

COLLEGE AND 11TH WATER MAIN REPLACEMENT

WATER MAIN IMPROVEMENTS

PROJECT LOCATION: BOUNDED TO THE NORTH BY WEST COLLEGE STREET, TO THE EAST BY LANGFORD HALL, TO THE SOUTH BY WEST HARRISON STREET, AND WEST BY 11TH AVENUE IN THE CITY OF BOZEMAN, MONTANA.

LEGAL DESCRIPTION: LOCATED IN THE NE 1/4 OF SECTION 13, TOWNSHIP 02S, RANGE 05E, P.M.M., GALLATIN COUNTY, MT

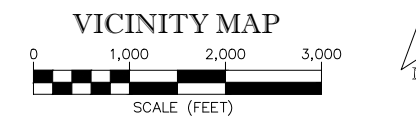
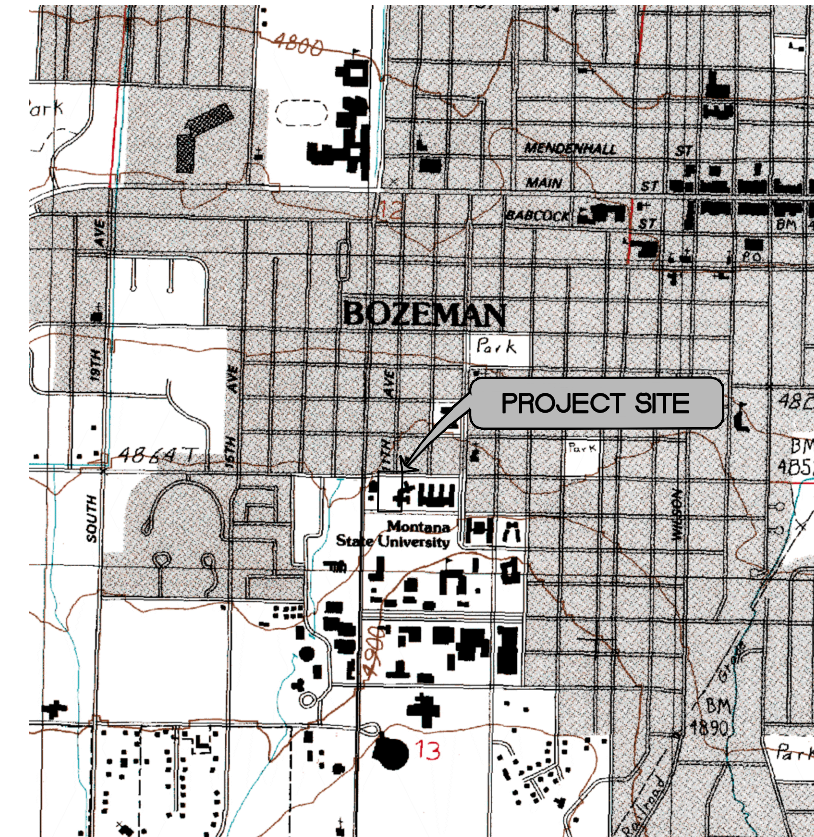
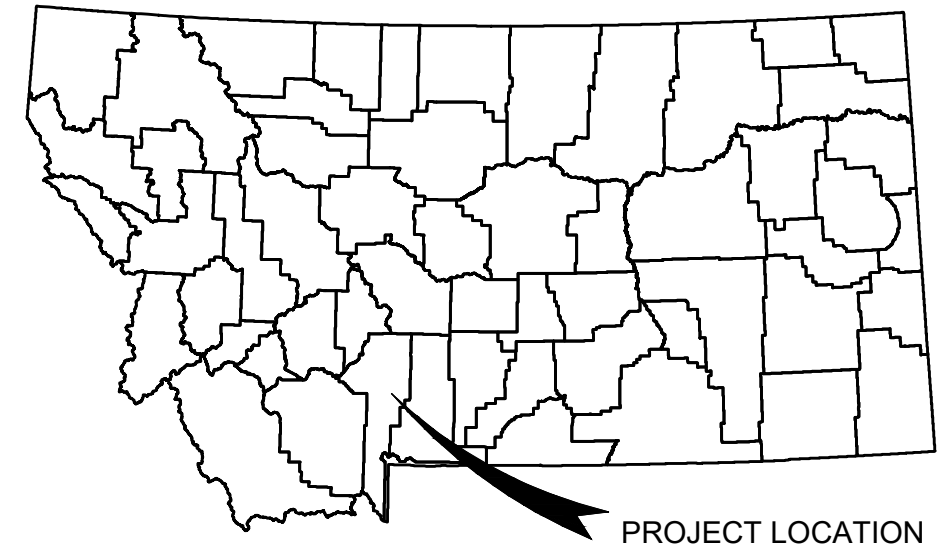
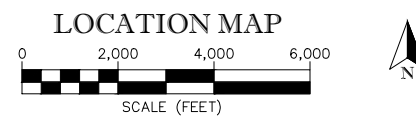
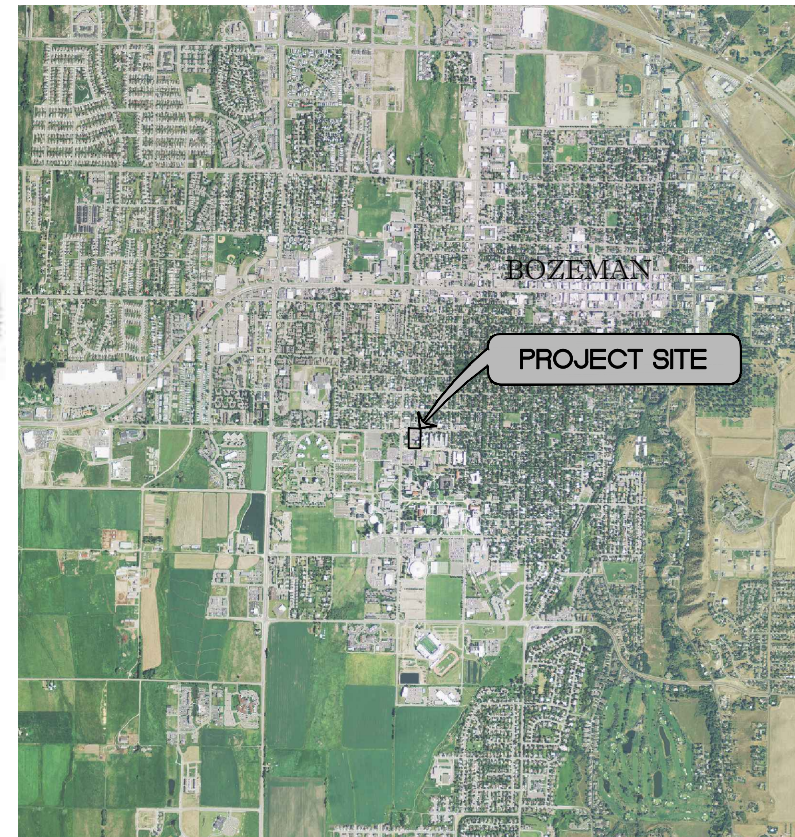
FEBRUARY 19, 2025

