

THE CORPORATION OF THE DISTRICT OF BURNABY

TRAFFIC SAFETY COMMITTEE

HIS WORSHIP, THE MAYOR
AND ALDERMEN

REPORT OF THE TRAFFIC SAFETY COMMITTEE

A. SCHOOL SAFETY PATROL INCENTIVE GRANT

RECOMMENDATION:

1. THAT a grant in the amount of \$2,500.00 be awarded to School District No. 41 - Burnaby for its School Safety Patrol Incentive Program.

R E P O R T

The Traffic Safety Committee at its meeting held on 1989 July 11 received a letter from the Secretary-Treasurer of Burnaby School District No. 41 advising that during the 1988-1989 school year, 26 elementary students in the district operated school patrols which involved a total of 1,105 students.

In support of this program, the Corporation of the District of Burnaby has, for several years, forwarded a grant which has been distributed to the schools on the basis of the number of pupils participating.

Your Committee wishes to advise that traditionally, grants in the amount of \$2,000 have been awarded for the school safety patrol incentive program but that the amount was increased to \$2,500 in the 1987-1988 school year due to the increased costs associated with recognizing the students efforts.

B. WESTMINSTER AVENUE - WOODSWORTH STREET TO LAUREL STREET

RECOMMENDATION:

1. THAT D.J. Munro, 3680 Westminster Avenue, Burnaby, B.C., V5G 4H2 be sent a copy of this report.

R E P O R T

A letter dated 1989 June 02 was received from Mr. D.J. Munro regarding a recent change in the parking restrictions on Westminister Avenue. Within the last six months the parking prohibition was changed from a 2 hour limit to 'No Parking, 7:00 a.m. to 6:00 p.m.' on the east side of Westminster Avenue.

In conclusion the writer suggested that either a sidewalk should be installed on Woodsworth Street or that parking should be eliminated on Woodsworth with Westminister Avenue being reassessed to 'Resident Only' parking on both sides instead of the current restriction. The writer felt that this would create the safety factor which the municipality had set out to accomplish.

INTERNAL DISTRIBUTION:

: - AGENDA - 1989 JULY 24
: - COPY - MUNICIPAL MANAGER
 - DIRECTOR ENGINEERING
 - DIRECTOR PLANNING & BUILDING INSPECTION
 - O.I.C., R.C.M.P.

REPORT
Regular Council Meeting
1989 July 24

-2-

A report dated 1989 June 22 was received from the Traffic Supervisor responding to the writer's concern and suggestion, the contents of which are contained hereunder:

"A letter expressing concerns about parking restrictions in the area of 3600 Westminster Avenue was received and referred to Engineering for report.

Westminster Avenue between Woodsworth Street and Laurel Street is constructed to an 8.5 m pavement standard curb to curb. Prior to 1989 February, the east side of Westminster Avenue was signed with a 2 hour time limit. This restriction was instituted in 1983 December to resolve the problem of on-street congestion caused by long term non-resident parkers attending B.C.I.T.

It was brought to the attention of this department in 1989 January that parking congestion on both sides of Westminster Avenue was again creating a hazard. In addition, a number of complaints were received from the neighbourhood regarding vehicles continually parking within corner and driveway clearances.

In view of the nature of these complaints, staff conducted a survey of the residents whose property abuts Westminster Avenue between Woodsworth Street and Laurel Street. The majority of the residents supported the installation of a 'no parking', 7:00 a.m. to 6:00 p.m. restriction on the east side of the street.

The restriction was installed on 1989 February 15. An additional sign post and a second sign on the existing post adjacent 3680 Westminster Avenue were installed to ensure compliance with both posted and bylaw regulations.

Woodsworth Street between Westminster Avenue and Garden Grove Drive is constructed to a 11 m pavement standard curb to curb. This allows enough width for parking and a travelling surface for two vehicles to pass safely.

Staff will investigate the feasibility of installing an improved walkway surface for Woodsworth Street to provide a safe route for school children by pursuing the matter with the Burnaby School Board.

The suggestion of implementing 'Resident Parking Only' is currently under study by Engineering staff. The application in this case however would not resolve all of the safety concerns on Westminster Avenue."

C. INTERSECTION OF CUMBERLAND STREET AND 10TH AVENUE

RECOMMENDATION:

1. THAT the New Westminster Traffic Advisory Committee be sent a copy of this report.

R E P O R T

A report dated 1989 June 27 was received from the Traffic Supervisor providing further information on the intersection of Cumberland Street and 10th Avenue with the view to determining what interim measures might be taken to improving on the receipt accident history.

