

Home Course In Road Making

V.—Basic Principles of Road Administration.

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THE roads of the United States are worse than the roads of any other civilized country on the face of the globe, and our systems of road administration are for the most part extravagantly wasteful and totally inefficient and inadequate. Until within the past few years the policy of extreme localization prevailed



THIS ROAD WAS LOCATED AND CONSTRUCTED BY A COMPETENT HIGHWAY ENGINEER.

ed in all the states in the administration of the public roads, and today this policy prevails in a great majority of the states. It places upon the county and in most cases upon the road districts or townships the entire burden of constructing and maintaining roads and leaves to it the initiative as well as the final determination as to the policy which shall be pursued in carrying on the work.

Our road laws for the most part do not contemplate the necessity for skilled supervision in road work; hence most of the work is done under the direction of men who have no knowledge of road building and who have only a passing interest in it. This is a situation which is truly amazing, for skilled supervision is demanded in practically every line of work. To the trained road builder it is evident that no more prolific source of waste can be found than in unskilled supervision.

There are, including county and township officials, at least a hundred thousand road officials in the United States, each exercising a practically independent authority. Can we expect efficiency in an army in which all are officers and none is the rank and file?

In nearly every public or private enterprise some measure of skill is required of the men who are expected to carry on the work. When a building is to be erected a number of men, each skilled in his own craft, are employed. One does not find that this man is employed because he needs the money and that one because he is a good fellow and the other because he has political influence, but because he is a skilled carpenter, competent bricklayer, a trained and capable painter, etc., throughout the entire transaction.

The civil service of the United States is made up of people selected after examination. Our public schools are in charge of teachers who have been awarded certificates after proper preliminary training and examination.

Is it not surprising, therefore, that we are willing to intrust the expenditure of \$140,000,000 annually in the building and care of our public roads, so essential to our welfare and even our happiness to 100,000 men, most of whom are selected without any regard whatever for their technical and practical experience?

In order to have skilled supervision the technical training and experience of the highway engineer are necessary. There is a popular idea prevailing in some sections that engineers are not essential to road improvement. This, however, is a very erroneous idea. An engineer, by reason of his technical knowledge, can secure the easiest grade for a roadway consistent with the traffic for which it is designed. By determining the drainage areas he is able to compute the proper size for culverts, he is able to design the bridges to suit the needs of traffic, to estimate the quantities and cost of materials, select proper road building materials and prepare plans and estimates. Furthermore, he stands between the community and the contractor and is able to give impartial justice to both.

There is one element in American

road administration which is universally conceded to be the very acme of inefficiency—namely, statute labor and the working out of property taxes. Men who work out their tax do it grudgingly because they think they are being imposed upon. They do it poorly because it is a work which they know but little about. They render the least possible amount of service because it seems to be the general understanding that the object of the statute laborer should be to shirk work rather than to perform it. There is scarcely any attempt at discipline, and it is obvious that discipline with such an assemblage of workmen would be impossible.

Many of the states provide for working out the property road tax, and this has grown to be an even greater source of weakness than statute labor, for in 1904 about \$20,500,000 of the property tax was paid in labor, or, in other words, was practically wasted.

Opposition to the part of ultra conservatives to the general improvement of the public roads is frequently based on the belief that the advocates of road improvement contemplate surfacing with hard material the entire 2,000,000 miles of earth road in the United States. They point to the fact that to macadamize 2,000,000 miles at \$5,000 per mile would cost \$10,000,000,000. That this is a mistaken view of the subject can be easily demonstrated. When all the roads of the country are classified according to traffic requirements it will result in the elimination of many thousands of miles of totally unnecessary road and of many more thousands of miles by relocation, straightening of curves and various other expedients.

Careful investigations have been carried on in various parts of the country which prove that about 20 per cent of the roads accommodate about 90 per cent of the traffic, so that if the roads are to be improved in such a way as to do the greatest good to the greatest number it will be necessary to improve only about one-fifth of the total mileage with stone and other hard materials, leaving the rest to be taken care of as earth roads.

The whole subject of road improvement in the United States is now passing through a transitory stage. We are striving not only to meet the new conditions of traffic with new forms of construction, but our various state legislatures are actively engaged in endeavoring to meet the demand for road improvement by the enactment of suitable legislation and by the appropriation of the necessary funds.

We have tried many expedients in the administration of our public roads, among them the toll road system, which involves private control over a public utility. This is manifestly unsound in a public enterprise, and it is a source of gratification that the toll road system has been largely abandoned.