OWNER: MONTANA STATE UNIVERSITY - BOZEMAN
UNIVERSITY FACILITIES MANAGEMENT
PO BOX 172760
BOZEMAN, MT 59717-2760
PHONE: 406-997-2001

CIVIL ENGINEER: ALLIED ENGINEERING SERVICES, INC.
32 DISCOVERY DRIVE
BOZEMAN, MT 59718

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PROJECT ENGINEER: RORY S. ROMNEY, PE

DESIGN ENGINEER: ERIC FOSS, PE
COLE OSHIRO-LEAVITT, EI

PROJECT SURVEYOR: GREG FINK, PLS



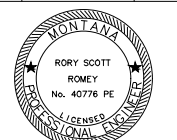
MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
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CONSTRUCTION PLANS
**COLLEGE AND 11TH
WATER MAIN
REPLACEMENT**



DRAWN BY: EJF, COL
REVIEWED BY: RSR

REV.	DESCRIPTION	DATE



PPA#22-0543
A/E#00-00-00
AESI # 22-121

SHEET TITLE
C0.1

SHEET
COVER

DATE
02-19-25

SPECIFICATIONS:

1. PROJECT SCHEDULE: TO BE COMPLETED DURING THE SPRING/SUMMER OF 2025.
2. CONSTRUCTION INSPECTION AND TESTING: CONSTRUCTION INSPECTION AND TESTING WILL BE PERFORMED BY ALLIED ENGINEERING. THE ENGINEER SHALL BE NOTIFIED AT LEAST TWO DAYS PRIOR TO CONSTRUCTION IN ORDER TO PROVIDE INSPECTION OF THESE ELEMENTS. THE CONTRACTOR SHALL MAINTAIN AS-BUILT RECORDS FOR FUTURE USE IN DEVELOPING RECORD DRAWINGS.
3. COORDINATION: THE CONTRACTOR SHALL COORDINATE WITH MONTANA STATE UNIVERSITY AND ALLIED ENGINEERING. AESI WILL BE REQUIRED TO INSPECT AND TEST CERTAIN ELEMENTS OF THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT ALL ENGINEER REQUIRED INSPECTIONS ARE ACCOMMODATED. SEE THE GENERAL NOTES FOR ADDITIONAL ITEMS PERTAINING TO COORDINATION, INSPECTION, AND AS-BUILTS.
4. PROJECT SUPERINTENDENT OR FOREMAN: THE CONTRACTOR SHALL HAVE EITHER A PROJECT SUPERINTENDENT OR FOREMAN THAT IS ON-SITE THE MAJORITY OF THE TIME. THIS INDIVIDUAL IS RESPONSIBLE FOR REVIEWING/UNDERSTANDING THE PLANS AND FOR DIRECTING THE WORK. FIELD CHANGES THAT ARE DIRECTED BY THE ENGINEER WILL BE CONVEYED TO THIS INDIVIDUAL FOR IMPLEMENTATION.
5. OPEN TRENCHES/HOLES: NO TRENCHES OR HOLES SHALL BE LEFT IN AN OPEN CONDITION OVERNIGHT. ALL SUCH TRENCHES AND HOLES SHALL BE BACKFILLED, COMPACTED, AND CLOSED BEFORE THE END OF EACH WORK DAY.
6. TRAFFIC CONTROL: THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL NECESSARY TRAFFIC CONTROL DURING THE COURSE OF THE PROJECT. ALL ANTICIPATED TRAFFIC CONTROL MEASURES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE PROJECT TEAM AND MUST BE APPROVED BY MSU AND THE PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITY. COORDINATE AS NOTED ABOVE FOR SITE ACCESS.
7. SHOP DRAWINGS: SHOP DRAWINGS WILL BE REQUIRED FOR ALL WET UTILITY, GRAVEL, CONCRETE, AND ASPHALT MATERIALS. THEY SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. DRY UTILITY WORK WILL BE COMPLETED BY THE SERVICE PROVIDERS AND WILL NOT REQUIRE SHOP DRAWING SUBMITTALS.
8. CLEAN-UP: THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN A CLEAN JOB SITE.
9. FITTINGS: CONTRACTOR TO VERIFY SIZES AND TYPES OF EXISTING FITTINGS AND PIPES, AND MAKE APPROPRIATE TRANSITIONS AND CONNECTIONS. INSTALL ALL FITTINGS PER MANUFACTURER RECOMMENDATIONS.
10. RESTRAINTS: ALL BURIED VALVES AND FITTINGS SHALL BE RESTRAINED WITH THRUST BLOCKS OR MECHANICAL JOINT RESTRAINTS IN ACCORDANCE WITH THE PLAN DETAILS.
11. WATER MAIN MATERIAL: ZINC COATED PIPE WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT IS THE PREFERRED MATERIAL. COORDINATE WITH MSU AND THE ENGINEER FOR AVAILABILITY AND TIMING. IF NECESSARY DUE TO TIMING AND PRODUCT AVAILABILITY, STANDARD DUCTILE IRON PIPE WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT MAY BE USED. ALL DUCTILE PIPE AND FITTINGS ARE TO BE WRAPPED WITH V-BIO ENHANCED POLYETHYLENE.
12. IRRIGATION: THERE ARE MULTIPLE IRRIGATION LINES AND CONDUITS IN THE VICINITY OF THE PROJECT SITE. IRRIGATION CONTROL VALVE BOXES ARE

SHOWN ON THE PLANS; HOWEVER, ASSOCIATED IRRIGATION LINES AND CONDUITS ARE NOT SHOWN. CONTRACTOR TO MARK IRRIGATION LINES AND COORDINATE WITH MSU ON REPLACEMENT/ROUTING OF IRRIGATION LINES AND CONDUITS WHICH MAY BE DAMAGED DURING CONSTRUCTION. ANY IRRIGATION DAMAGE WILL BE BILLED TO THE CONTRACTOR WITH WORK BEING PERFORMED BY MSU.

