

Aids to State Highway Programming Control Through Use of Charts

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● AS DO many states, the Idaho State Highway Department operates entirely on its income; namely, the Highway Users Revenue. Although the department prepares a biennial budget for the State Legislature, there is no appropriation made; however, the department is required to operate within its budget, and within its revenue. Therefore, one of the major problems facing the administrators of the department is that of correctly anticipating revenues and controlling or programming the expenditures of funds within the revenues available.

Many reports on the financial condition of the department are prepared each month. They are detailed and contain a mass of information on various subjects. To a busy administrator there is nothing quite so discouraging as having his desk piled high with numerous reports from all departments, regardless of the importance. Therefore, this problem, at least in part, has been solved through the use of charts, which attract attention more effectively than tables, so that readers are much less likely to skip over them.

If constructed properly, a chart is simple in appearance and portrays only a limited set of facts; the cardinal points can be more easily and quickly grasped from it than from a table or a report. It is safe to say that for an administrator to have at his command carefully made graphs or charts, presenting the most important facts, is an effective and time-saving element. Charts are somewhat more costly to make than tables, but not enough so that they cannot be used freely.

The object of the charts is to provide information as a basis for action, for the programing and construction of highways. The charts explained in detail in

the following depict contract obligations, both as to source of funds and to type of obligations. Others depict current financial status, and probably the most important anticipates in advance on a monthly basis the revenues that will be available.

GROSS AND NET INCOME

Figure 1 shows the cumulative gross revenue year to date and the cumulative net revenue year to date, plus the monthly gross revenue and net revenue represented by the vertical bars. These bars are broken down into the 15 percent Gas Tax Refunds, 30 percent of Highway Users Revenue returned to local Governments, and the net revenue for use by the State Highway Department. The 15 percent represents that amount of gas tax withheld by the collecting agency to reimburse non-highway users for gas tax paid, on which they may claim a refund. The 30 percent represents the amount of money withheld by the collecting agency for distribution to local government units to be used by them for road construction. Superimposed are the cumulative line graphs of prior years' revenues, which afford a ready comparison with the current year.

From the vertical bars, one can readily ascertain that the revenue from gas tax, licenses, permits, caravan fees, etc., remains fairly constant throughout the year and so enables forecasting of revenues and planning of expenditures with a relatively high degree of accuracy.

The primary purpose of this chart is to keep the State Highway Administrator informed as to the net highway users revenue available for highway use out of the total collected. This chart is valuable to anyone interested in the amount of funds available to the State Highway De-

