

### AGGRESSIVE ORGANIZATION SPEEDS WORK SEVEN-YEAR TASK CROWDED INTO THREE

Herbert Nunn, State Highway Engineer, and Staff, Backed by Commission, Make Wonderful Record in Construction of Oregon's Great System of Good Roads.

By S. Benson, Chairman State Highway Commission.

THE Oregon state highway system totals 4217 miles. Contracts have been awarded and work is under way for the construction and improvement of 1521.2 miles, over one-third of the total mileage. The work under contract, including engineering and contingencies and all post and forest road projects, totals \$21,468,613.44.

The energies of the state highway department have been directed to the improvement of roads of primary importance, such as the Pacific, Columbia and The Dalles-California highways.

The Pacific highway, totaling 352 miles, is completed or under contract for either grading or surfacing for its entire distance, and by the end of the summer of 1920 travelers will be enabled to journey from the Washington boundary to the California line over a road of approved construction.

The Columbia river highway is completed or under construction from Pendleton to Astoria, a distance of 360 miles, with the exception of a gap of 14 miles between Seuferts and the Deachutes. Contracts have been awarded for hard-surfacing the highway from Hood River to Astoria, a distance of 175 miles, and it will be completed early in the summer of 1920.

Of the 342 miles of The Dalles-California highway, 119.9 miles are under contract for improvement. In addition to the work on these main arteries, construction and improvement of highways is going on in every section of the state.

When the law creating the present highway commission was passed in 1917, Oregon was far behind the other Pacific coast states in road improvement and the commission concluded to push this form of development with all the power and energy at its command.

A constructive organization, with Herbert Nunn as engineer, was established and the work was pushed so

#### SUMMARY OF HIGHWAY WORK TO NOVEMBER 15, 1919, INCLUDING PARK AND FOREST, READS:

	Paving, Macadam, Grading, etc.	Price Bid.
Pacific highway.....	118.9	\$4,587,969.96
Columbia River highway.....	105.9	4,471,876.41
West Side Pacific highway.....	34.8	1,287,258.50
Salem - Dallas highway.....	13.1	320,742.50
Yamhill - Neetsucca highway.....	8.0	256,032.11
John Day River highway.....	20.1	956,785.83
La Grande - Enterprise highway.....	12.7	42,171.80
Portland-Forest Grove-McMinnville.....	14.2	230,092.72
Ashland - Klamath Falls highway.....	19.0	177,957.50
Cook's Bay-Roseburg highway.....	6.0	21,500.00
La Pine - Lakeview highway.....	12.9	141,649.20
Oregon - Washington highway.....	27.0	652,549.75
Old Oregon trail.....	22.1	376,547.57
Baker - Cornucopia highway.....	12.6	214,261.75
Crooked River highway.....	4.6	274,908.34
McKenzie River highway.....	19.8	304,638.16
Crater Lake highway.....	22.0	246,908.00
Flora - Enterprise highway.....	8.5	601,054.00
Corvallis - Newport highway.....	2.3	67,500.00
Mount Hood Loop highway.....	12.2	227,567.60
Central Oregon highway.....	16.7	197,967.00
The Dalles - California highway.....	55.8	562,255.25
Klamath Falls - Lakeview highway.....	12.9	146,008.16
Total.....	380.8	\$17,887,177.88
Ten per cent engineering.....		1,788,717.78
Ten per cent contingencies.....		1,788,717.78
Grand total.....		\$21,468,613.44

energetically that seven years' programs has been crowded into three. Approximately 40 per cent of the work under contract, owing to limited season when this work can be done, has been completed, but as contractors have their camps established and their equipment installed, the work will proceed very rapidly during the coming season.

The projects now under contract cover, if not in entirety, some part of every important road in the state. Elimination of railroad crossings, reduction of excessive grades, widening of dangerous curves, reconstruction of impassable stretches is part of the programme mapped out by the highway department, and the results obtained in the short period of the department's existence is gratifying and extremely satisfactory.

The passage of what is known as the market roads bill will provide funds for the counties to improve local roads. The bill provides for a mill tax and will yield approximately \$1,000,000, as the counties are compelled to match the sum that may be applied for, it will mean an annual expenditure of \$2,000,000 for the improvement of county roads.

#### Teel Project Gets Fine Start in 1919

Umatilla Irrigation Work Will Benefit 16,500 Acres of Fertile Oregon Land.

