

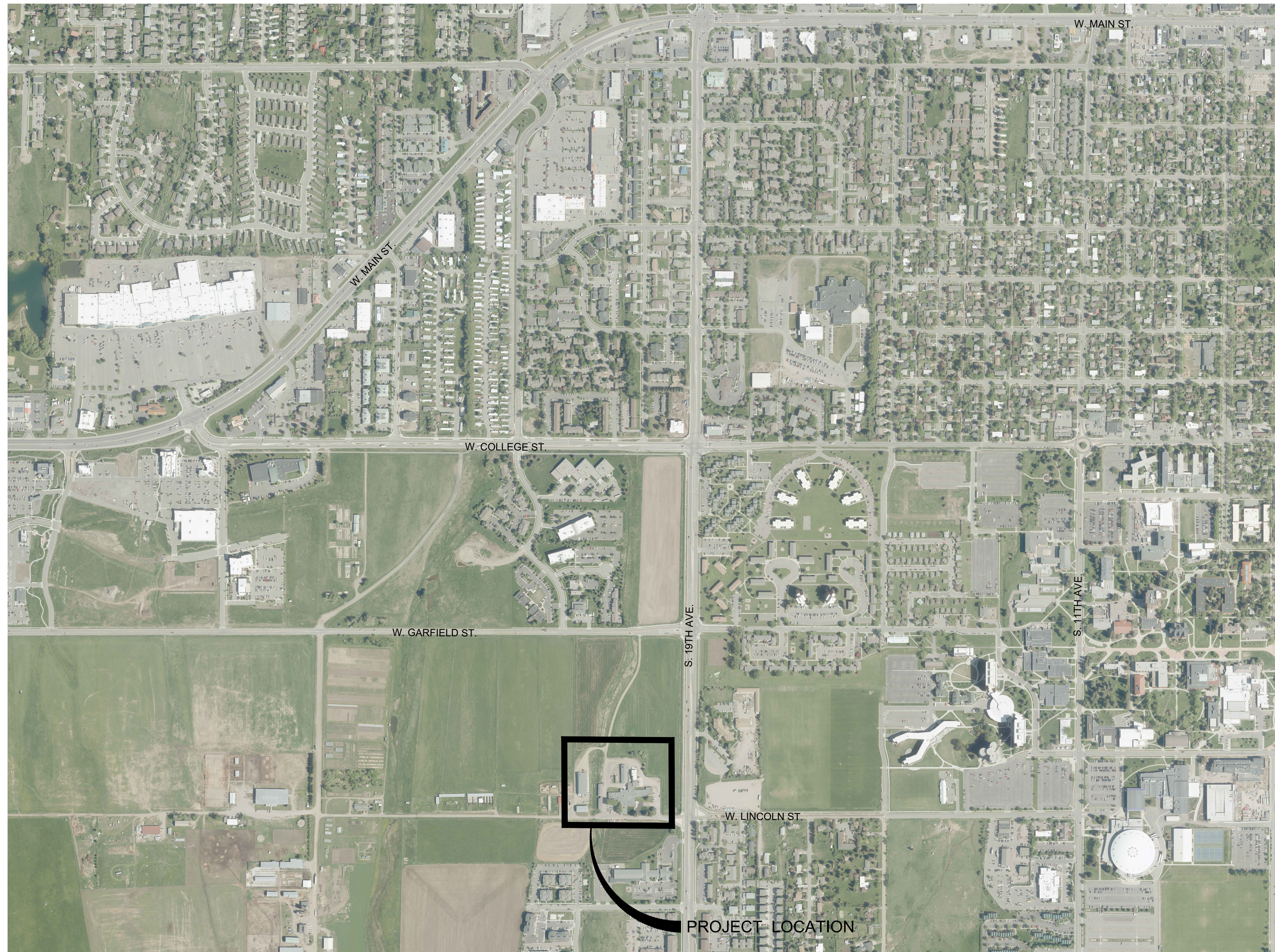


MONTANA STATE UNIVERSITY

BOZEMAN, MT

MARSH LAB VET CLINIC SEWER UPGRADES

PPA#19-0083



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OWNER:
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BOZEMAN, MT 59717
CONTACT: LORAS O'TOOLE, (406) 994-7092

CONSULTANT:
MORRISON-MAIERLE, INC.
2880 TECHNOLOGY BLVD. W.
BOZEMAN, MT 59718
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MSU-CPDC

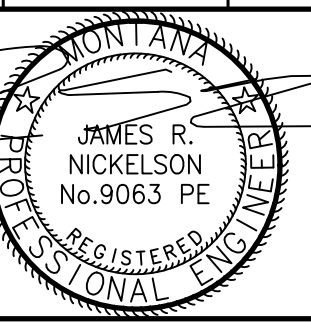
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CONSTRUCTION DOCUMENTS

**MARSH LAB
VET CLINIC
SEWER UPGRADES**



DRAWN BY: CJF		
REVIEWED BY: JRN		
REV.	DESCRIPTION	DATE
1	2020 BID PACKAGE	11/13/2020



PPA#19-0083

MMI# 0747.072

SHEET TITLE
COVER

SHEET
1

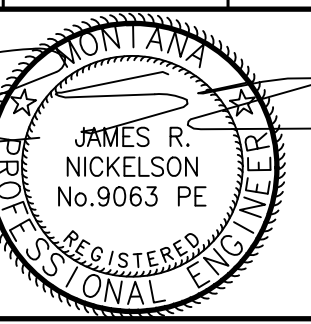
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SEWER UPGRADES**

