

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO DIVISION III CITY OF ENID WATER LINE CONSTRUCTION SPECIFICATIONS.
- COMPACTION OF TRENCH BACKFILL IN PAVED AREAS SHALL BE 95% STANDARD PROCTOR DENSITY.
- WHEN AN EXISTING VALVE IS ABANDONED IN A PAVED AREA, THE VALVE BOX IS TO BE FILLED WITH CONCRETE. WHEN AN EXISTING VALVE IS ABANDONED IN A GRASSY AREA, THE BOX IS TO BE PULLED AND THE TOP NUT REMOVED FROM THE VALVE. THE COST OF THIS WORK IS CONSIDERED INCIDENTAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROMPT REPLACEMENT AND/OR REPAIR OF ALL TRAFFIC CONTROL DEVICES AND APPURTENANCES DAMAGED OR DISTURBED DUE TO CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT CITY OF ENID TRAFFIC DIVISION FOR THE MARKING OF TRAFFIC SIGNAL CONDUIT AND APPURTENANCES AT LEAST TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AND/OR PLACING OR REMOVING ANY BARRICADES OR MODIFYING EXISTING TRAFFIC CONTROL DEVICES. CALL (508) 234-0400, EXT-7336.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL LANDSCAPING IN AS GOOD OR BETTER CONDITION AS EXISTING LANDSCAPING.
- ALL CONCRETE DRIVEWAYS TO BE REPLACED SHALL BE REMOVED AND REPLACED FROM THE PAVING GUTTER LINE TO THE JOINT ALONG THE PROPERTY LINE.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OR REPAIR OF ALL PRIVATE & PUBLIC UTILITIES DAMAGED DURING CONSTRUCTION.
- ALL SERVICES ARE TO BE CONNECTED TO EXISTING METER WITH NEW POLYLINE FROM PROPOSED WATER MAIN.
- BORE ALL STREET CROSSINGS, DRIVEWAYS, TREES, AND ANY OTHER AFFECTED STRUCTURES UNLESS OTHERWISE NOTED.
- STANDARD DEPTH OF COVER SHALL BE A MINIMUM OF 4.0 FEET, UNLESS OTHERWISE NOTED.
- ALL CROSSINGS AND PROPOSED TIE-IN LOCATIONS SHALL BE EXCAVATED AHEAD OF CONSTRUCTION TO VERIFY THE FLOWLINE OF EXISTING WATER MAINS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION STAKING. THE STAKING MUST BE DONE BY A PROFESSIONAL LAND SURVEYOR REGISTERED BY THE STATE OF OKLAHOMA, WHICH WILL BE VERIFIED AT PRE-WORK CONFERENCE.
- THE CENTERLINE AS NOTED ON THE PLANS IS THE CENTERLINE OF PAVING, UNLESS OTHERWISE NOTED.
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE INSTALLED WITH POLYETHYLENE ENCASEMENT.
- JOINT RESTRAINT GLAND SHALL BE MEGALUG AND MANUFACTURED BY EBBA IRON SALES, INC. P.V.C. - FITTINGS (MEGA-LUG, SERIES 2000 PV), D.I.P. - FITTINGS (MEGA-LUG, SERIES 1100), OR APPROVED EQUAL. ALL JOINT RESTRAINT GLANDS MUST BE INSTALLED WITH TYPE 316 STAINLESS STEEL BOLTS & NUTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO DRAIN AS GOOD OR BETTER THAN EXISTING CONDITIONS.
- ANY ANY WATER MAIN TEMPORARILY TAKEN OUT OF SERVICE FOR MAKING CONNECTIONS AND INSTALLING PLUGS/CAPS SHALL BE MADE AT LOW DEMAND TIMES. THE CONTRACTOR SHALL PROVIDE SEVEN (7) DAYS NOTICE FOLLOWED BY THREE (3) DAYS NOTICE TO CITY OF ENID - WATER DISTRIBUTION (580) 234-0400 EXT 7341, AND THE PROPERTY OWNERS PRIOR TO TAKING ANY WATER MAIN OUT OF SERVICE. THE CONTRACTOR IS NOT ALLOWED TO OPERATE ANY VALVE CONNECTED TO CITY OF ENID WATER MAINS
- ALL PORTLAND CEMENT CONCRETE PAVEMENT, CURBS, DRIVEWAYS AND SIDEWALKS DISTURBED BY THIS PROJECT SHALL BE REPLACED WITH HIGH EARLY STRENGTH (HES) CONCRETE, 3500 P.S.I. MINIMUM.
