

Pressure Zone 39 Water Main And Pump Station Improvements and Indian Hill Water Tank Replacement - Design

This project is to upgrade and improve various distribution main, pump station improvements and water tank replacement within water system Pressure Zone 39 in the south part of Prescott. The project consolidates several inter-related components of the system into one project. These system upgrades, consisting of replacement of aged and undersized facilities, are necessary to meet current and future water demand. The new water mains and pump station identified below will also enhance public safety by augmenting fire flow capability throughout Pressure Zone 39.

12" line in White Spar Road (Granite Street to Copper Basin)
20" line in Aubrey Street (S. Pleasant Street to the Pioneer Pump Station)
Pioneer Pump Station replacement
16" line in Country Club Drive (Pioneer Pump Station to Indian Hills Reservoir)
Replacement of Indian Hill Reservoirs (Two 200,000 gal tanks to One 1.3 million gallon tank)

The **12" line in White Spar Road** will replace an existing undersized 6" water main, increasing supply to the White Spar Pump Station and Copper Basin Road Service Area.

The **20" Line in Aubrey Street** will replace existing undersized 14" welded steel and 8" cast iron pipes that are in excess of 60 years old and severely deteriorated. Frequent leaks have occurred requiring expensive repairs and service outages.

The **Pioneer Pump Station** will be relocated and increased in capacity from 1,000 to 2,700 gallons per minute (gpm). The scope of work include new variable frequency drive pumps, piping, controls, an emergency backup generator, and enclosure since the new equipment will not fit within the existing structure. Relocation will also enable uninterrupted service while the new facility is being constructed on adjacent City land.

The **16" line in Country Club Drive** will replace an existing undersized 6" water main, conveying flow from the new Pioneer Pump Station to the Indian Hills tank which supplies the Zone 39 Service Area.

The **Indian Hill Tank Replacement** consists of replacing two 200,000gallon aging, undersized tanks with a new 1.33 million gallon tank. The capacity need for the reservoir is for a 2.0 million gallon tank. The 1.3 million gallon tank was sized to provide nearly maximum capacity within the area constraints of the hilltop balanced with pump size modifications. The area of the tank site is limited by archaeological features on the west and north sides which must be avoided. Also, the terrain of the hilltop itself is a limiting factor. The new Indian Hill tank will be constructed within the existing limits of the disturbed area. The site boundary will remain approximately the same on the west, north, and east sides and will increase by 12 feet at the widest point on the south side.

The access road will be improved by placing a gravel surface and grading of the road and the ditch will be rip-rapped to control the drainage. The road will not be widened.

Drainage for the tank site and road will be improved to control erosion and will discharge where it currently does at the base of the hill but in a more controlled manner.

All communications equipment will need to be removed from the existing tanks prior to demolition and relocated onto a tower. The private cell phone companies that have existing antennas will be required to pay for and build one or more new towers as may be required to relocate the existing equipment. Other City departments, such as Emergency Communications and utilities operations will have space on this site for communications equipment also.

Council approved award of design contract for water mains and pump station on 8/23/07 and a Supplemental agreement for design of tank site improvements on 11/6/07

Design work is scheduled to be completed in Summer 2008. Bidding and construction for the water mains and pump station are anticipated to follow in Fall 2008. Bidding and construction for water tank improvements will begin July, 2009.



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City of Prescott Pressure Zone 39 Utility Improvement Project Community Meeting Summary

June 12, 2008

On May 8, 2008, the City of Prescott held a meeting for residents of the Pressure Zone 39 Utility Improvement project area. Teaming with PBS&J, the design consultant, and ESMpr, public outreach specialists, the City made outreach efforts to area residents and property owners to address project-related questions and concerns. Outreach efforts included a press release for local radio and newspaper coverage and a bulk mailing of 2,630 fliers to area residents along the project corridor. Approximately 50 people attended the meeting. 31 questions were asked during the question and answer session with City of Prescott and PBS&J staff. 12 comments were submitted at the meeting and by mail. Positive and negative public issues were identified. This document summarizes the comments, questions and responses expressed during the Pressure Zone 39 Utility Improvement Project Community Meeting.

