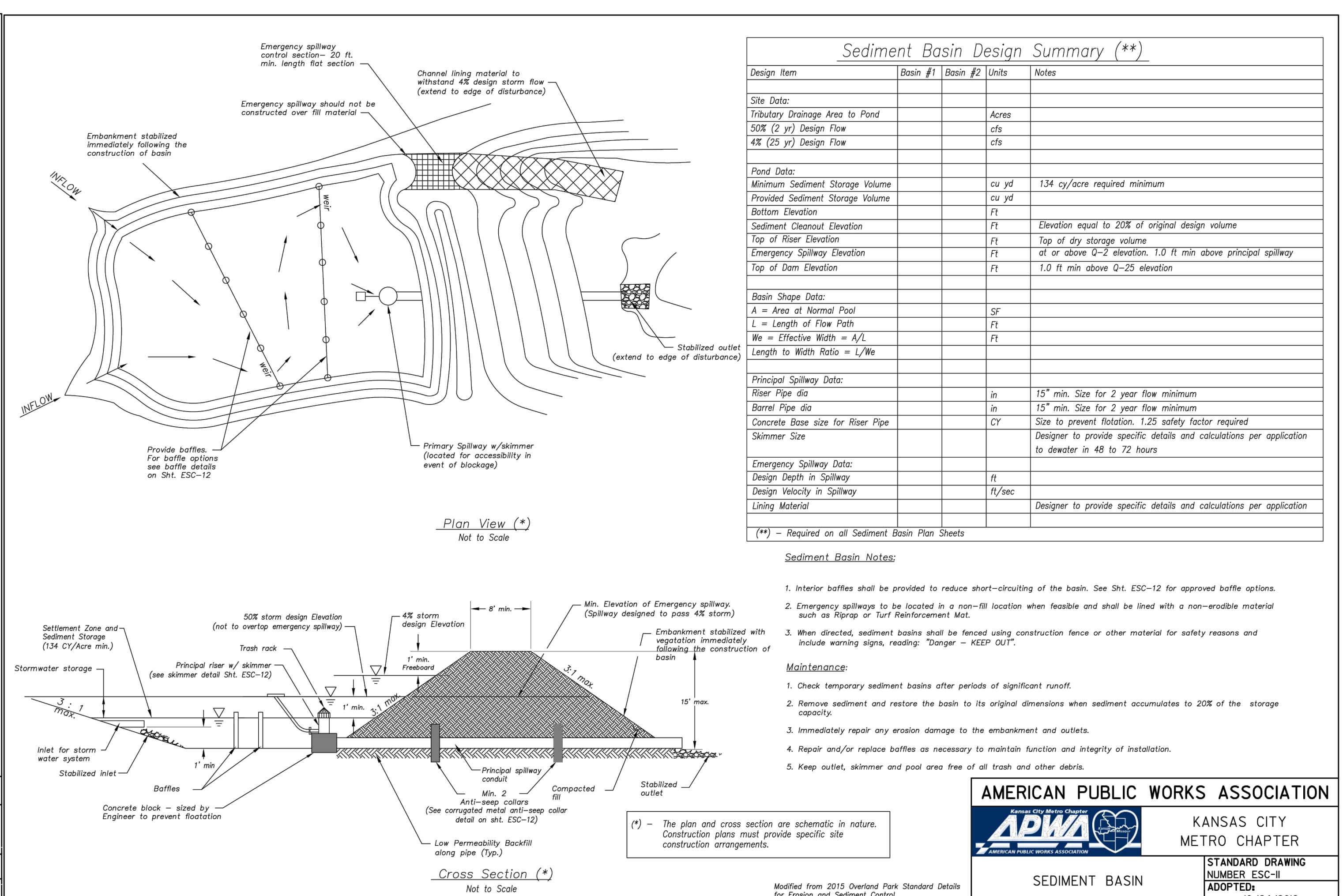
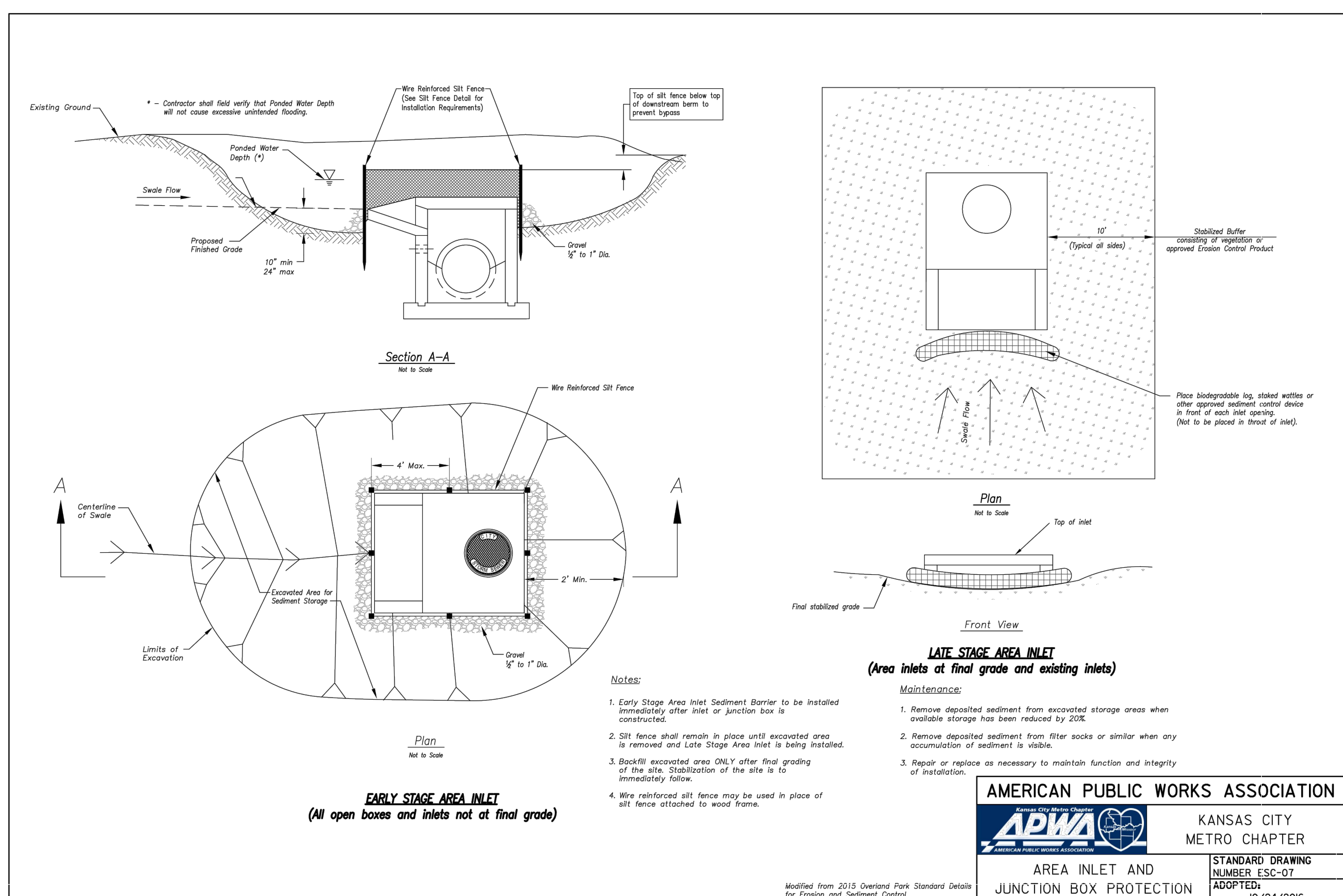
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Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

Record Drawing



Design Item	Basin #1	Basin #2	Units	Notes
Site Data:				
Tributary Drainage Area to Pond			Acres	
50% (2 yr) Design Flow			cfs	
4% (25 yr) Design Flow			cfs	
Pond Data:				
Minimum Sediment Storage Volume			cu yd	134 cu yd/acre required minimum
Provided Sediment Storage Volume			cu yd	
Bottom Elevation			ft	Elevation equal to 20% of original design volume
Sediment Cleanout Elevation			ft	Top of dry storage volume
Top of Riser Elevation			ft	at or above 0-2 elevation, 1.0 ft min above principal spillway
Emergency Spillway Elevation			ft	1.0 ft min above Q-25 elevation
Top of Dam Elevation			ft	
Basin Shape Data:				
A = Area of Normal Pool			SF	
L = Length of Flow Path			ft	
W = Effective Width = A/L			ft	
Length to Width Ratio = L/W				
Principal Spillway Data:				
Riser Pipe dia			in	15" min. Size for 2 year flow minimum
Barrel Pipe dia			in	15" min. Size for 2 year flow minimum
Concrete Base Size for Riser Pipe			CY	Size to prevent flotation, 1.25 safety factor required
Skimmer Size				Designer to provide specific details and calculations per application to dealer in 48 to 72 hours
Emergency Spillway Data:				
Design Depth in Spillway			ft	
Design Velocity in Spillway			ft/sec	
Lining Material				Designer to provide specific details and calculations per application

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

**AMERICAN PUBLIC WORKS ASSOCIATION**  
 KANSAS CITY METRO CHAPTER  
 SEDIMENT BASIN  
 STANDARD DRAWING NUMBER ESC-II  
 ADOPTED: 10/24/2016

**AMERICAN PUBLIC WORKS ASSOCIATION**  
 KANSAS CITY METRO CHAPTER  
 SILT FENCE AND WATTLE/BIODEGRADABLE LOG DITCH CHECKS  
 STANDARD DRAWING NUMBER ESC-09  
 ADOPTED: 10/24/2016