- THE COST OF OBTAINING A STORM WATER DISCHARGE PERMIT SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS. A STORM WATER DISCHARGE PERMIT IS REQUIRED BEFORE ANY LAND DISTURBING ACTIVITIES CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS & REPLACEMENT OF ALL EROSION CONTROL MEASURES.
- ALL WORK NOT CLASSIFIED AS A "PAY ITEM" SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION. THE COST OF WHICH SHALL BE INCLUDED IN THE COST OF OTHER BID ITEMS.
- CRUSHER RUN BACKFILL WILL NOT BE PAID DIRECTLY, COST SHALL BE INCLUDED IN OTHER ITEMS.
- WHEN PVC PIPE IS SPECIFIED AND USED ON THIS PROJECT, CONTRACTOR SHALL INSTALL ONE STRAND OF NO. 12 GAUGE COPPER TRACER WIRE ALONG TOP OF ALL PVC PIPES. BRING THE TRACER WIRE TO TOP OF GROUND AND ANCHOR AT ALL VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES.
- STREET CROSSING CONSTRUCTION SHALL BE ACCOMPLISHED 1/2 WIDTH AT A TIME WHERE NO ROADWAY SHALL BE COMPLETELY CLOSED. ANY LANE RESTRICTION OR CLOSURE SHALL REQUIRE SPECIFIC ADVANCED APPROVAL FROM THE CITY OF ENID.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL EXISTING WATER METER BOXES WITH AN APPROVED LOAD BEARING WATER METER BOX THAT IS TO REMAIN WITHIN A PAVED AREA, OR TO BE RELOCATED TO A PAVED AREA, OR THOSE AREAS CONTAINING DECORATIVE PAVERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GPS "AS-BUILT" SURVEY, FOLLOWING THE COMPLETION OF CONSTRUCTION, FOR EVERY 100' ALONG THE ALIGNMENT OF THE PROJECT, COORDINATES OF THE VALVES, FIRE HYDRANTS, EXISTING WATER METERS, AND SIMILAR APPURTENANCES. AN AUTOCAD DRAWING AND COORDINATES DATA SHEET SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL. THIS TASK MUST BE PERFORMED BY A REGISTERED PROFESSIONAL LAND SURVEYOR. DATA SUBMITTED SHALL BE TIED TO OKLAHOMA STATE PLANE COORDINATE SYSTEM.
- ALL WATER METERS TO BE RELOCATED SHALL BE RELOCATED TO A LOCATION WITHIN CITY RIGHT-OF-WAY ONLY, COMPLIANT WITH CITY OF ENID LOCATION REQUIREMENTS.
- TAPPING PVC PIPE - AWWA C-900, PRESSURE CLASS 200, DR 14 - FOR 3/4" THROUGH 2" TAPS, SERVICE SADDLES SHALL BE BRASS SADDLES WITH STAINLESS STEEL DOUBLE BAND, NUTS AND BOLTS, OR APPROVED EQUAL. ON THIS PROJECT, NO DIRECT TAP WILL BE ALLOWED. ALL TAPS REGARDLESS OF SIZE WILL REQUIRE TAPPING SADDLES.
- TAPPING DUCTILE IRON PIPE - FOR 1" THROUGH 2" TAPS, SERVICE SADDLES SHALL BE STAINLESS STEEL BAND, NUTS AND BOLTS, AND FUSION BONDED EPOXY COATING. WHEN TAPPING AN EXISTING DUCTILE IRON PIPE, TAPPING SADDLE WILL BE REQUIRED REGARDLESS OF THE SIZE OF TAP. WHEN TAPPING A PROPOSED DUCTILE IRON PIPE, 1" DIRECT TAPS MAY BE MADE WITHOUT TAPPING SADDLE, NO TAPPING SADDLE WILL BE REQUIRED. TAPS LARGER THAN 1" WILL REQUIRE A TAPPING SADDLE.
- ALL EXISTING FEATURES SHOWN ON THE PLANS ARE AT APPROXIMATE LOCATIONS, UNLESS OTHERWISE NOTED.
