
CITY OF KELOWNA

MEMORANDUM

Date: October 30, 2001
File No.: 5520-01

To: City Manager

From: Director of Works and Utilities

Subject: Follow-up – Undergrounding of Wires and Cables

RECOMMENDATION

THAT Council receives the report of the Director of Works and Utilities for information;

AND THAT Council direct staff to bring forward changes to Subdivision Bylaw and Local Improvement bylaws regarding undergrounding requirements for in-fill development and road improvements in existing areas;

AND THAT Council approves continued undergrounding in the City Electric Utility service area where financially affordable.

DISCUSSION

At the regular meeting of Council held March 19, 2001 Council considered a report from the Director of Works and Utilities regarding the undergrounding of wires (copy attached for information). Council deferred the report due to a number of factors including request for additional cost information as well as clarification on the city's position relative to the FCM/CRTC/Ledcor matter.

This report will address the following issues separately:

- a) City position regarding use of right of ways by telecommunications firms with the ongoing FCM/CRTC/Ledcor matter.
- b) Undergrounding strategy for wires in the City Electrical Utility area
- c) Undergrounding of wires as part of road upgrades and new development in existing urban areas and in newly developed areas of the City.

Use of City Right of Way by Telecommunications Firms

Council has dealt with this matter recently as part of approval of a Municipal Access Agreement (MAA) with Bel Intrigna. The MAA uses the FCM recommended agreement as the basis for use of the right of way. In this agreement conditions are set for all aspects of approvals, future relocation conditions, and ability to modify the agreement subject to outcome of the future decisions of the courts, CRTC or federal government. This MAA is used as the basis of all negotiations with other firms that wish to use the right of way. As well, a shallow utilities committee is being established that involves all shallow utilities that use the right of way.

In addition to the above efforts, staff continues to monitor and evaluate the role the City may consider to play in the provision of high-speed communications in the community. A separate report on this role will be brought to Council in the near future.

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Undergrounding of Wires in City Electric Utility Area

Over the past number of years the City Electric Utility, in cooperation with telecommunication providers, has had an aggressive program of undergrounding all wires on City streets in the full service area of the Utility. Wires on poles in lanes are not part of the program. Approximately 80% of the wires on City streets in the City electric utility area are now underground. With the deregulation of the telecommunication industry, the ability of the primary telecommunication providers to continue to participate financially has been significantly diminished. Therefore if the present program is to be continued additional financial participation by the City and benefiting property owners will be required. The estimated cost to bury the remaining wires on streets in the City electric utility area is \$11 Million.

As indicated in the previous report to Council, the primary benefit of burial of wires is aesthetic. Costs of wire burial are approximately 3 times that of installing a new overhead system. Wire life is approximately ½ of overhead wires due to moisture and heat conditions.

It is recognized that wire burial is still desired by some residents though City survey results suggest 70% of residents are not willing to pay extra for this benefit. In the recent Marshall Street revitalization, joint funding of wire burial was achieved between the various utilities and the residents. This example could be used to continue achieving wire burial on the remaining streets in the City electrical utility area. Therefore it is recommended that the Electric Utility be directed to continue to achieve burial of wires where possible. The willingness of other utilities to participate financially is dependent on the condition of their infrastructure and their financial capacity based on their other capital project needs. The intent would be to work through the Shallow Utilities Committee to identify locations where there are joint infrastructure needs that warrant upgrade or replacement of wires. Residents would be approached for participation if the full cost of undergrounding can not be justified by the utilities. Priority consideration will be given where residents approach the City for undergrounding.

These factors will be balanced against the City Electric Utility capital and financial plans as well as joint planning with the water, sewer, drainage, and road upgrade programs. As well, priority consideration will be given in town center and village centers areas consistent with the OCP.

Burial of Wires as Part of Revitalization and Development

As the previous report to Council indicated burial of wires is presently required under the following City policies and bylaws:

- a) OCP – calls for burial of wires in town center and village centers as part of new development and revitalization
- b) Subdivision, Development and Servicing Bylaw – the bylaw requires burial of wires in all newly created streets and for frontages of new or redevelopment properties.
- c) Transportation 20-Year Plan – as part of all upgrading of existing roadways, undergrounding of wires is required in urban areas.

Feedback from the development industry is that burial of wires on newly created streets is desired and supported. However, concerns have been raised on the costs of conducting this work in existing areas. It has also been pointed out that these costs are totally borne by the property owner, on which side of the road right of way that the poles exist, which is not necessarily seen as fair. The City Transportation Division on DCC road projects also experiences high cost factors where the cost of undergrounding is 10 to 30% of the total project cost. Present DCC rates do not cover the cost of this undergrounding. WKP has indicated that they do not wish to see transmission lines and heavy distribution lines buried for cost, maintenance and life span reasons. With additional users of the rights of way in the future burial of wires results in increased complexity and cost.

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With these factors, the following strategy is proposed for new or redevelopment properties:

- 1) Burial of wires continue to be a mandatory requirement in town center and village center areas.
- 2) Burial of wires be a requirement on newly developed streets.
- 3) Burial of wires in property redevelopment on existing roadways be optional at the discretion of the developer in areas outside of town centers and village centers.
- 4) Burial of wires on road upgrades be a continued requirement in village and town centers. A single pole line will be permitted outside town center and village centers however any service wires crossing roadways must be buried.

The impact of this strategy from an undergrounding perspective is a reduction outside of town center and village center areas but significant cost savings to the redevelopment in existing areas and to the City's Transportation 20-Year Servicing Plan. The requirement to ensure service wires crossing roadways are buried will result in a continued reduction of the visual and aesthetic concerns with wires.

