



CITY OF RICHMOND

REPORT TO COMMITTEE

TO: Public Works and Transportation Committee

DATE: January 20, 2000

FROM: Jeff Day, P. Eng.
Director, Engineering

FILE: 6340-01

RE: Servicing Proposal for the No. 5 Road Institutional Properties

STAFF RECOMMENDATION

It is recommended that Council:

1. Accept LMT's proposal to finance the Shell Road oversizing, Williams Road pump station and gravity sewer along their frontage; and,
2. Direct staff to identify the required funding in year 2001 of the 5 year capital plan required to construct the forcemain on Shell Road.

Jeff Day, P. Eng.
Director, Engineering

Attachment 1 & 2

FOR ORIGINATING DIVISION USE ONLY		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Development Applications	Y <input type="checkbox"/> N <input type="checkbox"/>	<hr style="border: 0; border-top: 1px solid black;"/>
Sewers and Drainage	Y <input type="checkbox"/> N <input type="checkbox"/>	
Budget	Y <input type="checkbox"/> N <input type="checkbox"/>	

STAFF REPORT

ORIGIN

On October 19, 1999, representatives of the Lingyen Mountain Temple (LMT) located at 10060 No. 5 Road along with their consultant, Karley Management Ltd., presented staff with a proposal (attached), whereby, the LMT will bear the full cost of the following sanitary sewer system which would enable them to connect into the municipal system. Their proposal will facilitate the future servicing of all the properties east of No. 5 Road from Blundell Road to Steveston Highway.

This proposal essentially follows the servicing strategy developed by M.P.T. Engineering Co. Ltd. in consultation with staff in the mid 1990's.

HISTORY

The sanitary sewer servicing of the properties along the east side of No. 5 Road from Blundell Road to Steveston Highway has been a pressing issue for the majority of these properties for several years.

There are no sanitary sewers servicing the east side of No. 5 Road, as it was never intended to be developed for any land use other than agricultural. As a result, these properties were also never assessed a sewer levy that would have helped fund a municipal sewer system.

Since receiving approvals from Richmond Council and the Agricultural Land Commission (ALC) in the early 1990's to develop the first 110 metres of their property to institutional use, many of these properties have now constructed schools and places of worship. All these developments currently use a combination of septic holding tanks and tile fields to address their waste water flows. The exceptions being Fantasy Gardens and Richmond Bethel Church.

With increasing enrolments and larger congregations generating more and more waste water, it is becoming more expensive for some of these properties to maintain their holding tanks. In addition, the LMT are also in the process of applying for an expansion of their current facility which would further increase their maintenance costs.

In 1996, at the recommendation of the City, several of the property owners united to form the "No. 5 Road Steering Committee" and appointed Mr. Francis Wong to act as their spokesperson. This committee retained M.P.T. Engineering Co. Ltd. to develop a sanitary sewer servicing strategy and cost estimate for the entire area. With input from City staff, M.P.T. prepared a report titled "Sanitary Sewer Construction Cost Estimate for No. 5 Road" dated February 16, 1996 and presented to the Public Works Committee in January of 1997.

ANALYSIS

The M.P.T. report addressed the servicing of the entire area bounded in the north by Blundell Road and the south by Steveston Highway.

In order to service all these properties, the following works were identified (also see Figure 1):

South Catchment Area – King Road to Steveston Highway

1. A gravity sewer collection system.
2. A sanitary pump station to be located in the proximity of the Williams Road and No. 5 Road intersection.

North Catchment Area - King Road to Blundell Road

1. A gravity sewer collection system.
2. A sanitary pump station to be located in the proximity of the Francis Road and No. 5 Road intersection.
3. A forcemain (pressurised sewer) from the pump station to the existing forcemain on Williams Road.

The gravity sewer collection systems and forcemains for both catchment areas are proposed to be located in rights-of-ways on private property parallel to No. 5 Road. The justifications for keeping the sewers and forcemains off of No. 5 Road are that it would reduce construction costs, avoid traffic disruption and avoid disturbing the relatively new road surface.

Common Works to Both Catchment Areas

1. A forcemain along Williams Road from No. 5 Road to Shell Road.
2. A 200mm forcemain along Shell Road from Williams Road to the existing G.V.S. & D.D. trunk sewer north of Finn Road.

The forcemain along Williams Road from No. 5 Road to Shell Road was constructed by the City at the City's cost (approximately \$300,000) in conjunction with the Williams Road repaving project in 1997.

