Developing Transportation and Land Use Alternatives in Toronto

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The Metropolitan Toronto Transportation Plan Review involved an evaluation of a total transportation system and extensive public participation. It produced not a single transportation plan but a number of alternative plans and indicated how each would contribute to differing development objectives.

One of the difficulties in presenting a case study is that, unless the audience is familiar with the locale under study, interest in the material tends to diminish exponentially with increases in the number of strange street names, expressways, and rapid transit routes. In the presentation of this material on the Metropolitan Toronto Transportation Plan Review (MTTPR), therefore, one challenge is to avoid as far as possible mentioning even a single street name.

At the outset, it might be worthwhile to ask what is different about the Metropolitan Toronto Transportation Plan Review that justifies presenting it to a large group of non-Torontonians? Basically, 4 things:

1. The MTTPR was a comprehensive evaluation of a total transportation system in which an attempt was made to involve the public as extensively as possible in an open planning process. To a degree, that process was successful: A large number of private citizens were involved in the review and in some cases they had considerable influence on the nature of the studies carried out.
2. Every effort was made to relate transportation issues to land use issues in a manner that could be readily understood by elected officials, the community, and the media. We were probably successful in forcing elected officials to realize that major transportation decisions should not be taken in isolation of their consequences for land use development. In this regard, the numerous publications stress the presentation of information in a manner that is relevant to the decision-making process and to the decision maker's perspective of the issues at hand.
3. Wherever possible, efforts were made to avoid aligning the professional staff with particular solutions and recommendations about which they might subsequently become defensive. Wherever possible, the conclusions tried to show how different transportation decisions could be grouped in a manner that was consistent with certain sets of objectives for overall urban structure. We then tried to indicate how certain transportation decisions were common to a wide variety of urban development objectives and could therefore be taken safely. By contrast, other transportation decisions might preclude certain development options and should therefore not be taken without first settling on those objectives.
4. Considerable emphasis was placed on the problems associated with implementation. In particular, the phasing of transportation improvements, the use of short-term

improvements as part of long-term solutions, and the long-range financial implications of transportation solutions were given considerable stress.

PUBLIC PARTICIPATION

Public participation is probably one of the most used and abused terms in the planning profession today. Almost every planning agency today claims to be committed to full public participation in its planning decisions. Planning studies are now hardly ever prepared without some reference to a significant public participation component.

Public participation, or "open planning" as it is sometimes called, is of course not without its skeptics and critics. These include planning officials who are inured to change and regard participation as merely another fad that will eventually disappear, politicians who already regard themselves as "the people's choice" and who regard professionals who attempt to deal directly with the public as being interlopers on their turf, individual citizens who regard participation programs as sinister attempts to co-opt the opposition, and some "people power" addicts who theoretically approve of the concept but who really thrive on dissension and prefer it to the boredom of cooperation.

Even among the advocates of public participation there are extremes in views. Some planners are philosophically committed to the concept of citizen involvement in planning decisions, so much so that they are often among the most naive when it comes to evaluating the real effectiveness of such programs. Others are involved in participatory processes because they now consider public participation to be a necessary evil.

These different viewpoints can all be justified, of course, depending on how public participation is defined and the perspective adopted. There are public participation programs that are complete shams that were never intended to be more than that. There are examples of participatory planning that has been successful in that both planners and the public have benefited from mutual interaction. There are also many examples of missed opportunities for effective public participation in the planning process.

One interpretation of public participation is quite simple: Public participation involves nothing more than producing information and making it available on a widespread basis. That information must be relevant; it must be presented in a way that is readily understood by both politicians and the public; and it must be more factual and objective than information produced by the press, which often dramatizes contentious points taken entirely out of context.

The argument for adopting such a simplistic definition of participation is that opportunities already exist for public involvement in the planning process. Planners are not charged with the responsibility for changing the nature of that process. They are charged with improving the process by broadening the base of public participation and treating it as an opportunity to improve the quality of planning.

This point can be illustrated by looking at a now shopworn concept of how decisions are actually taken in the transportation planning field (Figure 1). The process usually begins with a number of technical studies, although, admittedly, the nature of these technical studies is already based on some preconceived notion as to what kinds of improvements are desired. A politician, for example, may be aware of an abandoned or lightly used railway facility and suggest that it be put to more intensive use by the provision of new public transit services. This "conclusion" may instigate a technical feasibility study that deals with items such as costs, revenues, and possible operating strategies. In most cases, the technical studies produce recommendations that are then passed on to the decision makers, usually a group of elected officials. There, the recommendations may be debated, modified, distorted, sent back for further work, or ignored. Ultimately, a policy decision is taken.

