

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS FOR THE DAYTON YACHT HARBOR WATER SUPPLY SYSTEM, THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWS), AND ANY COUNTY, STATE OR FEDERAL REGULATIONS THAT MAY APPLY.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE DAYTON YACHT HARBOR.
3. THE CONTRACTOR SHALL SUBMIT TO THE PROJECT ENGINEER AND DAYTON YACHT HARBOR, A CONSTRUCTION SCHEDULE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. HOURS OF OPERATION SHALL BE APPROVED BY THE DAYTON YACHT HARBOR. THE CONSTRUCTION SCHEDULE SHALL BE SUBMITTED A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.
4. ELEVATIONS SHOWN HEREIN WERE PROVIDED BY OTHERS AND WHERE DETERMINED TO BE NGVD29 DATUM BASED ON THE BEST AVAILABLE INFORMATION.
5. THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION IN ACCORDANCE WITH SECTION 01500, "SUBMITTALS" OF THE MPWS.
6. THE CONTRACTOR SHALL SUBMIT TO THE PROJECT ENGINEER AND LAKE COUNTY, A TRAFFIC CONTROL PLAN FOR APPROVAL FOR ALL WORK WITHIN THE PAVED WAY AND THE PUBLIC RIGHT-OF-WAY. THE PLAN SHALL BE SUBMITTED TO THE PROJECT ENGINEER AND LAKE COUNTY PERMITS PRIOR TO BEGINNING CONSTRUCTION. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SECTION 01570 "CONSTRUCTION TRAFFIC CONTROL" OF THE MPWS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION WITH REVISIONS 1 AND 2, PART 6; TEMPORARY TRAFFIC CONTROL.
7. ALL REQUIRED PERMITS FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL PERMITS OBTAINED BY THE OWNER SHALL BE INCORPORATED INTO THE SCOPE OF PROJECT WORK.
8. EXISTING UTILITIES SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS WERE PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
9. ANY AND ALL FIELD CHANGES SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO IMPLEMENTATION OF ANY CHANGES.
10. THE CONTRACTOR SHALL MAINTAIN A SET OF REBUILT DRAWINGS IN THE FIELD DURING CONSTRUCTION. ALL "RECORD" INFORMATION, UTILITIES NOT SHOWN ON THE DRAWINGS, AND CHANGES IN SOIL CONDITIONS SHALL BE RECORDED ON THE REBUILT DRAWINGS. RECORDED INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO ANY CHANGES IN UTILITY LOCATION OR ALIGNMENT, CHANGES IN ELEVATIONS, CHANGES IN DRAINAGE PATTERNS AND ANY CHANGES TO THE EXISTING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT REBUILT DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL, WITHIN 30 DAYS OF SUBMITTAL FOR SUBSTITUTION. THE REBUILT DRAWING DOCUMENTS ARE SUBMITTED AND APPROVED BY THE PROJECT ENGINEER IN ACCORDANCE WITH SECTION 01700 "CONTRACT CLOSE-OUT" OF THE MPWS.
11. THE CONTRACTOR IS RESPONSIBLE TO HIRE A STATE OF MONTANA LICENSED WATER WELL CONTRACTOR. THE CONTRACTOR SHALL ASSURE THAT THE WATER WELL CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL DRILL CUTTINGS AND WATER.
12. ALL DAMAGES TO EXISTING IMPROVEMENTS AS A RESULT OF ANY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE PROJECT ENGINEER AND THE OWNER. NO ADDITIONAL COST TO THE OWNER WILL BE INCURRED FOR THIS WORK.
13. UNLESS OTHERWISE SPECIFIED THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN OFF-SITE DISPOSAL SITE FOR ALL UNSUITABLE/UNUSABLE MATERIAL REMOVED FROM THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRANSPORTATION OF ALL MATERIALS TO BE REMOVED BY THE OWNER PRIOR TO USE.
14. ONLY THOSE DRAWINGS STAMPED "APPROVED FOR CONSTRUCTION" DATED AND SIGNED BY THE PROJECT ENGINEER AND APPROVED BY THE CITY OF YAUPELL SHALL BE USED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE DRAWING SET IN USE IS CURRENT.
15. THE CONTRACTOR SHALL GIVE THE PROJECT ENGINEER A MINIMUM OF 24HRS ADVANCED NOTICE PRIOR TO ANY REQUIRED INSPECTION OR FIELD TESTING AND 48HRS NOTICE PRIOR TO SCHEDULING ANY SURVEY.

TIMBRSHOR SUBDIVISION PWS WATER SUPPLY SYSTEM 2020



VICINITY MAP
SCALE 1" = 500' - FULL SIZE
ABBREVIATION TABLE

APPROX. APPROXIMATELY	PPM	GALLONS PER MINUTE
ABV	ABR	RELEASE VALVE
AWM	ALL	WEATHER WOOD
C	CL	CLASS
CL	CLAS	CLASS
DL	DL	DRAINER
ED	ED	EMERGENCY
FEI	FEI	ENTER AND INSTALL
GA	GA	GALLON

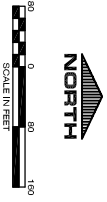
DRAWING SHEET INDEX

1	COVER
2	SITE PLAN WITH WATER DISTRIBUTION SYSTEM
3	WATER CONTROL BUILDING DETAIL
4	WATER DISTRIBUTION SYSTEM DETAILS
5	MCCARTHY WELL CONSTRUCTION DETAILS

