

# C&M ENGINEERING SERVICES

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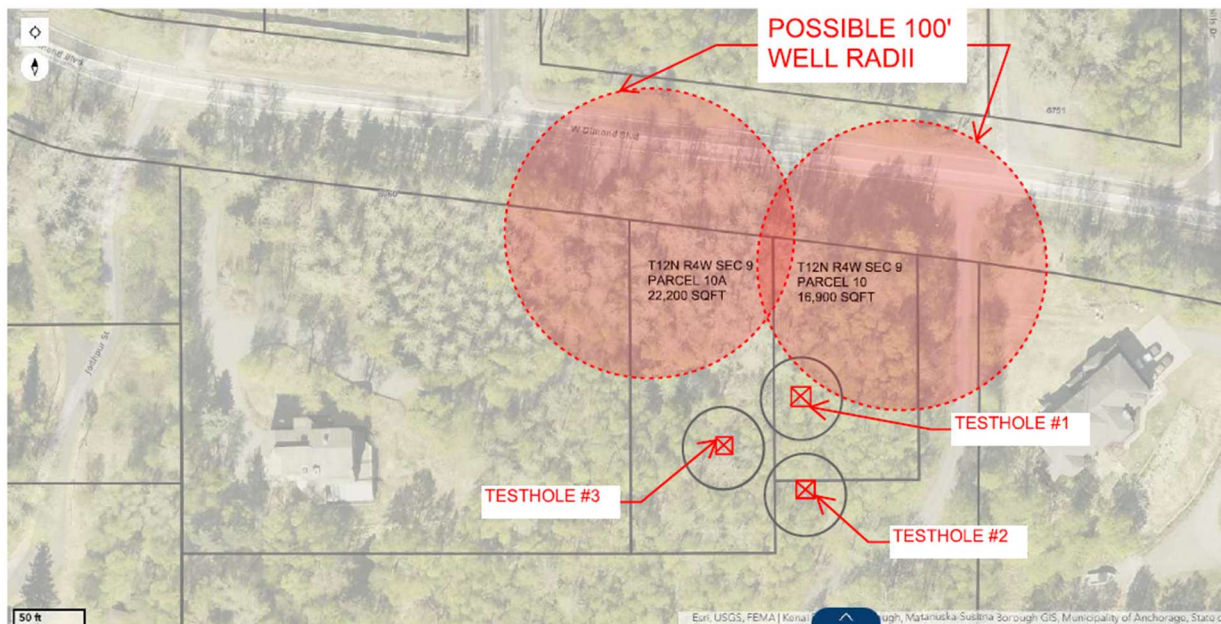
## T12N R4W SEC 9 PARCEL 10 AND 10A – Preliminary Soil Assessment

On June 6, 2026, we performed a limited site assessment to evaluate the suitability of the properties for development with on site septic systems.

The lots are sloped and heavily vegetated with large trees. Three test holes had previously been excavated on and around these properties. Soil logs were not available for these historic testholes.

The sketch below shows the approximate location of the testholes, as located by cell phone GPS and overlaid on publicly available parcel map data. Within the MOA, testhole data is considered valid for design within 30-feet of the testhole. 30-foot radii have been drawn around each testhole.

The sketch shows preliminary potential locations of future wells which could be drilled to provide water to each property. A 100-foot protective radius is shown around each well. Conventional septic systems need to be 100-feet from a private well. Advanced treatment systems may be constructed within 50-feet of a private well.



Each of the historic testholes had groundwater monitoring tubes installed. The testholes monitor tubes were dry during the assessment. The table below shows the depth each monitoring tube extends below the ground surface.

Percolation tests were performed near Testhole 1 and Testhole 2. The percolation holes were hand excavated to depths approaching 4-feet. At both locations, the soils consisted of a thin layer of black topsoil over loose fine grained brown sand with some silt. The Results are shown in the table below.

Summary Table				
Testhole	Depth	Groundwater	Perc Rate	Perc Depth
	(feet)	(feet or dry)	(min/inch)	(feet)
TH-1	13.5	Dry	3.3	3.5
TH-2	14.3	Dry	5	4
TH-3	13.9	Dry	na	Na

These preliminary results indicate that the properties are suitable for development with onsite septic systems. These results are not suitable for design, and it is recommended that the soils be logged and percolation tests be performed at locations planned for septic systems. As noted above testhole data is generally considered valid within 30-feet of the testhole. A percolation test was not performed at testhole 3. It is highly likely that the results would be consistent with those at testholes 1 and 2 due to their close proximities.

These findings are consistent with the soils logs available for the lots to the east and west of these parcels. A soil log filed for T12N R4W SEC 9 W2SW4SW4 shows silty sand to a depth of 17.5-feet and a percolation rate of 3.2 minutes per inch. A soil log filed for T12N R4W SEC 9 SW4SW4NW4SW4 PTN shows sand to a depth of 15-feet, with a layer of well graded gravel below, and a percolation rate of 2 minutes per inch.

The bottom of a conventional soil absorption system needs to be at least 6-feet above an impermeable soil layer and 4-feet above any seasonal high groundwater table. Percolation rates up to 60-minutes per inch allow conventional septic systems to be installed. Percolation rates between 1 and 5 minutes per inch are the most favorable for septic system design and installation.

Sincerely,  
Charles Balzarini, PE

