SHALLOW WATER WELL DRILLING PROJECT

February 11, 2016

Public Works Commission Meeting

Background

- Well Driller's Log identified abandoned municipal supply wells water bearing zones from 50'-240'
- Conducted a Hydrogeologic Feasibility Study which confirmed additional water supply sources
- Completed Preliminary Design Report for Development of Shallow Groundwater - prepared by R. Slade, January 2009

Objective

- Objective : To provide a reliable water supply and reduce the dependency from the Metropolitan Water District
- Solution: To augment the City's current groundwater supply from the four existing deep water supply wells by building two new wells and a conveyance system to the Water Treatment Plant

Project Plan

2014

- May: RFP for A&E Services

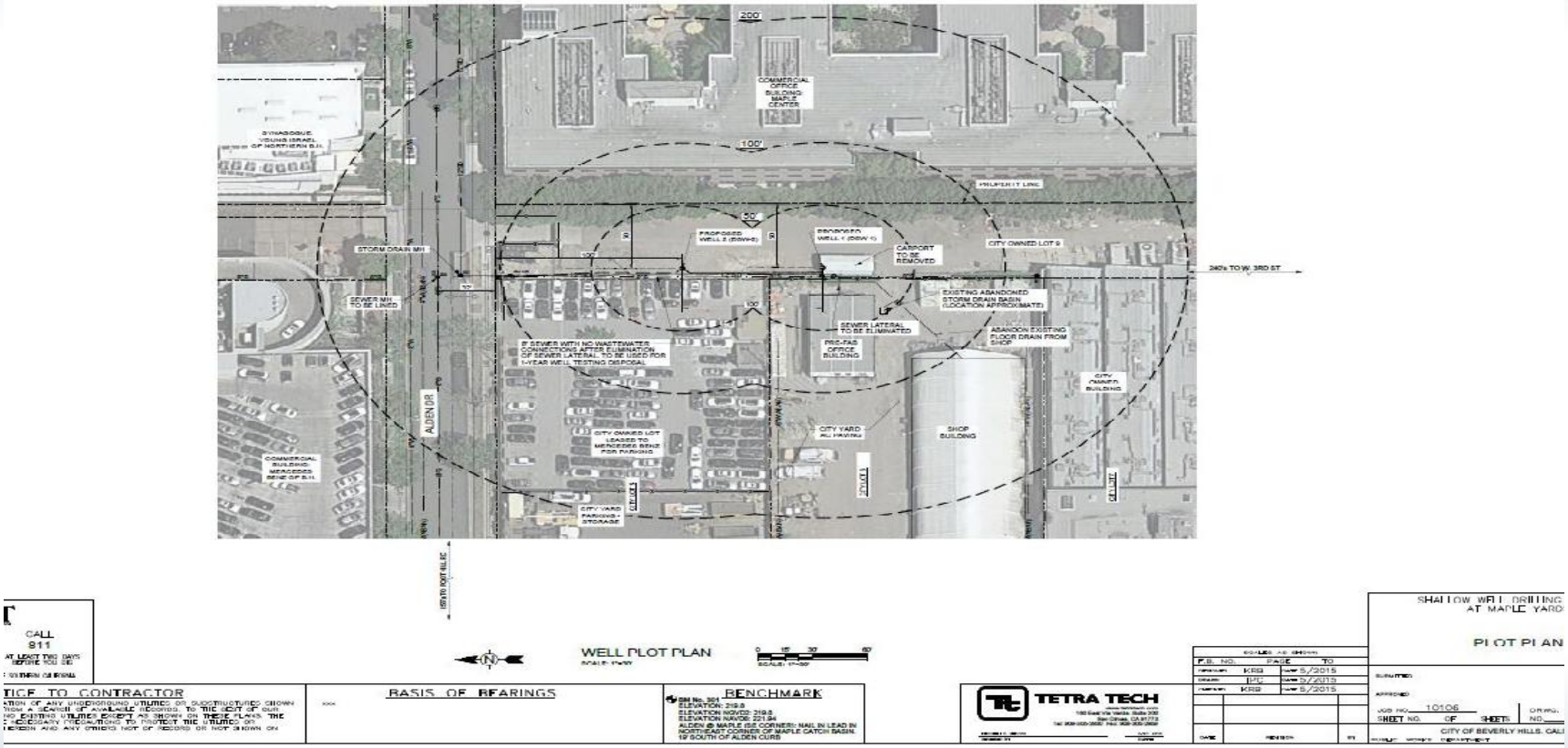
2015

- January: Awarded contract to Tetra Tech for Engineering Design Services
- February: Project kick-off
- July: Design completed and advertised
- September: Awarded contract to Cascade Drilling L.P. for $929,532.00
- December: Received drilling permit from State Department of Drinking Water (DDW)
- December: Contractor mobilized