Conclusion

Burial of wires is a desirable aesthetic objective particularly in town centers and village centers. The cost of this in existing areas is very high and therefore should be selectively conducted. The recommendations listed above continue to move the City in this objective but at a reduced pace outside of the key urban areas.

If supported by Council, necessary bylaw amendments will be brought forward for Council approval.

John Vos, Director of Works and Utilities

Attachment

cc: Director of Planning and Development Services
Development Engineering Manager
Electrical Utility Manager

CITY OF KELOWNA

MEMORANDUM

Date: November 1, 2001
File No.: 5520-01

To: City Manager

From: Director of Works and Utilities

Subject: Undergrounding of Wires and Cables

RECOMMENDATION

THAT Council approves the strategy for the burial of electrical wires and communication cables as outlined in the report of the Director of Works and Utilities dated February 28, 2001;

AND THAT staff be directed to bring forward changes to City Policy 101, Subdivision Bylaw and Local Improvement Bylaws to reflect this strategy change.

DISCUSSION

The City of Kelowna has had an aggressive strategy for many years to require burial of all electrical, telephone and cable wires as part of all new development in the community. In addition, the City Electrical Utility, with cooperation from Telus and Shaw Cable, has been undergrounding existing overhead wires in the City Electrical Utility service area. The benefits of undergrounding are primarily that of beautification of neighborhoods.

There are a number of factors that suggest reconsideration of the present policies and bylaws would be appropriate. Key factors include the following:

- 1) Due to the competitive nature of the telecommunications industry the traditional providers, Telus and Shaw, are financially limited in participating in the cost of undergrounding. Undergrounding typically costs an estimated 3 times what an overhead line would cost. Therefore Telus and Shaw will only participate where they have funds and where there is a benefit to their utility. The net impact is that they are unable to participate on some City undergrounding initiatives or alternatively the City may have to pay up to 100% of the cost of burial of their wires. In addition, new telecommunications companies are in discussion with the City in order to place cables in the City right of way. This will further complicate the coordination and increase costs of undergrounding wires.
- 2) The costs of maintaining, relocating, and upgrading of existing underground cables is very high. For example, as part of the Pandosy project now underway the cost of relocating the existing underground electrical utility is some \$500,000. This includes upgrading of existing plant as well as relocation. It should also be noted that the life span of buried cables is approximately 50-60% of overhead lines.
- 3) West Kootenay Power does not wish to bury transmission and heavy distribution wires due to costs, wire life spans and maintenance reasons.
- 4) The costs of relocating and burial of wires on a redevelopment in an existing area can be a significant impact on the viability of that redevelopment. It has also been suggested that it unfairly places costs on the property owner who is on the side of

the road where the wires are located while providing a benefit to all properties in the area. It is very difficult to establish mechanisms that would share costs among all benefiting properties.

- 5) Deregulation of the telecommunications industry means that customers have choice for service providers. For example a development may chose not to have a television cable provided since there is a conscious decision for satellite service only. As such there may be circumstances where the developer may be unwilling to install or extend wires for a service they do not require.
- 6) In the last two customer surveys done by the City over 70% of respondents indicated an unwillingness to pay increased electrical rates for extending underground wiring to all parts of the City.
- 7) Recent WCB and other safety regulations within the various utilities call for increased separation of cables, larger access chambers to the wires, etc. These have additional cost and road right of way space requirements.

Present policies and bylaws of the City of Kelowna that provide direction on undergrounding of wires include the following:

- 1) OCP – the new draft bylaw continues to encourage undergrounding of wires in all urban town centers and residential urban village areas.
- 2) Subdivision Bylaw – requires burial of wires in all but rural areas for new developments. Standard road cross-section drawings as well as text support the need for undergrounding of wires.
- 3) City Policy 101– identifies that the City will bury wires in the City electrical utility area at it's cost.

With all these factors in mind, recognizing there is still a desire to bury wires in urban town or residential urban village areas and there also may be requests by various residents for burial on specific streets the following strategy is proposed.

- 1) Installation of underground wires and cables will still be required in all new streets created by development.
- 2) Burial of overhead wires will be required in urban town center and residential urban village areas. The City would ensure that new development in these areas would be responsible for burial of wires fronting their property. The City would also look to develop various funding strategies to ensure all wires would ultimately be buried. This would be brought back to Council at a later date.
- 3) Redevelopment in existing areas outside of town and village centers will be given the option whether to bury wires fronting their property. The City's experience is that there is a desire from some developments to bury the fronting wires due to visual impact on their development. Other developments see no benefit.
- 4) In the City electrical utility service area the City will continue burial of wires under the following conditions:
 - a) Where all the telecommunications and City Electrical utilities jointly identify a benefit to burial of the existing wires and agree to financially share in the costs.
 - b) Where requested by residents a local improvement process will be initiated. The Electrical Utility will pay up to 100% of the cost of burial of their wires (depending on costs and local conditions) with all telecommunication costs to the City covered by the Local Improvement process. Residents would pay 100% of any costs assessed by the telecommunications firms.

The impact of the changes in the bylaws would be to reduce the present strategy of burial of wires while resulting in reduced costs of redevelopment of existing areas of the City. There

would be cost savings to the development community as well as to City costs in areas such as Roads DCCs. It also ensures that with new telecommunication players in the market that the excavation of City streets is reduced.

If this strategy direction is supported by Council changes to the City bylaws and policies will be brought before Council for approval. Details of how the bylaw and policy changes impact from a process and cost perspective will be brought forward as part of those changes.

John Vos

cc. Electric Utility Manager
Development Engineering Manager
Director of Planning and Development Services