

# The BOARD OF COUNTY ROAD COMMISSIONERS

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## of OAKLAND COUNTY, MICHIGAN

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### Tenth Annual Report to the Board of Supervisors

#### PERSONNEL

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G. ROSS THOMPSON, Chairman  
Highland Township

THOMAS LYTLE, . . . Pontiac

JOHN A. ADAMS, . . Addison Twp.

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L. V. Belknap, Co. Highway Engineer

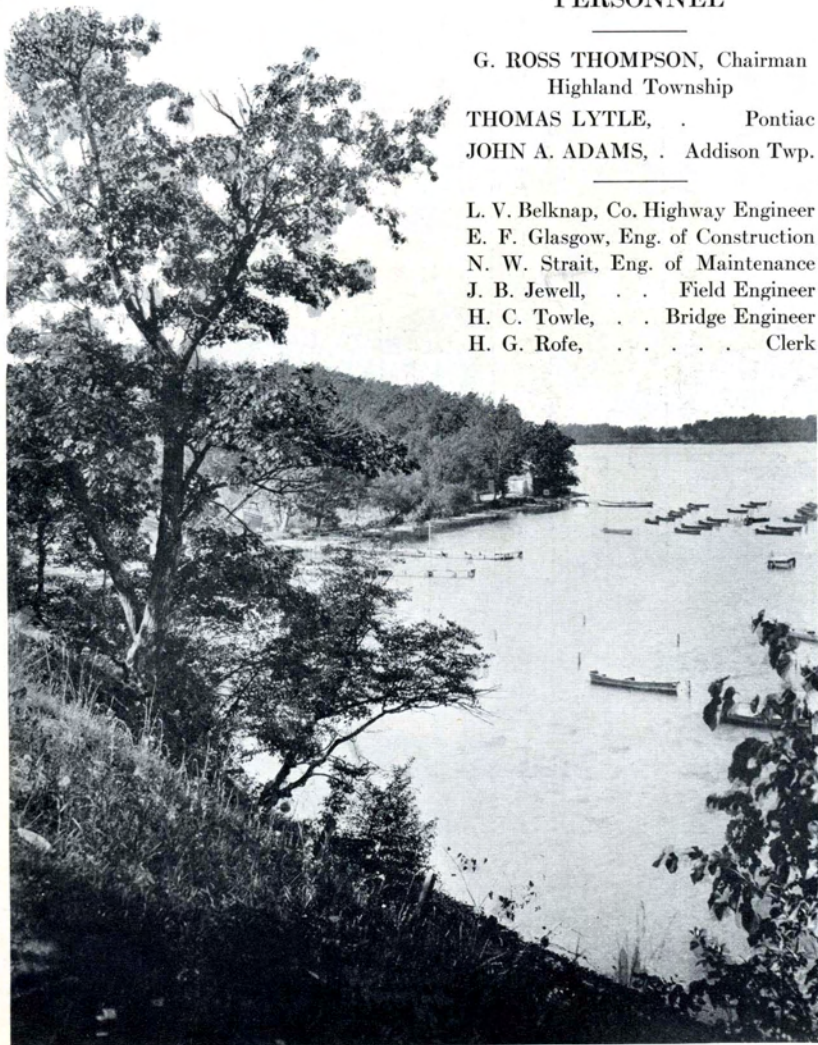
E. F. Glasgow, Eng. of Construction

N. W. Strait, Eng. of Maintenance

J. B. Jewell, . . . Field Engineer

H. C. Towle, . . . Bridge Engineer

H. G. Rofe, . . . . . Clerk



## Tenth Annual Report

Pontiac, Michigan, October 1st, 1922

*To the Honorable Board of Supervisors of the County of Oakland:*

GENTLEMEN:

In compliance with the statutes and in accordance with the resolutions heretofore passed by your honorable body relative to the construction and maintenance of county highways, the Board of County Road Commissioners of the County of Oakland takes pleasure in submitting for your approval the following Tenth Annual Report outlining the work done during the fiscal year from October 1, 1921, to September 15, 1922, showing the present status of the various roads and outlining the construction and maintenance program proposed for the next fiscal year and estimating the cost thereof.

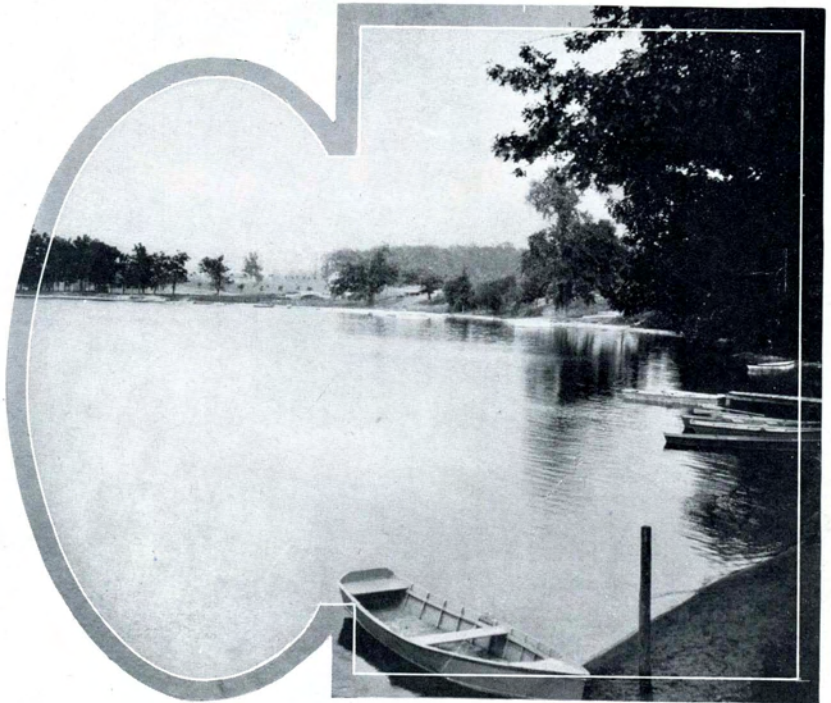
Respectfully submitted,

BOARD OF COUNTY ROAD COMMISSIONERS, OAKLAND COUNTY, MICHIGAN.

G. ROSS THOMPSON, Chairman.

THOMAS LYTLE,

JOHN A. ADAMS.



Lake Williams

The surface of the country throughout the County of Oakland may properly be described as comparatively level. The highest hills and ridges are found in the townships of Highland, Pontiac, Independence and Waterford. "Bald Mountain", so-called, lying partly in Pontiac and partly in Orion Townships, is most generally considered the highest land in the county.

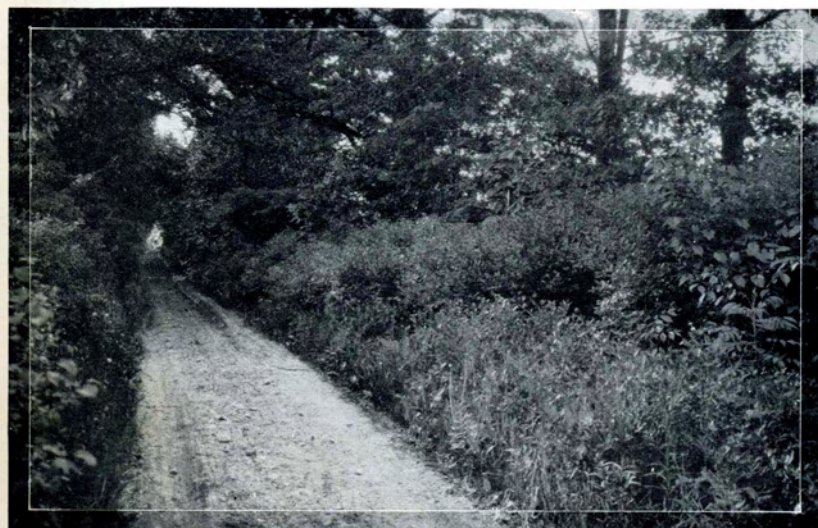
In several localities in the hilly portions are found extensive tracts of level land, denominated "plains" by the people, notable among them being those in and around Orion and Oxford villages, the "Sash-a-bau" plains in Independence Township, the "Drayton" plains in Waterford Township, and the White Lake plains lying partly in the four townships of Springfield, White Lake, Rose and Highland.

As seen from the summit of the high peaks on a clear day, the county presents the appearance of a vast champagne country, with its surface embossed here and there by rounded conical hills and ridges, seemingly all about the same height, and indented by almost innumerable water-basins and shallow valleys.

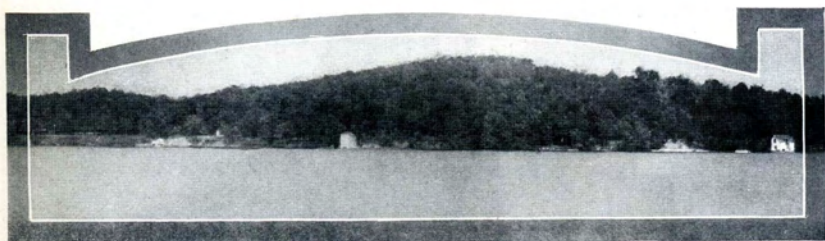
The general surface of the country is elevated about three hundred to four hundred feet above the water-level of the Great Lakes, and its drainage is comparatively good.