13. UTILITY CONFLICTS AND IMPROVEMENTS: THERE ARE MULTIPLE UTILITIES (WET AND DRY) IN THE VICINITY OF THE PROJECT SITE. IN ADDITION TO THE STANDARD ONE-CALL UTILITY LOCATE SERVICE, CONTRACTOR SHALL COORDINATE WITH MSU FACILITIES MANAGEMENT FOR ADDITIONAL UTILITY LOCATES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED OR DISTURBED UTILITY LINES. COORDINATE WITH MSU FACILITY SERVICES FOR OPERATION OF SYSTEM VALVES AND UTILITY CONNECTIONS.
14. CONSTRUCTION STAKING: THE CONTRACTOR SHALL COORDINATE STAKING NEEDS WITH ALLIED ENGINEERING. CONTROL POINTS WILL BE PROVIDED FOR USE NEAR THE PROJECT SITE. STAKING FOR WATER IMPROVEMENTS SHALL BE PROVIDED BY THE OWNER. WE ANTICIPATE UP TO 2 TRIPS FOR STAKING ITEMS REQUESTED BY THE CONTRACTOR. ADDITIONAL STAKING TRIPS WILL BE AT THE COST OF THE CONTRACTOR.
15. HYDRANT BURY DEPTH: CONTRACTOR TO VERIFY ELEVATION OF HYDRANT LEAD AND TO DETERMINE APPROPRIATE HYDRANT ASSEMBLY HEIGHT TO MATCH FG AT THE PROPOSED LOCATION. BURY LINE OF NEW HYDRANTS TO MATCH FG OR EXTEND A MAXIMUM OF 5" ABOVE FG.
16. HYDRANT LEAD INSULATION: CONTRACTOR TO INSULATE HYDRANT LEAD IN ALL LOCATIONS WHERE 6.5' OF COVER IS NOT MET. INSULATION TYPE TO SATISFY COB MODS TO MPWSS IN SECTION 02660, 2.15.A. INSULATION TO BE INSTALLED PER DETAIL 3/C3.1.



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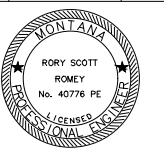
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CONSTRUCTION PLANS COLLEGE AND 11TH WATER MAIN REPLACEMENT



DRAWN BY: EJF, COL
REVIEWED BY: RSR

REV.	DESCRIPTION	DATE



PPA#22-0543

A/E#00-00-00

AESI # 22-121

SHEET TITLE

C0.3

SHEET

SPECIFICATIONS

DATE

02-19-25

BASIS OF BEARING, COORDINATES
 BEARINGS SHOWN ARE MONTANA STATE PLANE GRID.
 DISTANCES ARE GROUND DISTANCES IN INTERNATIONAL FEET.

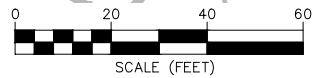
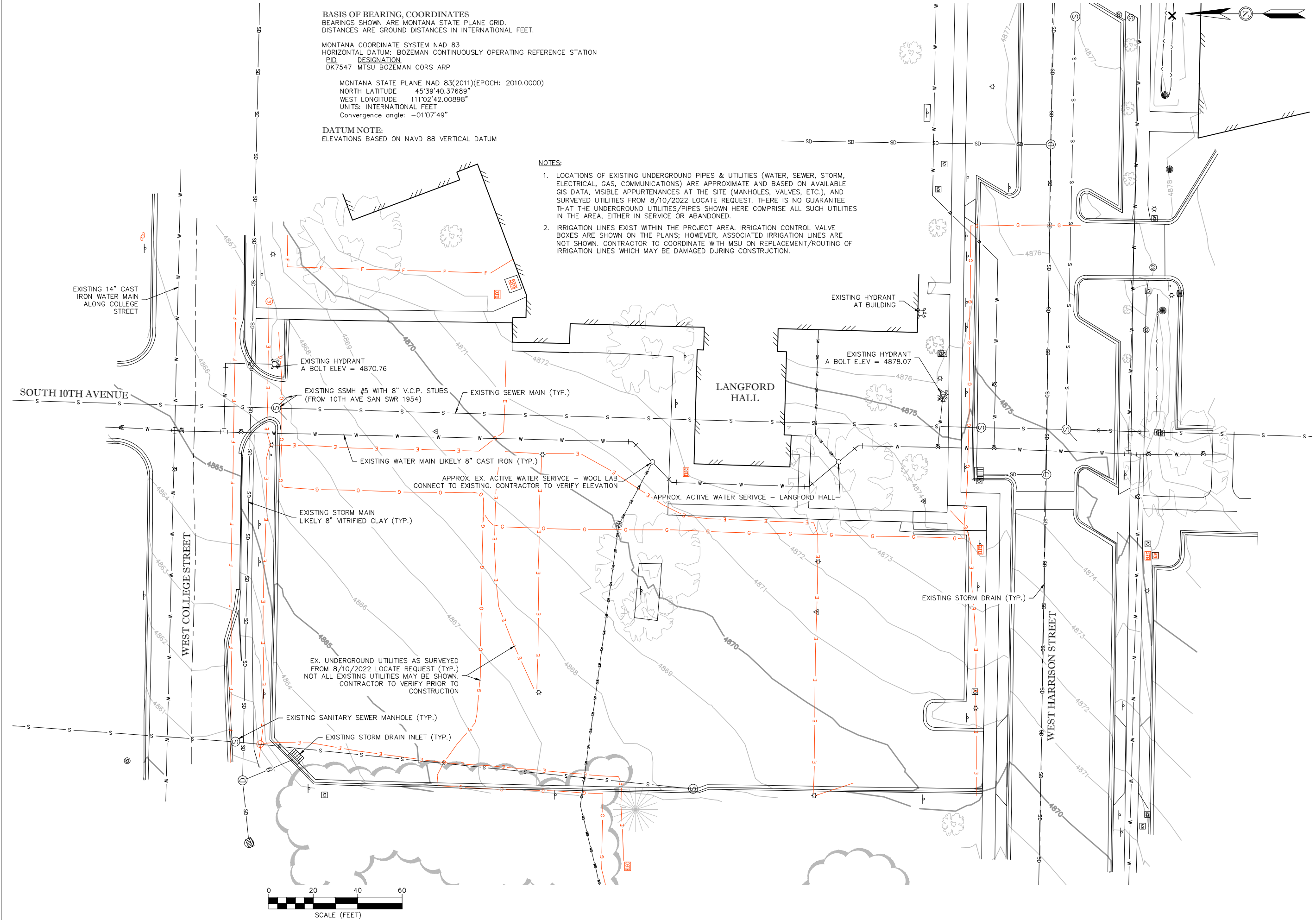
MONTANA COORDINATE SYSTEM NAD 83
 HORIZONTAL DATUM: BOZEMAN CONTINUOUSLY OPERATING REFERENCE STATION
 PID DESIGNATION
 DK7547 MTSU BOZEMAN CORS ARP

