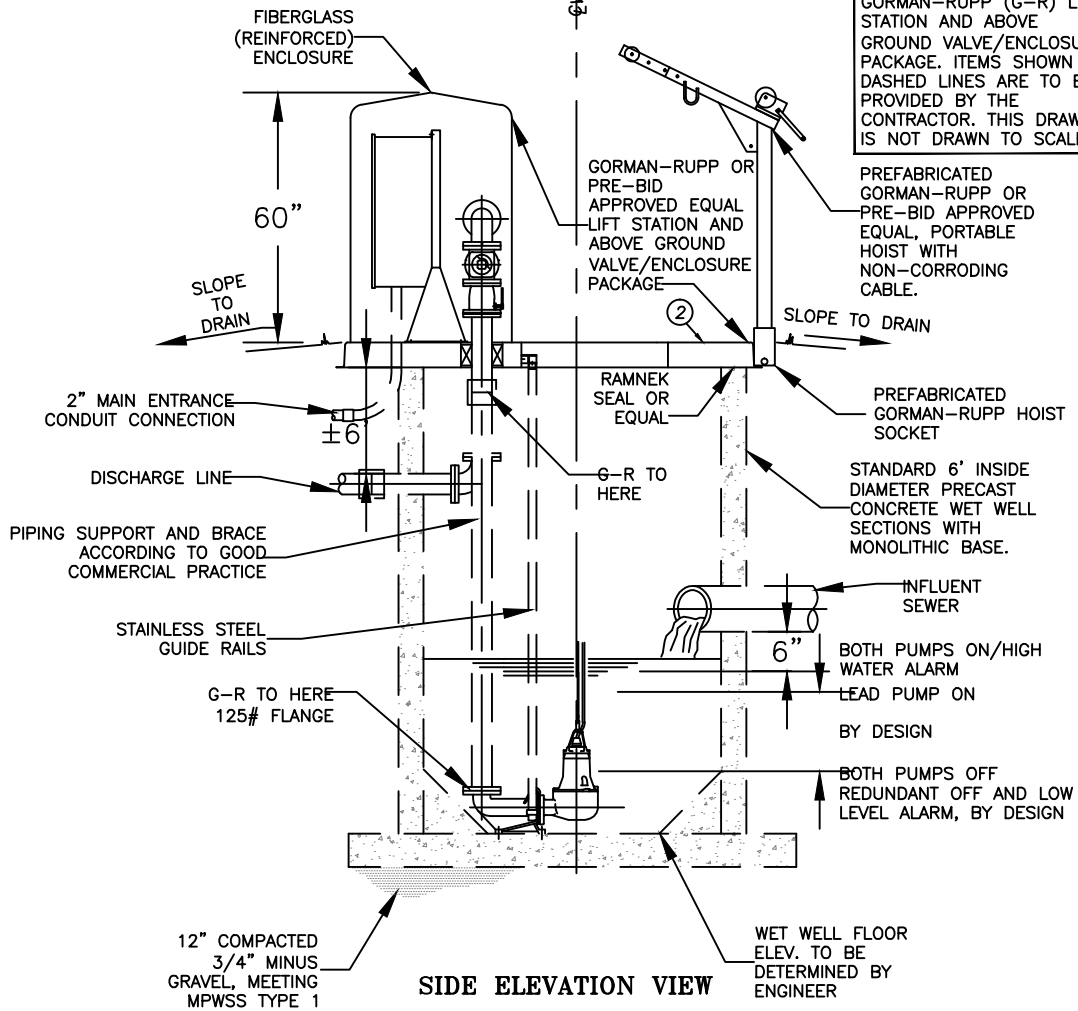


ITEM	DESCRIPTION	MAT'L & SIZE
①	PUMP	CAST IRON
②	BASE	CAST CONCRETE
③	PLUG VALVE	CAST IRON
④	CHECK VALVE	CAST IRON
⑤	WET WELL VENT	PVC
⑥	CONTROL PANEL	STEEL

NOTE: ITEMS SHOWN IN SOLID LINES ARE PROVIDED AS PART OF THE GORMAN-RUPP (G-R) LIFT STATION AND ABOVE GROUND VALVE/ENCLOSURE PACKAGE. ITEMS SHOWN IN DASHED LINES ARE TO BE PROVIDED BY THE CONTRACTOR. THIS DRAWING IS NOT DRAWN TO SCALE.