Threaded with its hundreds of miles of modern highways, and with its golf courses and summer hotels by the dozens, this county offers unusual attractions to motorists and summer tourists. Not only is it an ideal summer resort, but as an industrial and agricultural county it ranks very high. Many of its farms and country estates are conceded to be not only among the finest in Michigan, but to compare favorably with the famous estates on the Hudson just outside of New York City. It has well been called the "Summer Wonderland" of Michigan.

Not everyone can reside in Oakland County or even visit its beautiful hills, dales and placid smiling lakes, but those who long for the pictured natural beauties of other lands can find within the borders of this favored part of the old Wolverine State the aims of their ambition and the delight which contents a real lover of nature under its most alluring aspects.



Through a Woodland Way



## Construction of Concrete Pavements

RECENT developments in highway design have not entirely revolutionized pavement construction. Yet well conducted experiments have brought to light some interesting facts concerning the behavior of concrete pavements. As a result of these investigations conducted by the U. S. Bureau of Public Roads and State Highway Departments some changes in designs have been made, which, we believe, practically doubles the strength of designs in use heretofore.

It has been found that concrete pavements which are supposed to be rigid are not entirely so. Temperature changes causes the pavements to lengthen and shorten or to shrink laterally. The most important discovery is to the effect that the unequal heating and cooling of the top as compared with the bottom surface of the pavement causes the edges to curl up at night as much as  $\frac{1}{4}$  of an inch and down in the daytime with the center raised. At night it appears that the edges of the slab are entirely unsupported by the sub-grade.

The repeated loading of the slabs by truck loads passing over them have caused pavements to break down due to the fatigue of the slab. A truck loaded sufficiently to cause a 5 ton wheel load may pass over the edge of a pavement several times without failure yet if the same wheel passes along the edge 50 to 100 times it breaks the pavement down in many places. It would appear from the experiments that the loading of pavement should not exceed one-third of its apparent strength without danger of its failing in a comparatively short time.

Frost action has always been an unknown force in the destruction of pavements. Cracks are found so close together that there is not a good distribution of pressure caused by wheel loads passing over small segments. Freezing and thawing in the early spring months reduces the bearing power of the soil.

We know that impact is one of the great causes of destruction of our pavements. If the wheels of vehicles are smooth and the pavement smooth there will be no impact.

There are a few contributing causes to unevenness in pavements, some of which are: foreign material, non-uniform aggregates, poor workmanship, cracks and joints.

The design of concrete pavements constructed in Oakland County in the past two years have some features which tend to eliminate to some extent failures from above causes. Our pavements are eight inches in thickness with a crowned sub-base. A longitudinal joint is constructed in the pavement which increases its beam strength about four-fold. It eliminates longitudinal cracks that run irregularly over the entire width of the pavement. By confining this action to a 9 or 10 foot slab such cracks do not appear. The longitudinal joint in the center of the pavement, when filled with tar, forms a line of demarkation for passing vehicles. The joint material consists of a 16-gauge steel plate shaped to form a dowel. This dowel joint eliminates vertical separation of the slabs.

Reinforcement of concrete pavements has also received attention and has been used successfully for two years. The weight of metal used in 1921 was 40 pounds per 100 square foot and in 1922 65 pounds per square foot. Either wire mesh reinforcement or mats made up of steel bars are permitted. The John R. pavement having the 65 pounds metal made up in mats using  $\frac{3}{8}$ " bars spaced 16" transversely and 19" longitudinally; there being two bars at the center and edge of the slab placed top and bottom.

The advantages of steel reinforcement are that it gives the road greater resistance to frost action and greater bearing power and helps to offset irregularities and weaknesses in the sub-grade. By providing greater distribution of pressure it helps to preserve the integrity of the pavement and lessens any tendency toward cracking, which is one of the contributing causes to surface unevenness.

Transverse joints have always been a source of trouble. Lack of care in finishing joints coupled with a tendency to disintegrate and separate vertically have produced unevenness and the resultant damages to the pavement from impact. A wider spacing of joints or their entire elimination except at the end of a day's run or for any reason the mixer is forced to stop for any length of time are used to good success. The joints are dowelled together and with expansion material eliminated.

The use of a dry mix and the finishing by machines are producing better surfaces. A close inspection is necessary at all times, as the very life of the pavement depends not on how much the contractor made out of a job but how much he put into it. The pavement will be judged by its users and in passing judgment the contractor is rated good or bad according to the merits of the work.



Pine-scented air induces restful sleep



## MAINTENANCE

THE problems involved in the maintenance of highways have changed so radically within the last few years that this phase of highway work is now recognized as one of prime importance in the operation of any highway organization. It has been but a short time since the upkeep of our roads required only a few hours' time each week to keep them in very satisfactory condition. The rapid growth of the motor vehicle, however, besides creating a demand for more miles of improved roads, has made necessary new and improved methods of maintenance in order that the existing highways might render satisfactory and uninterrupted service to the traveling public.

Having undertaken large programs of construction in 1920 and 1921, we entered upon this last fiscal year with a total of 435 miles in our maintenance system. The necessity for adequate maintenance is best illustrated by the traffic map in the back of this booklet and the article in connection therewith.

In order that this work might be handled to best advantage, a Maintenance Department was created, as outlined on the organization chart, under the supervision of a Maintenance Engineer. The county is divided into three districts, each in charge of a Maintenance Superintendent. These three superintendents look after all gravel maintenance work in the county, each having approximately one hundred miles of highway. District No. 4 embraces all hard-surfaced pavements, including concrete, brick and asphalt on both trunk lines and county highways. This district also comprises approximately one hundred miles of road.

Without going into the methods of maintenance used on each type of road, it is sufficient to say that standard and up-to-date methods are in use, each section requiring individual investigation and study. Concrete roads require occasional tarring of cracks and joints, shoulder work, taking care of drainage by cleaning of ditches and attention to drainage structures, cutting of weeds and brush, and the repair of patches either by means of penetration method or replacement of broken slabs by the use of concrete. Gravel roads require floating in proportion to the amount of traffic, the addition of new material for patch work where holes develop of sufficient

size to make this work necessary, attention to drainage ditches and structures, scaring and removing oversize stone wherever and whenever such material shows up to any considerable amount, and the resurfacing of roads which have become badly worn.

During the hot summer months the dust nuisance becomes so disagreeable and dangerous to travel that it is found to be advantageous to apply calcium chloride as a dust layer. The material is usually put on in two applications, using three-quarters of a pound per square yard at each treatment.

Special features of maintenance work undertaken by this Commission during the last fiscal year include the erection of danger signs at all railroad crossings, dangerous corners and sharp curves, the erection of distance and direction signs at all road intersections, the improvement of all sharp turns by securing additional right-of-way and by widening and superlevating the roadway, painting a white strip down the center of all heavily travelled concrete pavements, and the use of prison labor in cleaning ditches, back-sloping and cutting weeds and brush.



**SIGNS.** Railroad crossing signs were erected in accordance with Act 270 of the Public Acts of 1921 which required highway authorities to erect danger signs at all crossings in the State, the sign to be furnished by the railroad company and to be erected by the proper highway authorities.

Distance and direction signs were erected at all road intersections, giving the distance and direction to towns. This work was done in co-operation with the Oakland Automobile Club, signs being furnished by the Road Commission, the expense of erection to be borne by the Automobile Club.

**CORNERS.** As a measure of safety, this Commission is now improving all right-angle turns, sharp jogs and dangerous curves by securing sufficient right-of-way to secure an easy riding curve and safe sight distance. Superlevation and widening at such points prevents many serious accidents.

**PRISON LABOR.** Very satisfactory results were secured this summer by the use of prison labor for cleaning ditches, back sloping, and cutting weeds and brush.

In spite of special work, increased traffic and the fact that we maintained 75 miles more highway this year than last, the total expenditure for maintenance purposes this year was less than that of last year by the amount of \$2,944.71. Or, in other words, if the rate per mile, as derived from last year's results, were applied to this year's increased mileage, the total expenditure would have been \$342,641.33, representing a saving of \$63,098.45. These costs include supervision, clerical work and all items of general expense and overhead chargeable to maintenance work.

*Hordes of autos now remind us  
We should build our roads to stay,  
And departing leave behind us  
Kind that rains don't wash away.*

*When our children pay the mortgage  
Father's made to haul their loads,  
They'll not have to ask the question  
"Here's the bonds, but where's the roads?"*

## Notice to the Board of Supervisors

Pontiac, Michigan, October 1st, 1922

*To the Honorable Board of Supervisors of the County of Oakland:*

GENTLEMEN:

Your Board of County Road Commissioners would respectfully submit the following financial statement of the County Road Funds showing expenditures for the fiscal year ending September 15th, 1922.

