

2018 JEFFERSON STREET WATER

MARCH 2018

PROJECT LOCATION



SHEET INDEX

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VICINITY MAP
NTS

BID SET	SHEET REVISIONS				CITY OF LANDER 240 Lincoln Street Lander WY, 82520 (307) 332-2870	JEFFERSON STREET WATER AND SEWER	DATE 3-27-18
	NO.	DATE	DESCRIPTION	BY		TITLE SHEET	DRAWING NO. SHEET NO. 1 of 5

GENERAL CONSTRUCTION DRAWING NOTES:

GENERAL

1. ALL MATERIALS AND CONSTRUCTION RELATED TO WATER AND WASTEWATER FACILITIES SHALL BE IN ACCORDANCE WITH THE CITY'S RULES AND REGULATIONS AND DESIGN AND CONSTRUCTION STANDARDS.
2. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE SET OF APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS, AND ALL APPROVED EASEMENT AGREEMENTS.
3. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY AND SHALL NOTIFY ONE-CALL OF WYOMING AT 1-800-849-2476 OR 811 TWO DAYS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY REGARDING ALL REQUIRED TESTS AND INSPECTIONS, AND SHALL BE RESPONSIBLE FOR THE COORDINATION AND SCHEDULING THEREOF.
5. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND FOR ANY EMERGENCIES AT (307) 332-3956. THE POLICE AND FIRE DEPARTMENTS SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND AT TIMES WHEN FIRE HYDRANTS ARE TO BE TEMPORARILY OUT FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED BY THE CITY.
6. THE CONTRACTOR SHALL NOTIFY THE CITY OF ANY PROBLEM IMPACTING WATER AND WASTEWATER FACILITIES THAT WOULD POTENTIALLY REQUIRE A VARIANCE FROM THE APPROVED PLANS AND SPECIFICATIONS. ANY VARIANCE FROM THE APPROVED DOCUMENTS SHALL BE AT THE SOLE DISCRETION OF THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING ALL FIELD CHANGES TO THE APPROVED DOCUMENTS AND THE CONVEYING OF THIS INFORMATION TO THE DESIGN ENGINEER FOR THE PURPOSES OF PREPARING RECORD DOCUMENTS AS REQUIRED BY THE CITY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF (POTHOLING), AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN, OR INCORRECTLY SHOWN ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE CITY AND THE OWNER OF THE IMPACTED UTILITY. VERTICAL CLEARANCES AND UTILITY PROTECTION BETWEEN CROSSING CITY FACILITIES SHALL BE MAINTAINED IN STRICT CONFORMANCE WITH THE CITY'S STANDARDS.
8. EXISTING POTABLE VALVES WITHIN THE CITY SHALL BE OPERATED BY DISTRICT PERSONNEL UNLESS OTHERWISE ALLOWED BY THE CITY.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THE WORK. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED, AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE FLOODING OF EXISTING STREETS OR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THE PLANS. A DEWATERING PERMIT MAY BE REQUIRED PRIOR TO PUMPING ACTIVITIES. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS DUE TO GROUNDWATER SHALL BE STABILIZED AS DIRECTED BY THE CITY.
10. THE CITY AND ITS ENGINEER(S) ARE NOT GUARANTORS OF THE CONTRACTOR'S OBLIGATIONS AND PERFORMANCE OF THE CONTRACT. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY AND ITS ENGINEER(S) FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE WORK PERFORMED ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CITY OR ITS ENGINEER(S).
11. CONSTRUCTION WATER IS AVAILABLE TO THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE CITY REGARDING CURRENT REGULATIONS AND REQUIRED AGREEMENTS RELATED TO THE PROVISION OF CONSTRUCTION WATER.
12. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE UTILIZED WHERE WORK IS IN CLOSE PROXIMITY TO RESIDENCES, TRAILS, OR OTHER PUBLIC AREAS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AS REQUIRED FOR CONSTRUCTION ACTIVITIES. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO AND APPROVED BY THE CITY.
14. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE.
15. THE CONTRACTOR WILL BE HELD CONTINUALLY RESPONSIBLE FOR THE CLEANLINESS OF ALL ROADWAYS AT ALL TIMES. NO TOLERANCE WILL BE GRANTED FOR DIRTY, MUDDY & UNSAFE DRIVING CONDITIONS RESULTING FROM WORK UNDER THIS CONTRACT.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY MATERIALS/CONCRETE/COMPACTION TESTING AND SHALL BE RESPONSIBLE FOR THE COORDINATION AND SCHEDULING THEREOF.