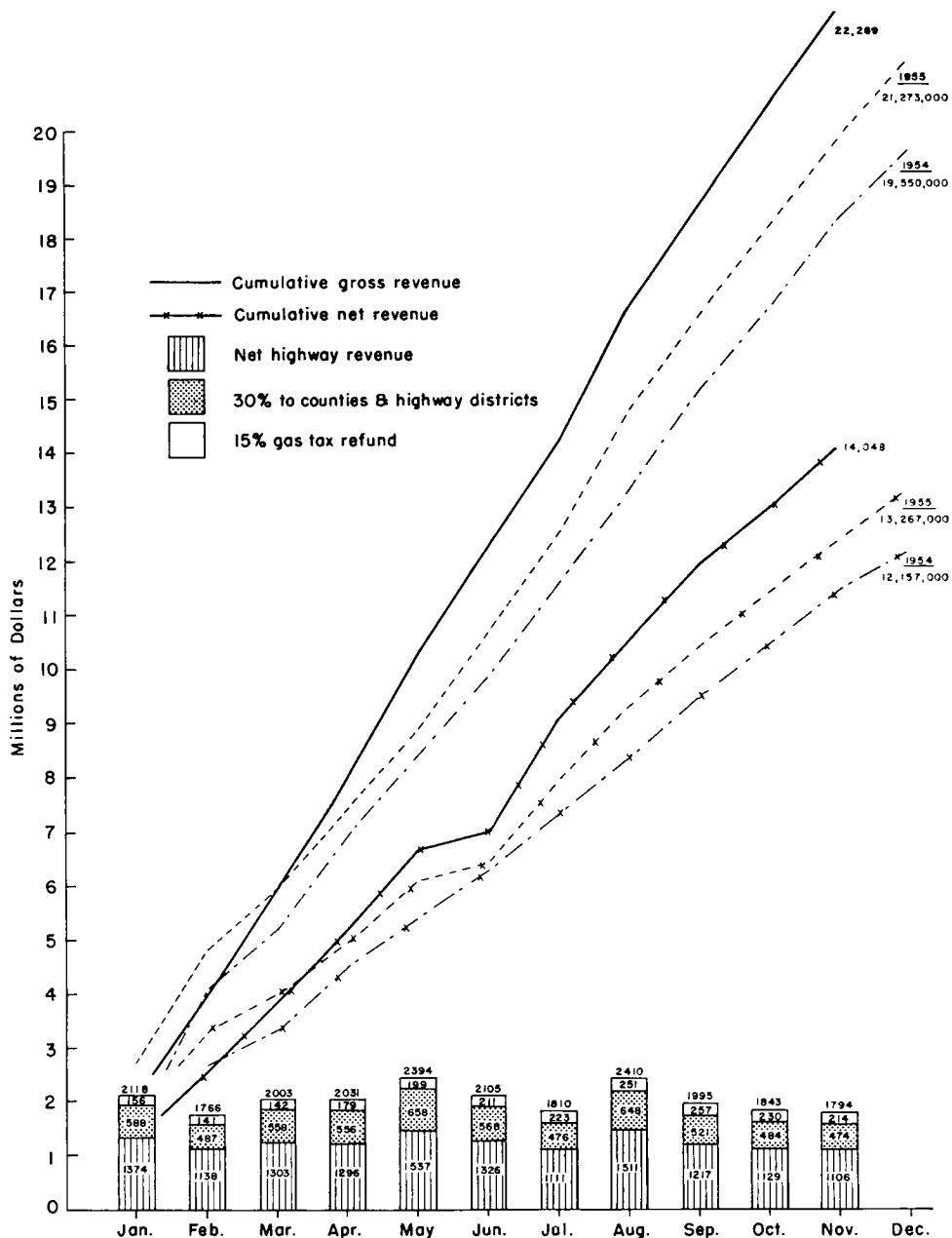


Figure 1. Gross highway users revenue and net to Department of Highways, 1956.

partment. Most people believe that 100 percent of the highway users revenue is made available for highway use. This chart immediately points out the fallacy of this idea.

RECEIVED AND ANTICIPATED REVENUE

Because the revenues are wholly derived from highway users revenue (such as gas tax, motor vehicle licenses, per-

mits, and miscellaneous fees), it is necessary to forecast anticipated revenues for at least twelve months in advance, taking into consideration any new legislation which might affect the revenues.

Having once forecast these revenues by month, as well as for the entire year, the state highway program is then based

on these results. As the year progresses, actual revenues received are plotted (Figure 2) against this trend line to determine whether or not the necessary funds are available to continue the program as planned, or whether construction must be reduced in order to remain within the revenue.