The Community Meeting featured members of the project team, project information, and display boards which had the 30% design drawings and various informational graphics. Project team members were identified by name badges and made themselves available to the public to discuss the informational boards and answer questions the public may have had. An acoustically-amplified presentation by the design firm which explained the needs and objectives of the project was followed by a more formal question and answer session. Questions asked by the public were answered by representatives from PBS&J and the City of Prescott. Detailed notes of the question and answer session were taken. A summary of questions regarding the project is a useful tool for understanding the improvements the City of Prescott is looking to make to Pressure Zone 39. The initials used correspond to the following people:

GB – Greg Barry, Designer, PBS&J

BC – Bruce Canavan, Utility Engineer, City of Prescott

TB – Tim Burkeen, Capital Projects Manager, City of Prescott

NB – Nancy Burgess, Historic Preservation Specialist, City of Prescott

1. How high, what are the dimensions of the new tank?

GB: The new tank will be 32 feet tall, the pad will be lowered so the height difference is slight.

2. How high are the existing tanks and tower?

GB: The existing tanks are 20 feet tall with 5 feet of cell phone equipment on top.

TB: The existing tower is 50 feet tall. The site will be lowered by 4 feet, which translates into an 8 foot difference for the tank.

3. Will the new tower need to be lighted for aircraft?

TB: I am not sure, but I will find out (Later, it was determined that it would not require a light).

4. Flooding has been an issue in the past; who is liable if the new tank fails and homes are flooded?

TB: The City of Prescott is responsible for upkeep of its facilities.

5. Are there Indian ruins under the current tanks?

TB: The City of Prescott has performed an independent archaeological survey on the historic sites on top of the hill. All improvements will avoid known cultural resources.

6. Will more technical data be made available?

TB: Yes. Please fill out a comment card with the data you would like to see and we will see what we can do to fulfill that request.

7. Can you please elaborate on the grading and retaining walls?

TB: All material excavated will be removed from the site, not pushed over the side of the hill. A three to four foot retaining wall will facilitate maintenance of the facility.

8. Why haven't subterranean tank options been explored?

TB: Alternate siting and technology options were explored extensively. To work within the City of Prescott Pressure Zone System, the tank needs to be located at a certain elevation. The existing site is well-suited because of the elevation and location. According to the geotechnical report, underground storage options are infeasible, because the hill is a granite protuberance.

9. For comparison, is the Willow Creek Road tower also 85 feet tall?

TB: I am unsure which tower you are referring to.

GB: I believe the question refers to the North Tanks tower. Please write this on a comment card and we can find the exact height of that tower.

10. Are we benefiting Hassayampa Country Club?

GB: No, we are benefiting the entire south and southwest sections of Prescott.

TB: This improvement project does not just affect Pressure Zone 39. The City of Prescott water system is a interdependent system, and improvements, including increased capacity, have a positive effect on the entire system. This serves all residents and improves fire safety.

11. How is the project funded?

TB: Utility improvements are performed from the service fees collected.

BC: There is no federal or state funding involved in this project.

At this point in the Question and Answer Session, a citizen stood up with a list of ten issues he has with the project:

- 1) I do not want a 1.3 million gallon tank above my head.
- 2) If you blast into the hilltop, I will feel it.
- 3) The addition of the cell phone tower was kept quiet when the city asked permission for the project.
- 4) Terrorists and "kooks" may blast this tank apart and who is liable? (TB: The City of Prescott is responsible.)
- 5) This new tank is an eyesore from my point of view.
- 6) In 16 1/2 years, there has been nothing but construction shortly after moving to the neighborhood. Give us a break!
- 7) I enjoy wildlife and this project will drive wildlife out of the area.
- 8) Construction will detract from property value.
- 9) This project is a personal and public nuisance.
- 10) Please let me live out my years in peace!

12. How will you access the top of the hill with the equipment needed to perform this project?

TB: The road will be addressed in design. We considered paving the access road, but that would be too much impact. We have plans to re-grade and re-gravel the road, and make drainage improvements which allow the trucks to get up the hill.

13. Will the lines under Country Club Drive be in property owners' yards?

TB: New pipes will be underground and under the existing streets. We will stay within our easements.

