
A Performance Review of the Washmill Lake Court Extension Project[©]

April 2014

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Every reasonable effort was made to ensure the information provided in this report is accurate and complete. The data, findings and other information have been produced and processed from sources and representations believed to be reliable but the supporting information was often based upon recollections which contained “best of knowledge caveats” or where there was conflicting information available. In many instances the terminologies used and information presented is as stated in various reports; which may not be consistent with how the OAG believes the information should have been presented or how the OAG would have presented it. Also, the OAG has used every effort to interpret the information and intent of the information in as consistent a manner as possible.

As the purpose of the report was to improve corporate processes and value of money; not personal accountability, we did not seek additional sources of information regarding many transactions or expand scope from what was originally intended.

Therefore, as much of the information within this report was either developed by the OAG or was the best estimate or interpretation on the part of the OAG; the OAG reserves the right to update the report for any relevant information or corrections to facts as we understand them which may come to our attention.

AUDITOR GENERAL

Halifax Regional Municipality

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Preamble

The 2012/13 work plan of the Office of the Auditor General (OAG) included a review of the processes used by Halifax Regional Municipality (HRM) in the management of its capital projects. The initial scope of the OAG project included a review of the 'start to finish' process for identification, funding and completion of capital projects. As part of this review, the OAG contemplated a review of a number of specific projects, including the Washmill Lake Court Extension (Washmill) as Regional Council had specifically requested the OAG review this project. However, it became apparent in the preliminary portion of the OAG project; there were a number of matters which occurred with respect to the Washmill project which required specific attention. As such, the OAG determined a separate project focused specifically on the circumstances surrounding the Washmill project was warranted.

Objectives

The objectives of this review were to understand the processes and procedures utilized in the project to extend Washmill Lake Court and create an additional access point to the Bayers Lake Business Park (BLBP). Through this report, the goal of the OAG was to articulate the process(es) followed, the issues encountered, how they were addressed and to suggest areas for improvement.

Scope

The scope of this project was the completion by HRM of the Washmill Lake Court Extension and the HRM processes used in the undertaking. It does not include any assessment of the Infrastructure Stimulus Funding Program or how projects were approved for funding by other levels of government.

Please note: throughout this discussion, the report will reference various business units and sections within HRM. These refer to business units and sections as they existed at the time. A number of organizational restructurings have since occurred. As such the section and business unit's names and composition may have changed as well. Therefore, the current organization structure will not necessarily align with the structure as it is referenced in this report.

In addition, the report references a number of positions which participated in various aspects of the project. Please note: the staff fulfilling these roles currently are not necessarily the staff that filled the roles during the period under review, as there have been a number of staffing changes in the ensuing time.

Please note: the cost, estimate, and budget amounts referenced throughout this report contain a mix of full HST, net HST and 100% recoverable HST, as this is how the information was presented in the documentation.

Methodology

The methodology for this project included the following:

- Interviews with staff responsible for the various sections of the capital budget to gain an understanding of the processes utilized within HRM,
- Review of staff files related to all phases of the Washmill project (where available),
- Interviews with staff specifically involved in the project in order to supplement the documentation provided and to, for example, aid in our understanding of the specific circumstances which occurred with respect to this project,
- Review of correspondence related to the project,
- Research to gain an understanding around various leading project management theories and practices.

Many items which the OAG might have wished to review as part of the methodology were simply not available; therefore, there were limitations on the preferred methodology due to this lack of documentation. For example, there was limited documentation available regarding how estimates provided to Regional Council were prepared, what the detailed scope of the project originally entailed, what was removed from the scope and why, and the basis for many decisions which were made. Since there was no complete project file available and the purpose of the report was to provide commentary and recommendations with respect to performance, the OAG performed no attestation or verification procedures with respect to the accuracy or completeness of budgetary, financial or other information contained within the report.

Executive Summary

Auditor General Commentary

Undoubtedly, after reading this report most readers will ask (as did the OAG), how this happened or what specifically went wrong. In terms of how did it happen, a number of circumstances contributed, as did (or did not as the case may be) a number of Managers, Directors, Deputy Chief Administrative Officer(s) (DCAO) and the Chief Administrative Officer (CAO). It is the view of the OAG, no one person or action led to the matters outlined in this report. In terms of what went wrong, the easier question might be - what went right. The simple answer to this question is another entrance to the business park including a road and underpass was built and infrastructure funding was used.

As the OAG has said many times before, the comments made are not to assess blame or appear overly harsh. They are presented with a balanced approach in mind and to hopefully, result in both individual and organizational reflection leading to change.

Expected Process

During the analysis of the Washmill Lake Court Extension (Washmill) project undertaken by the OAG, it became apparent there were few documented or established project management processes for the project. There were also a large number of views, even by management at senior levels regarding what “must have happened”, which varied significantly from what actually happened. As a result, one of the fundamental questions raised by the OAG is what the overall project management process should have looked like. With this question in mind, the OAG in varying degrees, reviewed:

- Processes used in the development of the capital budget and various capital project management process(es) as described by staff responsible for HRM’s various assets,
- The Project Management Institute’s “Guide to the Project Management Body of Knowledge”¹, including the Government Edition,

¹ A Guide to the Project Management Body of Knowledge (PMBOK Guide), Fourth Edition, 2008

- Various reference materials regarding what are, in theory, thought to be leading project management processes and practices both in the private and government sectors,
- Leading practices in other governments and not-for-profit enterprises.

Overarching Issues

As the OAG reviewed the events surrounding the construction of the Washmill Lake Court extension, several overarching points of concern arose.

- Clear project requirements and definition do not appear to have been completed,
- There appeared to be a significant absence of established and universally understood policies or procedures to guide projects along and ensure success (particularly for non-recurring projects),
- There was no formal project management process including accountability mechanisms for project management and completion, and in discussions with the OAG, some staff did not seem to understand or appreciate why this would be beneficial to the process and to HRM,
- There appeared to be a lack of complete adherence to appropriate legislation and established policies or practices which did exist,
- Lack of hard or soft controls to ensure established policies and procedures were followed,
- There was a significant void in terms of the quality and quantity of documentation available,
- Staff without engineering expertise acted outside what would logically be expected to be included in their position description(s) and became heavily involved in directing the project. In the opinion of the OAG, allowing staff, in a project such as this one, to be involved in areas outside their organizational role, and without the appropriate skills and experience is very concerning. The OAG was advised this situation occurred because the engineering staff responsible were not always responsive and there were concerns the project was not progressing appropriately. The OAG has to question why the section responsible for delivering the project was not held accountable and why

staff (without the required expertise), from a separate section were allowed to be involved at the level they were,

- There appears to have been a significant lack of initiative with regards to providing fulsome, timely, accurate and transparent information to Regional Council,
- When meeting with staff responsible for overseeing the design and construction portion of the project, the OAG was advised a hired consultant was the project manager (although no documentation was provided which supports this position). In addition, this assertion contradicts the Director for the area who stated there would have been an in-house staff member assigned to manage the project. In the variety of documents reviewed by the OAG, there were multiple HRM staff members repeatedly named as the project manager(s). The OAG questions how there could be a lack of understanding of something as fundamental as who the project manager(s) was, particularly at the managerial level,
- Lack of appropriate management of the outside consultant particularly in the early stages of the project,
- There was also a lack of regular reporting on the status of the project, including variances from budget and schedule. The OAG questions why managers and directors were not intimately involved from the start of the project in guiding staff and ensuring the appropriate project management was happening, particularly given:
 - the significant budget for the project,
 - the staff assigned had not been involved in this specific type of project before,
 - most HRM engineering staff had little experience with this type of project as they were primarily responsible for repetitive road re-surfacing type projects and
 - the OAG understands other similar projects may have encountered significant budgetary challenges.

Given the history with previously constructed interchange projects and the anecdotal problems encountered, the OAG would have expected the Manager of the section responsible for delivering the design and construction portion of the project to be heavily involved from the start

of the project, in overseeing the work and implementing processes and controls to ensure the project went smoothly and lessons learned in previous situations were applied appropriately. Unfortunately, this does not appear to have happened,

- There appeared to be a lack of appropriate construction controls such as completion of a substantive 'Class A type' estimate, engineering testing, confirmed legal right to build on certain parcels of land and complete engineering plans. The OAG would expect these to be decision (confirmation) points in any capital project but do not appear to have been used as such in this project.

A number of these factors should have, in the opinion of the OAG, prevented this project from being submitted at the time as a potential infrastructure funding project, particularly given the known deadline for completion of projects approved under this program. The OAG has to question why staff did not identify these issues and discuss the risks with Regional Council prior to submitting the application.

The OAG was advised by management, the reason this project was submitted was, after a number of previous submissions were rejected, HRM provided the entire five year capital plan for consideration, regardless of priority or state of readiness. According to information provided to the OAG with respect to this project, it appears staff did not advise Regional Council of the potential risks this approach would create such as:

- providing projects for selection which were likely not achievable in the required time frame and/or
- providing projects for selection with budget estimates, which were high-level conceptual estimates only and could change significantly once the required engineering design work was completed.

The OAG has to question the judgement of this decision, particularly given what should have been the known risks. As has been discussed in several previous reports, the OAG suggests HRM needs a better mechanism to identify organizational risks and to ensure Regional Council is made aware of these risks when making decisions. Part of this mechanism should involve providing meaningful alternatives as well as a full and transparent analysis of

advantages and disadvantages when suggesting courses of action. In addition, in areas where the reasons for a decision or what outcome actions were intended to achieve are not clear, the OAG notes the lack of documentation supporting decisions and processes undertaken seems to be a pervasive issue. Notable situations on which the OAG has previously issued reports where this significant lack of documentation was also a concern include:

- The concerts on the North Commons,
- Metro Centre operations,
- The transfer of Ticket Atlantic,
- Funding provided to the Farmers Market.

Overall, the OAG is forced to conclude:

- There were very few processes, policies and procedures in place which would protect HRM and its taxpayers and prevent the situation from happening again.
- There was a lack of interest or awareness on the part of some staff regarding why improved processes, documentation and reporting were necessary.
- There appears to have been a complete failure of the few controls which did exist.

Quality of Stewardship and Value for Money-Extended Commentary

As has been noted in previous reports, all projects undertaken by the OAG are in relation to quality of stewardship and value for money. Value for money is described and measured in terms of three concepts: efficiency, effectiveness and economies, otherwise known as the three E's. In order to provide the greatest value to Regional Council and HRM Administration, the OAG provides commentary throughout our reports with respect to how efficient, effective or economical a program, expenditure or policy appears to be.

Therefore, in completing the research and many interviews required in order to write this report, the OAG paid careful attention to the three E's and used these concepts as the basis for the report.

In the world of performance auditing, efficiency tends to be the measure which is most often thought of and most clearly

understood when value for money is assessed. Efficiency can be commented on by reviewing either the systems used to ensure efficiency of outcomes (systems-based approach) or by reviewing the results achieved against intended outcomes (results-based approach).

As will become clear to readers, it is not possible for the OAG to conclude the outcomes were as intended. Therefore using a results-based approach, the project would fail from an efficiency perspective. If the systems-based approach is used, based on the information reviewed, the OAG is forced to conclude the systems in place were weak and would not have resulted in an efficient output.

As will be seen from this report, while the issues encountered around this project were not particularly complex or difficult to identify, they were unfortunately numerous. In saying efficiency, effectiveness and economies were not achieved, the OAG felt there must be some indicators which would help explain how the situation developed and confirm this finding. To this end, the following list is the OAG's attempt at articulating the top issues which in our view caused this failure:

- The project presented to Regional Council in 2008 does not appear to be based on a well-thought out and executed needs assessment.
- The project presented to Regional Council in 2008 was not based on a substantive cost-benefit analysis (demonstration of value for money).
- There was no formal and documented risk assessment completed before the project was submitted for inclusion in the infrastructure funding program, even though there were significant known risks at the time or risks which should have been known.
- Staff did not complete substantive cost estimates before committing to the project.
- HRM did not follow a generally accepted or effective overall project management process(es).
- The manager of the unit responsible for delivering the project did not appear to become involved at an early enough point in the project given the level of risk in the project.
- Staff did not communicate evolving issues to Regional

- Council at appropriate points in time.
- Staff did not always communicate with Regional Council in a clear and transparent manner, therefore it was not possible for Regional Council to make informed decisions.
 - There appears to have been a significant lack or failure of internal controls (for example, monitoring, soft and preventative).

It is Not Enough to Use Normal Performance Measures to Explain the Significant Cost Overruns

As more and more information emerged, it became apparent to the OAG the three E's could not adequately explain the significant cost overruns associated with the project. It was felt more in-depth information needed to be presented to help explain why efficiency, effectiveness and economies were not achieved. The OAG feels this understanding is critical in assisting HRM in moving forward and not repeating the situation in the future.

Impacts on Performance of HRM Approach to Corporate Governance and Risk Management

Given HRM taxpayers are the ultimate stakeholder in all HRM expenditures and projects, there is a need to provide some opinion as to the reasons for the circumstances leading to the project being so far over budget and for a reduced scope of work. After considerable thought and discussion, the OAG has concluded two overarching points can explain much of what took place:

- The overall approach to governance and accountabilities,
- The approach or often lack of approach by HRM with respect to identification and management of risks.

Of the two, the most impact was likely the result of HRM's overall approach to corporate governance and accountabilities. In essence this speaks once again to corporate culture and tone from the top, subjects the OAG writes about continually.

While it serves little purpose to spend considerable time in this report once again explaining the importance of and high impact the proper tone from the top can have on an organization, the OAG felt it may be useful to articulate, in our view, what a proper tone from

the top or corporate culture might look like as it relates to capital projects. This tone might include, at a minimum, the following statements related to corporate culture in order to establish the appropriate tone from the top:

- We are an organization which truly understands the higher fiduciary and legislative responsibilities which exists in the public sector.
- We are an organization known for excellence.
- We are an organization known for having the right people with the right skills in the right place at the right time.
- We are an organization known as a sector leader in transparency and completeness.
- We are an organization known for a high level of efficiency, effectiveness, and economy.
- We are an organization known for understanding the clear differences between the definitions of responsibility and accountability.
- We are an organization of people who hold ourselves and others accountable.

With the above as a backdrop, the OAG is confident after reading this report it will be clear once again, the HRM tone from the top did not serve the organization well and was the cause for much of what took place with this particular project. It is important to understand these comments are made in reference to this project and the time under which it took place. The OAG is pleased to note changes in HRM's approach to tone from the top and understanding of its impact since we commenced our work on behalf of HRM.

