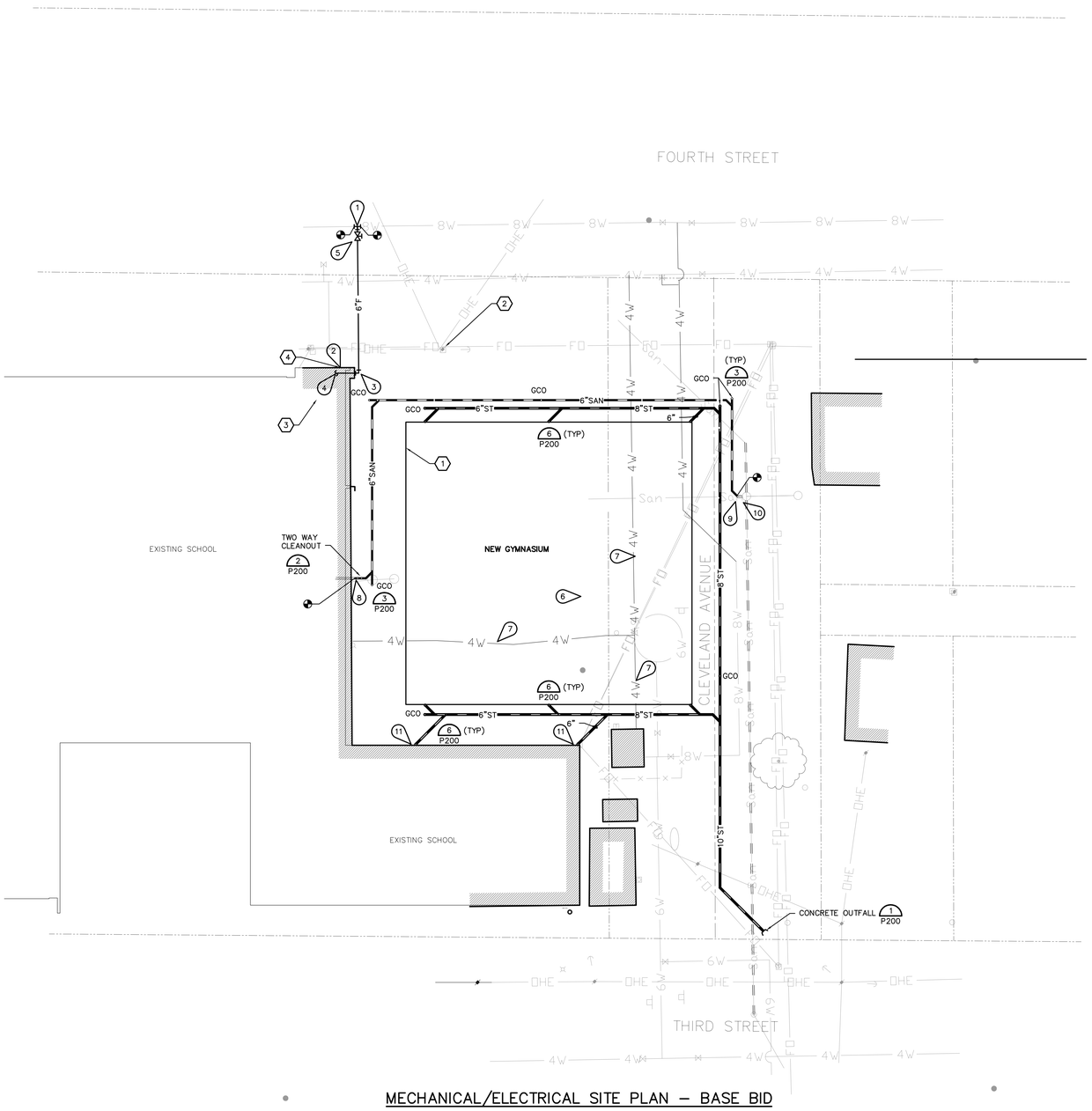


MECHANICAL/ELECTRICAL SITE PLAN – BASE BID

MECHANICAL KEYNOTES: (◇)