Your Board would report that the great problem now before this county is that of maintenance. The period of construction has largely ended and with it has ended the receipt of the State Reward funds from the State, so that henceforth the expense of maintenance must be almost entirely raised by taxation upon Oakland County.

We have maintained 435 miles during the past year at a cost of \$279,542.00 and the number of miles to be maintained is increasing each year; the amount which will be realized by the one-half mill tax will amount to between \$69,000 and \$70,000. The balance must be met from the receipt of auto tax and the deficit paid out of our present maintenance fund.

Your Board has felt it much better, in view of the constant increase of maintenance, that a regular tax of one-half mill be raised annually, than to use the present fund and then be compelled to raise a general tax of much more than one-half mill in order to properly maintain our roads. In addition, we contemplate the purchase of sufficient gravel pits so that Oakland County may protect its future supply of gravel. Therefore, available maintenance money must be used for that purpose.

We recommend that there be levied one (1) mill on 1921 equalized valuation for State Trunk Line construction and one-half ( $\frac{1}{2}$ ) mill for county road maintenance.

G. ROSS THOMPSON,

THOMAS LYTTLE,

JOHN A. ADAMS,

Board of County Road Commissioners.

Scene at Walled Lake





## CO. ROAD CONSTRUCTION COMPLETED 1922

	Expenditures Sept. 30, 1921	Expenditures 1922	Total Cost
ADDISON TOWNSHIP			
George Lake Road.....	\$16,226.02	\$ 8,066.90	\$24,292.92
FARMINGTON TOWNSHIP			
Switzer Road (New) .....	16,842.19	5,531.46	22,373.65
Switzer Road (Old).....		753.61	753.61
HOLLY TOWNSHIP			
Milford Road .....	15,879.59	18,917.50	34,797.09
MILFORD TOWNSHIP			
Commerce Road .....	10,107.36	1,330.14	11,437.50
ROYAL OAK			
John R. Road.....	14,558.66	4,421.90	18,980.56
SOUTHFIELD TOWNSHIP			
Franklin Village .....		6,751.18	6,751.18
Redford Road (Old).....	11,972.83	8,294.29	20,267.12
WEST BLOOMFIELD TOWNSHIP			
Walled Lake Road (Old).....		2,223.63	2,223.63
WHITE LAKE TOWNSHIP			
White Lake Road.....	23,767.88	17,406.24	41,174.12

## CO. ROADS UNDER CONSTRUCTION 1922

	Expenditures Sept. 30, 1921	Expenditures 1922	Total Cost
BLOOMFIELD TOWNSHIP			
Franklin Road .....		\$ 3,718.72	\$ 3,718.72
BRANDON TOWNSHIP			
Seymour Lake Road.....		18,233.01	18,233.01
COMMERCE TOWNSHIP			
South Commerce Road.....		7,227.62	7,227.62
LYON TOWNSHIP			
New Hudson Road .....		24,430.77	24,430.77
OXFORD TOWNSHIP			
Oakwood Road .....		12,796.54	12,796.54
ROSE TOWNSHIP			
West Holly Road.....		18,447.47	18,447.47
SOUTHFIELD TOWNSHIP			
Redford Road (New).....		4,688.31	4,688.31
WEST BLOOMFIELD TOWNSHIP			
Walled Lake Road (New).....	\$3,040.23	4,812.11	7,852.34
WOODWARD AVENUE SURVEY.....	1,349.92	2,595.61	3,945.53

## COVERT ROAD COMPLETED 1922

	EXPENDITURES SEPT. 30, 1921	EXPENDITURES 1922	TOTAL COST
No. 27—Village of Milford.....	\$170,107.89	\$ 9,208.15	\$179,316.04
No. 29—Eleven Mile Road.....	333,855.62	67,489.84	401,345.46
No. 30—Twelve Mile Road.....	107,676.11	16,022.23	123,698.34
No. 38—McCracken Road.....	18,229.99	20,273.77	38,503.76
No. 39—Halstead Road.....	21,883.94	30,406.07	52,290.01
No. 40—Holly Village.....	36,932.08	14,603.21	51,535.29
No. 41—Milford - Grand River.....	117,784.90	68,290.43	186,075.33
No. 47—Baldwin Avenue Road.....	84,298.03	15,948.04	100,246.07
No. 48—Village of Ortonville—Mill St.....	12,101.64	11,227.08	23,328.72
No. 49—Village of Ortonville—Church St..	44,677.90	40,163.98	84,841.88
No. 50—Ford Republic Road.....	11,375.03	2,291.02	13,666.05
No. 52—Village of South Lyon.....	7,180.16	42,473.83	49,653.99
No. 54—Village of South Lyon.....	5,087.93	28,264.87	33,352.80
No. 62—Southfield Road.....	336,558.68	70,697.29	407,255.97
No. 65—Rochester Village North.....	7,686.20	105,051.70	112,737.90
No. 71—Clarkston Village.....	747.29	27,063.87	27,811.16

## COVERT ROADS UNDER CONSTRUCTION

No. 11—John R. Road.....	\$ 1,723.24	\$205,025.66	\$206,748.90
No. 56—Beaver Road.....		5,642.96	5,642.96
No. 57—Birmingham Village—Adams Ave.		1,078.26	1,078.26
No. 69—Oxford Road.....	3,492.71	49,382.62	52,875.33

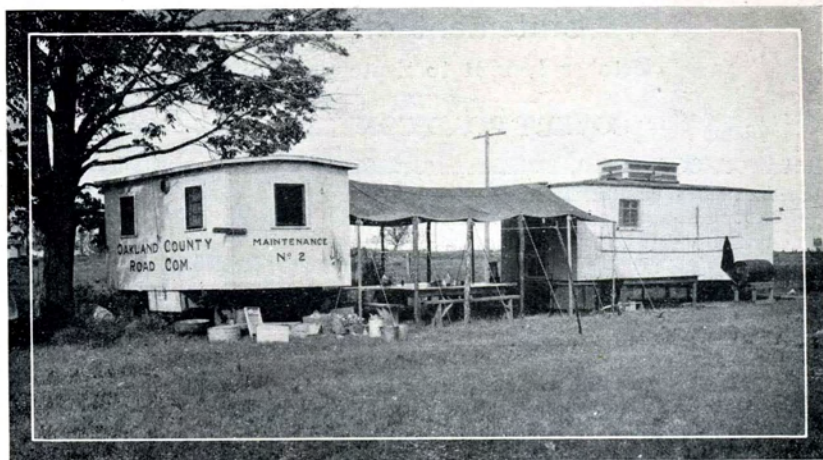


Cool breezes offer a tempting inducement to the tourist on a hot summer day

## ROAD MAINTENANCE

County Roads—October 1, 1921 to September 15, 1922

Maintenance Section Number	Type	Mileage	Expenditure	Cost Per Mile
1.....	Gravel.....	7.75	\$ 2,542.29	\$ 328.04
2.....	Gravel.....	6.80	5,065.42	744.92
3.....	Gravel.....	4.00	1,010.06	252.52
4.....	Gravel.....	15.80	10,938.98	692.34
5.....	Asphalt.....	1.25	588.16	470.53
6.....	Gravel.....	7.00	2,309.85	329.98
8.....	Gravel.....	21.30	8,653.33	406.26
9.....	Gravel.....	10.10	5,289.60	523.72
11.....	Gravel.....	13.60	7,674.70	564.32
12.....	Gravel.....	14.30	10,138.95	709.02
13.....	Gravel.....	10.00	4,269.03	426.90
14.....	Concrete.....	5.10	864.72	169.55
15.....	Concrete.....	1.70	139.58	82.11
17.....	Concrete.....	4.00	2,248.68	562.17
18.....	Gravel.....	1.00	187.70	187.70
19.....	Concrete.....	6.10	1,238.25	202.99
20.....	Concrete.....	7.60	1,237.68	162.85
21.....	Concrete.....	2.60	322.40	124.00
22.....	Concrete.....	7.25	1,443.60	199.12
23.....	Gravel.....	3.50	4,201.96	1,200.56
24.....	Gravel.....	15.00	10,345.34	689.69
28.....	Concrete.....	6.05	1,378.83	227.91
30.....	Concrete.....	3.10	584.69	188.61
40.....	Gravel.....	8.00	3,670.36	458.80
41.....	Gravel.....	5.80	995.50	171.64
42.....	Gravel.....	6.20	1,933.47	311.85
43.....	Gravel.....	8.00	4,628.82	578.60
44.....	Gravel.....	8.10	3,189.50	393.77
45.....	Asphalt.....	0.60	25.55	42.58
46.....	Gravel.....	7.05	3,571.21	506.55
47.....	Gravel.....	6.50	2,406.01	370.16
48.....	Gravel.....	5.30	1,876.36	354.03
49.....	Gravel.....	3.65	2,577.87	706.27
50.....	Asphalt.....	1.55	409.90	264.46
51.....	Concrete.....	2.80	1,117.06	398.95
52.....	Gravel.....	5.70	3,170.37	556.21
53.....	Concrete.....	0.60	69.85	116.42
60.....	Gravel.....	3.00	664.10	221.37
61.....	Concrete.....	2.40	420.00	175.00
62.....	Concrete.....	11.75	5,518.83	469.69
63.....	Gravel.....	9.70	3,105.09	320.11
64.....	Gravel.....	9.55	3,724.41	389.99
65.....	Concrete.....	0.45	95.02	211.16
66.....	Gravel.....	5.65	3,926.55	694.96
67.....	Gravel.....	5.70	2,172.24	381.10
68.....	Gravel.....	4.90	2,496.35	509.46
69.....	Gravel.....	17.60	23,387.90	1,328.86
70.....	Gravel.....	8.20	4,340.04	529.27
71.....	Gravel.....	4.80	2,763.07	575.64
72.....	Concrete and Brick.....	0.85	670.05	788.30
73.....	Concrete.....	2.10	279.91	133.29
74.....	Gravel.....	5.85	1,602.84	273.99
75.....	Gravel.....	4.15	2,558.93	616.61
76.....	Gravel.....	3.00	2,331.86	777.29
Total.....		344.40	\$172,372.82	