POTABLE WATER DISTRIBUTION SYSTEM

1. TRACER WIRE SHALL BE INSTALLED ON ALL POTABLE WATER MAINS, REGARDLESS OF PIPE MATERIAL. ALL SPLICES SHALL BE MADE USING WATERPROOF GEL CAP TYPE CONNECTORS. UNDER THE SUPERVISION OF THE CITY, TESTS SHALL BE MADE BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION TO INSURE THAT THE WIRES CARRY A CONTINUOUS CURRENT BETWEEN TEST BOXES.
2. THERE SHALL BE A MINIMUM COVER OF 6 FEET OVER ALL POTABLE WATER MAINS AND SERVICE LINES.
3. ALL POTABLE WATER MAINS SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA C651, "DISINFECTING WATER MAINS." WHEN TABLETS ARE USED, A SUFFICIENT NUMBER OF TABLETS SHALL BE ADHERED TO THE TOP OF EACH PIPE TO PRODUCE A MINIMUM CONCENTRATION OF 100 MILLIGRAMS PER LITER. THE CHLORINATION OF ANY FINISHED PIPELINE WHERE THE TABLET METHOD WAS USED SHALL BE TESTED AND ACCEPTED BY THE CITY PRIOR TO HYDROSTATIC TESTING OF THE LINE.
4. ALL POTABLE WATER MAINS SHALL BE HYDROSTATICALLY TESTED AT A TEST PRESSURE OF 150 PSI UNLESS OTHERWISE DIRECTED BY THE CITY. TESTS SHALL BE MADE UNDER THE SUPERVISION OF THE CITY.
5. ALL POTABLE WATER DUCTILE IRON PIPE AND FITTINGS SHALL BE ENCASED IN CLEAR POLYETHYLENE WRAP.
6. ALL POTABLE SYSTEM VALVE BOX LIDS, METER PIT COVERS, MANHOLE COVERS AND VAULT COVERS SHALL BE FURNISHED WITH THE WORD "WATER" CLEARLY CAST ON THE SURFACE. POTABLE WATER MAIN VALVE BOX LIDS SHALL BE CIRCULAR.
7. A MINIMUM CENTERLINE-TO-CENTERLINE HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND ALL OTHER SANITARY SEWERS, STORM SEWERS, AND IRRIGATION WATER MAINS WHERE POSSIBLE.
8. A MINIMUM DISTANCE OF 7 FEET TO PIPE CENTERLINE SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND GUTTER FLOWLINES WHERE POSSIBLE.
9. ALL POTABLE WATER VALVES INSTALLED IN THE CITY SHALL OPEN LEFT (COUNTER-CLOCKWISE). VALVES 10-INCH AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. LARGER VALVES MAY BE RESILIENT SEAT GATE VALVES OR BUTTERFLY VALVES.
10. ONLY ONE CONNECTION TO THE EXISTING POTABLE WATER DISTRIBUTION SYSTEM SHALL BE MADE UNTIL ALL HYDROSTATIC TESTING, FLUSHING, AND CHLORINATION HAS BEEN COMPLETED.
11. THE CONTRACTOR SHALL RESTORE ALL CITY RIGHT-OF-WAY AND EASEMENTS AFFECTED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL CONDITION WHICH INCLUDES COMPLETING ALL REQUIRED REVEGETATION AND RESTORING ALL DITCHES, CULVERTS, FENCES, SIGNS, ETC.
12. THE CONTRACTOR SHALL INSTALL BEDDING MATERIAL BETWEEN THE NEW WATER LINE AND THE SPRINGLINE OF ALL OVERLYING STORMWATER RCP, SANITARY SEWER LINES AND SERVICES CROSSED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY DAMAGE TO OR SETTLING OF ALL EXISTING STORMWATER RCP, SANITARY SEWER LINES AND SERVICES CROSSED DURING CONSTRUCTION. THIS INCLUDES SUPPORTING THE RCP, SANITARY SEWER LINES AND SERVICES IF NECESSARY.
13. ALL BENDS AND FITTINGS SHALL BE PROTECTED FROM UNBALANCED THRUST BY BOTH CONCRETE THRUST BLOCKS (T.B.) AND RESTRAINED PIPE JOINTS.

ADDITIONAL CONSTRUCTION NOTES

1. THE EXISTING WATER LINES AND SERVICE LINES SHALL REMAIN IN SERVICE WHILE THE NEW WATER MAIN IS BEING CONSTRUCTED.
2. THE NEW WATER MAIN SHALL BE DISINFECTED, TESTED AND ACCEPTED BY THE CITY FOR SERVICE BEFORE IT IS TIED INTO THE SYSTEM.
3. AFTER THE NEW MAIN IS TESTED AND ACCEPTED, END CONNECTIONS SHALL BE MADE TO THE EXISTING SYSTEM AND THE EXISTING SERVICE LINES SHALL BE REPLACED AND TRANSFERRED TO THE NEW MAIN AS DESCRIBED IN THE SPECIFICATIONS AND SHOWN IN THE DETAILS, WITH MINIMAL DISRUPTION OF SERVICE TO THE TAP OWNERS.
4. ADEQUATE PROVISIONS FOR NOTIFICATION OF AN INTERRUPTION OF SERVICE MUST BE GIVEN TO THE CUSTOMER BY THE CONTRACTOR PRIOR TO THE ACTUAL ISOLATION OF THE SYSTEM.
5. THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENT PRIOR TO TAKING FIRE HYDRANTS AND SUPPLY WATER OUT OF SERVICE, AND SHALL DELIVER ALL REMOVED HYDRANTS TO THE PUBLIC WORKS BUILDING. NEW FIRE HYDRANTS MUST BE TESTED AND PUT INTO SERVICE PRIOR TO EX. ADJACENT FIRE HYDRANTS BEING REMOVED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL AND INLET PROTECTION AS NEEDED.
7. THE EXISTING UTILITIES HAVE BEEN SHOWN BASED OFF INFORMATION OBTAINED FROM LOCATES AND MAPPING. THE SANITARY SEWER SERVICES WERE IDENTIFIED BY VIDEO TAPING THE SEWER MAINS AND THEY HAVE BEEN SHOWN FROM THIS INFORMATION WHICH IS ALSO INCLUDED IN THE PROJECT SPECIFICATIONS. SOME GAS SERVICES WERE LOCATED AND ARE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ONE CALL OF WYOMING TO LOCATE ALL UTILITIES AND SHALL VERIFY THEIR LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ASSUME THAT EACH LOT HAS A GAS SERVICE STEMMING FROM THE MAIN WHERE GAS SERVICES HAVE NOT BEEN LOCATED. EACH LOT HAS A WATER SERVICE STEMMING FROM THE EXISTING WATER MAINS AND THE METER PIT LOCATIONS HAVE BEEN IDENTIFIED ON THE PLANS. THE CONTRACTOR SHALL ACCOUNT FOR ALL CROSSINGS OF UTILITIES SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, IN ITS BID PRICES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING THE LOCATION OF EXISTING WATER LINES AT CONNECTION LOCATIONS AS WELL AS AT UTILITY CROSSINGS TO DETERMINE POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION AND TO CONFIRM WATER LINE SIZES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING THEMSELVES WITH THE AREA SURROUNDING EACH CURB STOP OR METER PIT PRIOR TO BIDDING AND CONSTRUCTION.