Tone from the Top - Avoiding Excuses and Rationalizations

Despite the many comments contained within this report where the OAG states it is not our desire to extend blame but rather to point out where systems and culture are in need of improvement, the OAG does feel two points must be raised as 'constructive criticism'. In discussing various situations with staff at all levels in the completion of this and other reports, the OAG cannot help but notice a disturbing theme.

While it may seem innocent on the surface, the impact on the organization is almost overpowering. There is a tendency for the

organization to rationalize what has taken place and allow these rationalizations to become nothing more than excuses. During various interviews, the OAG has often heard comments (paraphrasing) from staff along the following lines:

- I had no choice,
- I came into the project late,
- There really was nothing wrong here, as it cost what it should have cost,
- It was not my job to think about that,
- It was someone else's decision,
- It was Regional Council's decision,
- We talked with Councillors,
- I did not understand what was being asked of me,
- Someone else completed the paperwork for me,
- Not my responsibility,
- That part was done by someone else, I'm not sure who,
- This was just 'filler work' ,
- We don't have standards for documentation,
- We don't need written agreements when we have an understanding between parties,
- This was the first time we had ever done this,
- This was not a normal situation, we generally do better,
- I tried to explain issues but no one was listening,
- I am not sure who was in charge - but it was not me,
- It's complex, there were a large number of people involved,
- Because there were so many people and business units involved, it is hard to hold anyone responsible,
- I was so busy, I did my best,
- I really don't know why it was done that way,
- We have no documentation to support that decision or course of action.

In conducting research into this aspect of tone from the top, the OAG reviewed an article in Canadian Business written by Chris MacDonald. In the article Mr. MacDonald makes a powerful observation and comments "we don't generally make up rationalizations on our own and learn how to apply them from scratch. We learn them, unfortunately, from our leaders and role models"².

² Canadian Business, Does the Right Tone at the Top Guarantee Success?, Chris Macdonald, April 19, 2013

Defining Responsibility and Accountability - Impact on Tone from the Top and Reducing Rationalizations

What the OAG has noticed in discussions with individuals in completing various reports is there appears to be 'some confusion' as to the difference between the definitions of responsibility and accountability.

Responsibility, for purposes of the work the OAG does, is defined as more relating to 'tasks' and whether individuals have fulfilled what is assigned or required to be done or even what the average person would 'expect' be done by them in their role and as part of an entire project. In other words the responsible person 'does it' and is the 'go-to' person for an individual task which is generally only part of an entire project.

Accountability is viewed by the OAG as the person who has overall responsibility to ensure all of the individuals involved in a project complete assigned tasks and from the taxpayers perspective is the individual who has responsibility for:

- Building a team of responsible people
- Having the expertise to build systems to ensure those responsible for individual components of a project have the required expertise and are achieving desired outcomes.

The OAG is of the view, without accountability you have uncoordinated areas of responsibility; actions likely being random with achievement of intended outcomes very much at risk.

Therefore, the OAG simply cannot accept no one was either responsible or accountable or responsibility can be discharged simply by believing there is someone at a higher level who will ultimately be held accountable.

With this in mind, the OAG questions who was actually or considered to be in charge of the Washmill project. For the most part, it would appear no one individual was in charge other than, by default, the Directors of Transportation and Public Works,

Infrastructure and Asset Management³ and Finance as well as the Deputy and Chief Administrative Officers at the time.

When asked who the project sponsors or owners were, the OAG was often advised it was the Real Estate Services section (who were part of the Transportation and Public Works (TPW) business unit at the time). They were intimately involved in the organization and undertaking of the project as it was their capital budget being used to fund the project which, by default in the HRM system, made them the project sponsors.

Responsibility and Accountability - Tone from All Levels

The OAG felt it appropriate to raise one last point with respect to tone from the top. In discussing tone from the top, it is possible a misunderstanding could take place. It is the view of the OAG, tone from the top is not restricted to the most senior leaders of HRM. While the culture of the organization is ultimately their responsibility, tone from the top must cascade to become tone from the middle and so on. All leaders at all levels must exhibit this tone in all they do and not merely speak the words.

HRM Management of Risks and the Impact on Project Outcomes

The question of how risks are managed at HRM has been the subject of much commentary in previous OAG reports and also has been the basis of many recommendations in past reports including “A Review of Concerts Held on the North Common”, “Review of HRM’s Contribution to the Seaport Farmers’ Market through the Community Facility Partnership Fund”, as well as others.

Many readers and experts in the fields of capital project management and/or engineering projects could undoubtedly provide very sophisticated project planning and management frameworks and checklists. This level of comment and discussion is beyond the scope of this report, however the OAG believes HRM needs to develop and implement a reasonable project management framework going forward to avoid similar situations.

³ Infrastructure and Asset Management was the business unit which existed at the time. It has been subsequently restructured but is referenced here as it was the existing structure when the Washmill Lake Court Extension project was undertaken.

This framework is needed immediately as unfortunately, the OAG has been given the impression this was not a particularly unique situation and the circumstances are ripe for this situation to continue to recur, although hopefully not to the magnitude that occurred with the Washmill project.

Again, as noted, the OAG does not suggest our office has the needed or specific project management expertise resident in-house to outline all of the specific items which should be present in a high-level framework for properly developed implementation plans. The following sections, however, suggest what the OAG believes are the minimum which should have been addressed by HRM Administration as they relate to risk.

What Should Have Been Included in the Risk Component of a Capital Project Framework by HRM

As noted above, a complete list of all of the elements of a risk framework is beyond the scope of this review, however a number of basic elements should be considered and documented going forward including:

- Who should be responsible for the development of a risk profile for the type of project being undertaken (for example recurring versus non-recurring).
- The specific expertise the person has, either personally or through a leadership group, to identify all risks associated with the specific project.

In very simple terms, development of the project budget and time lines should not be started until the above two questions are answered and documented.

A key item supporting this assertion is the comment by many of the HRM staff involved in the project (even managers) that the most significant factor leading to the cost overruns and issues with management of the project was, HRM had never done this type and scale of project before. This alone should have caused the project to be considered high risk, requiring special handling and oversight.

Please see Appendix B for further information regarding the suggested components which it would be reasonable to expect in any capital construction project.

Types and Categories of Risk

Again, the types and magnitude of risk categories with this type of project are outside the scope of this report, however some guidance can be provided. In an article entitled “Why Good Projects Fail Anyway”⁴ authors Nadim F. Matta and Ronald N. Ashkenas present insights into why projects often fail, in a well-thought-through and understandable manner.

The authors first start by discussing what are commonly considered the main areas of risk: project plans, timelines and budgets. The OAG is of the firm belief; the quality of these three elements has a significant impact on the success of any project. These elements control what the authors have described as “execution risk”.⁵

The authors go on to outline two additional areas of risk management, which also appear to have been lacking in the HRM approach to the Washmill project. These risks are defined by the authors as:

- White space risk,
- Integration risk.

White space risk is the risk some required activities will not be identified in advance. Integration risk is the risk that disparate activities will not come together in the end.

The OAG is of the strong belief the lack of proper identification and management of these three risks (execution, white space and integration) was at the centre of the result of the Washmill project.

Matta and Ashkenas also go on to make an interesting point - a project could actually be on time and budget yet the intended results may not be delivered. This is interesting to the OAG, as this discussion ties in very well with the philosophy around the three E's presented by the OAG in recent performance reports. In the world of performance auditing, benchmarking expected outcomes to actual outcomes is some measure of how effective a project was, the second of the three E's. This type of effectiveness analysis gives the taxpayer a strong indication of whether the inputs used resulted

⁴ Harvard Business Review, September 2003, Nadim F. Matta and Ronald N. Ashkenas

⁵ Ibid

in the intended output. The OAG is of the strong opinion, in order to measure efficiency and economies, the inputs and outputs model must be precise and well documented in advance. This is required in order to understand whether the intended outputs (outcomes) achieved were realized using the right inputs at the lowest cost (economies) and using as few of the available inputs as possible (efficiency). This is why being able to understand how effectively a project outcome was achieved is so critical to determining value for money.

Concerns With the Management of Execution Risks

As the OAG report will suggest, there are concerns with how the execution risks were managed in the Washmill project. As noted above, execution risks are managed through:

- strong planning and project management,
- strong financial controls and budgets,
- strong project timelines.

It is clear from the information available, this project suffered from deficiencies in all three elements of execution risk. This view is easily supported by the OAG after having reviewed the available facts surrounding this matter and finding for example:

- No 'master file' for the project housed in one business unit under the responsibility of one individual,
- Little in the way of formal (prescribed) documentation around plans, conversations and meetings in any of the business units involved,
- Little in the way of documentation to support how the project was managed from a financial perspective. (The OAG has been presented with minimal documentation to show how project budgets were developed and how ongoing expenditures were recorded and compared to budget and how oversight took place),
- Lack of clarity as to who exactly was responsible for the overall project and management of the so called white space and integration risks,
- The mistaken belief, as suggested by some, despite how the project was managed there was an output resulting from the inputs, therefore the project "cost what it should have cost". (This is particularly concerning to the OAG as it

suggests a lack of understanding on the part of some as to the need for strict planning and budgeting in order for any project to be efficiently and economically completed.)

Concerns with the Management of Integration Risks

As suggested earlier, the integration risks related to the project which should have been identified and managed were numerous. The OAG is of the view, the different 'pieces and skill sets' needed in a project of this type were not managed in a way to ensure success of the project from an outcomes perspective.

As will be seen throughout this report, the OAG has significant concerns around how HRM manages this aspect of risk. This position is taken as it does not appear there was a real understanding on the part of the HRM Administration of the day regarding the need to manage these types of capital projects very differently from routine (recurring) projects undertaken on a regular basis.

In very simple terms, in order to achieve success for the Washmill project, particularly given it was viewed as something HRM had never done before, HRM Administration might have considered implementing the following, as a minimum:

- An acceptance, on the part of HRM, the organization had not successfully completed a project of this type and magnitude and it would be appropriate to reach out to other levels of government, who had in fact completed similar projects, for assistance and guidance.
- The development of a multi-disciplined steering committee to ensure all elements necessary for managing execution risk were present.
- A steering committee chair or lead, with talents and experience in previously leading teams to success, not simply past responsibility for certain aspects of projects.
- A project charter outlining the project and setting out the risks around project integration and how they are to be mitigated.

Concerns with the Management of White Space Risks

White space risks are defined as the risk one or more required or critical activities will not be identified in advance. Unfortunately, it is the view of the OAG a number of critical activities were overlooked starting with an analysis of the level of complexity this project represented, who actually was to be the project manager and what the duties (and limits) of the manager were. In this particular case, it would appear the project sponsor was, by default, the Real Estate Services section as the funds were to come from their capital budget. Unfortunately, it appears staff from Real Estate Services also acted as the Project Manager or co-Project Manager, which the OAG would suggest was likely outside the accountabilities and skills of personnel in their position(s).

As suggested in various readings, a clear project sponsor is critical to any project's success. While the OAG totally agrees with this suggestion, it would seem logical to assume the sponsor would have the appropriate expertise to be responsible for the project. By extension this expertise should extend to the development and management of white space risks.

Governance and Risk Management - Signs of Projects in Trouble and How to Avoid Shallow Causes for Failure

As noted earlier, the focus of this report was not the specific engineering requirements of designing and building an underpass and roadway. It really is not necessary for the OAG to provide commentary or recommendations at this level. Arguably the starting point for improvement is likely at a much higher level.

It is however interesting to note how many obvious issues with the project were ignored in the early stages and HRM apparently only defined the project as in trouble after it became obvious there were budget issues (e.g. when there were insufficient funds to issue a tender for a construction portion of the project, even after the scope had been reduced). The OAG suggests there were signs the project was in trouble long before this became the main issue.

Those who consider this particular project a failure seem to do so because of significant cost overruns. While it is true significant cost

overruns happened, this answer is far too shallow. It is more likely, the project failed due to improper development and documentation of the full project scope and the use of very high-level estimates which HRM Administration admits were not properly calculated and were created solely as budget place holders. It is also more likely, the failure on the part of management to have formal processes or documented procedures to deliver a well-researched and documented project scope as the foundation for a well-prepared and documented budget, were the reasons for the cost overruns.

The fact the final project outcome is so different from what was originally described as needed (number of lanes to roadways and bridge, type of lighting, bicycle lanes, removal, re-alignment and upgrade of intersection) points to far more serious issues than simply running out of money.

Conclusions:

1) Failure was not Due to One or Two Single Events rather the Organizational Culture

It quickly became obvious the OAG would not be able to explain the Washmill project by pointing to one or two events or situations. In fact, this became probably the most challenging aspect of this report, being to explain why the project 'failed'.

Research in the field of project management suggests, and the OAG would agree, this project failed due to the presence of a corporate culture which allowed a number of dysfunctional components to exist over a long period of time. This in turn allowed a number of problems to grow to the point where they managed the project rather than the project managing them. Effectively, staff were managing each issue as it arose, somewhat in isolation, without keeping the overall, 'big picture' view in mind.

2) Failure Due to Ineffective Decision Making

Clearly, the above situation results in part, from ineffective decision making. This ineffective decision making is caused by a number of things. As Caleem Consulting suggests in an article published on

their web site entitled “Why do Projects Fail?”⁶, the main causes of dysfunctional decision making include:

- Lack of situational awareness,
- Cognitive biases,
- Political forces,
- Organizational cultural factors.

The article also goes on to make another interesting point, which the OAG also believes was present, being it is not always just the decisions made by those directly involved with the project which can negatively impact success. It is also the decisions of the extended stakeholders which have great influence on success. In this case, it was implied to the OAG, others suggested which projects would be accepted if included in the application for infrastructure funding and it was also others who decided which projects to fund, with what would appear to be little consideration for the degree to which the project really was shovel-ready⁷.

3) Failure Due to Inadequate Communications and Reporting

As this report will illustrate, HRM is very much in need of improved methods and frequency of communications to all major stakeholders should projects of this type be attempted in the future.

One of the complaints most often heard from Regional Councillors is around the quality and frequency of reports provided to Regional Council as major projects and budgets are prepared. One of the points often made by management is “Regional Council was aware” or “it was in a report”. What this report will illustrate are the pitfalls of this approach to governance. In the view of the OAG, it is not adequate governance of taxpayer dollars to default to suggesting an issue was contained in a report and Regional Council need only have read the report to know there was an issue and understand the situation. The OAG would point to one simple fact as noted in an Oracle White Paper “Why Projects Fail, Avoiding the Classic Pitfalls” being “it takes the average person seven views of the same message before it starts to resonate”⁸. The White Paper goes on to make the

⁶ “Why do Projects Fail?”, R. Goatham – Editor, calteam.com/WTPF/?page_id=2213

⁷ Per www.oxforddictionaries.com, shovel-ready refers to a construction project being at the stage where workers can be employed and construction can begin.