Maintenance Camp for prison labor

## STATE TRUNK LINE ROADS

Maintenance Section Number	Type	Mileage	Expenditure	Cost Per Mile
10-1	Concrete	13.05	\$ 13,525.56	\$1,036.44
10-2	Asphalt	3.05	17,546.63	5,752.99
10-3	Gravel	4.38	8,671.14	1,979.71
10-4	Gravel	4.00	7,767.36	1,941.84
10-5	Asphalt	10.05	1,873.87	186.46
16-1	Concrete	4.35	1,376.63	316.47
16-2	Gravel	4.20	21,482.36	2,922.77
16-3	Gravel	3.15		
16-4	Gravel	4.30		
16-5	Gravel	2.85	6,609.20	924.36
36-1	Gravel	4.75	5,097.12	1,073.08
36-2	Gravel	4.80	6,089.43	1,268.63
36-3	Concrete	1.20	360.36	300.30
36-3	Gravel	2.50	1,640.00	656.00
36-4	Gravel	4.10	1,404.77	342.63
59-1	Concrete	7.00	2,565.25	366.46
87-1	Gravel	5.80	6,044.24	1,042.11
87-2	Gravel	5.40	4,800.00	888.88
87-2	Asphalt	1.80	316.14	175.63
Total		90.73	\$107,170.06	
Grand Total		435.13	\$279,542.88	
Average Cost Per Mile—Trunk Line Roads—Gravel				\$1,385.74
Other Types				\$ 927.52
County Roads—Gravel				\$ 555.85
Other Types				\$ 274.91
Average Cost Per Mile—All Roads				\$ 642.44

*"Beating the train" is a pleasant game, but helps to increase motorist mortality. A durable warning sign will often save a life."*

## Statement of Funds

October 1, 1921 to September 15, 1922

### COVERT ROAD CONSTRUCTION

BALANCE, OCTOBER 1, 1921.....	\$386,155.28	
(Certificate of Deposit included, in 1921 statement) .....	40,000.00	
	\$ 346,155.28	
<b>RECEIPTS</b>		
Tax Collections 1918-1920.....	\$ 63,235.53	
Tax Collections 1921.....	173,085.04	
Int. Returned, Previously Paid from Const. Funds .....	34,611.90	
Refund, D. U. R. Bridge, A. D. No. 65 .....	7,100.00	
Interest on Deposits.....	6,544.46	
Sale of Bonds.....	446,900.00	
	\$ 731,476.93	
LOANS .....		112,584.66
TRANSFERS .....		64,494.65
<b>DISBURSEMENTS</b>		
Checks Drawn .....		\$ 836,444.37
Loans Returned .....		96,348.94
Transfers .....		2,124.26
Funds in hands of Co. Treasurer, Sept. 15, 1922.....		319,793.95
	\$1,254,711.52	\$1,254,711.52

### COUNTY ROAD CONSTRUCTION

BALANCE, OCTOBER 1, 1922.....		\$ 118,566.22
<b>RECEIPTS</b>		
Sale of Lumber.....	\$ 10.00	
Rebate of Freight Charge.....	63.66	
Tax Levy .....	204,557.12	
Interest on Deposits .....	1,795.43	
	206,426.21	
<b>DISBURSEMENTS</b>		
Transfer .....		\$ 105,415.90
Checks Drawn .....		165,031.45
Funds in hands of Co. Treasurer, Sept. 15, 1922.....		54,545.08
	\$ 324,992.43	\$ 324,992.43

*The mills of the Gods grind slowly  
Though they grind exceeding small.  
But consid'ring the stuff they have to grind,  
It's a wonder they grind at all.*

## MAINTENANCE FUND

BALANCE OCT. 1, 1921.....	\$269,962.05	
<b>RECEIPTS</b>		
State Reward,		
Trunk Line Repair.....	\$ 11,264.04	
County Road Repair.....	14,524.27	
Construction Reward.....	104,884.87	
Equipment Rental.....	4,685.00	
Re-assessed Tax.....	367.36	
Delinquent Tax Redemptions.....	141.78	
Tax Sales.....	1,604.52	
Delinquent Tax Collections.....	30,326.18	
Tax Collections—Auditor Gen.....	145.79	
Refunds.....	260.52	
Interest on Deposits.....	4,931.18	
Auto Tax.....	119,708.09	
Sale of Material & Machinery.....	794.38	
Farm Rent.....	80.00	
Sale of Farm—1st Payment.....	200.00	
Loans Returned.....	96,348.94	
Transfers.....	107,467.16	497,734.08
<b>DISBURSEMENTS</b>		
Loans.....	\$112,406.32	
Transfers.....	115,335.99	
Checks Drawn.....	303,124.73	\$530,867.04
<b>FUNDS IN HANDS OF TREAS.,</b>		
SEPT. 15, 1922.....		236,829.09
	\$767,696.13	\$767,696.13

## TRIAL BALANCE

September 16th, 1922, after closing

### COUNTY TREASURER'S FUNDS.

County Road Construction Fund.....	\$ 54,545.08	
Maintenance Fund.....	236,829.09	
Covert Road Fund.....	319,793.95	
County Road Construction.....	97,422.20	
Covert Road Construction.....	725,585.39	
Woodward Avenue Survey.....	3,945.53	
Machinery and Tools.....	54,583.20	
Material and Stores.....	4,593.51	
Contingent Pay Roll.....	424.19	
Highland Gravel Pit.....	926.23	
Farmington Gravel Pit.....	1,132.47	
Shoemaker Gravel Pit.....	11,051.00	
Surplus.....		\$7,359,789.89
<b>COMPLETED ROADS:</b>		
Covert Roads.....	3,776,397.06	
Bond.....	1,000,000.00	
Maintenance.....	350,177.01	
County.....	722,383.98	
	\$7,359,789.89	\$7,359,789.89

**COVERT ACT ROADS  
STATEMENT OF TAXES DUE AND PAYABLE**

Oakland County at Large

Road No.	Total Tax	Taxes Paid to Date	Unpaid Tax	Int. Due	Total Prin. and Interest	Installment Due	Installment & Int. Due
1.....	\$ 47,225.01	\$ 18,890.00	\$ 28,335.01	\$ 1,700.10	\$ 30,035.11	\$ 4,722.50	\$ 6,422.60
2.....	19,430.75	7,772.30	11,658.45	699.51	12,357.96	1,943.08	2,642.59
3.....	18,137.42	7,254.98	10,882.44	652.95	11,535.39	1,813.74	2,466.69
4.....	38,600.86	15,440.34	23,160.52	1,389.63	24,550.15	3,860.09	5,249.72
5.....	15,829.71	4,748.91	11,080.80	664.85	11,745.65	1,582.97	2,247.82
6.....	14,966.29	5,986.51	8,979.78	538.79	9,518.57	1,496.63	2,035.42
8.....	76,205.84	22,861.75	53,344.09	3,200.65	56,544.74	7,620.58	10,821.23
9.....	3,987.50	1,595.00	2,392.50	143.55	2,536.05	398.75	542.30
11.....	148,798.27	.....	148,798.27	5,951.93	154,750.20	14,879.83	*20,831.76
12.....	56,246.09	16,873.82	39,372.27	2,362.34	41,734.61	5,624.61	7,986.95
15.....	159,904.40	47,971.32	111,933.08	6,715.98	118,649.06	15,990.44	22,706.42
16.....	294,855.94	88,456.78	206,399.16	12,383.95	218,783.11	29,485.59	41,869.54
18.....	20,194.06	6,058.21	14,135.85	848.15	14,984.00	2,019.41	2,867.56
19.....	10,046.38	3,013.91	7,032.47	421.95	7,454.42	1,004.64	1,426.59
20.....	49,605.54	14,881.66	34,723.88	2,083.43	36,807.31	4,960.55	7,043.93
21.....	30,960.63	9,288.18	21,672.45	1,300.35	22,972.80	3,096.06	4,396.41
22.....	105,086.66	21,017.33	84,069.33	5,044.16	89,113.49	10,508.67	15,552.83
23.....	14,094.12	4,228.24	9,865.88	591.95	10,457.83	1,409.41	2,001.36
24.....	16,438.51	3,287.70	13,150.81	789.05	13,939.86	1,643.85	2,432.90
27.....	83,337.66	16,667.13	66,670.53	4,000.21	70,670.34	8,333.77	12,333.98
29.....	153,881.27	30,776.25	123,105.02	7,386.30	130,491.32	15,388.13	22,774.43
30.....	33,431.77	3,343.18	30,088.59	1,805.32	31,893.91	3,343.18	5,148.50
32.....	26,510.11	5,302.02	21,208.09	1,272.49	22,480.58	2,651.01	3,923.50
34.....	20,830.00	4,166.00	16,664.00	999.84	17,663.84	2,083.00	3,082.84
35.....	17,253.70	3,450.74	13,802.96	828.18	14,631.14	1,725.37	2,553.55