These policy decisions are then subject to some further review by a more senior level of government that exercises a degree of financial control. The review process usually results in a decision to either proceed with the implementation of the improvement or to prevent the project from being carried forward.

Throughout this process, various elements of the community at large also become involved in the decision making. There are some examples of community or citizen

involvement during the technical studies or at the time when preliminary policy decisions are being debated by elected officials. By and large, however, the bulk of the citizen involvement occurs at the review stage, and it is largely characterized by confrontation and, in some cases, highly organized protest movements. How the nature of these community inputs can be improved is not dealt with here, but it should be pointed out that there are ways of improving the quality of community input, using that input more productively, and, in particular, using it to help identify what are the most relevant issues and consequences to be considered by elected officials when they make their decisions (1, 2, 3).

The most important feature of this simplistic approach to decision making is that the technical studies constitute a starting point. They produce information and recommendations that ultimately become the basis of decisions. To the extent that the quality of the information produced is improved, one must assume that the quality of the decisions taken will also improve.

One of the most important ways of improving the quality of information is to ensure that the kinds of information presented to the decision makers describe the factors and consequences that they and the community consider important in making their decisions. That can only be accomplished by ensuring a broader range of input early in the process and by more open discussion of the issues and potential solutions by all concerned before a significant degree of planning is undertaken. Involving the public early in the process will help ensure that the right issues and problems are identified. It will also ensure that the right studies are undertaken in the first place.

Involving the public more fully in the planning process is, of course, not a substitute for the normal decision-making procedures of government. All that is being said is that improved communication with the public early in the planning process may give professionals a better assessment of the true needs and desires of the community. In that regard, public participation is an important means of educating the planners. As a result, better solutions might be recommended.

In some cases, the interactions between professionals and the community may not be particularly productive, but keeping the community informed, if nothing else, helps the individual citizen to argue his or her particular point of view more effectively. And, in a free democratic society, that happens to be one of his or her basic rights. It may also help to quickly deflate extraneous arguments, thereby saving both time and money in the implementation of policies and projects that governments eventually decide to pursue.

There are perhaps a few lessons that can be learned from the successes and failures of trying to involve the public more fully in the way that is being suggested here.

1. The true test of how effective public participation has been only comes at the end of the process. If the process has been successful, then no credible group should be able to suggest a reasonable alternative that did not emerge before the final recommendations were made. That means not that their alternative must be accepted, only that it has received fair consideration in relation to other alternatives that were analyzed.
2. If the public is to participate in influencing planning recommendations, politicians must be prepared to recognize their participation and to take part in the proceedings themselves. An essential ingredient of good public meetings is to have local elected officials present to respond to questions and to obtain a measure of the community's sentiment.
3. Some thought should be given to using the press effectively in a participation program. Ultimately, the media will reach a much wider audience than any highly organized public participation program. The media, therefore, should be looked at as yet another opportunity for improving the quality of information that is eventually presented to the public. That means holding meetings, as opposed to press conferences, with representatives of the media to provide them with a better opportunity to review any material produced. Often such meetings will be much more useful if the media are given an opportunity to read reports and documents beforehand.
4. Professionals involved in a participatory planning process must really understand how decisions are taken in the political arena. That is the only way of ensuring

that the information and recommendations that they ultimately produce at least take into account the decision maker's perspective of the problem.

5. A cardinal rule is to involve the public only when there is something substantive to discuss, even if it is nothing more than a definition of the problem as the planners see it. The worst thing to do is to have a meeting when there is nothing to say. It is when people have nothing to talk about that they usually start throwing things.

DEVELOPING TRANSPORTATION AND LAND USE ALTERNATIVES

Perhaps one of the most distinguishing features of the MTTPR is that more effort was devoted to the formulation of alternatives than to their testing and evaluation. Engineers and planners have developed some fairly good techniques for the analysis and evaluation of alternative transportation systems. By contrast, the process by which these alternatives are formulated is not so rigorous. The generation stage is, of course, the most critical because good choices or decisions cannot be made if the best solutions are not included in the population of alternatives from which the evaluation is made. For this reason, most of the discussion on this case study concerns the process for generating or formulating alternative transportation solutions.

Developing long-range transportation plans is not an easy task for 2 reasons. First, long-range planning is talked about a great deal, but there is little evidence of long-range planning in transportation decisions that are actually taken. Almost all major transportation decisions appear to be based on short-term considerations. Yet decisions taken today will obviously have a significant effect on the future growth of any metropolitan area. As a result, one of the approaches used to develop the long-range alternatives involved a consideration of how they could be staged to deal with shorter term needs.

