A few more turns of the mixing drum and the material is dumped out on a sheet-iron floor under the mixer, in order to make shoveling easier. We either haul it out and use it immediately or put it in stock-piles for future use.

The mixture does not seem to set up or become hard until it has been compacted by either rolling or traffic, because it contains no volatile material. Being able to predetermine the asphaltic content, thereby making the patching mixture either a soft pliable mass or a harder material, we have found that we can patch any of our roads with the same materials, either our concrete roads with the harder mixture, or other types of surfacing with the softer, more pliable mixture.

When making large patches, we use our roller in order to make this repaired area as smooth as the existing surface, but where we are filling small holes, we use a tamp or let traffic iron out the patches. We are of the opinion that we get about as good results whether they are pre-compact or compacted under traffic. By using the finer aggregate, we are able to feather the edges of the patch, or to make a thin skin patch, sealing the “alligator” cracks that sometimes occur where the base is weak.

ENGINEERING SERVICES TO TOWNS, CITIES, AND INDIVIDUALS

J. C. Eckert, Ripley County Surveyor and Road Supervisor, Versailles, Indiana

I am assuming that this subject applies to the work which we do that is not in the line of our official duties as county surveyors or engineers. Chapter 148, Section 1, of the Acts of the General Assembly of 1935, states:

That for the purpose of safeguarding life, health and property, no person shall practice or offer to practice the profession of engineering or of land surveying in this state, unless and until such person shall submit evidence that he is qualified so to practice and shall have been registered, as hereinafter provided. It shall be unlawful for any person to practice or offer to practice the profession of engineering or of land surveying in this state, or to use, in connection with his name, or otherwise assume, or advertise, any title or description tending to convey the impression that he is a professional engineer or a land surveyor, unless such person shall have been duly registered or is exempted under the provisions of this act.

Of course, as the duly elected county surveyors, we are exempt from this act in performing the official duties of county surveyor, but that does not give us the authority to do other work unless we are registered. As I interpret the law, we, as county surveyors or engineers, are required only to
perform certain duties within the county, under the direction or authority of the county commissioners, the circuit or superior courts. Thus, there is nothing in the statutes to prevent us from serving towns, cities, or individuals, so long as it does not conflict with, or hinder us from performing, our official duties, and any compensation derived from these services is the legal property of the county surveyor.

My services, outside of my official duties, have consisted principally of acting as engineer for the city of Batesville, and making surveys and plats for Federal Land Bank loans, plats for insurance companies, farm and town lot surveys, and one United States Post Office survey and plat.

Most of the work for the city of Batesville involves street, sidewalk, curb and gutter, and storm sewer projects. Probably the most difficult task is that of establishing the center lines of the streets. Like most small cities, it was laid out years ago in small additions with a four-rod chain that was well worn. Diplomacy is about as important as a transit in re-locating lines and tying the subdivisions together.

In my first few farm surveys for Federal Land Bank loans, I believe I wasted a lot of time in trying to locate lines and corners accurately. In granting a loan, the Federal Land Bank is not interested in the fact that the fence may be off line a foot, but it wants a metes-and-bounds description whereby it can check the acreage as called for in the deed. As an example, a deed for a part of a farm in the southern part of the county called for "all that part of a 40-acre tract lying north of the creek containing 22 acres more or less," and had been carried on the transfer books in that manner for years. I surveyed it for the Federal Land Bank and found that it actually contained a fraction over 16 acres. Now, on Federal Land Bank surveys, I do not try to relocate lost corners or lines, but make the following clause a part of my description: "This survey was made to determine area only and not to establish lines or corners; lines and corners being taken as the fences, roads, and streams now existing."

As a rule, the work for insurance companies consists of a complete plan and profile plat of a section of highway at the scene of an automobile accident.

The farm and town lot surveys consist of the ordinary work with which all of you are familiar. Of course, when these surveys are made by order of the court or the county commissioners, or at the request of a property owner, who in turn notifies all adjoining property owners, they become legal surveys and are a part of the county surveyor's official duties. As such, a copy of the survey should be placed in the surveyor's field notes record, and the fees turned in to the county auditor.

In a survey for the United States Post Office, accuracy was required. As the plans for the building were drawn by
architects who never saw the site, all details had to be shown. Observations had to be taken on Polaris to tie in the boundary lines.

Although at times we hear some adverse comment on public officials doing private work, so long as the salary of the county surveyor remains at the present level, especially in counties with a population class such as Ripley County, I believe everyone of us is entitled to as much private work as he can get, so long as it does not interfere with our official duties as county surveyors or engineers.

ENGINEERING SERVICES TO TOWNS, CITIES, AND INDIVIDUALS

V. R. Dicken, Grant County Surveyor, Marion, Indiana

As county engineers, your first allegiance is to the people of your county, and you can do much to raise the standards of the engineering profession by being the most obliging and serviceable engineer ever to hold that office. You can make and keep up-to-date maps of your county, including drainage maps, property maps, and soil maps, if they are available. You can have up-to-date maps of all the towns in your county, and you can set up standards for your construction work which are at your finger tips when needed.

When you are retained by a town or city, do not let it embark upon a project which it cannot afford. Do a little investigating yourself, and see if it is overshooting its mark when it tells you what it wants done. If it wants a sewage disposal plant, and all it needs for a few years to come is an Imhoff tank, don't design an activated sludge plant. If it wants a street improved, and the traffic does not warrant a high-type pavement, don't design one, but construct the very best pavement for the money that will carry the traffic put upon it. If you are designing a structure, give the best that will fulfill the purpose intended. You may say, "If the city wants to spend the money, why not let it spend it?" Well and good, if that is really the case; but if a lot of opposition to the project develops after the job is started, the blame for the excess expenditure of money can quickly be shifted to your shoulders.

Engineering jobs are not so plentiful that you can afford to let any community mistrust your judgment. Never tackle a job that is beyond your knowledge or experience, just because you don't want to pay out the money to get an opinion from another engineer. That very easily can ruin you once and for all. Always remember that no matter how good a thing looks on paper, or how nice it looks after it has been built, if it does not do the job for which it was intended, it is absolutely worthless.