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**Yukon 2000**

**Municipal Infrastructure Linkage Study**

**Discussion Paper**

**Prepared for the**

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**Scott Widmeyer  
Resources Expediting and Management  
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## Yukon 2000 and Municipal Infrastructure

### Definitions

Firstly it was felt that a definition of economic development was necessary to have a standard to compare ideas to, for orderly and progressive planning and implementation. I have therefore defined it as *the process of growth in total and per capita incomes of an area, accompanied by fundamental changes or stabilization in the structure of the economy*. These changes may consist of increasing importance of one sector of the economy, migration of labour from one area to another, a diminishing reliance on other areas to supply goods and services, or an increase in the capacity to generate growth from within. The main objective of economic development is to raise the living standard and general well-being of all persons participating in the economy.

Furthermore a definition of municipal infrastructure is necessary to determine the scope of this discussion paper. An appropriate definition is *the underlying capital of a society embodied in roads, and other transportation and communication systems, as well as water supplies, waste disposals, electric power, recreation and other public services. This will also be expanded to include those items termed social capital, which include the health, skills, education and other qualities of the population*. To facilitate discussion I propose that this definition be broken into three types of infrastructure, namely ;

hard infrastructure - those physical services without which a community is not a viable entity

example : roads, water, sewer, power.

soft infrastructure - those services which improve the quality of life above some basic level

example : communications, recreation facilities, education.

social infrastructure - this includes the items of social capital as outlined above

example : municipal government, administration, community groups

It may be of note that this definition allows for a framework to be developed which gives a great deal of flexibility for developing different areas of the Yukon in the manner which they themselves

feel is most suitable. They could choose what level of services they wish to provide as hard, soft or social infrastructures and what type of infrastructure they wish to emphasize, to further economic development in their region. This would allow mobility between infrastructure types as the community develops ; i.e. recreation could change from soft to hard over a period of time or could be split into recreation facilities as hard and recreation planning as soft, as development proceeds. The final stage and possibly most important part of defining municipal infrastructure, is to determine what the most valuable part of that infrastructure is. Given that without a population base of any kind an area has no requirement for services, it becomes a simplified fact that social capital is the most important aspect. It is comparable to software, in computer terms, and without it acquisition of hardware becomes an exercise in futility. It is recognized however that some level of hard infrastructure must be in place to support, especially in the primary stages, viable communities; in the Yukon I feel that this is not a consideration as those basics have been achieved in all areas.

In light of the last statement it seems appropriate at this point to comment on Indian bands, as they often border physically on municipalities and yet do not have the same standards or types of infrastructures. I am not going to make comment on those infrastructures, as I feel that this is too complex an area and requires separate and careful study. It must be determined whether the current problems facing bands are the same as those facing municipalities in all three areas of infrastructure, whether development can or should take place simultaneously and in the same direction, what form of government is desirable, along with a multitude of other questions. Some of what follows may be applicable to Indian bands, or at least indicate areas which could be discussed in light of the comments made, but interpretation and discussion will be left to the readers.

#### **A base for development.**

The first step is to show what role or roles the infrastructure could play in planning and implementation of economic development. *If planning is to be successful we must determine a base to commence from, and the contention of this paper is that there is nowhere more appropriate than the community level, and if the planning takes place at this level then it follows naturally that*

*implementation should start here as well.* Looking at the mandate of municipal governments, (which I am considering as an important part of the infrastructure), according to the municipal act under which they labour, they must generally control their business and finance for present and future years, ensure the accuracy of the accounts, make provision for local improvements, effect by-laws for the regulation of everything from insects to businesses, and possibly most important for purposes of this paper, effect planning, land use and development. The unabridged definition of municipal infrastructure can now be seen to provide the basis for the rationale of using communities and their existing infrastructures as a base from which to begin discussing and planning economic development in Yukon.

### **Individuality of development can lead to broad goals**

Each community in Yukon can be viewed as a specialized economic unit with its own demography, infrastructure, and indeed, almost personality. It seems obvious from this that strict delivery of hard services is a small part of the community role. These communities are best able to plan for their own development, as they should know best what direction they want to go and what role they want to play, and, dependent on their status, are required to plan for it. Development of economic plans have been undertaken or have been contemplated in several communities under the Economic Development Agreement subsequent to a community planning workshop held in Haines Junction in 1985. It is of particular note that the Faro participants identified that existing plans and studies should be used wherever possible to ensure efforts are not being duplicated. It would seem reasonable that all communities would be actively encouraged to proceed with and complete these plans and at that point this material could be integrated into an overall strategy. The alternatives to using this data as a base run the risk of excluding community needs and wants by omission rather than by conscious decision (which will be necessary on occasion) of an overall strategy. I would suggest that many of the items which were brought out in the Faro workshop have been previously identified and expressed at the community level . Hopefully on looking at the finished plans of the communities and the results of workshops such as those held in Haines Junction and Faro, a number of basic and broad goals can be constructed on which there is general agreement, and towards these the Government of Yukon can direct its energies.