The Traffic Supervisor reported as follows:

"1.0 BACKGROUND

At its regular meeting of 1989 May 02 the Traffic Safety Committee received a report regarding additional traffic control at the intersection of Cumberland and 10th Avenue.

The report outlined the concern that a traffic signal at the intersection might draw additional 'arterial' traffic to Cumberland which is a local collector in both Burnaby and New Westminster. The decision by the City's Traffic Advisory Committee was 'that no changes be considered at the intersection of 10th Avenue and Cumberland Street at this time and that following completion of the intersection construction work proposed for 10th Avenue and McBride Boulevard, the 10th and Cumberland intersection be re-evaluated and that further discussions on this matter be held with Burnaby following that evaluation'.

The Burnaby Traffic Safety Committee moved that this matter be referred back to staff for further review of the statistical information related to this intersection with a view to ameliorating the accident problem.

2.0 INTERSECTION STATISTICS

Exhibits 1 and 2 attached graph the recent growth in traffic (average weekday 24 hours total) and annual traffic accidents at the Cumberland/10th intersection. The accidents recorded are primarily, as might be expected, right angle collisions (11 of the 16 collisions reported in 1988 were right angle).

This accident profile tips the balance when this intersection is 'tested' against the R.T.A.C. warrants for a traffic signal. The intersection accidents account for 29 of the 126 R.T.A.C. warrant points in our current analysis. Following the R.T.A.C. warrant guidelines we would normally recommend a signal if the intersection scaled above 100 points.

3.0 INTERIM ALTERNATIVES

This intersection also meets the guidelines for the installation of a 4 way stop control but we do not recommend this as a solution, even an interim one. This is because, as shown on Exhibit 3 attached, the flows along Cumberland and 10th are heavily weighted in favour of 10th Avenue. A 4 way stop would increase delays to 10th Avenue traffic while encouraging the through movement on the Cumberland corridor as that corridor would experience relatively less delay. The extent to which this disproportionate intersection loading would of itself generate additional accident risk is undeterminate. Clearly a demand actuated traffic signal is the preferred 'additional control' solution.

We have considered the options of reducing the number of accidents - by reducing the number of potential conflicts at this intersection. A most promising initial possibility was the installation of a median along 10th Avenue which would limit access from Cumberland to right turn out/in. Overtly this would appear to also solve the dilemma of accentuating Cumberland as a through route. Unfortunately, we cannot be certain what alternative route the deterred traffic would use. Our examination of this situation, coupled with past experience, suggests that this traffic would probably seek new 'rat runs' through the residential streets of Burnaby and New Westminister. For example, the volume of vehicles turning left from southbound 10th Avenue to eastbound Cumberland (New Westminister side) was higher than anticipated. By eliminating this movement this traffic would find another route to access 8th Avenue. Chilliwick Street, being the first street to access 8th Avenue from 10th would probably absorb the brunt of this traffic.

4.0 DISCUSSION AND CONCLUSION

Our analysis of traffic accident data, recent traffic counts, and re-evaluation of signal warrants serve to reinforce our conclusion that this intersection should be signal controlled in preference to other possible solutions.

There are however neighbourhood ramifications from signal control that need further consideration. It would be most appropriate that this further consideration, as recommended by the New Westminster Traffic Advisory Committee, be deferred until after the now imminent reconstruction of the McBride/10th Avenue intersection.

As an interim solution we recommend occasional surveillance by the police with enforcement as appropriate."

D. TRAFFIC SAFETY AT ELEMENTARY SCHOOLS

RECOMMENDATION:

That Council endorse, in principle, the policy/procedural approach to traffic regulation at elementary schools as outlined in this report.

R E P O R T

The Acting Director Engineering submitted a report dated 1989 May 11 reviewing the traffic regulations and signing policy of the Engineering Department at elementary schools.

The Acting Director Engineering reported as follows:

"1.0 INTRODUCTION

Traffic safety at elementary schools is usually more fraught with emotion than any other road safety issue. Yet, statistics indicate that child pedestrians in the vicinity of schools are 'safer' than elsewhere. Nonetheless, it must be recognized that young children behave irrationally and unexpectedly. Extraordinary measures to protect them are required. Often Municipal staff and the Traffic Safety Committee receive complaints from parents regarding a traffic safety problem at the school. Whether the problem is real or perceived, the complainants usually suggest countermeasures. Unfortunately, countermeasures proposed though well intentioned are usually ad hoc, do not necessarily attack the problem, and may in fact be counterproductive.