Second, transportation issues cannot be considered separately from land use issues. One basic difference in our approach, therefore, was that the transportation alternatives were related to alternative land use development. In most transportation studies, future land use is normally taken as given, and the transportation alternatives are then designed to service the needs implied by a particular land use pattern. In the Toronto study, we attempted to recognize the interaction between land use and transportation and tried to emphasize that it does not make a great deal of sense to consider one without the other.

The process for developing alternatives is shown in Figure 2. It begins with certain assumptions about one land use pattern for the year 2000 based on the principles of the Toronto centered region (TCR) concept. (The TCR concept is a set of policy guidelines established by the provincial government for the growth of the metropolitan Toronto region. It designates particular areas for new development, sets population and employment targets for those areas, and identifies controls to encourage development or discourage it where none is desired.) This land use forecast was used as the basis for preliminary traffic predictions. Since the demand for transportation depends on the kinds of facilities and services available, certain preliminary assumptions also had to be made about the extent of the transportation system that would exist in 2000.

For this particular transportation and land use configuration, it is possible to make a prediction of future travel demand for various trip purposes and for different modes of transportation. That can be accomplished by using some of the traditional models for trip generation, trip distribution, and traffic assignment. In this case, the traffic assignment routines were applied to a simplified spider network.

For the particular distribution of population and employment implied by the assumed land use pattern, traffic assignment to the spider network provides some indication of where the major travel demands are likely to exist. Comparison of a number of different spider network assignments suggested the existence of 8 major travel corridors, 6 of which are oriented to the existing central area and 2 of which appear to accommodate cross-town travel, as shown in Figure 3. [The actual techniques are described in detail in Report 62 (4).] For these corridors, the traffic assignment provided estimates re-

Figure 1. Decision process for transportation planning.

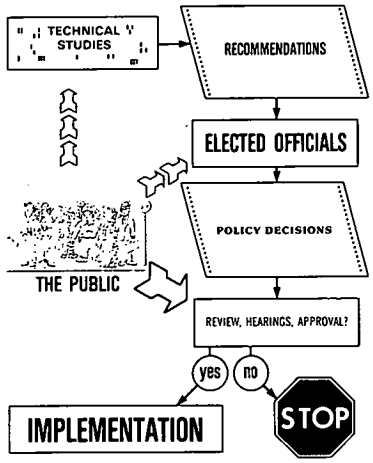


Figure 2. Work flow for developing transportation and land use alternatives.

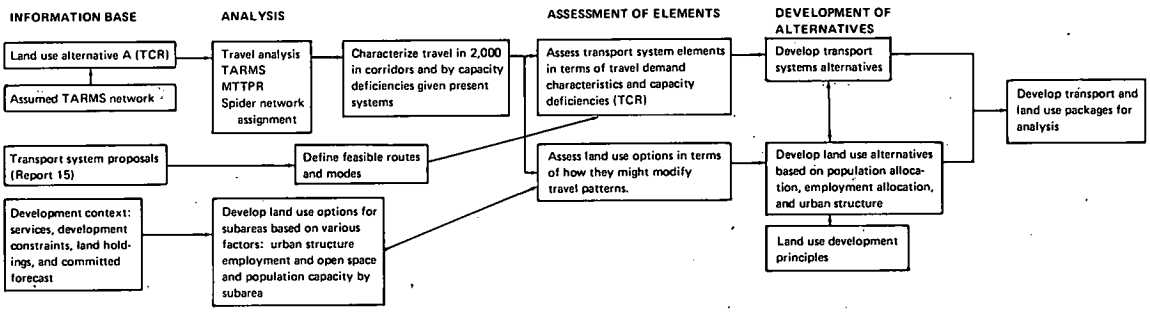
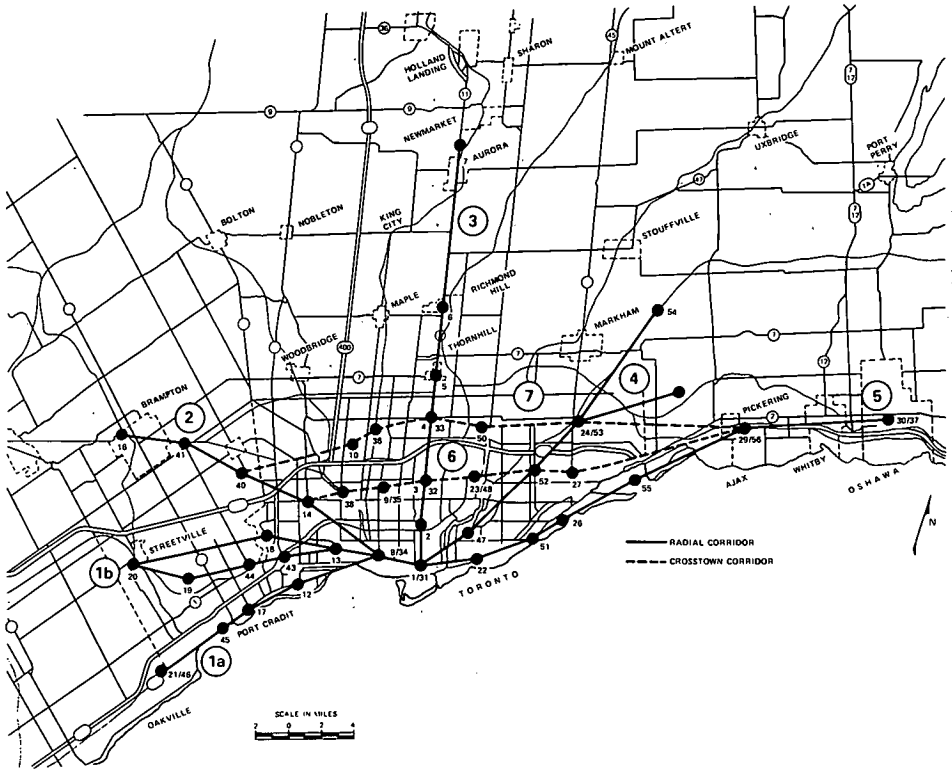