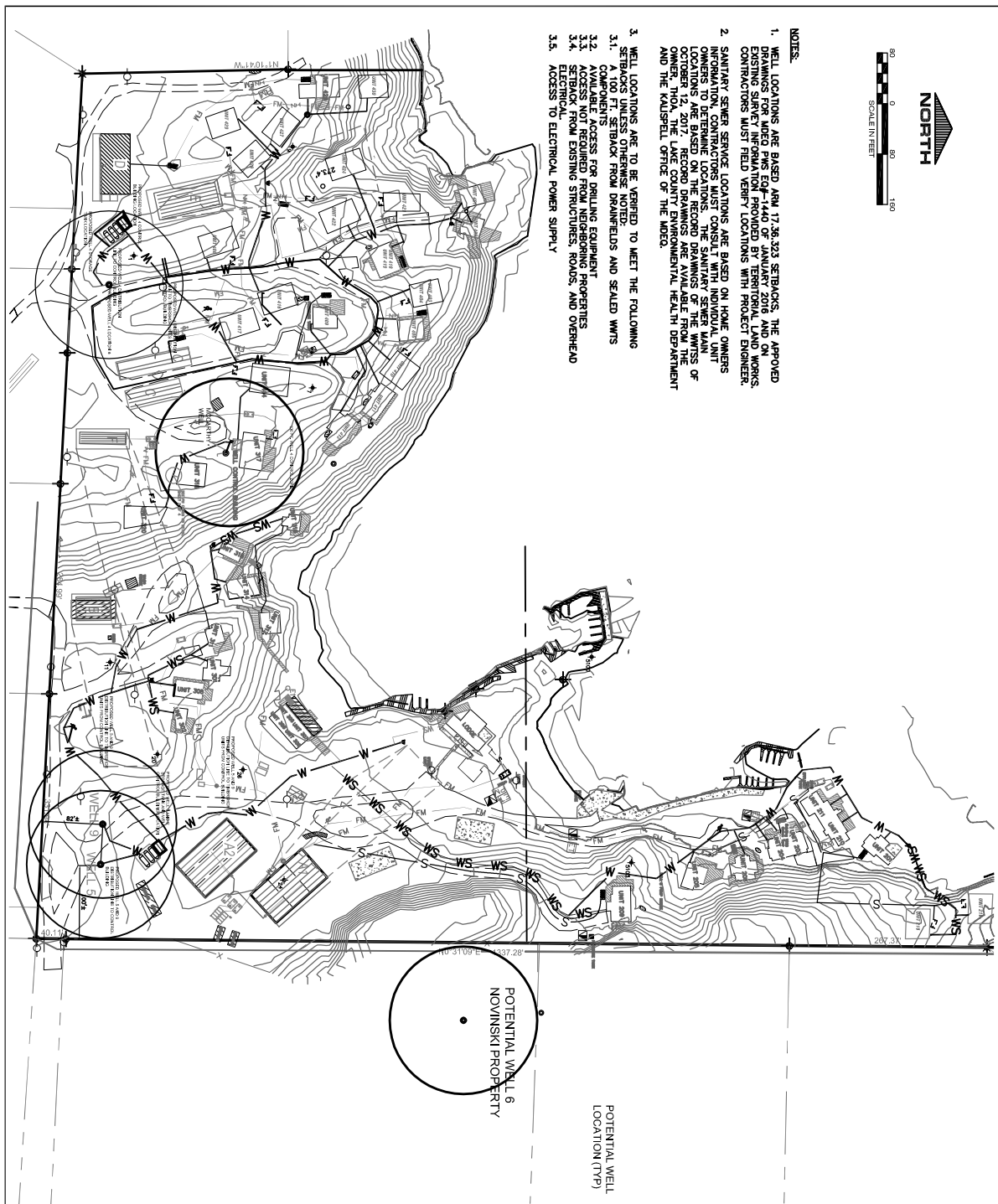
LEGEND

	EXISTING
	5' CONTOUR
	1' CONTOUR
	PROPERTY LINE
	EASEMENT
	ROAD
	DRAINFIELD
	SEPTIC TANK
	SEWER LINE
	WELL
	WATER LINE
	SERVICE AREA
	NON-POTABLE WATER
	UNDERGROUND STORAGE TANK

<p>DATE: 2-16-2020 DESCRIPTION: COVER AND SITE PLAN/LAYOUT</p> <p>DATE: 4-11-2020 DESCRIPTION: COVER CREATED</p>	<p>BY: [] DATE: []</p>
<p>TIMBRSHOR SUBDIVISION WATER SYSTEM IMPROVEMENTS FOR TIMBRSHOR HOA</p> <p>SECTION 7, T23N, R19W, P3M, M, LAKE COUNTY, MONTANA</p>	
<p>DATE: 2-16-2020 DRAWING NUMBER: 1 OF 10</p>	



- NOTES:**
1. WELL LOCATIONS ARE BASED APM 17.36.323 SETBACKS, THE APPROVED DRAWINGS FOR WED PWS EQUIP. 140 OF JANUARY 2016 AND ON RECORD DRAWINGS FOR WED PWS EQUIP. 140 OF JANUARY 2016. CONTRACTORS MUST FIELD VERIFY LOCATIONS WITH PROJECT ENGINEER.
 2. SANITARY SEWER SERVICE LOCATIONS ARE BASED ON HOME OWNERS RECORD DRAWINGS AND VISUAL INSPECTION OF THE SANITARY SEWER MAIN LOCATIONS ARE BASED ON THE RECORD DRAWINGS OF THE WYMS OF OCTOBER 12, 2017. RECORD DRAWINGS ARE AVAILABLE FROM THE PROJECT ENGINEER AND THE MONTANA DEPARTMENT OF HEALTH AND THE MALSPELL OFFICE OF THE WDO.
 3. WELL LOCATIONS ARE TO BE VERIFIED TO MEET THE FOLLOWING SETBACKS UNLESS OTHERWISE NOTED:
 - 3.1. A 100 FT. SETBACK FROM DRAINFIELDS AND SEALED WYMS
 - 3.2. 50 FT. SETBACK FROM EXISTING DRAINAGE
 - 3.3. ACCESS NOT REQUIRED FROM NEIGHBORING PROPERTIES
 - 3.4. SETBACK FROM EXISTING STRUCTURES, ROADS, AND OVERHEAD ELECTRICAL
 - 3.5. ACCESS TO ELECTRICAL POWER SUPPLY



- LEGEND**
- (B) PROPERTY BOUNDARY
 - (B) ADJACENT PROPERTY BOUNDARY
 - (E) LOT LINE
 - (E) WATER LINE
 - (E) WATER SERVICE
 - (E) SEWER FORCE MAIN SERVICE
 - (E) GRAVEL ROAD
 - (E) CONCRETE
 - (E) INDIVIDUAL SEPTIC TANK AND LINE
 - (E) FORCE MAIN
 - (E) SANITARY SEWER SERVICE
 - (E) SEWER FORCE MAIN SERVICE