This is not to say that by basing development on their infrastructures means that community

groups or municipal governments are the only ones which will play a role in economic development. It is going to take a concerted effort on the part of all groups and levels of government if Yukon 2000 is to have any success and not become another piece of "wish list" planning. A Chamber of Commerce forming an important part of the economic base of a community could be held as an example of this by acting as another part of the infrastructure giving additional substance to the planning for, say, tourism development in their area. Or perhaps Indian Bands have recognized a necessity to increase cultural awareness among all Yukoners and create a series of cultural displays throughout Yukon communities. Both of these show the utilization of a base which is the community.

A note of caution is made later concerning increasing work loads at the community level; this cannot be emphasized enough, as especially the smaller communities will be affected by taking on more planning or development processes without assistance, including the appropriate resources. The decision to plan and the direction of proposed development can be contentious at the community level, where the perception is often that dusty shelves were made to house plans.

*The first requirement of the Yukon 2000 Strategy may well be to show the importance and gain the acceptance of the planning process itself, especially at the community level.*

#### **Devolution and decentralization lead to more community development**

Consider for a moment the present move towards devolution and decentralization, or regionalization of services, of senior governments and ask yourself where the people and the powers of decision are being placed? Federal powers ultimately pass to the hands of the provincial or territorial governments, as provincial and territorial powers and responsibilities will ultimately be passed on to the community level, even if not directly to a municipal government. As has been discussed before there is no necessity to re-invent the wheel; there are economic areas and units which are in existence which should be used in present or perhaps modified form, but the basic types of infrastructures are in place and are presently viable, both economically and socially. It is almost a given, that as responsibility is assumed then development will take place, but if that development is to be controlled and efficient, then communities must be willing and capable of accepting responsibility.

The sections above have set out ideas which may differ somewhat from others which have been presented before. The differences arise largely from the scope in regard to what actually constitutes infrastructures and in the suggested base role they may play in development. This actually becomes secondary to acceptance of the fact that infrastructures as they exist are an established base to work from. If we can agree what the base is, then there is a starting point for planning. Appointment of committees, advisors, consultants, positioning of discussion papers and linkage studies all rely on acceptance and participation of a single unit ; the community.

### **Current state of community infrastructures, documentation and standards**

The current state of the *hard* and *soft* municipal infrastructure is fairly well documented throughout various municipal and Government of Yukon records, although a complete, concise and reliable consolidation of these records is lacking. To have a thorough knowledge of these items is essential if we are to treat the communities as a base for development, and that knowledge must be fully accessible to decision makers if their input is to be valuable. This upgrade of current documentation could be made from municipal insurance records, municipal financial statements, the Community Services Improvement Program 1981 - 1985, the 1986 Yukon Community Profile study (an internal Government of Yukon release), etc. and from personnel within the communities and the Yukon Government. A general community profile has been put into chart form (see fig. 1) but does not attempt to determine whether any of the items listed are considered deficient. An attempt has been made to inventory those items which municipalities now have in place, (see fig. 2) and a judgement made as to whether or not they meet the standards criteria as set by the Yukon Government (see fig. 3) in accordance with the size and type of community, but this is by no means comprehensive and excludes the unorganized communities.

It should be explained at this point that the Yukon Government has had documents prepared, in 1974 the Final Report on Community Services Improvement Program, in 1980 the Community Services Improvement Program 1981 - 1985 (updating, reviewing and projecting on the 1974 document), and the current Department of Community and Transportation Services Capital Plan, which have basically set out the criteria for standards as developed, especially in the first two publications. Services are related to a set of standards that were developed to provide a basis for