**Propex Geosolutions**  
**LANDLOK TRM**  
 TURF REINFORCEMENT MAT (TRM)  
 LANDLOK TRM INSTALLATION DETAILS FOR SLOPES

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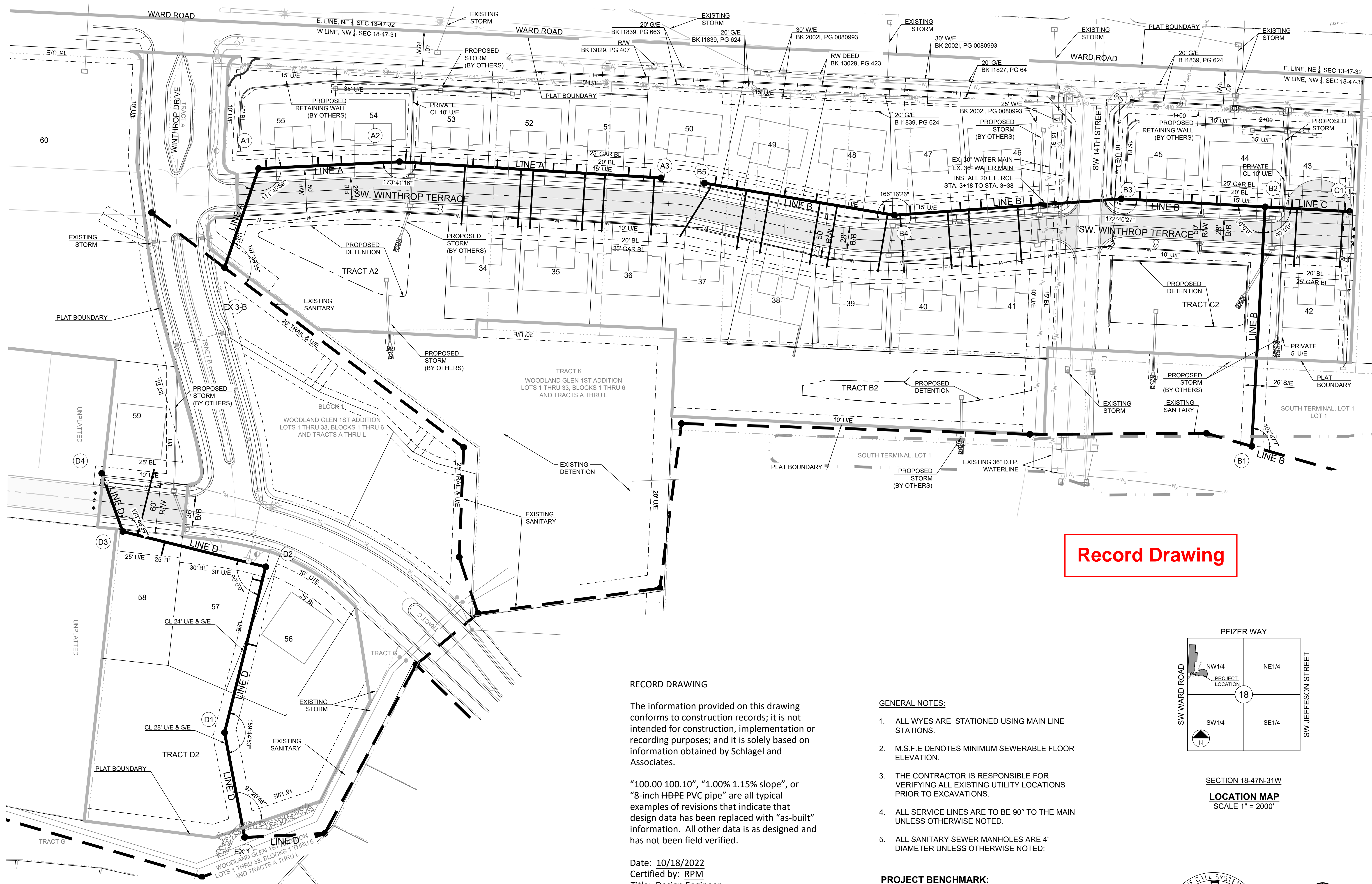
**PREPARED BY:**

**WOODLAND GLEN 2ND PLAT**  
**SANITARY SEWER MAIN EXTENSION**  
**WARD ROAD AND WINTHROP DRIVE**  
**LEE'S SUMMIT, MISSOURI**

**SAN EROS DET**

**6**

**WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI**



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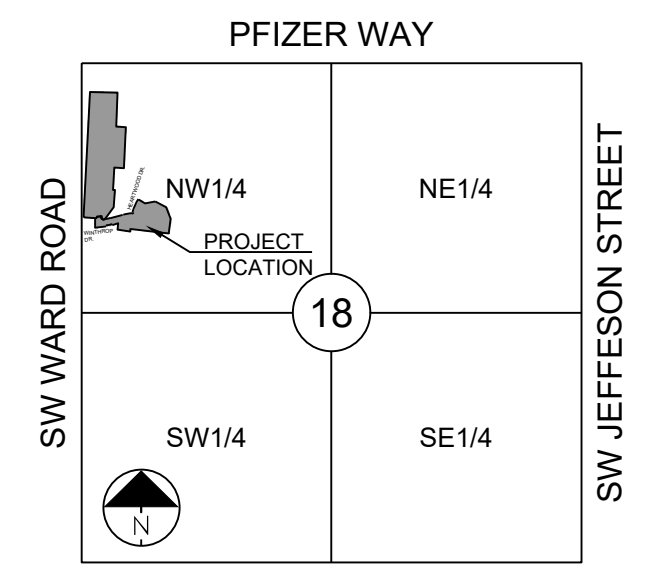
Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

**GENERAL NOTES:**

1. ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
2. M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
4. ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
5. ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

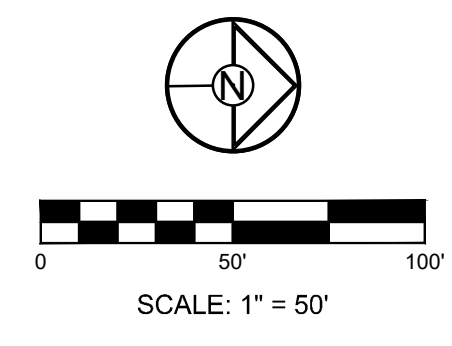
**PROJECT BENCHMARK:**

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



SECTION 18-47N-31W

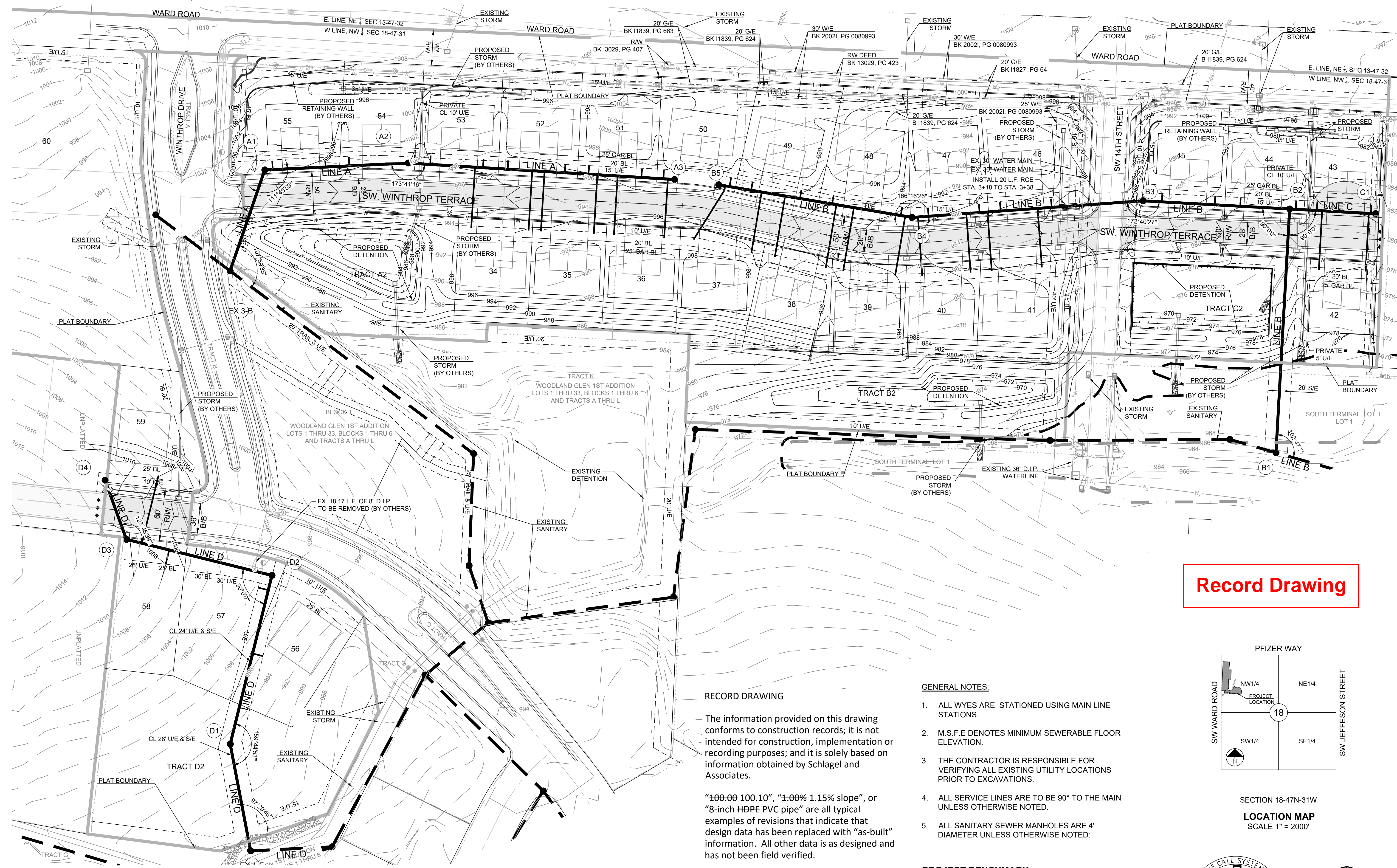
LOCATION MAP  
 SCALE 1" = 2000'