- SYMBOLS**
- (S) SEPTIC TANK
 - (D) DRAINFIELD
 - (W) WELL
 - (J) TELEPHONE JUNCTION BOX
 - (E) ELECTRICAL TRANSFORMER
 - (M) POWER METER
 - (P) POWER POLE
 - (S) SET 30" x 24" REBAR WITH 4" PVC SWALLOWED IN, CASTING SOUNDS*
 - (N) FOUND AS NOTED.
 - (X) FOUND 2" BRASS CAP
 - (P) FOUND PVC PIPE
 - (O) FOUND PROPANE TANK
 - (B) EXISTING BUILDING
 - (P) EXISTING SOIL PROFILE
 - (P) EXISTING CONTROL POINT
 - (P) CHECK VALVE
 - (P) AIR RELEASE VALVE
 - (D) DRAINFIELD
 - (P) SEPTIC TANK
 - (P) ISOLATION GATE VALVE
 - (F) SEPTIC

POTENTIAL WELL LOCATION (TYP)

POTENTIAL WELL 6 NOVINSKI PROPERTY

NOTE:
NOT ALL FEATURES SHOWN IN LEGEND AND SYMBOLS
APPEAR IN DRAWING.

DATE	DESCRIPTION	BY	CHKD

**TIMBRSHOR SUBDIVISION PWS
WATER SYSTEM IMPROVEMENTS**

FOR
TIMBRSHOR HOMEOWNERS ASSOCIATION

SECTION 7, T.23N., R.31W., P.14M., LAKE COUNTY, MONTANA



H&B ENGINEERING, INC.
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WWW.H&BENGINEERING.COM

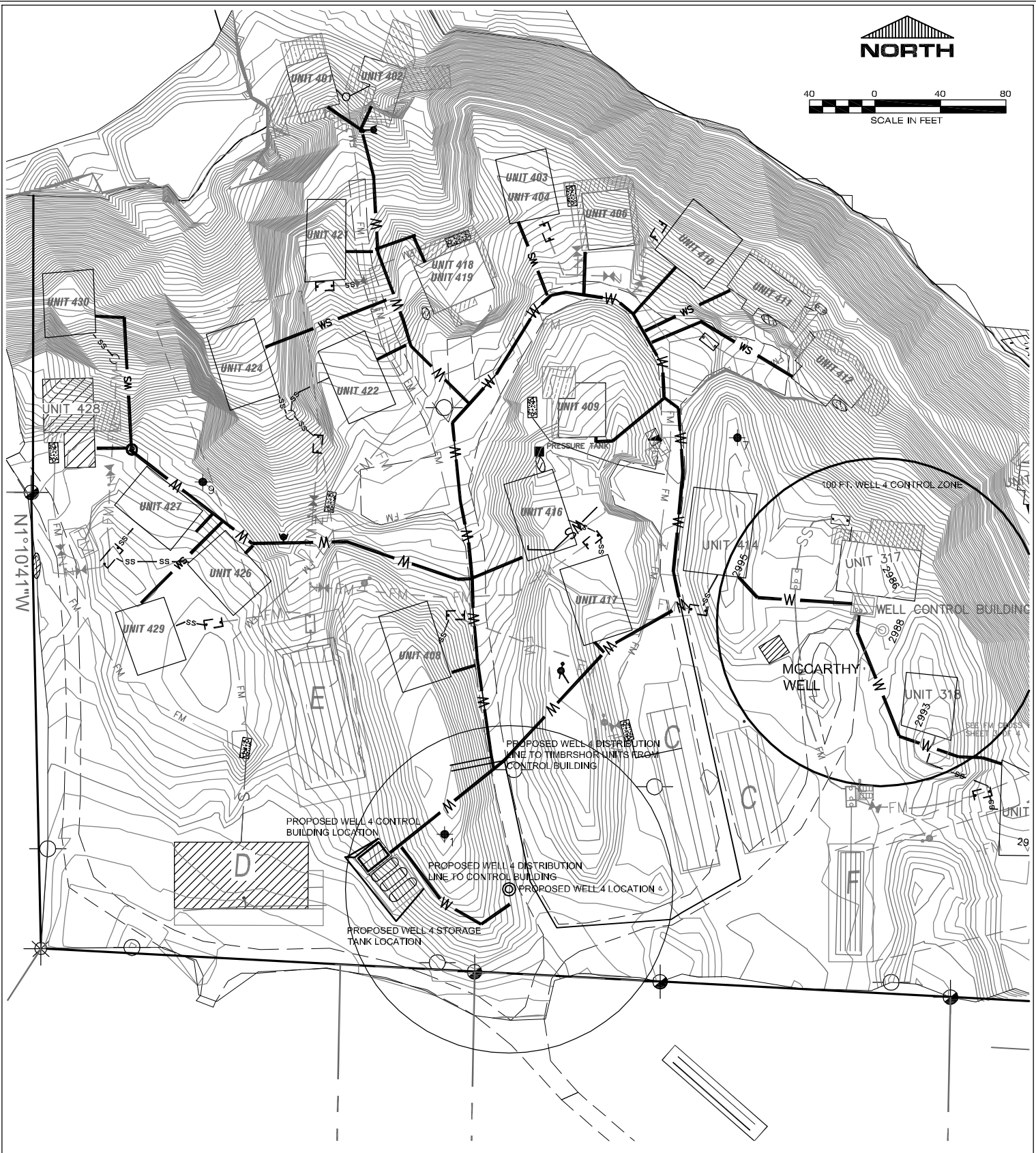
CONTRACTOR'S CERTIFICATION: I, THE UNDERSIGNED, HAVE PREPARED THE ENGINEERING DESIGN AND CALCULATIONS FOR THE PROJECT DESCRIBED HEREIN. I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MONTANA AND I AM NOT PROVIDING ENGINEERING SERVICES TO ANY OTHER PARTY FOR THE SAME PROJECT.