\*4%

COVER ACT ROADS, (Continued)

Road No.	Total Tax	Taxes Paid to Date	Unpaid Tax	Int. Due	Total Prin. and Interest	Installment Due	Installment & Int. Due
38	12,460.44	1,246.04	11,214.41	672.86	11,887.27	1,246.04	1,918.90
39	14,936.98	1,493.70	13,443.28	806.60	14,249.88	1,493.70	2,300.30
40	17,911.26	1,791.13	16,120.13	967.21	17,087.34	1,791.13	2,738.34
41	80,999.54	8,099.96	72,899.58	4,373.98	77,273.56	8,099.95	12,473.93
47	48,855.31	4,885.53	43,969.77	2,638.19	46,607.96	4,885.53	7,523.72
48	10,809.84	1,080.98	9,728.86	583.73	10,312.59	1,080.98	1,664.71
49	36,142.84	3,614.28	32,528.56	1,951.71	34,480.27	3,614.28	5,565.99
50	3,355.12	335.51	3,019.61	181.18	3,200.79	335.51	516.69
52	22,523.83	2,252.38	20,271.45	1,216.29	21,487.74	2,252.38	3,468.67
54	16,065.76	1,606.58	14,459.18	867.55	15,326.73	1,606.58	2,474.13
56	23,384.25	.....	23,384.25	935.37	24,319.62	2,338.43	*3,273.80
62	182,833.91	18,283.39	164,550.52	9,873.03	174,423.55	18,283.39	28,156.42
65	43,123.71	4,312.37	38,811.34	2,328.68	41,140.02	4,312.37	6,641.05
69	25,758.74	2,575.87	23,182.87	1,390.97	24,573.84	2,575.87	3,966.84
71	13,877.47	1,387.75	12,489.72	749.38	13,239.10	1,387.75	2,137.13
Totals	\$2,028,897.49	\$416,298.13	\$1,612,599.36	\$93,312.34	\$1,705,911.70	\$202,889.75	\$296,202.09

\* 4%

"Here lies the body of William Jay,  
 Who died maintaining his right-of-way,  
 He was right, dead right, as he sped along  
 But he's just as dead 's if he'd been wrong."



## 1922 TAXES ON TOWNSHIPS AT LARGE

TOWNSHIP	Road	Installment Due	Interest Due	Total Payment 1922
ADDISON	No. 19	\$ 248.96	\$ 104.57	\$ 353.53
	23	704.71	295.98	1,000.69
	69	858.63	463.66	1,322.29
		\$ 1,812.30	\$ 864.21	\$ 2,676.51
AVON	No. 2	\$ 699.51	\$ 251.83	\$ 951.34
	15	2,479.31	1,041.31	3,520.62
	16	4,992.27	2,096.75	7,089.02
	35	575.12	276.06	851.18
	65	1,437.46	776.23	2,213.69
		\$ 10,183.67	\$ 4,442.18	\$ 14,625.85
BLOOMFIELD	No. 1	\$ 1,967.71	\$ 708.38	\$ 2,676.09
	2	466.34	167.88	634.22
	8	3,636.23	1,527.22	5,163.45
	12	674.95	283.48	958.43
	15	137.74	57.85	195.59
	62	4,875.57	2,632.81	7,508.38
		\$ 11,758.54	\$ 5,377.62	\$ 17,136.16
BRANDON	No. 48	\$ 360.33	\$ 194.58	\$ 554.91
	49	1,204.76	650.57	1,855.33
		\$ 1,565.09	\$ 845.15	\$ 2,410.24
COMMERCE	No. 3	\$ 60.46	\$ 21.77	\$ 82.23
	12	168.74	70.87	239.61
	21	307.77	129.26	437.03
	32	331.38	159.06	490.44
	41	1,259.99	680.40	1,940.39
		\$ 2,128.34	\$ 1,061.36	\$ 3,189.70
FARMINGTON	No. 1	\$ 196.77	\$ 70.84	\$ 267.61
	4	1,930.04	694.82	2,624.86
	21	461.66	193.90	655.56
	38	830.70	448.58	1,279.28
	39	995.80	537.73	1,533.53
	50	174.47	94.21	268.68
		\$ 4,589.44	\$ 2,040.08	\$ 6,629.52
GROVELAND	No. 48	\$ 120.11	\$ 64.86	\$ 184.97
	49	401.59	216.86	618.45
		\$ 521.70	\$ 281.72	\$ 803.42
HIGHLAND	No. 27	\$ 757.62	\$ 363.66	\$ 1,121.28
			\$ 363.66	\$ 1,121.28
HOLLY	No. 40	\$ 676.65	\$ 365.39	\$ 1,042.04
			\$ 365.39	\$ 1,042.04
INDEPENDENCE	No. 9	\$ 79.75	\$ 28.71	\$ 108.46
	22	2,942.43	1,412.36	4,354.79
	71	462.58	249.80	712.38
		\$ 3,484.76	\$ 1,690.87	\$ 5,175.63

TOWNSHIP	Road	Installment Due	Interest Due	Total Payment 1922
LYON	No. 18	\$ 1,009.70	\$ 424.08	\$ 1,433.78
	52	1,001.06	540.57	1,541.63
	54	714.03	385.58	1,099.61
		\$ 2,724.79	\$ 1,350.23	\$ 4,075.02
MILFORD	No. 27	\$ 3,788.08	\$ 1,818.28	\$ 5,606.36
	41	1,439.99	777.60	2,217.59
		\$ 5,228.07	\$ 2,595.88	\$ 7,823.95
NOVI	No. 21	\$ 307.77	\$ 129.26	\$ 437.03
	38	83.07	44.86	127.93
	41	900.00	486.00	1,386.00
		\$ 1,290.84	\$ 660.12	\$ 1,950.96
OAKLAND	No. 5	\$ 506.28	\$ 212.64	\$ 718.92
	16	1,872.10	786.28	2,658.38
	19	248.96	104.57	353.53
	34	925.78	444.37	1,370.15
		\$ 3,553.12	\$ 1,547.86	\$ 5,100.98
ORION	No. 5	\$ 337.52	\$ 141.76	\$ 479.28
	20	959.35	402.93	1,362.28
	22	2,311.91	1,109.72	3,421.63
		\$ 3,608.78	\$ 1,654.41	\$ 5,263.19
OXFORD	No. 69	\$ 2,575.87	\$ 1,390.97	\$ 3,966.84
		\$ 2,575.87	\$ 1,390.97	\$ 3,966.84
PONTIAC	No. 2	\$ 310.89	\$ 111.92	\$ 422.81
	15	1,652.87	694.21	2,347.08
	47	1,628.51	879.40	2,507.91
		\$ 3,592.27	\$ 1,685.53	\$ 5,277.80
ROSE	No. 40	\$ 119.41	\$ 64.48	\$ 183.89
		\$ 119.41	\$ 64.48	\$ 183.89
ROYAL OAK	No. 6	\$ 1,017.71	\$ 366.38	\$ 1,384.09
	11	3,802.62	1,521.05	5,323.67
	16	7,488.41	3,145.13	10,633.54
	24	1,174.18	563.61	1,737.79
	29	6,539.95	3,139.18	9,679.13
	30	1,872.18	1,010.98	2,883.16
		\$ 21,895.05	\$ 9,746.33	\$ 31,641.38
SOUTHFIELD	No. 1	\$ 196.77	\$ 70.84	\$ 267.61
	29	1,154.11	553.97	1,708.08
	30	1,471.00	794.34	2,265.34
	50	161.05	86.96	248.01
	62	5,281.87	2,852.21	8,134.08
		\$ 8,264.80	\$ 4,358.32	\$ 12,623.12
SPRINGFIELD	No. 9	\$ 319.00	\$ 114.84	\$ 433.84
		\$ 319.00	\$ 114.84	\$ 433.84