Figure 3. Travel demand corridors in 2000.



lated to both volumes and the character of travel (which is important because of its influence on the choice of appropriate transportation technologies). As a result of the travel prediction procedure, therefore, we have some indication of where the major corridors of travel are likely to be and an estimate of the character and magnitude of travel demand within those corridors.

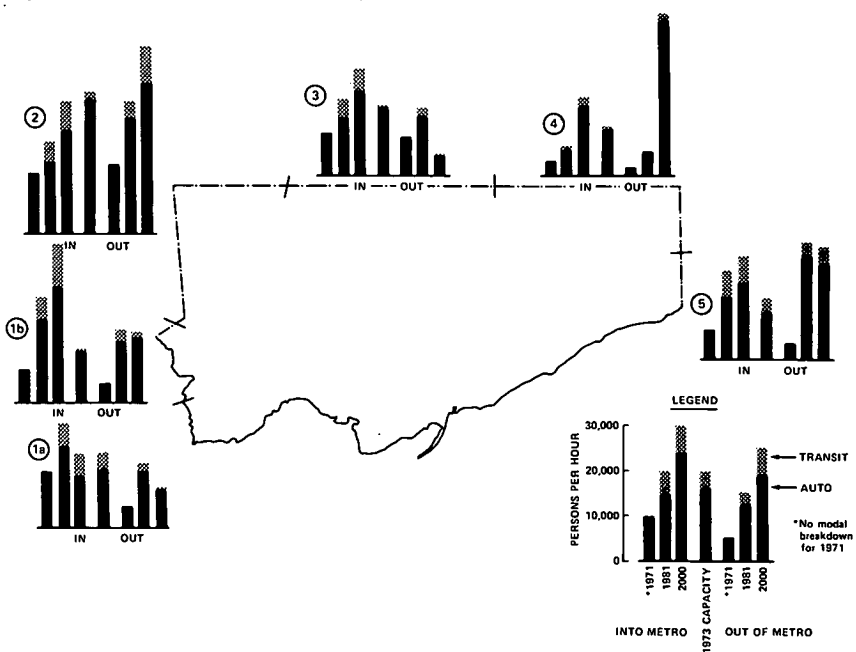
The next step is to look at the capability of the transportation system to accommodate these projected demands, remembering that they are based on certain preliminary assumptions about land use and the extent of transportation facilities. Obviously, the ability to accommodate projected demand will vary at different locations within a particular corridor, so key locations must also be defined for comparing the relation between projected demand and the ability of the road and transit system to handle that demand. This involves establishing a series of cordons and identifying the road and public transit facilities now crossing the cordons in each corridor. The capacity of these facilities within each corridor at each cordon can also be calculated and compared to the demand estimates for travel in the corridor. Figure 4 shows an example of the analysis carried out at one particular cordon, the metropolitan boundary. In each bar diagram, the central bar represents existing capacity that can be compared to inbound and outbound volume estimates for the years indicated. Similar analyses were carried out for other cordons and a variety of other key locations.

