

use. In the administrative area also, care should be taken to avoid premature opening of projects that are not operationally safe for traffic.

V. The adoption of a safety cross section to provide 30 feet or more of clear area from the edge of pavement on Interstate projects is one of the more important steps toward greater safety on Interstate projects. This will require not only the revision of standards for new work but also the acceleration of programs to remove fixed object hazards such as unnecessary guardrail, signs, trees, utility poles, boulders and other similar items. The desirability is also evident of adopting 6:1 or flatter slopes at the roadside wherever practical, and the smoothing and removal of all substantial obstacles from the gore, except for the standard EXIT sign and light-weight delineator posts. In all cases, the EXIT sign should be on breakaway type supports.

VI. Where hazardous objects are not feasible of removal, installation of appropriate barrier devices should be considered. Under such conditions, barriers usually should be installed at a maximum distance from the roadway rather than at the conventional position along the outer edge of the shoulder. Special impact-attenuating devices now becoming available should be employed for shielding center piers in medians and for similar massive objects that cannot in any reasonable way be relocated or removed.

VII. Hundreds of relatively minor hazards exist in current designs or in projects now in use. These should be the focus of programs by traffic engineering and maintenance forces. Corrective work includes such readily adaptable features as frangible or breakaway bases for exposed sign supports and light standards, the lowering of concrete footings to ground level, the removal of unneeded barrier curb, the burying and flaring of guardrail approach ends, the removal of safety walks and wide curbs on bridge structures, and the placement of clear understandable signing sufficiently in advance of decision points.

VIII. One of the major breakdowns noted from the study of the nine Interstate projects is the inadequate communication and use of available research findings and improved techniques. The failure to communicate is noticeable at all levels and actually may be more serious in the higher administrative levels than at the technical level. A change of attitude which would characterize the highway as a more positive contributor to traffic safety is a pre-condition to progress in this area.

IX. Concerted efforts should be made to compress the time period between final design decisions and general use of the highway improvement so that the benefits of recent advancements in operational practices, designs and controls will be realized in new or remedial work on the Interstate System.

X. None of the findings from the observation of nine Interstate projects can or should be regarded as fully conclusive and final. Through properly directed research and additional investigation, more specific information as to highway design and operating deficiencies and solutions will surely be identified. Nevertheless, the findings of this study of nine new and representative Interstate projects do have high indicated value. Typical of the attention being devoted to betterment of the general situation is the listing of Interstate safety improvements contemplated or underway (See Addendum I).

ADDENDUM I

CURRENT AND CONTEMPLATED SAFETY IMPROVEMENTS FOR THE NINE INTERSTATE PROJECTS REVIEWED BY THE SPECIAL SUBCOMMITTEE ON THE FEDERAL-AID HIGHWAY PROGRAM

Each of the nine Interstate projects selected for review in the several regions of the Federal Highway Administration has been said to be deficient safetywise in some one or more of its engineering details. Total safety in engineering design and operation will never be reached but some brief mention of the justified striving toward that objective ought to be included in the record.

Within the regions and on the projects studied cooperatively by the Subcommittee staff and a qualified engineer from the Bureau of Public Roads, the safety improvements listed below are presently underway or contemplated:

Region One—Rhode Island Interstate 95

1. Signs originally placed 2 feet off the edge of shoulder will be moved back to 30 feet wherever viewing conditions permit.