14. How will the tanks be transported up the hill?

BC: One piece at a time, same as the demolition and removal of the old tanks. We will disassemble the old tanks and remove them from the top of the hill one piece at a time. Then, we will move the pieces of the new tank up the hill and assemble them.

15. How will the Pressure Zone system function during the work period, when there is no tank?

BC: The new pump station, which will be installed prior to the tank work, has a Variable Frequency Drive. This allows the new pump to deliver water to the system as it is needed. This takes more energy, but will allow us to perform all the tank and pipe work.

16. Will there be traffic impacts associated with the installation of the new water pipes?

BC: We will be replacing the utilities under the streets, and there will be traffic delays associated with the work.

17. When is work scheduled to be performed?

TB: Design should be completed by summer of this year. We should have a contractor by fall and work is scheduled to begin in spring of next year.

18. What end of the project are you going to start with?

TB: Work is scheduled to be performed from east to west from Pioneer Street.

19. Why can the City of Prescott not locate these cell phone antennae to the cell tower on top of the downtown parking garage?

NB: The facilities on top of the downtown garage do not include a tower. That communication equipment is actually built in to the garage.

20. Will the project include a major street project?

NB: There is no street project scheduled at this time. This project will replace the roadway with the same surface it currently has, retaining any historic elements of the roadway.

21. Will the new pump station create much noise?

GB: No. In fact, the new pump station will be much quieter.

22. Will there be a new road up Indian Hill?

TB: No.

23. How will you make the transition to the new water tank?

TB: The transition will be made using phasing and the Variable Frequency Drive pump. Phase I will include installing the new pump and the new water line. In Phase II, the tank will go offline and the pump will handle the load until the new tank is functional.

24. Have environmental, archaeological, and noise impact studies been performed?

TB: Geotechnical and archaeological studies have been performed. The archaeological report has been delivered to the Preservation Commission. Because this is a City-funded project on City of Prescott property, no environmental study is required and none has been performed.

25. Will the excavation of the hilltop require blasting?

BC: No.

26. Will you widen the road up the hill?

TB: No. We plan to re-grade the road and improve the drainage.

27. If Zone 39 includes the area of Safeway, why not buy the lot across from Safeway and locate the tank there?

BC: As stated before, everything in the system is gravity-fed. The system is a combination of pumps and storage, with water being pumped up to storage reservoirs and then gravity-fed to other areas. The existing storage reservoir location (Indian Hill) is well suited to this system, and we would like to upgrade the existing reservoir.

28. I live above Aubrey Street; will you be tearing up my yard?

TB: I believe I know where your property is. Please leave your contact information and a member of the project team will contact you regarding your specific property.

29. Will trees and boulders be taken out during construction?

TB: The water line is going up an easement which will have restoration requirements. The project is complicated by a narrow easement at that point, and we will need to trench. This will not require a road; however, the hillside will be disturbed. We will restore and reseed all areas with native vegetation.

30. I experience heavy water use because I created a park. I recently saw a water rate increase for some reason. How do you justify this? Will water rates continue to rise?

BC: Improvement project such as this are funded through two sources, impact fees and rates. One of the difficulties in improving the system is that the rates have not gone up in ten years. As we collect money, the system ages. I believe impact fees will be raised in the future. You may see rate increases, but they will not be like the previous one.

31. When you excavate the hilltop, where will you take the excess soil and how many truckloads will be passing through the neighborhood?

TB: The material will be relocated to an as-yet unidentified site. I am unsure how many truckloads this will entail.

During the question and answer period, significant negative testimony regarding the project was shared by several members of the public. The City of Prescott is looking to upgrade existing city facilities on city property. These improvements include utility service to residents, increased water availability for fire emergencies, and enhancing emergency communications capabilities. The City of Prescott has opened a dialogue with the public regarding this project and will work to help concerned citizens understand the need to improve the utility infrastructure. The public participation process is designed to provide information to the public and answer questions the public has regarding the project, and the City of Prescott is committed to addressing issues identified by the public in a civil and productive manner.

The question and answer session lasted an hour, and the project team members then made themselves available for one-on-one interaction with the public. Comments were collected at the meeting and through traditional mail and email for a three-week period following the meeting. The comments have been provided to the design team for consideration as they move forward with the design for the Pressure Zone 39 Improvement Project.