MONTANA STATE PLANE NAD 83(2011)(EPOCH: 2010.0000)
 NORTH LATITUDE 45°39'40.37689"
 WEST LONGITUDE 111°02'42.00898"
 UNITS: INTERNATIONAL FEET
 Convergence angle: -01°07'49"

DATUM NOTE:
 ELEVATIONS BASED ON NAVD 88 VERTICAL DATUM

NOTES:

1. LOCATIONS OF EXISTING UNDERGROUND PIPES & UTILITIES (WATER, SEWER, STORM, ELECTRICAL, GAS, COMMUNICATIONS) ARE APPROXIMATE AND BASED ON AVAILABLE GIS DATA, VISIBLE APPURTENANCES AT THE SITE (MANHOLES, VALVES, ETC.), AND SURVEYED UTILITIES FROM 8/10/2022 LOCATE REQUEST. THERE IS NO GUARANTEE THAT THE UNDERGROUND UTILITIES/PIPES SHOWN HERE COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
2. IRRIGATION LINES EXIST WITHIN THE PROJECT AREA. IRRIGATION CONTROL VALVE BOXES ARE SHOWN ON THE PLANS; HOWEVER, ASSOCIATED IRRIGATION LINES ARE NOT SHOWN. CONTRACTOR TO COORDINATE WITH MSU ON REPLACEMENT/ROUTING OF IRRIGATION LINES WHICH MAY BE DAMAGED DURING CONSTRUCTION.



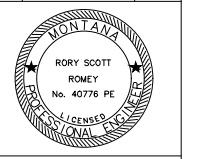
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WATER MAIN
REPLACEMENT



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 REVIEWED BY: RSR

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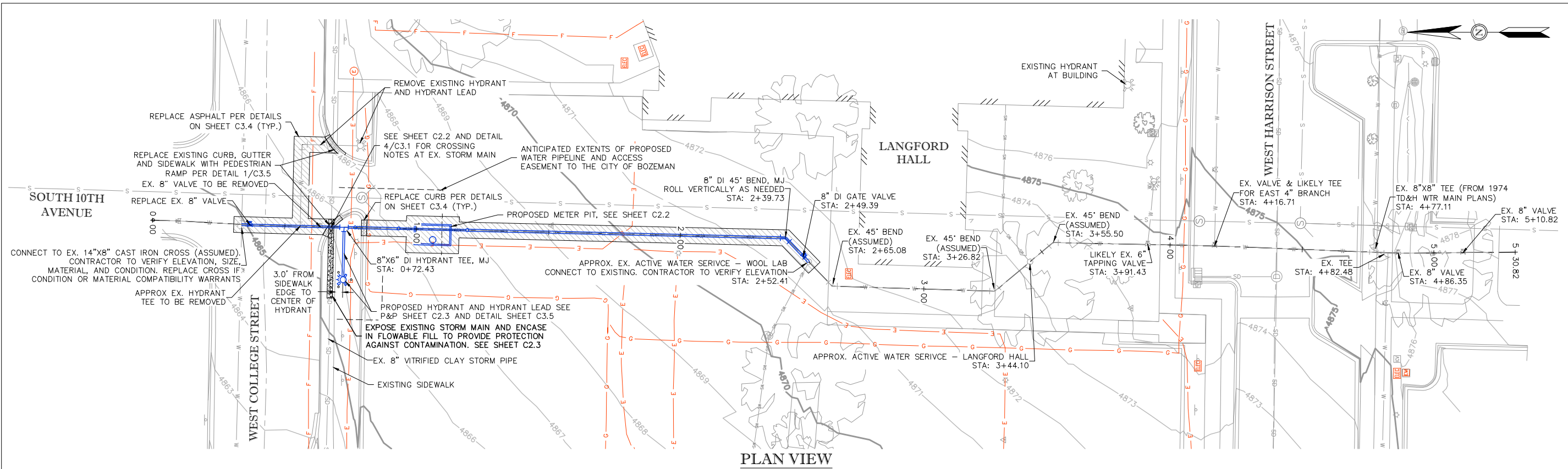