- "BORING - PIPE" AND "BORING - CASING" CLARIFICATION (SECTION 252) FOR WATER CONSTRUCTION, "BORING - PIPE (SIZE)" OR "BORING - CASING (SIZE)" SHALL BE MEASURED BY THE LINEAL FOOT BORED. PAYMENT FOR "BORING - PIPE (SIZE)" OR "BORING - CASING (SIZE)" SHALL BE MADE AT THE UNIT PRICE BID PER LINEAL FOOT FOR EACH SIZE. THE PRICE ESTABLISHED SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING ALL MATERIALS INCLUDING PIPE OR CASING, EXCAVATION AND BACKFILL, SHEETING, SHORING, BRACING AND DRAINAGE, DISPOSAL OF ALL SURPLUS MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM OF WORK. THE UNIT PRICE BID FOR "BORING - PIPE (SIZE)" SHALL INCLUDE THE COST OF THE BORE AND THE CARRIER PIPE. THE UNIT PRICE BID FOR "BORING - CASING (SIZE)" SHALL INCLUDE THE COST OF THE BORE AND THE CASING.
- ALL WATER VALVE BOXES SHALL NOT BE INSTALLED WITHIN EXISTING OR PROPOSED A.D.A. RAMPS.
- EXISTING VALVES, PIPE LINES AND STRUCTURES MAY LEAK IN THE CLOSED POSITION. CONTRACTOR SHALL PROVIDE WHATEVER MEANS AND EQUIPMENT NECESSARY TO CONTROL WATER DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE OPERATION OF ALL EXISTING VALVES WITH THE CITY OF ENID WATER UTILITIES, LINE MAINTENANCE DIVISION. OPERATION OF VALVES BY THE CONTRACTOR IS NOT ALLOWED.

PAY QUANTITY NOTES

- GATE VALVES, BUTTERFLY VALVES, TAPPING VALVES SHALL BE MECHANICAL JOINT AND MANUFACTURED BY AMERICAN CAST IRON PIPE COMPANY, MUELLER CO., U.S. PIPE, PRATT OR APPROVED EQUAL.
 - HYDRANTS SHALL CONFORM TO AWWA STANDARD C502, LATEST REVISION. HYDRANTS SHALL BE AMERICAN DARLING (MODEL 5 1/4" B-84-B), MUELLER CENTURION 200 MODEL A-423, M&H RELIANT MODEL 129, U.S. METROPOLITAN OR CLOW MEDALLION. DUCTILE IRON PIPE AND FITTINGS SHALL BE MANUFACTURED BY U.S. PIPE AND FOUNDRY CO., GRIFFIN PIPE PRODUCTS CO., AMERICAN CAST IRON PIPE CO., AND McWANE CAST IRON PIPE COMPANY. DUCTILE IRON FITTINGS MANUFACTURED BY TYLER PIPE AND STAR PIPE PRODUCTS SHALL BE ACCEPTED.
 - TESTING AND CHLORINATING WATER MAINS: WATER MAINS SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR "INSTALLATION OF DUCTILE IRON WATER MAINS AND THEIR APPURTENANCES," AWWA DESIGNATION C-600. THE PRESSURE TEST OF 200 PSI SHALL BE FOR THIRTY MINUTES' DURATION. IF THE LINE PASSES THE TEST WITHOUT SIGNIFICANT PRESSURE DROP, A LEAKAGE TEST SHALL BE MADE AT THE NORMAL OPERATING PRESSURES UNDER WHICH THE LINE IS TO OPERATE FOR TWO HOURS' DURATION. BEFORE BEING PLACED IN SERVICE, ALL MAINS SHALL BE CHLORINATED IN ACCORDANCE WITH "AWWA STANDARD FOR DISINFECTING WATER MAINS," AWWA DESIGNATION C-651. WHERE TEMPORARY PLUGS ARE REQUIRED FOR PRESSURE TESTING, THE CONTRACTOR SHALL FURNISH AND INSTALL THE PLUG AND TEMPORARY BLOCKING, AND REMOVE AFTER TESTING IS COMPLETE. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE. NO ADDITIONAL PAYMENT WILL BE MADE.