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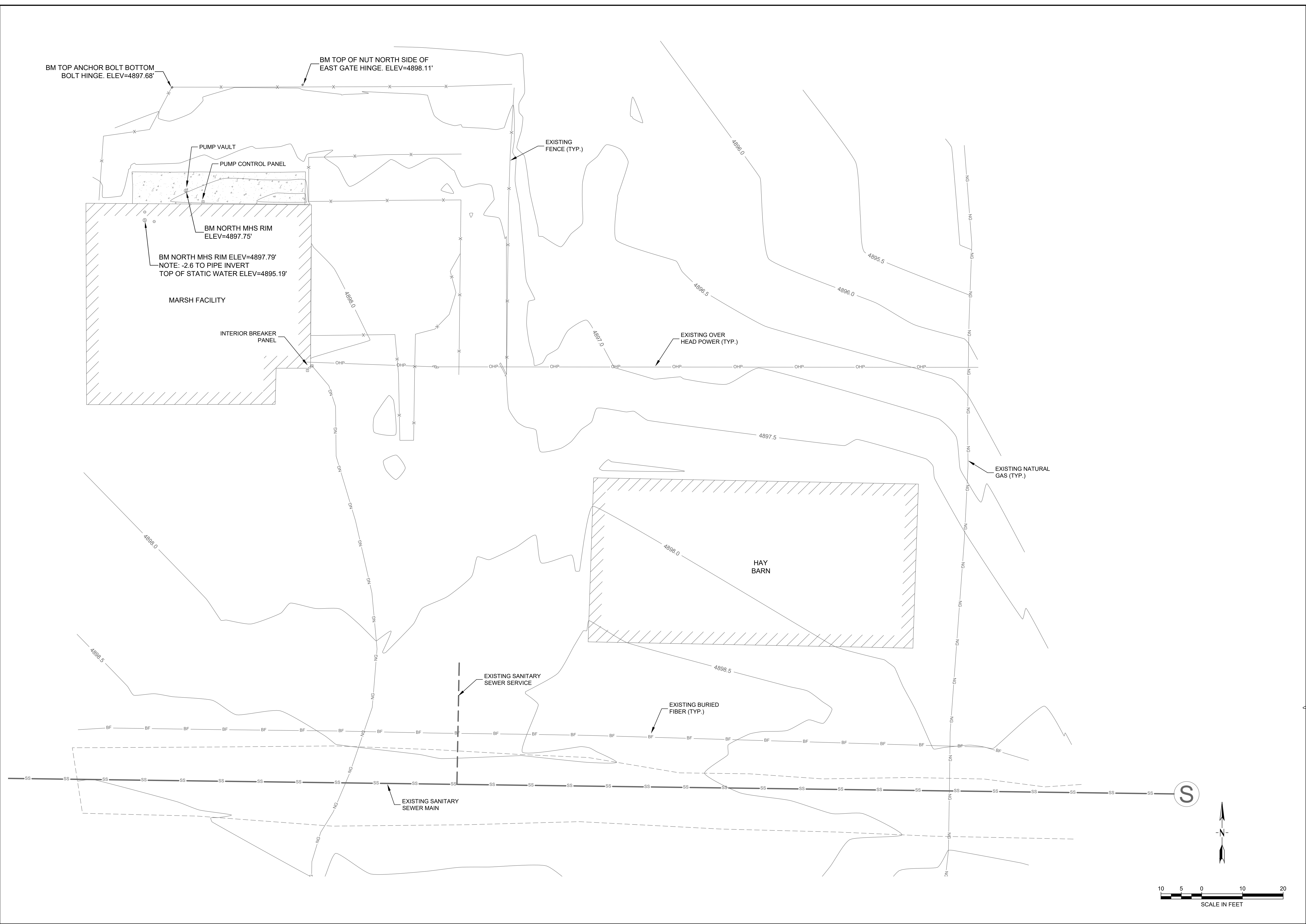
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**SHEET TITLE
EXISTING SITE
AND UTILITIES**

SHEET

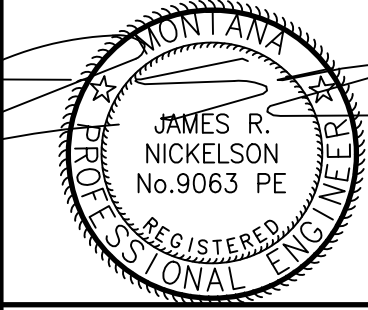
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DATE
11-13-2020



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DRAWN BY: CPK		
REVIEWED BY: JRN		
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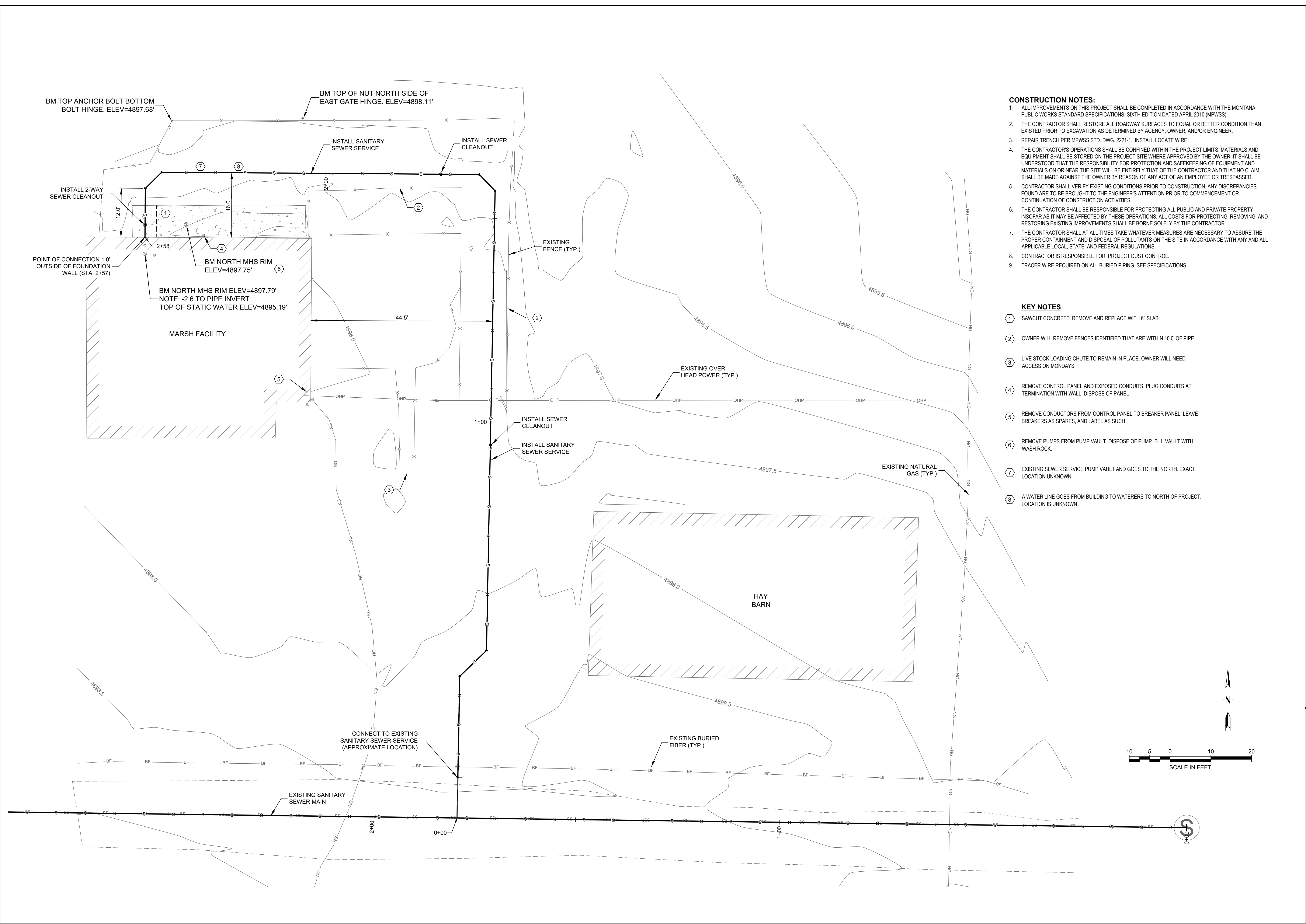
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**SHEET TITLE
PROPOSED
SITE PLAN**