PPA#22-0543
A/E#00-00-00
AESI # 22-121
SHEET TITLE
C1.1

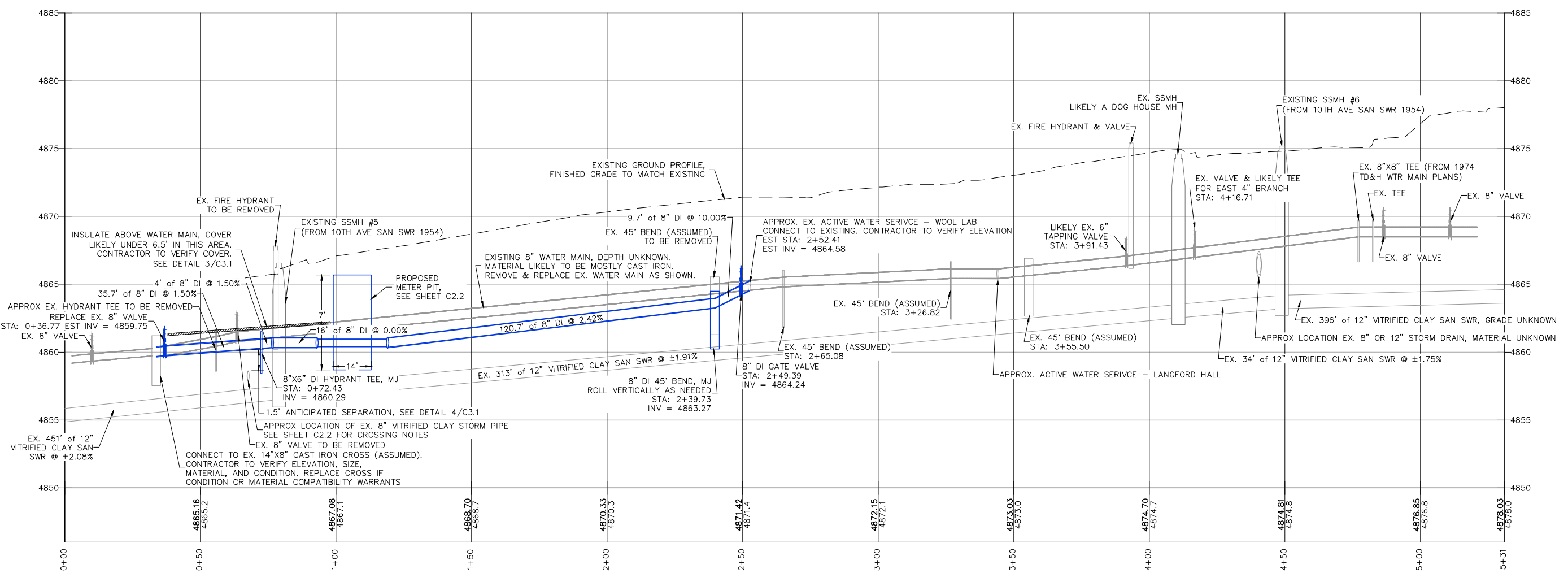
SHEET
EXISTING
CONDITIONS

DATE
02-19-25

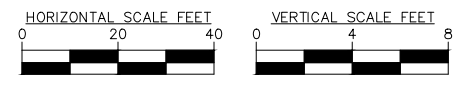
PPA # 2022-0543, ROMEY, RORY SCOTT, PE, No. 40776, State of Montana. This is a preliminary drawing. It is not to be used for construction without the approval of the engineer of record.



PLAN VIEW



PROFILE VIEW

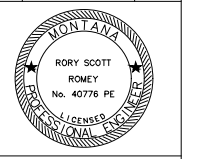


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CONSTRUCTION PLANS
**COLLEGE AND 11TH
WATER MAIN
REPLACEMENT**



DRAWN BY: E.J.F. COL
REVIEWED BY: RSR
REV. DESCRIPTION DATE



PPA#22-0543
A/E#00-00-00
AESI # 22-121
SHEET TITLE
C2.1

SHEET
WATER MAIN
PLAN & PROFILE

DATE
02-19-25

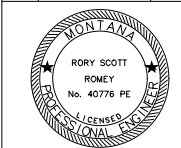
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CONSTRUCTION PLANS
COLLEGE AND 11TH
WATER MAIN
REPLACEMENT