**Figure #1 - General Community Profile**

Community	Bvr. Ck.	Bwsh. Lndg.	Carcrs.	Crmks.	Dawson	Destrn. Bay	Elsa	Faro	Hains. Jct.	Keno City	Mayo	Old Crow	Pelly Crsng.	Ross River	Stwt. Crsng.	Swift River	Teslin	Upper Liard	Watson Lake	Whitse
Services																				
Population	88	85	302	403	1541	80	376	319	527	42	493	264	212	381	16	17	407	219	1585	1811
Distance from Capital (Km.)	458	284	74	180	536	267	455	246	159	469	411	780	286	358	358	308	183	442	459	
Community Status	UC	UC	UC	Village	Town	UC	Hamlet	Town	Village	UC	Village	UC	UC	UC	UC	UC	Village	UC	Town	City
Type of Government	YG	YG	YG	Elect.	Elect.	YG	YG/Pri	YG	Elect.	YG	Elect.	YG	YG	YG	YG	YG	Elect.	YG	Elect.	Elect.
Gen Tax Rate - Residential	0.73	0.6	0.73	0.5	1.29	0.6	0.51	0.87	0.95	0.57	0.9	0.6	0.6	0.73	0.51	0.51	0.82	0.51	0.9	1.15
- Commercial	0.73	0.6	0.73	0.5	1.68	0.6	0.51	0.93	0.95	0.51	0.9	0.6	0.6	0.73	0.51	0.51	0.82	0.51	0.9	1.3
Major Economic Activity	TS	RR	TS	HS	TS/M	HS	M	M	TS	M	M	RR	RR	RR	HS	HS	TS	RR	TS/RR	Gen.
Income Tax Filers (1983)	NA	NA	145	200	780	NA	200	535	285	NA	265	NA	NA	NA	NA	NA	225	NA	735	
Electrical Power																				
- Supplier	YE/D	YE/D	YE/H	YE/H	Ncpc/D	YE/D	Ncpc/H	Ncpc/H	YE/H	YE/H	Ncpc/H	YE/D	YE/D	YE/H	YE/D	YE/D	YE/H	Ye/D	YE/D	YE/H
- Approximate Cost	0.26	0.26	0.14	0.14	0.23	0.26	0.06	0.07	0.14	0.08	0.06	0.31	0.26	0.2	0.26	0.26	0.07	0.26	0.18	
Water Supply	W	W	T	W	P	P/W	P	P	P	T	P/T	T	W	T	W	W	T	W	P	P
Sewage Disposal	S	S	S	P	P	P/S	P	P	P	S	P/S	T	S	S	S	S	P/T	S	P	P
Garbage Disposal	NC	NC	NC	NC	C	NC	NC	C	NC	NC	NC	C	NC	NC	NC	NC	C	NC	C	C
Fire Equipment (to Std.)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y
Fire Insurance (cost/\$50K)	\$600	\$600	\$350	\$350	\$350	\$600	\$350	\$180	\$350	\$600	\$350	\$600	\$600	\$350	\$600	\$600	\$350	\$600	\$180	\$180
Ambulance	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	N	Y	N	Y	Y
Schools	K-8	N	K-9	K-9	K-12	K-8	K-7	K-9	K-12	N	K-12	K-10	K-9	K-10	N	N	K-10	N	K-12	Colleg
Telephone	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Television	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Postal Service	2	2	3	3	3	2	3	3	3	N	3	3	3	3	3	3	3	N	3	5
Real Estate Transactions																				
- Number	3	0	26	7	81	NA	3	9	19	3	13	NA	NA	14	1	0	28	0	37	299
- Average \$ Value 000's	29	0	19	39	15	NA	11	116	58	11	30	NA	NA	22	20	0	11	0	30	69

**Key**

UC - Unorganized Community  
 YG - Administered by Yukon Government  
 TS - Tourist Service  
 M - Mining  
 RR - Renewable Resources  
 HS - Highway Services

YE - Yukon Electric  
 /D - Diesel  
 /H - Hydro  
 W - Individual Wells  
 T - Trucked  
 P - Piped

C - Community Collection  
 NC - Not Collected  
 NA - Not Available  
 K-8 - Kindergarten to Grade 8

**Figure #2 - Municipal Inventory**

	Carmacks	Dawson City	Faro	Haines Junction	Mayo	Teslin	Watson Lake	Whitehorse
Administration Facilities	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Streets and Roads								
Subgrade	Standard	Sub Standard *	Standard	Standard	Standard	Standard	Standard	Standard
Surface	Standard	Sub Standard **	Sub Standard **	Standard	Sub Standard **	Standard	Sub Standard *	Sub Standard **
Drainage	Standard	Sub Standard *	Above Standard	Standard	Standard	Standard	Standard	Sub Standard **
Sidewalks	Sub Standard *	Sub Standard **	Sub Standard **	Sub Standard **	Sub Standard **	Sub Standard *	Sub Standard **	Sub Standard **
Lighting	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Public Works Facilities	Sub Standard *	Standard	Sub Standard **	Standard	Standard	Standard	Standard	Standard
Public Health								
Water Supply Quality	Standard	Standard	Standard	Standard	Standard	Sub Standard **	Standard	Standard
Supply and Storage	Sub Standard *	Standard	Standard	Standard	Sub Standard **	Sub Standard **	Standard	Standard
Distribution	Sub Standard *	Standard	Standard	Standard	Standard	Sub Standard **	Standard	Standard
Sewage Collection	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Treatment	Standard	Sub Standard *	Standard	Standard	Sub Standard **	Standard	Standard	Standard
Disposal	Sub Standard *	Sub Standard *	Standard	Standard	Sub Standard **	Standard	Standard	Standard
Solid Waste Disposal	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Fire Protection								
Facilities	Sub Standard **	Sub Standard **	Standard	Standard	Above Standard	Standard	Standard	Standard
Equipment	Above Standard	Above Standard	Sub Standard **	Standard	Above Standard	Standard	Above Standard	Standard
Animal Control - Pound	Sub Standard **	Standard	Standard	Standard	Standard	Sub Standard **	Standard	Standard
Recreation - Indoor								
Community Hall	Standard	Marginal Standard	Standard	Standard	Standard	Standard	Standard	Standard
Gymnasium	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Above Standard
Curling Rink	Standard	Sub Standard **	Standard	Standard	Standard	Standard	Standard	Standard
Skating Rink	Sub Standard **	Standard	Standard	Standard	Standard	Marginal Standard	Standard	Above Standard
Swimming Pool	Standard	Sub Standard **	Sub Standard **	Above Standard	Marginal Standard	Marginal Standard	Standard	Standard
- Outdoor								
Play Field	Standard	Standard	Standard	Sub Standard **	Standard	Standard	Standard	Standard
Ball Diamond	Standard	Standard	Standard	Sub Standard **	Standard	Standard	Standard	Above Standard
Ski Trails	Standard	Sub Standard **	Sub Standard *	Standard	Standard	Standard	Above Standard	Above Standard
Community Plan	Sub Standard **	Sub Standard **	Standard	Sub Standard **	Sub Standard **	Sub Standard **	Sub Standard *	Sub Standard
Cemetery	Sub Standard **	Standard	Standard	Standard	Sub Standard **	Standard	Marginal Standard	Standard
Zoning By-Law			Standard	Sub Standard **	Sub Standard **	Sub Standard **	Standard	Standard