SURVEY NOTES

SURVEY WAS PROVIDED BY WYDOT

COORDINATES ARE BASED ON THE WYOMING COORDINATE SYSTEM NAD 83 (2011), WY WEST CENTRAL ZONE, AND HAVE BEEN MULTIPLIED BY A PROJECT FACTOR OF: 1.000321491 LABELED PLAN DATA (COORDINATES, CURVE DATA, BEARINGS, DISTANCES, AND STATIONING) EXCEED SURVEY ACCURACY. EXISTING LAND LINES, PROPERTY LINES AND EASEMENT LINES NOT SURVEYED OR TIED TO THE ALIGNMENT SHOULD BE CONSIDERED APPROXIMATE. THE VERTICAL DATUM IS NAVD 88.

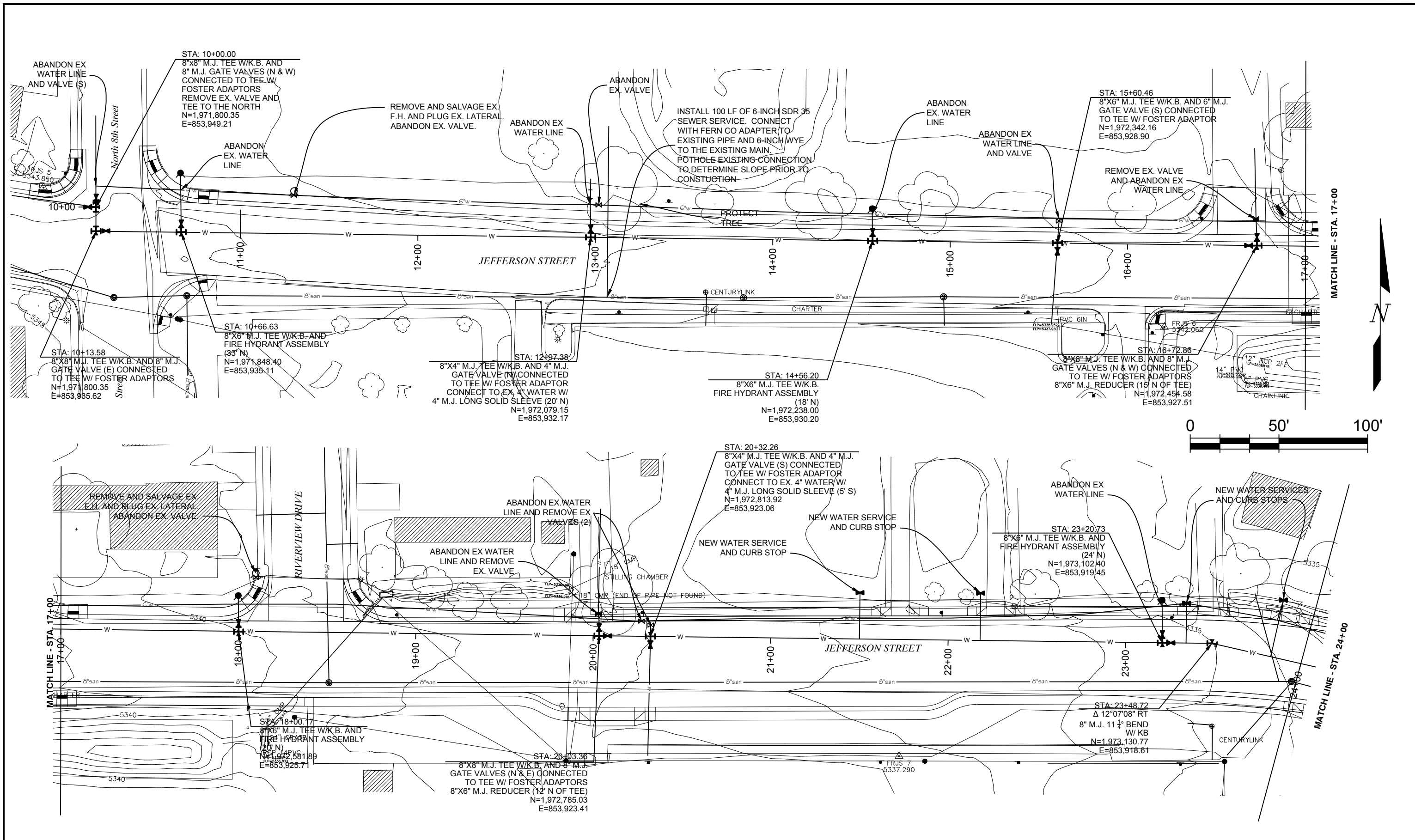
ABBREVIATIONS

B.O.P.	BOTTOM OF PIPE	N:	NORTHING COORDINATE
CIP	CAST IRON PIPE	N.T.S.	NOT TO SCALE
COMB.	COMBINATION	PVC	POLYVINYL CHLORIDE
	EASTING COORDINATE	R.O.W.	RIGHT OF WAY
EX.	EXISTING	SVC.	SERVICE
FH	FIRE HYDRANT	SACWSD	SOUTH ADAMS COUNTY WATER AND SANITATION DISTRICT
G.V.	GATE VALVE		
INV.	INVERT	T.O.P.	TOP OF PIPE
KB	KICK BLOCK	TYP.	TYPICAL
MH	MANHOLE	W/	WITH
MIN.	MINIMUM	WL	WATER LINE
M.J.	MECHANICAL JOINT		