DRAWN BY: E.J.F. COL
REVIEWED BY: RSR

REV.	DESCRIPTION	DATE



PPA#22-0543

A/E#00-00-00

AESI # 22-121

SHEET TITLE

C2.2

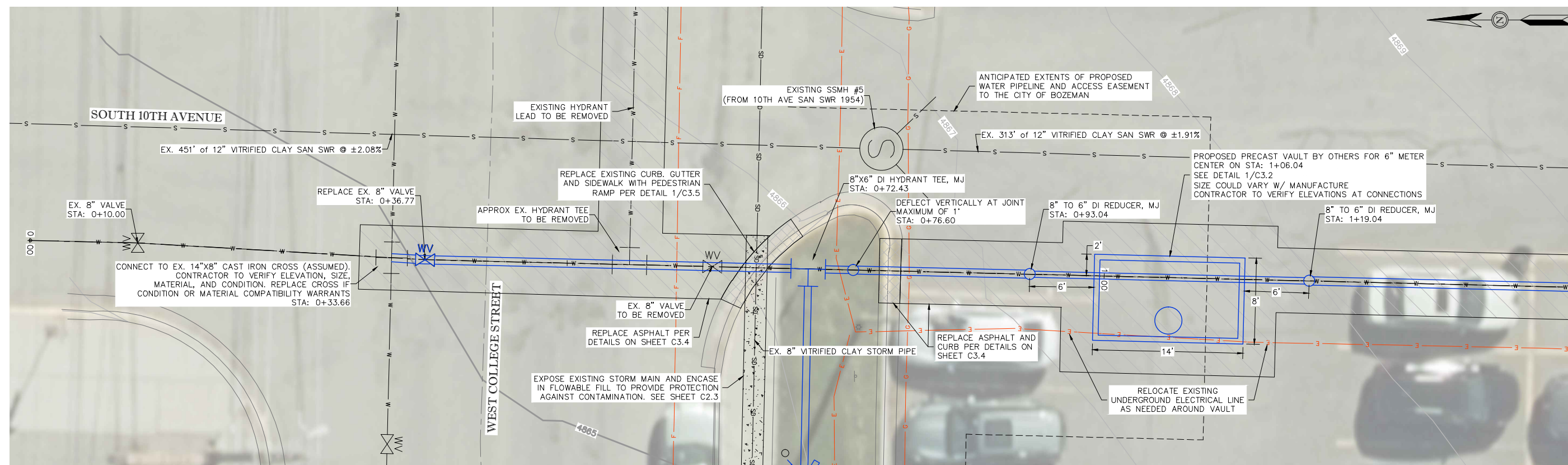
SHEET

METER PIT

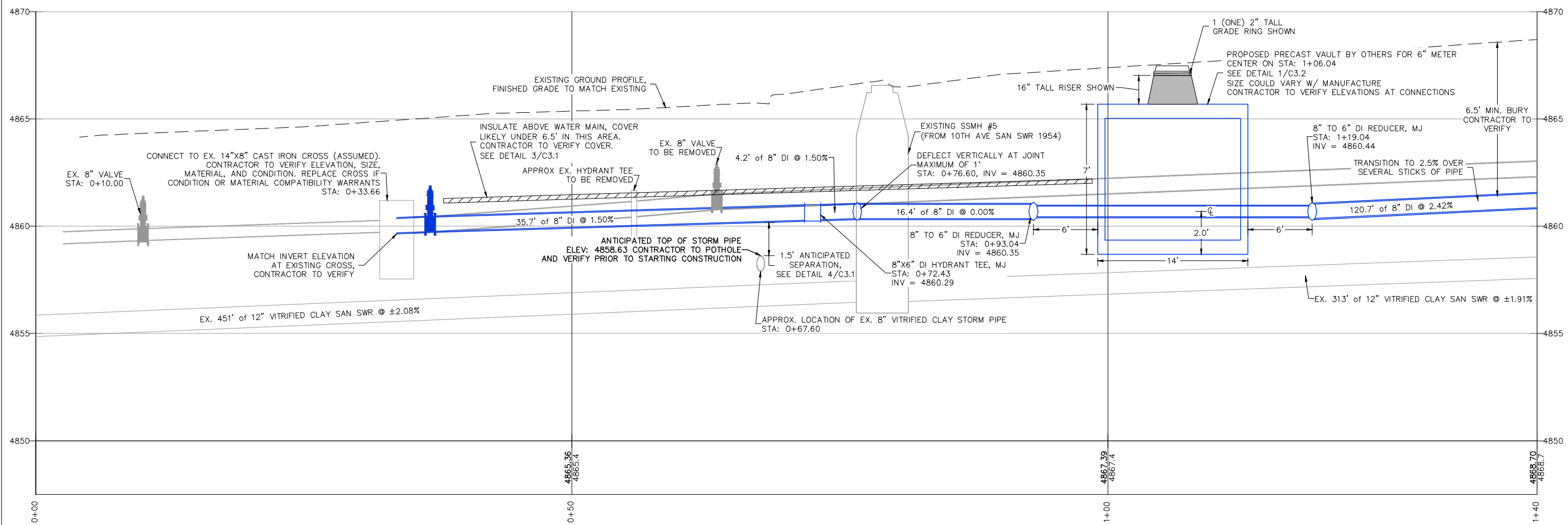
PLAN & PROFILE

DATE

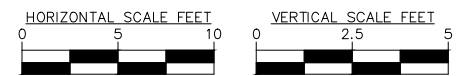
02-19-25



PLAN VIEW



PROFILE VIEW



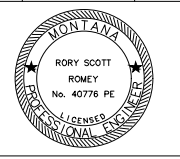
PPA# 22-0543 - Meter Pit Plan and Profile
 Date: 02/19/25
 Project: 11th Street Water Main Replacement - 11th and College St. Corridor
 Scale: 1" = 40'