\* - Denotes No Planning to Upgrade

\*\* - Denotes Planned for Future Upgrading

Figure # 3 - Designated levels of service for Yukon Communities

			Population*
Level A	City	Whitehorse	18,112
Level B	Town	Faro	319 <sup>+</sup>
		Dawson City	1,541
		Watson Lake	1,585
Level C	Village	Mayo	493
		Haines Junction	527
		Teslin	407
		Carmacks	403
	Hamlet	Elsa	376
Level D	Recognized Unincorporated Community	Beaver Creek	88
		Burwash Landing	85
		Destruction Bay	80
		Keno City	42
		Pelly Crossing	212
		Old Crow	264
		Upper Liard	219
		Ross River	381
		Carcross	302
		Stewart Crossing	16
		Swift River	17
Level E	Rural Areas	Canyon Creek	
		Champagne	
		Tagish	
		Marsh Lake	
		Laberge / Deep Creek	
		Klukshu	
		Whitehorse North	
		Whitehorse West	
		Golden Horn	
		Annie Lake	
Kusawa			

\* From Yukon Community Profile 1986

+ Substantial changes to this figure have occurred reflecting the recent mine opening

comparing communities and determining any need for improvements. An example of capital program standards for roads and streets (see fig. 4) is given for the five different levels as identified under the program. In my opinion these are an excellent source of information on all communities and could be updated with minimal time and expense to form a base for much of the hard and soft infrastructure on which to make projections as to future needs, as well as to determine whether the standards as set are appropriate at this time and into the future. A final observation on this is to ensure that the bulk of this work be done at the community level in order that the needs and desires as expressed by the communities may be taken into account.

#### **Identification of gaps in present infrastructure**

With the above comments in mind it is beyond the scope of this paper to determine what specific gaps are present in infrastructure as this would be fairly voluminous (the original papers were in excess of two hundred pages) and more important, any gaps must be determined at the local level.

The one exception to this is the social infrastructure, which is seen as the weakest level of infrastructure at present. With the planned decentralization of the Government of Yukon to the outlying communities and devolution of some authority and autonomy to the local governments, it is essential that this is changed in the immediate future. If the communities are to be used as a base for development, then it becomes even more crucial that some process of upgrading be started immediately.

*The hard and soft infrastructure items, buildings, waste treatment facilities, roads, recreation facilities, community plans, etc. are the most easily placed given specified amounts of a combination of time and money ; the social infrastructure, especially that sector responsible for the planning and execution of community development, is the most important aspect of the system and in turn becomes the most difficult to place. To create a strong base for development (the primary consideration here) given the definition of municipal infrastructure, requires an increase in skills, resources, training and awareness of all personnel involved in decision making at the community level, including both the elected officials and administration (in municipal areas). These people are currently being asked to administer to the needs, and make decisions, in their areas (and often*

**Figure 4 : Example Of Capital Program Standards**

Capital Program	Capital Activity	Major Capital Items	LEVEL				
			A (City)	B (Town)	C (Village & Hamlet)	D (Recognized Community)	E (Rural Area)
Community Affairs	Roads & Streets	Road Surface	Most roads paved with asphaltic concrete	Arterial, major collector and main business district roads paved with asphaltic concrete, and local roads surfaced with BST	Most roads surfaced with BST and some roads finished with crushed gravel	Same as C	Most roads surfaced with crushed gravel

From Community and Transportation Services Capital Plan

beyond those boundaries) as well as to plan for the future with very little formal background, training, experience and limited resources in most cases. Given an expanded role in any planning process may well over-tax an already burdened group of basically volunteers to the point where they become ineffective or inefficient as decision makers. Given little or no role in this type of planning process, i.e.. having decisions not made and having discussion not take place at the local level where is the community input and consequent acceptance or implementation of any plan ? How important do we think the role of social infrastructure is ?

From Yukon 2000 : Yukon Training Strategy :

" Educated and trained people are the chief, and in the long run, the only agents of development.", and " The Government is examining methods of increasing the responsiveness of local Community Learning Centres to local decisions about economic development and training". I think the integrity and plain common sense of these statements need not be defended nor further explained.