SHEET

**7**

**WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI**



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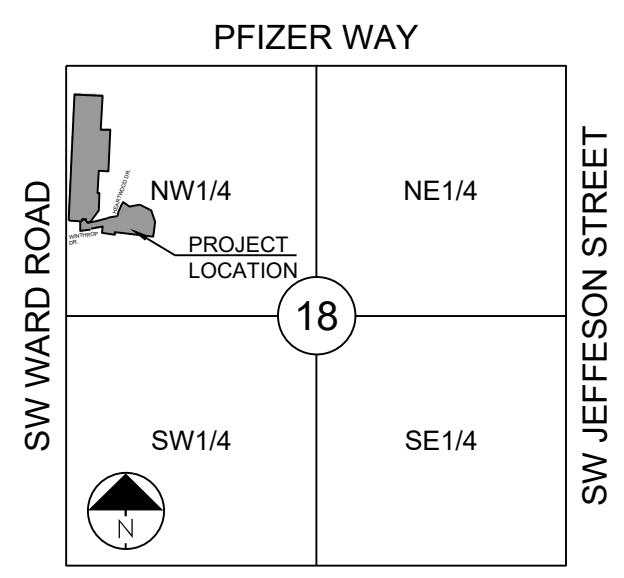
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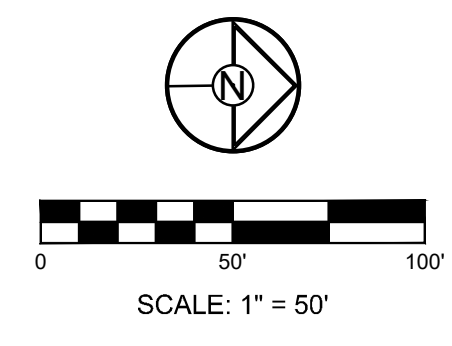
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 M.D.N.R. DOC. NO. 800-65374  
 ELEV. 1036.41



SECTION 18-47N-31W  
 LOCATION MAP  
 SCALE 1" = 2000'



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GRADING PLAN

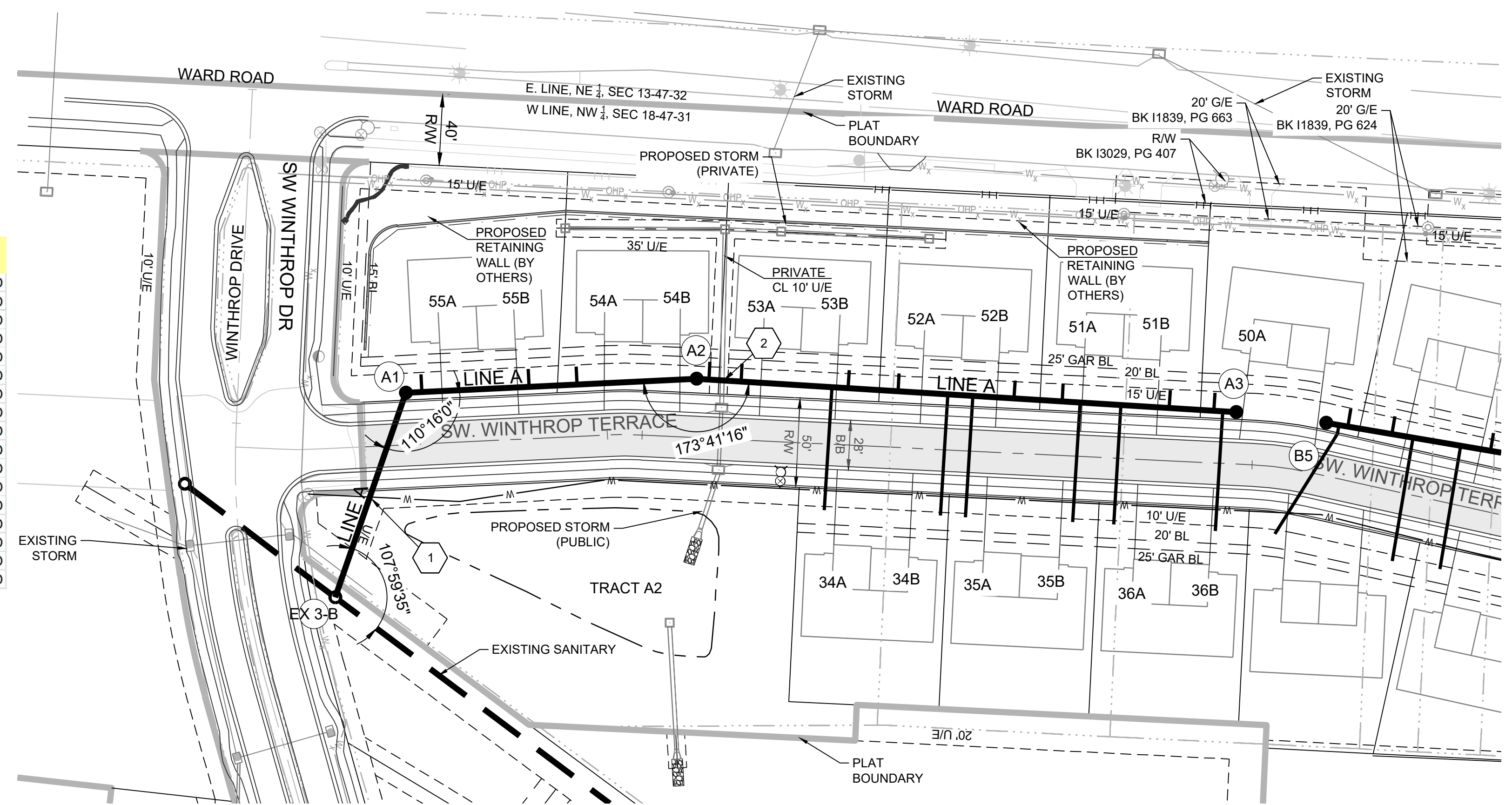
SHEET

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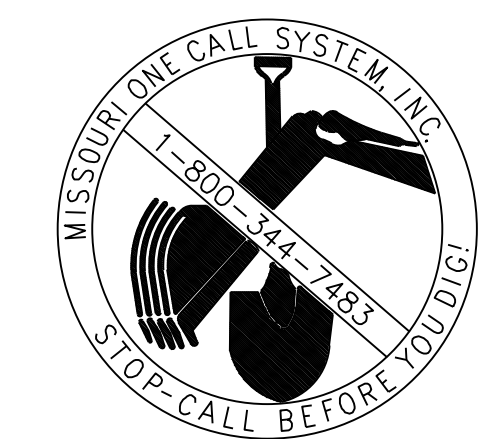
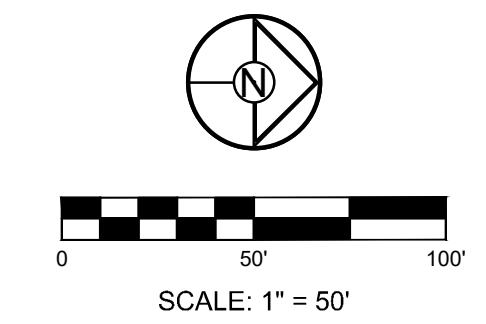
Lot No.	WYE STA	Stub Length (L.F.)	Stub Slope (%)	Riser Length (L.F.)	As-Built EOS Elev	MSFE Elev	Cleanout
34A	359.84	69	1.30	0.00	984.31	987.31	NO
34B	424.84	68	1.30	0.00	984.95	987.95	NO
35A	438.84	67	1.30	2.00	986.49	989.49	NO
35B	498.84	67	1.30	0.00	985.68	988.68	NO
36A	521.84	67	1.30	0.00	985.92	988.92	NO
36B	578.84	67	1.30	0.00	986.49	989.49	NO
50A	573.84	8	1.30	3.00	987.79	990.79	NO
51B	548.84	9	1.30	2.00	986.84	989.84	NO
51A	488.84	9	1.30	2.00	986.24	989.24	NO
52B	461.84	10	1.30	0.00	984.57	987.57	NO
52A	396.84	10	1.30	0.00	983.91	986.91	NO
53B	368.84	10	1.30	0.00	983.63	986.63	NO
53A	308.84	10	1.30	0.00	983.02	986.02	NO
54B	290.84	10	1.30	0.00	982.84	985.84	NO
54A	217.03	9	1.30	2.00	983.24	986.24	NO
55B	190.03	6	1.30	6.00	985.72	988.72	NO
55A	130.03	6	1.30	6.00	985.04	988.04	NO

ID	SAN ELEV.	STORM/WATER ELEV.	SAN SIZE	STORM/WATER SIZE	VERTICAL SEPARATION	RCE/CRCE REQUIRED?
1	978.97	991.38	8" PCV	8" PVC	11.68	NO
2	982.58	988.78	8" PCV	15" HDPE	5.49	NO



- GENERAL NOTES:**
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  - M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
  - ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
  - ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