DRAWING TITLE:
**TIMBRSHOR SUBDIVISION
PWS AND WELL**

DATE:
MAY 2020

PROJECT NO:
1502

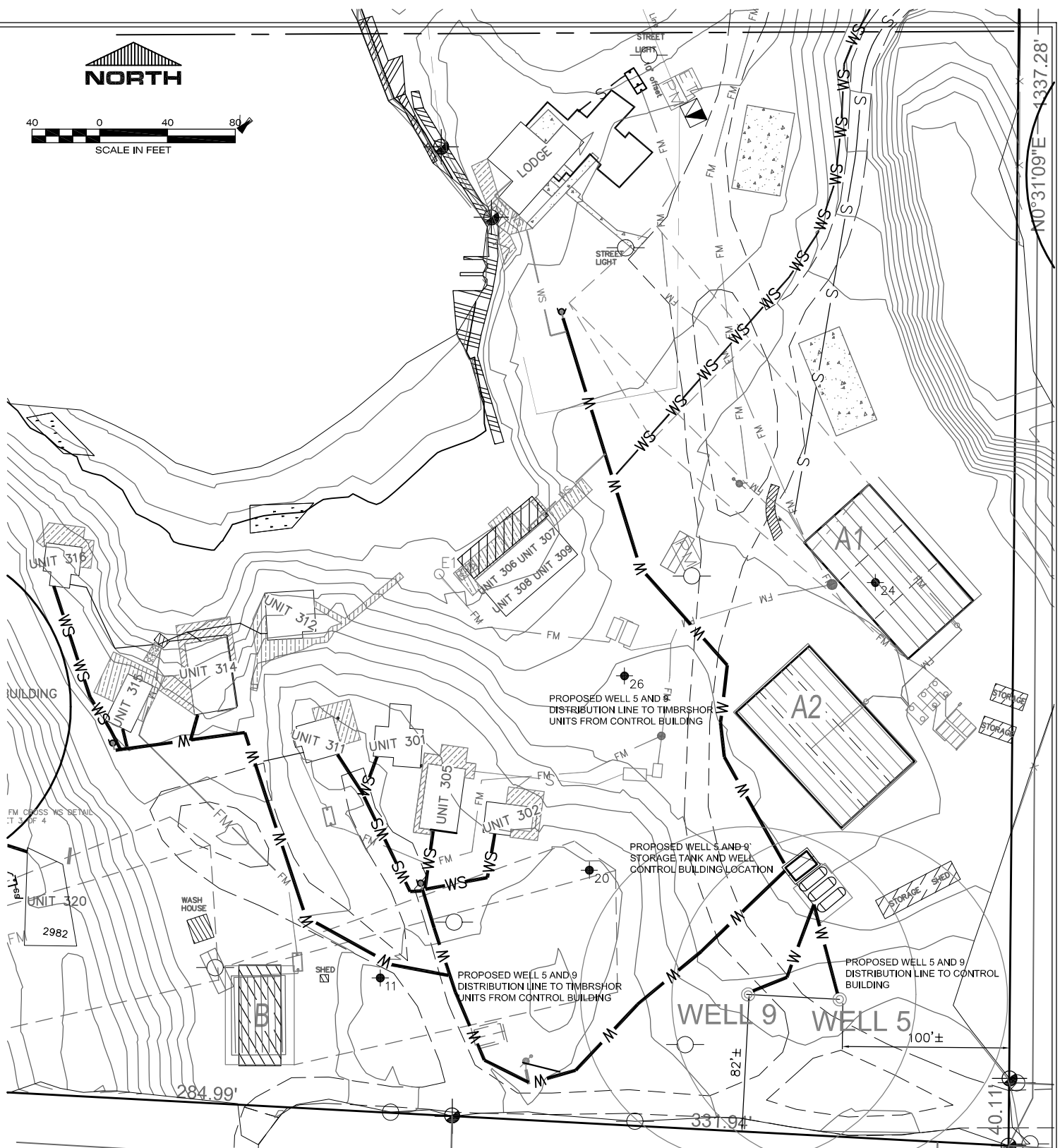
DRAWING NUMBER:
2 OF 10



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DRAWING TITLE:			
WELL #4 PIPELINE DISTRIBUTION			
FOR			
TIMBRSHOR SUBDIVISION PWS			
SECTION 7			
T23N, R 19W, PM, M., LAKE COUNTY, MONTANA			
DATE: JUNE 16, 2020	PROJECT NUMBER: T.58.2	SCALE: AS SHOWN	SHEET: 3 OF 10
FILE LOCATION: S:\LAND PRO...T.58.2\DWG	DRAWN BY: KMH	APPROVED BY: THOA	



WELL 5 AND 9 WELL LOCATION AND PIPELINE DISTRIBUTION SYSTEM ROUTING SOUTH HALF



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DRAWING TITLE:
WELL 5 AND 9 SOUTH PIPELINE DISTRIBUTION

FOR
TIMBRSHOR SUBDIVISION PWS

SECTION 7
T23N, R 19W, PM, M., LAKE COUNTY, MONTANA

DATE: JUNE 15, 2020	PROJECT NUMBER: T.58.2	SCALE: AS SHOWN	SHEET: 4 OF 10
FILE LOCATION: S:\LAND PROJ...T.58.2\DWG	DRAWN BY: KMH	APPROVED BY: KMH	