A comprehensive approach is required - one that is implemented, monitored and reviewed on an equally comprehensive basis. For the purpose of this report, we have split the issue into two factors:

- 1) the mechanistic provision of signs and traffic control regulation which is the responsibility of the Municipality's Traffic Engineering Division, and
- 2) the inculcation of appropriate traffic safety behaviour by parents, motorists and children. Responsibility for this area of concern falls on the parents, the School Board and the police.

This report deals with the first of the above issues - relating primarily to the accountability of the Traffic Supervisor and the R.C.M.P. whose staff enforce the regulations as appropriate.

It would be desirable if a second subsequent report were prepared dealing with the other wider concerns related to traffic safety behaviour. That report would most appropriately be drafted by the School Board in consultation with the R.C.M.P., and parents (as represented on the Traffic Safety Committee). It would deal with the responsibility of each of those agencies in matters such as traffic safety education of parents, children and motorists as well as school run safety programs including safety patrols, adult crossing guards, safe routes, etc.

2.0 TRAFFIC CONTROL AND REGULATION

Specific traffic control regulations that are deployed around elementary schools are discussed below, along with proposals for refinement of those regulations. Traffic Division staff consider it imperative that the traffic regulations that we use in the Municipality are consistent internally as well as with the practice employed by other jurisdictions, most particularly our neighbours. Consistency of approach amongst various jurisdictions obviates confusion and minimizes accidents resulting from misunderstandings. To this end we have discussed the aspects of school and playground safety with Traffic Engineering staff in various jurisdictions in Canada as well as the Lower Mainland. This review draws extensively from these. Our review of the literature has also yielded a useful 'local' overview which is available upon request.

2.1 School Zones

Road segments contiguous to school sites are usually defined as school zones. Roads that don't abut schools are no-so defined. Following current guidelines entry to school zones is marked by the 'walking school children' pentagon sign. Typically these signs will be posted on all street approaches to schools in the vicinity of the school site boundary. It should be noted that this is the practice employed by the City of Vancouver and generally conforms with what the Municipality already does. Any review of signs at schools should confirm the presence of school zone pentagon signing. It should be noted that the new 'standard' pentagon sign has the walking school children silhouette but it is more stylized than that currently employed.

2.2 Speed Zones

There is almost universal agreement within the Traffic Engineering profession that speed zones in the vicinity of schools or playgrounds are not effective if not counterproductive. At one time, up to the 1950's, most jurisdictions in Canada used speed zones. Now only a minority do so. Amongst the minority however are Burnaby and the City of Vancouver. The city speed zones are posted on all local residential streets that are contiguous to schools but not on arterials where crosswalks are employed. Burnaby's other neighbours, Coquitlam, posts speed zones adjacent to school grounds that are not protected by a fence.

Most schools in Burnaby now have speed zones and it would be politically naive to recommend their removal. Rather it would be appropriate for the Municipality to move toward conformance with its largest near neighbour, the City of Vancouver. Accordingly it is proposed that speed zones be employed only on unclassified residential streets contiguous to elementary schools. The reduced speed of 30 km/h will be conveyed to motorists by means of a standard tab sign under the school area pentagon. Speed zones would not be placed on higher category roads where crosswalks are utilized. According to the Motor Vehicle Act reduced speed zones at schools are in effect from 8:00 a.m. to 5:00 p.m. on school days.

2.3 Marked Crosswalks

Marked school crosswalks should be employed on all major streets that are crossed by significant flow of school children. Ideally, for each school we should have a dendogram (tree-like) map showing the paths which children are to be encouraged to take in making their way to school. Again ideally, this route map would be defined by representatives from the school, police, the local parents association, and Traffic Engineering.

We understand that most schools in Burnaby have or do employ 'safe route' programs which are a desirable prerequisite for marked crosswalk location. Staff do not propose a 'warrant' system for determining marked crosswalks at schools because we feel a flexible approach is required. Obviously in determining whether a crosswalk is to be recommended we will be guided by objective criteria such as that published by the M.O.T.H. and others but we will be equally guided by the experience and advice of the R.C.M.P., school officials, etc.