LEGEND

-----	EXISTING EDGE OF ASPHALT	△	CONTROL POINT
8" W	PROPOSED WATER LINE	⊖	POWER POLE
35+00	↑ WATER LINE STATION	⊙	SANITARY MANHOLE
✂	WATER LINE VALVE	⊕	EXISTING FIRE HYDRANT
⊕	FIRE HYDRANT ASSEMBLY	⊕	EXISTING WATER VALVE
✂	PROPOSED KICK BLOCK	⊙	LIGHT POLE
┌	PROPOSED PLUG	⊙	EXISTING WATER METER
—2" g	EXISTING GAS LINE		
—e(o.h.)	EXISTING OVERHEAD ELECTRIC		
8" san	EXISTING SANITARY SEWER LINE		
6" w	EXISTING WATER LINE		
—36" stm	EXISTING STORM SEWER LINE		
—t	EXISTING TELEPHONE LINE		
//////	ASPHALT REMOVAL AND REPLACEMENT		

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	NO.	DATE	DESCRIPTION		BY	DRAWING NO.
					GENERAL NOTES, WATER LINE	SHEET NO. 2 OF 5
					NOTES	

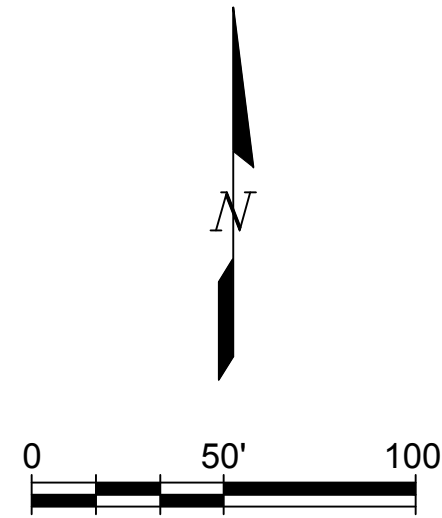
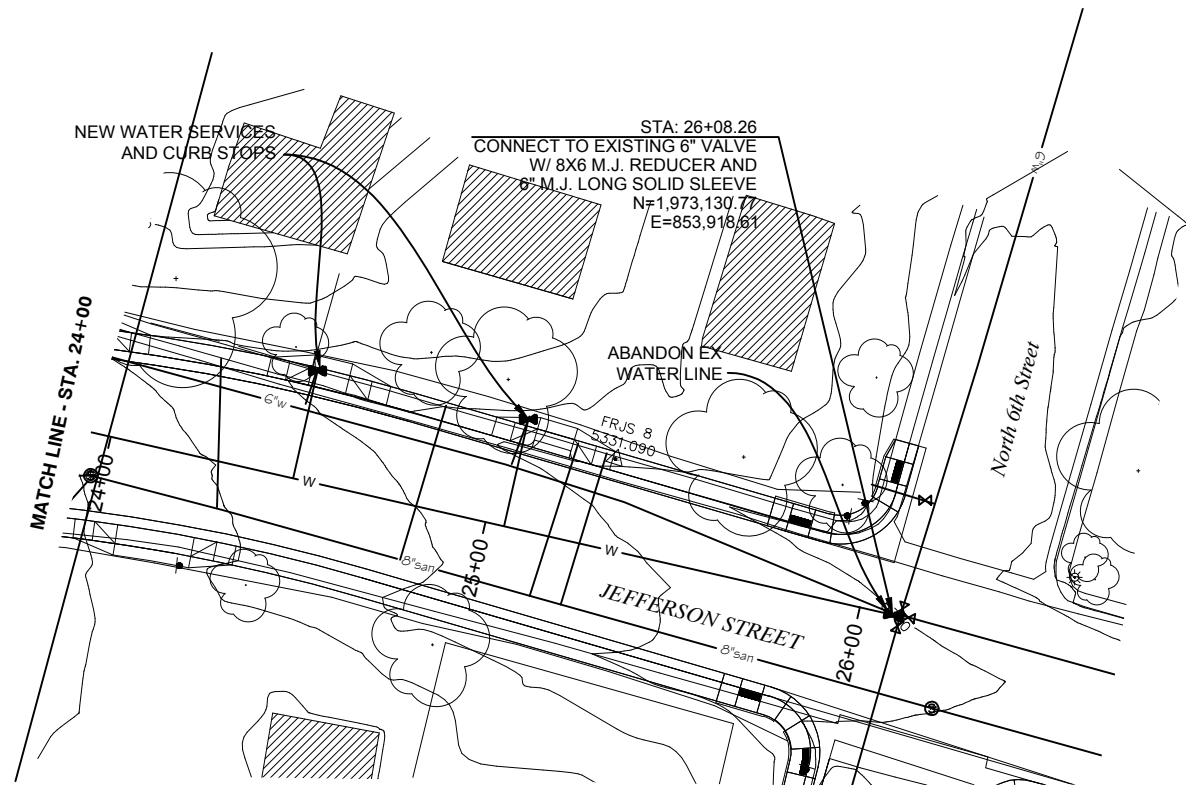