SHEET
3

DATE
11-13-2020



- CONSTRUCTION NOTES:**
- ALL IMPROVEMENTS ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, SIXTH EDITION DATED APRIL 2010 (MPWSS).
 - THE CONTRACTOR SHALL RESTORE ALL ROADWAY SURFACES TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO EXCAVATION AS DETERMINED BY AGENCY, OWNER, AND/OR ENGINEER.
 - REPAIR TRENCH PER MPWSS STD. DWG. 2221-1. INSTALL LOCATE WIRE.
 - THE CONTRACTOR'S OPERATIONS SHALL BE CONFINED WITHIN THE PROJECT LIMITS. MATERIALS AND EQUIPMENT SHALL BE STORED ON THE PROJECT SITE WHERE APPROVED BY THE OWNER. IT SHALL BE UNDERSTOOD THAT THE RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF EQUIPMENT AND MATERIALS ON OR NEAR THE SITE WILL BE ENTIRELY THAT OF THE CONTRACTOR AND THAT NO CLAIM SHALL BE MADE AGAINST THE OWNER BY REASON OF ANY ACT OF AN EMPLOYEE OR TRESPASSER.
 - CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FOUND ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OR CONTINUATION OF CONSTRUCTION ACTIVITIES.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE PROPERTY INSOFAR AS IT MAY BE AFFECTED BY THESE OPERATIONS. ALL COSTS FOR PROTECTING, REMOVING, AND RESTORING EXISTING IMPROVEMENTS SHALL BE BORNE SOLELY BY THE CONTRACTOR.
 - THE CONTRACTOR SHALL AT ALL TIMES TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE PROPER CONTAINMENT AND DISPOSAL OF POLLUTANTS ON THE SITE IN ACCORDANCE WITH ANY AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR PROJECT DUST CONTROL.
 - TRACER WIRE REQUIRED ON ALL BURIED PIPING. SEE SPECIFICATIONS.

- KEY NOTES**
- SAWCUT CONCRETE. REMOVE AND REPLACE WITH 6" SLAB
 - OWNER WILL REMOVE FENCES IDENTIFIED THAT ARE WITHIN 10.0' OF PIPE.
 - LIVE STOCK LOADING CHUTE TO REMAIN IN PLACE. OWNER WILL NEED ACCESS ON MONDAYS.
 - REMOVE CONTROL PANEL AND EXPOSED CONDUITS. PLUG CONDUITS AT TERMINATION WITH WALL, DISPOSE OF PANEL
 - REMOVE CONDUCTORS FROM CONTROL PANEL TO BREAKER PANEL. LEAVE BREAKERS AS SPARES, AND LABEL AS SUCH
 - REMOVE PUMPS FROM PUMP VAULT. DISPOSE OF PUMP. FILL VAULT WITH WASH ROCK.
 - EXISTING SEWER SERVICE PUMP VAULT AND GOES TO THE NORTH. EXACT LOCATION UNKNOWN.
 - A WATER LINE GOES FROM BUILDING TO WATERERS TO NORTH OF PROJECT. LOCATION IS UNKNOWN.