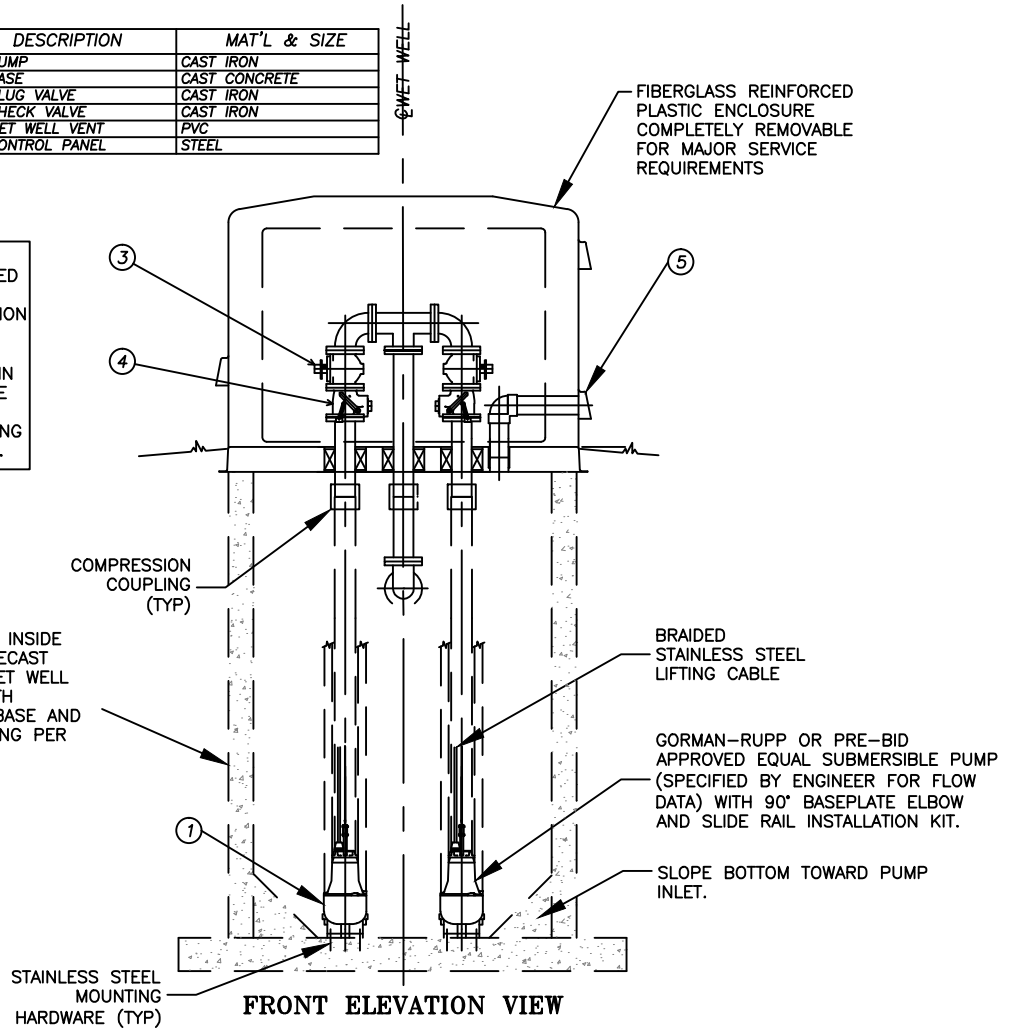


APPROVED	REVISIONS

CITY OF HAMILTON
 DEPARTMENT OF PUBLIC WORKS
STANDARD
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 (Sheet 1 of 3)
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ITEM	DESCRIPTION	MAT'L & SIZE
①	PUMP	CAST IRON
②	BASE	CAST CONCRETE
③	PLUG VALVE	CAST IRON
④	CHECK VALVE	CAST IRON
⑤	WET WELL VENT	PVC
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NOTE: ITEMS SHOWN IN SOLID LINES ARE PROVIDED AS PART OF THE GORMAN-RUPP LIFT STATION AND ABOVE GROUND VALVE/ENCLOSURE PACKAGE. ITEMS SHOWN IN DASHED LINES ARE TO BE PROVIDED BY THE CONTRACTOR. THIS DRAWING IS NOT DRAWN TO SCALE.



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PUBLIC WORKS DIRECTOR

DATE

CITY OF HAMILTON
DEPARTMENT OF PUBLIC WORKS

STANDARD
SEWER LIFT STATION
(Sheet 2 of 3)

HC. 20.02.007-2

CITY OF HAMILTON STANDARD ABOVE GROUND LIFTSTATION REQUIREMENTS

In Addition to Montana Department of Environmental Quality Circular 2, Chapter 40
The Following is Required:

1. All new sewage pumping stations shall be Gorman–Rupp J Series, packaged duplex factory–built submersible pumps with aboveground valve package or pre–bid approved equal. All stations shall be engineered and sized for each specific situation.
2. All pumps in lift stations shall be powered by 460 volt, 3 phase motors.
3. The units shall have the following options included:
current or future systems utilized by the Wastewater Division.
 - a. Dry contacts–high and low water alarm SPDT and phase failure
 - b. Pump start delay to reduce starting load
 - c. Submersible transducer liquid level control
 - d. Station heater
 - e. Station insulation package
 - f. Redundant high water pressure transducer
 - g. Spare pump and motor with cable and parts for any critical component not readily available with current systems utilized by the Wastewater Division.
4. Control panel shall include phase monitor and redundant pressure transducer wired normally closed.
