

San Francisco, June 15, 1940.

Mr. C.C. Story.....Keddie

Attached is print showing topography taken by you on recent survey at M.P. 316.17, Survey #2380, for proposed ditch to lead to a new 24" pipe to be installed about Engr.Sta. 1274+75.

After further investigation it has been decided that a much better drainage facility can be installed with a slight additional expense, if a 36" pipe is jacked through the fill opposite the hole which A.F. Williams has indicated on the attached sketch as being at Engr.Sta. 1273+05. This Engr.Sta., however, does not appear to fit the topography if the culvert is jacked through the fill at right angles with the outlet end on top of the big rock at an elevation about 20 feet below the main line.

Will you please arrange to take additional topography in the vicinity of Engr.Sta. 1273 where the culvert would be located to connect the hole on the north side of the track with the outlet end of the pipe at the top of the big rock referred to. In order to obtain a 2% grade for the pipe the inlet end would be at an elevation approximately 17 feet below top of tie and pipe should be jacked through the fill, if possible, at right angle. After taking the necessary topography please furnish a cross-section similar to the attached at the proposed location of the pipe. The outlet end of the pipe should rest on top of solid rock to prevent washing and it may be necessary to extend the pipe beyond the toe of the fill and not install a headwall. The upper end would undoubtedly require a headwall and I want to know the character of the material where the headwall would be installed.

Use the same datum as on previous survey so we can extend the contours on the same datum.

Copy of Major Simmons' letter of June 14th to Mr. Combs is attached for your information.

This survey should be made as soon as possible after you return to Keddie. You will note, however, from Major Simmons' letter that he wants Mr. Combs on the ground when the survey is made so you should wire Mr. Combs a few days in advance as it may be necessary for you to change the time of making the survey to conform with his itinerary.

J. W. Williams.

Attmts.
RIG:SH