Staff have reviewed LMT's proposal and have the following comments:

1. This proposal follows the overall servicing strategy as prescribed in M.P.T.'s 1996 report and is conducive to the future overall servicing for the entire area.
2. As the LMT is located in the South Catchment Area, their proposal only includes a limited scope of those works (Phase 1) in this catchment plus the common work.
3. LMT propose to only construct the gravity sewer collection system to the extent of their frontage.
4. With respect of the common work, the forcemain on Shell Road, and the South Catchment Area pump station, the LMT hope to recover their costs through the registration of a Latecomers Agreement.
5. In order for any property in the North Catchment Area to connect to the City's sewer system, they must construct the pump station at Francis Road, the forcemain and the required gravity sewer from their property to the pump station. In addition, they will be subject to a latecomers charge for the common work (Shell Road forcemain upgrade).
6. In order for any property in the South Catchment Area to connect to the proposed pump station at Williams Road, they will have to extend the proposed gravity sewer abutting the LMT south to service their property. In addition, they will be subject to a latecomers charge for the common work (Shell Road forcemain upgrade) as well as the South Catchment Area pump station at Williams Road.
7. There presently exists a 400mm diameter forcemain along Shell Road which is under capacity and needs to be upgraded. This has been recognised in the original M.P.T. report

resulting in their requirement for an additional 200mm diameter forcemain. Staff recommend that the existing 400mm diameter forcemain be replaced and combined with the proposed 200mm diameter forcemain. A new 600mm diameter forcemain will eliminate the need for the twin parallel forcemains along Shell Road and minimize future maintenance costs.

ALTERNATIVES

Alternative 1: Do not accept LMT's proposal and require that they continue to use their holding tanks until all the properties are ready to contribute 100% of the costs to the sewer collection system.

Advantages:

- No direct or immediate costs to the City.

Disadvantages:

- Does not address the issue at hand.
- Does not take advantage of the financing offered by LMT.
- Does not take advantage of the potential cost savings that may be achieved by co-ordinating the oversizing of the Shell Road forcemain.

Alternative 2: Accept LMT's proposal and secure from LMT the funding required (estimated \$400,000) to construct the proposed 200mm diameter forcemain on Shell Road. This funding will be used in conjunction with city funds to replace the existing 400mm with a 600mm. This alternative will leave it up to the individual property owners in the South Catchment area to pay for the extension of the sewer to their own respective properties.

Advantages:

- Potential cost saving to the City to co-ordinate the oversizing of the Shell Road forcemain.
- No financing/front end costs for extending the sewer to other properties in the South Catchment Area.
- May be the catalyst required for the other properties to extend the sewer.

Disadvantages:

- Does not provide for the immediate sewer extension to the other South Catchment Area properties.
- By not facilitating/co-ordinating the sewer extension to the other South Catchment Area properties, the City may be subjected to the administration of numerous Latecomers Agreements and/or local improvement charges.
- The \$900,000 required for the construction of the Shell Road forcemain has not been budgeted.

Staff have not included the \$900,000 required for the Shell Road forcemain in the year 2000 budget, nor has it been identified in the 5 year capital plan. The Shell Road forcemain oversizing can be deferred until 2001, or until at least when the remainder of the South Catchment Area is prepared to connect into the system. The 5 year capital budget will then have to be revised to include this item prior to budget adoption. In the interim, some form of security equivalent to LMT's commitment for the Shell Road forcemain will have to be provided.

With respect to the other South Catchment Area properties, they may each individually apply to extend the gravity connection to their own property at a later date via Latecomers Agreements and/or a local improvement petition. The City's Local Improvement Bylaw will then have to be amended to include the provision of sanitary sewers. Furthermore, the City may have to exercise its authority under the "Enabling and Validation" provision in the Municipal Act to secure the required rights-of-ways on those properties where the owner(s) is uncooperative.

FINANCIAL IMPACT

Alternative 1: No costs.

Alternative 2: \$900,000 (design cost and GST included) for the City's cost to construct the 600mm forcemain on Shell Road plus administration costs for managing the project including the Latecomers Agreement.

CONCLUSION

The LMT proposal conforms to the overall servicing strategy for this area as developed by M.P.T. and staff in 1996. Although this proposal does not immediately address the servicing needs of the other properties, it will bring the sewer system that much closer to the area, particularly to the South Catchment Area, due to their dependency on the pump station at Williams Road.