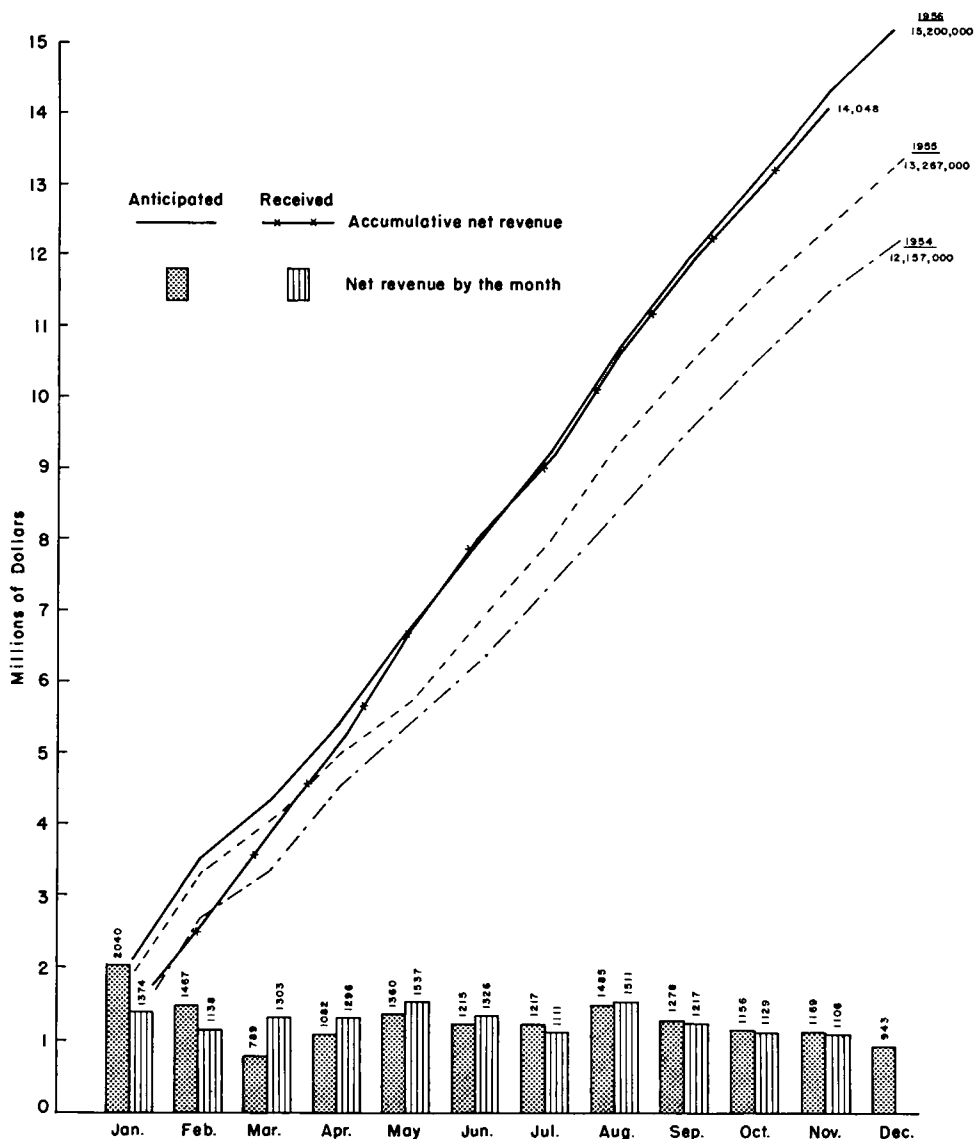


Figure 2. Net highway users revenue received and anticipated, 1956.