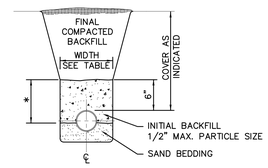
7. THE EXISTING WATER SERVICE PIPING FROM THE MAIN PIPE LOOP TO THE WELL/PUMP HOUSE AND RETURN BACK TO THE MAIN PIPE LOOP SHALL BE ADDRESSED AND/OR RELOCATED BY THE CITY OF MULLEN UTILITIES.
8. CONNECT NEW 6" SANITARY SEWER LINE TO EXISTING 6" SANITARY SEWER LINE. VERIFY EXACT LOCATION, SIZE AND DIRECTION OF FLOW PRIOR TO WORK.
9. CAP EXISTING SANITARY SEWER LINE AND ABANDON. VERIFY EXACT LOCATION, SIZE AND FLOW DIRECTION PRIOR TO WORK.
10. CONNECT NEW 6" SANITARY SEWER LINE TO EXISTING 6" SANITARY SEWER LINE. FIELD VERIFY EXACT LOCATION, DEPTH, SIZE AND DIRECTION OF FLOW PRIOR TO WORK.
11. CONNECT THE EXISTING 6/4 RAINWATER DOWNSPOUT FROM THE EXISTING SCHOOL ROOF, TO THE NEW 6" STORM LINE. VERIFY THE EXACT DOWNSPOUT SIZE AND LOCATION.

FIRE PROTECTION KEYNOTES: (◇)

1. PROVIDE A WET TAPPING SLEEVE TO CONNECT NEW 6" FIRE MAIN TO EXISTING 8" DOMESTIC WATER MAIN. PROVIDE RESTRAINED JOINT PIPING USING ANY METHOD PERMITTED IN NFPA 24. PRIMARY OPTIONS ARE LOCKING GLANDS OR TIE RODS WITH THRUST BLOCKS AT EVERY CHANGE IN PIPE DIRECTION. SEE PROJECT SPECIFICATION 21 10 00 FOR SITE FIRE MAIN PIPING REQUIREMENTS. PROVIDE LINE TRACING IN ACCORDANCE WITH **DETAIL 2 ON THIS SHEET**. SEE **DETAIL 1 ON THIS SHEET** FOR BEDDING REQUIREMENTS.
2. WALL MOUNTED POST INDICATOR VALVE (PIV) TO BE INSTALLED AT BEST LOCATION ON THIS WALL. SEE **DETAIL 1 ON SHEET FP100A**.
3. RESTRAIN ALL CHANGES IN DIRECTION IN ACCORDANCE WITH NFPA 24. SEE **DETAIL 3 ON THIS SHEET** FOR THRUST BLOCK OPTION OF PIPE RESTRAINT.
4. FOR PIPING WITHIN 5'–0" OF BUILDING, SEE DRAWING SHEET FP100A.
5. PROVIDE CURB STOP IN ACCORDANCE WITH CITY WATER UTILITY REQUIREMENTS.
6. LOCATE EXISTING POST INDICATOR VALVE (PIV) INSTALLED ON EXISTING 4" FIRE MAIN. REMOVE VALVE AND CAP MAIN. REMAINDER OF EXISTING 4" FIRE MAIN SITE PIPE SHALL BE ABANDONED IN PLACE.

ELECTRICAL KEYNOTES: (⬡)

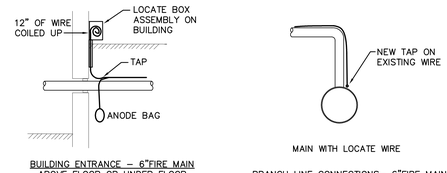
1. PLACE THE NEW DISTRIBUTION PANEL AND NEW PANEL–G IN THIS GENERAL LOCATION. COORDINATED LOCATION WITH ARCHITECT AND OWNER..
2. EXISTING POLE MOUNTED TRANSFORMERS FOR THE EXISTING SCHOOL SERVICE TO BE REPLACED BY THE UTILITY. NEW TRANSFORMER LOCATION APPROXIMATELY HERE.
3. APPROXIMATE LOCATION OF EXISTING SCHOOL ELECTRICAL SERVICE.
4. TAMPER SWITCH FIRE ALARM PIV.