2016

- Complete construction of Wells 1 and 2
- Perform 1-year Performance Testing
- Design and construct Conveyance System to Water Treatment Plan

Well Siting



60’ wide City owned property at 342 N. Foothill Road

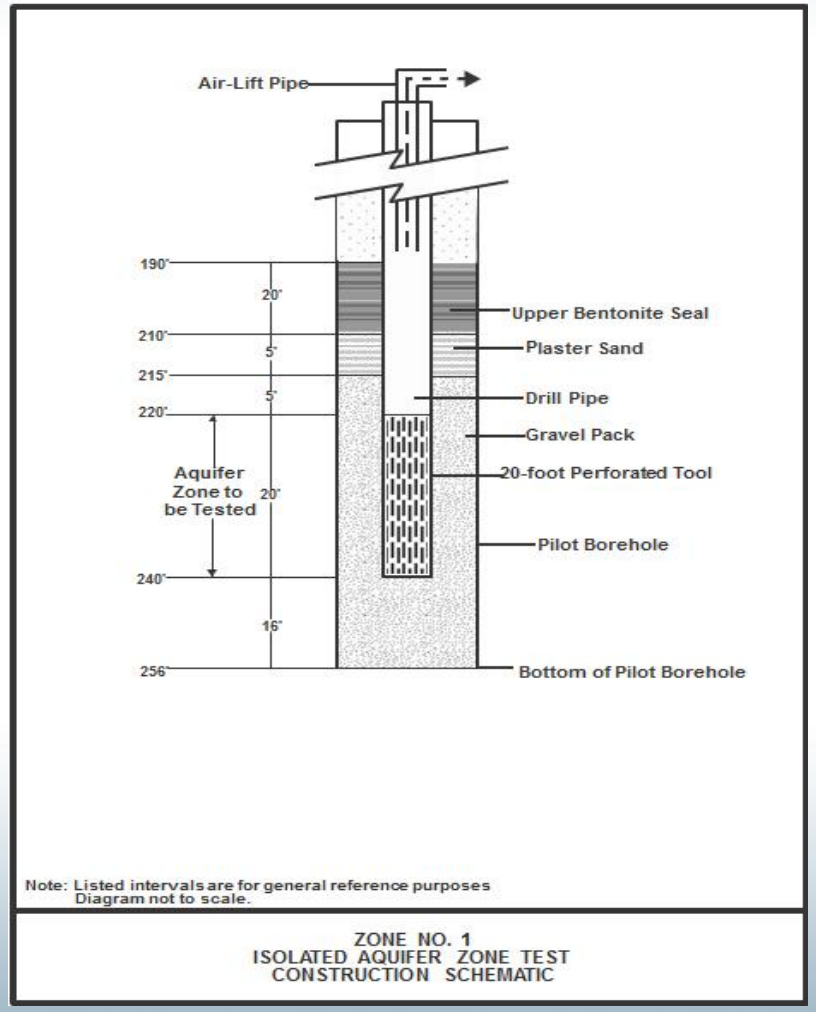
Well Drilling

- Drilling of Conductor Casing to the depth of 50’ and encounter water at 45’

Well Drilling

- Drilling of Pilot Hole to the depth of 265 feet
- Perform e-log to identify water bearing aquifers

Zone Testing



Project requires Aquifer testing for Well No. 1 at these Zone levels:

- Zone Test#1: 220’-240’
- Zone Test#2: 140’-160’
- Zone Test#3: 75’-95’

Illustration of Zone Testing

Results of Zone Test for Well#1

Zone Test#1 indicates:

- Total Dissolved Solids (TDS) 630
- pH 7.9
- Chemical Constituents: Iron, Manganese, Aluminum, Arsenic and Zinc are present in water sample
- Samples of Zone Test #2 and 3 are being analyzed with results by end of February

Water treatment will be required by DDW before introduced into the system.

Next Steps

- Complete construction of Wells No. 1 & 2
- Perform pump and water testing of both wells for up to one year
- Submit test results to State DDW for approval
- Design and construct Conveyance System to deliver water to Water Treatment Plant