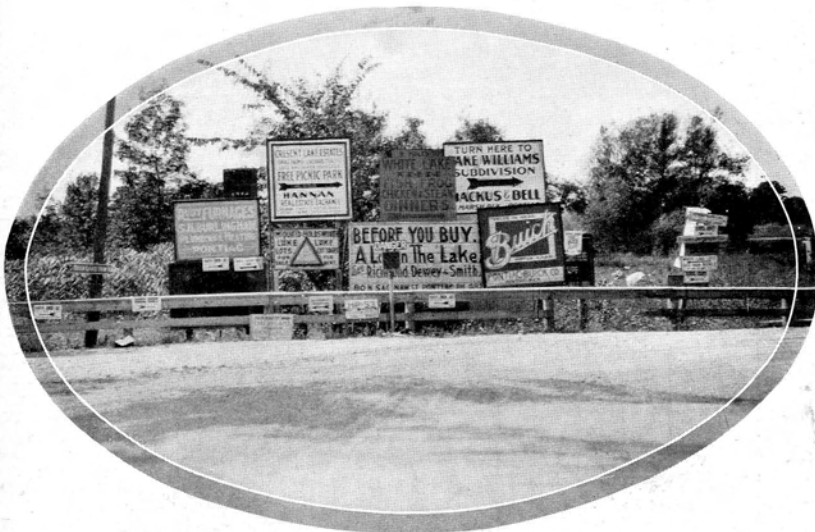
TOWNSHIP	Road	Installment Due	Interest Due	Total Payment 1922
TROY .....	No. 2.....	\$ 466.34	\$ 167.88	\$ 634.22
	6.....	478.92	172.41	651.33
	11.....	2,810.63	1,124.25	3,934.88
	15.....	413.22	173.55	586.77
	16.....	3,120.17	1,310.47	4,430.64
	56.....	1,039.30	415.72	1,455.02
		\$ 8,328.58	\$ 3,364.28	\$ 11,692.86
WATERFORD .....	No. 3.....	\$ 906.87	\$ 326.47	\$ 1,233.34
	32.....	745.60	357.89	1,103.49
		\$ 1,652.47	\$ 684.36	\$ 2,336.83
WEST BLOOMFIELD .....	No. 1.....	\$ 1,293.01	\$ 465.50	\$ 1,758.51
	3.....	60.46	21.77	82.23
	4.....	643.35	231.61	874.96
	8.....	2,424.15	1,018.14	3,442.29
	12.....	899.94	377.98	1,277.92
	21.....	461.66	193.90	655.56
	32.....	579.91	278.36	858.27
39.....	149.37	80.66	230.03	
		\$ 6,511.85	\$ 2,667.92	\$ 9,179.77
WHITE LAKE .....	No. 3.....	\$ 181.37	\$ 65.30	\$ 246.67
	32.....	248.53	119.30	367.83
		\$ 429.90	\$ 184.60	\$ 614.50
Total.....		\$107,572.91	\$49,402.37	\$156,975.28



An inviting spot where many pleasant hours may be spent

## SUMMARY OF COVERT ACT TAX

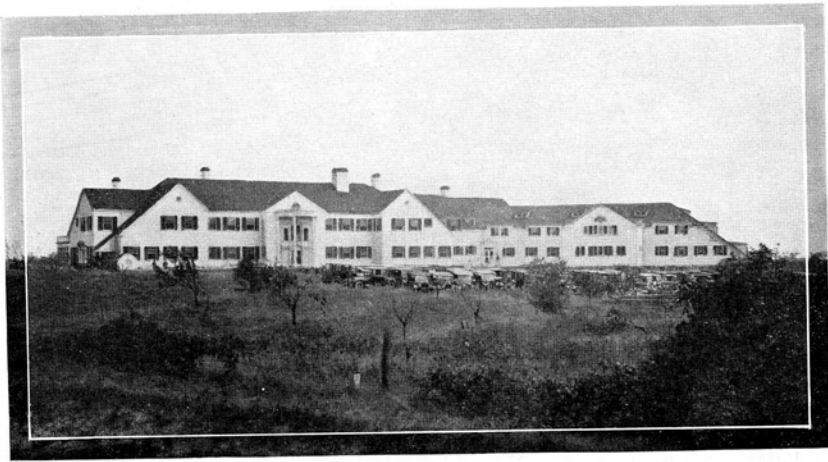
	Annual Interest	Annual Installment	Total Due 1922
Oakland County at Large.....	\$ 93,312.34	\$202,889.75	\$296,202.09
Addison Township at Large.....	864.21	1,812.30	2,676.51
Avon Township at Large.....	4,442.18	10,183.67	14,625.85
Bloomfield Township at Large.....	5,377.62	11,758.54	17,136.16
Brandon Township at Large.....	845.15	1,565.09	2,410.24
Commerce Township at Large.....	1,061.36	2,128.34	3,189.70
Farmington Township at Large.....	2,040.08	4,589.44	6,629.52
Groveland Township at Large.....	281.72	521.70	803.42
Holly Township at Large.....	365.39	676.65	1,042.04
Highland Township at Large.....	363.66	757.62	1,121.28
Independence Township at Large.....	1,690.87	3,484.76	5,175.63
Lyon Township at Large.....	1,350.23	2,724.79	4,075.02
Milford Township at Large.....	2,595.88	5,228.07	7,823.95
Novi Township at Large.....	660.12	1,290.84	1,950.96
Oakland Township at Large.....	1,547.86	3,553.12	5,100.98
Orion Township at Large.....	1,654.41	3,608.78	5,263.19
Oxford Township at Large.....	1,390.97	2,575.87	3,966.84
Pontiac Township at Large.....	1,685.53	3,592.27	5,277.80
Rose Township at Large.....	64.48	119.41	183.89
Royal Oak Township at Large.....	9,746.33	21,895.05	31,641.38
Southfield Township at Large.....	4,358.32	8,264.80	12,623.12
Springfield Township at Large.....	114.84	319.00	433.84
Troy Township at Large.....	3,364.28	8,328.58	11,692.86
Waterford Township at Large.....	684.36	1,652.47	2,336.83
West Bloomfield Township at Large.....	2,667.92	6,511.85	9,179.77
White Lake Township at Large.....	184.60	429.90	614.50
Total.....	\$142,714.71	\$310,462.66	\$453,177.37



What are signs?

Chart Showing Assessed Valuation and Mileage of Improved Roads by Townships

TOWNSHIP	A. D. ROADS		COUNTY ROADS		MILEAGE TOTALS			Assessed Valuation 1922
	Gravel	Hard Surface	Gravel	Hard Surface	Gravel	Hard Surface	All Types	
Addison.....	5.071	.....	15.325	.....	20.396	.....	20.396	\$ 1,145,130
Avon.....	6.936	9.661	4.619	1.040	11.555	10.701	22.256	5,523,800
Bloomfield.....	2.035	10.600	6.353	5.648	8.438	16.248	24.686	11,299,750
Brandon.....	0.527	1.605	15.848	.....	16.375	1.605	17.980	1,500,801
Commerce.....	6.908	.....	17.812	.....	24.720	.....	24.720	1,329,417
Farmington.....	12.972	11.012	12.733	.....	25.705	11.012	36.717	3,598,774
Groveland.....	.....	6.047	10.950	.....	10.950	6.047	16.997	833,200
Highland.....	.....	.....	16.141	.....	16.141	.....	16.141	1,185,691
Holly.....	.....	4.129	13.324	.....	13.324	4.129	17.453	2,359,360
Independence.....	5.381	0.615	9.190	.....	14.571	0.615	15.186	1,597,940
Lyon.....	5.779	1.111	19.924	.....	25.703	1.111	26.814	1,725,562
Milford.....	2.553	2.975	10.316	.....	12.869	2.975	15.844	1,647,254
Novi.....	7.124	.....	15.215	.....	22.339	.....	22.339	1,870,566
Oakland.....	5.468	.....	15.242	.....	20.710	.....	20.710	1,381,490
Orion.....	6.786	1.202	10.903	.....	17.689	1.202	18.891	2,594,360
Oxford.....	4.760	1.000	13.335	.....	18.095	1.000	19.095	3,126,960
Pontiac.....	0.850	5.063	8.274	0.912	9.124	5.975	15.099	2,032,000
Rose.....	.....	.....	12.577	.....	12.577	.....	12.577	956,770
Royal Oak.....	2.938	18.450	.....	6.938	2.938	25.388	28.326	18,927,400
Southfield.....	3.515	7.007	11.406	.....	14.921	7.007	21.928	2,780,695
Springfield.....	2.000	2.250	9.181	.....	11.181	2.250	13.431	930,233
Troy.....	3.059	9.248	4.219	0.464	7.288	9.712	17.000	3,955,419
Waterford.....	3.426	2.846	6.946	1.820	10.372	4.666	15.038	2,713,615
West Bloomfield.....	2.121	7.561	13.746	.....	15.867	7.561	23.428	4,687,570
White Lake.....	0.114	.....	13.027	.....	13.141	.....	13.141	1,096,972
City of Pontiac.....	.....	.....	.....	.....	.....	.....	.....	40,709,901
City of Royal Oak.....	.....	.....	.....	.....	.....	.....	.....	5,740,847
Totals.....	90.383	102.382	286.606	16.822	376.989	119.204	496.193	\$127,301,477



Oakland Hills Country Club

## COVERT ROADS UNDER CONSTRUCTION

The Covert Road construction for the season of 1922 was limited to a short mileage. Only such roads as were recommended before the Board of Supervisors in the October session 1921 were given consideration.