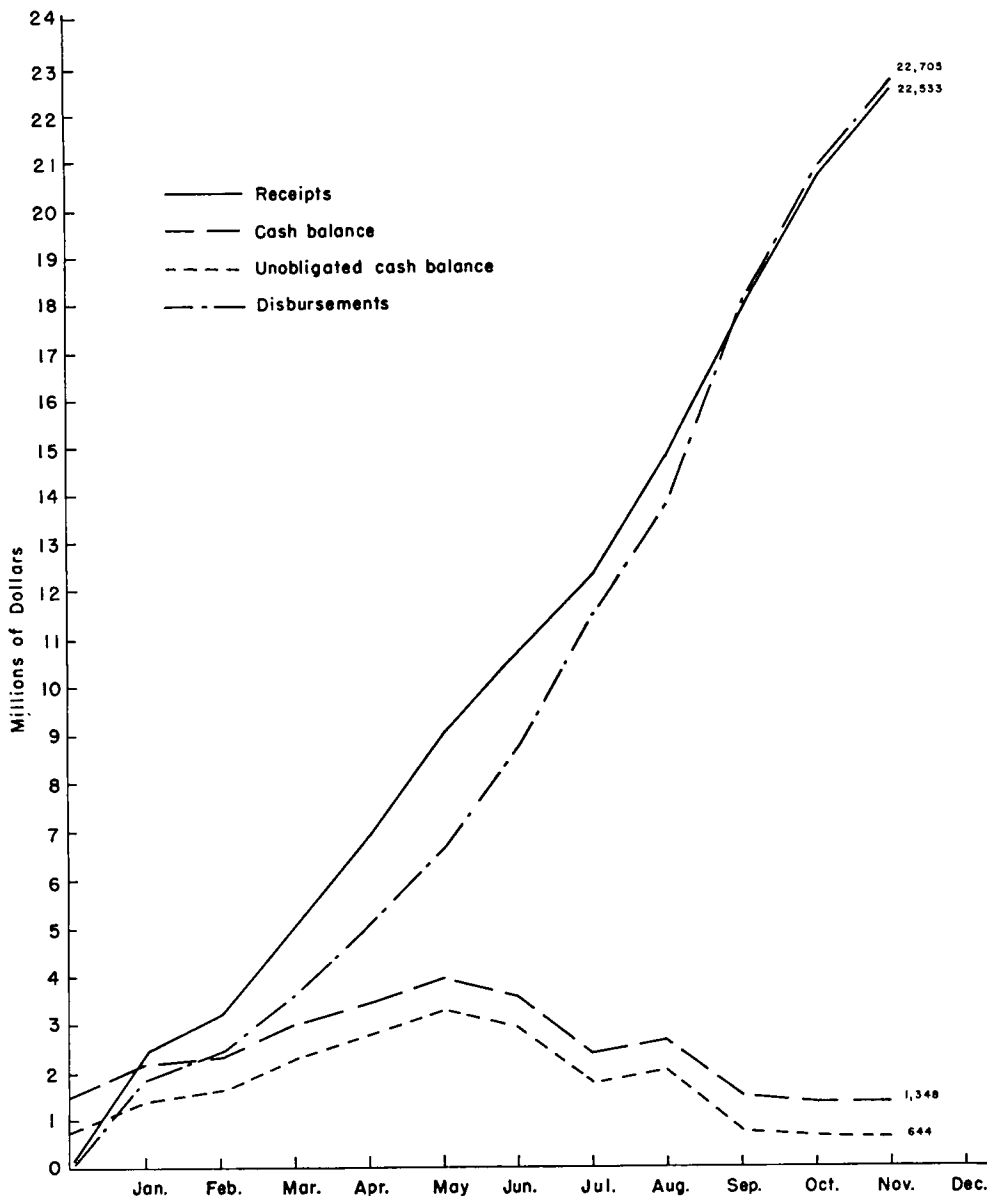


Figure 3. Cumulative receipts and expenditures, and cash balance to date, all sources, 1956.

CUMULATIVE RECEIPTS AND EXPENDITURES

Figure 3 compares revenue or receipts to date with total expenditures to date. The difference, of course, is the cash balance on hand. However, because certain funds are held in trust, representing

moneys from counties or highway districts for secondary road construction not on state system, the cash balance is obligated by the amount held in trust, thereby arriving at the unobligated cash balance or free highway cash. (The State Highway Department does not build

county secondary roads; however it does administrate collection of Federal-aid funds and local funds for this purpose.)

REVENUES, DISBURSEMENTS AND CASH BALANCE

Figure 4 supplements Figure 3 in that it presents monthly revenue and disbursements and shows the obligated trust moneys and the free highway cash balance.

By using a different scale, Figure 4 details the same information as shown in Figure 3, but by month rather than by year to date. This enables one to see at a glance whether the funds are within the revenue limitations and what the highway cash balance is for any particular month.

CONTRACT COMMITMENTS OUTSTANDING

Figure 5 shows the amount of contract commitments outstanding during each month of the year by type of project: State Non-participating, Federal-Aid Primary, Federal-Aid County Secondary, and other miscellaneous construction contracts.

Reports are prepared each month on this subject, showing balances on each of the breakdowns. To the beginning balances are added the new contracts, and

the current payments to contractors are deducted, leaving a new balance at the end of the month. Figure 5 is constructed from this report.

Because the trends are plotted for a 5-year period (only 4 years shown in Figure 5), the administrator is able to see the increase or decrease in contract obligation and thereby is able to plan ahead for new construction. At the same time it is possible to determine whether or not revenues have been adequate to meet the program. This chart also shows immediately the proportion of projects to one another by type.

FUNDS TO RETIRE CONTRACTS

Figure 6 is a companion chart to Figure 5. Instead of breaking the total contract run obligation down by type of projects, it breaks the contract obligation down as to type and the source of funds required to retire the obligation each month.

This chart is also prepared from a monthly report, by adding the new contracts to the existing balances from the preceding month and reducing these balances by payments made to the contractors.

From this chart one may ascertain the proportion of funds needed or anticipated

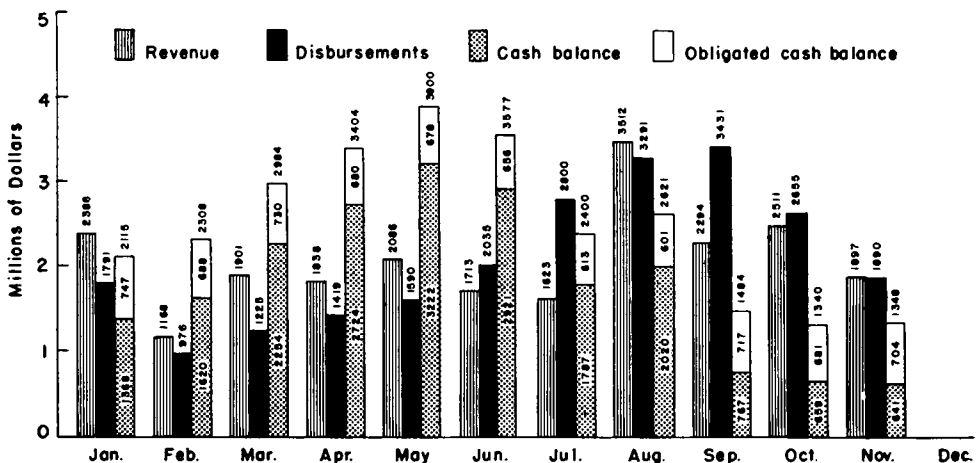


Figure 4. Monthly revenues, disbursements, and cash balance, 1956.