⁸ Oracle White Paper, October 2011, Oracle Primavera, page 2

obvious recommendation, communications to major stakeholders cannot be left to the point where the impact on costs, timelines and scope are significant or irreversible, which unfortunately was the case with the Washmill project.

4) Failure Due to Lack of Clarity Around Why HRM was Doing This Particular Project and Why Then

What the OAG has noted in numerous reports, and now suspects is being discussed more frequently by the taxpayers of HRM, is the very basic question, 'why are we doing this'. After considerable review, the OAG created what can be described as a Needs/Timing Matrix. The elements of the matrix include:

- Why are we doing this now,
- Do we have the funding to do this,
- Is the strategy clear to support the use of HRM assets (inputs),
- Have alternatives been reviewed, are they clearly understood and communicated,
- Is the choice of projects based upon a proper needs assessment or is some other decision process overriding this analysis,
- Are any unusual time pressures influencing decision making at both project selection and implementation levels,
- Is the appropriate expertise available at this time to complete this project, with a due regard for quality of stewardship of public funds and to properly assess and manage risk,
- Are all of the above criteria/decisions clearly documented.

5) Failure Due to Lack of Appropriate Governance

With stricter controls around how projects are planned, managed and executed, many of the issues around accountability and transparency would be eliminated. This can be illustrated by simply looking at what the results of a simple ad-hoc process would likely be.

The OAG suggests ad-hoc elements of a properly governed project might resemble Project Definition followed by a Project Work Plan followed by the development of Project Specific Procedures

supporting project execution to ensure plans and processes are properly carried out.

The OAG is of the strong view the taxpayers of HRM deserve to see their tax dollars spent with a greater emphasis on governance. The approach is simple but the results are significant. A greater emphasis on governance drives accountability. This accountability should be at:

- The operational level,
- The managerial level and
- The overall organizational level.

6) Failure Due to Ineffective Leadership

As is often the case, the OAG will likely be asked to opine on what exactly needs to change. As in many other reports, in the simplest of terms the OAG once again believes it is the HRM culture towards accountability and responsibility which was the most significant contributor to project failure with, the ultimate issue being, ineffective leadership at the time.

As has been noted in so many other reports, the lack of appropriate leadership and governance models has lead HRM into questionable decisions and unintended consequences.

This commentary, while perhaps overly blunt, is supported by the many sections of this report where the OAG believes issues or problems could easily have been overcome had there been more 'effective leadership'.

The OAG strongly believes it is critical for HRM to review leadership at all levels. Simply put, what much of this report will point to is questionable accountability and a culture of rationalizations.

Lack of Appropriate Quality of Stewardship over Public Funds

Given the commentary provided with respect to project planning, risk assessments and governance as noted earlier, it is clear to the OAG all of the factors leading to dysfunctional and ineffective decision making were present with respect to the Washmill project.

As readers of this report will quickly realize, the entire Washmill project became overly complex and troublesome through a combination of outside influences and events as well as internal influences and processes. Therefore, the OAG has no other alternative other than to conclude this project was not completed in an efficient or effective manner with due regard for economies and did not provide the taxpayers with the appropriate quality of stewardship over public funds.

Significant Findings and Recommendations

Corporate Culture and Tone from the Top- Impact on Accountability and Soft Controls

Once again the OAG finds itself commenting on the consequences which result from the HRM corporate culture and tone from the top. The OAG once again heard (paraphrasing), 'I really don't know who was responsible, but I do know it wasn't me', 'we must have done it that way', 'I don't have any records of why we did what we did', 'this was a unique situation, we always do better', 'I came into the project late'.

It is not the role of the OAG to comment on individuals or individual circumstances. It is however the role of the OAG to provide commentary on the consequences of the above thinking. As stated in earlier reports, this thinking is fundamentally flawed and is serious as it works in opposition to the positive impact soft controls are intended to have.

Simply put, this report presents another example of where the lack of soft controls at HRM has led to 'unintended consequences'.

Responsibility for Oversight

- 1.0.1 The OAG recommends it be made clear to the current CAO and future CAOs, they have total responsibility for oversight of HRM and for demonstrating value for money with respect to all programs and expenditures and ensuring Regional Council receives all information necessary to make appropriate decisions.
- 1.0.2 The OAG strongly recommends HRM Administration review whether it has a collaborative culture and ensure all tools necessary for collaboration are made available to managers.
- 1.0.3 The OAG strongly recommends HRM Administration review whether it has a culture of accountability and demonstrates actual accountability through set outcomes and where necessary take appropriate steps to ensure this is developed and supported. As with a previous OAG

recommendation with respect to ethics, HRM Administration should implement appropriate training to support greater development and understanding around accountability, particularly for management positions.

- 1.0.4 It is clear to the OAG that organizational fragmentation and siloing occurred throughout the Washmill project. It also occurs to the OAG that in the previous structure with two DCAOs or in the current structure with one DCAO and a CAO with shared responsibility for overseeing business units, these positions should be responsible for ensuring business units work collaboratively in all appropriate situations. The OAG recommends HRM Administration take whatever steps are necessary in order to ensure this guidance and oversight is happening and Regional Council should ensure the Administration accepts direct responsibility.

Washmill Specific Issues

- 1.0.5 Given that as of late May 2014 the OAG understands HRM had not yet received the certification package for the bridge structure at Washmill confirming it meets all appropriate standards. The OAG recommends HRM Administration meet with all stakeholders to ensure the Washmill project meets appropriate construction standards, including HRM standards for road construction as prescribed in HRM's Municipal Service Standards guideline manual (known as the "Red Book") and CSA standard CAN/CSA-S6-00 Canadian Highway Bridge Design Code. This concern is also raised as it occurs to the OAG, what was finally designed and constructed was what the Administration apparently felt it had budget for, not what was originally contemplated and portions (phases) of the project are possibly, at May 2014, not completed and not identified in the current capital budget.
- 1.0.6 The OAG also recommends HRM Administration determine what part of the process failed such that the certification package was not received and forwarded to the Province of Nova Scotia in a timely and appropriate basis (i.e. it was not appropriately actioned until the OAG advised the Chair of the Audit and Finance Committee and the CAO – almost 2 ½

years after the road opened to the public) and take corrective action to ensure this situation does not reoccur in the future.

- 1.0.7 The OAG recommends Regional Council request an immediate update on the remaining phase(s) of the project, including the work yet to be completed, the expected costs and timing.

Project Management

- 1.0.8 The OAG recommends HRM Administration immediately engage qualified external assistance to develop and implement a formal leading practice 'cradle-to-grave' project management methodology and require this methodology be applied to all capital construction and renovation projects undertaken by HRM.
- 1.0.9 In conjunction with implementing the project management methodology in Recommendation 1.0.8, the OAG also recommends HRM provide specific training for staff responsible for delivering capital construction and renovation projects, in appropriate project management methodologies and ensure they learn and understand why project management processes with appropriate reporting, documentation, control points and clarity of information provided for decision making, are important.
- 1.0.10 The OAG recommends HRM Administration implement a policy requiring every capital construction and renovation project have an assigned Project Manager who is responsible for the oversight and coordination of all aspects of the project and who is ultimately accountable.

Project Budgets

- 1.0.11 The OAG recommends the budget implications section of reports to Regional Council for capital projects be changed to show the history of any changes to the project budget, including the original budget, any increases (listed individually by date) and the revised total budget. In

addition, it should show total commitments-to-date and the remaining amount available. The committed-to-date information should include the total amount committed for all tenders or contracts issued, as well as any anticipated cost overruns, not just the invoices processed to date.

- 1.0.12 The OAG recommends HRM Administration reinforce to staff the requirement for Regional Council to approve any increases to capital project budgets.
- 1.0.13 The OAG recommends HRM Administration and Regional Council require any requests for budget changes include a detailed, fulsome explanation, for why the changes are required.
- 1.0.14 The OAG recommends budget estimates provided to Regional Council for all capital projects should describe the basis and quality of the estimate so that Regional Council can understand the level of reliance which can be placed on the estimate.
- 1.0.15 The OAG recommends HRM Administration immediately cease the use of 'place holders' for budget information in requests to proceed with any capital project. If a reliable budget estimate cannot be provided, the project should not be considered ready to request approval to proceed to a tender or construction phase.

Capital Project Approval Process

- 1.0.16 To enhance the quality of decision making and create greater effectiveness of outcomes, the OAG recommends the following with respect to large (perhaps \$1,000,000 or greater) capital projects:
 - 1) HRM Administration adopt a widely accepted guideline for capital project estimation and the level of confidence which can be placed on any estimate be communicated as part of any report to Regional Council.
 - 2) With projects contained in the Multi-year capital plan, the level of cost estimate of each project be clearly

outlined.

- 3) Regional Council not commit final approval for any project until the level of cost estimate provided is at least within 10% of expected final cost.

1.0.17 The OAG recommends Regional Council implement a policy specifically prohibiting the approval of significant budget changes to capital projects within the annual budget process. A request for an increase could easily be overlooked when it is part of the larger total budget request, particularly given the way and in the form information is provided in the budget book. The OAG suggests Regional Council require specific, individual approval for budget changes for all capital projects estimated to cost in excess of say \$1 million or changes to projects effecting the scope by, for example, plus or minus \$100,000 (cumulatively) and that this approval be requested before it is tabled in the annual capital budget.

1.0.18 The OAG recommends those responsible for determining the scope of capital construction projects be required to prepare and retain a documented needs assessment which justifies the level of infrastructure proposed and identifies any items which are optional and why they are suggested.

Project Review-Management and Peer Review

1.0.19 The OAG recommends HRM Administration develop a framework for providing a robust and thorough peer review of design work performed by internal staff, including ensuring the Director responsible has the appropriate subject matter expertise. The individuals involved would vary depending on the type and magnitude of the project.

1.0.20 The OAG recommends a formal review process be implemented in the Design and Construction Services group such that any estimate provided by any member of the group receive review and approval by the Manager before it is provided to the client department. These estimates should be supported by appropriate working papers, including detailed calculations and assumptions as well as

an indication of the level of the estimate (i.e. Class A, Class D).

- 1.0.21 The OAG recommends HRM Administration consider creating a dispute/opinion resolution mechanism for professionals applying judgement in their work so there is a means to resolve professional differences of opinion and ensure projects move forward as appropriate, particularly with respect to engineering requirements.

Management of Risks

- 1.0.22 As noted in a number of OAG reports, particularly the “Concerts on the North Commons” report released in June 2011, the OAG once again strongly recommends HRM establish the role of Chief Risk Officer who, given the importance of the role, should have a reporting relationship with the Finance and Audit Committee.
- 1.0.23 The OAG recommends if or when future cost-sharing infrastructure funding programs are considered, staff be required to provide full and accurate information to Regional Council specifically regarding risks related to any projects proposed for submission. The OAG anticipates this would highlight such things as (but not limited to) the quality of the estimates being relied on, status of deliverables currently outstanding on the project, and anticipated timelines compared to any program deadlines.
- 1.0.24 As noted in previous reports, the OAG recommends all reports to Regional Council include a Risk Assessment section which identifies and analyzes the risks associated with the topic of the report both in relation to the recommended action as well as the alternatives not recommended. The OAG is concerned this recommendation is becoming a recurring item in multiple OAG reports and suggests HRM Administration either prioritize its implementation so that Regional Council is provided with the appropriate information on which to make decisions or explain to Regional Council why it does not intend to implement this recommendation.

- 1.0.25 The OAG recommends the Administration ensure project management processes are very clear as to when legal services should be apprised of perceived non-performance on the part of independent contractors and consultants in order to ensure HRM's interests are fully protected. This also contemplates HRM Administration developing and implementing a corporate policy addressing how and when issues related to unacceptable performance and missed deadlines by a consultant should be addressed.
- 1.0.26 The OAG recommends HRM Administration implement a policy which requires legal title to any required lands be obtained prior to issuing construction tenders which will involve work on the lands.
- 1.0.27 As the OAG is repeatedly forced to comment on the lack of documentation and the poor quality of the limited documentation available, the OAG recommends HRM Administration immediately implement a program to ensure appropriate organizational records management practices are developed and implemented. Staff at the most senior level in the organization (likely the DCAO) should be assigned responsibilities to oversee the program and be held accountable to ensure its effectiveness.

Clarity of Requests within Reports to Regional Council

- 1.0.28 Within this project, the OAG noted reports submitted to Regional Council often addressed multiple issues. For example, the sale of bulk lands for development in the Business Park and approval of the project to extend Washmill Lake Court were both contained within the same report to Regional Council. The OAG recommends significant, distinct issues should be addressed in separate reports.
- 1.0.29 The OAG recommends Regional Council explore the possibility of creating a Capital Projects Committee as a sub-committee of Audit and Finance Standing Committee. This recommendation is made, given the Administration is authorized to spend in excess of \$140 million on capital projects in 2014/15, and with Regional Council only seeming

to have the opportunity to focus on the allocations and issues at budget time. The OAG suggests the current process does not provide sufficient time for oversight of a significant area of expenditure and risk.

Responsibility for Ensuring Accuracy of Information Contained in Reports to Regional Council

- 1.0.30 The OAG recommends HRM Administration clarify the intent and expectation regarding approval of reports to Regional Council such that accountability for the information contained in the report is clear to all who are named as authors or approvers, including ensuring the information and recommendations in the report are: 1) in compliance with the HRM Charter, 2) in compliance with HRM's related policies and procedures and 3) ensuring the information contained in the report is accurate and presented in a clear and unbiased manner.

In-Camera Reports with respect to Capital Projects

- 1.0.31 The OAG recommends HRM Administration review its process for determining when an item can be or should be provided to Regional Council on an in-camera basis. The OAG recommends it be the Municipal Solicitor who provides this advice and ensures the position taken is supported by either Section 19(2) of the Halifax Regional Municipality Charter or the spirit of Section 19.
- 1.0.32 In order to ensure there are full historical records of discussions with and decisions made by Regional Council, the OAG recommends Regional Council request a legal opinion as to the possibility of having in-camera sessions recorded and the recordings be retained for an appropriate records retention period.