Even in the states which have followed a progressive policy during the last few years most of the roads are still under local control. Year by year we have been frittering away our millions maintaining the roads in their primitive condition until the yearly tribute of road taxes in the United States now amounts to over \$140,000,000 and our petty road officials have grown to an army more than 100,000 strong. The incompetence of a large number of officials is more difficult to remedy than the incompetence of a single official. It is manifestly impossible for a district or township with limited revenues to secure the assistance, advice and supervision of a high grade engineer, whereas in a centralized system the cost is so widely distributed as to impose but a slight burden on



THIS ROAD WAS REPAIRED UNDER THE STATUTE LABOR SYSTEM.

each of the smaller units. In the purchase of supplies and equipment a large saving can be effected by centralization, while in the reduction of personnel and in standardization of methods and equipment still greater economy results. It cannot fail to impress every thinking man that a system of extreme localization will mean an entirely unnecessary multitude of officials and irregular and ill directed road improvement.

It is apparent that the smallest unit for effective control in the administration of road affairs is the state, although excellent results have been obtained under county systems where all the roads are placed under the jurisdiction of a competent and skilled highway engineer or superintendent.

Our highway departments, both county and state, should be entirely free and away from political influences. All road work should be placed in the hands of trained and experienced road builders, and all road taxes should be paid in cash. Road officials and caretakers should have sufficient compensation to justify them in devoting their entire time and attention to the work. Under such a system properly administered it will be possible to secure a dollar's worth of work for every dollar expended, which is certainly not the case at the present time, except where this plan has already been adopted.

BRIEF NEWS OF OREGON

The Haines water system has been completed.

Asa Holaday, a well known pioneer of 1853, is dead at Scappoose, aged 84 years.

The annual Lincoln county Fair and Festival will be held at Toledo August 29 to 31.

Superintendent of Banks Wright has appointed H. E. Albert as state bank examiner.

The senate has confirmed the nomination of William E. Tate to be postmaster at Wasco.

Of the 298 pupils who took the state eighth grade examinations in Linn county last week 133 passed.

Out of the 109 children of the Hood River valley who took the eighth grade examinations, but 42 passed.

Portland folk so far have contributed \$443.25 toward the fund for the relief of 3,999,999 starving people in China.

Former Cashier James Evars, of the defunct Philomath State Bank, will receive no clemency from the state parole board.

Frank Allen, insane, ringleader in an escape of five men from the state asylum for the insane recently, has been deported.

There has probably not been a time during the past 20 years when the ranges of Grant county were in as good condition as the present time.

It is probable that the Illihee club, of Salem, organized 25 years ago, and which has played a prominent part in the social life of the capital, will disband.

The state railroad commission has named June 18 as the date for a hearing at Baker on the question of the valuation of the Sumpter Valley railroad.

Thirty or more southern Oregon physicians assembled in Roseburg Saturday for the twenty-first annual session of the Southern Oregon Medical association.

There promises to be a very active street campaign in Eugene this summer. The city council has ordered three miles of streets paved and there are petitions in for another mile.

Representation in the legislature based on the population as shown by the 1910 census is proposed by the People's Power league. This idea is incorporated in the measure to be submitted to the voters of the state.

More than 200 persons, representatives of threshing machine concerns and others interested in grain farming in Oregon will attend the fourth annual convention of the Oregon State Threshers' Association, which meets at Condon Thursday and Friday.

F. W. Waters, representing the Welch railroad interests which recently purchased the Salem street car system, announces that his company is preparing to expend not less than \$3,000,000 in extension and development of their lines in and about Salem.

With a view to eliminating saloons from the Oregon Electric depot at Jefferson street, Portland, Railroad Commissioner Miller directed Attorney-General Crawford to look up the law on the subject, and should he find that it is possible, he will bring a suit.

Positive assurance is given that the Eugene-Coos Bay railroad will be built at once, with construction commencing from the Marshfield end. The McArthur-Perks contracting company and Porter Brothers have secured the contract from the Southern Pacific.

That the Harriman interests will build a railroad up the South Santiam valley from Lebanon to a point above Foster this summer is indicated by the filing in the county clerk's office at Albany of a copy of a resolution authorizing the construction of the line.

Bell, Wildman & Co., a Portland firm, has been awarded the contract for constructing the \$50,000 storage plant of the National Apple company at Hood River. The plant will be 80 by 100 feet, four stories, and will have a capacity of 120,000 boxes of apples.

A new coal mine, which it is claimed will be the best ever opened in the Coos Bay country, is to be developed at once by a new company which has been formed with C. A. Smith at the head. The mine is on Isthmus Inlet and it is estimated that there are 1,000,000 tons above water level.

The 1912 schedule is out for the twentieth annual session of the Southern Oregon Chautauqua assembly, which will continue for 11 days, beginning with July 2. The program will embrace musical attractions, lectures, readings and sermons, some of the foremost talent coming from beyond the Atlantic.