5. Radio telemetry equipment shall be Microstation 900 Mega Hertz transmitter or equal and repeater system, if necessary, required on all new lift stations. Equipment shall be compatible with the current systems utilized by the Wastewater Division.
6. All lift stations shall be provided with backup generator power. At a minimum a generator shall have the following:
 - a. Wired for 460 volt, three phase
 - b. Weather–tite enclosure
 - c. Automatic transfer switch
 - d. Standard muffler
 - e. Liquid cooled, diesel powered engine
 - f. Generator sized to step start the duplex pumps and provide additional power for any other lift station components.
7. Special groundwater protection is required for the wet well and shall consist of the following:
 - a. Wet well joints shall have gasketed joints with Conseal 102 or approved equal. Install an 12” wide external joint wrap Conwrap 213 or approved equal on all joints.
 - b. The exterior of the wet well shall have a minimum of 1/16” thickness exterior coating of “culvert mastic MF#75CM” or an approved equal meeting ASTM A849–90 sprayed or brush applied.
 - c. The wet well shall be tested in accordance with ASTM C1244–93, test method for concrete sewer manholes by the negative air pressure (vacuum) test.
 - d. Wet well inlets shall include a compression–type flexible connection, cast into the wet well wall, providing 10 degree deflection as manufactured by A Lok Products or approved equal.
 - e. Entire wetwell shall be coated with Utilithane 1600 Polyurethane, Sherwin–Williams SherFlex EP or equal to a thickness of 250 mills, with associated primer product to a thickness of 5 mills, as required by the Public Works Director.
8. All backup power generation equipment shall have local availability in Western Montana on a 24 hour availability for parts and service.
9. All valves, fittings and appurtances shall be fusion epoxy coated of a nominal 10 mill thickness protecting all interior and exterior iron surfaces and complies fully with AWWA C550 and is certified to NSF 61 or approved equal.



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CITY OF HAMILTON DEPARTMENT OF PUBLIC WORKS
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