Possible Business Unit Changes

- 1.0.33 The OAG recommends HRM Administration undertake a complete review and possibly a significant restructuring of the Design and Construction Services section. The OAG suggests the first step in this recommendation would be to

obtain independent expertise and advice related to the appropriate structure and practices for the section including (but not limited to) operational structure, staffing levels, appropriate professional processes and standards of practice, appropriate services standards and performance measures. This should help to ensure Design and Construction Services can meet the needs of their business unit clients and deliver on the projects they are specifically responsible for, while adhering to appropriate engineering and project management standards.

- 1.0.34 With respect to Real Estate Services and particularly the Business Parks section, the OAG suggests HRM Administration needs to ensure there is role clarity and accountability for the group to ensure staff do not participate in areas outside their expertise. The OAG contemplates the Business Parks section could be restructured to be separate from Real Estate Services and the OAG recommends HRM Administration engage independent professional expertise to identify the needed skills and appropriate structure for this organizational activity as well as the appropriate resource and staff levels.
- 1.0.35 The OAG recommends HRM Administration review the possible benefits of a consolidation of all positions responsible for capital construction or renovation projects within one operating unit, responsible to one director or consider some other organizational restructuring which would reduce and (if possible eliminate) the silos and fragmentation which existed within this project.

Clarity in Business Unit Responsibilities

- 1.0.36 The OAG recommends HRM Administration implement an accountability mechanism, as contemplated in Recommendation 1.0.33, for the section responsible to deliver capital projects on behalf of client business units (currently Design and Construction Services) ensuring there is accountability on the part of the section to deliver and equally important, ensure areas of client business units do not become involved outside their accountability and expertise. The OAG contemplates this could take the form

of an engagement letter or some similar project start document used by professional services organizations.

- 1.0.37 The OAG suggests 'one-time' projects require an approach and expertise which is not supported by those only familiar with recurring projects. The OAG recommends specific policies and procedures be developed for high-value, non-recurring projects.
- 1.0.38 The OAG would recommend HRM Administration seek independent advice with respect to the expertise needed to advise on or carry out non-recurring capital projects, which it would seem reasonable for HRM to have resident in the organization and support any additions which are felt appropriate.
- 1.0.39 The OAG recommends for any future projects where the services of independent consultants are engaged by HRM, the Administration ensure whoever is responsible for overseeing the contract have the appropriate level of knowledge of both the work to be undertaken and the management of independent consultants.
- 1.0.40 The OAG recommends for any future high-value, non-recurring projects, the responsibilities of independent contractors be very clear, so that 'confusion' and 'assumptions' as to what will be designed and who for instance, the project manager is, will not take place.
- 1.0.41 With regards to HRM relying on traffic studies obtained by third parties based on HRM requirements, the OAG recommends the process be changed so that HRM is a named party in the contract for services as relying on the report and also having the ability to provide input into the terms and conditions of the work to be performed.

Spending Authorities and Procurement

- 1.0.42 The OAG recommends Regional Council update the Procurement Policy - Appendix B which deals with construction projects, to limit the amount of any increase which can be approved by the CAO. The OAG suggests

cumulative contract increases exceeding 20% of the original award amount should require the approval of Regional Council through Audit and Finance Standing Committee.

- 1.0.43 Additionally, the OAG recommends HRM Administration clarify the Procurement Policy such that it is clear a tender/contract can only be increased by up to 10% of the tender award's original value and not 10% of total project budget and there must be budget funds available, not including the portion of the project which has yet to be tendered.
- 1.0.44 The OAG recommends HRM Administration implement a written policy specifically prohibiting staff from entering into any contractual arrangements in excess of say \$10,000 (including cost-sharing arrangements) based on verbal estimates without specific approval by Regional Council.
- 1.0.45 The OAG recommends HRM Administration draft an amendment to the Procurement Policy specifically addressing potential issues with unit price contracts and improving the control mechanisms for early recognition of and approval for, cost overruns on these types of contracts.
- 1.0.46 The OAG recommends Regional Council request a report from the Administration as to specific measures it has put in place or intends to put in place going forward to ensure the contractual interests of HRM are protected in order that any contemplated legal remedies are not conflicted by ambiguous legal documents.

Changes to Scope of Projects Previously Approved by Regional Council

- 1.0.47 The OAG recommends Regional Council require all capital projects brought to them for approval contain a clear, detailed description of the scope of the project and identify the basis on which the scope was determined.
- 1.0.48 The OAG recommends HRM Administration implement a process and system of internal controls which prevents staff

from materially changing the scope of a project (increases or decreases) without approval from Regional Council and require staff to advise Regional Council when they become aware a project will likely exceed budget.

- 1.0.49 The OAG recommends HRM Administration immediately implement the capital project reporting requirements as set out in Section 3 (5) on page 3 of the Capital Spending policy, which was approved by Regional Council on May 18, 1999. The OAG recognizes there is a report on Capital projects included in the quarterly financial report to Regional Council, however, it does not contain all the required information such as the status of active projects or information on completed projects.

Management Development and Staff Expertise

- 1.0.50 The OAG recommends HRM Administration seek external expertise to facilitate the development of a Talent Management System. This system should, at a minimum, drive basic talent management, optimal levels of performance and consistent leadership criteria.
- 1.0.51 The OAG recommends in conjunction with Recommendation 1.0.50, the Administration look to expected capital budget projects ten years into the future and ensure the expertise needed to deliver the program is either present in-house or can be acquired and managed when needed.
- 1.0.52 In order to achieve Recommendation 1.0.51, the OAG further recommends HRM Administration immediately develop rich and in-depth employee data which includes experience, current training, interests and any special skills. This information should then be drawn upon when non-recurring projects are undertaken to identify the most appropriate staff members to assign to the project in order to ensure success.
- 1.0.53 The OAG recommends HRM Administration implement internal policies and processes such that additional leadership, guidance and support is provided to staff when

they are working in learning situations or on projects which are unusual or not routinely undertaken. As this is a recurring theme in a number of OAG reports, it is recommended this receive priority focus.

- 1.0.54 Given much of what the OAG has written in previous reports regarding responsibilities and accountabilities, and our concerns around performance, the OAG recommends the Human Resources group be immediately tasked with the development of an improved compensation process. The basis of the process should be pay for performance, which in turn creates a pay for performance culture based upon accountabilities.
- 1.0.55 The OAG recommends HRM review its role descriptions for its managerial and executive positions to ensure there is absolute clarity around the focus of the role. It is the view of the OAG the focus should be one of planning and organizing, being able to deal with problems and bring them to successful conclusions. In essence, a person who is very much a self-starter who holds themselves accountable.

Detailed Findings

1.0 Timeline

Although it is not possible to provide a complete understanding of all matters which led to the Washmill project outcomes, the following sections are intended to provide a broad overview of significant events.

1.1 Project Identification and Approval in Principle

March 1999 to June 2002

March 1999

- In March 1999, HRM received a traffic study prepared for the Nova Scotia Department of Transportation and Public Works (but apparently cost shared by HRM). The study noted a future opportunity for the construction of a major street connection from Regency Park Drive under Highway 102 into the Bayers Lake Business Park (BLBP), which would create an additional entrance to the park.

November 2001

- In November 2001, HRM received an unsolicited proposal requesting HRM purchase a parcel of land (lot GP04 shown in Appendix C), which could be used to provide the connection from Regency Park Drive to BLBP identified in the 1999 traffic study.

*March 2002
(Cost of project was estimated to be \$4 - \$5 million)*

- In March 2002, staff provided a report to Regional Council recommending the purchase of lot GP04 in order “to protect the future opportunity for construction of an important piece of roadway”.

In the report, staff advised the proposed alignment was the most cost-effective option and the estimated cost of construction would be \$4 - \$5million.

However, the report did not provide any detail regarding:

- scope for the proposed route, i.e. number of lanes, sidewalks, bike lanes, streetlights, water infrastructure,
- how the extension could happen if Regional Council chose not to authorize the purchase of lot GP04,
- advantages or disadvantages of this route or any other options considered or
- expected timing for construction of the road

- the level of reliance which could be placed on the cost estimate.

The report did however advise, if in the future the underpass was not required, the lands could be sold at market value, likely recovering all costs incurred.

One point of concern to the OAG, was the lack of discussion in the report to Regional Council regarding the quality, reliability or basis for the \$4 - \$5 million cost estimate. Due to the early stage in the process and the round figures used, it could reasonably be inferred this was a rough, high-level estimate. However, this was never made clear by staff in the report. When staff were asked how this estimate was developed, the OAG was advised it was, in fact, a high-level estimate based on past experience.

June 2002

- In June 2002, Regional Council accepted the report recommendation and HRM purchased the lot to facilitate the future roadway.

At this point, although it was not explicitly stated, Regional Council had in essence approved in principle what would eventually become the Washmill project. Unfortunately, also at this point, they had not been given any detailed information regarding the scope of the project outside of the \$4 - \$5 million cost estimate and a route traversing lot GP04.

1.2 Process Leading to Council Approval of Initial Washmill Project Budget

January 2003 to December 2008

*January 2003
Cost of project was estimated
to be \$7.017 million.*

- In January 2003 HRM completed another traffic study (in addition to the one completed in 1999), which also recommended a new entrance to the BLBP with an underpass at Highway 102, although the specific route was not discussed. This report estimated the cost of the project at \$6,102,000 plus a 15% contingency (\$7,017,300 in total excluding HST) but still did not fully articulate the scope of the project (the specific route, number of lanes, sidewalks,

bike lanes, etc.). It did, however, indicate four lanes on the BLBP side of Highway 102 but it did not specify the number of lanes or route on the Clayton Park side of the highway.

At the time, the extension was identified as a long-term requirement.

Based on this report, the cost estimate for this project was approximately \$2 to \$3 million more than what Regional Council was advised 11 months earlier (March 2002). It appears there was no clarifying information provided to Regional Council regarding the reason for the increase.

Fall 2006

- There appears to be no further significant activity on the project until the fall of 2006 when a report was provided to Regional Council regarding an unsolicited offer received requesting HRM sell bulk lands for development in the BLBP. The report noted one of the constraints to allowing these lands to be developed was the adequacy of transportation services. The report indicated there were long-term plans to improve the transportation infrastructure in the area (they were not planned for at least three years and were not in the current capital budget). The report did not discuss what the planned transportation infrastructure improvements were or the estimated cost and did not mention the high-level estimate in 2003, which was approximately \$7 million.

Regional Council accepted the report recommendation and declined the proposal.

May 2007

- In May 2007, staff brought another report to Regional Council regarding (in part) the extension of Washmill. The report advised Regional Council of a potential cost-sharing proposal from a developer for the extension of Green Park Close to the eastern boundary of Highway 102, which would facilitate the extension of Washmill. According to the report, the proposal from the developer also included the developer purchasing and developing the remaining portions of lot GP04, which HRM did not need. As noted earlier, this lot was purchased by HRM in 2002 specifically for the purpose of providing an additional entrance to BLBP. Under the proposed agreement, HRM and the developer

would share the cost of the extension of Green Park Close through lot GP04 to the eastern boundary of Highway 102 at a total estimated cost of \$1.445 million (HRM's share was to be \$726,250 (\$718,750 and an additional \$7,500 in closing costs). As part of the agreement HRM would transfer ownership and development rights for the remaining portions of lot GP04 (which HRM would no longer require) to the developer at market value (\$919,000). The excess (\$200,000) over HRM's share of the road construction costs would be paid to HRM.

It is concerning to note the costs identified in this report were based on an estimated cost per linear foot, yet the

staff involved in preparing the report were unable to provide the OAG with any information regarding how the estimated cost per linear foot was derived.

This report also did not provide a full picture to Regional Council of the plan to extend Washmill Lake Court. Specifically, it did not discuss the total estimated cost of the project; it did not reference the \$4 - \$5 million estimate provided in 2002; or the \$7 million estimate received in the 2003 traffic study. Once again it did not provide any scope other than to say it would generally be consistent with the details and specifications 'agreed to' when a similar road extension was completed for HRM (i.e. Regency Park Drive). While the report recommended Regional Council decline the proposal, it did not provide any alternatives.

Again, this report provided no information to Regional Council regarding the quality of the cost estimate, which would indicate the level of assurance Regional Council could place on it. The report also did not identify whether this would be a fixed-price contract at the amount noted in the report or if the final price paid by HRM would be based on the actual costs incurred by the developer during construction. In addition, the report did not identify potential funding sources or budget implications if Regional Council chose to disregard the staff recommendation and pursue the proposal. Effectively, based on the lack of information provided to Regional Council, it is the view of

June 2007

the OAG they had little choice but to accept the staff recommendation and decline the proposal.

At this time, a Councillor also raised an issue of concerns from existing residents on Green Park Close who had moved to the area after HRM acquired lot GP04 but apparently had been unaware of the planned road. After some discussion of the concerns, the matter was deferred by Regional Council based on a request for additional information.

- As requested, a report supplying additional information was provided to Regional Council in June 2007. The report stated Green Park Close was established as a collector road and was constructed to that standard with the intention of connecting it to Washmill Lake Court in the future.

It then stated although some residents on Green Park Close had concerns, there were no alternatives which staff could suggest. In addition, the report stated the selection of another roadway “would mean that the investment made when building the original road would be wasted and in a few years the same situation would arise as residents begin moving into buildings on the new collector street.”

The report was deleted from the agenda and was not discussed by Regional Council.

This report concerns the OAG for a number of reasons:

- 1) It definitively stated there were no alternatives. However, the 2002 report recommending the purchase of lot GP04 identified one alternative - to direct the route along one of the parcels already owned by HRM (GP05 or GP06 – See Appendix C). It is not clear why these alternatives along with the appropriate analysis, were not presented. It is also not clear why other potential routes were not identified and assessed, such as the one eventually used.
- 2) The June 2007 report stated the investment made when building the original road would be ‘wasted’ but there were no details provided regarding the magnitude of the investment. The OAG questions why the costs already incurred were not clearly identified so Regional Council could make an informed decision.

When staff were asked for specific information around 'wasted' costs, the OAG was eventually advised the road was built by the developer and therefore, there were no direct costs incurred by HRM. Staff also indicated the additional costs incurred by the developer would likely have been minimal due to the existing favourable grade of the land and because the road was not constructed with four lanes (instead it was constructed with two) and a large right-of-way which would allow for expansion to four lanes in the future.

These issues raise questions for the OAG, particularly:

- 1) Why the report was deleted from the Regional Council agenda?
- 2) Why the report was not presented in a clear, unbiased and transparent manner?
- 3) What the review and approval process was for reports to be provided to Regional Council at the time? This particular report was approved by six separate senior management staff members.

The OAG questions the purpose and effectiveness of these approvals given the tone, lack of clarity and likely inaccuracies in the report.