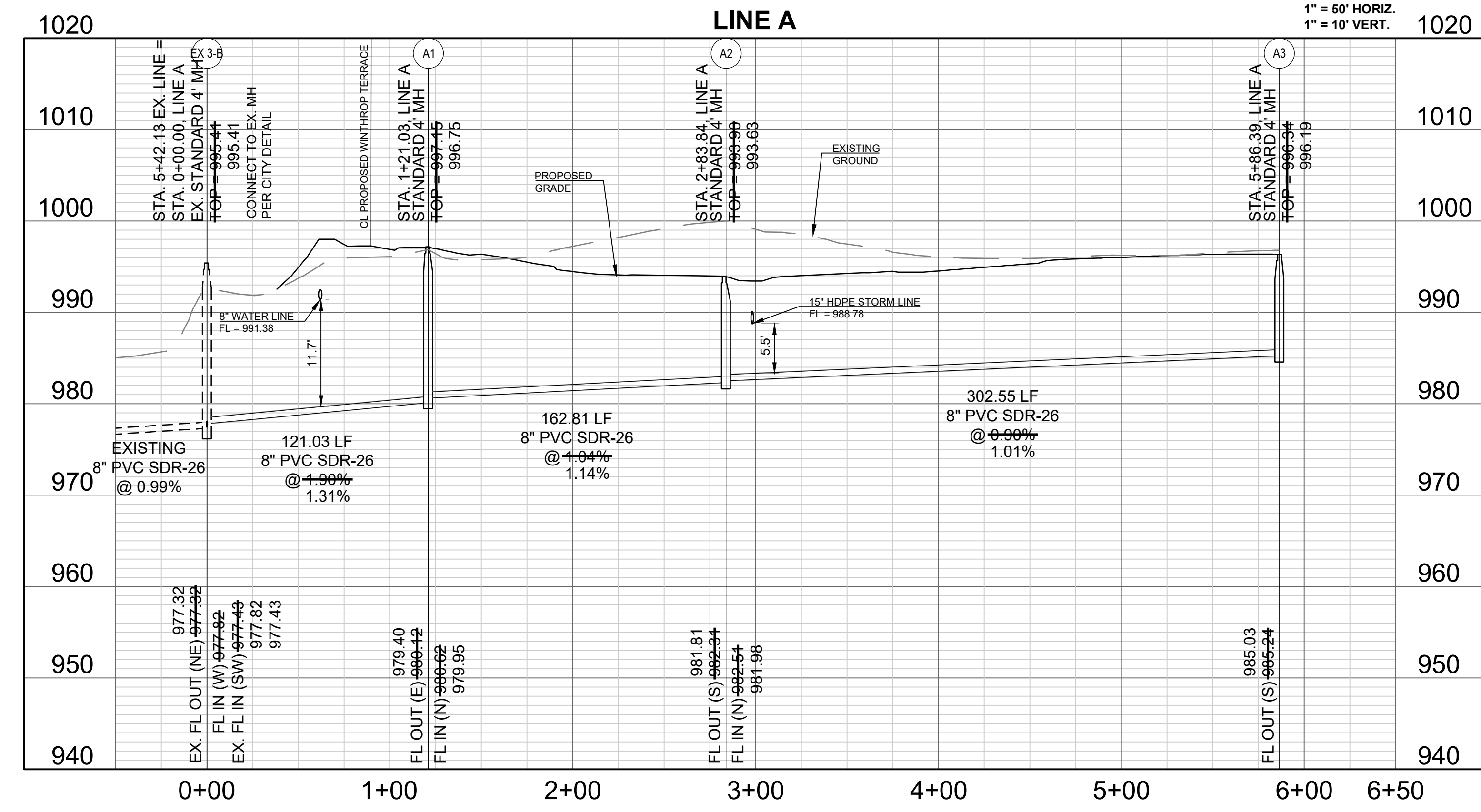
**PROJECT BENCHMARK:**  
 SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



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**WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI**

Structure Name	Structure Northing	Structure Easting
A1	992504.4316	2818397.8530
A2	992667.0525	2818389.9810
A3	992969.0240	2818408.6667
EX 3-B	992465.0382	2818512.2921



**Record Drawing**

**RECORD DRAWING**  
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"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

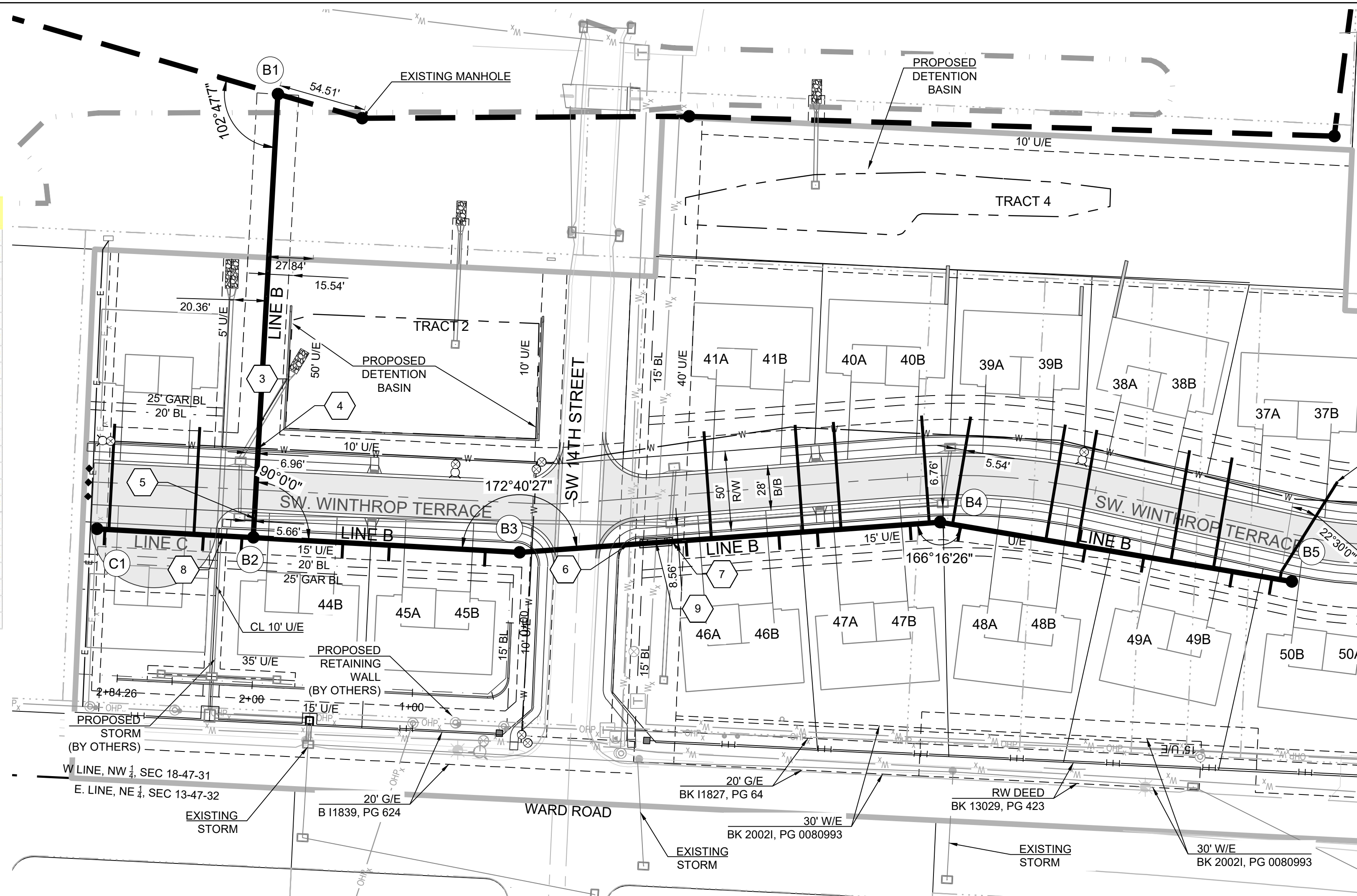
REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	SCHLAGEL QUANTITIES
01/12/2021	SCH. REGRADE
05/10/2021	ESC SHEETS
06/03/2021	EX. MH 1-7 TIE IN
10/07/2021	MH 1-1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

LINE A PLAN AND PROFILE

SHEET  
**9**

Lot No.	WYE STA	Stub Length (L.F.)	Stub Slope (%)	Riser Length (L.F.)	As-Built EOS Elev	MSFE Elev	Cleanout
37B	920.89	71	1.30	0.00	986.79	989.79	NO
37A	878.89	70	1.30	0.00	984.64	987.64	NO
38B	851.89	70	1.30	0.00	983.26	986.26	NO
38A	792.89	70	1.30	4.00	983.08	986.08	NO
39B	772.89	71	1.30	3.00	981.36	984.36	NO
39A	713.89	64	1.30	5.00	979.68	982.68	NO
40B	699.18	63	1.30	5.00	978.91	981.91	NO
40A	644.18	64	1.30	4.00	977.65	980.65	NO
41B	620.18	64	1.30	4.00	977.41	980.41	NO
41A	563.18	64	1.30	4.00	976.83	979.83	NO
44B	332.84	10	1.30	0.00	969.46	972.46	NO
45A	361.84	9	1.30	2.00	971.51	974.51	NO
45B	421.84	10	1.30	0.00	971.46	974.46	NO
46A	547.18	6	1.30	6.00	977.32	980.32	NO
46B	605.18	7	1.30	4.00	976.52	979.52	NO
47A	629.18	4	1.30	8.00	979.55	982.55	NO
47B	687.18	5	1.30	7.00	979.44	982.44	NO
48A	718.89	4	1.30	8.00	981.28	984.28	NO
48B	797.89	6	1.30	6.00	983.91	986.91	NO
49A	834.89	6	1.30	6.00	985.80	988.80	NO
49B	890.89	7	1.30	4.00	987.26	990.26	NO
50B	915.89	8	1.30	3.00	987.84	990.84	NO
50A	573.84	8	1.30	3.00	987.79	990.79	NO
51B	548.84	9	1.30	2.00	986.84	989.84	NO

ID	SAN ELEV.	ELEV.	SAN SIZE	SIZE	SEPARATION	RCE/CRCE REQUIRED?
3	964.33	970.18	8" PVC	30" HDPE	5.14	NO
4	964.67	974.85	8" PVC	8" PVC	9.46	NO
5	965.88	971.53	8" PVC	24" HDPE	4.94	NO
6	973.04	978.16	8" PVC	36" DIP	4.03	NO
7	973.70	978.65	8" PVC	15" HDPE	4.38	NO
9	972.15	974.1	8" PVC	30" DIP	1.10	RCE



**PROJECT BENCHMARK:**  
 SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41

**GENERAL NOTES:**

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- ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
- ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED:

INSTALL 5 L.F. OF 6" PVC THEN 6" 22.5° BEND THEN 65 L.F. OF 6" PVC

"C" = 6" for pipe 18" & less  
 8" for pipe 21" thru 36"

Reinforcing by Engineer as follows:  
 RCE & Cradle:  
 #4 Bars @ 6" Ctrs. Longitudinally,  
 #4 Bars @ 24" Ctrs. Transverse.