#### **Priority for upgrading infrastructure weaknesses**

One crucial point which should be determined at this time is where will efforts be concentrated in upgrading infrastructures when and if gaps or weaknesses are identified. It was recognized in Faro that commitment should be made to existing communities rather than establishing new communities, but is there merit in upgrading all aspects of the infrastructures of every community? Should development be directed specifically towards communities or on a regional basis ? Should the function of economic development be removed from the hands of elected officials or community groups after they have determined a specific proposal or have set up a definite terms of reference ? Should committees be appointed as development planning groups with overall direction from local governments ? All of these questions point to potential sources of conflict, skewed development etc., either between or in communities, and to be very plain, hard decisions on both the territorial and municipal political levels will have to be made, as we operate by necessity with economic constraints. The goals and strategies as finally set out in Yukon 2000 may well form the basis of those decisions, and will determine where the greatest and the least efforts will be expended.

The timetable for determination of these gaps and needs can and should be set back until a point in time where the social infrastructure is adequate and is able to contemplate and absorb the effects of its decisions to implement changes, whatever they may be. Not being given this time and training

could have detrimental effects on communities and render the planning stage useless.

As with present, future gaps can only be determined on the local level in conjunction with projections such as the Yukon Economic Outlook to help determine potential requirements. Also, planners should refer to capital budgets or five year capital forecasts prepared annually by each municipality and the Government of Yukon. Caution should be exercised in the use of municipal forecasts as the expertise in preparation is lacking, although they show at the very least a general direction for municipalities.

### **Suitability of infrastructures**

When the standards for the Capital Program previously mentioned were determined, some of the factors taken into account included :

- the necessities for a safe, healthy, comfortable life;
- the needs and desires as expressed by the residents;
- comparisons with services provided in other parts of Canada, taking into account the unique character of the Yukon, the climate, and the remoteness of the region.
- protection of the environment, and current policies of approving agencies;
- encouragement of continued growth and development of the region.

Having taken these criteria into account hopefully determined the best kinds and types of hard and soft infrastructures particular to the Yukon at that time. What we must determine at this point is whether or not any shift in attitudes or perceptions have made those standards obsolete, or perhaps whether they require minor changes, or are able to stand as written. It is tempting to say that comparison to Canadian standards are not relevant as we should be capable of determining what is necessary or desired, but if the example of the recent report on housing is considered, in which the Yukon was found deficient when compared with other Canadian areas, the idea of comparison, at least as a tool for creating standards, has merit. We must certainly use caution and discretion when interpreting the results of any comparative studies, as something which may be socially or environmentally acceptable here (due to expediency, culture, necessity etc.), may not be in other areas of Canada and vice versa. We have had a net immigration to the Yukon which could mean that the population base has altered somewhat and with it the expectations and usages.

### Suitability of standards

I would comment that from my discussions a large number of people felt design standards should be included in the capital standards; that is to say it is no longer enough to say that a certain population base requires a covered arena of 200 feet by 90 feet, but for example that guidelines in design standards for insulation values, heating criteria, or freeze-thaw ability should be included. The concept of standards itself is seen as a positive influence on development and the example of how pleasant it is to have the capability to wear good clothing without being mud spattered was brought up more than once. A small point perhaps, but it shows acceptance of a standard not previously held (sidewalks, curb and gutter, pavement), an increase in the quality of the life of those persons, and the development of a more extensive clothing market with its incumbent economic impacts. In this case the standards and funding arrangements were set by the Government of Yukon, the planning and placement completed by the municipality, and the benefits enjoyed by at least some of the population : no demand was made simply a standard was set as the incentive.

Again there is a difference between hard, soft and the social aspect of infrastructures with respect to types and needs when comparing to national or other standards throughout Canada. The requirement for sound social infrastructure is not unique to any area in Canada, but each area in Canada and within Yukon has its own unique social structure, making comparisons particularly difficult and any resultant generalizations almost precarious simplifications. Few people would argue with the statement that the overall type of social infrastructure preferred is democratic. In comparison to national standards we have basically the same standards as other areas as regards government at the Territorial / Provincial level. At the municipal level there are the same organizational structures in place with a smaller population base from which to choose. This should not be construed to mean that the quality or dedication is any less, but the experience base is almost certainly lower. Bodies such as the Association of Yukon Communities, have provincial and national counterparts, although the AYC has had recent times when it was a less than effective body. In the area of municipal administration (managers, chief administrative officers, clerks, etc.), there are at present no organizations equivalent to those in provincial jurisdictions. Yukon College has indicated they will be developing and offering course work in this field, and the AYC had passed a resolution acknowledging the need for such a body and supporting the idea, especially for

academic education and training purposes .

These organizations, bodies, political structures, etc., form a base on which the Yukon is organized and governed, which is largely patterned after provincial jurisdictions. Seemingly the best alternative is to discuss and compare the standards that we now have in place to determine their relevancy and adequacy. Any resultant standards or guidelines for the management of at least municipalities could be put in place to assist in their operation.

#### **Who should pay for placement and operation of community infrastructures**

The question of "who pays" for municipal or community infrastructure is in my opinion one of responsibility ; infrastructure placement, maintenance and replacement is one of the fundamental responsibilities of local governments. We do not expect the territorial government to burden municipalities with the full cost of social programs why would they be expected to pay for community infrastructures. Infrastructure costs may be large and burdensome in the future and the choices although difficult are tax increases, reduction or elimination of services, debenture financing or possibly some combination of these.