According to staff, one issue with the review and approval of reports (generally) was that each person reviews it from their own narrow perspective. If this is correct, this fragmented approach is very concerning to the OAG particularly at senior management levels.

Despite the report being removed from the Regional Council agenda and therefore not being addressed by Regional Council, there continued to be activity among staff regarding possible alternate routes.

July 2007

- In July 2007, staff prepared a preliminary estimate of \$2.75 million (not including costs for the sanitary sewer and water infrastructures and highway crossing) for a two-lane road apparently along a new route connecting to Main Avenue (the details of the route were not available in the documentation provided to the OAG). The information provided was noted as preliminary only and suggested additional survey and geotechnical information would be needed to provide more detailed estimates.

As a reference point, this is the route which was eventually chosen.

August 2007

- In August 2007, a staff member raised concerns regarding the estimates for the new route, noting the cost per metre seemed “about the same” (presumably as the Green Park Close route) however, the new route had significantly more “rock cut” required (presumably referring to the increased elevation in the land along the Main Avenue route) and the current estimate did not appear to account for the possibility of encountering pyritic slate.

A response was provided by staff in the Real Estate Services section indicating the estimate should be increased for the ‘cut’.

The OAG questions the role of Real Estate Services staff in this portion of the project. If HRM were to use a modern operational structure with role descriptions, expertise and accountability all aligned to ensure intended outcomes are achieved, it would not seem logical to have staff from Real Estate Services directing or even providing this type of input into the development of cost estimates for the construction of a road.

This type of involvement by Real Estate Services staff was seen consistently throughout the project, although they assert they were not involved in the management of the project (The OAG notes two individuals in particular from Real Estate Services sent and received thousands of emails with respect to the project). Based on discussions with these individuals, the OAG understands staff from Real Estate Services regularly participate in this manner in projects related to the business parks, frequently contacting engineering consultants directly and participating in non-real estate related portions of projects. As a result, the OAG questions the organizational structure which allows and encourages staff to participate at this level, in areas likely outside of their expertise and accountability.

September 2007

- In September 2007, staff indicated they met with one of the Regional Councillors for the area who suggested the extension road should be four-lanes. Staff estimated a four-lane road would increase the previously estimated cost of \$2.75 million by 60% to \$4.40 million (excluding water and sanitary sewer systems and the Highway 102 crossing). It

was not specified which route was being discussed but it appears to be the new route connecting to Main Avenue.

There was no documentation provided to the OAG indicating any work done to determine what level of infrastructure was required and there appears to be no consideration given to additional on-going maintenance costs for a four-lane versus a two-lane road.

This causes the OAG to wonder how staff determine what level of infrastructure is required.

The OAG also wonders how often infrastructure is built beyond what is truly needed and how much HRM has spent unnecessarily on both construction and on-going maintenance of infrastructure, which was not required at the time of construction or in the foreseeable future.

In reviewing the estimates provided by staff, the OAG was also concerned to note they appear to exclude the costs related to a significant portion of the project, specifically the underpass. In addition, the estimates do not specify the start or end points of the route. The estimate noted a length of 997metres. However, it is unclear if this was the length of the entire route, or simply a portion of the route.

October 2007

- In October 2007, another report was submitted to Regional Council regarding the previously proposed bulk sale of lands in BLBP and the extension of Washmill. In the background section of the report, staff stated there was a requirement to create an entrance to BLBP in order to enable the development of the bulk lands in question. It also reminded Regional Council of their previous direction (2002) to acquire the land required for a corridor connecting to Green Park Close which would be used as a collector road.

The report stated Green Park Close was designed for the purpose of creating a connection to Washmill Lake Court via an underpass beneath Highway 102 and the road was carefully aligned to the optimum underpass location and “oversized to a collector road standard”.

The report also stated residents who moved to Green Park Close were now expressing concern regarding its eventual connection to BLBP and had asked for an alternative road

alignment to be considered. To this end, the report suggested the party interested in acquiring the bulk lands be required to complete a traffic study to determine the infrastructure improvements required. The designation of Green Park Close as the connection to Regency Park Drive and the review of any alternate alignments and design were to await the outcome of this traffic study.

During Regional Council's review of the report, staff provided clarification on a number of items, including the "need to complete the traffic study to determine the best route and ensure that Green Park Close will not become a collector". This was a specific change of direction as Regional Council had, in 2002, approved the acquisition of a parcel of land specifically to build a collector road based on the information provided at the time which indicated it was the most cost effective option.

It was also interesting to note completing this new traffic study was made the responsibility of the party looking to purchase the land.

The OAG questions why HRM delegated responsibility for the completion of the traffic study to an outside party, who arguably was not independent in this situation, without requiring HRM be specifically identified in the report as a party who would be relying on the information and for what purpose.

Regional Council accepted the report recommendations.

The OAG does not understand how staff could commit to both determining the best route and also removing Green Park Close from consideration especially given it had previously been identified as the best route. Instead, the OAG would have expected to see a full report to Regional Council outlining all available options, including Green Park Close, with a robust analysis of the advantages and disadvantages and construction and maintenance costs for each option. This however, was not provided. In addition, the OAG would have expected to see an explanation as to why the previously identified optimal route was no longer considered the best alternative.

January 2008

- Correspondence indicates in January 2008, a meeting was held with certain Regional Councillors and a developer (who was not connected to parties involved in the potential bulk land transaction in BLBP) to discuss the Washmill extension and a subsequent meeting was held with HRM staff, including senior staff and the same developer regarding possible route alternatives. This appears to have been under consideration from as early as July 2007, if not before. It is concerning to note Regional Council was specifically advised there were no alternatives to the Green Park Close route while it appears discussions regarding this alternate route were apparently going on.

February 2008

- In February 2008, the developer formally 'proposed' an alternate route (Main Avenue), which appears to be the route which had been under discussions with staff for some time.
- In February 2008, the traffic study commissioned (by the prospective purchaser of bulk lands in BLBP) in response to the October 2007 Regional Council direction was finalized and supported a route for the extension of Washmill through Main Avenue. However, the report appears to only have considered if the route connecting to Main Avenue would meet traffic needs, not what route was optimal (as was the direction from Regional Council). As a result, the report did not provide a comparison of the Green Park Close route (or other possible routes) with the Main Avenue route for advantages, disadvantages or costs.

Given the October 2007 report to Regional Council did not identify any possible route options other than Green Park Close, the OAG is confused as to why the Main Avenue route was reviewed in the traffic study and Green Park Close was not.

April 2008

- In April 2008, there was correspondence between staff discussing updated estimates for the construction of the extension.

At the time staff indicated – “depending on the level of accuracy required”, an engineering consulting company could be hired but staff could prepare what was

currently needed. It is concerning to the OAG it appears different levels of accuracy to capital budgeting were acceptable with no stated standards to guide this type of thinking and the spending of taxpayer dollars. How could Regional Council have been expected to make strategic decisions when the level of accuracy present in estimates provided was unclear? In addition, what was the organizational goal in presenting budget information for decision making which varied in 'accuracy' from project to project?

May 2008

The estimated cost for the project now ranged between \$6.622 and \$8.556 million.

- In May 2008, engineering staff revised the internal estimates (and provided them to their supervisor) which now included \$2 million for an interchange (bridge structure) and the following three options:
 - 1) Green Park Close \$6.622 million
 - 2) Main Avenue \$8.075 million
 - 3) Main Avenue (including the water system) \$8.556 million.

Unfortunately, the estimates did not indicate the start or end points of the proposed routes for any of the options. As a result, it is unclear if they were for the entire route length including the portion on the business park side of Highway 102.

Upon further investigation of this issue, the OAG received conflicting information, with the estimated length of the road varying between 1,000 and 1,200 metres. The OAG believes, as a result of conversations held with staff, reviewing available documentation and conducting research regarding the routes, it is likely the 1,000 metre estimates did not include the entire length of road required and particularly excluded the work required on the BLBP side of the highway (the construction of approximately 200 metres of additional road and the widening of the existing two-lane road to four lanes plus turning lanes and intersection upgrades). The OAG is very concerned in a project of this magnitude, staff cannot definitively confirm what the estimate included and if the estimate included the entire scope of work for the project.

The estimates also did not state what the differences were between the options or the assumptions used. The OAG was

advised by staff the difference was the inclusion of the water system in one option (#3 above).

The OAG also has concerns with respect to the review processes and control points used (or not used – as the case may be) within the Design and Construction Services section (as the area providing these estimates) to ensure estimates provided were reasonably accurate. Staff advised the OAG they have protocols for ‘normal’ projects but they were not followed in this case. The OAG does not understand why a project of this dollar value and with this risk profile would have a reduced oversight compared with a routine project.

The OAG has not seen any indication of a robust review carried out by Supervisors or Managers in order to ensure complete and accurate information was being provided and that the information provided included all infrastructure requirements.

It is not clear, why at this point the Green Park Close route estimate was only \$6.622 million when it was estimated to be at least \$7.017 million five years earlier. Additionally, the OAG questions why the difference between the estimated costs for the Main Avenue and Green Park Close options were not greater, given the difference in length, the increase in elevation (likely requiring a significant increase in the amount of excavation) and the amount of pyritic slate⁹ to be removed along the Main Avenue route.

Based on discussions with staff, the OAG understands the estimate for the Green Park Close route included the total cost to construct the route from the end of Washmill Lake Court in the BLBP, connecting with the existing Green Park Close road.

It did not note the possible \$718,750 in cost sharing which would have been available had the May 2007 offer been accepted. Assuming the estimate of \$6.622 million was also valid in 2007, the total cost to HRM would have been \$5.903 million to build the Green Park Close route, had the May 2007 offer been accepted.

⁹ Pyritic slate, otherwise known as sulphide bearing material is aggregate (rock) having a sulphide content equal to or greater than 0.4%. When sulphide-bearing rock is exposed to oxygen and water, oxidation reactions produce sulphuric acid. Disposal of sulphide bearing materials is regulated under Section 66 of the Nova Scotia Environment Act. – Source – Report to Environment & Sustainability Standing Committee of HRM, October 6, 2011, page 2

In addition, estimates showed the new route (Main Avenue) would cost between \$8.075 and \$8.556 million. This was an increase of between \$1.675 and \$2.156 million from the internal estimate of \$6.4 million¹⁰ previously provided in September 2007 for the Green Park Close route and was an increase to HRM of between \$2.394 and \$2.875 million if the additional cost sharing available in 2007 of \$718,750 is taken into account.

Based on discussions with staff, the OAG has the following concerns regarding the Main Avenue estimates:

- When comparing the two routes, the Main Avenue route appears to be significantly longer than the Green Park Close route. As a result, the OAG does not understand why the difference in the estimates was not higher.
- The OAG is unsure of the effectiveness of the review process applied to these estimates which apparently did not question or clarify the differences between the two routes and the associated costs, and did not question the difference between these estimates and the one the consultant provided in 2003. The OAG was advised by staff involved in the project they were not aware of the 2003 information. The OAG suggests this is an example of circumstances which can happen when a master file is not maintained for a project. This lack of continuity and corporate history is very concerning to the OAG.
- As noted above, questions remain regarding the actual length of the route constructed by HRM and the proposed length included in the estimates. Based on the information made available to the OAG, the length of the route from the end point on Washmill Lake Court to Main Avenue was calculated to be 1,200 metres. However, when reviewing the estimates provided by staff, the OAG was advised they were for 1) the entire route and 2) a route 1,000 metres long. The OAG is very concerned with

¹⁰ The estimate provided in 2007 by staff was \$4.4 million but excluded the bridge structure, which was subsequently estimated to cost \$2 million. In order to provide comparable information the \$2 million for the bridge structure was added by the OAG to the \$4.4 million estimate, resulting in a combined estimate of \$6.4 million.

June 2008

The estimated cost for the project ranged between \$7.088 and \$8.471 million.

this difference and wonders how there can be a question around something as fundamental as the length of the road and how it can be out by potentially as much as 20%.

- In June 2008, engineering staff updated the estimates for the Main Avenue route and these were provided to staff in the Design and Construction and Real Estate Services sections. According to the documentation, these revised estimates were for the route from Highway 102 to Main Avenue (1,000 metres), comparing a two-lane route (\$7.088 million) to a four-lane route (\$8.471 million), both of which included the water system.

It is concerning both estimates are less than the estimate provided the previous month for the two-lane road (with the water system). The OAG has to question why the cost went down from May to June.

When staff were asked by the OAG to confirm what the estimate was based on, they advised the estimate was for the entire route from Main Avenue to the end of Washmill Lake Court (in the BLBP) and this extended route was approximately 1,000 metres long in total. However, when asked for information regarding the length of specific sections of the route, staff provided conflicting information which showed the route was approximately 1,000 metres from Main Avenue to the eastern boundary of Highway 102, not including the portion under Highway 102 and connecting to Washmill Lake Court in the BLBP (approximately 200 additional metres).

The OAG is perplexed with this conflicting information. If the estimates were in fact for the one kilometre stretch of road from Main Avenue to Highway 102, then the estimate did not include approximately 200 metres of road. Based on the estimated cost per metre, this likely would have added an additional \$1.0 to \$1.3 million to the estimated cost, not including the cost of the required improvements to the existing Washmill Lake Court. Either way, it appears the costs were underestimated.

The OAG questions an estimating process which results in a lack of clarity regarding something as fundamental as what length of road is included.

In addition, there are few assumptions or notes provided with the estimate which would advise the reader of the scope of the estimate.

With respect to the difference between the estimates for the two-lane versus four-lane Main Avenue route, the OAG questioned why the difference between the two options was not higher.

There was only a 27% projected increase to build to a four-lane road, with apparently no change in the cost of the bridge structure. This is significantly less than the 60% increase suggested in 2007.

At this point, the OAG has to question why staff did not engage a consultant with the appropriate expertise to provide estimates particularly given staff had previously identified this possibility. Repeatedly throughout the completion of this project, the OAG was advised by some staff this was the first time HRM had designed or built this type of bridge structure (although from other staff, the OAG understands there were other projects completed previously, which were similar).

The OAG has to question why staff were unaware of the previous experiences and what lessons may have been learned from the process and applied to the Washmill project. Additionally, the OAG has to question why staff felt they could provide a reasonable cost estimate for something they did not feel they had the experience in either designing or constructing. The OAG understands HRM staff did contact staff at the Province of Nova Scotia regarding the potential cost of the bridge structure and received a high-level response. This was apparently used in the budget provided to Regional Council. It appears however, the scope on which this high-level estimate was based was not consistent with the proposed scope and did not mention the cost of critical portions of the bridge project such as the required detour road. It is again very concerning to the OAG, staff presented this information to Regional Council as the basis for a decision but did not identify the very high-level and potentially incomplete

nature of the estimate.