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NO.	DATE	DESCRIPTION	BY

CITY OF LANDER
 240 Lincoln Street
 Lander WY, 82520
 (307) 332-2870

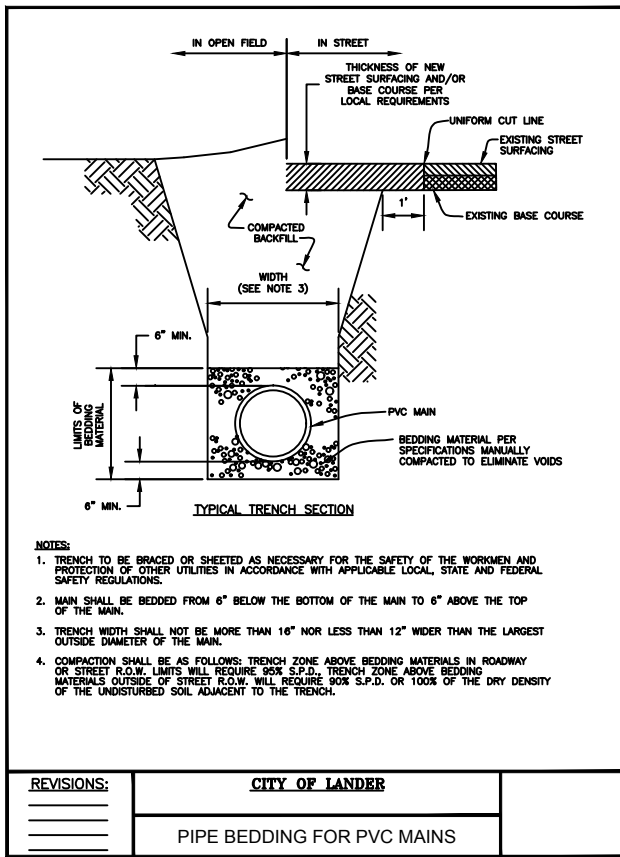
JEFFERSON STREET WATER AND SEWER		DATE 3-27-18
WATER PLAN 1		DRAWING NO.
		SHEET NO. 3 OF 5



CONSTRUCTION NOTES:

1. ADEQUATE PROVISIONS FOR NOTIFICATION OF AN INTERRUPTION OF SERVICE MUST BE GIVEN TO THE CUSTOMER BY THE CONTRACTOR PRIOR TO THE ACTUAL ISOLATION OF THE SYSTEM.
2. THE CONTRACTOR SHALL COORDINATE WITH THE SCHOOL DISTRICT DIRECTLY ON SHUTDOWN TIMING FOR TRANSFERRING SERVICES AND ENSURE THE WORK ON THIS PROJECT DOES NOT EFFECT THE ABILITY FOR THE SCHOOL DISTRICT TO CONDUCT THEIR DAILY OPERATIONS. THE SCHOOLS COULD HAVE FIRE ALARMS THAT MAY NEED TO BE TURNED OFF PRIOR TO DISCONNECTING THE SCHOOL SERVICES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL AND INLET PROTECTION AS NEEDED.
4. THE EXISTING UTILITIES HAVE BEEN SHOWN BASED OFF INFORMATION OBTAINED FROM LOCATES AND MAPPING. THE SANITARY SEWER SERVICE WAS IDENTIFIED BY VIDEO TAPING THE SEWER MAINS AND THEY HAVE BEEN SHOWN FROM THIS INFORMATION WHICH IS ALSO INCLUDED IN THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ONE CALL OF WYOMING TO LOCATE ALL UTILITIES AND SHALL VERIFY THEIR LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ASSUME THAT EACH LOT HAS A GAS SERVICE STEMMING FROM THE MAIN WHERE GAS SERVICES HAVE NOT BEEN LOCATED. EACH LOT HAS A WATER SERVICE STEMMING FROM THE EXISTING WATER MAINS AND THE CURB STOP LOCATIONS HAVE BEEN IDENTIFIED ON THE PLANS. THE CONTRACTOR SHALL ACCOUNT FOR ALL CROSSINGS OF UTILITIES SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, IN ITS BID PRICES.
5. THE CONTRACTOR SHALL MAKE CONNECTIONS TO BOTH SCHOOL DISTRICT SERVICE LINE BY EITHER CUTTING, CAPPING, AND KICKING THE LINE EXISTING LINE TO THE NEW LINE AS THEY INSTALL THE NEW LINE OR LAYING THE NEW LINE BELOW THE EXISTING SERVICE AND ROLLING THE TEE WITH AN 11 1/2 DEGREE BEND. THE FOSTER ADAPTER MAY NOT BE REQUIRED DEPENDING ON THE APPROACH OF THE CONTRACTOR.
6. THE ASPHALT REMOVAL AND DISPOSAL ON THIS PROJECT IS INCIDENTAL TO THE WATER LINE WORK. THERE SHALL BE A SEPARATE CONTRACTOR WHO WILL BE PERFORMING COMPLETE RECONSTRUCTION OFF ALL ASPHALT ON JEFFERSON STREET BETWEEN 6TH AND 8TH STARTING JUNE 1ST. THE CONTRACTOR FOR THIS PROJECT CAN REMOVE AS MUCH AS ASPHALT AS NEEDED TO SAFELY PERFORM THE WORK AS PART OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING AT LEAST 4-INCHES OF TEMPORARY DRIVING SERVICE IN ANY AREA WHERE ASPHALT IS REMOVED FOR FINAL COMPLETION. THE TEMPORARY SURFACE IS ALSO INCIDENTAL TO THE WATER LINE WORK.
7. THE SANITARY SEWER SERVICE GOING TO NORTH PARK NEEDS TO BE POTHOLED AND PROFILED BY THE CONTRACTOR FOR THE REPLACEMENT WORK. THERE MAY BE AN OPPORTUNITY TO RELOCATE AND ABANDON THE SERVICE DEPENDING ON THE CONTRACTOR'S ABILITY TO PROTECT THE EXISTING TREE NEXT TO THE SERVICE.
8. THIS PROJECT REQUIRES BOTH MECHANICAL JOINT RESTRAIN (PER THE LENGTHS REQUIRED ON THE ATTACHED TABLE) AND KICK BLOCKS.
9. THE OWNER WANTS TO POINT OUT JUST ONE LAST TIME THAT ONLY ONE ONE LIVE CONNECTION WILL BE MADE TO THE EXISTING SYSTEM PRIOR TO PASSING ALL WATER LINE TESTING. ALL OTHER CONNECTIONS WILL BE MADE ONLY AFTER THE WATER LINE IS PROVEN TO BE ACCEPTABLE.
10. TRACER WIRE WILL BE RUN WITH EACH SERVICE AND RUN OUTSIDE THE CURB STOP VALVES. THE TOP OF THE TRACER WIRE CAN BE INSERTED INTO ONE OF THE CURB STOP OPENINGS.
11. THERE IS AN APPROVED MATERIALS LIST FOR THE PROJECT. IF CONTRACTOR IS SUBMITTING AN "OR EQUAL" MATERIAL NOT ON THE LIST, THE CONTRACTOR NEEDS TO GET APPROVAL PRIOR TO THE BID.
12. THIS PROJECT IS NOT ANTICIPATED TO NEED TEMPORARY WATER TO ANY PROPERTIES TO PERFORM THE WORK. IF THE CONTRACTOR WANTS TO USE TEMPORARY WATER, THAT WORK NEEDS TO BE INCIDENTAL TO THE WATER LINE WORK.
13. CONTRACTOR IS RESPONSIBLE FOR PROFILE FOR WATER LINE BASED ON UTILITY INFORMATION DISCOVERED DURING CONSTRUCTION. MINIMUM COVER SHALL BE 6'.
14. BEDDING MATERIAL SHALL BE ASTM #57 STONE COMMONLY REFERRED TO AS "PIPE BEDDING" FOR THIS PROJECT OR APPROVED EQUAL.