**WELL 5 AND 9 PIPELINE DISTRIBUTION SYSTEM
ROUTING NORTH HALF**

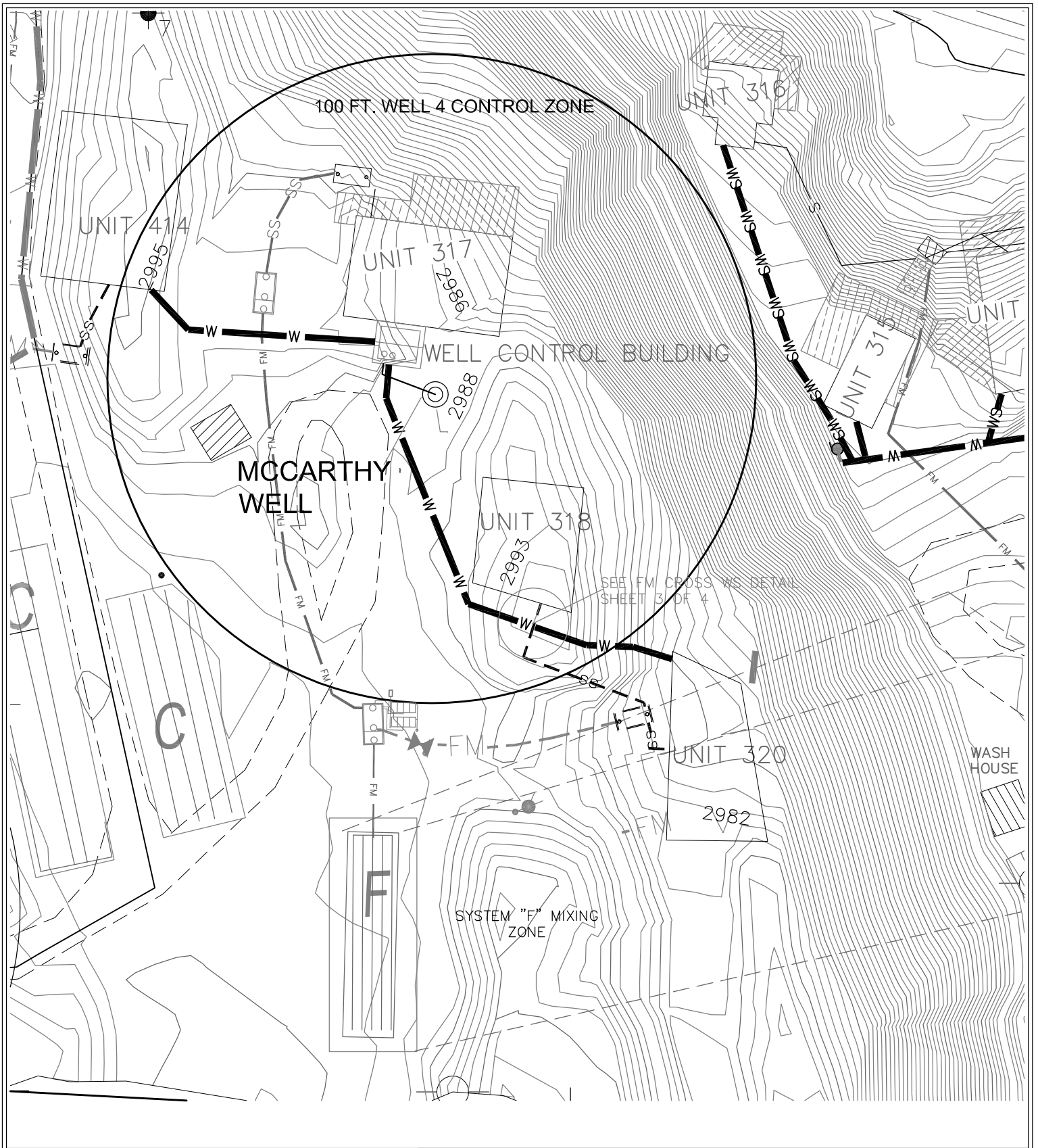


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DRAWING TITLE:
WELL 5 AND 9 NORTH PIPELINE DISTRIBUTION
 FOR
TIMBRSHOR SUBDIVISION PWS
 SECTION 7
 T23N, R 19W, PM, M., LAKE COUNTY, MONTANA

DATE: JUNE 15, 2020	PROJECT NUMBER: T.58.2	SCALE: AS SHOWN	SHEET: 5 OF 10
FILE LOCATION: S:\LAND PRO...T.58.2\DWG	DRAWN BY: KMH	APPROVED BY: THOA	



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DRAWING TITLE:

McCARTHY WATER SYSTEM SITE PLAN

FOR

TIMBRSHOR SUBDIVISION PWS

SECTION 7

T23N, R 19W, PM, M., LAKE COUNTY, MONTANA

DATE:
 JUNE 15, 2020

PROJECT NUMBER:
 T.58.2

SCALE:
 AS SHOWN

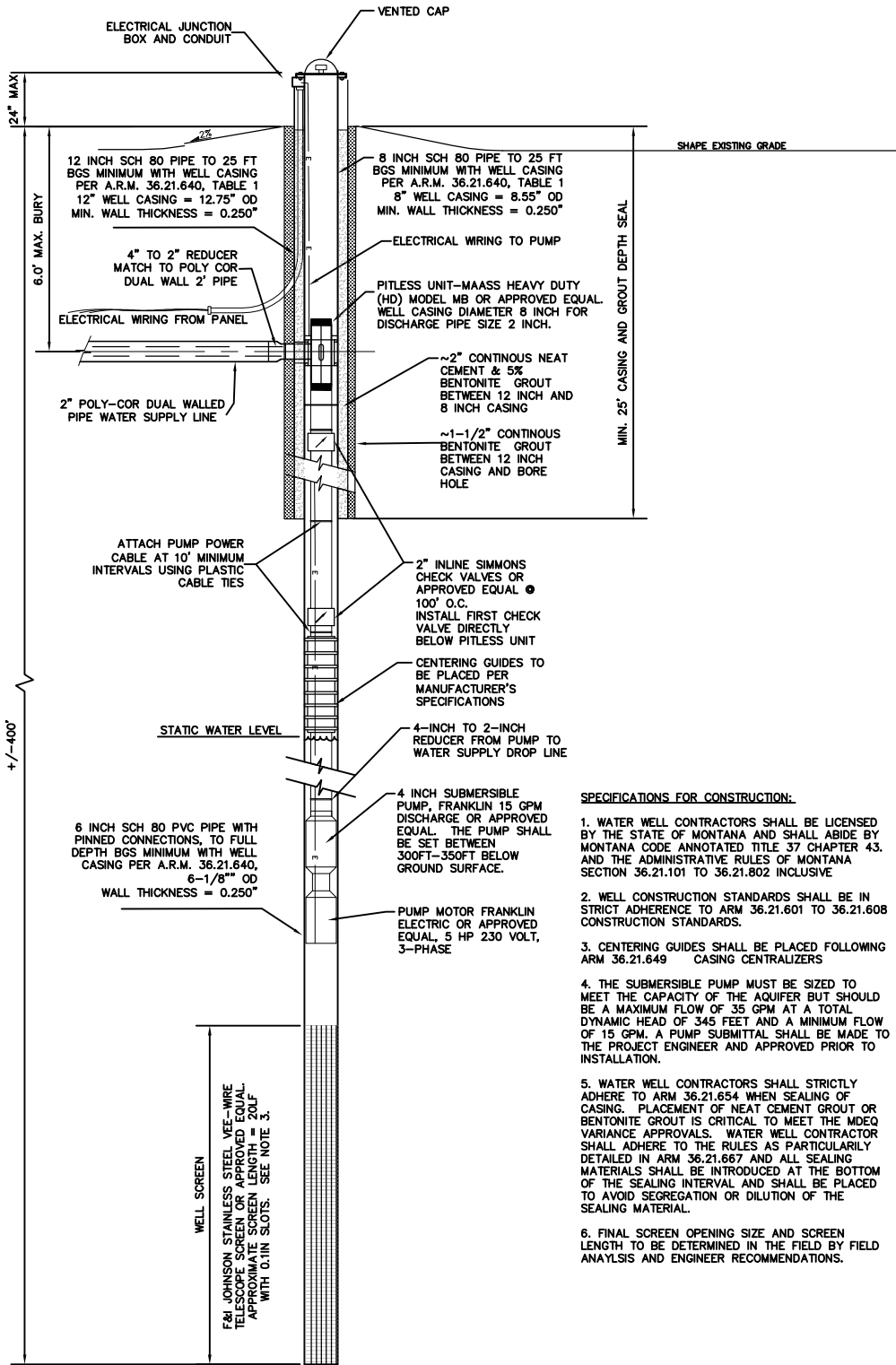
SHEET:

FILE LOCATION:
 S:\LAND PRO...T.58.2\DWG

DRAWN BY:
 KMH

APPROVED BY:
 KMH

6 OF 10



SPECIFICATIONS FOR CONSTRUCTION:

1. WATER WELL CONTRACTORS SHALL BE LICENSED BY THE STATE OF MONTANA AND SHALL ABIDE BY MONTANA CODE ANNOTATED TITLE 37 CHAPTER 43, AND THE ADMINISTRATIVE RULES OF MONTANA SECTION 36.21.101 TO 36.21.802 INCLUSIVE
2. WELL CONSTRUCTION STANDARDS SHALL BE IN STRICT ADHERENCE TO ARM 36.21.601 TO 36.21.608 CONSTRUCTION STANDARDS.
3. CENTERING GUIDES SHALL BE PLACED FOLLOWING ARM 36.21.649 CASING CENTRALIZERS
4. THE SUBMERSIBLE PUMP MUST BE SIZED TO MEET THE CAPACITY OF THE AQUIFER BUT SHOULD BE A MAXIMUM FLOW OF 35 GPM AT A TOTAL DYNAMIC HEAD OF 345 FEET AND A MINIMUM FLOW OF 15 GPM. A PUMP SUBMITTAL SHALL BE MADE TO THE PROJECT ENGINEER AND APPROVED PRIOR TO INSTALLATION.
5. WATER WELL CONTRACTORS SHALL STRICTLY ADHERE TO ARM 36.21.654 WHEN SEALING OF CASING. PLACEMENT OF NEAT CEMENT GROUT OR BENTONITE GROUT IS CRITICAL TO MEET THE MDEQ VARIANCE APPROVALS. WATER WELL CONTRACTOR SHALL ADHERE TO THE RULES AS PARTICULARLY DETAILED IN ARM 36.21.667 AND ALL SEALING MATERIALS SHALL BE INTRODUCED AT THE BOTTOM OF THE SEALING INTERVAL AND SHALL BE PLACED TO AVOID SEGREGATION OR DILUTION OF THE SEALING MATERIAL.
6. FINAL SCREEN OPENING SIZE AND SCREEN LENGTH TO BE DETERMINED IN THE FIELD BY FIELD ANALYSIS AND ENGINEER RECOMMENDATIONS.

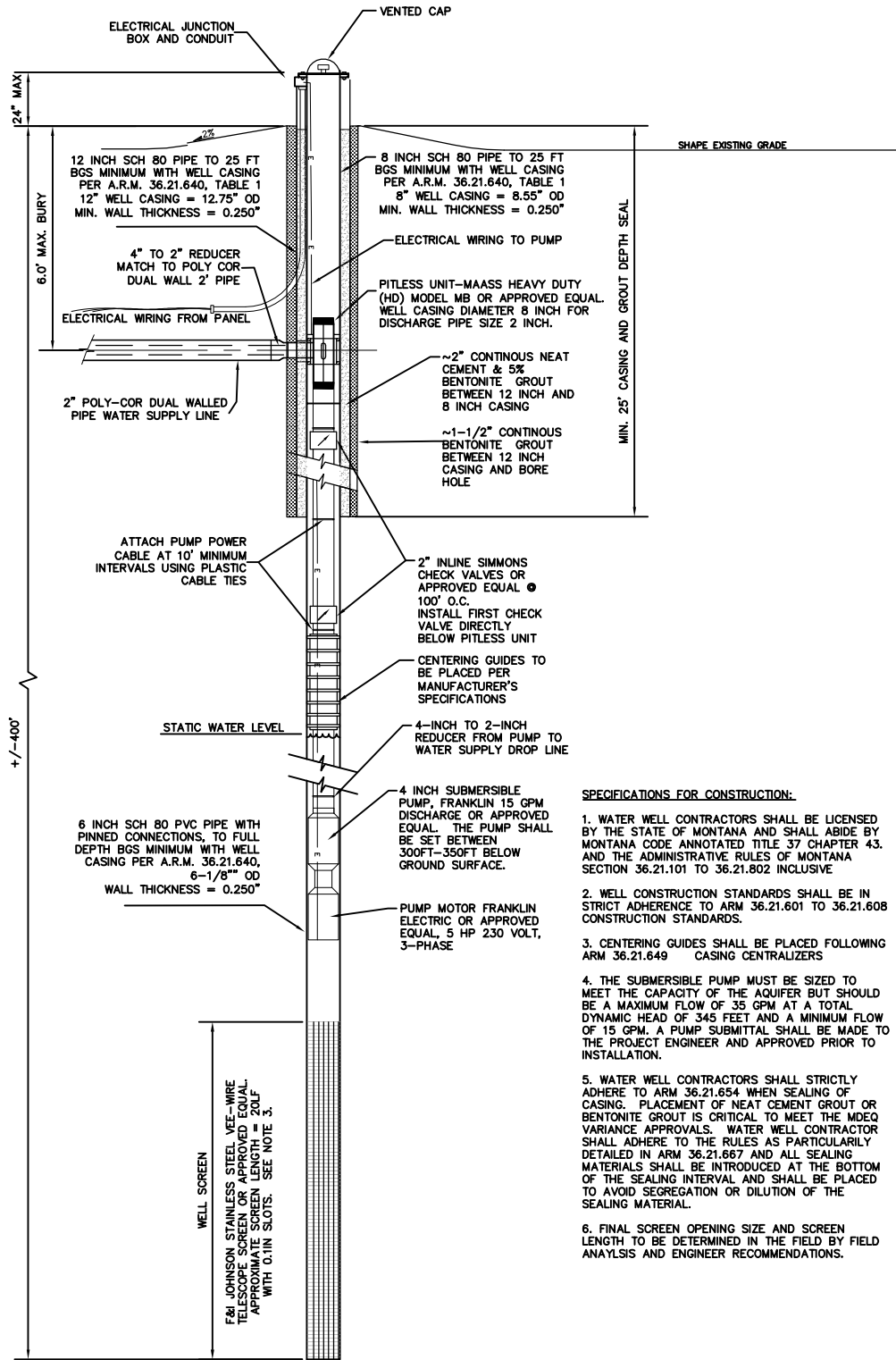
THOA PWS WELL 4, CONSTRUCTION DETAIL
SCALE: N.T.S.