Reinforced Concrete Encasement (RCE)

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**Record Drawing**

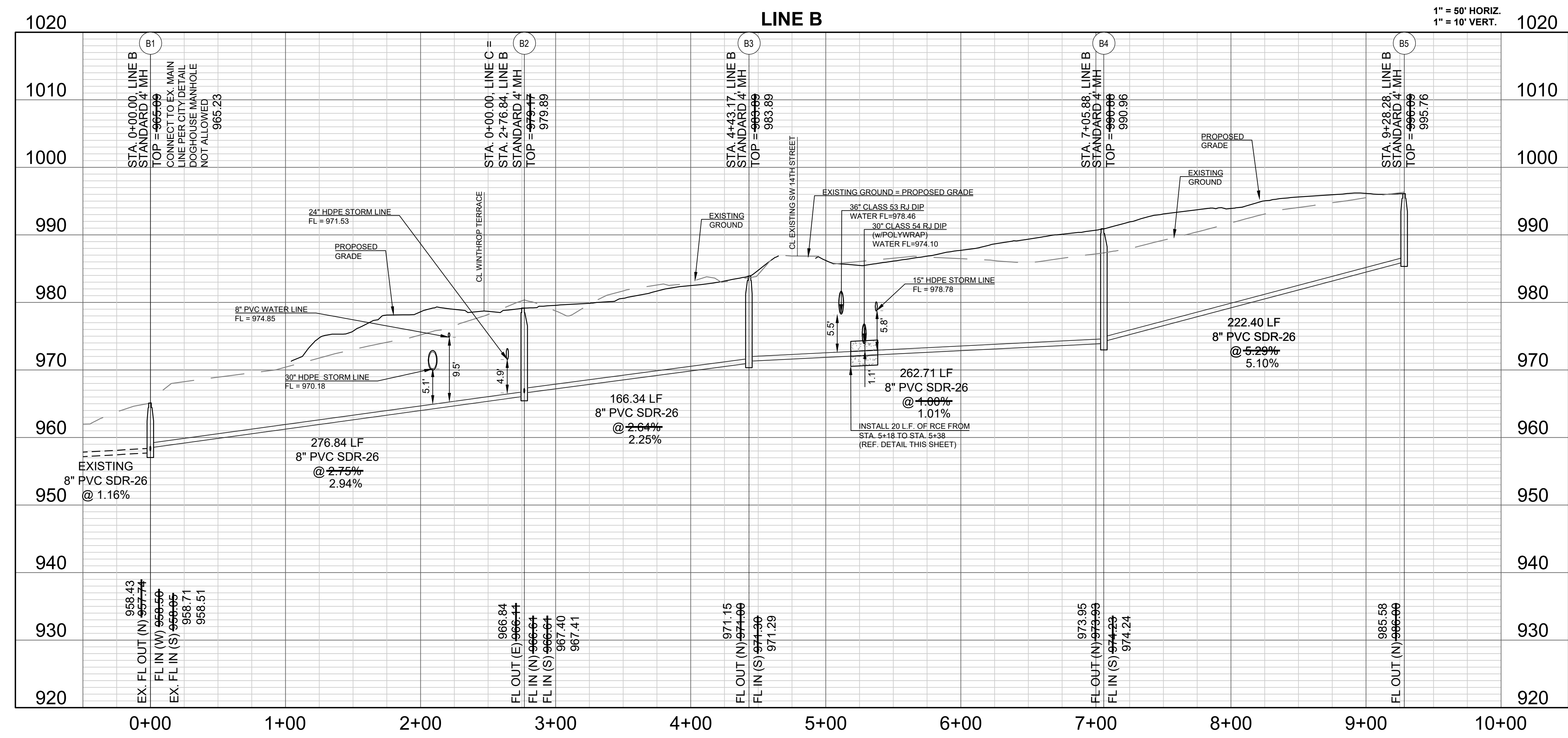
Structure Name	Structure Northing	Structure Easting
B1	993651.2313	2818718.4949
B2	993666.6637	2818442.0890
B3	993500.5868	2818432.8165
B4	993238.5614	2818451.7377
B5	993019.2687	2818414.6635

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 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.



WOODLAND GLEN 2ND PLAT  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	SCHLAGEL QUANTITIES
01/12/2021	SCH. REGRADE
05/10/2021	ESC SHEETS
06/03/2021	EX. MH 1-7 TIE IN
10/07/2021	MH C1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

LINE B PLAN AND PROFILE

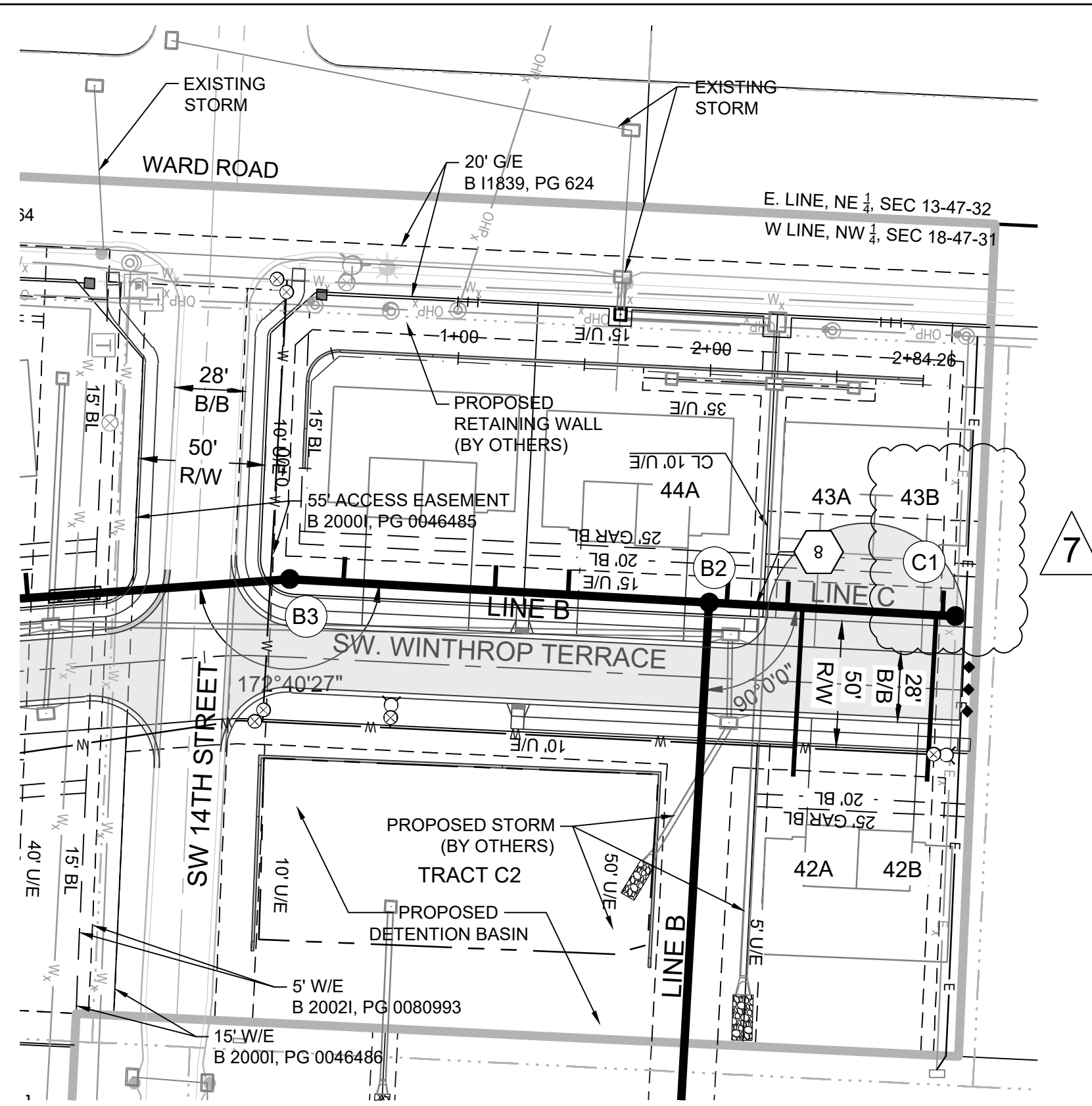
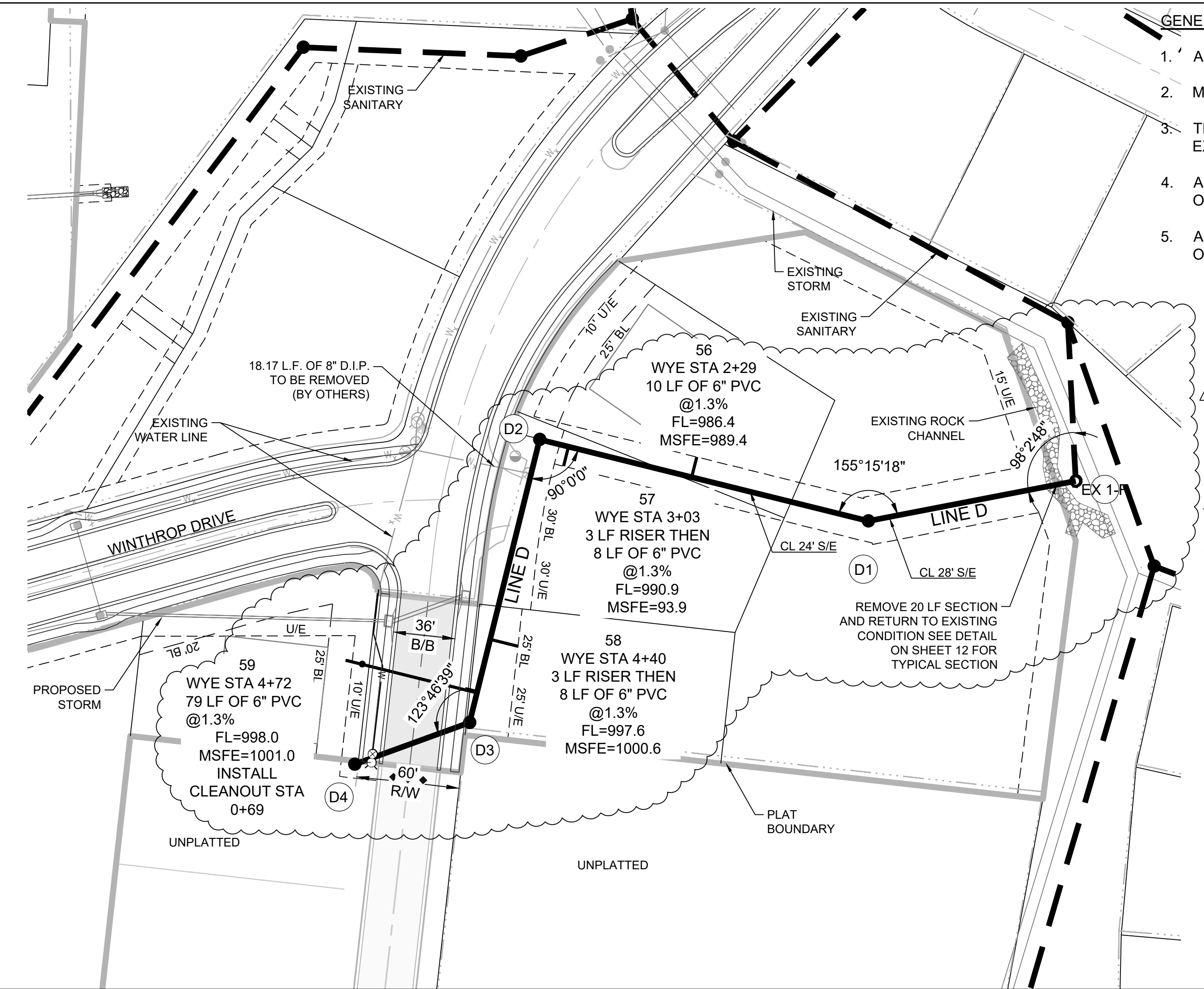
SHEET  
**10**