#### **Treatment of costs for capital projects**

Capital costs have been traditionally shared by municipalities and the Government of Yukon, formulated under the Capital Plan. With the advent of Capital Block funding this will change completely to a situation where municipalities will be given sums of money yearly, based on a formula combining population size, and assessment base (see Fig. #5) from which they will be expected to place all capital projects. The exception to this will be in a case where the municipality contemplates a project larger than 2.5 times its yearly allotment, in which case the Government of Yukon will cost share on an as yet undetermined basis. This method of funding gives rise to the situation of a municipality spending its monies yearly on smaller projects, saving for larger projects for some period of time or debenturing and retiring those debentures with capital monies over a period of years, or going into large projects with the assistance of the Territorial Government and possibly tripartite agreements with all three levels of governments participating. Perhaps it would be an opportune time for the Government of Yukon to set guidelines and offer municipalities a one

Figure #5 - Capital Block Funding Formula

<u>Municipality</u>	<u>Base Grant</u>	<u>Percentage of Assesment</u>	<u>Assessment Grant</u>	<u>Total Grant</u>
Whitehorse	\$1,000,000.	77.6	\$2,122,417.	\$3,122,417.
Faro	\$ 650,000.	6.0	\$ 164,104.	\$ 814,104.
Dawson City	\$ 650,000.	4.3	\$ 117,608.	\$ 767,608.
Watson Lake	\$ 650,000.	6.2	\$ 169,575.	\$ 819,575.
Haines Junction	\$ 435,000.	2.5	\$ 68,337.	\$ 503,377.
Mayo	\$ 375,000.	1.4	\$ 38,291.	\$ 413,291.
Teslin	\$ 375,000.	1.0	\$ 27,351.	\$ 402,351.
Carmacks	<u>\$ 375,000.</u>	<u>1.0</u>	<u>\$ 27,351.</u>	<u>\$ 402,351.</u>
Totals	<u>\$4,510,000.</u>	<u>100.00</u>	<u>\$2,735,074.</u>	<u>\$7,245,074.</u>

Note: City - minimum population 5,000 - \$1,000,000 base grant  
Town - minimum population 1,000 - \$650,000 base grant  
Village - minimum population 500 - \$435,000 base grant  
Village - population less then 500 - \$375,000 base grant

time grant for upgrading specifically the executive and administrative infrastructure over some set period of time. This may help span a gap they are currently facing in being unable to replace elected officials (Teslin) and employees (Mayo), by providing an incentive over some period of time, and beginning to establish a firm base for the social infrastructure.

There are current examples of tripartite funding for capital items such as in the Winnipeg Core Area Initiative which is actually a proposed agreement between Canada, Manitoba and Winnipeg, or the Renaissance Regina Development Program involving the City of Regina, CN, CP, and the Federal Government Railway Relocation and Crossing Act. I mention these only to show that money is available at several levels for infrastructure replacement.

In nearly all situations involving municipal infrastructure it is the taxpayer who pays, and unless a radical change in our system occurs, such as in the case of mining towns where a private corporation places, maintains and operates infrastructure, taxes will continue to be the only method of placing infrastructure. The users may not be direct payers ; municipal land taxes as opposed to income taxes, transfer payments etc., tend to cloud the issue of who pays. The exception to this is the local improvement charge, but if they are seen to be onerous, they could be a serious deterrent to development.

### **Operation and maintenance of infrastructures**

The other side of the coin is the operation and maintenance of the infrastructures once placed. *Current ideas suggest as much of a user pay scenario as possible*, but given the limited populations especially in rural areas and resultant economies of scale in relation to user fees, there is little chance of full recoveries. The current Municipal Operating Grant and Water and Sewer Deficit Grant basically provide the amount of the shortfall from user fees and tax revenues, and the proposed Capital Block Funding formula does make provision for using some portion of the grant for operations. The question here is how long those grants will be available and do they promote responsibility at the municipal level.

The current state of our infrastructures including size, quality and effectiveness, is the result of our

past policies, plans and decisions. While Yukon communities generally are in a healthy financial state, all Yukoners, not only government leaders, have a responsibility to ensure that this state is not only maintained but enhanced. In order for the overall infrastructure not to decay there must be on-going programmes of assessment, provision and replacement. Are all areas in the Yukon presently capable of this ? Water and sewer in Dawson City was nearly in a complete state of collapse and was at the very best inadequate before it was replaced; will this be the method of replacement in other municipalities ? It has been proven far too expensive for any community to contemplate this type of scenario.

#### **Infrastructure development in relation to economic development**

The appropriate means (or method of bringing about the desired result) for development of infrastructure is not a clear cut issue, like the chicken versus the egg, what comes first ; but it is definitely an issue which must be addressed at the planning stage. *Basically the question becomes how and why should infrastructures be developed in order to accommodate or stimulate economic development?*

Infrastructure could be seen as a cost-pull or as a demand-push, i.e.. develop the infrastructure first and plan for the demand that will be created or will occur naturally, as opposed to responding to a demand being made for infrastructure and then placing ( also referred to as "proaction" or "in reaction"). The first method has been traditional in Yukon and requires a capital outlay and tends to create an "inventory" of infrastructures. The two most obvious problems stem from the unknown demand, and are 1. the money cost of the inventory and 2. the possibility that demand will never materialize and the capital costs will have to be written down, or off. The main drawback of the second method is the very real possibility of a backlog of projects in a time of boom or even of normal demand. Planning for response time and full analyses of emergency demand situations may avoid these problems, but the policies concerning development must be sound and yet flexible.

