

Controls on Federal-Aid Highway Construction

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The subject of this paper is rather basic to our program of constructing rural and urban highways. An understanding of and belief in the controls on federal-aid highway construction seems altogether necessary if we are to make maximum progress within the framework of such controls.

It is the purpose of this paper to review in rather general terms some of the background and present day applications of controls on the federal-aid road, street, and bridge construction program. The question of whether the existing controls over our federal-aid highway program are too elaborate, too restrictive, or too cumbersome will not be dealt with here but left for others to debate.

We live in a democracy and the ultimate judge of any highway program is the individual citizen, and he judges on the basis of what he sees, hears, and understands. Thus, our destiny in the field of highway construction is ultimately determined by organized opinion, whether we like it or not. Here we have problems over and beyond the physical and economical ones of actual construction; problems that must be recognized and resolved by highway industry people if they are to accomplish their objectives. In these days every one of our citizens is affected by what is done, or what is not done, in our road programs, and the voice of John Q. Public determines the program, its size, its expansion, or its curtailment.

It follows that, to survive, a program must be in the public interest and have popular goals. No program, no method of accomplishing the objectives of a program, or for that matter, no part of our government itself, has an inherent right to be perpetuated unless it is to the public advantage and unless it is so understood by the public.

In view of this, we can say that controls on federal-aid highway construction are a result of public officials recognizing properly devised and applied controls as a sound means of insuring that the public interest will be served. The need for control of materials and processes used in accomplishing public construction can scarcely be questioned. So we in

the highway field, from the national to the local level, have collectively and cooperatively adopted rules and regulations to control federal-aid highway construction in such a manner as to insure that the overall national and individual interest is best served. The Federal Bureau of Public Roads, the Indiana State Highway Commission, and the Indiana county boards of commissioners are the public agencies with which we are concerned here and which are jointly responsible for serving all public interests from nation-wide to those of the private citizen.

Our current cooperative federal-aid highway construction program had its origin in the Federal-Aid Highway Act of 1916 and has been in continuous operation since. Subsequent acts have bolstered and expanded but have not changed the original fundamental federal-state partnership relationship. Along the way the Federal-Aid Highway Acts of 1944 and 1956 have been milestones.

The Federal-Aid Highway Act of 1944 broadened the base of the original program and authorized federal participation in the construction of local roads. As a result, we now have a three-way governmental partnership in the secondary, or local road, portion of the federal-aid highway program in which the state administratively acts as agent for the federal and county governments.

Based on prior agreements with the Bureau of Public Roads and, in cases of county secondary projects, with the respective county boards of commissioners, the state contracts federal-aid construction work and pays for it. There is review and cooperation at each step and in the end, if all is well, the state is reimbursed for the county and federal shares, respectively. However, the federal law specifically states that the payment of federal funds is contingent upon completion of construction in accordance with approved plans and specifications. A failure to properly construct a road, bridge, or street brings disallowance of federal funds and quickly draws the attention and interest of John Q. Public far out of proportion to the relative importance of the particular situation in question. Funds involved from federal, state, or county sources are public funds and this presents problems not usually associated with a straight business transaction between two parties. Public funds and the way they are handled, in this democracy of ours, are everyone's business. A failure to meet our public trust anywhere reflects on our entire operation and levels unjust criticism on the mass of dedicated public servants with whom we work. Obviously, safeguards and controls on federal-aid highway construction are necessary if we are to prevent unscrupulous and selfish interests from creeping in to discredit the fruits of our labors. Strict and elaborate controls are undoubtedly

here to stay in the federal-aid highway construction field and, if anything, appear to be on the increase.

Let us take a look for a moment at today's design, construction, and operation of the highways themselves and the requirements that must be met. Thirty or forty years ago, the need that we now have for high type roadbeds was limited. Traffic was usually light and speeds were not high. So we built roads that would give us the most value for monies expended under the then prevailing circumstances. For example, we often planned a "seasoning" period for foundations and embankments to stabilize. Our knowledge of soils was still in the early stage of development. A foundation failure or a material failure was considered the result of a calculated risk and not eligible for criticism. Today the situation is quite different. A highway pavement must not only meet high geometric standards but also must be built with foundation and surface materials that provide a smooth, solid, lasting surface. Most of today's highways are subjected to high speed, high load, high volume traffic immediately upon opening. Any shutdown of operations to make repairs is costly in itself, and results in costly inconvenience to our most severe critics, the traveling public. Here we can say that inspections, tests, and other forms of controls have been brought forth and applied in an effort to get the best possible product from the materials and locations at hand.

As stated earlier, the passage of the Federal-Aid Highway Act of 1956 was a milestone in the evolution of federal-aid highway construction. With the passage of this act we embarked on the largest peacetime public works program in all history. This, of course, vastly increased the chances for errors and malpractices. Also, we find many of the controls on federal-aid highway construction growing out of the situation created by this act. Further, the initiation of this tremendous highway program focused the attention of citizens all the way across the nation on the undertaking.