Through this process, a composite picture can be assembled of where the deficiencies are in the existing system of transportation with respect to the future travel demand implied by the preliminary land use assumption. This description of the deficiencies forms the basis for formulating future transportation improvements.

There are, of course, a number of ways in which attempts can be made to accommodate these deficiencies. One is to modify land use, or, in other words, to alter the relation between places of residence and places of employment so as to reduce travel demand. Another is to modify travel behavior, for example, by greater incentives for transit use and greater restrictions on automobile travel. A third is to increase the capacity of the transportation system.

We have thus characterized travel in 2000 for various major corridors and have

Figure 4. Demand-capacity analysis by travel demand corridor.



some idea as to where the major deficiencies of the present system lie. We also have a number of different transportation system proposals that have been suggested at one time or another by the various agencies that are concerned with transportation planning and operations within metropolitan Toronto. In addition, there are a number of opportunities within each corridor for improving transportation.

Taking the capacity deficiencies by corridor, considering some of the existing transportation proposals, and recognizing the limited opportunities that exist in each corridor, we then developed a number of transportation system alternatives. In the formulation of these alternatives, the underlying design philosophy was to satisfy the transportation requirements within each corridor and to provide facilities that would be compatible with the characteristics of the travel demands in each corridor.

In all, 4 alternative transportation systems were developed during the first round of analysis. Subsequently, the number of alternative transportation systems was increased to 7 as a result of public discussion and consultation with a number of local and regional planning agencies. All systems recognize that it will be increasingly more difficult to accommodate travel demands of the metropolitan area by road improvements. Therefore, all alternatives assume a higher degree of public transit use in 2000 than is now the case.

The transportation system alternatives were developed on the basis of potential travel demand and the deficiencies within the existing system of transportation. The estimated travel demand, however, is based on certain preliminary assumptions about future land use and transportation. The next stage, therefore, was to review those original assumptions about land use in the light of the transport system alternatives subsequently developed. A variety of other factors that might affect future land use development were also considered, including

1. Proposed or committed municipal services,
2. Large-scale assembly of land,
3. Variations that are possible concerning the distribution of new employment in the study area [During the short term, for example, significant variation in population and employment distribution is not likely because of the lead time involved for new urban projects. Thus, the land use pattern during the time period for already committed projects (say, to 1981) was assumed not to be subject to much variation. Major variations in land use were assumed to be possible during the time period 1981-2000.], and
4. Opportunities for redevelopment.

These factors were used to develop a number of land use alternatives. The basic land use implied by the Toronto centered region concept was the starting point. It assumes a central area employment of about 400,000 jobs out of a total regional employment of about 2.2 million jobs. The remaining land use alternatives were developed as land use responses to transportation issues. They involve

1. Reducing travel in a corridor to eliminate capacity deficiencies,
2. Restructuring travel in a corridor to make better use of facilities, and
3. Encouraging greater transit use.

Basically, differences among the land use alternatives can be characterized by additions and subtractions to population or employment or both in different areas so as to achieve these objectives. For example, one land use responds to a problem of excess outbound demand across an eastern boundary by reducing employment to the east and increasing employment to the west of this boundary. This results in the area in question becoming more self-sufficient with respect to residence-employment compatibility. Other land use alternatives were developed to support the efficient use of public transit, for example, by concentrating new employment at the extremities of rapid transit facilities to encourage better balance in directional flows.

The various land use and transportation alternatives were generated in this manner based on some fairly crude initial assumptions about future land use and transportation. If we were to change the basic transportation network for the initial demand simulation

used to establish the major corridors of travel, perhaps other corridors would have become more important. But, here, there are basically 2 approaches that can be followed: Either we can attempt to establish the future land use and transportation network from "first principles," or we can make some initial assumptions as a starting point and come back later to check the validity of those assumptions. In the MTTPR we chose the latter course of action, largely because considerable development and a large transportation network already exist. The alternatives thus generated constituted what we considered to be the reasonable range of transportation and land use alternatives for the future growth of metropolitan Toronto. In total, 14 land use alternatives and 7 transportation alternatives were developed for subsequent testing and evaluation. To this point, no attempt was made to evaluate either the relative desirability or the feasibility of these alternatives. An attempt was made to ensure that the list covered the range of reasonable alternatives as viewed from a number of different perspectives.

