

can unhesitatingly say that we still have the biggest job to do in maintaining more than 66,000 miles of roads that carry 85 per cent of the rural free delivery and more than 80 per cent of the school busses and milk trucks in Indiana. Formerly no complaint was registered if these roads were closed one or two months each year, but now we are expected to keep them open 12 months of the year to carry traffic that has doubled several times. Surely no one can question the size of this job.

The State Highway Department has been more progressive. To be frank, they have been better salesmen. They stress their publicity department, and the results are reflected in the respective attitude of the general public toward state versus county roads. Our secondary position is largely due to a lot of these things that do not cost much money. We need more selling, through the press, through our equipment, and through our men, to the public and to the legislature.

Please do not say it can't be done. Remember that old slogan that Billy Sunday used so often, "A dead fish can float down stream, but it takes a real live one to go up stream!"

## MAKING A COUNTY LANDOWNER'S MAP

A. F. Buerkle,

Tippecanoe County Surveyor

In December, 1940, I was approached by several real-estate men in regard to making a new Tippecanoe County Map. Knowing of the dissatisfaction with, and criticism of, the last two maps that were made rather haphazardly by a local abstracter in conjunction with an out-of-state map company, I hesitated to undertake the job. Several days were spent in studying the sources of information available, their reliability, and the amount of work required to make a fairly accurate map of the county. Such a map should show locations of all streams, railroads, towns, township lines, county and state roads, farm property lines, and present landowners' names and amount of acreage. Several map-making firms were written, and information was secured on manufacturing costs.

I was convinced that the project would not be worthwhile unless I could be assured of the sale of at least 24 maps to local business concerns in addition to six I was positive of selling to various county offices. To reap a fair return for my work, plus the draftsman's salary and the cost of production, a map, mounted on muslin and equipped with a roller with bottom moulding and brackets to hang it, would have to sell at \$20 to \$25. It seemed desirable to require a down payment of \$12 with the order from all business concerns to cover carrying charges.

Several business men assisted me in soliciting orders, and by January 10 we had signed up 21 purchasers and collected \$252.50 in down payments. I bought drawing paper, tracing cloth, and other material, and we started work. To compensate for use of office space, drawing table, lights, etc., I agreed to give the County Surveyor's Office, the Road Supervisor's Office, and the Commissioner's Office each one of the mounted maps. A Purdue junior student agreed to work on the map during his spare time. We determined that a scale of 1 inch equals  $\frac{1}{2}$  mile was most practicable and would enable us to make reductions if desired. As references we used old county maps of 1922, 1931, and 1936, right-of-way maps of the five railroads traversing the county, the 1929 Wabash River Survey maps of the Army Engineers, State Highway right-of-way maps, township drainage maps, a rural-route delivery map loaned by the Lafayette Postmaster, and several other maps of lesser importance.

In the middle of February the surveyor's office received a set of aerial photographs covering the entire county on a scale of eight inches to the mile. By this time I had put in 50 hours and the draftsman 80 hours on the map, but the aerial photographs showed up so many errors of alignment in the roads and streams of the county that we erased everything and started over again. These aerial photographs are worth far more than their cost to the county engineer. Ours cost 65 cents for a 20 $\frac{1}{2}$ -by-26-inch print, and there are 282 prints for the county plus one mile of overlap on all bordering counties.

We planned our road sizes, thickness of lines, depth and thickness of various letters and numbers, with the idea of making legible reductions of the map. This naturally required some extra study and time. After most of the map lines were completed, landowners' names were roughed in lightly. A final check was made after everything on the tracing was inked except the landowners' names. These were all checked with the auditor's transfer books to take care of late transfers. Instead of completion around Easter as planned, the map was not finished until the draftsman had put in five full weeks after the close of school in June. We spent considerable time running down obsolete descriptions where source maps varied, so that property lines would be correct. On the map, landowners are correct as of July, 1941.

To show roads properly you must make the right-of-way scale larger than the rest of the map layout. You must use conventional symbols for railroads, streams, cemeteries, towns, corporation limits, highways, civil township boundaries, etc. The placing of rural routes on the map is worthwhile and has been the clincher in several sales.

To date we have sold 40 muslin-mounted maps at \$22.00; 12 muslin-mounted maps to township trustees for educational

purposes at \$17.50; 7 large paper maps at \$5.00; and 80 photo-offset prints at \$1.00 each. I gave one of the small maps to all purchasers of the mounted map at \$22.00. Various county officials and several friends also received complimentary copies of the small map.

The making of such a map is a worthwhile endeavor. You should know your clientele and have sufficient orders beforehand to warrant a satisfactory price for the great amount of effort required. You should have a written agreement on all orders and demand at least half-down payment on business-firm orders. Don't guarantee a completion time. Have access to the county auditor's and county recorder's records when these offices are closed so that you can work whenever possible. Let the taxpayers know you have made this map and are proud of it.

## CONTROLLING SUBDIVISION DEVELOPMENTS BEYOND THE CITY LIMITS

G. E. Lommel,

Professor of Topographical Engineering, Purdue University,  
and Chairman of State Planning Board

NOTE: Professor Lommel's address was developed from the following brief outline:

This present-day problem is two-fold, involving control in the fringe area surrounding the city and control in the war-industries areas. Some suggested solutions for the problem are as follows:

### IN THE FRINGE AREA

An active plan commission should adopt a master plan for the city and "any areas outside of its boundaries which, in the commission's judgment bear relation to the planning of the city" (from State Enabling Act), and the "Platting Rules and Regulations" set up by the Commission. The plan commission may also regulate the use and intensity of use for these areas by zoning, but this is rarely done outside city boundaries.

Control may be effected by organizing a county planning commission that will adopt a master plan and, in co-operation with the county agricultural planning committee, develop and pass a zoning ordinance for the county. This commission should also prepare a platting guide and enforce its provisions. This is the better of the two methods.