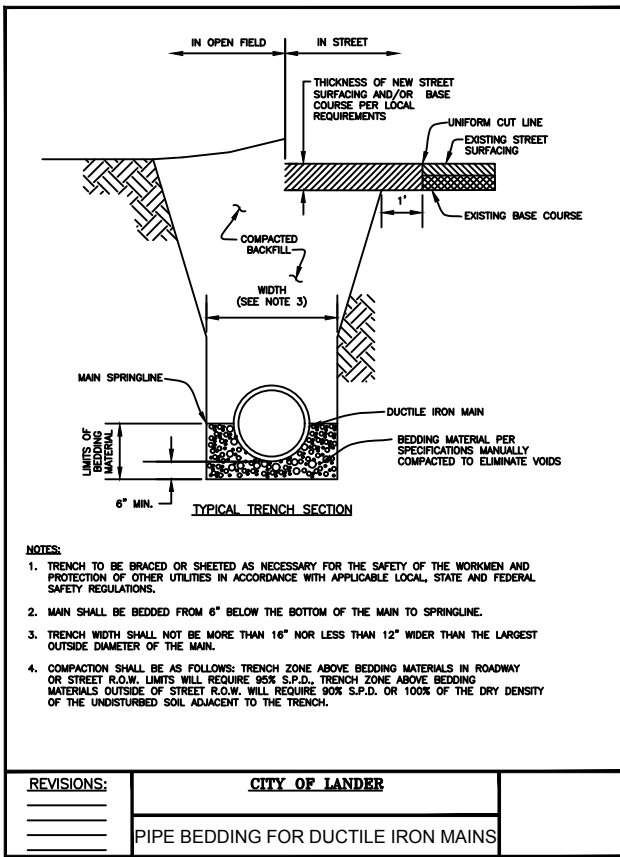
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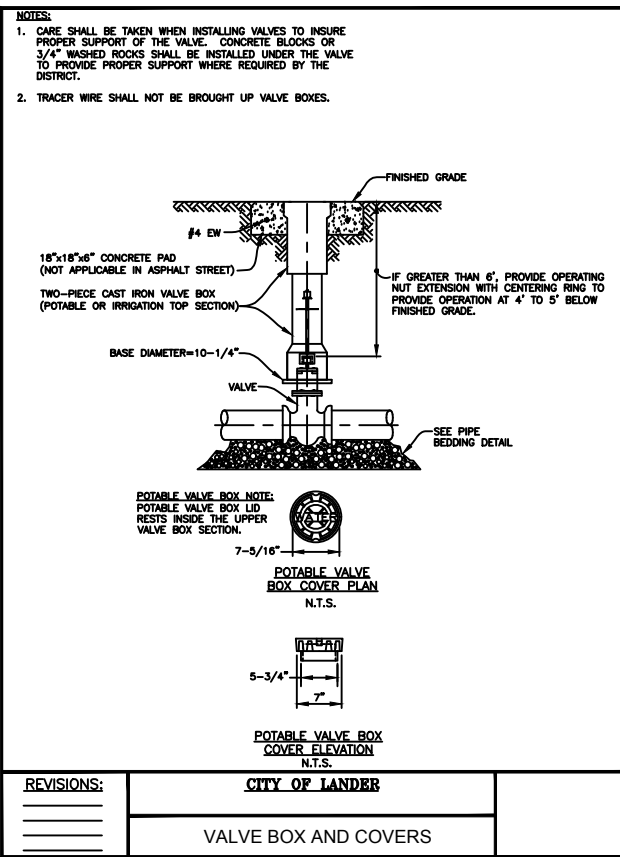
PIPE BEDDING FOR PVC MAINS