TESTING AND EVALUATION

The 7 transportation systems and 14 land use alternatives potentially allow for 98 combinations of land use and transportation. Obviously, to test all of these would not be practical, and in many cases certain combinations would be inconsistent with one another. Ultimately 23 combinations were selected for testing as shown in Figure 5. All of the transportation systems were tested with land use B, which is a modified land use alternative based on the TRC concept (i.e., a policy alternative). Land use M, characterized by high central area growth, was tested with 4 transportation systems because high central area growth is a major planning issue in Toronto. The performance of several transportation systems should therefore be evaluated under these conditions. In all other cases, only the most apparently compatible transportation system was tested with each land use. The testing procedure essentially involved 4 steps.

1. A number of criteria were selected to characterize the performance of each combination of land use and transportation. These criteria included travel demand, costs, socioeconomic effects, environmental impact, development effects, and phasing. A description of these criteria is too detailed for inclusion in this paper, but can be found in the final report (5).

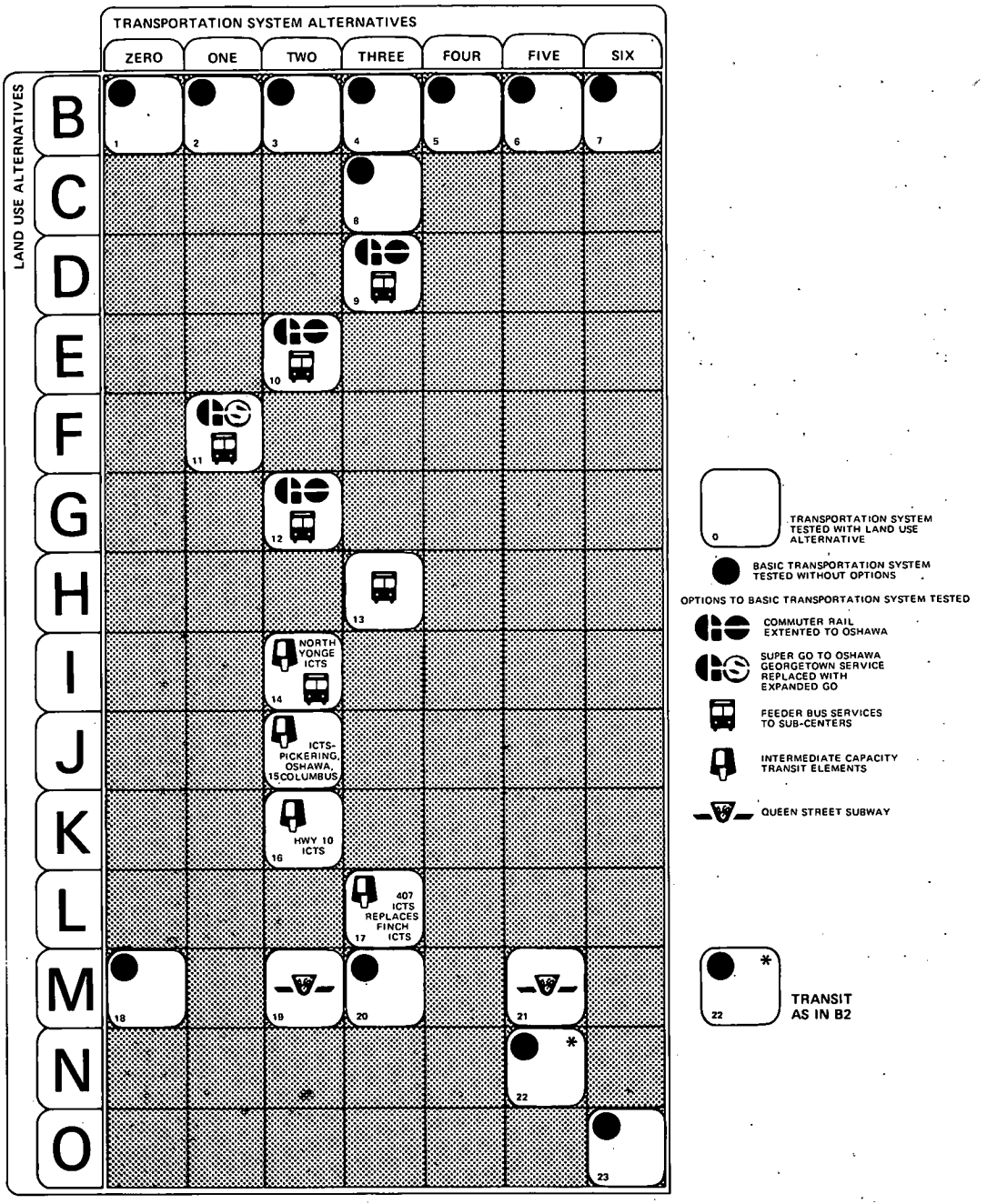
Briefly, however, it might be worth commenting on the less traditional testing criteria. The analysis of social effects gave some indication of the differences among alternatives with respect to life-styles, the extent to which the systems differ with respect to the accessibility provided to employment and recreational activities for different segments of the population, and the incidence of benefits in terms of how various segments of the population are served. Developmental criteria refer to the feasibility of land use concepts when they are considered from a local perspective and take account of local estimates of population and employment, official plan objectives, development concepts under consideration by local municipalities, and opportunities perceived through visual observation and judgment. Phasing criteria concern the extent to which a long-range alternative through its staging process also deals with short-term deficiencies, because it is the short-term demand and capacity relation that has the greatest influence on decision making.