IN IRRIGATION, the year just ended has seen a great project, planned back in 1912, get off to a flying start in Umatilla county. The Teel project, which will water 16,500

acres of fertile land in the west end of the county, will cost in the neighborhood of \$1,300,000.

This project is, in substance, a plan to divert water from Camas creek through the Blue mountains by means of an 18-mile canal and a 12.341-foot tunnel, emptying it into Butter creek, from whence it will be piped to a storage reservoir to irrigate more than 16,000 acres of the best land in Umatilla county, south and west of the town of Echo. Nine hundred and thirty thousand dollars' worth of bonds have been certified by the state and issued, the money to be drawn as needed. On the completion of the first unit of the work, further financing is to be taken up.

**Diversion Dam Completed.**

The diversion dam on Camas creek was completed October 22. The immense tunnel, about four feet in diameter, which is being bored through solid rock, is being worked from both ends and the crews are now making about 20 feet each day at each end. November 15, 1919 feet had been completed.

The main canal is to be 25 feet wide on the bottom, 40 feet deep on the top and will carry five feet of water. Construction of this part of the job was started September 15 and is progressing at a rate of about 4100 lineal feet per month. One steam shovel is working one shift a day at present, but in spring work will be rushed day and night. The 18-mile canal will carry four miles of flume.

To provide the timber necessary for the project a sawmill was erected convenient to the operations.

### OREGON HAS MANY MILLIONS OF ACRES OF RAW SCENIC MATERIAL FOR TOURISTS

Federal Forest Service Takes Hand in Development of Vast Resources So Beautiful as to Need No Embellishment—Transportation and Accommodation Are Declared Sole Needs.

THE forests and the mountains are so intricately woven with the scenic resources of the west that the forest service has been forced to take a hand in their development along with other organizations which are building up the great west.

Oregon alone has millions of acres of raw scenic material to sell to the tourist. No embellishment is necessary except in the way of transportation and accommodation. What more could we ask in a scenic way than her Cascades, its Pacific ocean, her ramified system of beautiful lakes and streams.

Among a host of wonderful mountain lakes, there is the unparalleled Crater Lake, prominent in the memory of everyone who has visited there and looked into its deepest blue waters.

But Oregon's crown of glory is in her magnificent forest of towering fir trees, a heritage of one-sixth part of all the growing timber in the United States, a proportion that grows daily as other states cut and slash.

This immense body of timber is

here to enrich the state and the largest part of it will be cut over probably when forest products will be bringing the highest market values.

The federal service has taken up the problem of scenic highways and trails as a study and bends every effort toward the leaving of sufficient timber and natural growth along those traveled by the outdoor lover. Large bodies of timber are sold and cut over, but never without a constructive study of the effects of such cutting in scenic places; and reserving patches or strips of virgin timber where necessary to hold the scenic value.

It is the aim of the government to accommodate the traveling public and to select places for special improvement in every national forest. Camp grounds are being developed and planned, but the demand seems to be ever ahead of the supply. If it were not for the fact that the cash outlay is relatively small for sufficient improvement to make room for large numbers of campers, the forest service would be swamped.

Every camper, whatever his experience, is something of a fire hazard and it is perhaps the idea of self-

preservation which first prompted the plan of collecting campers together as a safety factor in fire control. Every camper carries more or less debris which he does not take back. The large public camp ground takes care of this, which makes for neatness and sanitation. Everything has not been said about the tin can on the public highway.

Another phase of the forest recreation business is the survey and leasing of summer homesites. The "home in the mountains" idea has become so popular during the past few years that it has been necessary to lay out many hundreds of lots close to the many lakes and streams of the national forests. Every survey is now planned with reference to the scenic beauties of the landscape. Homesites are fitted to the surroundings instead of attempting to fill an allotted space with as many lots as possible.

In the earlier days of this work, the small city plan predominated, producing a sort of checkerboard effect that was soon found to be undesirable for the reason that it is just that city effect which the summer home people are desirous of ridding themselves.