### JOHN R. ROAD.

#### ASSESSMENT DISTRICT ROAD NO. 11.

The John R. road is an important route between the eastern part of the county and the City of Detroit. It furnishes an alternate route so that traffic can avoid congestion through Royal Oak and Ferndale. It connects John R. Street, in the City of Detroit, at the Eight Mile road and extends northerly a distance of eight miles. It is built of 20 feet reinforced concrete 8 inches thick and a 28 foot grade. The construction consists of two 10 foot slabs divided by a longitudinal joint as now specified by several states. This construction is similar to the Southfield road, built last year, with the addition of heavier reinforcement. The C. A. Handyside Construction Company of Detroit are the contractors. It is expected to be completed this year. There is now six miles completed.

### BIG BEAVER ROAD.

#### ASSESSMENT DISTRICT ROAD NO. 56.

The Big Beaver road extends from Big Beaver easterly 2 miles to the county line. The construction consists of one mile of 20 foot concrete connecting the John R. road with Big Beaver and one mile of gravel road. This road is practically completed and expected to be finished this fall. The C. A. Handyside Construction Company are the contractors.

### OXFORD ROAD.

#### ASSESSMENT DISTRICT ROAD NO. 69.

This road was commenced in the fall of 1921 and is to be completed soon. The grading and drainage structures are completed and the gravel practically placed. The Oxford road opens up a rich farming country and also connects Oxford Village with points in Lapeer County.

## BOND ROADS COMPLETED OR UNDER CONSTRUCTION

### OAKWOOD ROAD.

Commencing at the Oakwood postoffice; thence east to the Lapeer road in Oxford Township, a distance of  $2\frac{1}{2}$  miles. This road is practically completed of 9 foot gravel and a 24 foot grade. This section completes the gap in the system between the Villages of Oxford and Ortonville.

### SOUTH HOLLY ROAD.

This road extends from the Milford road in the northern part of Rose Township to the limits of the Village of Fenton, a distance of  $3\frac{1}{4}$  miles. It is completed of 9 foot gravel and a 24 foot grade. The South Holly Road furnishes an alternate route to Fenton.

### SOUTH COMMERCE ROAD.

The South Commerce road connects the Village of Commerce with the Village of Walled Lake through Commerce Township. It is approximately 4 miles long and when completed to be surfaced with 9 foot gravel. The grading and drainage structures are completed and the gravel will be placed this fall.

### WIXOM ROAD.

The Wixom road extends from the Village of Wixom to New Hudson and forms part of the highway connecting the cities of Pontiac and Ann Arbor. This road is completed of 9 foot gravel and 24 foot grade, a distance of approximately  $1\frac{1}{4}$  miles.

### REDFORD ROAD.

This road is one mile in length, located in Southfield Township. It is built of 9 foot gravel and 24 foot grade. This construction completes the Redford road (so-called) between Redford and Birmingham.

### FRANKLIN ROAD.

This road is  $\frac{1}{2}$  mile in length, located in Bloomfield Township. It is completed of 9 foot gravel and 24 foot grade. The Franklin road is an important thoroughfare, forming an alternate route between the Lake region and the City of Detroit.

### WALLED LAKE ROAD.

The Walled Lake road, in West Bloomfield Township; a distance of  $1\frac{1}{2}$  miles will be completed this fall. This road is built of 9 foot gravel and 24 foot grade. It forms the last improved link in the route between Pontiac and Walled Lake.

### SEYMOUR LAKE ROAD.

The Seymour Lake road is graded and the gravel surface practically placed. The work will be completed this fall. This road is built of 9 foot gravel and 24 foot grade and is located in Brandon Township. This road completes an alternate route between the Villages of Oxford and Ortonville.

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*The poet grew so hungry,  
His form so gaunt and thin,  
He took to writing lines like these  
To use as fillers-in.*

## HARD SURFACED PAVEMENTS

The following list shows the type and status of all pavements completed or placed under construction since our last report, which have been surfaced with material other than gravel.

ROAD NO. 11—JOHN R.

Location—Wayne County Line north on  
John R. to Big Beaver Road.

Length—8.053 miles.

Type—20' concrete.

Contractor—C. A. Handyside Construction  
Company.

Under construction.

ROAD NO. 48—VILLAGE OF ORTONVILLE.

Length—0.391 miles.

Type—18' to 36' asphalt on concrete base.

Contractor—Bartling & Dull.

Contract Price—\$22,945.00.

Completed.

ROAD NO. 49—VILLAGE OF ORTONVILLE.

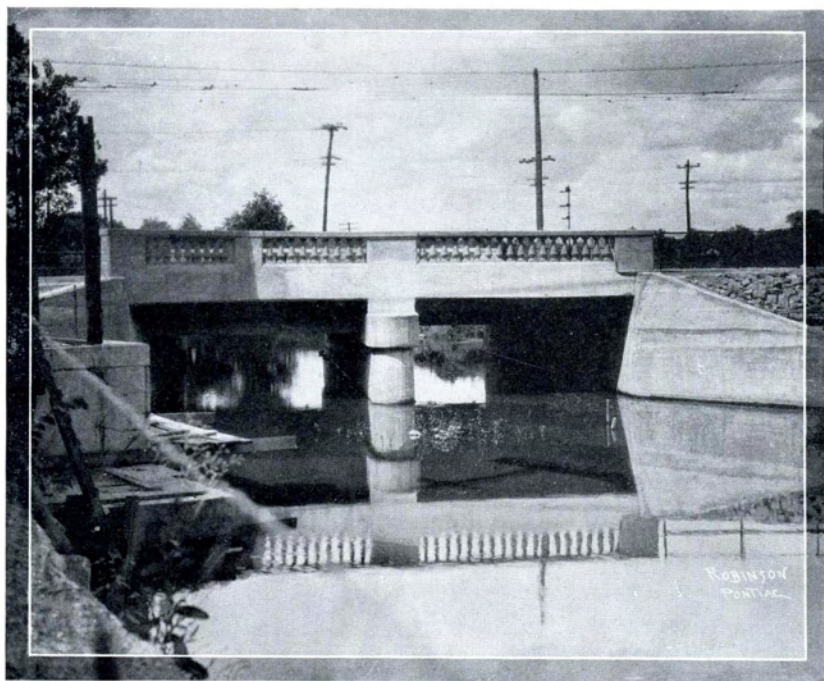
Length—1.214 miles.

Type—18' to 35' asphalt on concrete base.

Contractor—Bartling & Dull.

Contract Price—\$78,000.00.

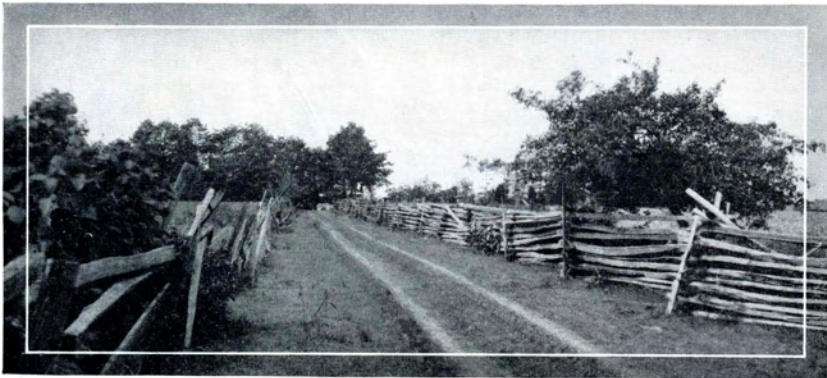
Completed.



Re-inforced concrete bridge, Rochester



- ROAD NO. 52—VILLAGE OF SOUTH LYON.  
Length—0.663 miles.  
Type—20' to 48' asphalt on concrete base.  
Contractor—Ann Arbor Asphalt Construction Company.  
Contract Price—\$40,000.00.  
Completed.
- ROAD NO. 54—VILLAGE OF SOUTH LYON.  
Length—0.448 miles.  
Type—20' asphalt on concrete base.  
Contractor—Ann Arbor Asphalt Construction Company.  
Contract Price—\$26,000.00.  
Completed.
- ROAD NO. 56—BIG BEAVER ROAD.  
Location—John R. Road west to Big Beaver.  
Length—1.000 mile.  
Type—20' concrete.  
Contractor—C. A. Handyside Construction Company.  
Under construction.
- ROAD NO. 65—VILLAGE OF ROCHESTER.  
Length—0.900 miles.  
Type—20' concrete.  
50' brick on concrete base.  
Contractor—R. D. Baker Company.  
Contract Price—\$103,459.22.  
Completed.
- ROAD NO. 71—VILLAGE OF CLARKSTON.  
Length—0.616 miles.  
Type—20' concrete.  
Contractor—C. A. Handyside Construction Company.  
Contract Price—\$26,263.00.  
Completed.
- ROAD NO. 392—  
Location—Farmington south to Wayne Co. Line.  
Length—1.680 miles.  
Type—18' to 46' concrete.  
Contractor—Walter O. Brown.  
Completed.
- FEDERAL AID ROAD NO. 41.  
Location—Potter's Corners northwest to Genesee County Line.  
Length—10.047 miles.  
Type—18' asphalt on concrete base.  
Contractor—Butler Construction Company.  
Globe Construction Company.  
Completed.
- ROAD NO. 87-2—  
Location—Village of Holly.  
Length—1.754 miles.  
Type—20' to 47' asphalt on concrete base.  
Contractor—Bartling & Dull.  
Completed.