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DRAWING TITLE:			
WELL 4 CONSTRUCTION DETAILS			
FOR			
TIMBRSHOR SUBDIVISION PWS			
SECTION 7			
T. 23N., R. 19 W., P.M., M., LAKE COUNTY, MONTANA			
DATE:	PROJECT NUMBER:	SCALE:	SHEET:
JUNE 2020	T.58.2	AS SHOWN	7 OF 10
FILE LOCATION:	DRAWN BY:	APPROVED BY:	
S:\LAND...T.58.2\DWG\WELL 4 DETAILS.DWG	KMH	KMH	



SPECIFICATIONS FOR CONSTRUCTION:

1. WATER WELL CONTRACTORS SHALL BE LICENSED BY THE STATE OF MONTANA AND SHALL ABIDE BY MONTANA CODE ANNOTATED TITLE 37 CHAPTER 43, AND THE ADMINISTRATIVE RULES OF MONTANA SECTION 36.21.101 TO 36.21.802 INCLUSIVE
2. WELL CONSTRUCTION STANDARDS SHALL BE IN STRICT ADHERENCE TO ARM 36.21.601 TO 36.21.608 CONSTRUCTION STANDARDS.
3. CENTERING GUIDES SHALL BE PLACED FOLLOWING ARM 36.21.649 CASING CENTRALIZERS
4. THE SUBMERSIBLE PUMP MUST BE SIZED TO MEET THE CAPACITY OF THE AQUIFER BUT SHOULD BE A MAXIMUM FLOW OF 35 GPM AT A TOTAL DYNAMIC HEAD OF 345 FEET AND A MINIMUM FLOW OF 15 GPM. A PUMP SUBMITTAL SHALL BE MADE TO THE PROJECT ENGINEER AND APPROVED PRIOR TO INSTALLATION.
5. WATER WELL CONTRACTORS SHALL STRICTLY ADHERE TO ARM 36.21.654 WHEN SEALING OF CASING. PLACEMENT OF NEAT CEMENT GROUT OR BENTONITE GROUT IS CRITICAL TO MEET THE MDEQ VARIANCE APPROVALS. WATER WELL CONTRACTOR SHALL ADHERE TO THE RULES AS PARTICULARLY DETAILED IN ARM 36.21.667 AND ALL SEALING MATERIALS SHALL BE INTRODUCED AT THE BOTTOM OF THE SEALING INTERVAL AND SHALL BE PLACED TO AVOID SEGREGATION OR DILUTION OF THE SEALING MATERIAL.
6. FINAL SCREEN OPENING SIZE AND SCREEN LENGTH TO BE DETERMINED IN THE FIELD BY FIELD ANALYSIS AND ENGINEER RECOMMENDATIONS.

THOA PWS WELL 5 AND 9, CONSTRUCTION DETAIL

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DRAWING TITLE:

WELL 5 AND 9 CONSTRUCTION DETAILS

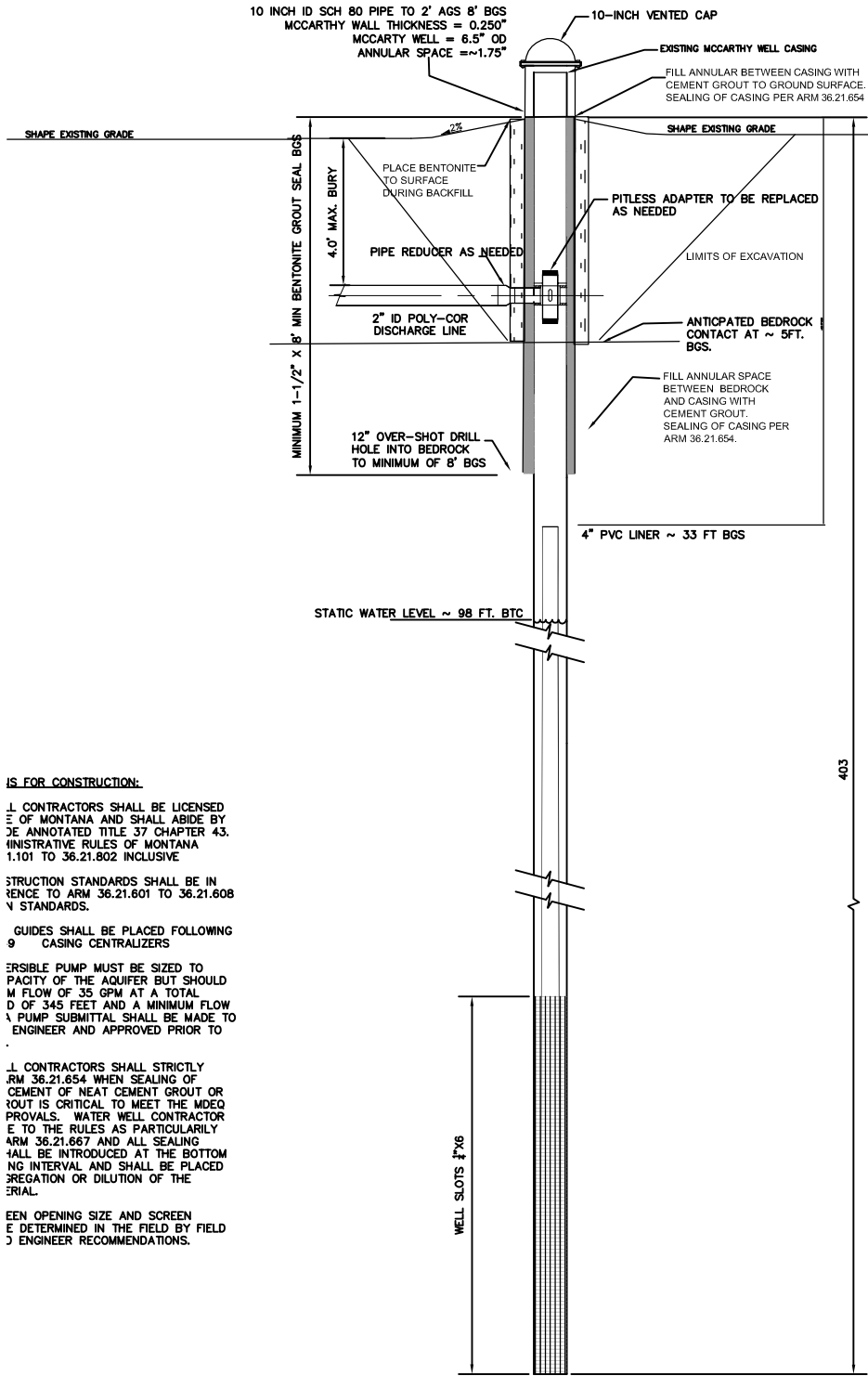
FOR

TIMBRSHOR SUBDIVISION PWS

SECTION 7

T. 23N., R. 19 W., P.M., M., LAKE COUNTY, MONTANA

DATE: JUNE 2020	PROJECT NUMBER: T.58.2	SCALE: AS SHOWN	SHEET: 8 OF 10
FILE LOCATION: S:\LAND...T.58.2\DWG\WELL 4 DETAILS.DWG	DRAWN BY: KMH	APPROVED BY: KMH	



- NOTE:
- EXCAVATION SHOULD BE COMPLETED WITHOUT DISTURBING THE EXISTING CASING. HAND TOOLS ARE RECOMMENDED WITHIN 1 FT. OF THE EXISTING CASING.
 - BACKFILL SHALL BE PLACED WITH HAND COMPACTION ONLY. A CONTINUOUS BENTONITE LAYER APPROXIMATELY 1-1/2" SHALL BE PLACED AROUND THE CASING DURING BACKFILL.
 - ALL GROUT REQUIREMENTS SHALL FOLLOW DEQ-3 SECTION 3.2.5.5 AND AS APPLICABLE ARM 36.21.654 TO 36.21.660.

IS FOR CONSTRUCTION:

1. CONTRACTORS SHALL BE LICENSED IN THE STATE OF MONTANA AND SHALL ABIDE BY THE RULES AS PARTICULARLY ARM 36.21.667 AND ALL SEALING SHALL BE INTRODUCED AT THE BOTTOM OF THE WELL AT EACH SEALING INTERVAL AND SHALL BE PLACED IN A MANNER TO PREVENT SEGREGATION OR DILUTION OF THE BENTONITE.

2. CONSTRUCTION STANDARDS SHALL BE IN ACCORDANCE WITH THE MONTANA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES STANDARDS.

3. GUIDES SHALL BE PLACED FOLLOWING THE REQUIREMENTS OF THE MONTANA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES STANDARDS.

4. THE PUMP MUST BE SIZED TO THE CAPACITY OF THE AQUIFER BUT SHOULD NOT EXCEED A FLOW OF 35 GPM AT A TOTAL HEAD OF 345 FEET AND A MINIMUM FLOW OF 5 GPM. THE PUMP SUBMITTAL SHALL BE MADE TO THE ENGINEER AND APPROVED PRIOR TO CONSTRUCTION.

5. CONTRACTORS SHALL STRICTLY FOLLOW ARM 36.21.654 WHEN SEALING OF CASING WITH CEMENT GROUT OR BENTONITE. IT IS CRITICAL TO MEET THE MDEQ APPROVALS. WATER WELL CONTRACTORS SHALL FOLLOW THE RULES AS PARTICULARLY ARM 36.21.667 AND ALL SEALING SHALL BE INTRODUCED AT THE BOTTOM OF THE WELL AT EACH SEALING INTERVAL AND SHALL BE PLACED IN A MANNER TO PREVENT SEGREGATION OR DILUTION OF THE BENTONITE.

6. THE WELL OPENING SIZE AND SCREEN SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR IN ACCORDANCE WITH THE ENGINEER RECOMMENDATIONS.

MCCARTHY WELL SEAL RECONSTRUCTION DETAIL

SCALE: N.T.S.



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DRAWING TITLE:

MCCARTHY WELL CONSTRUCTION DETAILS

FOR

TIMBRSHOR SUBDIVISION PWS

SECTION 7

T. 23N., R. 19W., P.M., M., LAKE COUNTY, MONTANA

DATE:
JUNE 2020

PROJECT NUMBER:
T.58.2

SCALE:
AS SHOWN

SHEET:

FILE LOCATION:
S:\LAND...T.58.2\DWG MCCARTHY

DRAWN BY:
KMH

APPROVED BY:
THOA

9 OF 10