Before 1956 the federal-aid highway program created little stir in Congress, but the moving of road building into "big time," so to speak, brought increased scrutiny. Many, not familiar with the history of federal-aid highways, overlooked the fact that here was merely an expansion of a forty-year proven relationship between the states and the federal government, and far too many assumed that a program of this size and complexity could not be operated without incompetency and fraud. Subsequently, rather widespread suspicions, including those of our elected representatives in Congress, have been unfairly directed against the entire highway fraternity.

A widely publicized manifestation of public interest in a thorough investigation of the federal-aid highway program and the adequacy of its controls has been the creation of the so-called Blatnik Committee of Congress. This "watch-dog" committee was established and financed by Congress to scrutinize and investigate our highway program to insure that all public interests are adequately protected in an operation of such magnitude. Consequently, those of us who are responsible for the exercise of controls on federal-aid highway construction must never lose sight of the fact that the hot light of public scrutiny can be beamed at any time on any part of our operation. Each Blatnik Committee hearing seems to add more pressure for more federal controls and it is regrettable that certain acts in certain states continue to give rise to additional hearings. Concurrently with congressional investigation, the Bureau of Public Roads has activated and expanded a Project Examination Branch which scrutinizes given projects in detail at the construction contract level. No project, however small, is immune.

This is the setting for our present federal-aid highway program. As the program has grown, federal controls have been added. Apart from special investigations, all features of our "on the job" project engineering, testing, and inspection are now subject to examination in detail by the Bureau of Public Roads throughout the life of each construction contract. Both the state highway organization and the bureau must have operations under continual review. Also, counties must be ever circumspect when they elect to participate in the federal-aid highway program.

In 1960 it was deemed advisable to provide more detailed instructions to guide Bureau of Public Roads engineers in making their inspections and to provide a firmer basis for accepting construction as having been completed in conformity with approved plans and specifications. Such instructions have since been superseded by additional and more extensive ones. Currently, two different classes of samples and tests are required for each project. They are "job control samples and tests" and "record samples and tests." The latter class is subdivided into "progress samples and tests" and "final samples and tests." And the Bureau of Public Roads engineer is required specifically to examine test reports during each of his visits to a project. Further, the Bureau of Public Roads engineer is required to make periodic and random check measurements of thickness and other dimensions of finished work in place. Random samples of materials being used may be taken at locations designated by the Bureau of Public Roads engineer and sent to the state highway central laboratory for testing. It goes almost without

saying that Bureau officials are required to disallow federal funds at the discovery of any irregularities. With these and many others in mind, we can say that project engineering and inspection procedures have become quite complicated and require constant vigilance on the part of everyone concerned.

Since counties are required to furnish resident project engineering and inspection services on county secondary projects in this cooperative federal-aid road and bridge construction program, it becomes very important for the respective responsible county officials to exercise great care in the selection of personnel for federal-aid project work. Integrity and competence are absolutely essential. Otherwise, you are asking for trouble which can be distorted and given publicity far out of proportion to importance.

In the area of controls on federal-aid highway construction, a regulation entitled "Conflicts of Interest" is so vital that it must be thoroughly understood by everyone affected. It reads as follows: "No official or employee of a State or any other governmental instrumentality who is authorized in his official capacity to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any contract or subcontract in connection with a project shall have, directly or indirectly, any financial or other personal interest in any such contract or subcontract. No engineer, attorney, appraiser, inspector or other person performing services for a state or a governmental instrumentality in connection with a project shall have, directly or indirectly, a financial or other personal interest, other than his employment or retention by a State or other governmental instrumentality, in any contract or subcontract in connection with such project. No officer or employee of such person retained by a State or other governmental instrumentality shall have directly or indirectly, any financial or other personal interest in any real property acquired for a project unless such interest is openly disclosed upon the public records of the State Highway Department and of such other governmental instrumentality, and such officer, employee or person has not participated in such acquisition for and in behalf of the State."

Failure on the part of a small number of people to comply with this regulation, coupled with incompetency on the part of others, has brought to light serious weaknesses in construction contract administration. The result has been additional cross-checks and controls. However, from the perspective of the overall federal-aid highway program, we can say instances of weakness and failure have been relatively few when we learn

that over 85,000 construction contracts have been awarded over the nation since passage of the milestone act of 1956.

The spectacular publicity given trouble spots as they are exposed, too often distorts public opinion. Many people, because of this or because of a desire to discredit the federal-aid highway program, have assumed or suggested that these problem areas are typical. This is just not so, for actually the program is to date a great credit to a veritable army of dedicated public servants.

Controls are only a means to an end, tools in the hands of administrators, and should be so used. Cross-checks and controls on federal-aid highway construction have had a good effect on operations and a good effect in substantiating public support of our extremely important highway program for dynamic, growing America.