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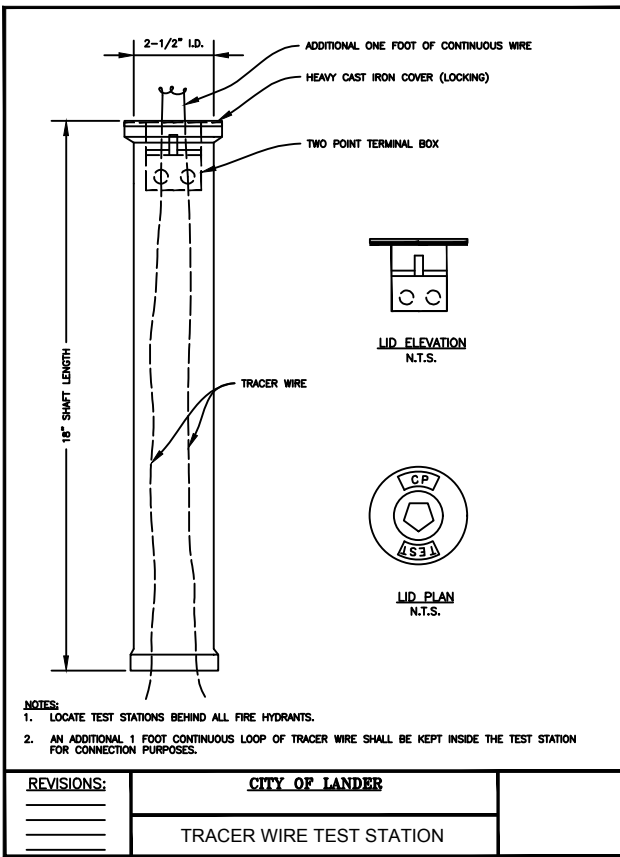
PIPE BEDDING FOR DUCTILE IRON MAINS



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VALVE BOX AND COVERS



REVISIONS:

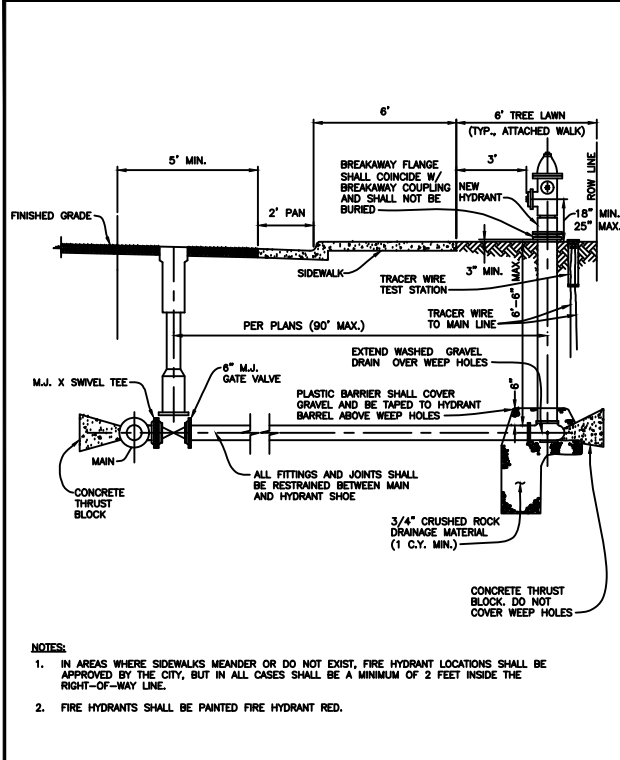
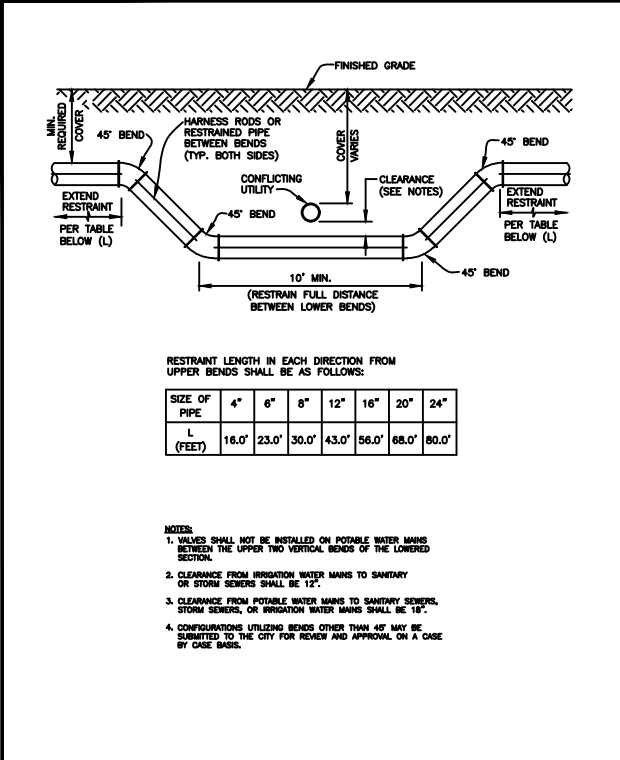
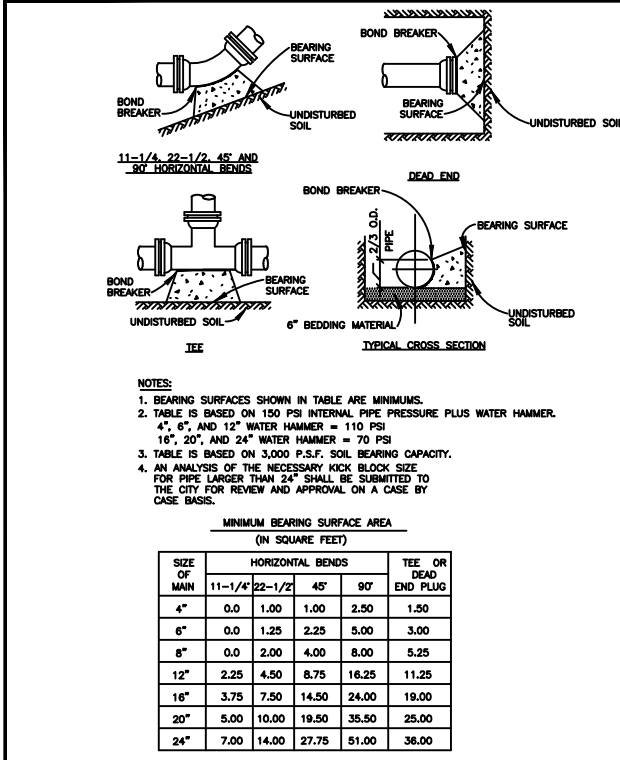
CITY OF LANDER