The OAG also questions what the responsibilities were for individuals being asked to provide an estimate on a project in such a circumstance. Unfortunately as previously noted, staff expertise and staff acting in areas where they may or may not have had the right skill sets became recurring themes as the OAG completed this project.

The approach used raises a number of significant concerns:

- 1) there appears to have been no questioning of the estimates provided
- 2) the supervisors involved did not appear to have the experience to recognize the errors in the estimates or to guide staff in a learning situation
- 3) the OAG was advised the manager responsible for the design and construction portion of the project was not involved in the Washmill project at this point. Given this project was something HRM had apparently not done before and it involved a significant budget, the OAG is concerned with a process and structure which would have the manager responsible not actively involved.

In reviewing the correspondence among staff, there did not seem to be any concern with the escalating costs of the project which was originally presented as a \$4 - \$5 million project using the Green Park Close route but had increased to at least \$8.471 million if the Main Avenue route was to be followed.

October 2008

- In October 2008 staff provided another report to Regional Council regarding a proposal to sell bulk lands in BLBP and the approval of the capital project for the Washmill Lake Court extension. This report appears to assume the route for the extension of Washmill Lake Court was now Main Avenue.

Prior to this, Regional Council had not been formally advised of or approved the route change. However, based on this report, this appears to be where they formally approved proceeding with the project which was now along the Main Avenue route.

The estimated cost for the project was now \$8.642 million.

The report provided a total estimated cost of \$8,641,772 for the entire Washmill project (including water, sanitary sewer and storm-water systems) with \$5,927,245 to be approved in that report and the balance (\$2,714,527) from a report to follow. The \$5,927,245 was funded through a \$1,694,223 contribution from the land purchaser and \$4,233,022 from the Business Park Reserve (Q121).

In essence, with this approval process, the total project was approved in pieces (different reports) with funding originating from several different sources, both internal and external. With this October 2008 report, it appears Regional Council effectively approved 69% of the project budget and agreed to defer approval of the remaining 31% of the budget to an unspecified future date. The OAG has issues with the effectiveness of this approval process.

This report to Regional Council is concerning to the OAG as it once again raises the following issues:

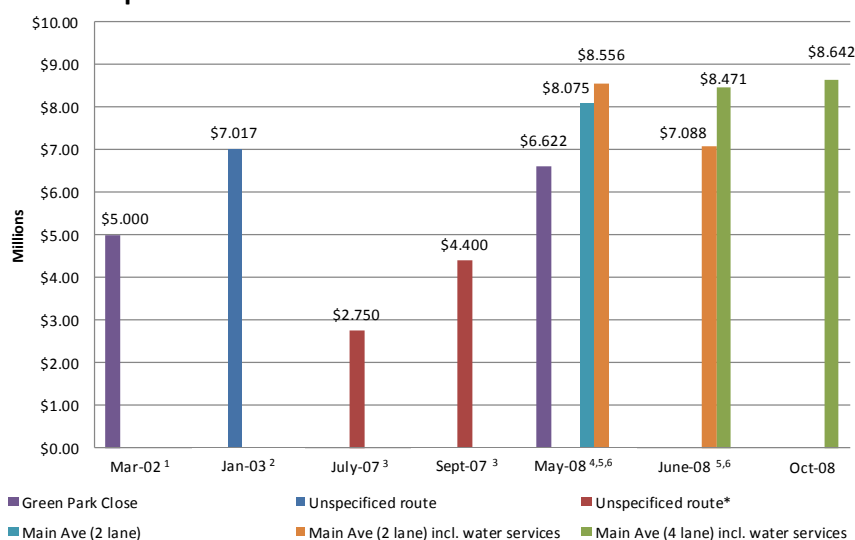
- it did not give Councillors a full history of the proposed project,
- it did not provide a comparison of the possible routes,
- it did not provide details on the standard to which the road was to be built (scope),
- it did not mention the scope had been increased to a four-lane road with sidewalks and bike lanes on both sides, a centre median, aluminum light standards and water service,
- it did not advise Regional Council of the lack of ownership, at the time, of lands required for the proposed route,
- it did not warn Regional Council of the basis for the estimate – meaning it was extremely high-level, at best,
- it did not identify the newly proposed route as costing significantly more than the previously proposed route,
- it did not lay out any risks associated with the project, such as the fact staff were inexperienced with this type of project and
- it did not provide a time line for completion of the project.

Overall, the OAG can only conclude there was more wrong with this particular report to Regional Council than was right. It appeared to be requesting approval for a major, unique capital project in excess of \$8.6 million, within the approval of a transaction to sell land in the industrial park.

In addition, when staff were asked why they would take a project to Regional Council based on such a high-level estimate, the OAG was advised the budget number was 'just a place holder'. Staff further indicated to the OAG, Finance was responsible for providing the budget information and they were just responsible for the information in the background and discussion sections. Given much of the detailed financial information was included in the discussion section of this report, this lack of clarity regarding responsibility for critical information is concerning to the OAG.

In addition, the OAG has significant concerns regarding the \$8.6 million estimate because even when reviewed at a very high level (see Exhibit 1), it raises questions which do not seem to have been asked or addressed by staff or management.

Exhibit 1 - Comparison of Cost Estimates Provided and what was Included⁷



*does not include the estimated cost of the bridge structure crossing Highway 102

	Mar-02 ¹	Jan-03 ²	July-07 ³	Sept-07 ³	May-08 ^{4,5,6}			June-08 ^{5,6}		Oct-08
Route Length (metres)		554	997	997	554	1200	1200	1000	1000	1000
Number of lanes		2/4	2	4	2	2	2	2	4	4
Water System							✓	✓	✓	✓
Sanitary Sewer					✓	✓	✓	✓	✓	✓
Storm water System			✓	✓	✓	✓	✓	✓	✓	✓
Sidewalk and bike lane on one side			✓	✓	✓	✓	✓	✓		
Sidewalks and bike lanes on both sides									✓	✓
Bridge under Hwy 102	✓	✓			✓	✓	✓	✓	✓	✓
Estimate Prepared by Consultant		✓								
Estimate Prepared by HRM Staff	✓		✓	✓	✓	✓	✓	✓	✓	✓

¹ This estimate was provided as part of the report to Regional Council in March 2002.

² This estimate was provided as part of the traffic study prepared in 2003. It does not specify the route but appears to generally follow the direction of the Green Park Close route.

³ In July 2007, an estimate was provided apparently for a two-lane route, however, the route is not specified. In September an estimate was provided for a four-lane road. Again, the route was not specified.

⁴ In May 2008, there were two estimates provided for the two-lane Main Avenue route, one with water services, one without water services.

⁵ The May 2008 estimate did not specify the length of either the Green Park Close or the Main Avenue routes. The lengths provided here are the result of estimates by the OAG based on other information provided. The June 2008 estimates indicated the length was approximately 1,000 metres from Main Avenue to Highway 102. Staff advised the OAG the estimate was actually for the entire route including the portion in the Bayers Lake Business Park and the length of the total route was 1,000 metres. Staff subsequently advised the OAG the distance from Main Avenue to Highway 102 was approximately 1,011 metres. Based on all the information gathered, the OAG has determined the total length of the route was approximately 1,200 metres.

⁶ The bridge cost noted in the May 2008 estimate was provided in a covering e-mail at \$2 million but was not included in the detailed estimate. The June 2008 estimate also did not include the cost of the bridge structure. The \$2 million provided for the May 2008 estimate was added for consistency and comparability.

⁷ Based on the best available documentation and information provided to the OAG at the time of the review. The comparison is intended to illustrate the OAG's interpretation of the information to the best of our knowledge and understanding.

After preparing the above analysis, the OAG cannot help but wonder:

- 1) Why a similar comparison was not prepared by staff at the time,
- 2) Why the project only increased by \$1.6 million from January 2003 to October 2008, particularly given the length of road appears to have more than doubled, significant upgrades were added, the 2003 estimate included a 15% contingency and the 2008 estimate included a 25% contingency and
- 3) If any of the managers and directors involved in the project asked these types of questions. In the documentation provided by all the staff involved in this project, there was nothing which indicated this type of oversight or questioning took place.

The OAG again has to question the accountabilities associated with the staff approvals provided on the report (October 2008) and if the approvals provided met the intent. The OAG cannot stress enough our concerns regarding the approvals as this report was approved by:

- four Managers
- three Directors
- the DCAO and
- the CAO

but yet it did not address the OAG concerns noted above.

In addition, in the documentation provided by staff for this project, there were no files specific to this report or supporting the financial information contained in it. It is again concerning to the OAG it appears members of management would approve a report to Regional Council without receiving and reviewing appropriate supporting documentation to ensure the information presented is factual and complete.

*December 2008
The estimated cost for the
project was now \$8.642
million.*

- The above concerns are heightened even further after reviewing the related report which was before Regional Council in December, 2008. Although it dealt specifically with the Washmill project, this report is even less clear and transparent than the October 2008 report.

In the background section, the report stated the Green Park Close route was originally created and designed for the

purpose of connecting to Washmill Lake Court and as a result the road was carefully aligned to the optimum underpass location and 'oversized' to a collector road standard.

Interestingly, the report then outlined a proposal where the lot purchased in 2002 (to facilitate the 'optimal' route along Green Park Close) would be sold at market value and the purchaser would as part of the transaction convey to HRM specific lands required for the new Washmill route (Main Avenue).

The report also stated the new alignment was a better overall fit but did not provide any comparison of the two routes or estimated costs and did not provide a meaningful explanation of why the new route was the 'new optimal'. It also, once again, did not indicate the quality of the cost estimates and, by default, implied the estimates included in the report were reasonably reliable and reflected the total expected project cost.

The report also noted a 'developer contribution' as a funding source. On further investigation, it was determined this was primarily the estimated cost to the developer to build the portion of the road which was their responsibility, not a contribution towards HRM's portion of the construction.

The issues regarding the funding sources are most concerning to the OAG. In the report, the Budget Implications section stated the project was to be partially funded through the conveyance of a parcel of land with a fair market value of \$170,658 and a contribution of infrastructure by the developer, estimated at \$2,543,869.

Based on the information provided in this latest report, total projected cost of the project including costs to be paid by HRM and costs to be paid by the developer are believed by the OAG to have been as follows (see Methodology Section):

\$2,000,000	Bridge
6,471,114	Road
170,658	Right of way (land)
<u>\$8,641,772</u>	<u>Total projected cost</u>

The funding sources were apparently to be as follows:

\$2,543,869	Infrastructure provided by developer
170,658	Land conveyed to HRM by developer
1,694,223	Cost sharing provided by bulk lands purchaser
4,233,022	HRM Business Parks Reserve (Q121)
<u>\$8,641,772</u>	

Based on the OAG's interpretation of the information provided, it appears the portion HRM was responsible to design and construct was estimated to cost \$4.544 million (shown below), approximately half the total project costs.

Estimated cost of construction for entire route was estimated to be \$8.642 million. The estimated cost for the portion HRM was responsible to construct was \$4.544 million, and \$5.927 million was the total estimated HRM cost.

<u>\$ 8,641,772</u>	Total Projected Cost
	Less: Developer Portion
(2,543,869)	Infrastructure designed and constructed by developer as required when developing lands
(170,658)	land conveyed to HRM by developer
<u>(2,714,527)</u>	Total developer portion
5,927,245	Total HRM Estimated Cost
(1,383,376)	Oversizing (designed and constructed by the developer on HRM's behalf and at HRM's cost)
<u>4,543,869</u>	Estimated cost for portion to be designed and constructed by HRM
(2,000,000)	Less: Estimated cost for underpass
<u>\$ 2,543,869</u>	Estimated HRM road construction costs

The OAG finds this curious as the HRM portion of the road appeared to contain more significant 'rock cuts' and included the construction of the bridge structure at an estimated cost of \$2 million in addition to road work. This suggests HRM planned to construct approximately 700 metres of road for about \$2.5 million compared to the developer who apparently agreed to construct the remaining approximately 500 metres of road for \$3.9 million. While it is unclear exactly what each entity intended to construct, the OAG understands there are costs the developer would incur which HRM would not (such as inspection costs) however it is unlikely these costs alone explain the difference of approximately \$1.4 million. The

OAG is puzzled why HRM staff did not question the difference in estimated cost and confirm the HRM estimate was accurate.

Why did HRM staff feel they could construct approximately 40% more road, for approximately 35% less cost than the developer particularly considering the significant amount of 'rock cut' required along the HRM portion?

The estimated cost will be discussed in further detail later in the report when reviewing the total actual costs of the project and HRM's portion.

1.3 Engineering Design Contract and Application for Federal Infrastructure Funding

November 2008 to November 2009

November 2008

- In November 2008, HRM issued a Request for Proposal (RFP) for engineering services for the design of Washmill Lake Court Extension. This was however, only for the HRM portion of the extension, estimated to cost \$4.5 million per the reports to Regional Council in late 2008. According to the RFP, the contract requirements were to provide engineering services to design the extension of Washmill Lake Court into the BLBP connecting with Regency Park Drive (to Main Avenue). The design was to include:
 - improvements to the intersection of Washmill Lake Court and Chain Lake Drive,
 - upgrading Washmill Lake Court to a major collector road including four lanes with sidewalks, bike lanes, center median and lighting,
 - a four-lane underpass with bike lanes, sidewalks and lighting (a median was optional), providing six lanes of traffic on Highway 102, plus two auxiliary lanes,
 - extending Washmill Lake Court an additional 250 metres on the east side of Highway 102 (on the Main Avenue route) as a major collector complete with sidewalks, bike lanes and lighting,
 - concrete curb and gutters, piped storm drainage system but specifically excluded sanitary sewer and water main extensions.

The OAG questions why the sanitary sewer and water main extensions were included in the estimated cost provided to Regional Council in December, 2008 (and comprised approximately 8% of the total cost of the project) given they were specifically excluded from the RFP which was issued nine days earlier.

It is interesting to note in the initial RFP, Washmill Lake Court was to extend 250 metres on the east side of Highway 102 but this was increased to 500 metres in an addendum issued in early December 2008.

The OAG questions why adding 250 metres of road which HRM would be responsible for constructing (and therefore reducing the developer portion by 250 metres) did not:

- increase HRM's estimated costs and/or
- change the funding share as outlined in the report provided to Regional Council the following day (as noted in Section 1.2, December 2008).

This change brought the length of road which HRM was responsible to build to approximately 700 metres (of the total of approximately 1,200 metres).

