

Extracts from Resident Engineer's Bulletins, Issued during Progress

of Construction:

Dec. 15th, 1905: "Orders have been issued to the contractors that no more hay is to be stored in the Washkewen Shaft than is sufficient for 12 hrs. feed for mules. You will please see that this is rigidly enforced, and, if not, report at once to me."

Dec. 15th, 1905: "You will please note and record daily the number of lights, kind used, in each tunnel, and divide this into number used between the Portal and the working face and those used at bench in the heading. Please see carefully the station of the bench each day, as well as that of the heading, and note correctly on the progress profile."

Dec. 15th, 1905: "In recording the progress in each heading on the daily progress profile in my office, in future, instead of recording the progress each day at a certain hour, note the time when the blasting of each round of the heading is completed and the station of the new face, and put both these on the profile as soon thereafter as practicable. The station of the bench can be recorded at a certain hour each day, as heretofore."

Jan. 22nd, 1906: "It is absolutely necessary that the pumps at the Washkewen end be kept in shape for use at all times to prevent flooding of the River Tunnel. You will pay particular attention to this and see that sufficient supplies and men are at hand at all times to run the compressors to furnish air and to look after these pumps and run them."

Feb. 10th, 1906: "During the time actual work is temporarily suspended the foremen will note each day in their reports the time they visit each part of the work. These reports must be written up before leaving at the end of each shift, at its time, as well as at all other times. All reports must be signed each day by the inspector by whom they are made."

1906: "Several errors have recently appeared in connection with this work, principally in calculating quantities for monthly, and even FINAL estimates, and I have had occasion to notice slovenly habits in keeping notes and note books and other records. Notes of all kinds whether of Engineering, Inspection or Force Account must be kept as clearly and fully as an entrepreneur without any other information than the office records and the notes in question can properly interpret them. All note books must be numbered and paged before being used and a space left on the front page or pages for an index, and this latter kept up to date. Full notes must be made of EVERY OPERATION in the field and each page headed to show PLACE, DATE, TIME, and names of each man in the party at that time. This must be recorded BEFORE COMMENCING each piece of work. All field calculations must be made by the head of the party as well as the next in rank and the man checking the calculations must initial the page of the note book on which they are recorded. The Chief of Party must see that this is done or accept full responsibility himself for all errors. Men checking either field or office computations will be expected to assume responsibility for methods and premises as well as for the actual calculations, and must know that these are correct; ordinarily the foreman in rank should make the original computations, and the man in charge the check, but this must necessarily be governed by circumstances. Two note books should be used for all work of leveling, giving grades, etc., and calculations of Turning Points, Heights of Instrument, etc., worked out independently by each man."