NO. 10 2020 11/13/2020 11:13 AM JRN

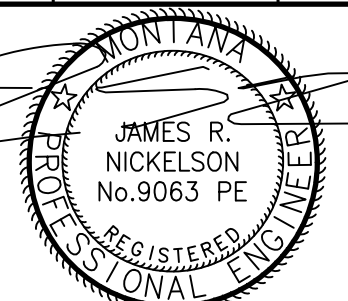
**MARSH LAB
VET CLINIC
SEWER UPGRADES**

CONSTRUCTION DOCUMENTS

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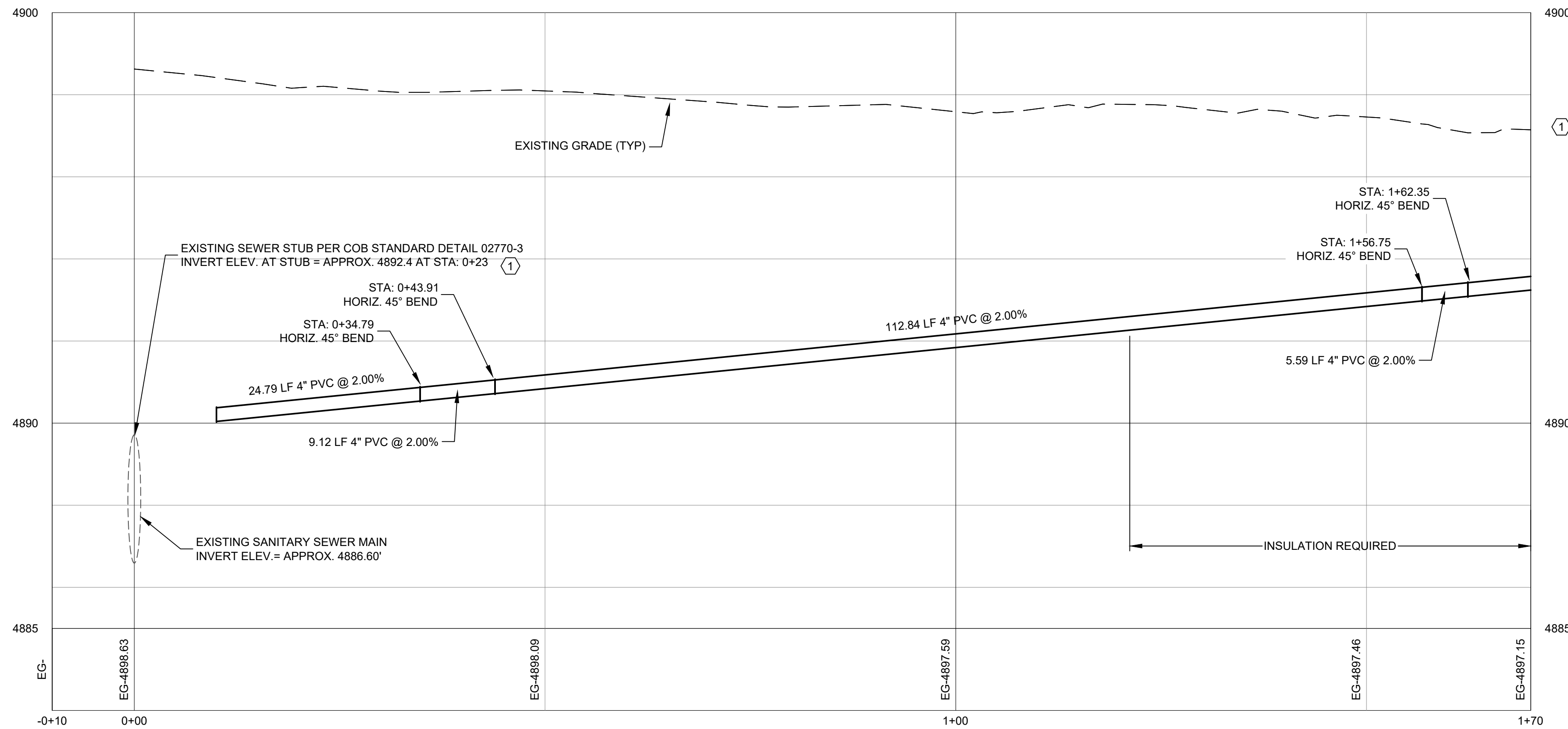
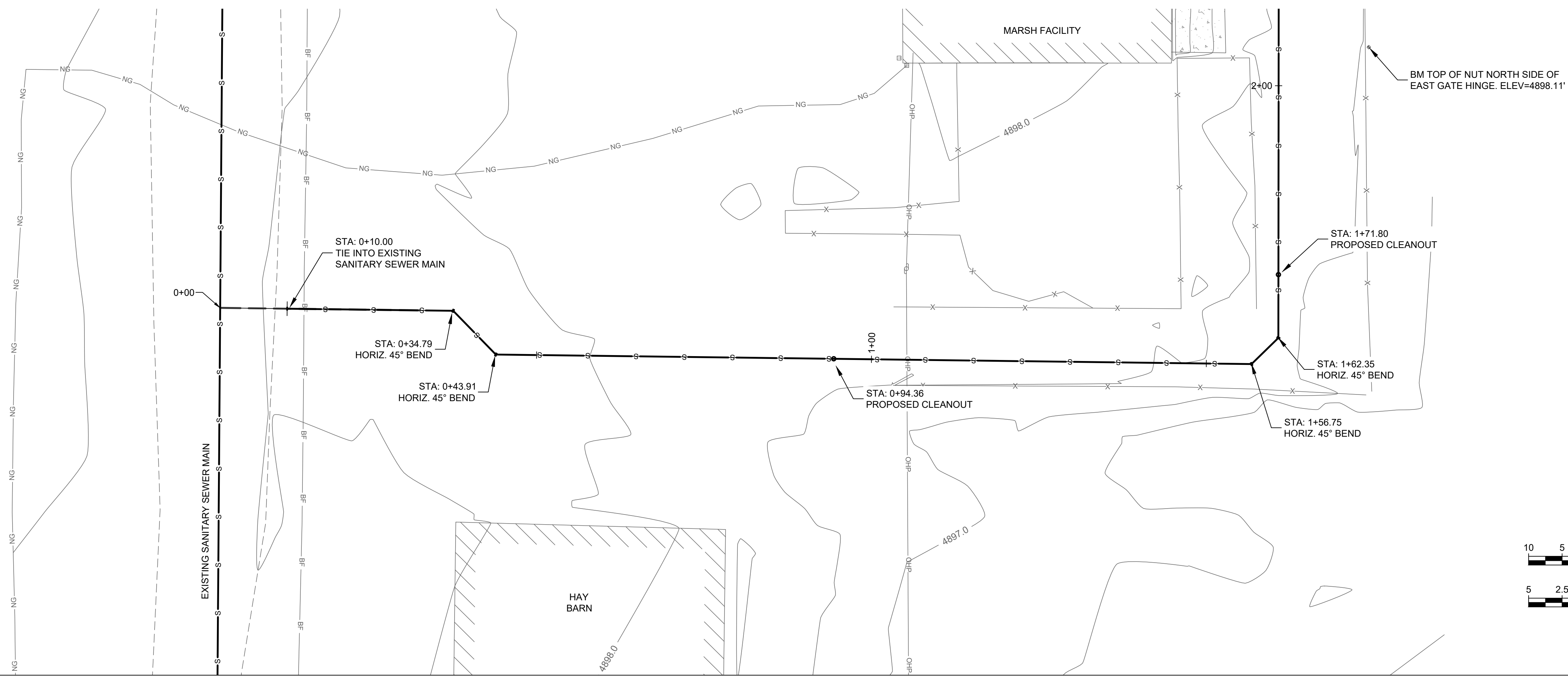
PPA#19-0083

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**SHEET TITLE
SEWER SERVICE
PLN-PRO**

**SHEET
4**

**DATE
11-13-2020**



KEY NOTES
 ① CONTRACTOR TO EXPOSE EXISTING SEWER SERVICE STUB AS NEEDED TO MAKE THE CONNECTION. THE EXISTING STUB IS INSTALLED WITH VERTICAL 45 DEGREE BENDS AS SHOWN ON DETAIL 1 ON SHEET 6. POINT OF CONNECTION WILL NEED TO BE FIELD DETERMINED BASED ON THE ACTUAL CONFIGURATION OF THE EXISTING STUB. THE INVERT OF THE NEW SERVICE AT THE POINT OF CONNECTION WILL BE APPROXIMATELY 4890.0.