Ultimately, a combination of approaches may prove to be the most expedient as there are some types of projects which have created or at least encouraged development, while others have not. An example could be made again of Dawson City where the placement of water and sewer is seen to have improved the investment climate considerably, while Haines Junction on the other hand has

shown no significant growth since the provision of piped water and sewer, at least not directly attributable to that infrastructure. Land development on a proaction basis in the Yukon has generally been successful for residential uses, but it is questionable whether commercial development has responded to this method. To determine the most appropriate means for development, (we can see that it may well be different for each type of infrastructure), means analyzing what has been done in the past, successfully or not, to make planning much more effective.

#### **Means of managing municipal infrastructure**

Management of municipal infrastructure is most certainly to be left in the hands of the municipalities. At this juncture the point should be made that there is a very distinct difference between municipalities and communities; municipalities are legally incorporated entities with elected governments working under the Municipal Act while communities are controlled directly by the Government of Yukon generally with the advice of a community group. They have been treated largely interchangeably in this paper and it is important to note the similarities in *responsibility* for provision of services. These bodies although looked upon as being junior governments have the abilities and experience to deliver what is required at their levels, usually with a reasonable level of efficiency. I would suggest these are the natural and functional units for delivery of services at that level, as they are directly responsible within the community for decisions made and fully accountable as well, at the municipal level.

#### **Development of priorities and setting of criteria**

As a general statement the criteria for development of infrastructures on a priority basis should be developed at a local level so at this point in time it becomes a matter of who should set the criteria not what criteria should be set. Only at the individual community level is there a detailed knowledge of what is required, what is wanted and the best timing involved. Again, as social infrastructure was identified as a main gap earlier, it should be noted here as a priority for development, if acceptable to the communities. The means of development specifically in this regard are difficult indeed as there is in practice very little actively that can be done to induce good management with regard to the skills and goals of a populace in general. What can induce a person to run for office in a municipality let alone become active in decision making and planning on a daily basis. Those communities with active and aggressive leaders will develop more quickly certainly in terms of hard

infrastructure, but the effect on the quality of life for the majority of the residents cannot be measured in quantitative terms, if at all. In the more passive communities is the economy stable or stagnant, and is that the position in which they want to be? It makes sense to offer the training along with an inducement of some type to devote some portion of free or working time to managing a municipality, or perhaps simply the training and experience involved will be the inducement. Courses could be developed, possibly ending with diplomas or degrees in municipal management (in conjunction with provincial courses) and salaried employees may see accredited courses, with their inherent increase in earning power and mobility, as possible inducement to make a commitment to becoming involved in upgrading.

Criteria was briefly mentioned under the suitability heading and mention made of guideline criteria . In the case of social infrastructure this is an extremely important concept as there are no guidelines or standards in existence, and their development is beyond the resources and capabilities of communities (with the one possible exception of the City of Whitehorse).

**Consider how municipal infrastructure management and development can contribute to employment and business development in the Yukon.**

These items seem self evident from the present figures we have concerning the expenditures made at the municipal level. The 1986 approximate budgeted expenditures for the operation and maintenance of current municipal infrastructures are given below ( often management is considered to be operation and maintenance while development is considered with capital items):

Whitehorse	\$12,790,000.
Faro	\$ 1,230,000.
Watson Lake	\$ 704,000.
Haines Junction	\$ 350,000.
Mayo	\$ 243,000.
Carmacks	\$ 229,000.
Teslin	\$ 275,000.
Dawson City (approximate)	<u>\$ 800,000.</u>

Totals

\$16,621,000.

These figures are basically annually recurring expenditures which are not capital amounts (with the exception of Faro which includes approximately \$690,000 in debt payments). If we look at the multiplier effect whereby each dollar of expenditures is eventually received as an income and then respent, less savings and taxes, we can see that municipal expenditures have a definite and significant impact in the economy. Estimates of this effect vary widely depending on several complex criteria, and in the case of a small regional type of economy such as Yukon's, it may be as low as 2. When these amounts are combined with the approximately \$7,000,000. in capital funding, the effect, especially in local economies when any increase or decrease comes about, can create drastic economic changes in the short and long run.

Development of on-going, well planned and budgeted expenditures for operation, maintenance and capital items may help to maintain or increase the viability of some businesses or indeed communities themselves through the building of consistency and confidence in a very localized economic atmosphere.

As an example look at the role played by municipal infrastructure in the following scenario.