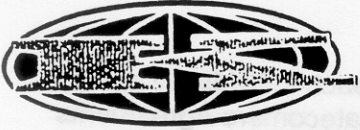
Any other property within the catchment area may then request to extend the sewer to their property by paying up front and attempt to recover their costs by a separate Latecomers agreement, like LMT, or initiate a local improvement petition.

Staff estimate that LMT will have to fund approximately \$850,000 (design and GST included) to upgrade the Shell Road forcemain, construct the Williams Road pump station and extend the gravity sewer upstream of the pump station to the extent of their south property line.

Therefore, staff support Alternative 2.

Paul H. Lee, P.Eng.
Manager, Engineering Planning

:phl



KARLEY MANAGEMENT LTD
LAND DEVELOPMENT, PROJECT MANAGEMENT & CONSTRUCTION MANAGEMENT

File No. 99-023

November 08, 1999

CITY OF RICHMOND
7577 Elmbridge Way
Richmond, B. C.
V6X 2Z8

Attention: Mr. Paul Lee, P.Eng.

**RE: SANITARY SEWER SYSTEM FOR LING YEN MOUNTAIN TEMPLE
AT NO.5 ROAD & WILLIAMS ROAD – RICHMOND, B.C.**

In our meeting on October 19, 1999, we expressed to you that our client wishes to have their above mentioned property connected to the public sewer system.

In 1997, MPT Engineering Co. Ltd. prepared a Report for the No.5 Road Steering Committee outlining the sewer catchment area and the costs involved to carry out the work. We have now reviewed this Report and propose to the City that the sanitary sewer project be phased as follows:

PHASE 1

- Construction of 350 mm Ø forcemain on Shell Road from Williams Road to approximately 860 m south of Steveston Highway. Tie into existing 600 mm Ø forcemain at Rice Mill Road. Total length approximately 1.6 km.
- Construction of a sanitary sewer pump station at the intersection of No.5 Road and Williams Road. Tie into existing 250 mm Ø forcemain at Williams Road.
- Construction of a sanitary gravity sewer on No.5 Road fronting the Ling Yen Mountain Temple property.

PHASE 2

- Construction of gravity sewer from Ling Yen Mountain Temple south to Steveston Highway
- Construction of sanitary gravity sewer from Williams Road to King Road

PHASE 3

- Construction of sanitary pump station at the intersection of No.5 Road and Francis Road.
- Construction of 250 mm Ø sanitary forcemain from Francis Road to Williams Road. Tie into existing 250 mm Ø forcemain at Williams Road
- Construction of sanitary gravity sewer from King Road to Francis Road
- Construction of sanitary gravity sewer from Blundell Road to Francis Road

We hereby request that the City consider allowing Phase 1 to proceed at this time with the full cost of the work to be borne by our client. With design, design approval, tendering and documentation, we project that the construction of Phase 1 can proceed in the summer of 2000.

Our client would request that a Latecomer's Charge be put on the pump station at Williams Road and also the 350 mm Ø forcemain on Shell Road. We also request consideration that this Latecomer's Charge be retired in 20 years instead of the standard 10 years. This would discourage the landowners from delaying their decision and result in an accelerated time for No.5 Road sewer construction and also provide our client with a better opportunity to recover some of their initial investment. As Phase 1 proceeds, we would work closely with the property owners to try to initiate Phase 2 and possibly Phase 3.

Please note, the sizing of the proposed gravity sanitary sewer and proposed sanitary forcemains are preliminary. During design stage, the actual sizes of these proposed systems will be calculated for the catchment area as stated. If the city wishes to oversize these systems in order to accommodate the existing catchment area, it would be necessary for the City to contribute for the oversizing of the sewer lines.

We ask that the City look favourably at this proposal for the following reasons:

The client's property is in the lower sewer catchment area. They can proceed with Phase 1 of the work without involving other landowners.

Our client's willingness to front end the cost of Phase 1 work helps to advance history in bringing sewer to the area as per the MPT Report.

Minimized health hazards can be realized by eliminating septic systems.

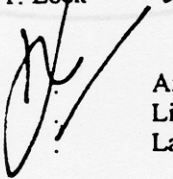
We appreciate your consideration. Please call if you require more information at this time.

Yours truly,
KARLEY MANAGEMENT LTD.

