## DEPT. OF TRANSPORTATION LABORATORY

The Department of Transportation Laboratory, which now occupies a large building complex at 5900 Folsom Boulevard in Sacramento, California, was started in 1912 in a small wooden building on the old State Fairgrounds.

The original purpose was to supply materials testing for the State Highway contracts, but the need for improved procedures and controls led to the development of a research program which has resulted in significant contributions to highway design and construction. New test procedures, standards and specifications that have received national attention number more than one hundred. Space does not permit detailing of these many contributions but a few of the more important ones were:

- 1. Development in 1930 of the California Bearing Ratio test for soils. This test procedure is now used by many state and federal agencies to determine the pavement thickness required to support traffic.
- 2. Development in 1930-1935 of the Hveem Stabilometer for evaluating the stability of asphalt paving mixtures, and in 1941-1948 application of this test to soils after correlation with data from the Brighton Test Track built by the California Division of Highways in 1940. These test procedures are now used by the California Department of Transportation and many highway departments worldwide for design and control of asphalt pavements.
- 3. Design and use of Horizontal Drains as a means to stabilize landslide areas.
- 4. Development of quality control of welding on highway steel structures.
- Development of techniques for measuring corrosion potentials of soils that affect highway drainage structures. Also development of effective cathodic protection for reinforcing steel.
- Development in 1960 of new asphalt specifications as a result of a long experimental program that became the basis of the Uniform Pacific Coast Asphalt Specifications adopted by User Agencies in 1974
- 7. Development of reflective traffic buttons or markers on highway pavements.
- 8. Development of dynamic testing methods for determining the effectiveness of median barriers to effectively separate opposing lines of traffic.
- 9. Development of computer controlled traffic signals



## References

<u>Transportation Laboratory Tours</u> https://dot.ca.gov/programs/engineering-services/transportation-laboratory-tours