* MATERIAL FREE OF CINDERS, ASHES, ORGANIC MATERIAL, BOULDERS, ROCKS OR STONES.

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'–8"	3'–0"
6"	1'–10"	3'–0"
8"	2'–0"	3'–0"
12"	2'–4"	3'–0"

PIPE BEDDING DETAIL 1
NO SCALE



BUILDING ENTRANCE – 6"FIRE MAIN ABOVE FLOOR OR UNDER FLOOR

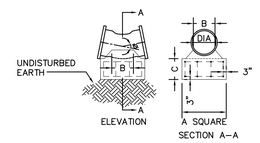
MAIN WITH LOCATE WIRE

BRANCH LINE CONNECTIONS– 6"FIRE MAIN

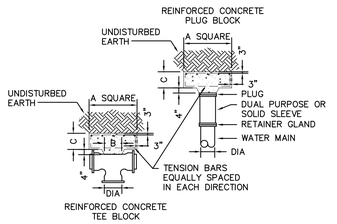
GENERAL NOTES:

1. LOCATE WIRES SHALL BE INSTALLED AS PER SPECIFICATIONS. THESE NOTES GIVE A GENERAL OVERVIEW OF REQUIREMENTS.
2. LOCATE WIRE TO BE SOLID COPPER 12 AWG WITH 30 MIL POLYETHYLENE INSULATION.
3. LOCATE WIRE TO BE RUN ON TOP OF PIPE AND BE TAPED TO PIPE WITH DUCT TAPE EVERY 10 FEET.
4. 17 LB MAGNESIUM ANODE BAGS TO BE PLACED AT ENDS OF WIRE, OR AS INDICATED IN DRAWINGS. BAGS ARE TO BE LOCATED 1 FOOT BELOW PIPE CENTER LINE.
5. ALL CONNECTIONS AND SPLICES ON THE LOCATE WIRE SHALL USE A TI–064C NICOTAP WITH HEAT SHRINK TUBING.
6. EXPOSED SURFACE MOUNTED WIRES (SUCH AS ON POST INDICATOR VALVES) SHALL BE INSTALLED IN A LOCATE WIRE BOX ASSEMBLY WITH THE CONDUIT EXTENDING 18" BELOW GRADE. BOX TO BE ATTACHED WITH A STAINLESS BAND–CLAMP.

LOCATE WIRE – UTILITIES DETAIL 2
NO SCALE



REINFORCED CONCRETE THRUST BLOCKS



REINFORCED CONCRETE TEE AND PLUG BLOCK

PIPE DIA.	A FT. IN.	B FT. IN.	C FT. IN.	BAR SIZE	# BARS EACH WAY	STEEL (LBS)	CONC. CUBIC YARDS
6"	1'–9"	0'–8"	0'–8"	–	–	–	0.1
8"	2'–3"	0'–9"	0'–9"	–	–	–	0.2
10–12"	3'–4"	1'–0"	1'–0"	NO. 4	6	22.7	0.4
16"	4'–6"	1'–3"	1'–3"	NO. 4	8	42.8	1.0
20"	5'–8"	1'–6"	1'–6"	NO. 5	8	86.8	1.9
24"	6'–9"	1'–9"	1'–9"	NO. 5	11	143.5	3.1

GENERAL NOTES:

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO A.S.T.M. SERIAL DESIGNATION A–305–507 AND SHALL SATISFY THE BEND TEST REQUIREMENTS FOR STRUCTURAL GRADE STEEL IN ACCORDANCE WITH THE REQUIREMENTS.
2. ALL CONCRETE SHALL BE L3500.
3. MINIMUM DEPTH OF EMBEDMENT FOR REINFORCING STEEL TO BE AS NOTED.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
5. POURED IN PLACE CONCRETE THRUST BLOCKING SHALL BE PROPERLY FORMED TO THE STATED DIMENSIONS AND SHALL NOT ENCASE THE M.J. BOLTS AND FASTENERS.