CONSTRUCTION PLANS
COLLEGE AND 11TH
WATER MAIN
REPLACEMENT



DRAWN BY: E.J.F. COL
REVIEWED BY: RSR

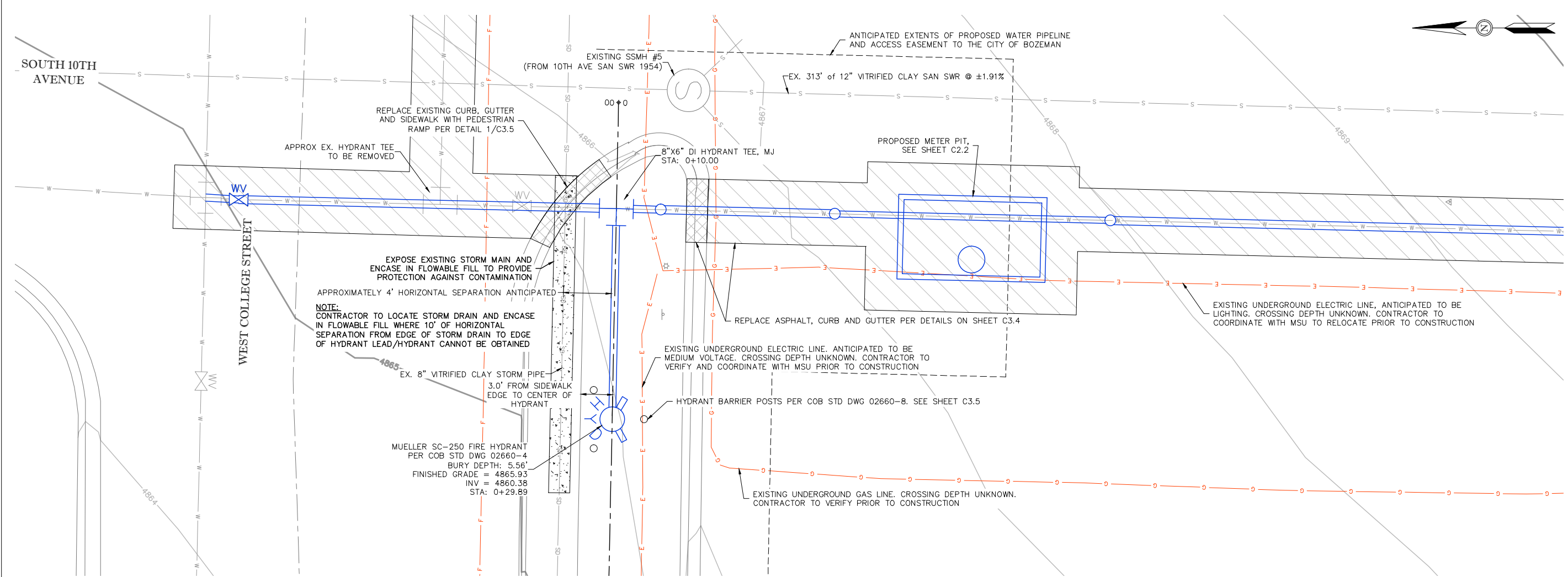
REV.	DESCRIPTION	DATE



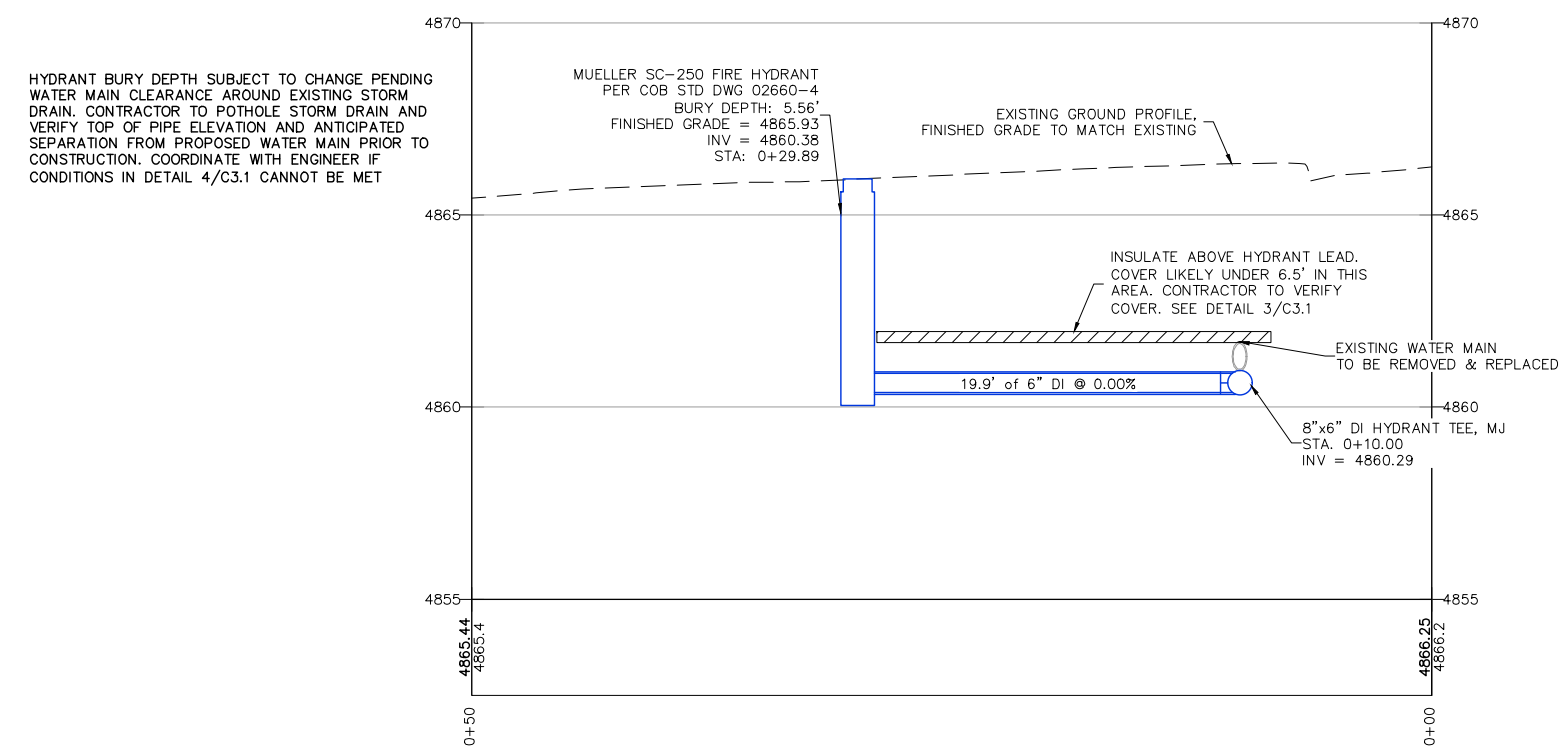
PPA#22-0543
A/E#00-00-00
AESI # 22-121
SHEET TITLE
C2.3

SHEET
COLLEGE STREET
HYDRANT
PLAN & PROFILE

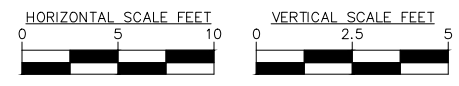
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02-19-25



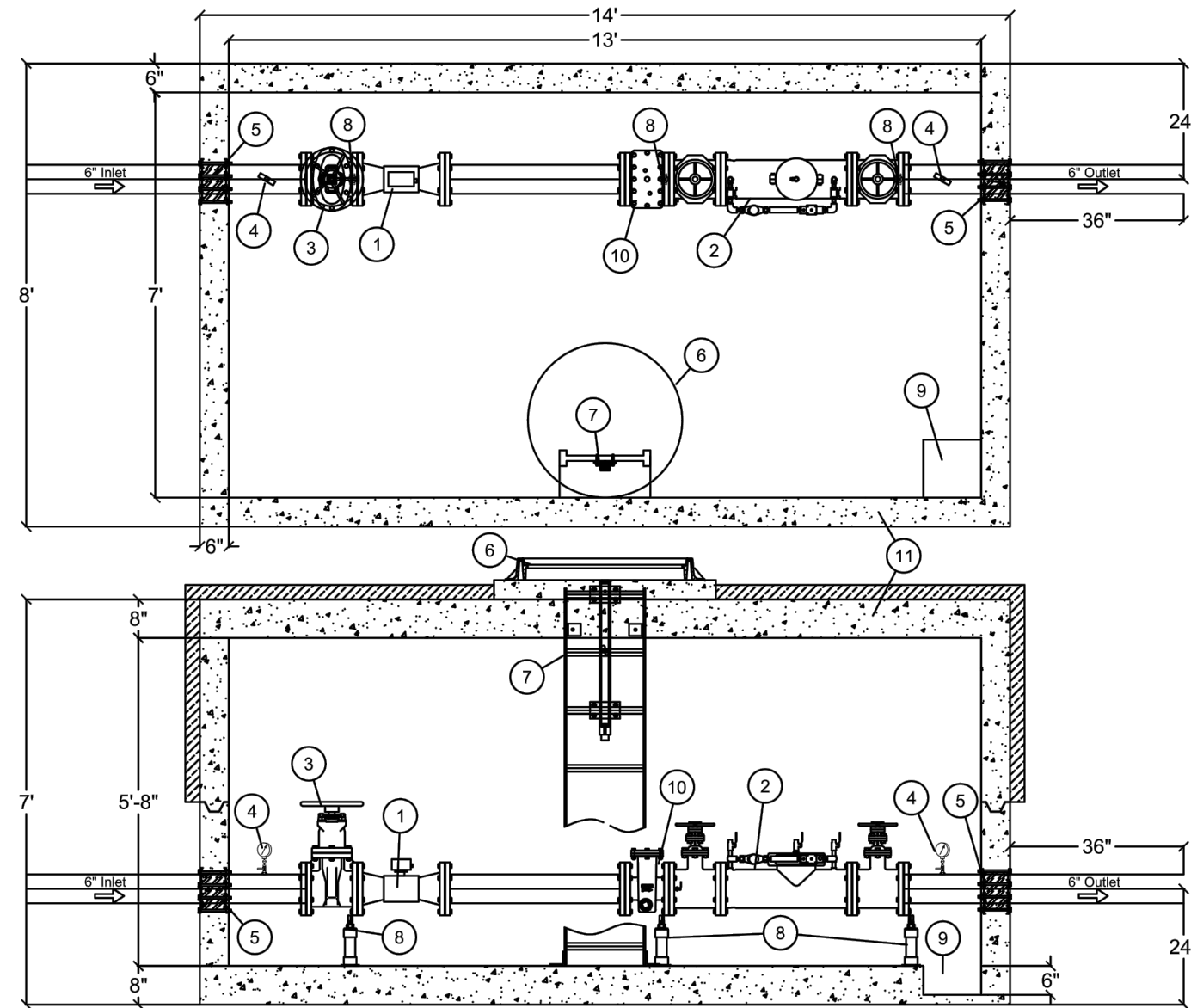
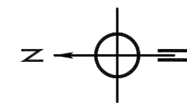
PLAN VIEW