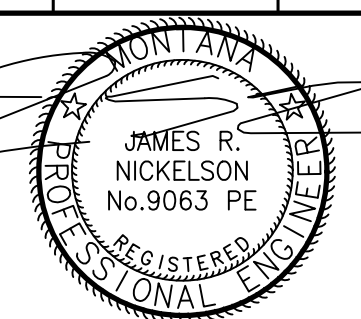
**MARSH LAB
VET CLINIC
SEWER UPGRADES**

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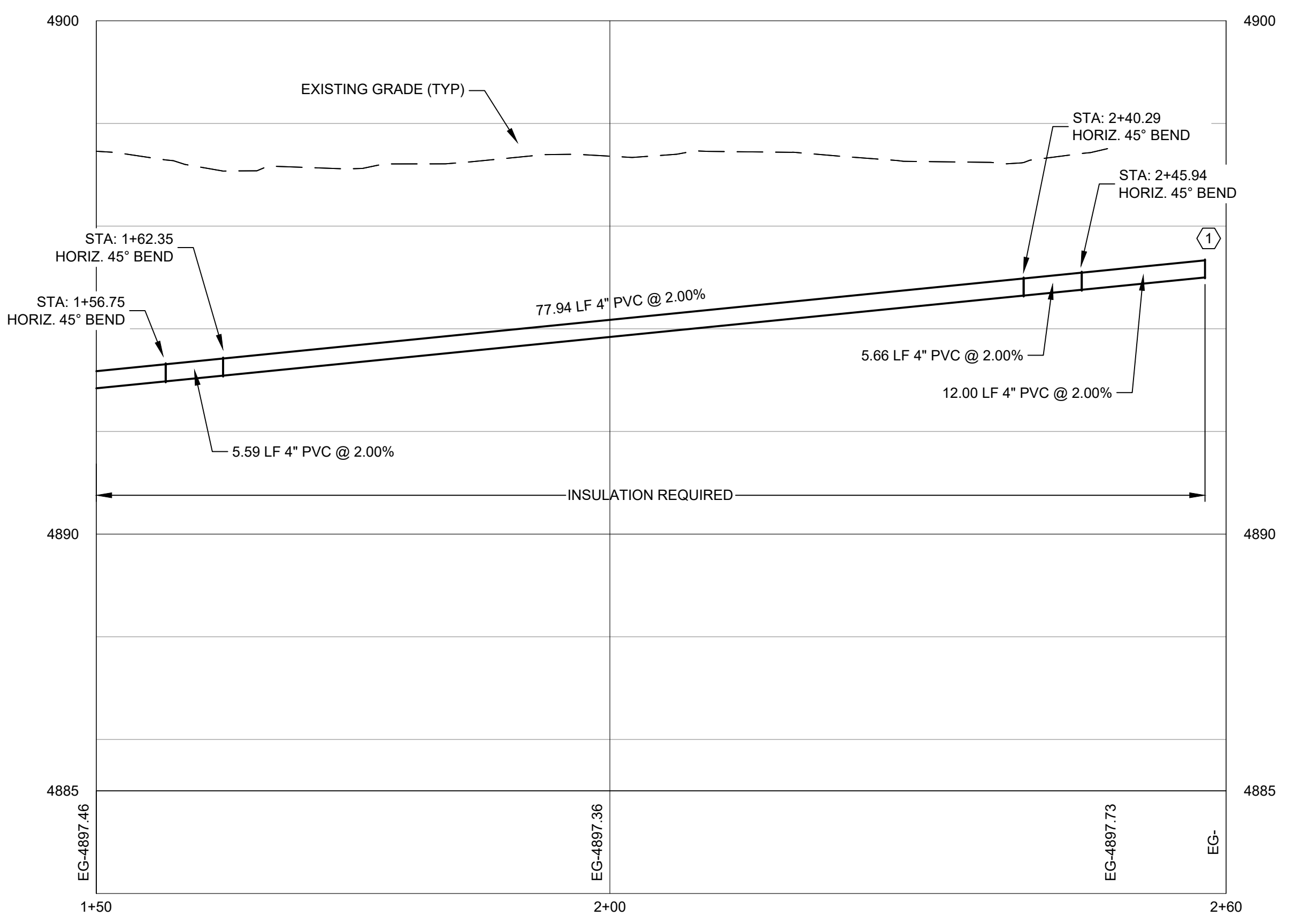
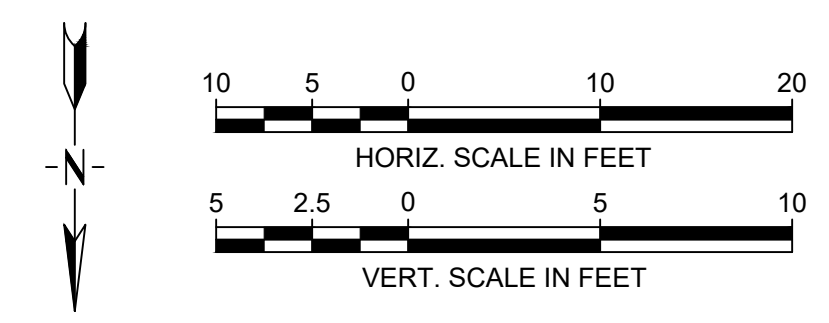
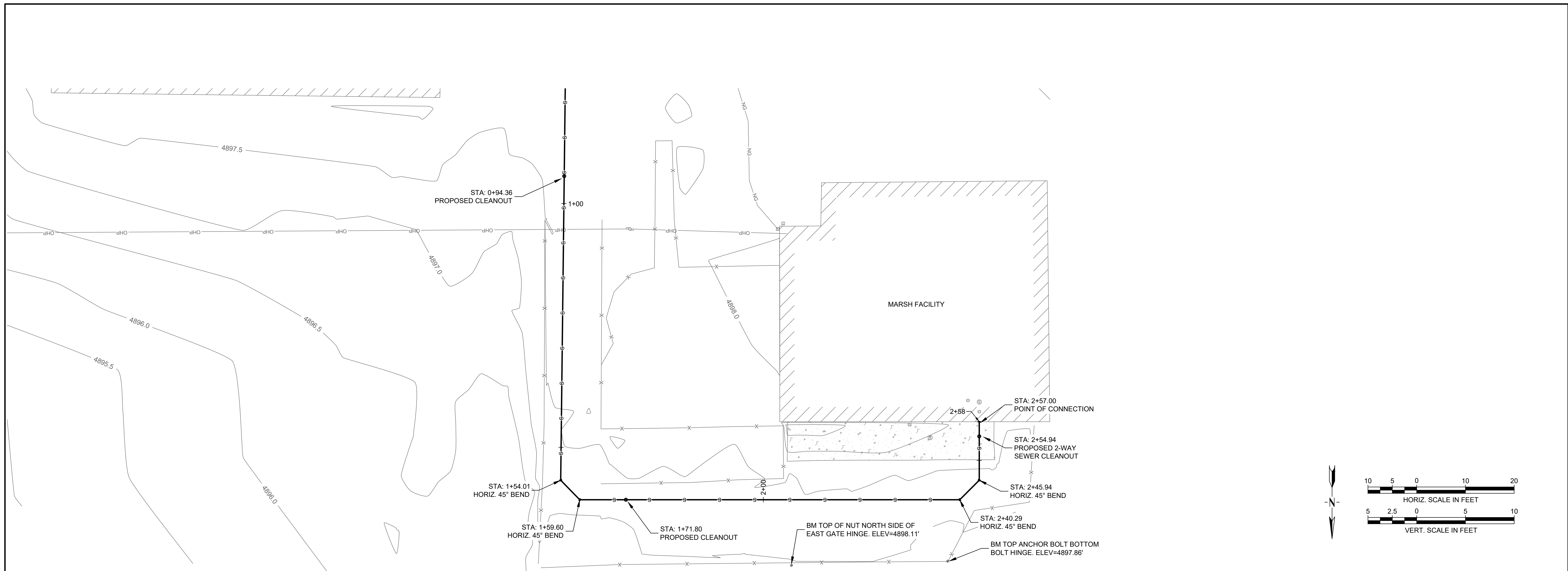
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**SHEET TITLE
SEWER SERVICE
PLN-PRO**