The installation standards for pedestrian crosswalks has been the subject of a previous report to the Traffic Safety Committee. The school crosswalk standards which the Municipality will be employing as practice are shown as Exhibits 4 and 5 attached. Where crosswalks attract substantial other pedestrian traffic we will implement a 'normal' marked crosswalk in accordance with recommended practice.

2.4 Parking Prohibitions

The 'Burnaby Street and Traffic Bylaw - 1961' states:

'Except where a traffic control device indicates that parking is permitted, no person shall park a vehicle on that side and portion of any street upon which any school or land thereof abuts between the hours of 8:00 o'clock in the forenoon and 5:00 o'clock in the afternoon on any day on which school is regularly held.'

Technically we do not have to sign 'no parking' zones adjacent to schools, but our recent practice has been to do so. We achieve better compliance with signed parking regulations. Understandably motorists are irked by tickets written for violation of a parking regulation that is not signed.

Again in conformance with the City of Vancouver we are proposing that parking will be prohibited between the hours of 8:00 a.m. and 5:00 p.m. on streets that abut schools. (In the absence of parking, parents will be able to drop kids off or stop and wait for them). However, it is our intention to further prohibit stopping during school hours at the entranceway to the school. This will allow for ready access by emergency vehicles, etc.

2.5 Silhouette Signs

Periodically we receive requests for silhouette signs to supplement existing signage, school patrols etc. at crosswalks. These signs come in various guises. For example in Delta, silhouettes in the shape and size of a school child are deployed. Other districts have been known to use miniature police figures. Traffic Engineers believe that these signs are ineffective and constitute a serious potential hazard - for example;

- i) An unsuspecting motorist mistaking the sign for a live person could brake or swerve and lose control thereby causing an accident;
- ii) The sign could mask a child from a motorist who has otherwise thought the crossing unoccupied.

In the event of such an accident scenario any road authority that sanctions use of silhouette signs would be inviting a legal suit.

In the past staff have resisted such signs but under the direction of the Traffic Safety Committee have experimented with a hybrid silhouette sign consisting of a standard school zone pentagon mounted on a 'fluorescent' orange pylon. Results of that experiment were subject reports to the Traffic Safety Committee.

The silhouette sign's functional application is to provide an additional visual cue to motorists approaching a marked guarded crosswalk. We believe that the new school crosswalk application that has been discussed previously will provide improved visibility. However School District staff and members of the R.C.M.P. are more positive about the merits of silhouette signs than Traffic staff. Accordingly we recommend that silhouette signs, cones, etc. to supplement crosswalk signing be further considered in the context of a review of school patrol/crossing guard usage as discussed below.

3.0 ENFORCEMENT

The active enforcement of traffic regulations, by R.C.M.P. at the schools is usually considered as a last resort. We generally find that sensible regulations, if consistently implemented, achieve a good level of compliance.

Studies and comments by others in the Traffic Safety/Engineering business indicate that the very presence of school children tends to have a moderating effect on driver behaviour. School patrols tend to reinforce driver awareness of young pedestrian activity. Other jurisdictions with strong school patrol programs are most enthusiastic about their efficiency. In Burnaby the school patrol program has fallen into disrepair as a greater reliance has been placed on paid crossing guards.

4.0 SAFETY EDUCATION

Often when staff are called out to investigate traffic safety problems at an elementary school, we are told that the problem results from poor driving habits of 'commuters'. However most children travel to and from school outside of the peak hour of commuter travel. At most schools much of the traffic activity in the vicinity of schools immediately before and after school hours is generated by parents. Typically these parents have been observed to stop their vehicles at crosswalks, on crosswalks, in no stopping zones, u-turn carelessly, etc. Parents who accompany their child as a pedestrian have been observed to endanger the life of their child and themselves by crossing mid-block (when a crosswalk is available). Parents, like other pedestrians, are often reckless in assuming that they need not exercise any caution while using a crosswalk.

These parents or indeed 'careless' drivers are not malicious or uncaring - they do not wish to endanger lives of children. But often they don't realize they are not behaving sensibly and are unaware of what the sensible behaviour is. Our discussions with other traffic engineers has highlighted the importance of school safety programs that involve school officials, parents, police, and peripherally traffic engineering staff. It is particularly important to involve parents in the traffic safety education process. At schools where there is strong parent involvement in school affairs, and especially where there is parental participation in actively monitoring safety, unsafe behaviour is minimized.