REINFORCED CONCRETE THRUST BLOCK

PIPE DIA.	ø = 11–1/4°							ø = 22–1/2°						
	A FT. IN.	B FT. IN.	C FT. IN.	BAR SIZE	# BARS EACH WAY	STEEL (LBS)	CONC. CUBIC YARDS	A FT. IN.	B FT. IN.	C FT. IN.	BAR SIZE	# BARS EACH WAY	STEEL (LBS)	CONC. CUBIC YARDS
6"	1'–3"	0'–9"	1'–0"	–	–	–	0.1	1'–6"	0'–9"	1'–0"	–	–	–	0.1
8"	1'–6"	1'–0"	1'–0"	–	–	–	0.1	1'–6"	1'–0"	1'–0"	–	–	–	0.1
10–12"	1'–6"	1'–0"	1'–0"	NO. 4	3	4.0	0.1	2'–3"	1'–0"	1'–0"	NO. 4	3	7.0	0.2
16"	2'–3"	1'–0"	1'–0"	NO. 4	3	7.0	0.2	3'–0"	1'–0"	1'–0"	NO. 4	6	16.7	0.4
20"	2'–9"	1'–3"	1'–0"	NO. 4	4	12.0	0.4	3'–9"	1'–3"	1'–0"	NO. 4	7	30.4	0.6
24"	3'–3"	1'–6"	1'–0"	NO. 4	6	22.0	0.5	4'–6"	1'–6"	1'–3"	NO. 5	6	50.1	1.1

PIPE DIA.	ø = 45°							ø = 90°						
	A FT. IN.	B FT. IN.	C FT. IN.	BAR SIZE	# BARS EACH WAY	STEEL (LBS)	CONC. CUBIC YARDS	A FT. IN.	B FT. IN.	C FT. IN.	BAR SIZE	# BARS EACH WAY	STEEL (LBS)	CONC. CUBIC YARDS
6"	1'–9"	1'–0"	1'–0"	–	–	–	0.2	2'–3"	1'–0"	1'–0"	–	–	–	0.2
8"	2'–3"	1'–0"	1'–0"	–	–	–	0.2	3'–0"	1'–0"	1'–0"	–	–	–	0.4
10–12"	3'–3"	1'–0"	1'–0"	NO. 4	6	22.0	0.4	4'–3"	1'–0"	1'–3"	NO. 5	6	47.0	0.9
16"	4'–3"	1'–0"	1'–3"	NO. 5	6	46.9	0.9	5'–9"	1'–0"	1'–6"	NO. 5	10	109.5	2.0
20"	5'–3"	1'–3"	1'–6"	NO. 5	8	79.3	1.6	7'–0"	1'–3"	1'–9"	NO. 5	15	203.4	3.3
24"	6'–3"	1'–6"	1'–6"	NO. 5	11	131.9	2.3	8'–6"	1'–6"	2'–0"	NO. 6	15	360.5	5.6

REINFORCED CONCRETE THRUST BLOCK DETAIL 4
NO SCALE

FARRIS ENGINEERING
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NO.	DATE	REVISIONS

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TITLE: MECHANICAL/ELECTRICAL SITE PLAN – BASE BID
PROJECT: Mullen Public Schools – 2012 Gymnasium Addition
Mullen, NE 68822

PROJECT NUMBER 11-0796
DRAWN BY HDS/DDH
CHECKED BY JMM/MDW
DATE May 17th, 2012
SHEET NUMBER ME100A
REVISION NUMBER