SHEET

5

**DATE
11-13-2020**

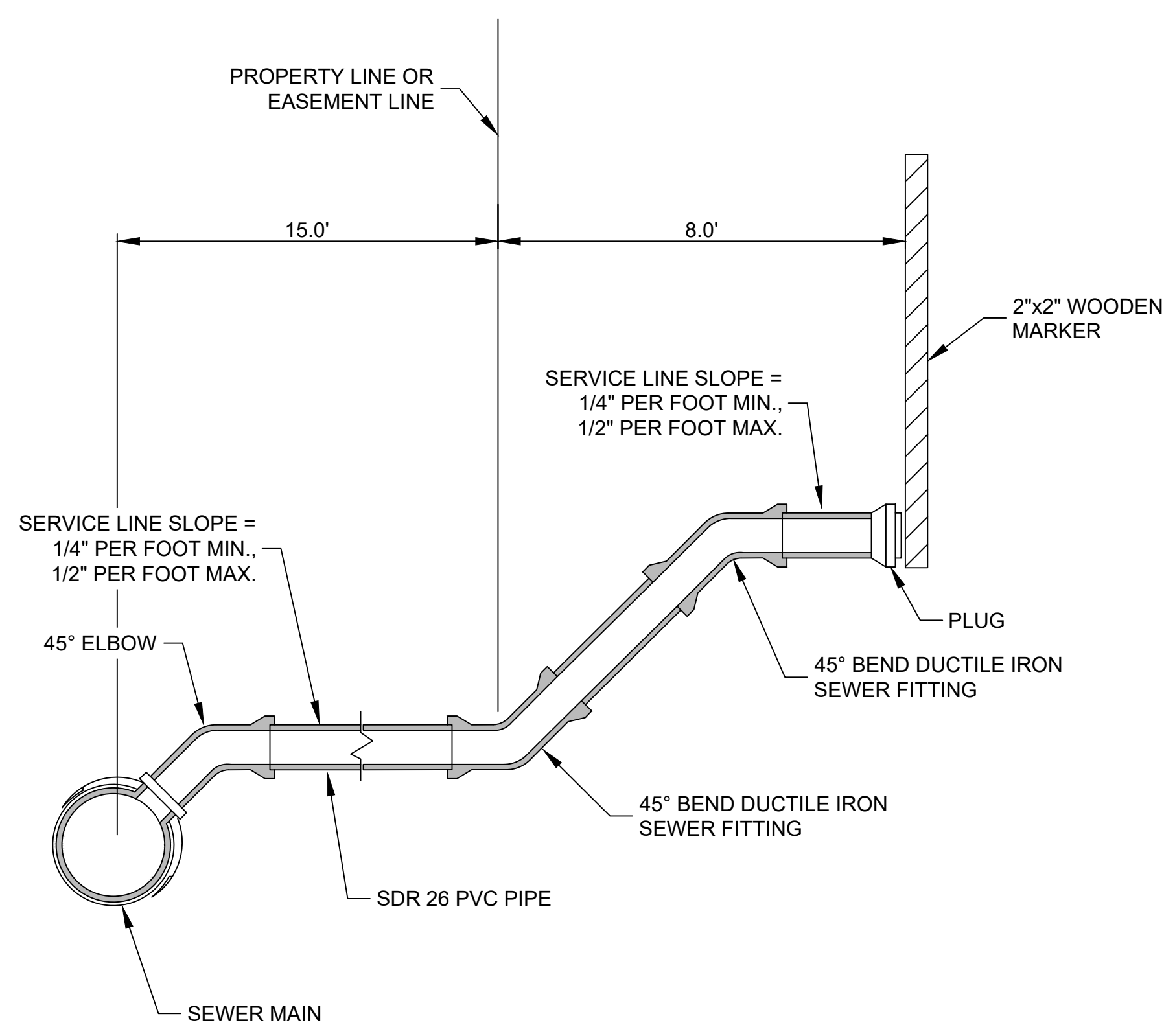
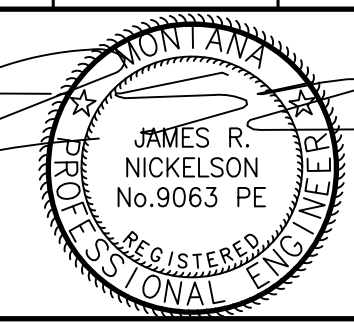