PROFILE VIEW



PPA # 22-0543 - A/E# 00-00-00 - College Street Hydrant Plan and Profile -
 Date: 02/19/25 - 11:58 AM - RSR
 C:\Users\rsr\OneDrive\Documents\11th and College St Water Main Replacement - 11th and College St Water Main Replacement



BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
1	1	6" NEPTUNE MACH 10 ULTRASONIC WATER METER
2	1	6" AMES SERIES 2000SS W/ OS&Y VALVES
3	1	6" KENNEDY RESILIENT SEATED GATE VALVE KS RW NRS C515 150LB FLGXFLG W/ HANDWHEEL, ANSI/NSF-61G
4	2	2 1/2" 0-300 PSI GAUGE LIQUID FILLED W/ 1/4" SST. ISOLATION VALVE
5	20	6" LINK SEAL ASSEMBLY(QTY= # OF LINKS NEEDED)
6	1	32" C23 MANHOLE CAST IRON FRAME AND COVER H20 TRAFFIC RATED W/ WATER BADGE
7	1	ALUMINUM LADDER WITH SAFETY POST AT OPENING
8	2	6" STANDON FLANGE STYLE PIPE SUPPORT
9	1	12" x 12" x 6" SUMP
10	1	6" SINGER IN-LINE STRAINER: 316 SST, LARGE AREA Z PLATE SCREEN, DI BODY, NSF APPROVED FUSION BONDED EPOXY COATING, COMPLIES W/ AWWA C701 & C702
11	1	PRESTIGE WWT 6" WALLED H ₂ O RATED PRV VAULT. OD: 14' L x 8' W x 7' T ID: 13' L x 7' W x 5'8" T W/ 3" INSULATION IN TOP HALF OF OUTSIDE OF VAULT

- NOTES:
- ALL PIPING AND EQUIPMENT SUPPLIED BY PRESTIGE WORLDWIDE TECHNOLOGIES. ALL PIPING IS SCHEDULE 40 304 SST.
 - VAULT SUPPLIER WILL SUPPLY AN INDIVIDUAL WITH AT LEAST 10 YRS EXP. WITH CONTROL VALVE EQUIPMENT START-UP AND TROUBLE SHOOTING.
 - VAULT SUPPLIER TO PROVIDE 3 COPIES OF O & M MANUALS.
 - VAULT SHOWN INCLUDES ALL EQUIPMENT REQUIRED FOR A FULLY FUNCTIONING PRV STATION. THIS INCLUDES DELIVERY TO SITE.
 - INSTALLER WILL OFF-LOAD VAULT AND COORDINATE WITH SUPPLIER DELIVERY. INSTALLER MUST PROVIDE ALL EXCAVATION AND FINAL CONNECTIONS.
 - DISINFECTIONS: FINAL GRADE AND ANY CONNECTIONS OUTSIDE OF THE VAULT ARE THE INSTALLER'S RESPONSIBILITY.

DISCLAIMER: THIS DRAWING IS THE PROPERTY OF PRESTIGE WORLDWIDE TECHNOLOGIES, LLC. AND EMBODIES CONFIDENTIAL INFORMATION, REGISTERED MARKS, TRADE SECRET INFORMATION, AND/OR KNOW HOW THAT IS PROPERTY OF PRESTIGE WORLDWIDE TECHNOLOGIES, LLC AND SHALL NOT BE DISCLOSED TO ANYONE OUTSIDE THIS PROJECT WITHOUT DIRECT CONSENT FROM PRESTIGE WWT.

TITLE: 6" FLOW METER VAULT	DRAWN BY: JD	DATE: 2/19/2025	SCALE AT AO: 1:40
	CHECKED BY: MW	DATE: 2/19/2025	REVISION: 6
PROJECT: MONTANA STATE UNIV - 11TH AND COLLEGE	DRAWING NO: 1		



PO BOX 1404
RATHDRUM, ID 83858
MARTY@PRESTIGEWWT.COM CELL: 208-691-7430
WWW.PRESTIGEWWT.COM

1 SECTION
C3.3 PRECAST VAULT INTERNAL DETAILS
NOT TO SCALE



MSU-CPDC

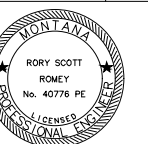
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PPA#22-0543

A/E#00-00-00

AESI # 22-121

SHEET TITLE

C3.3

SHEET

PRECAST VAULT
INTERNAL LAYOUT

DATE

02-19-25