TRACER WIRE TEST STATION

LINE SIZE	4"		6"		8"		12"		16"		20"		24"	
	D	L	D	L	D	L	D	L	D	L	D	L	D	L
TEE (BRANCH)	3/4"	30"	3/4"	40"	3/4"	40"	3/4"	60"	3/4"	80"	3/4"	100"	3/4"	120"
PLUG OR END FITTING	3/4"	30"	3/4"	40"	3/4"	40"	3/4"	60"	3/4"	80"	3/4"	100"	3/4"	120"
45° HORIZ. BEND	3/4"	40"	3/4"	50"	3/4"	50"	3/4"	75"	3/4"	100"	3/4"	125"	3/4"	150"
90° HORIZ. BEND	3/4"	40"	3/4"	50"	3/4"	50"	3/4"	75"	3/4"	100"	3/4"	125"	3/4"	150"
22.5° HORIZ. BEND	3/4"	40"	3/4"	50"	3/4"	50"	3/4"	75"	3/4"	100"	3/4"	125"	3/4"	150"
11.25° HORIZ. BEND	3/4"	40"	3/4"	50"	3/4"	50"	3/4"	75"	3/4"	100"	3/4"	125"	3/4"	150"
FLUSH OR 90° END FITTING	3/4"	30"	3/4"	40"	3/4"	40"	3/4"	60"	3/4"	80"	3/4"	100"	3/4"	120"

NOTES:

- LENGTHS OF RESTRAINT ARE MEASURED EACH WAY FROM BENDS.
- CLAMPS AND RODS ARE NOT ALLOWED FOR 24" AND LARGER MAINS.
- D=DIAMETER, L=LENGTH, GRADE=GRADE, M.S.=MILD STEEL, H.S.=HIGH STRENGTH.
- MIN. 6" COVER (POTABLE).
- TABLE BASED ON 150 PSI INTERNAL PRESSURE.
- S.S. MEANS STAINLESS STEEL.
- NUTS SHALL BE STAINLESS STEEL.
- LENGTH REFERS TO THE AMOUNT OF MAIN WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
- LENGTH OF TEE MAIN ALSO APPLIES TO THE LENGTH OF MAIN RESTRAINED BY MEANS OF RODS.
- TEES AND CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
- ALL REDUCERS/INCREASERS SHALL HAVE MECHANICAL RESTRAINT DOCKERS ON EACH SIDE OF THE FITTING.
- PIPE JOINT RESTRAINT MAY BE ACCOMPLISHED USING HARNISS RODS, MECHANICAL JOINT RESTRAINT OR RESTRAINED JOINT PIPE AND FITTINGS.
- USE 2 RODS ON 12" AND SMALLER MAINS, 4 RODS ON 16" MAINS AND 6 RODS ON 20" MAINS.
- AN ANALYSIS OF THE NECESSARY RESTRAINT LENGTH FOR PIPE LARGER THAN 24" SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL ON A CASE BY CASE BASIS.
- AS AN ALTERNATE TO BRANCH RESTRAINT ON A TEE USING THE ABOVE TABLE THE MAIN MAY BE RESTRAINED INSTEAD FOR THE FOLLOWING DISTANCES IN EACH DIRECTION FROM THE TEE, PROVIDED THAT THE BRANCH IS RESTRAINED AT THE CONNECTION WITH THE TEE AND THE BRANCH SIZE DOES NOT EXCEED THE MAIN SIZE.



REVISIONS:

CITY OF LANDER

RESTRAINED PIPE LENGTHS

REVISIONS:

CITY OF LANDER

CONCRETE THRUST BLOCKS

REVISIONS:

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WATER MAIN LOWERING ON A NEW WATER MAIN INSTALLATION

REVISIONS:

CITY OF LANDER

FIRE HYDRANT ASSEMBLY

SHEET REVISIONS

NO.	DATE	DESCRIPTION	BY

BID SET

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240 Lincoln Street
Lander WY, 82520
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JEFFERSON STREET WATER AND SEWER
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