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REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	CITY COMMENTS
01/12/2021	SCHLAGEL QUANTITIES
05/10/2021	SCH. REGRADE
06/03/2021	ESC SHEETS
07/07/2021	EX. MH 1-7 TIE IN
10/08/2021	MH/C1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS

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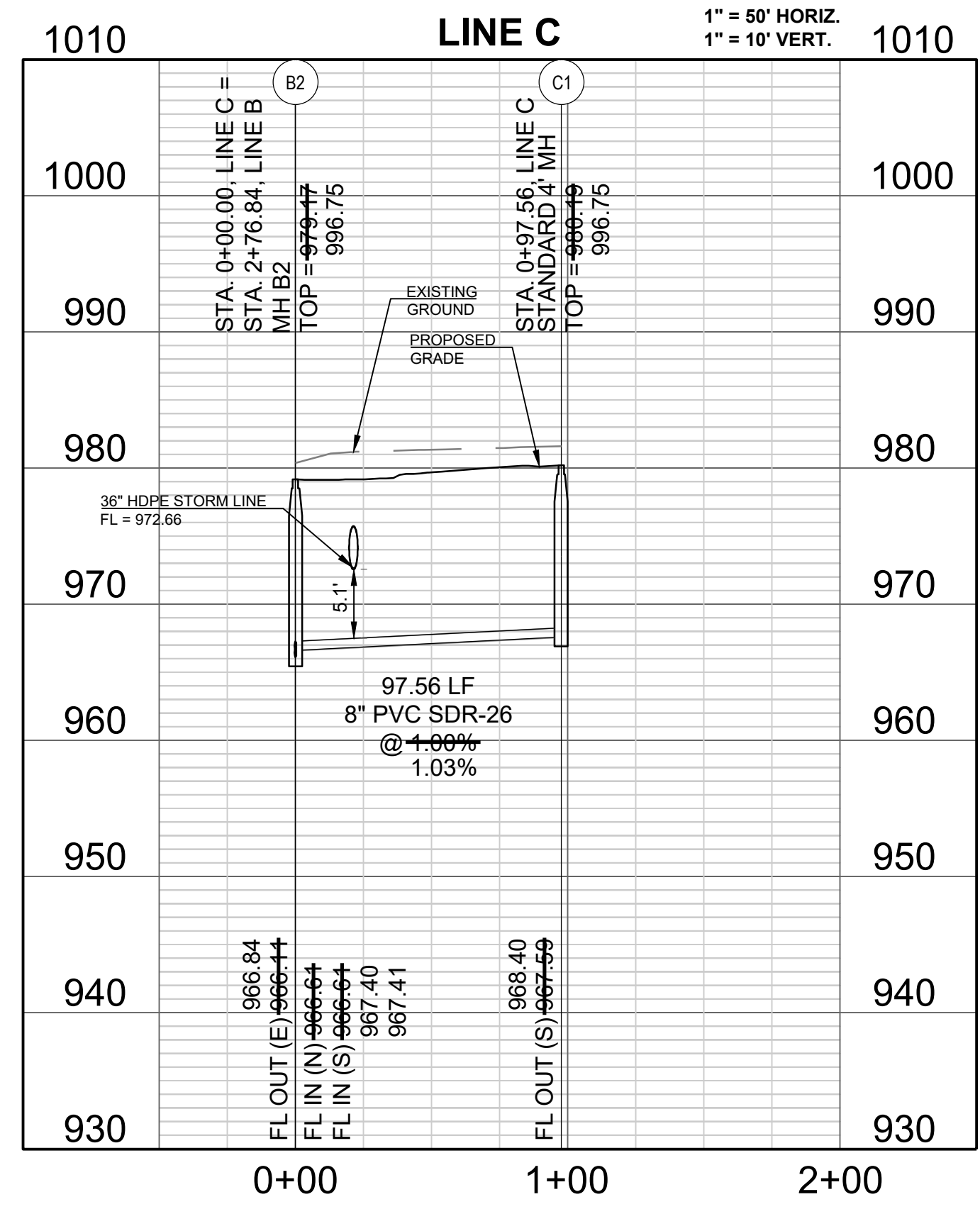
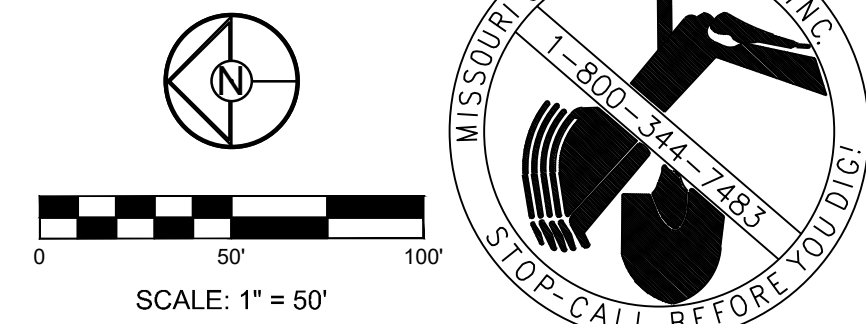
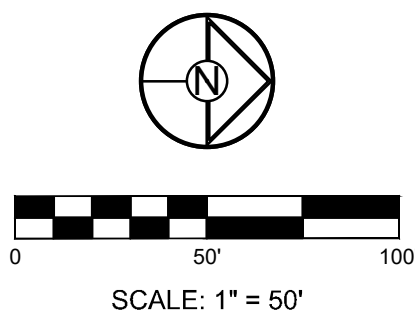
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 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



Lot No.	WYE STA	Stub Length (L.F.)	Stub Slope (%)	Riser Length (L.F.)	As-Built EOS Elev	MSFE Elev	Cleanout
42A	37.00	67	1.30	0.00	969.32	972.32	NO
42B	90.00	66	1.30	0.00	969.85	972.85	NO
43B	92.50	8	1.30	3.00	971.24	974.24	NO
43A	31.00	8	1.30	3.00	970.61	973.61	NO
44A	7.00	8	1.30	3.00	970.36	973.36	NO

**SANITARY CROSSING TABLE**

ID	SAN ELEV.	STORM/WATER ELEV.	STORM/WATER SAN SIZE	STORM/WATER SIZE	VERTICAL SEPARATION	RCE/CRCE REQUIRED?
8	966.71	971.97	8" PCV	36" HDPE	4.54	NO



**Structure Table**

Structure Name	Structure Northing	Structure Easting
B2	993666.6637	2818442.0890
C1	993764.0684	2818447.5273

