

The 1933 law covering maintenance of county highways provides that maps be made of each road district and that the roads be either numbered or named. In Wayne County we have nine road districts of varying mileage and shape. These variations are caused by the type of the roads, their grade and alignment, and the volume of traffic. We prepared district maps, using a single heavy line for each road, to such scale that the map could be shown on an 8 by 10½ inch sheet. We use the names by which the roads have been known for years and have these names shown on these district maps. The only change involved the assignment of the same name to a road throughout the county regardless of how many districts it passed through. The mileage of each road is shown in table form, and district men make their reports from this map.

The following suggestions are offered to those who have not yet started making a county map:

1. Before starting to trace the map, determine whether you will want to use it in the size drawn or in reduced form. If the map is to be reduced, width of lines and size of lettering must be made of such size as to be legible when reduced.
2. Use different kinds of lines and symbols (with key if necessary) to show boundary lines. Remember that if different colors are used for this purpose, each print from the original map will have to be colored.
3. Make the map as small as possible to show clearly the information desired.
4. Choose the kind of prints that will enable you to correct the tracing without undue expense.
5. Correct any errors found in the map immediately upon discovery.
6. If possible secure some mechanical device for keeping letters and figures uniform in size and design. This is particularly desirable where more than one person is working on the map and will aid in making corrections more neatly.

OFFICE RECORDS AND OFFICE HELP

By Howard C. Grube, Marshall County Surveyor

In every well-regulated office it is essential that a complete and accurate record be kept of activities pertaining to all required duties of the office. This is a prerequisite to successful administration of public office. In the average surveyor's office there are so many matters continually arising that without such a system there is danger of confusion and delay of work in progress. Frequently matters that need prompt attention are overlooked and sometimes forgotten. You may remember the main facts concerning a certain case while important details have escaped your memory. If your record

system is properly organized you will have all the facts at your command.

It is not so much my intention in this short discourse to prove to you that a daily record should be kept, to which you would, doubtless, all agree, as it is to try to describe my method and plans of keeping up with the daily status of the duties of my office.

When the new drainage laws placed the supervision of all the county ditches in the hands of the surveyors, a multitude of trials and tribulations was unloaded upon us. For proper performance of all the duties that are now incumbent upon the surveyor, a definite system must be adopted. Separate systems should be kept for ditches, roads, and bridges.

In my county we have nearly 800 miles of county ditches to keep in repair. Two years ago when this work came into my hands there were no records of county ditches excepting the court records, which give but little information. In order to render efficient service to the patrons of the office, a system of filing was inaugurated to which I may turn and promptly secure the information needed. In our office we have a large steel filing case in which we keep these records. In one section of this cabinet we keep the ditch records, which are separated by townships. Each ditch record is kept in a separate folio, in which are placed reports of the trustees, who are deputy surveyors, *ex officio*. This folio contains all detailed information and accounts of cost of labor, tile, or other materials, and all correspondence, comments, and recommendations for future work. The record shows when and by whom the report was made and a report of the action taken. A map showing the drainage area is included. We have regular report blank forms that are used in making ditch reports, copies of which have been placed in the hands of the trustees for their use.

Aside from the large file cabinet we have a small card file case which is kept in a similar manner except that reports kept on these forms are brief. These cards are used to refer to as a progress record and a reminder of work in need of attention. In addition to the files mentioned we have prepared a sort of catalogue or directory of the whole drainage ditch system of our county, in which are listed the names of every ditch by townships. The commissioners-court and circuit-court ditches are kept separately.

Maps for each township have been prepared showing names and courses of ditches, land owners, railroads, roads, lakes, etc. A highway map has been prepared as well as many other maps. The tracings are numbered and catalogued in the drawing record book. At the time I took office there was no place provided to keep tracings and maps except an old case with pigeon-holes in which they were placed after being rolled into small rolls. All of you know what difficulties are

encountered in trying to use prints that have been rolled up tightly for some time. It renders them almost unfit for use. I put the matter before the commissioners and they kindly allowed me to have a cabinet made with drawers large enough for the maps to be placed without rolling. The drawers are labeled so that I can find the particular map or tracing wanted without spending a lot of time. This method leaves them in good shape to use and one does not have to unroll a map and place weights on the corners to use it. As the tracings have a definite place there should be no occasion for them to become lost, as my predecessor explained the absence of map tracings that belonged to the office at the time I took it over. I had the cabinet made by a local firm who did a very good job of it. It makes a fine piece of furniture for the office and is a fixture that I think every surveyor should have as a part of his office equipment.

There isn't much I can say on office help since I must be draftsman, inspector, instrument man, stenographer, and field-chief all at the same time. Any normal, intelligent person willing to learn and follow a certain system of keeping office records should make a satisfactory helper. It is rather difficult to find someone who can take hold of the work at once, as the work is not of routine nature and the office helper should have plenty of initiative. Good help in the office is worth a lot to the surveyor.

I am keeping records in regular form so that when the time comes to turn the office over to my successor he will have all the facts and figures at his command. He may then continue with the work intelligently, without a breach of public service. He will not be at a loss to know what already has been accomplished or what has been planned for the future.

SPECIFICATIONS FOR COUNTY ROAD MATERIALS

By R. E. O'Connor, Vice-President, Indiana Highway
Constructors, Inc., Ft. Wayne, Indiana

The proper development of this subject requires that I deliberately state to you truths, which, though they be contrary to general practice and much at odds with custom of long standing, nevertheless are true, and will so remain against all challenge. What must be said to bring out these facts may cause both the statements and myself to be for the moment classed as radical, through our great American habit of so classifying those things and persons who differ with established custom or practice, no matter how wrong or antiquated this custom or practice may be.

The subject before us comes forth for a frank discussion at a most fitting and proper moment, because our recent experiences have awakened in most of us a real desire to look