KEY NOTES

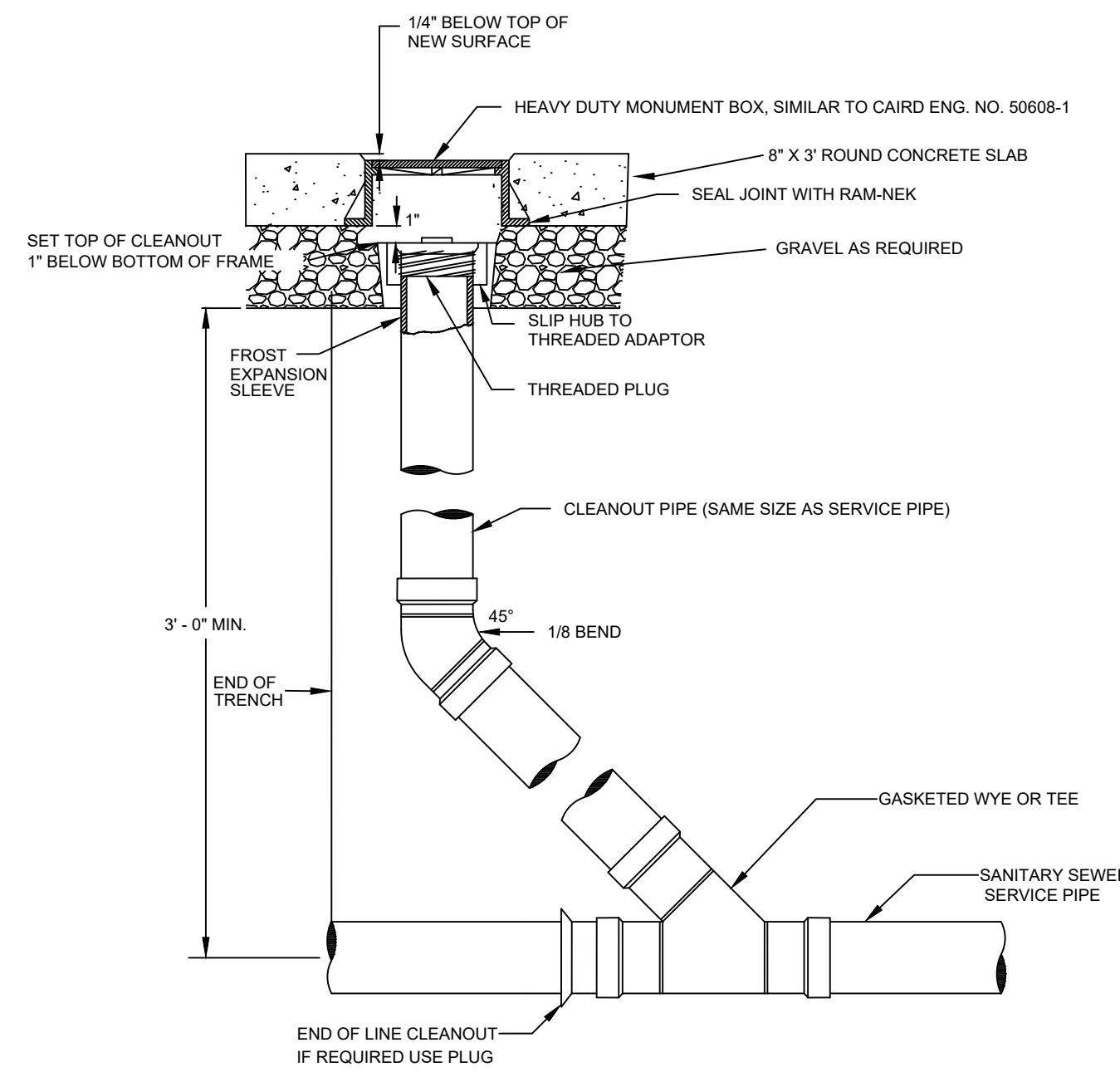
① ELEVATION OF SERVICE AT BUILDING WALL ASSUMED TO BE AT ELEVATION 4895.0'. CONTRACTOR TO CONFIRM AND BEGIN NEW SERVICE AT THIS LOCATION.

NOT TO SCALE. ALL DIMENSIONS SHOWN UNLESS OTHERWISE SPECIFIED.

REV.	DESCRIPTION	DATE
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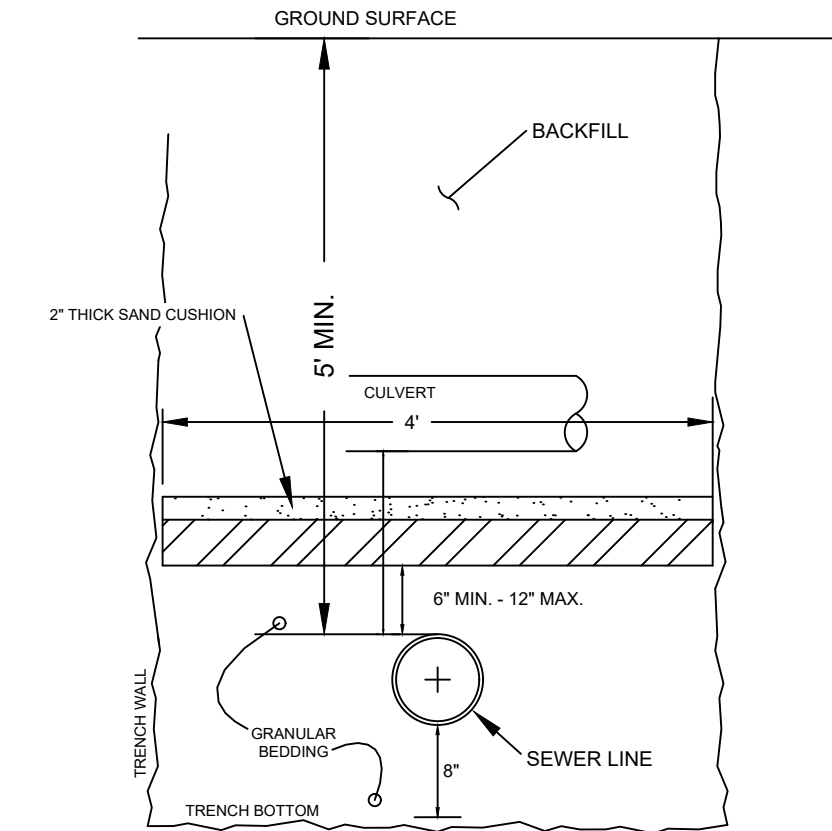