Assume that the Yukon Government determines that one portion of the development policy is to take full advantage of new and upcoming technologies. Given the geographic location and the resultant, or at least implied difficulties, in attracting industries and commercial ventures, communications may be considered one aspect to concentrate on. What market will this open to the Yukon? In itself none, but given the fact that companies could now communicate with their branches via computers etc. they could base corporate headquarters here. What incentives exist for this. Again at present none, but if the Yukon Government were able to wring tax concessions from Ottawa for any corporation having headquarters here, perhaps also from the provinces, companies are willing to look at the bottom line and if there are significant savings Yukon headquarters now become a consideration. Companies now look at employees and how to entice them to, and retain them in, a location such as Yukon (we are talking of middle and high level executives, key office personnel, technicians, etc.). The municipalities must offer what these people want in terms of hard, soft and social infrastructure; they must be in place or planned in order to have the ability to

cope with this size and type of a population influx. It is up to each of the municipalities to attract their share of the influx by offering their own incentives. Who wins? Ottawa sees the Yukon as a less dependent area with a resultant decrease on the drain from its coffers (which is inevitable in any case in my estimation). The three levels of government have effected an increase in the population, hopefully the per capita income, increase in overall usage of infrastructure, increase in requirement for education etc. Economies of scale would be increased in some communities through an increase in population, work force diversification, construction, increasing tax bases etc. This is a hypothetical example of what could be done by planning, the interaction of the different levels of government, and *the underlying necessity of the municipalities and their infrastructure to form a base for development.*

**Potential for, and benefits of, using Yukon materials and supplies in municipal infrastructure.**

The potential for usage of Yukon materials is primarily dependent on the nature of the project. If for example, a sewermain extension was undertaken in any community, the potential for using Yukon manufactured pipe is zero as there is none, and for the number of projects contemplated and the amounts to be used, there is no economy in creating a pipe manufacturing industry in Yukon (this also assumes that the distance factor for raw materials and finished goods makes Yukon less than competitive in outside markets for this particular product). On the other hand, in building a new administration office, local lumber or logs could be used, locally produced blocks, Furnishings, cabinets etc. The benefits are obvious and direct, being employment and industry stimulation. Yukon supplies on the other hand (let us class these as goods stocked by Yukon based firms in the normal course of business) can be used in nearly every aspect of a municipal infrastructure, from building supplies, to administrative supplies, to fuel for buildings. It seems practical to say that the potential for Yukon business to manufacture or stock large items of a non-recurring or low use nature is marginal, but those items in being transported may accrue revenues to a transportation company which has a positive aspect for its employees.

Two aspects become important here; the first being to increase the potential for usage and the second to increase the accuracy of the projections affecting these usages. Are we able to increase the potential for Yukon materials and supplies by means other than increasing the overall economy

in Yukon ? The business incentive policy adopted by the Yukon Government is an example of an attempt to maximize employment and encourage companies to maximize their presence in Yukon, utilizing the present body of labour while attempting to have new businesses establish permanently in the Yukon. This type of policy may have to be embraced by municipal governments as well, to ensure this work will be passed to Yukon firms. Consideration must also be given to competitive aspects and the effect such a policy may have on pricing and costs. Potential can only be turned to actual if the prospect of "use local", does not become uneconomic to the end user.

In the short term the potential for infusion of monies into local economies is directly proportional to the number of projects for increasing the infrastructure which are undertaken. In the long run it becomes the number of users (taxpayers) which determine the necessity for hard infrastructure projects. The object is therefore to optimize the number of users, which is consistent with the goals which were given at the outset, to enhance the quality of the hard, soft and social infrastructures and in turn raise the living standard and general well-being of all persons participating in the economy.

#### **Summary**

As a linkage study , this paper has shown that municipal infrastructures when defined in terms of hard, soft and social, cross or affect every sectoral boundary outlined in the Yukon 2000 Discussion Paper, and in affecting these sectors, show communities (which are the integration of hard, soft and social infrastructures) as forming the most logical base from which to begin planning for economic development. The recurring theme throughout the paper is the critical weakness of the most important part of all communities, namely the social infrastructure, and what could be done to strengthen it. It is recognized that economic development is a long term project but that even if there is a requirement to set back some stages of the planning function, communities must have the capability to adsorb and address the process before it can really begin. The role of the Yukon Government is to set overall strategy policies, fiscal policies, and general guidelines for the assistance and direction of the communities, to further economic development and to induce fundamental changes in the area of social infrastructure at the community level. The most important of these changes are seen to be in the areas of awareness, skills and resources of community groups, elected officials and administrative personnel. Without these changes an overall decay of community infrastructures will result, and the burdens placed on the decision makers at that level

will simply become intolerable.

**Discussions held relative to this paper**

Kosmeniuk D., Local Government Advisor Government of Yukon

Cornie J., Director Municipal Engineering Government of Yukon

Fisher M., Local Government Advisor Government of Yukon

Couture R., Executive Director Association of Yukon Communities

Graham R., Director Municipal Affairs Government of Yukon

McWilliams R., Economic Development Government of Yukon

King T., Motorways Transportation

Sewell T., Director Policy and Planning Government of Yukon

MacDonald, The Honourable P., Minister Community Affairs and Transportation

Government of Yukon

Walt Bryce, Chief Administrative Officer City of Whitehorse