Additionally, the OAG is very concerned something as fundamental as the length of the road to be constructed was not set before the RFP was issued.

In total, although it was not stated in the RFP, the HRM portion of the road to be designed was:

- approximately 700 metres, along the Main Avenue route from what was the then existing end of Washmill Lake Court,
- for upgrades required to the existing Washmill Lake Court (approximately 200 metres).

The OAG is confused as to why staff would issue an RFP to design a route given HRM had not yet fully determined the requirements for many aspects of the road.

This is important to remember, as further in the report, the OAG will discuss the estimate received from the consultant compared with the original estimate provided by staff in October 2008.

December 2008

The RFP specified the contract was to be awarded in January 2009 with a deadline for delivery of the detailed design during June 2009.

- In December 2008, the RFP for Engineering Services closed.

Through December 2008 and January 2009, discussions continued (but were not finalized) between HRM staff and a developer regarding the land required for the Main Avenue route.

February
2009

- In February 2009, staff advised Regional Council the sale of bulk lands in the business park (approved in October 2008), which was to provide \$1.7 million in funding for the Washmill project, had fallen through.

At the same time, the RFP for engineering services which closed in December 2008 was brought to Regional Council for award (\$195,939 including net HST). It is interesting to note the RFP stated the award would take place on January 27, 2009 with the deadline for delivery of the final design in June 2009. Given the award did not happen until late February, the deadline was moved to the end of July. Effectively, the project was delayed by a month from the start because HRM was late issuing the award.

Given the loss of the cost-shared funding, the OAG would have expected to see the report to Regional Council identify the project as on hold as it was no longer fully funded. However, in discussions with staff, the OAG understands the design portion of the project proceeded at this point as it was anticipated there would be interest from other parties in purchasing the lands in the park. If this happened, the Washmill extension would still be required and HRM would be in a better position to move forward if the design work for the extension were completed. As a result, staff felt it was prudent to complete the design so HRM would be in a better negotiating position when this happened.

The OAG is concerned this was not conveyed to Regional Council, particularly in the RFP award report. It seems this would have been the most appropriate place to advise Regional Council the plan they had previously approved had changed and to gain their approval to proceed based on the new plan.

This, however, is not what happened. In fact, staff did not mention the lost funding in the award report, again raising concerns for the OAG regarding the open and transparent provision of information to Regional Council, as well as the identification of risk areas.

The funding source for the engineering design portion of the project was identified as project number CQ300743 – Bayers Lake & Ragged Lake. The OAG does not understand why this work was not charged to project CQ300748 – Washmill Lake Court Extension. This resulted in the project design costs not being captured as part of the total cost of the Washmill project.

This is a significant concern for the OAG because it illustrates the difficulty in tracking total project costs against what had been approved by Regional Council.

Unfortunately, this concern around not tracking and reporting on total project costs is a recurring theme throughout this project.

- In late February 2009, a project start meeting was held with the successful proponent for the engineering design services consultant contract. It is interesting to note, at this point according to staff, the specifics for the road had not yet been set. There were still discussions happening at HRM regarding scope options, possible collector roads, etc. and in the early days of the contract,

HRM apparently expected to receive design options for at least four separate alignments, although this was not identified in the RFP document as a requirement.

The OAG is perplexed as to why HRM would award an RFP for engineering design services when they had not yet decided on key, high-level specifics of the project.

It is also interesting to note, according to staff, there was no particular urgency at this point. Although there was some pressure to develop the lands in the BLBP which was contingent on the road being built, staff stated they expected slippage on the delivery date for the deliverables as is typical in this type of design project. The OAG

March/April 2009

The estimated cost for the HRM portion was now \$5.800 million,

questions why HRM supplies a deadline, if it does not intend for the consultant to meet it and then feels it can hold the consultant accountable when it feels the situation warrants it or issues appear dealing with project completion or the need for an immediate budget estimate.

- In late March and during April 2009, staff presented Regional Council with a prioritized list of capital projects for application to the infrastructure stimulus funding program. This list included the project to extend Washmill Lake Court, however it was not recommended for submission. It is interesting to note:

- the estimated cost was listed at \$5.800 million, which is \$0.127 million less than the \$5.927 million estimate (from December 2008) for HRM's portion and \$2.842 million less than the total cost estimate provided in the October and December 2008 reports to Regional Council.

- the report stated the project was included in the 5-year capital plan however, it was not listed in the 2008/09 capital budget and the 2009/10 capital budget had not yet been tabled, and
- the project was categorized at 'shovel readiness' of 120-365 days.

This shovel-ready estimate raises a number of questions for the OAG:

- HRM was not scheduled to receive final drawings or substantive estimates for the project to be used as part of the tendering process until July – approximately 120 days away.
- It was known any projects funded under the infrastructure funding program were required to be completed by March 31, 2011. When staff were asked how long they originally thought it would take to complete the project, they were unable to provide an answer.

In the documentation provided to us, the OAG found no indication of any discussions regarding the ability to meet the deadline. As a result, the OAG questions if these discussions happened. If they did

not, it raises serious concerns for the OAG regarding how projects were assessed for suitability for inclusion in the application process.

May 2009

- In late May 2009, the draft 2009/10 capital budget was tabled with (and approved by) Regional Council. The budget included the Washmill project at \$8.642 million planned for the 2010/11 fiscal year, with funding of \$4.408 million to be provided by external cost sharing. This is concerning as:

Estimated HRM project cost was now \$7.507 million and budgets were now \$8.838 million including the engineering design services charged to a separate project.

- the amount appears to include \$2.842 million in costs not included in the presentation to Regional Council the previous month,
- based on our understanding of the process used to record the value of new roads constructed by developers, these costs would not be charged to the capital budget or the project account. Including them in the capital budget appears to artificially inflate the budget by \$2.842 million,
- it apparently still included the \$1.694 million of cost sharing which was no longer available and
- the description provided in the budget book was very high-level and did not provide any information regarding the scope of the project other than it included an underpass at Highway 102 and when completed would link Washmill Lake Court to Regency Park Drive and Main Avenue.

In addition, this extremely high-level information leads the OAG to question what specifically Regional Council is approving when they approve the capital budget. Are they simply approving the project concept and high-level budget amount without any specific information around the scope of the project? The answer to the question appears to be yes.

It is also interesting to note there is no mention of the contract awarded in February 2009 for the design of the Washmill Lake Court extension.

July 2009

- In July 2009 staff provided an update to Regional Council regarding infrastructure funding program options. The update identifies the original HRM application was not supported and HRM was being encouraged to re-submit their application with a different project(s). Regional Council directed staff to return in early August with a 'revised

capital funding strategy'. Regional Council also approved the submission of a second non-project specific application to the infrastructure funding program.

Apparently, the design portion of the Washmill project moved forward during the summer months. Although the completion of the engineering design and cost estimate was due at the end of July, there does not appear to be concern raised by staff with respect to its progress until the end of August/early September. This is particularly concerning given there were deliverables due before the final design and cost estimates were to be produced, such as 60% drawings. As of late August/early September these early stage deliverables had not yet been received.

Late August 2009

- In late August 2009, the OAG understands the Washmill project was selected for application under the infrastructure stimulus funding program. Staff from Real Estate Services and Design and Construction Services who were heavily involved in the project apparently attended a meeting with staff from the Infrastructure and Asset Management business unit regarding the infrastructure fund application requirements. It is interesting to note the person coordinating the information gathering and application process specifically stated in an email "the most important piece with the timeline is that the work is complete by March 31, 2011". However, the OAG has found no documentation indicating staff, at this point, made senior management or staff supporting the infrastructure application aware of the current issues with the project, including the design being more than a month overdue, which could jeopardize meeting the deadline.

The OAG does not understand why these risk areas were not specifically documented, particularly given staff were specifically asked.

September 2009

- In early September 2009, staff in Real Estate Services apparently followed up with the engineering services consultant regarding the delays in receiving the contracted for drawings and cost estimate,

requesting an updated estimate for 'budget purposes' and apparently received a verbal estimate indicating the total estimated project cost would be "safer up in the \$10m estimate at this point". This is concerning to the OAG for a number of reasons, including the information was not being used 'for budget purposes' but instead was used in an application for federal infrastructure funding.

How did staff expect the consultant to provide appropriate information when staff were not clear regarding the intended use of the information?

In addition, given the critical nature of the timing of completion of the project why would HRM staff not have an open and frank discussion with the consultants regarding their ability to meet the deadlines necessary for the project to be completed by March 31, 2011 and follow these discussions up in a more formal manner?

Estimated HRM cost was now \$11.579 million. The budgets remained unchanged at \$8.838 million.

To the best of the OAG's understanding, the verbal estimate apparently did not include the cost of the engineering design services (\$195,939) or the cost of the oversizing of the developer portion of the road (\$1.383 million).

The OAG questions what HRM staff thought the basis for the estimate was, given 60% drawings had not yet been received.

The OAG is also very concerned staff would use information provided at this level in an application for funding without completing any due diligence regarding the reliability and accuracy of the information or having any documentation to support the class of estimate it represented or even have the estimate confirmed in writing.

The OAG has a number of questions with this approach:

- Why was the infrastructure application for only \$10 million? Why was it not increased for the cost of the engineering design consultant and oversizing portions to be constructed for HRM by the developer, which were known?
- Why was there no contingency added to the \$10 million verbal estimate apparently provided by the consultant?
- Why did no one question why the estimate had increased from \$4.544 million for the construction

of the HRM portion of the project (approved October 2008) to \$10 million – bringing the estimated project cost for HRM’s portion to \$11.579 million, an increase of just over \$7 million, in less than a year?

- Why were staff from Real Estate Services interacting directly with the engineering services consultant instead of staff from the Design and Construction Services group who hired them and who should have been responsible to manage the project at this point?
- Why would staff accept a verbal estimate, particularly given they knew this was going to be used to determine the funding to be requested from the infrastructure funding program?
- Did Real Estate Services staff have the right experience and expertise to be effective in these types of dealings?
- Did staff question why the estimate had increased from what was expected?
- Did staff question what level of assurance could be placed on the estimate, particularly given it was not supported by any detailed information and was not in writing?
- Why did staff not formally highlight to senior management or Regional Council the potential risks associated with going forward with this very high-level estimate?
- Were staff not concerned the estimate could increase even further given it had already gone up significantly from the internal estimates without any supporting information and given it was still at best a high-level estimate?
- Given the delays experienced, did staff discuss the infrastructure deadlines with the consultant prior to submitting the application? The OAG suggests it would have been reasonable and appropriate to ensure the consultant was aware of the new deadlines and was committed to meeting them before HRM submitted its application.

Unfortunately, the OAG found no evidence this happened.

It is interesting to note, the engineering services consultant verbally asserted to the OAG, the estimate provided was for \$13 million - \$10 million for high-level quantity based costs (known costs at time) and a 30% provision for expected items not specifically included in the \$10 million. As the information was exchanged verbally, it is not possible for the OAG to know the actual conversation which occurred. Either way, the estimate provided was significantly less than the actual costs eventually incurred.

- Early September 2009, staff provided an update to Regional Council on the infrastructure funding program application.

The Washmill project was included in the presentation as a 'recent project of interest' at a budget of \$8.642 million. On two subsequent slides in the same presentation, the Washmill project is again mentioned but at a budget of \$10 million, without any discernible difference in the project.

Given the project completion deadline under the infrastructure funding program was known to be March 31, 2011, the OAG questions why the Washmill project would still have been included given:

- HRM had not yet received design drawings at any percentage of completion,
- HRM had only a high-level, verbal estimate of the costs and
- It appears HRM had not yet secured the right to the land for the proposed extension.

The OAG again questions why Regional Council was not advised of these risks.

HRM staff advised the OAG they believed (based on informal conversations with Federal Government staff members) if HRM did not submit the Washmill project HRM would lose the \$6 million in cost-shared funding. While the OAG understands the desire to not lose the available funding, these 'unofficial' discussions should not have been sufficient to proceed with the project. As a minimum, the OAG is of the strong belief staff had a responsibility to

advise Regional Council of the entire situation, including the perceived pressure to proceed with this particular project, the current state of the project (i.e. no drawings, high-level verbal cost estimate, the increasing cost estimate) such that Regional Council could fully assess the risks and determine if they still wanted to proceed.

Simply because one party favoured this project, does not mean HRM should accept it without fully understanding the risks.

Estimated HRM cost was \$11.579 million and the approved budgets were \$8.838 million.

- Regional Council approved the list of projects to be submitted for infrastructure funding including the Washmill project at \$10 million.
- Staff prepared and submitted the Infrastructure Stimulus Fund Project applications, including one for the Washmill project with total eligible project costs noted as \$10 million.

At this point, the estimated cost was now apparently \$10 million for a stretch of road which was approximately 700 metres long, compared with the originally approved budget of \$8.642 million for a stretch of road approximately 1,200 metres long.

Additionally, based on the way this information was compiled, the OAG understands it did not include the \$1.383 million to be charged to HRM to oversize the developer portion of the road or the \$195,939 in engineering design consultant service costs. As a result, although it had not been articulated to Regional Council and was not included on the infrastructure stimulus funding application, the total estimated cost for HRM's portion of the Washmill project was more likely \$11.579 million at that time.

In addition, if the cost estimate was truly \$13 million at this point, there was an additional \$3 million in costs which could potentially have been included in the application for infrastructure stimulus funding.

It is concerning to the OAG the staff who were leading the project did not include the known \$1.579 million commitment in the infrastructure funding application.

This significant increase in budget was neither raised with, nor specifically approved by Regional Council at that time.

- The following day, HRM received information from the engineering services consultant advising additional environmental work was required around expected issues, in order to meet Provincial requirements and this process was likely to take several months.

The OAG has to question why HRM would have committed to completing the project under the infrastructure funding program with such a significant item outstanding, and why at a minimum, this would not have been noted as an area of risk.

- Several days later, HRM received informal notification the Washmill project application submitted for the infrastructure funding program had been accepted.
- Over the next several months, there was significant correspondence between Real Estate Services, Design and Construction Services and the engineering services consultant regarding the outstanding deliverables for drawings and cost estimates on the Washmill project, with HRM staff indicating the delays were potentially jeopardizing the project and HRM's ability to meet the infrastructure funding program requirements.

The OAG saw no evidence of HRM discussing the decision to apply for infrastructure funding for this project and the resulting implications on timing with the engineering services consultant, prior to submission, in order to obtain their commitment to meet the new requirements. If the engineering services consultant had not been able to achieve deadlines to date, why would HRM proceed without confirming they would be able to meet these new, tighter and more stringent deadlines and why would HRM then not get the agreement of the consultant in writing to aid in ensuring accountability? This likely would have been a prudent course of action given missed deadlines to that date.