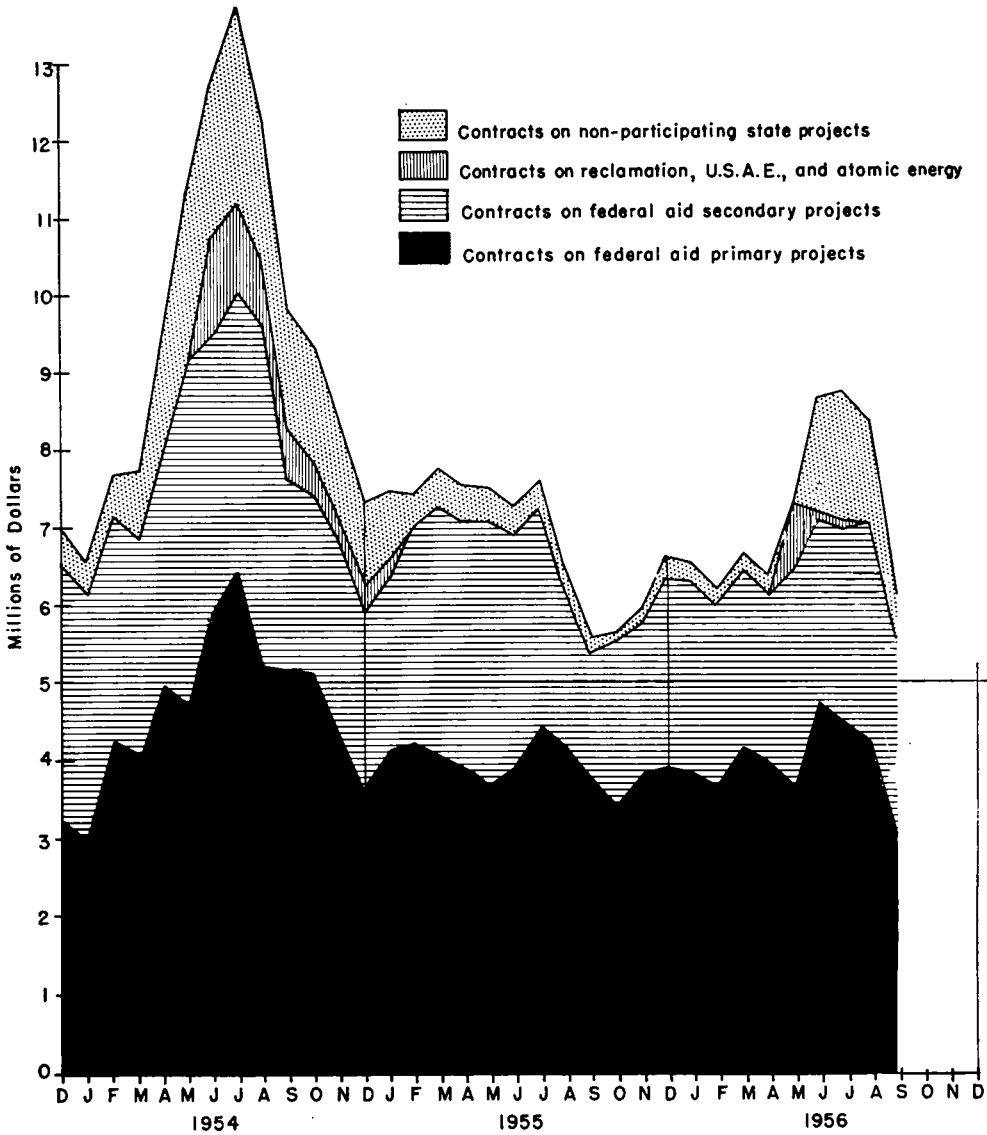


Figure 5. Contract commitments outstanding, by type of project, 1954-6.

to retire contracts at the end of each month, and at the same time is able to determine the proportion of construction money being used in the various categories.