2. The land use and transportation combinations were classified in terms of long-range development objectives. Basically, there were 2 categories of land use patterns: centralized and decentralized. The second category includes a number of subcategories for achieving decentralization.

3. The results of applying the test criteria were summarized for each combination of land use and transportation.

4. From this summary, the preferred combination of transportation and land use could be selected for each category of development objective as given in Table 1. The term "preferred" simply indicates which combination ranks highest within that category and is not meant to imply that the combination ranks highest overall.

Figure 5. Land use and transportation combinations selected for testing.



CONCLUSIONS

At the outset, I suggested that some relation might exist between the value of case study material and the extent to which site specific examples are included. Thus, although the Transportation Plan Review produced a large number of conclusions that relate to specific transportation corridors and land use issues in metropolitan Toronto, some conclusive material may have general relevance to transportation planning in any urban area.

First, it is noteworthy that the MTTPR did not recommend a single transportation plan. A number of alternative plans were described, and in each case an indication was given as to how each plan would contribute to different development objectives. In other words, the nature of the conclusions was somewhat of the "if-then" variety. If, for example, a highly centralized land use concept is desired, then the conclusions indicated what transportation decisions would be most appropriate for achieving that land use objective (basically, transportation facilities that serve the central area). Table 1 gives the various land use decisions and transportation decisions that are consistent with a variety of development objectives.

Second, an attempt was made to point out the degree of commonalty associated with specific transportation decisions. Decisions at the political level are rarely taken about entire systems; they are taken incrementally about individual projects. Each system, however, comprises a number of individual elements. The summary given in Table 2 indicates the extent to which a particular facility is common to a number of different transportation system alternatives. Sufficient information was also provided for each of the individual transportation components to evaluate their effectiveness and desirability in terms of many of the usual measures related to demand satisfaction, economics, and various other criteria listed in the previous section.

Third, based on the commonalty aspects of specific transportation projects and the way in which they contribute as part of an overall system to long-range development objectives, individual transportation decisions were categorized into those that were neutral and those that had a high degree of impact on development. Neutral transportation facilities may well have a high impact on land use, but they are generally defined to be facilities that do not limit the choice of alternative development options in the future. Taking decisions with respect to these types of transportation facilities does not preclude changing direction with respect to land use development should growth objectives change in the future (or even if they are not well defined now, which is usually the case).

By contrast, high impact decisions not only affect land use seriously but also do so in ways that eliminate certain opportunities to change direction in the future. For example, a decision to electrify a low-volume commuter rail facility and thereby increase its capacity significantly may result in substantial growth and development in a particular corridor. Such development might preclude concentration of activity at other locations or in other corridors that may be consistent with a different set of development objectives.

In other words, the analysis suggested that there is one set of transportation facilities about which decisions may now be safely taken. Some of them may be costly and have a high degree of impact on the community, but essentially they do not close off any significant options for the overall growth of the metropolitan area. There is another set of transportation projects that may be appealing in the short term because they deal with existing problems (which is the reason why there is pressure to consider them in the first place), but no decisions should be taken about these projects until it has been established that the development pattern that they will encourage is the one that is desired.

Finally, we attempted to indicate how certain short-term improvements could be made to the existing transportation system in ways that would ensure that subsequent investment in major projects would produce the highest payoff possible in terms of effectiveness. For example, many of the major transportation facilities involve construction of new rapid transit services. To ensure that these services are well used as they become available may require the use now of short-term improvements as a means of shaping and building the market during the time required for implementation. Thus,

Table 1. Preferred land use and transportation combinations and related decisions.