5.0 PROCESS

When traffic staff receive a complaint regarding signage/regulation at schools our investigation includes consultation with the principal. At the conclusion of our investigation we discuss our intentions with the complainant and principal.

REPORT
Regular Council Meeting
1989 July 24

-8-

Minor changes are usually implemented with no further ado. We would propose maintaining this procedure for routine items that are covered by 'policy' (as discussed previously). For more major issues - items that typically fall under the wing of the Traffic Safety Committee - we propose extending the consultation to the School Board representative on Traffic Safety Committee and if applicable the R.C.M.P. representative. This might prolong response to an issue but we believe that it would result in a more effective response.

6.0 CONCLUSIONS

Traffic Engineering staff are seeking Committee concurrence and support for uniform traffic regulation policy at elementary schools. The approach discussed (Section 2.0) falls within the accountabilitys of the Traffic Supervisor's office. However, this report has been prepared in consultation with the R.C.M.P. and School Board staff.

The report raises wider issues related to traffic safety (Sections 3.0, 4.0) that are arguably more important than the placement of signs. It would be appropriate if those issues were dealt with by the School Board, under which accountability they lie in consultation with R.C.M.P. and Parents Group representation."

Respectfully submitted,

Alderman J. Young
Chairman

Alderman R.G. Begin
Member

10th & CUMBERLAND TRAFFIC VOLUMES

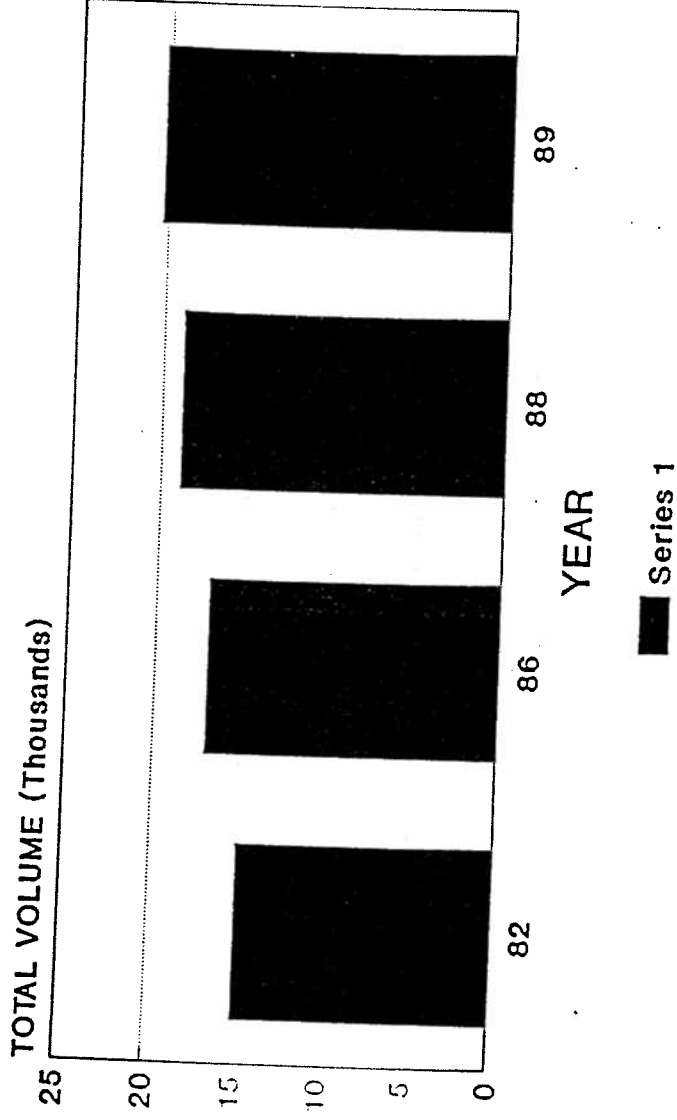


EXHIBIT 1

10th & CUMBERLAND ACCIDENTS

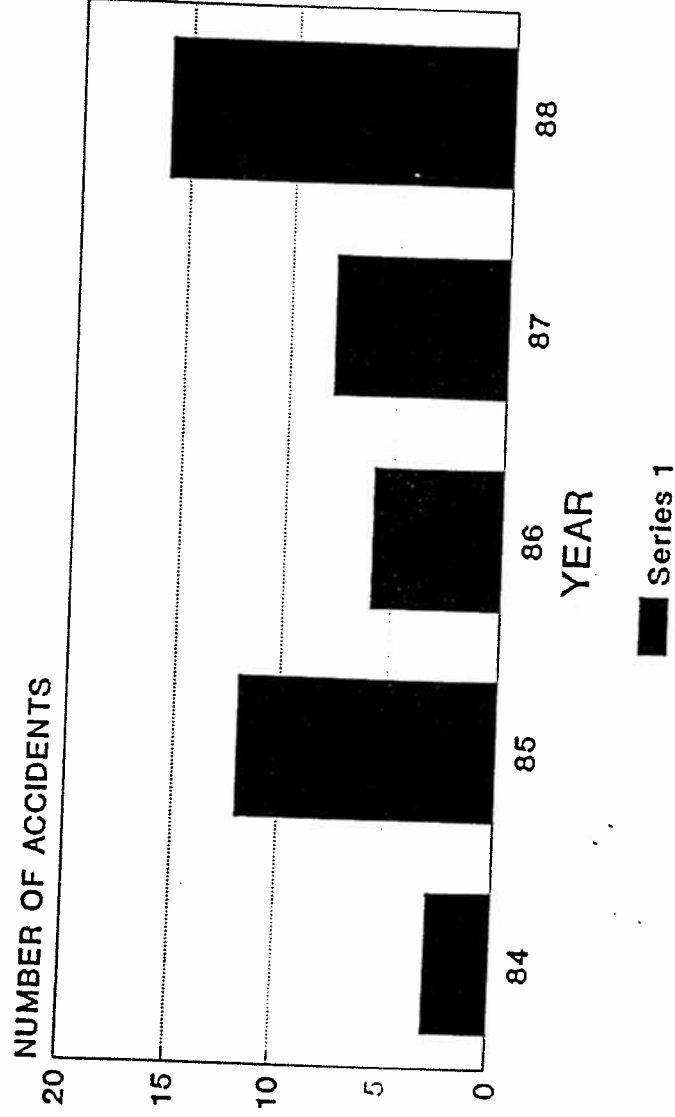
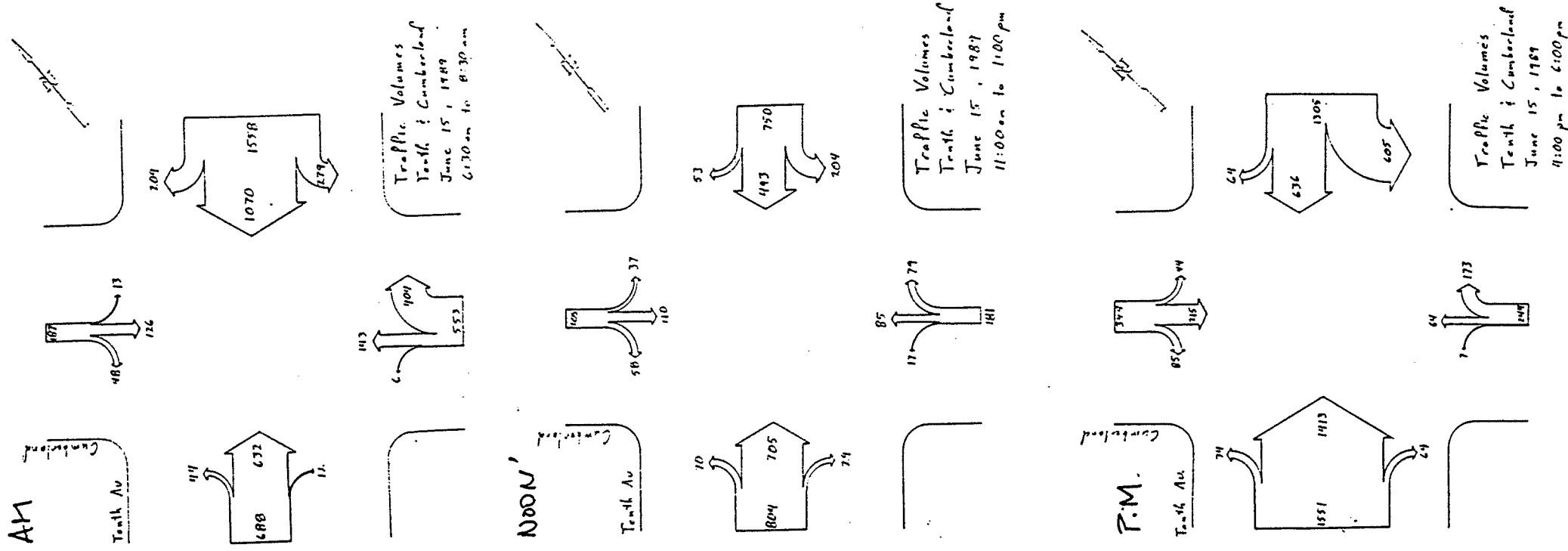