- (W1) SHALL BE PAID FOR BY THE LBS UNDER DUCTILE IRON FITTINGS IN ACCORDANCE TO 313.5 IN DIVISION III, CITY OF ENID WATERLINE CONSTRUCTION SPECIFICATIONS.
- (W2) SHALL BE PAID FOR UNDER SEDIMENT AND EROSION CONTROL.

0806			
PAY QUANTITIES			
WATER (NON-PARTICIPATING)			
ENID SPEC. ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY
	MOBILIZATION	LSUM	1
	BONDS AND INSURANCE	LSUM	1
	SEED AND FERTILIZE ALL DISTURBED AREAS	LSUM	1
	DEWATERING	LSUM	1
	HYDROSTATIC PRESSURE TESTING AND DISINFECTION	LSUM	1
	CONSTRUCTION STAKING (CONSTRUCTION SURVEY)	LSUM	1
	GPS "AS-BUILT" SURVEY	LSUM	1
	COLOR AUDIO/VIDEO RECORDING, PRE AND POST CONSTRUCTION (RECORDED DIGITALLY ON DVD)	LSUM	1
	CONSTRUCTION SIGNING AND TRAFFIC CONTROL	LSUM	1
	CLEARING AND GRUBBING	LSUM	1
	SEDIMENT AND EROSION CONTROL	LSUM	1
	WATER METER RESET	EA	2
408.1	6" PVC WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	15
408.1	8" PVC WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	1443
404.1	12" DUCTILE IRON PIPE WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	15
404.1	16" DUCTILE IRON PIPE WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	537
404.1	18" DUCTILE IRON PIPE WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	76
404.1	24" DUCTILE IRON PIPE WATERLINE, FINISHED AND LAID, COMPLETE IN PLACE	(3) LF	68
404.1	DUCTILE IRON FITTINGS	(W1), (1) LBS	24640
	12" POLYETHYLENE ENCASEMENT	LF	16
	16" POLYETHYLENE ENCASEMENT	LF	591
	18" POLYETHYLENE ENCASEMENT	LF	83
	24" POLYETHYLENE ENCASEMENT	LF	74
	MEGA-LUG 1106	EA	3
	MEGA-LUG 1108	EA	2
	MEGA-LUG 1112	EA	4
	MEGA-LUG 1116	EA	27
	MEGA-LUG 1118	EA	11
	MEGA-LUG 1124	EA	29
	MEGA-LUG 2006	EA	4
	MEGA-LUG 2008	EA	59
	6" GATE VALVE IN BOX, IN PLACE	EA	3
	8" GATE VALVE IN BOX, IN PLACE	EA	10
	16" GATE VALVE IN BOX, IN PLACE	EA	3
	18" GATE VALVE IN BOX, IN PLACE	EA	2
	24" GATE VALVE IN BOX, IN PLACE	EA	4
	8"x8" TAPPING SLEEVE, IN PLACE	EA	2
404.8	FIRE HYDRANT, IN PLACE	(2) EA	3
415.2	SERVICE CONNECTION (SHORT)	EA	1
316.0	CONNECT TO EXISTING 24" WATERLINE	EA	1
316.0	CONNECT TO EXISTING 16" WATERLINE	EA	1
316.0	CONNECT TO EXISTING 12" WATERLINE	EA	1
316.0	CONNECT TO EXISTING 8" WATERLINE	EA	4
	THRUST BLOCKS	CY	115
	TREE REMOVAL	EA	1
320.0	12" BORE STEEL CASING (12")	LF	180
320.0	54" BORE STEEL CASING (54") (ALTERNATE)	LF	97
	REMOVE EXISTING FIRE HYDRANT	EA	1
	REMOVE EXISTING 24" GATE VALVE	EA	1
411.0	TACK COAT (0.15 Gal/YD ²)	GAL	18
503.0	FULL DEPTH ASPHALT PATCH	SY	120
504.0	FULL DEPTH CONCRETE PATCH	SY	126
	ALTERNATE - INSTALL 16" HYDRA-STOP	EA	1

DESIGN			CITY OF ENID SUMMARY OF PAY QUANTITY NOTES (WATERLINE)
DRAWN	Tt		
CHECKED	MLD		
APPROVED	MLD		
SQUAD			
CITY PROJECT: W-1406B			SHEET NO. 3

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