Development Objective	Preferred Combination	Description	Land Use Strategies	Supporting Transportation Elements
Centralization	M3	Highest level of central area growth	Oppose development controls in central area Support full-scale development of metro center Centralize government functions	Modest expansion of GO Transit to Streetsville and Richmond Hill; increased capacity of Lakeshore GO Eglinton Transit Allendale and Don Mills high-capacity transit Scarborough town center and Malvern ICTS Road improvements in northwest Major metropolitan center transportation terminal Don Valley Parkway extension
Binodal	06	Downsview Airport major center	Support development controls in central area Prepare proposals for development of Downsview Airport site Locate Metro offices in Downsview	Modest expansion of GO Transit to Streetsville and Richmond Hill; modest increase in capacity of Lakeshore GO Sheppard and Wilson transit Scarborough town center and Malvern ICTS Road improvements in northwest Highway 407 Spadina Expressway extension to Highway 407
Subcenter	D3	Subregional centers at North York, Mississauga, and Oshawa Several local centers	Support development controls in central area Support high-density development at sites with good transit access Decentralized government functions	Modest expansion of GO Transit to Streetsville and Richmond Hill; modest increase in capacity of Lakeshore GO Eglinton Transit Scarborough town center and Malvern ICTS Road improvements in northwest Highway 403
Corridor development	G2	Eglinton development corridor	Support development controls in central area	Same as D3 except for Highway 403
	F1	Lakeshore development corridor	Support development controls in central area	Same as D3 plus Major capacity increase of Lakeshore GO (possible electrification) Major metropolitan center transportation terminal
Metro dispersion	C3	Toronto centered region concept with minor adjustments	Support development controls in central area Support intensive use of commercial and industrial areas of Scarborough Oppose high-density redevelopment	Same as D3 plus Support more regional freeways
Regional dispersion	L3	Decentralization with development in Highway 407 corridor	Support development controls in central area Discourage extensive residential redevelopment in Metro	Same as D3 plus Support early construction of Highway 407 Don Valley Parkway extension Spadina Expressway extension to Highway 407

Table 2. Alternative transportation systems.

	Transportation System						
Major Facilities	0	1	2	3	4	5	6
Freeways							
Highway 427 extension		X	X	X	X	X	X
Highway 404	X	X	X	X	X	X	X
East Metro Freeway		X	X	X	X	X	X
Highway 401 widening	X	X	X	X	X	X	X
Highway 407		X	X	X	X	X	X
Highways 403 and 410	X	X	X	X	X	X	X
Richview Expressway					X	X	
Highway 400 extension					X	X	
Spadina Expressway						X	
Crosstown Expressway						X	
Scarborough Expressway						X	
ICTS							
Eglinton ICTS to Mississauga center		X	X	X	X	X	
Eglinton ICTS Malton Branch		X	X				
Malvern ICTS to North Pickering		X		X	X	X	X
Malvern ICTS to Malvern only	X		X				
ICTS from Mississauga center to Bloor subway terminal				X			
Eglinton ICTS branch extended to Brampton				X			
Finch ICTS from Highway 427 to Malvern				X			
Inner ICTS loop—Don Valley, Eglinton, and Allendale				X			
ICTS from Pickering GO station to airport				X			
Sheppard ICTS—Mississauga to Scarborough town center							X
Commuter rail							
Lakeshore maximum super GO		X					
Brampton minimum super GO		X					
Richmond Hill standard GO	X	X	X	X	X	X	X
Lakeshore expanded GO	X		X	X	X	X	X
Streetsville to Pickering expanded GO			X				
Streetsville-Union GO							X
Georgetown standard GO				X			
Georgetown expanded GO	X		X		X	X	X
Special services							
Express bus from Bloor subway terminal to Mississauga center		X			X		
Pickering-Oshawa express bus	X	X	X	X	X	X	X
Pickering-North Pickering express bus		X	X	X	X	X	X
Richmond Hill express bus		X	X	X	X	X	X

although some of the short-term improvements, such as the use of express buses, may not appear to be particularly cost effective in terms of revenues generated, they act almost as "loss leaders" in developing the market for future services that would be more cost effective.

In closing, I should note that this process of defining alternatives and their implications without necessarily making specific recommendations resulted in some quick action on the part of elected officials (too quick in the minds of some). The final report of the Metropolitan Toronto Transportation Plan Review was presented on January 24, 1975. By July, decisions had been taken to proceed with implementation of 4 major transportation projects (Scarborough LRT, Streetsville commuter rail line, metro center transportation terminal, and road improvements in the northwest) and 2 short-term improvements (transit for the physically handicapped and express bus services).

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