**RECORD DRAWING**

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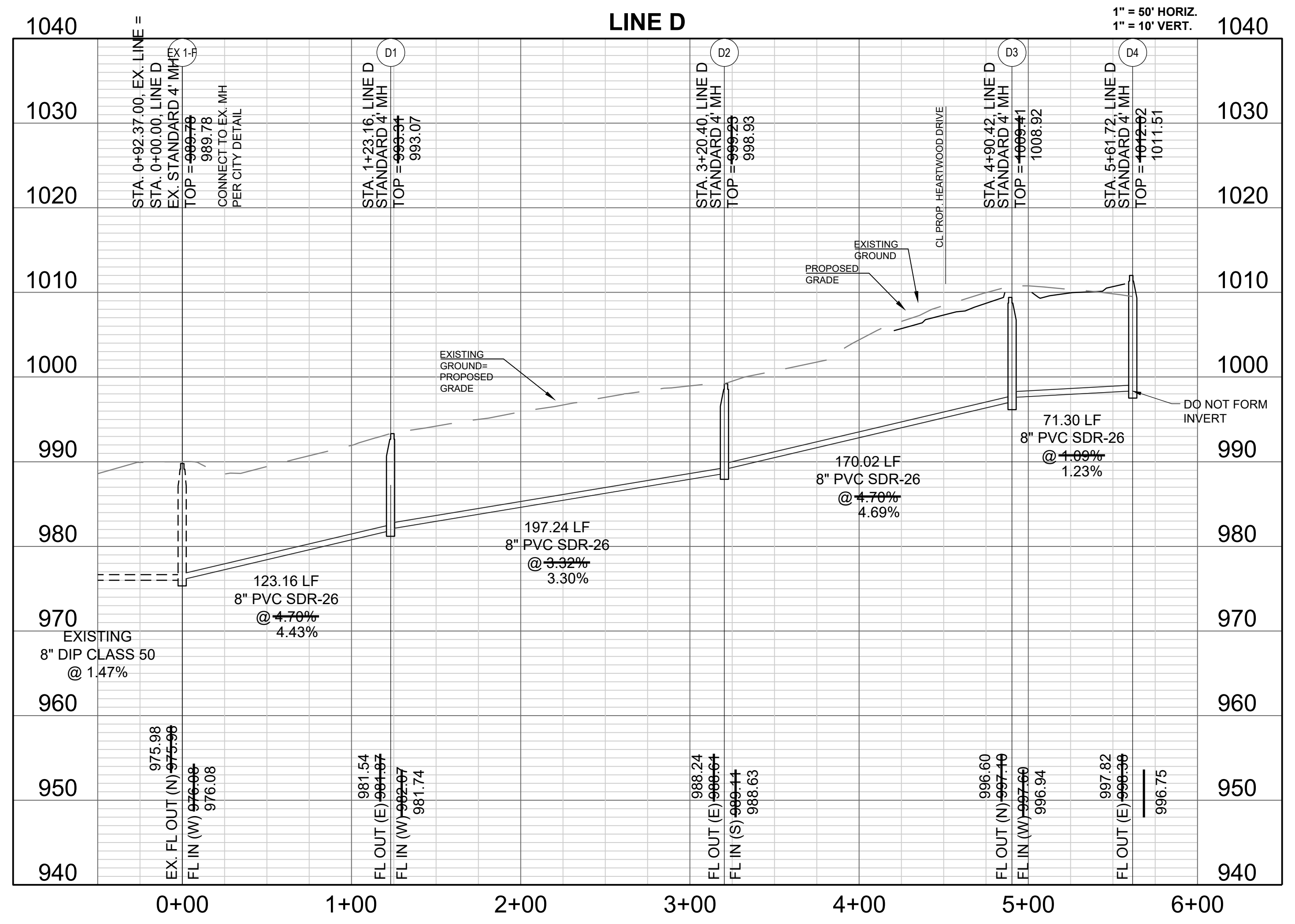
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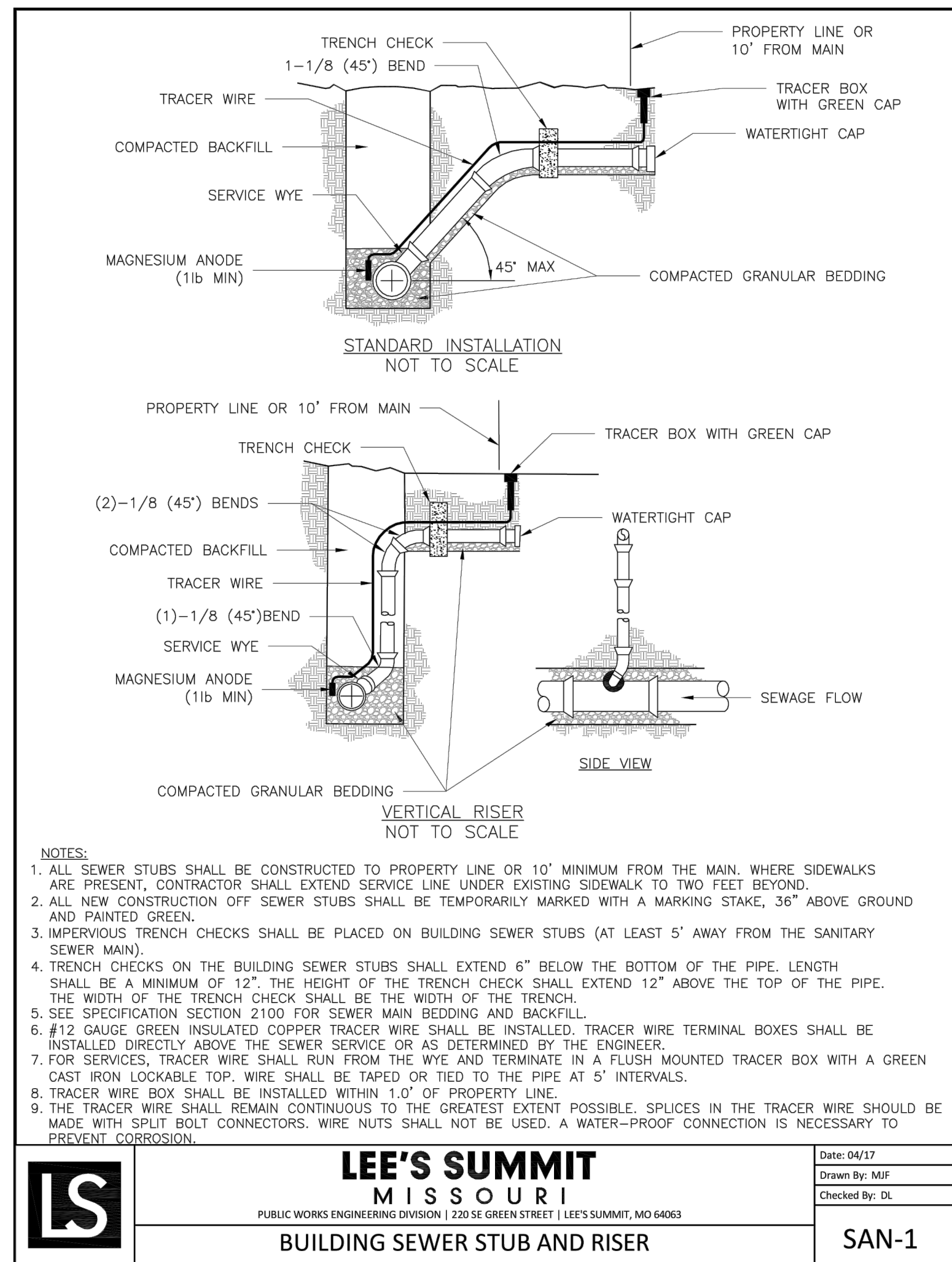
Date: 10/18/2022  
 Certified by: RPM  
 Title: Design Engineer  
 Firm: Schlager and Associates, P.A.

**Structure Table**

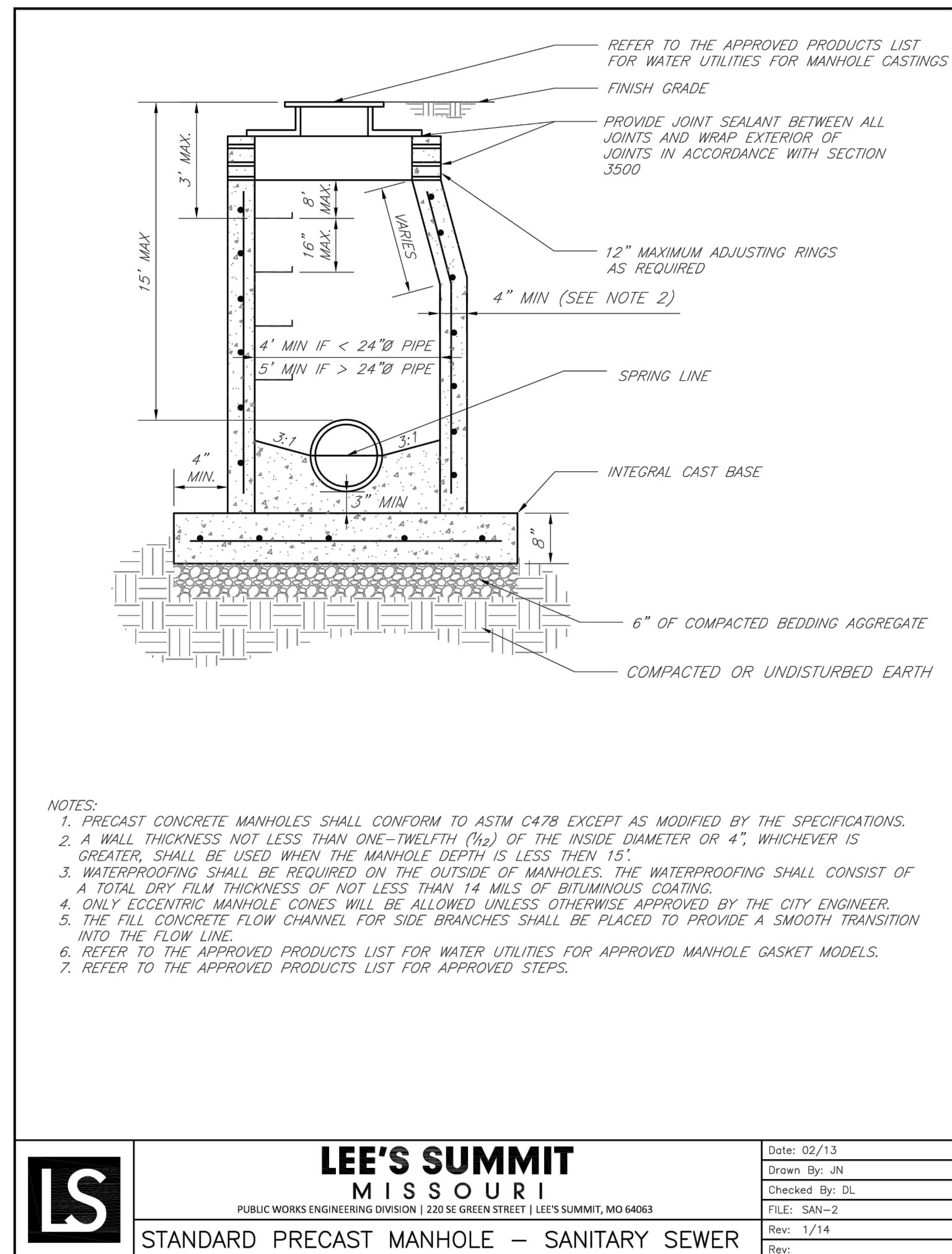
Structure Name	Structure Northing	Structure Easting
D1	992465.1668	2819049.0765
D2	992512.5490	2818857.6124
D3	992347.5106	2818816.7699
D4	992323.2667	2818749.7146
EX 1-F	992488.3400	2819170.0360