EXISTING SEWER SERVICE STUB 1
SCALE: N.T.S.



SANITARY SEWER CLEANOUT 2
SCALE: N.T.S.

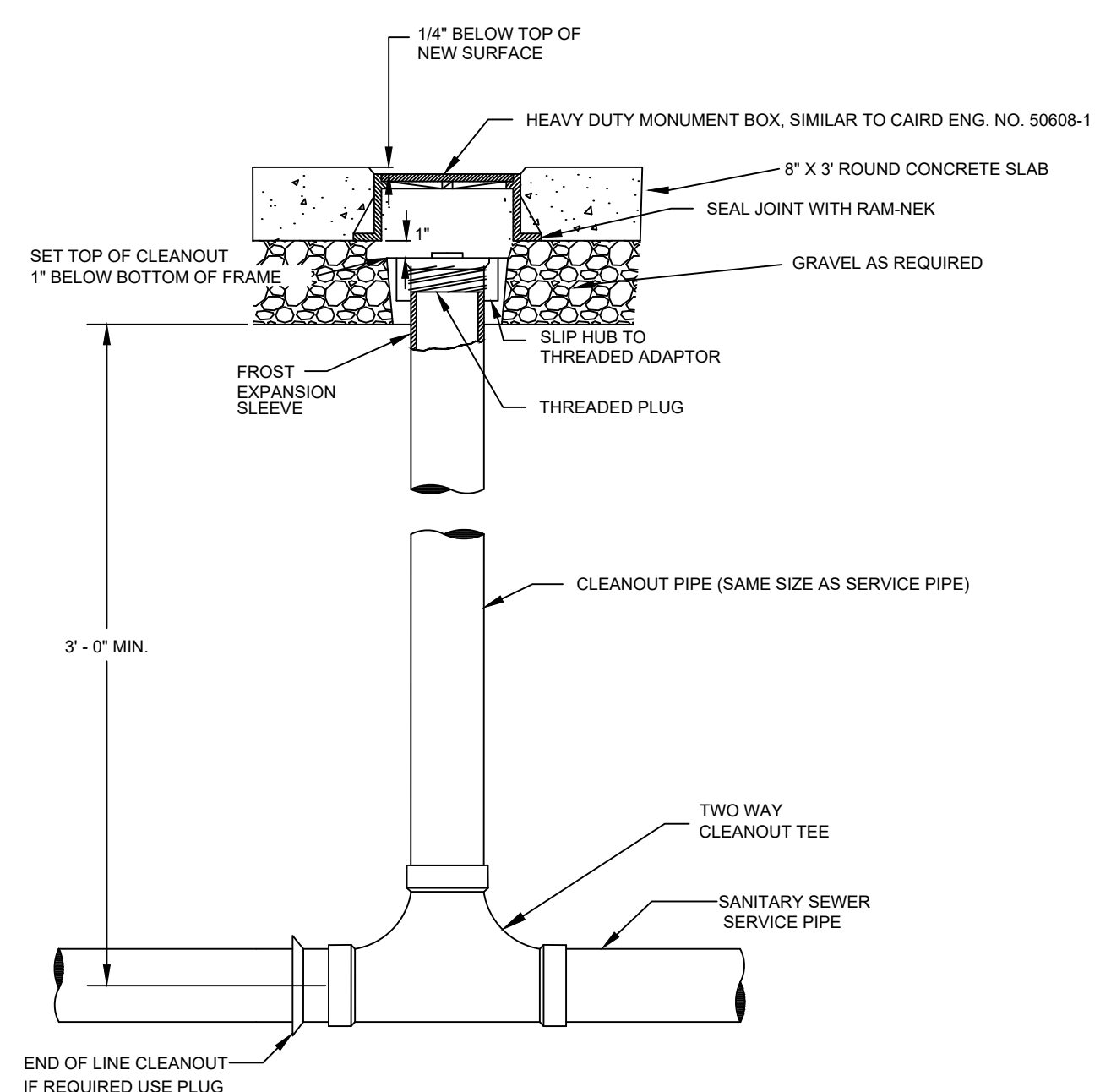
- NOTES:**
1. INSTALL INSULATION OVER ALL WATER OR SEWER LINES WITH LESS THAN 6.0' OR 5.0' COVER, RESPECTIVELY, TO FINISHED GRADE OR CULVERT.
 2. INSTALL INSULATION IN TWO 2" THICK LAYERS. ROTATE ORIENTATION OR STAGGER JOINTS TO PROVIDE 2" MIN. OVERLAP BETWEEN JOINTS.
 3. INSULATION BOARD SHALL BE 2" THICK EXTRUDED POLYSTYRENE INSULATION BOARD PER AASHTO M230-70.



INSULATION TABLE FOR WATER/SEWER LINE (SIZES 2" TO 12")

VERTICAL SEPARATION BETWEEN WATER/SEWER AND FINISHED GRADE/CULVERT	WIDTH OF INSULATION TO BE INSTALLED
2.5'-5.0'	4.0'

INSULATION DETAIL 3
SCALE: N.T.S.



2-WAY SANITARY SEWER CLEANOUT 4
SCALE: N.T.S.