

Plumbing Systems Review:

The following report is the result of a site visit by Tim Kehoe of Muermann Engineering, LLC that occurred on October 17, 2014. Site observations and interviews with staff were all used in the preparation of this report.

The building was constructed in 2000.

Plumbing System

Domestic Water

Observations

- A. The existing water service for the building is 6" in diameter with a 4" water meter and a 4" domestic water service for the building.
- B. The water piping appears to be adequately sized for the domestic water load of the building. Water pressure appears to be adequate.
- C. Existing water piping is type "L" copper tube and is in good condition.
- D. The existing building has a 6" service for fire protection however the only space that has fire protection is the Auditorium. The existing service is large enough to accommodate fire protection for the entire building.



Recommendations

- A. The facility should evaluate the possibility of expanding the fire protection system throughout the entire building.

Sanitary Piping

Observations

- A. The existing sanitary piping is in good condition. The owner stated that there was no problem with the existing system.
- B. The main cooking for the high school is done the middle school. The kitchen in the high school does not have a grease interceptor and is not required to have one.
- C. Science rooms are in good condition. Acid neutralization basins are located on the first floor and are regularly maintained.



Recommendations

- A. None at this time.

Storm Piping Observations

- A. Storm pipes appear to be in good condition.
- B. Roof drains are in good condition however there appears to be some ponding of water around the roof drains. In most cases there appears to be a buildup of sludge at the drain body and roof drain dome.
- C. There is a storm conductor in the woods shop that has been repaired with a corrugated piping. This piping should be replaced with new schedule 40 PVC.
- D. The owner indicated that the outlet of the storm sewer discharges into a nearby creek. This discharge point continually freezes during the winter.

Recommendations

- A. Repair the storm conductor located in the metals shop.
- B. Clean the roof drain domes of debris. This should facilitate better drain of the roof.

Plumbing Equipment

Observations

- A. The water heater equipment recently failed and has been replaced with new instantaneous gas fire water heaters manufactured by Navien. The water heaters are energy efficient and in conjunction with the existing hot water storage tank and appears to be adequately sized for the building.
- B. The existing water softener is in good condition and appears to be adequately sized for the building.
- C. See additional comments regarding the air compressor located in the Middle School report.
- D. Welding equipment for the metals shop is located on portable tanks. It was indicated this equipment is operating well.



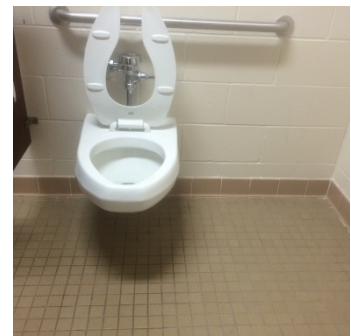
Recommendations

- A. Instantaneous water heaters require cleaning of the heating element. We recommend annual maintenance checks on this equipment.
- B. Schedule air compressor for replacement.

Plumbing Fixtures

Observations

- A. Toilet rooms are ADA compliant.
- B. The water closets and urinals are both flush valves and are in good condition.
- C. Lavatory fixtures are wall hung and are in good condition.



- D. Science room sinks are in good condition. Gas turrets are located in all science rooms and all Science rooms are provided with an emergency shut off valve for the natural gas. Not all of the Science rooms have emergency eye-wash fixtures located within the room.
- E. The metals and wood shops do not have an emergency eye-washer located in the rooms. The wash fountains are old and appear to be in poor condition.
- F. Showers and Locker room fixtures are in good condition.
- G. The school has multiple styles for electric water coolers. Many of these units are not ADA compliant however we feel the building does have enough ADA compliant fixtures to comply with current codes.
- H. The existing laundry is in good condition.

Recommendations

- A. Provide emergency eye-wash fixtures in all science rooms, the metals shop and woods shop.
- B. Provide continual maintenance on all flush valves for flush valves serving water closets and urinals.

