

# **APPENDIX 'E'**

## **VALUE ENGINEERING SESSION REPORT**

Appendix 'E' contains the summary report of a Value Engineering session that was undertaken during the preliminary design stage of the Polo Park Infrastructure Improvements project. Information contained herein was relevant at the time of the session, which was January 10, 2014. Recommendations within the report may or may not have been implemented in the final design and thus may or may not be part of the scope of work of Bid Opportunity 210-2014. The Value Engineering report is provided for information only.

**Polo Park Infrastructure  
Improvements – St. Matthews  
Avenue, St. James Street,  
Ellice Avenue**

**Value Engineering Session  
Report, January 10, 2014**



Dillon Project No. 13-8593-1001  
City File No. 13-B-02

*Prepared by*  
**Dillon Consulting Limited**

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## **1 INTRODUCTION**

The purpose of the Value Engineering (VE) Session was to review items/ideas that would be of value to the City of Winnipeg for the Polo Park Infrastructure Improvements project. It was to provide suggestions to move closer to an optimum value project for both initial cost and long term investment. Using a multi-disciplinary group, value and economy are improved by considering alternative designs, materials, and staging. Morrison Hershfield (MH) is the Lead Consultant on the project, with Dillon Consulting Limited (Dillon) as the Third Party Contract Administrator. Present at the meeting were the following persons:

David Wiebe	Dillon Consulting Limited
David Marsh	Dillon Consulting Limited
Rick Pidsadny	Dillon Consulting Limited
Bill Nairn	Dillon Consulting Limited
Greg Blatz	Dillon Consulting Limited
Emily Slater	Dillon Consulting Limited
Bonnie Konzelman	City of Winnipeg
Blake Kibbins	City of Winnipeg
Charles Boulet	City of Winnipeg
Kas Zurek	City of Winnipeg
Jason Ruby	City of Winnipeg
Bruce Biglow	Morrison Hershfield
Ron Bruce	Morrison Hershfield
Wayne Jaworski	Morrison Hershfield
Kirby McRae	TetraTech
Dennis Cruise	Bituminex Paving Limited
Jonathan Peters	Darco Enterprises

Invited but unable to attend:

Neil Myska	City of Winnipeg
Kevin Nixon	City of Winnipeg
Colin Titchkosky	City of Winnipeg

Some attendees were involved in the project from the outset, while others were brought in for a new perspective. Of note, two representatives from heavy construction contractors were present. This was to provide insight on contract size, constructability, and staging. Care was taken not to discuss construction budgets so as not to disqualify these contractors from bidding in the future.

Certain attendees had previously reviewed the preliminary roadworks drawings and various other reports, while others were learning the details of the project for the first time. The following reports were available and reviewed by Dillon staff prior to the VE Session:

- Traffic Impact Assessment (Draft) – October 15, 2013
- Design Criteria Brief (Draft) – August 19, 2013
- Pavement Design Brief (Draft) – October 7, 2013
- Preliminary Design Drawings (Issued for Client Review) – November 28, 2013

The MH team displayed large plot plans of the expected roadworks (as shown at the public open house) as well as preliminary drawings of the land drainage sewer and watermain works.

The design team is comprised of the following organizations:

- Lead Consultant: Morrison Hershfield
- Underground Municipal Utilities: Tetra Tech
- Landscaping: Scatliff Miller Murray
- Public Consultation: Susan Freig and Associates

## **2 VALUE ENGINEERING SESSION METHODOLOGY**

The format of the VE Session was determined by Bonnie Konzelman and David Wiebe. The intention was to scale the session for the project type. As the right-of-way is limited and scope well defined, a traditional VE multi-day session was not deemed necessary. The session was facilitated by David Wiebe and hosted at the Dillon office. The meeting was divided into two main sections, first an introduction to the project by the Morrison Hershfield project team, including the most current design, and secondly a topic-specific discussion where attendees were encouraged to provide feedback on the design. The agenda, with project feedback topics, is in Appendix A.

At the time of the VE Session, the preliminary design for the roadworks and land drainage sewer was complete while watermain preliminary design was still in progress.

## **3 PROJECT FEEDBACK**

Attendees were encouraged to provide feedback that provided value to the City and were reminded that the purpose of the meeting was not a detailed design review. Participants were asked to submit comments following the meeting if time did not allow for their feedback to be heard during the meeting.

The following is a compilation of recommendations and comments as a result of the VE Session. Topics discussed but rejected at the meeting are not listed. The project feedback comments are identified with a unique ID number so that they can be easily referenced in future discussions. Morrison Hershfield is expected to investigate the feasibility of implementing these items in the detailed design phase. Some items are noted to be the responsibility of the Public Works Department to consider.

### **3.1 Horizontal Geometry and Roadway**

#### VE Comment #01 – Reduce Radius of Back to Back Curves for Left Turn Lane Development

- Radii within left turn auxiliary lanes are currently designed to the correct City standard geometry (for design speed = 70 km/h); however, storage space within left turn lanes is at a premium, and small radii would increase the storage space for auxiliary lanes in both directions. This applies to several locations around the project but an example is on St. James Street north of the proposed Target access.

#### VE Comment #02 – Pavement Rehabilitation to Replace Reconstruction

- Currently, the entire project limits are proposed to be reconstructed with no identification of rehabilitation areas. When vertical profile is determined during detailed design, look for opportunities (likely near project limits and transitions) to limit construction to a less expensive rehabilitation.