Congressman Hawley has been advised that an appropriation of \$225,000 for the reimbursement of settlers of Sherman county who were compelled to abandon lands because of the Dalles military road grants, has been agreed upon by the house claims committee, and will be reported with the next omnibus claims bill.

Although the law passed by the people in 1910 provided that necessary expenses of delegates to national conventions up to \$200 should be paid by the state, the last legislature failed to make a specific appropriation for this purpose, and the delegates will have to await the mercy of the next legislature before they receive their money.

RICHESON EXECUTED FOR GIRL'S MURDER

Boston.—Clarence V. T. Richeson was electrocuted at 12:17 (Eastern time) Monday morning. The current applied was 1900 volts, eight amperes. One application was sufficient.

Richeson walked to the electric chair erect, eyes straight ahead until he sat down. Then he closed his eyes and kept them shut until the end.

The execution of Clarence V. T. Richeson drew the curtain on a tragedy unsurpassed for cunning, cruelty and notoriety in the criminal annals of the United States. The minister, with his wedding announcement already in the hands of friends, and a discarded sweetheart importuning him to relieve her from a position that would cloud her life with shame, calmly conceived a plan that would release him from his unwelcome liaison and deliberately purchased a quantity of cyanide of potassium, a deadly poison, and advised Miss Linnel to take it.

It was at first believed that she had committed suicide in a fit of despondency upon learning the news of Richeson's approaching marriage to Miss Edmonds.

It is expected the wishes of the dead man will be carried out and that he will be buried beside his mother in the family vault in Virginia.

Escapes An Awful Fate.

A thousand tongues could not express the gratitude of Mrs. J. E. Cox, of Joliet, Ill., for her wonderful deliverance from an awful fate. "Typhoid pneumonia had left me with a dreadful cough," she writes. "Sometimes I had such awful coughing spells I thought I would die. I could get no help from doctor's treatment or other medicines till I used Dr. King's New Discovery. But I owe my life to this wonderful remedy for I scarcely cough at all now." Quick and safe, it is the most reliable of all throat and lung medicines. Every bottle guaranteed. 50c and \$1.00 Trial bottle free at All Dealers.

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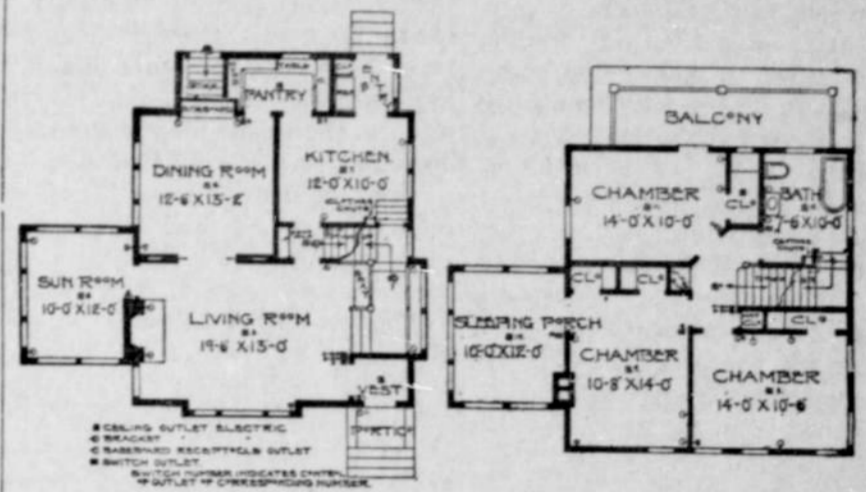
STYLE KNOWN AS THE CRAFTSMAN.

Design 966, by Glenn L. Saxton, Architect, Minneapolis, Minn.



© by Glenn L. Saxton.

PERSPECTIVE VIEW—FROM A PHOTOGRAPH.



FIRST FLOOR PLAN.

SECOND FLOOR PLAN.

We have this plan made up as an old New England colonial, English half timber, Spanish mission and Georgia colonial, besides Craftsman, as shown above. The size of the house is twenty-six feet wide and twenty-eight feet deep under the main part. There is a sun room on the side which is ten feet six inches wide, thus making a frontage of thirty-six feet six inches. Necessarily this calls for at least a forty-five or fifty foot lot, or one wider still is even more appropriate for this home. Cost to build, exclusive of heating and plumbing, \$3,800.

There is a full basement under this entire house. First story nine feet, second story eight feet in the clear. First story is finished throughout in birch and birch floors in first and second stories. Red oak or Georgia pine could be used if desired. The second story is finished in pine to paint, with birch to stain mahogany color to give the old colonial interior finish for the chambers.

Upon receipt of \$1 the publisher of this paper will supply a copy of Saxton's book of plans entitled "American Dwellings." The book contains 254 new and up to date designs of cottages, bungalows and residences costing from \$1,000 to \$6,000.

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