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<http://oregon.gov/DHS/ph/dwp/index.shtml>

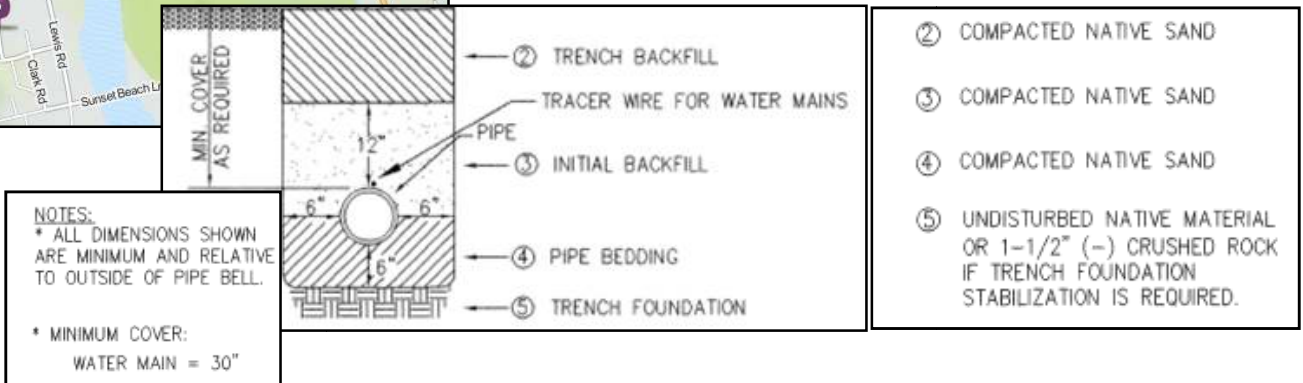
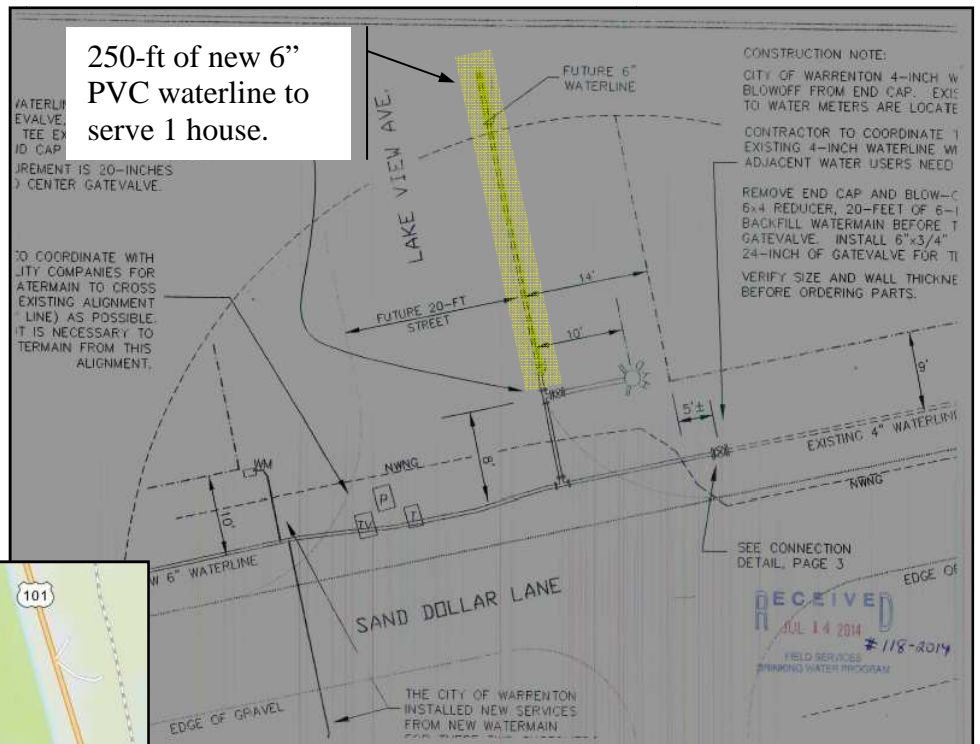
August 14, 2014

Bill Hughes
Bill Hughes Excavation
41901 Old HWY 30
Astoria, OR 97103

**Re: City of Warrenton (PWS ID #00932) Lake View Rd 6-in Watermain Extension
Conditional Approval - PR #118-2014**

Dear Mr. Hughes,

I have completed my review of the submitted plans (received July 14, 2014 along with a check for \$600 and a Land Use Compatibility Statement) for the construction of a potable waterline for the *Lakeview Ave 6-inch Watermain Extension* project in the vicinity of Lake View Road and Sand Dollar Lane near Warrenton, Oregon (PR #118-2014). The waterline extension calls for the installation of roughly 250-ft of 6" PVC main within public ROW of Lake View Rd. highlighted in the project plan shown at right.



The project is approved for construction as shown in the submitted plans, provided the following conditions are met:

1. Waterlines are designed for potable use meeting NSF-61 standards and installed and tested in conformance with the latest standards of the American Water Works Association, NSF International, or other equivalent standards with at least 30 inches of cover and disinfected and tested according to the latest AWWA standard C651.
2. The design ensures 20 psi to be maintained at all service meters.
3. Air-relief valves are installed at high points where air could accumulate in such a manner that the breather tube extends above ground and is provided with a screened, downward facing elbow.
4. Dead ends are minimized by looping. Where dead ends are installed, or low points exist, blow-offs of adequate size are provided for flushing.
5. Provisions are made at all bends, tees, plugs, and hydrants to prevent movement of the pipe or fitting.
6. Number 18 AWG (minimum) solid copper tracer wire is installed according to OAR 333-061-0050(8)(k), with wire ends accessible in water meter boxes, valve boxes, or outside the foundation of buildings where the pipeline enters the building. It is recommended that the tracer wire be placed immediately above the initial backfill material and directly over the pipe according to the latest AWWA Standard C605 *Underground Installation of PVC Pipe*.
7. No sewer lines are anticipated in the project area, however, if they are encountered or planned, the waterline meets all installation requirements of OAR 333-061-0050(9) in relation to sanitary sewer mains and laterals. Where the lines cross, a minimum vertical separation of 1.5-ft or more between the top of the sewer line and the bottom of the waterline should be used with one full length of the waterline centered at the sewer crossing. Where a waterline runs parallel with a sewer line, the horizontal separation between the lines should be 10-ft (or 5-ft with the 1.5-ft vertical separation as described above).

If you have any questions or would like this information in an alternate format, please feel free to contact me at any time at 971-673-0419 or via e-mail at evan.e.hofeld@state.or.us.

Sincerely,



Evan Hofeld, Regional Engineer
Oregon Health Authority – Drinking Water Services

cc. Don Snyder, Public Works Director, City of Warrenton