#### VE Comment #03 – Increase Pavement Joint Spacing

- Currently, the proposed joint spacing is 4.3 m. A longer joint spacing of 5.0 m was proposed as it would reduce the number of joints, dowel assemblies, and future maintenance. Local experience with 5.0 m spacing has been positive, and literature from the Cement Association of Canada have “rule of thumb” of: thickness \*24 = slab length (230\*24=5.5m).

### **3.2 Watermain**

#### VE Comment #04 – Tie-In to Existing Watermain West of Box Culvert

- Currently, the proposed design is to extend the new watermain past the box culvert and tie-in east of Omand’s Creek. The proposal is to move the tie-in to the west side of the box culvert to eliminate the need to add another utility crossing the culvert. Note that the watermain over the box culvert was replaced in 2010 and is likely in excellent condition. This would save the project both the cost of the pipe and the additional time to install it.

### **3.3 Land Drainage Sewer and Overflow**

#### VE Comment #05 – Relocate Watermain S side of St. Matthews between Route 90 and Madison

- Discussion on whether to utilize the existing watermain along the existing south side of St. Matthews right-of-way. Land likely surplus after St. Matthews realigned and extended to St. James, and having property “free and clear” of easements for a watermain would likely make the land more valuable to sell.

### **3.4 Active Transportation and Pedestrians**

#### VE Comment #06 – Increase Clear Width on Sidewalk Above 1.5m

- On Ellice and St. James where the sidewalk width is 2.892 m or 2.9 m (back of curb to edge of sidewalk), attempt to designate (i.e. with paving bands) as much of that width as possible as the clear width for the sidewalk. It should be possible to designate a width in excess of 1.5 m. While 1.5 m is acceptable for suburban areas, the medium density commercial is expected to generate moderate foot traffic, so a wider sidewalk akin to those in a central business district is more appropriate.

### **3.5 Construction Staging and Schedules**

#### VE Comment #07 – Construction Contract Structure

- Original concept was to have all construction (roadworks, LDS, water) within one contract; however, some advantages to dividing the contract into multiple smaller contracts were presented. The construction contract could be divided by type of work (i.e. one contract for all underground utilities and one contract for all roadworks) or by geographic area. The advantages to having smaller contracts are that the first contract could be issued sooner and as a result work could commence sooner. Smaller contracts could also be planned around the latest utility conflict and property acquisition restraints. This would allow more time for those issues to be resolved without holding up the entire project. **Bonnie Konzelman to confirm contract structure preference.**

#### VE Comment #08 – Manitoba Hydro Poles on St. James in Sidewalk

- Decision on relocating St. James Street Manitoba Hydro poles has not been confirmed yet. The poles are in close proximity to the roadway and are within the sidewalk width. Concern of not being in control of Manitoba Hydro construction schedule, and thus a delay to the project. Consider adding installation of Hydro ducts to the contract.

### **3.6 Landscaping**

#### VE Comment #09 – Removal and Planting of Trees

- On the south side of St. Matthews between St. James and Empress there are approximately 50 trees that will be removed as part of construction. **Bonnie Konzelman to confirm if tree removals will require an offset payment to Urban Forestry Branch.**

### **3.7 Property Acquisition**

#### VE Comment #10 – St. Matthews Extension

- The combination of the delay associated with the property purchase, tenant negotiations, and utility reconstruction required for the St. Matthews extension between St. James and Century make it possible that this work cannot be completed by 2015. If property acquisition process and utility relocation schedule is still not known at the time of tender in early 2014, consider excluding this work from the bid opportunity so as not to incur contingencies in contractors' bids regarding having an unknown completion date.

### **3.8 Utilities**

#### VE Comment #11 – Relocation of Manitoba Hydro Poles on St. James

- All parties should work together to confirm the possibility of relocating the Manitoba Hydro poles on St. James Street. The schedule and budget implications of this utility relocation are significant. **MH and Bonnie Konzelman to confirm intent to relocate Manitoba Hydro Poles and if so, the relocation schedule.**

## **4 CLOSING**

The comment summary provided in this report will be distributed to the design team and members of the project team from the City of Winnipeg. The Value Engineering Session Report will be carried forward within the existing Issue Tracking log for this project until all of the comments are addressed or closed.

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**APPENDIX A**

**Polo Park Infrastructure Improvements – 599-2013  
Value Engineering Session Agenda**

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Third Party Contract Administration  
Polo Park Improvements  
St. Matthews Avenue, St. James Street, Ellice Avenue

Value Engineering Session  
9:00 am, January 10, 2014.  
Dillon Boardroom – 1558 Willson Place

AGENDA

Time	Activity	Lead By
9:00 a.m.	Introduction -Attendees, agenda -Ground Rules	Dillon
9:10 a.m.	Project Overview -(Follows feedback topics below) -Project schedule and status -Major project constraints	Morrison Hershfield
10:00 a.m.	Break (Snacks and Drinks Provided)	-
10:10 a.m. – 12:00 p.m.	Project Feedback	Dillon
10:10 a.m.	Horizontal Geometry	
10:30 a.m.	Watermain	
10:50 a.m.	Land Drainage Sewer and Overflow	
11:10 a.m.	Active Transportation and Pedestrians	
11:20 a.m.	Construction and Staging and Schedules	
11:40 a.m.	Landscaping	
11:45 a.m.	Property Acquisition	
11:55 p.m.	Utilities	
12:00 p.m.	Questions, Wrap Up and Next Steps	