## COVERT ROADS IMPROVED, 1921-2

### JOHN R. ROAD—ASSESSMENT DISTRICT ROAD No. 11.

This improvement extends from the Wayne County Line north on the John R. Road to the Big Beaver Road, a distance of 8.053 miles. Together with Assessment District Road No. 56 this improvement provides a relief route to Detroit from points north and affords an opportunity to avoid traffic congestion on Woodward Avenue. Now under construction by C. A. Handyside Construction Company of Detroit. With favorable weather conditions this project will be completed this fall.

### MCCRACKEN ROAD—ASSESSMENT DISTRICT ROAD No. 38.

This highway extends from the Farmington Road, at the S. E. corner of Section 10, Farmington Township, westerly for a distance of four miles. It is now complete as a 9 foot gravel road.

### HALSTEAD ROAD—ASSESSMENT DISTRICT ROAD No. 39.

This improvement extends from the North Farmington Road south through Farmington Township to the Grand River Road. It is now complete as a 9 foot gravel road and provides an outlet for a large farming district.

### MILFORD TO GRAND RIVER—ASSESSMENT DISTRICT ROAD No. 41.

This project extends from the east village limits of Milford easterly and south-erly through the Village of Wixom to the Grand River Road. Completed early in the spring by Contractor P. M. Lau as a 9 foot gravel road.

### MILL STREET, ORTONVILLE—ASSESSMENT DISTRICT ROAD No. 48.

Extending from South Street, in the Village of Ortonville, to the west corporate limits. An asphalt surface on a concrete base, 2065 feet in length, 18 to 36 feet in width. Completed. Bartling & Dull, contractors.

### CHURCH STREET, ORTONVILLE—ASSESSMENT DISTRICT ROAD No. 49.

Beginning at the south corporate limits of Ortonville and extending northerly along South and Church Streets to the north corporate limits; thence east for a distance of one-half mile.

One-half mile of 9 foot gravel and 6410 feet of asphalt surface on a concrete base. Varying in width from 18 to 55 feet. Completed.

### LAKE STREET, SOUTH LYON—ASSESSMENT DISTRICT ROAD No. 52.

Extending from east village limits of South Lyon westerly along Lake Street to the Livingston County Line. 3500 feet of asphalt on a concrete base varying in width from 20 to 48 feet and 3393 feet of Class B, 9 foot gravel. Completed.

**LAFAYETTE STREET, SOUTH LYON—ASSESSMENT DISTRICT ROAD No. 54.**

Extending from north to south corporate limits of Village of South Lyon. 2368 feet of asphalt, 20 feet in width, and 2900 feet of 9 foot gravel. Completed.

**BIG BEAVER ROAD—ASSESSMENT DISTRICT ROAD No. 56.**

This improvement extends from the Rochester Road at the Village of Big Beaver east to the Macomb County line. Approximately one mile of Class B, 9 foot gravel. The balance is 20 foot concrete connecting the John R. and the Rochester concrete roads and providing an alternate route to Detroit from points north. Now under construction.

**MAIN STREET, ROCHESTER—ASSESSMENT DISTRICT ROAD No. 65.**

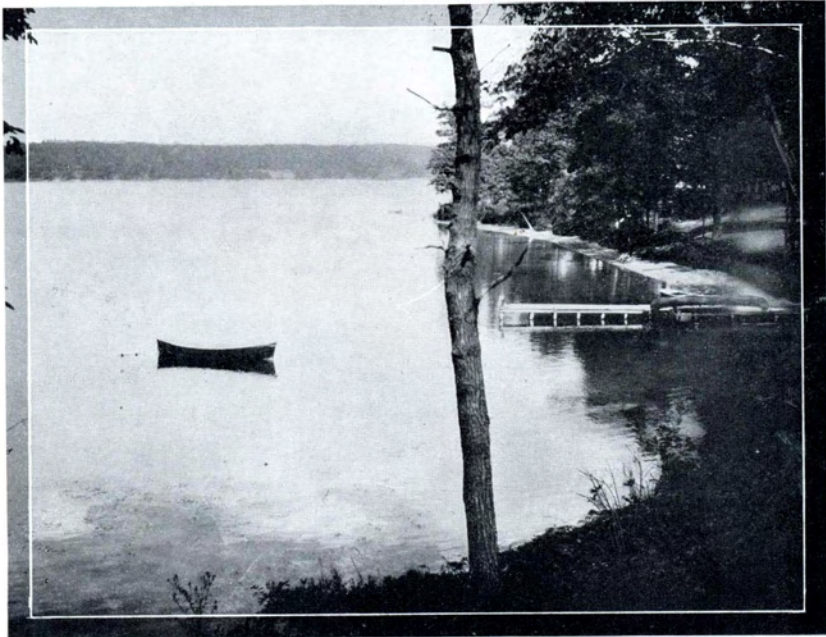
This improvement begins at the north end of the present brick pavement on Main Street, in the Village of Rochester, and extends north to the Junction. The portion within the village consists of a brick pavement on a concrete base, 50 feet in width. The balance is concrete, 20 foot in width. This contract also involved the construction of a reinforced concrete bridge of approximately 40 foot span. Completed this spring by the R. D. Baker Company of Detroit.

**OXFORD ROAD—ASSESSMENT DISTRICT ROAD No. 69.**

Beginning at the north corporate limits of the Village of Oxford and extending northerly and easterly through Oxford and Addison Townships for a distance of 6,760 miles to the Lapeer County Line. Class B, 9 foot gravel. Recently completed by P. W. O'Connor Company of Grand Rapids.

**MAIN STREET, CLARKSTON—ASSESSMENT DISTRICT ROAD No. 71.**

Beginning at south corporate limits of the Village of Clarkston and extending north along Main Street for a distance of 3250 feet. 20 foot concrete. Completed late in the fall of 1921 by C. A. Handyside Construction Company, contractors.



Lake Angelus

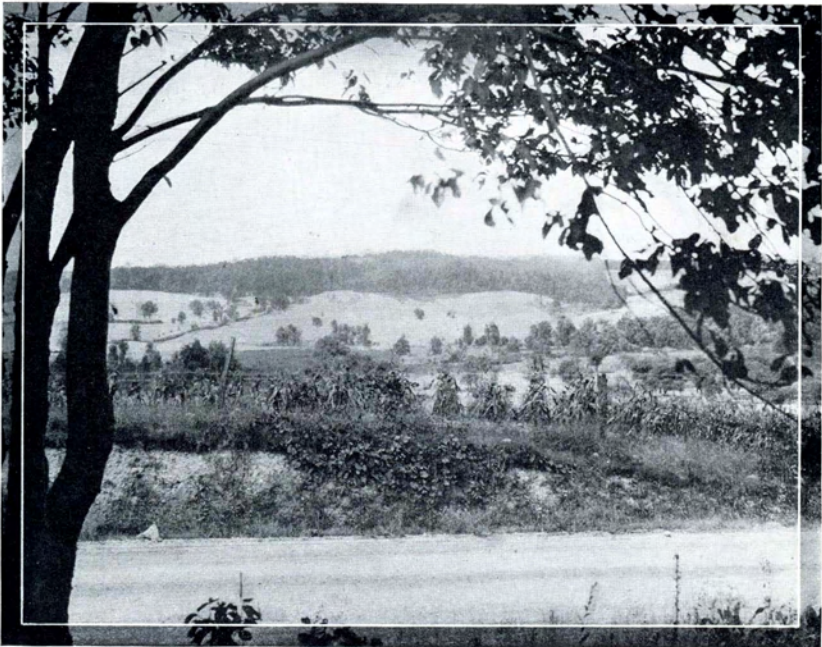
## CHART SHOWING VALUATION OF OAKLAND COUNTY

Year	Equalized Valuation
1912.....	\$ 44,603,845
1913.....	64,746,860
1914.....	67,095,790
1915.....	68,359,840
1916.....	75,544,151
1917.....	86,342,121
1918.....	89,556,862
1919.....	112,955,076
1920.....	136,371,409
1921.....	139,613,081
1922.....	127,301,477

### RAILROAD CROSSINGS

The State of Texas is setting an excellent example in the matter of eliminating railroad crossings. Up until the present time 165 dangerous crossings have been eliminated, thus giving the reckless automobile driver 165 less chances to get killed or injured.

Statistics show that out of the 12,000 persons killed on the highways of the country last year, 7,000 were struck down at grade crossings. An average of 20 persons being killed every day during the year on account of railroad crossings alone.



View from the Orion-Rochester Road