"CHANNELIZATION"

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Mr. John has just introduced you to the fact that we Traffic Engineers have available several tools for combating accidents and congestion occurrences and their attendant economic losses. I should like to, so to speak, open the tool box and withdraw one of these tools for evaluation with you. The tool to which I have reference is the traffic island, the application of which is known by the rather high sounding term, channelization. Boiled down to more rudimentary terms, channelization becomes the creation of clearly designated lanes or channels for use by conflicting traffic movements through an intersection area.

Even the simplest of four-way intersections contain 32 points of possible conflict between turning vehicles. Simple intersections of this nature accommodating relatively minor traffic volumes of say 1,000 vehicles per day confront motorists using the intersection with well over 1,000,000 potential collisions in a month. Increases in either the complexity of the intersection or in the volume of traffic using the intersection invariably result in a proportionate increase in the number of potential collisions. Since accident exposure rates of this magnitude are created even by simple intersections with relatively low traffic volumes our statisticians can predict with assurance that intersections of traffic streams can and do produce most of our traffic accidents. It then becomes axiomatic that driver confusion in intersection areas will produce chaotic results. Since channelization, by creating clearly defined paths for intersectional movements, is one of the most effective tools in eliminating driver confusion in intersectional areas, we can readily understand the need for and the importance of this traffic engineering tool.

Another important use of channelization is the provision of a place of refuge for pedestrians crossing the streams of traffic in an intersectional area. To appreciate the value of this application of the traffic island, one need only witness the plight of a pedestrian that has been able to cross only two of four or more undivided lanes before the light changes and who has only the width of a painted center line for protection. Traffic islands frequently are used to allow the placement of signs at their proper locations. We frequently observe motorists proceeding into the wrong street or into the wrong travel lanes at an intersection simply because there was not enough room available at the proper location to install a sign telling him where to turn to make the maneuver properly. Small, properly located islands could solve the problems which are shown on the two slides which follow. Slide #1: At this location you will see that the stop sign is as much as 150' in back of the proper stop location. Slide #2: At this location, the stop sign is non-existent, simply because there's no protected place near the intersection to install the sign. Another most important use of the traffic islands, and one with which I am sure all of you are familiar, is the creation of shadowed left turn storage lanes. Slide #3: Traffic islands used in this manner eliminate the possibility of rear-end collisions between vehicles stopped on the pavement prior to turning left and other vehicles desiring to proceed through the intersection.

In many intersections motorists desiring to make such standard intersectional maneuvers as right turns or left turns become confused by the existence of uncontrolled commercial entrances lying within the intersectional area. Slide #4:
Frequently these uncontrolled commercial developments elongate the intersectional area of the two streets by as much as 400' or 500'. I feel considerable pity for the strange motorist on a dark, rainy night who is trying to decide if he is turning into his street or turning into a commercial area 50', 100' or 200' away from his street. These frequent problems can be best overcome by properly placed traffic islands with judiciously spaced and marked openings for intersecting streets and commercial entrances and exits. In view of these many factors, we are convinced that properly conceived, well designed, judiciously placed traffic islands are needed to reduce or eliminate accidents at many intersections throughout the state by providing more orderly traffic flow through these areas.

The Division of Traffic has in the past, installed such channelization at several locations throughout the state. Due to many factors, however, we have not yet been able to install traffic islands at all of the locations where we have reason to believe they are needed. Sometime ago, our Engineers undertook the development of a state-wide channelization program. Slide #5: We are at present investigating the feasibility of installing channelization at about 1,000 locations throughout the state. Many of these locations are on our list as the result of field observations of traffic operations at the intersections and of the geometric layout of the intersection itself. Other potential candidates for channelization were added to our list as the result of investigations of state-wide accident records. At these locations, well over 2,000 accidents, causing an estimated loss of more than $1,000,000 are occurring each year. Visual inspection of each of these locations by our Engineers will determine whether channelization or some other traffic engineering tool is needed to reduce or, we hope, eliminate the accident occurrence. Although our state-wide channelization program is still in the planning stage, all indications are that a need for channelization will be found at 500 or more intersections, and that the total cost for the installation of channelization will be well over $1,000,000. As you may expect, a program of this size which will undeniably produce highly desirable results, will be confronted with many obstacles. Obviously, the required man power and funds will present a major, though I am sure, surmountable obstacle. Several years will probably be required for the completion of the state-wide program. As you would expect, we are planning to proceed at the earliest date with the installation of channelization at those locations with the highest accident records or with the greatest need for the traffic islands. We anticipate also that the state-wide program may get off to a rather slow start, because usually those locations having the greatest need for correction require the most elaborate and most expensive corrective measures. No doubt, many of the locations in this category will require, in addition to the traffic islands, other costly supplementary devices such as highway lighting, overhead signing, and perhaps signalization.

We anticipate that one other major obstacle will stand in the way of our successful completion of the anticipated program. From our past experience, we know that channelization has a multitude of vociferous, outspoken opponents. Normally, the most outspoken of this group are the property owners abutting the intersection at which the channelization is applied. Occasionally, opposition to channelization even arises from well meaning motorists. Regardless, however, of the form of the opposition, we can appreciate the fact that the opposition normally results from a lack of understanding or appreciation of the fact that it is occasionally necessary to introduce a small degree of inconvenience or even safety for one movement to obtain a much greater degree of safety and convenience for another movement.

While we recognize that opposition to the channelization program probably will develop, we recognize also that there is considerable value contained in the time worn expression "There are several ways to skin a cat". If therefore I could leave one thought with you regarding our future channelization work, let it be this—although we do not wish to unduly sacrifice the improved safety which we know will result from applied channelization, we will wherever possible, make any
modifications in our designs and plans which will result in the least possible inconvenience to all persons affected.

Since the question of greatly improved safety and convenience for most of the traveling public through channelization versus the possible small reduction in convenience with the resulting economic losses, however slight, to affected commercial enterprises seems inherent in our anticipated channelization program, we know of no fairer arbiters than those of you in the audience whose responsibility it is to protect the interest of the public as a whole. With this in mind therefore I would like to solicit your frank comments and evaluations of specific projects as they are completed, whether these comments and evaluations are favorable or unfavorable. Your comments and evaluations will assist us in modifying channelization projects where necessary to provide relief for those who have justifiable objections.