M. Carlson

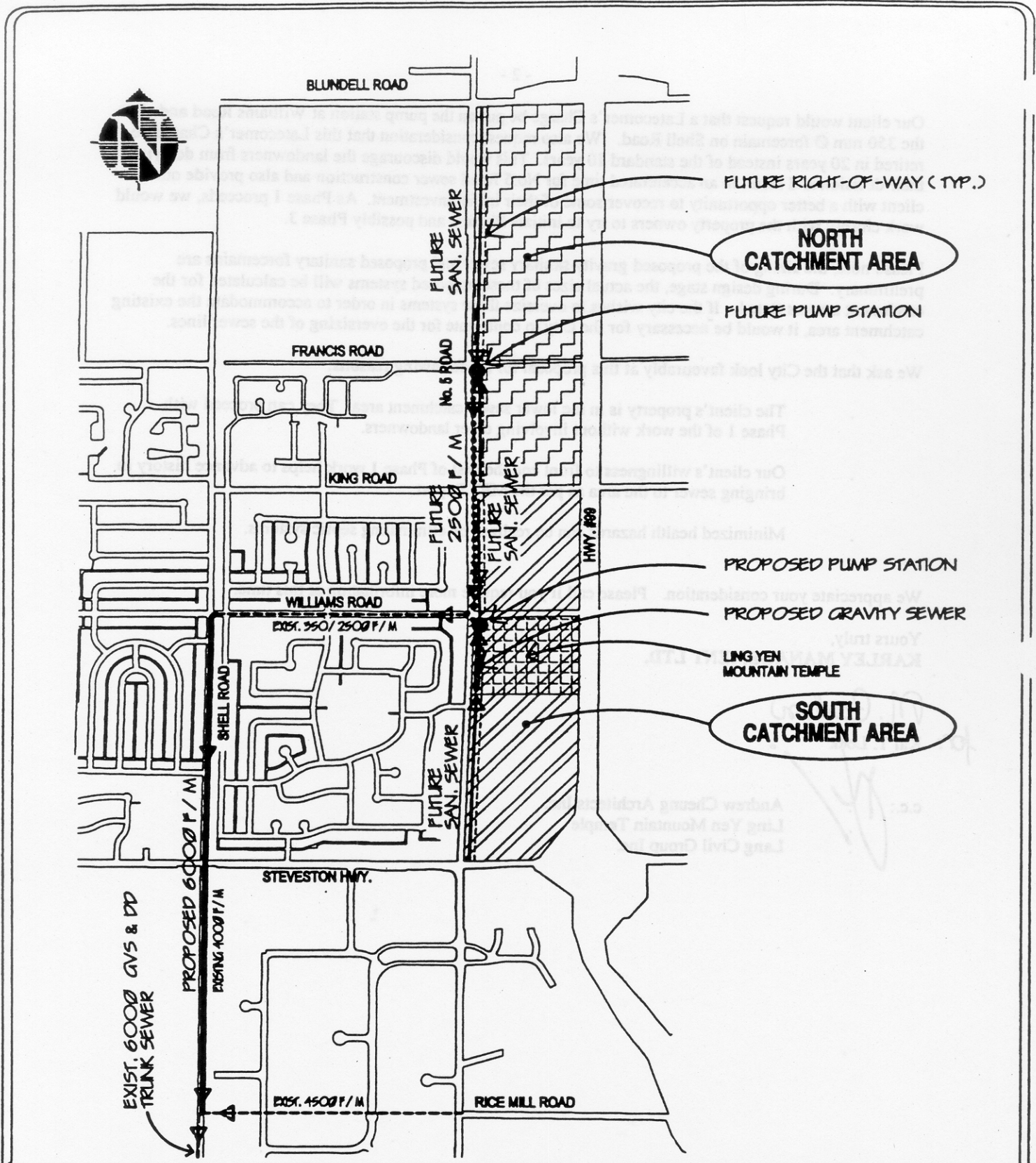
for: Kai T. Lock

c.c.:



Andrew Cheung Architects Inc.
Ling Yen Mountain Temple
Lang Civil Group Inc.

FIGURE 1



RICHMOND 330
 ISLAND CITY BY NATURE
 7577 Elmbridge Way, Richmond, B.C.

TITLE: PROPOSED SANITARY SEWER SYSTEM NO. 5 ROAD		
DESIGN:	DWG. No. FIGURE 1	
DRAWN: FC	SCALE: N.T.S	DATE: FEB. 29, 2000
CHECKED:	SEC. No :	SHT. No : 1 OF 1
ENGINEER:		