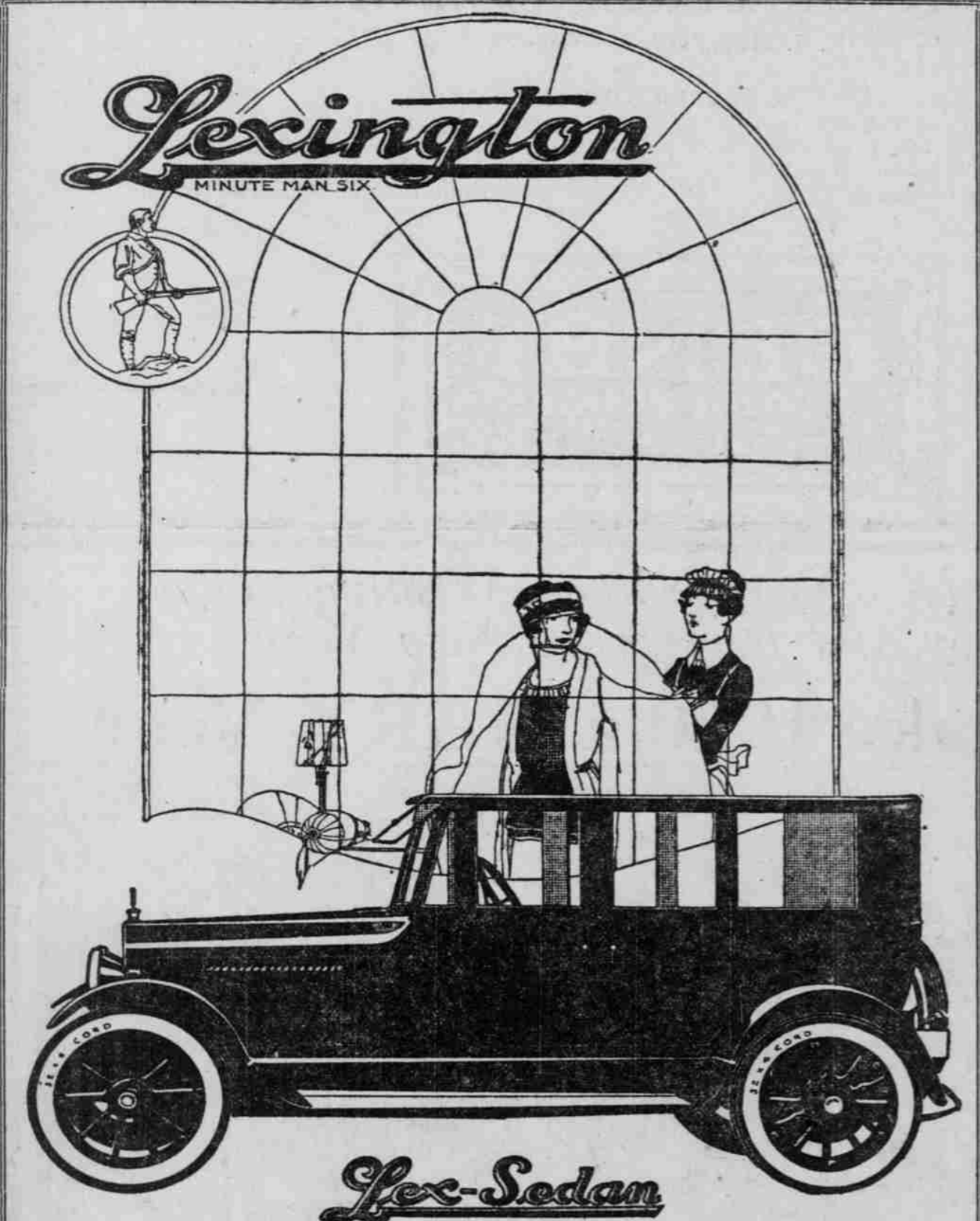
Now-a-days, when the forest service

gets applications or foresees a need of a summer home survey in a certain location, a layout map showing topography and landscape features is the first requisite. Lots are then fitted to suit the conditions, each being roomy enough to include a good building site and sufficient space to avoid crowding. A larger area is fitted with road surveys to best accommodate it before any lots are surveyed. In these cases, adequate water systems are also planned for the area as a whole, so that the community may co-operate if desired on a public water supply.

Sanitary regulations are strict, but not burdensome in the way of expense or labor. In order to give each party what he really wants, it is planned to make each lot approximate a landscape unit so that the user may use his own judgment in the making of an attractive neighborhood.

The types are sufficiently different that it is not difficult to suit the individual tastes of the customer. Terms are allowable if the improvement contemplated are sufficient to justify it. One pleasant feature in these days of high prices is that congress has placed the maximum rental at \$25 per lot for the year. The average charge runs about \$7.50 per year.

Hotel sites, sanitarium, garage and store sites are among the many different kinds of sites to be leased. Public schools and churches are allowed special use permits on national forest lands without charge. Semi-educational or semi-religious organizations



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