**Record Drawing**

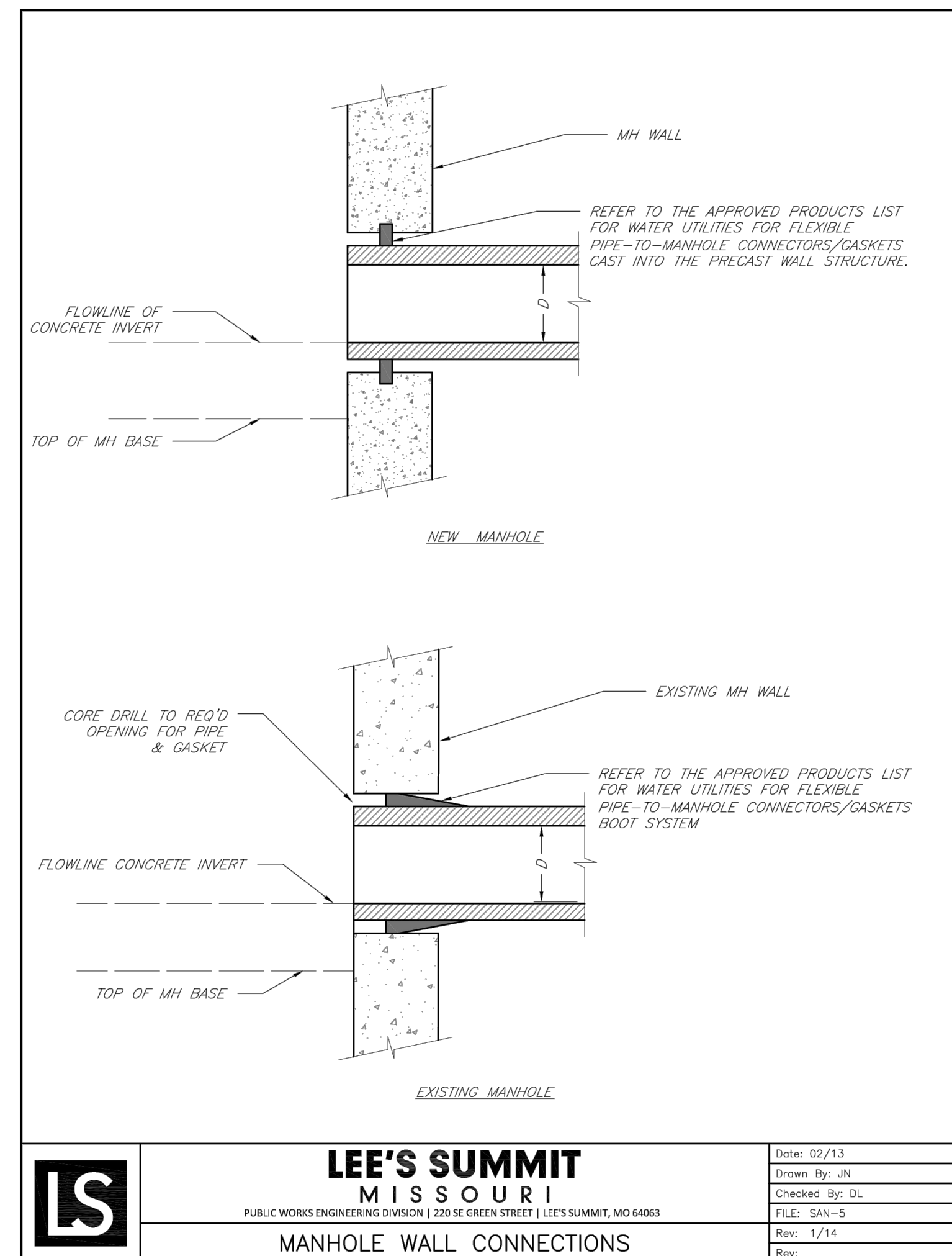




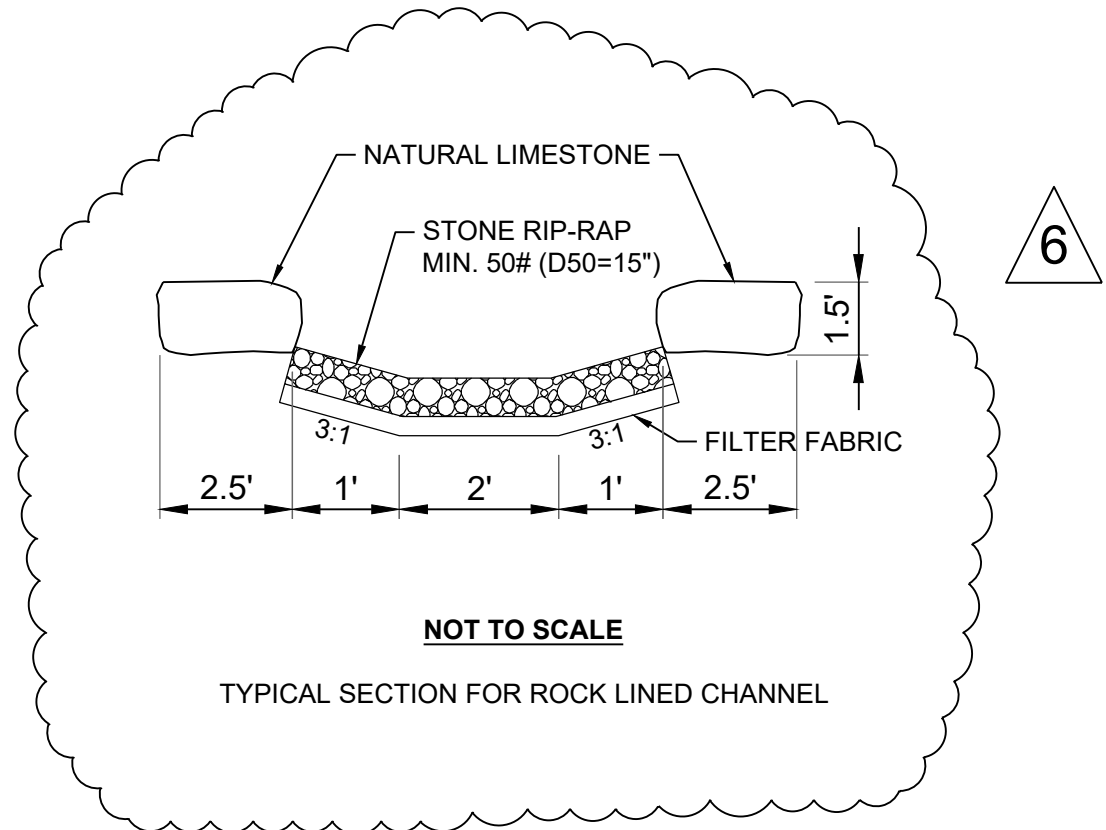
<b>LS</b>	<b>LEE'S SUMMIT</b> MISSOURI PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	Date: 08/22 Drawn By: MJF Checked By: DL
	<b>BUILDING SEWER STUB AND RISER</b>	SAN-1



<b>LS</b>	<b>LEE'S SUMMIT</b> MISSOURI PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	Date: 02/13 Drawn By: JN Checked By: DL FILE: SAN-2 Rev: 1/14
	<b>STANDARD PRECAST MANHOLE - SANITARY SEWER</b>	Rev:



<b>LS</b>	<b>LEE'S SUMMIT</b> MISSOURI PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	Date: 02/13 Drawn By: JN Checked By: DL FILE: SAN-5 Rev: 1/14
	<b>MANHOLE WALL CONNECTIONS</b>	Rev:



**Record Drawing**

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<b>WOODLAND GLEN 2ND PLAT</b> <b>SANITARY SEWER MAIN EXTENSION</b> <b>WARD ROAD AND WINTHROP DRIVE</b> <b>LEE'S SUMMIT, MISSOURI</b>	
REVISION DATE	DESCRIPTION
4-21-2020	CITY COMMENTS
5-20-2020	CITY COMMENTS
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12/08/2021	MH C1 UPDATE
01/20/2022	WATER LINE CONFLICT
10/18/2022	AS-BUILTS
DRAWN BY: BAL	
CHECKED BY: MAB	
DATE PREPARED: 2-20-2020	
PROJ. NUMBER: 18-017	
<b>SANITARY DETAILS</b>	
SHEET	
<b>12</b>	