EXHIBIT 2

EXHIBIT 3 TRAFFIC FLOW AT 10th / CUMBERLAND



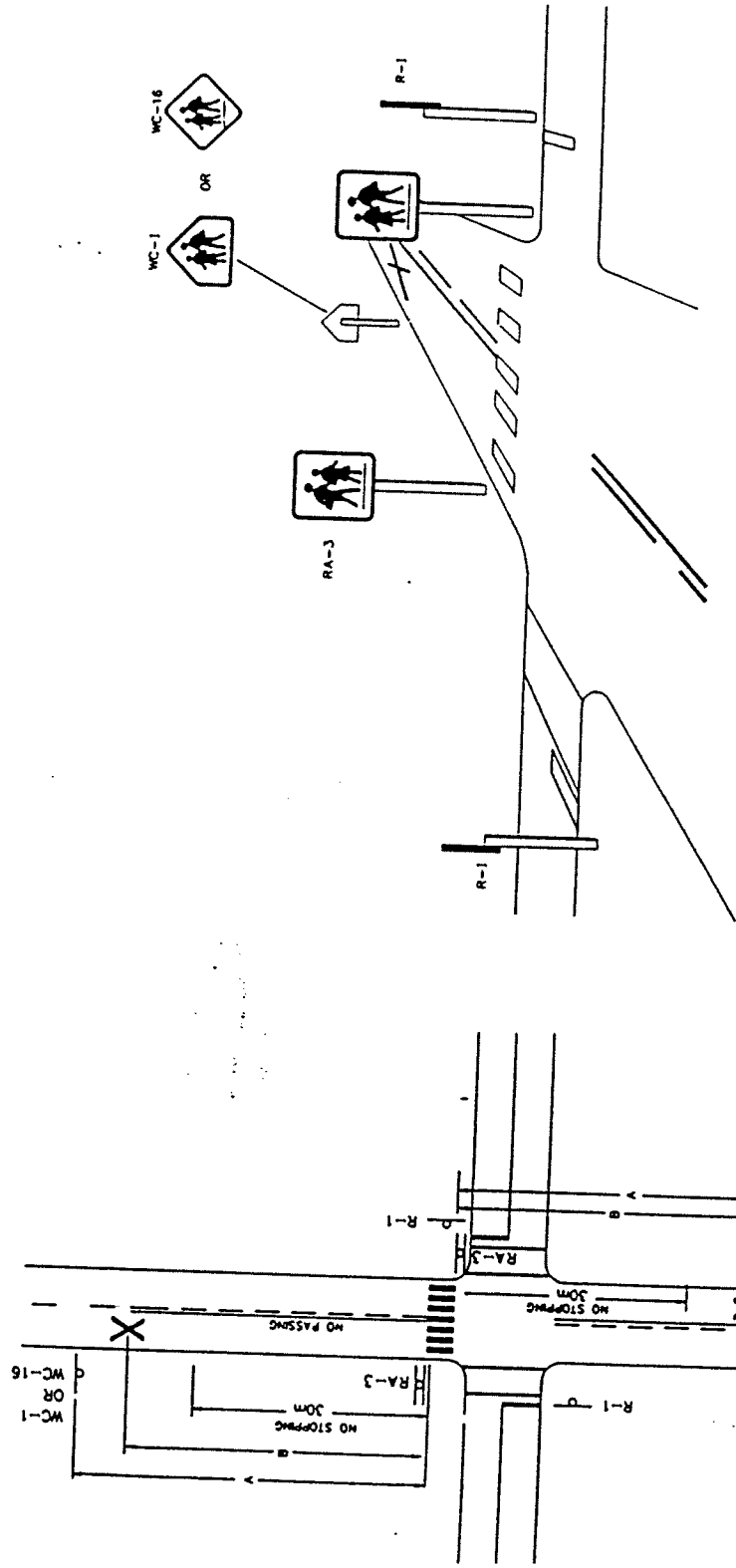
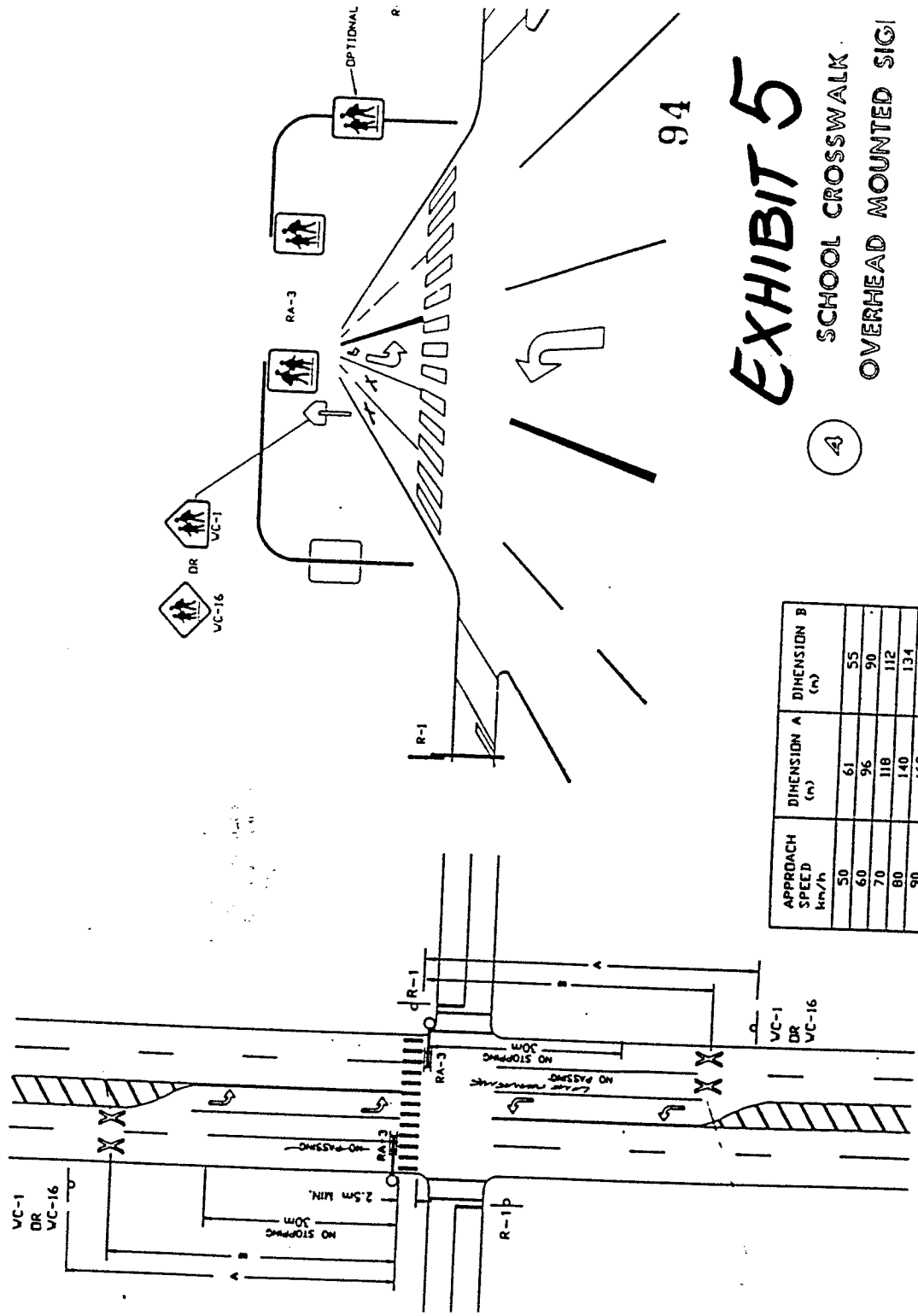


EXHIBIT 4

③ SCHOOL CROSSWALK
POST MOUNTED SIGNS

APPROACH SPEED km/h	DIMENSION A (m)	DIMENSION B (m)
50	61	55
60	96	90
70	118	112
80	140	134
90	168	162



94

EXHIBIT 5

④ SCHOOL CROSSWALK
OVERHEAD MOUNTED SIGNS

APPROACH SPEED km/h	DIMENSION A (m)	DIMENSION B (m)
50	61	55
60	96	90
70	118	112
80	140	134
90	168	162