COMMENTS

Since the inception of these charts,

they have been used by the Highway Engineer during meetings of the Board of Commissioners to point up his program. He has also used them to present facts on highway building costs in addresses to various clubs and forums, and to point up the need for revenues and to increase the program during the biennial sessions of the Legislature.

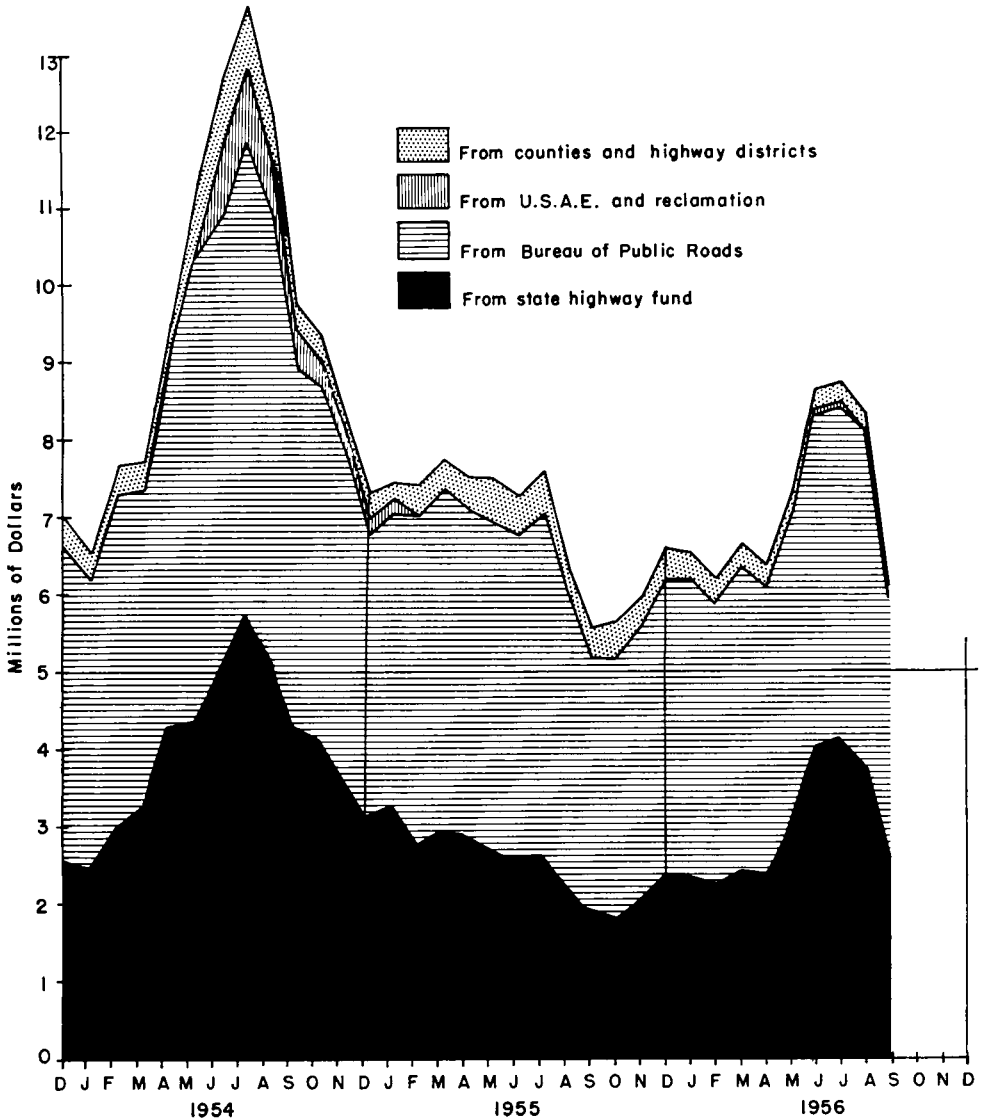


Figure 6. Source of funds to retire contract commitments, 1954-6.

The use of charts, simple in nature and loaded with accurate facts, has proven the value of a picture. Pressure groups and interested parties have found that the department can give them a clear and easily understood picture of the state highway financing through use of these charts.

For the department's own use the charts are invaluable, in that progress

can be pointed out to the various department heads, as well as keeping the Highway Engineer informed at all times as to finances. Reports are also available showing the charted information. Use of the two methods together has been gratifying because of the increased interest shown and care taken to make the highway dollar go further.