Late October 2009

- In late October 2009, HRM staff from Real Estate Services provided internal staff with a copy of a project charter, which included a high-level scope for the project, key deliverables as well as several risk areas.

It is interesting to note although the project is already three months behind schedule, this is not mentioned as a potential risk, nor are the concerns related to the ability to complete the project by March 31, 2011. In addition, securing the private lands required for widening along the existing Washmill Lake Court is noted as a medium risk, but there is no mention made of the fact HRM had not yet secured the right to the land needed to construct the road on the eastern side of Highway 102, or the other parcels of land anticipated to be required. According to this document, the project sponsor was Real Estate Services and the project delivery was the responsibility of staff in Real Estate Services and Design and Construction Services.

*November 2009
Estimated cost of HRM's
portion was now \$16.308
million. The budgets remained
unchanged at \$8.838 million.*

- In mid-November 2009, HRM received a written estimate from the engineering services consultant indicating the extension of Washmill Lake Court would cost \$14,729,315, excluding HST, based on 60% drawings. This was specifically for the portion to be constructed by HRM and did not include the \$1.383 million for oversizing of the developer portion of the road (to be constructed by the developer and billed to HRM) or the \$195,939 for the engineering design services. The OAG understands this estimate was for the route from the end of Washmill Lake Court to a point approximately 500 metres past the eastern boundary of Highway 102 for a total length of approximately 700 metres and included upgrades to the existing Washmill Lake Court. This estimate was significantly higher (47%) than the \$10 million verbal estimate accepted in September 2009 (just 78 days earlier), and drastically higher than the \$4.544 million estimate provided to Regional Council in 2008. It is concerning to note, this was still not a Class A estimate as it was based on only 60% drawings.

In essence, it seems likely staff went to Regional Council in 2008 with a budget which was low by \$10.4 million. The OAG has to question how Regional Council could be expected to make reasonable and appropriate decisions when the information provided to support the decision process is this inaccurate.

1.4 Revised Design and Road Construction – Project Requirements Revised to Fit Remaining Budget

November 2009 to December 2011

November 2009

- Following receipt of the estimate from the engineering services consultant, there were discussions among HRM staff regarding how the project scope could be changed from the previously recommended scope to reduce the cost. It appears staff were now building what the budget would allow versus what was previously felt was required. This approach to determining capital project needs is extremely concerning to the OAG.

These discussions included comments by one staff member suggesting the roadway could be reduced to two lanes as was originally planned.

In addition, this staff person noted they did not recall any analysis being done by HRM staff to suggest four lanes were really needed, as opposed to the two lanes originally contemplated.

This causes the OAG to again question how HRM staff determine capital project requirements, particularly with respect to new infrastructure; if they are truly sized to meet the needs of the reasonably foreseeable future; how often the requirements are set without fulsome analysis and how often projects are potentially 'over built'.

December 2009

- In early December 2009, a development agreement was presented to Chebucto Community Council with a recommendation by staff it be approved. The report advised:
 - the development agreement would facilitate the construction of a new collector road linking Regency Park Drive with Washmill Lake Court via an underpass crossing Highway 102
 - HRM would be responsible for construction of the underpass and the street connections from the existing Washmill Lake Court. The portion of the street extending Regency Park Drive would be constructed by the developer. The report noted as

long as the underpass was substantially complete by the Spring 2011, HRM would be reimbursed for two thirds of its costs through infrastructure stimulus funding. Although the report did not mention this, the two-thirds cost sharing was to a maximum of \$6.667 million based on eligible project costs of \$10 million submitted in the application.

This situation is concerning to the OAG as apparently HRM had applied for and received funding approval for the Washmill project in September but it appears only now was dealing with the legal right to build on the land required for the road on the Clayton Park side of Highway 102. If the negotiations with this developer had fallen through, it is unlikely HRM would have been in a position to meet the requirements of the infrastructure program and would have spent significant taxpayer money designing a road along a route which could not be built without likely significant additional cost and time delays.

The level of commentary provided in the report is concerning as it provides no indication of the significant risks with the budget and the ability to meet the Spring 2011 deadline, both of which were known to staff at the time. It also did not advise there would be no cost sharing of any cost overruns if they occurred, which of course was the eventual outcome and was known, or should have been known at the time to be likely.

Based on the report provided, Chebucto Community Council scheduled a public hearing for early January 2010 as the next step in the approval process for the development agreement.

- In early December (at the same time the development agreement was presented to Chebucto Community Council), staff (through e-mail correspondence) discussed potential design and scope changes which could save money on the project and one staff member said

“Councillors would appreciate an early tipoff to a potential issue”.

Additionally in e-mail correspondence, staff stated “Councillors are the ones who ultimately approve these budgets so if upgrading is important to them they can help push additional funding along”.

This comment is once again confusing to the OAG as it seems to indicate staff felt Councillors were looking to add upgrades to the scope of the project when it was, in fact staff who developed the scope of the project and advised Regional Council of the 'optimal' requirements in the first place. It appears the scope of the project was only changing as the project had effectively exceeded the stated budget at that time.

- Based on these discussions, staff drafted an e-mail addressed to two Regional Councillors and copied to a number of internal staff. The e-mail advised of the budget challenges with the project and of the resulting decision to revert to a two-lane road versus the four-lane road previously included in the estimate.

This e-mail was, however only sent to two of the area Councillors, not the entire Regional Council who had approved the project.

The OAG questions why Regional Council in its entirety was not advised and given the significance of the change in scope and budget, why the changes were not brought to Regional Council for approval?

From December 2009 through February 2010 there was on-going correspondence among staff regarding possible design changes and frustrations were expressed with the engineering services consultant. At some point in the process, the decision was made to split the project into phases so work could be done on the first phase (land clearing, etc.) while the design was being finalized.

Throughout this period, there did not seem to be any discussion of what the new estimated cost for the project was and there was no information brought to Regional Council regarding the changes (in budget and scope) which were being implemented.

January 2010

- January 2010 – HRM received official notification of the approval of the Washmill project under the Infrastructure Stimulus Funding program.

- In early January 2010, a public hearing was held regarding the development agreement which had been brought to Chebucto Community Council in December 2009 and included the extension of Washmill Lake Court. The agreement was approved by Chebucto Community Council following the public hearing.

It appears, with the approval of the development agreement, HRM effectively secured the right to the lands required to construct the road (on the eastern side of the highway) to extend Washmill Lake Court along the route connecting to Main Avenue and formalized the requirement for the developer to construct the portion of the road related to their proposed development.

The OAG is extremely concerned the project was submitted for infrastructure stimulus funding before this critical component was secured. If the development agreement had not been approved, the OAG wonders if the project could have proceeded or if the agreement had been delayed, what would have happened to the infrastructure stimulus funding?

It is interesting to note the purchase and sale agreement for the land required to build the road on the Clayton Park side of Highway 102 was not signed until March 2010, almost three months later and more than two weeks after the tender for the Phase I construction work was awarded.

- In late January 2010, Regional Council approved a revised 2009/10 capital budget, which included funding for the Washmill project (CQ300748), by year as follows:

2009/10	\$1.5 million
2010/11	8.5 million
2011/12	0
2012/13	0
2013/14	0
Total	<u>\$10.0 million</u>

There is no indication if this budget included the \$1.383 million required for the oversizing of the developer portion of the road, however information available to the OAG

The total estimated HRM cost remained at \$16.308 million. The combined budgets increased to \$10.196 million.

suggests it likely did not, which is of significant concern. The \$10 million provided in the 2009/10 capital estimate also does not appear to include the \$195,939 for the engineering design services.

Based on the established capital budget process at the time, staff had the ability to spend the first \$1.5 million but were not permitted to spend or commit the \$8.5 million until the 2010/11 budget was approved, unless there was advance capital approved¹¹. The \$8.5 million therefore was a 'planning' amount at this point and had not been approved for expenditure.

The information provided in the budget raises a number of concerns for the OAG:

- 1) The OAG questions why the amount of \$10 million was used in the budget book when the \$14.729 million estimate had been provided by the consultant more than two months previously, given there were no reductions noted in the scope of the project to justify or support the \$10 million estimate.

The OAG would have expected the budget to reflect either the \$14.729 million estimate recently received plus the \$1.383 million for the oversizing or the \$10 million estimate with an explanation of the reduced project scope required in order to meet the budget.

- 2) Also of particular importance to the OAG is the required budget for the construction of the HRM portion of the road and bridge structure now appeared to be \$10.196 million (excluding costs to oversize the developer portion of the road). This is concerning as this portion of the project was estimated at approximately \$4.544 million in the report provided to Regional Council in October 2008 (just two years prior), with \$1.694 million to be provided via cost sharing, resulting in a net

¹¹ Advanced Capital Project Funding is a process whereby up to 50% of the funds from "Year 2" of the annual capital budget for a specific project are approved in advance of the start of year 2. This is done for projects which have a longer lead time or which need to have contracts in place for the start of the fiscal year in order to meet deadlines. The Advanced Capital Project Funding Policy sets out the criteria for a project to be included. Generally this provides the mechanism for the procurement process to start prior to the start of the fiscal year and allows the funds to be committed prior to the start of the fiscal year, but does not allow the funds to be spent or paid until the new fiscal year has started.

estimated cost to HRM of \$2.842 million. By default, HRM now must have anticipated (after receiving \$6.667 million in infrastructure funding) costs of \$3.529 million to construct the same portion of road and bridge but with a reduced scope (two lanes vs. four lanes for a portion of the road).

HRM was now paying an additional \$700,000 (24%) for a reduced scope without this being identified to Regional Council.

The OAG would suggest presenting significant budget changes on a major project by simply including the change within the capital budget, with its multitude of projects, and then expecting Regional Council to provide a meaningful approval of the change is ineffective and unsupportable, at best.

The OAG questions the effectiveness of HRM's processes and system of internal controls which allowed this to happen.

- 3) It is also concerning to note there was inconsistent information contained within the Approved 2009/10 Capital Budget Book. Page 10 lists the total cost for the Washmill project for 2009/10 as \$1.5 million with cost sharing of \$1.0 million and page 22 of the book lists the total cost for the 2010/11 year as \$8.642 million with cost sharing of \$4.408 million. Based on these two schedules, the total cost of the project over the two years was to be \$10.142 million with cost sharing of \$5.408 million. However, a schedule further in the budget book (with no page number) shows the cost for 2009/10 as \$1.5 million and 2010/11 as \$8.5 million for a total of \$10.0 million. Based on other information (verbal estimates, presentations to Regional Council, etc.) available to the OAG, it is assumed the \$10 million was the intended number. However, this situation causes the OAG to again question the effectiveness of using the annual capital budget book as the funding approval mechanism for significant projects such as this. Based on the information presented it is unclear exactly what funding Regional Council approved. This same situation exists with regards to the

information presented in the budget book for the cost sharing available for the project. The total available cost sharing for the Washmill project noted on pages 10 and 22 was \$5.408 million. However, the Project Supplemental Report on page E6 notes the total as \$6.667 million.

Again the OAG understands the \$6.667 million was the correct amount but questions a process which provides conflicting and inaccurate information when requesting a decision by Regional Council, particularly within the same document.

February 2010

- In early February 2010, the tender for Phase I of the Washmill project (clearing, grubbing, rock removal, and detour road) was issued. HRM staff advised the OAG the items and quantities presented in this tender were specified by the engineering services consultant.
- In mid-February 2010, a report was provided to Regional Council advising them the Capital Steering Committee had approved \$36 million in advance capital from the 2010/11 budget as allowed by policy. This amount included \$1.0 million for the Washmill project. Combined with the \$1.5 million approved in the 2009/10 capital budget, this brought the amount available to commit on this project to \$2.5 million.
- In early March 2010, the award of the tender for Phase I in the amount of \$2,073,751 (including net HST) was approved by Regional Council.

March 2010

Estimated cost of HRM's portion remained unchanged at \$16.308 million. The budget remained unchanged at \$10.196 million.

It is interesting to note the budget implications section of the report showed a cumulative unspent amount of \$2.5 million which is the total budget approved to date but did not reference the approximately \$200,000 already committed (for the engineering design) as it was charged to a different project number.

The report's budget implications section also included a note stating the total cost of the project was \$10 million to be cost shared, with two-thirds paid by the infrastructure stimulus program. The report did not mention any project cost increases, any of the scope changes being implemented, or the \$1.383 million commitment to the

developer for oversizing of the Regency Park portion of the road. Again, the OAG questions why this information was still not provided to Regional Council as it represented a significant change from what had previously been provided, particularly given staff had now been aware of the situation for more than three months.

In essence, Regional Council was asked to award a tender without being told the total costs and/or scope of the project were changing.

- Two days later, staff received notification a plan to use the existing pyritic slate on site to build the required detour road had been denied by the Provincial Government. As this type of request was not common practice, the engineering services consultant apparently had preliminary discussions with staff at the Provincial Department of Environment enquiring if this would be approved and were apparently advised it would be as there was precedence on past projects in the area. The OAG was advised, unfortunately, this approval was not documented, and was outside the authority of the provincial staff person it was discussed with.

Staff subsequently advised the CAO of the situation and indicated this would result in cost over-runs of about \$250,000 or 2.5% of the total project cost (not the tender amount). According to staff, all construction projects have a 10% cost over-run component automatically built in and as such no additional approvals were required to proceed.

However, HRM's Procurement Policy requires written approval from the Director for cumulative amendments exceeding the greater of 10% of the original award amount or \$10,000 and CAO approval for cumulative amendments that exceed the greater of 15% of the original award amount or \$15,000.

Estimated cost of HRM's portion was now apparently \$16.558 million. The budget remained unchanged at \$10.196 million.

Given this was a 12% increase over the original tender award amount and was greater than \$15,000, the OAG believes, according to the documented policy, formal approval from the Director or possibly the CAO should have been obtained.

Late April 2010

- In late April, HRM staff e-mailed the engineering services consultant advising they were preparing to issue the tender

May 2010

for Phase II and asking for confirmation the estimate was “still around \$8 million for this phase”. There appears to be no documentation indicating what the revised total estimated project cost was at the time, or indicating what changes had been implemented compared to the project approved by Regional Council.

- In early May 2010, a tender was issued for Phase II (Road Extension and Bridge Structure) of the project.

Although the tender was issued, the OAG understands the design was still not finalized and there were a number of items outstanding.

The OAG was advised by HRM staff the items and quantities presented in this tender were specified by the engineering services consultant.

- In May 2010, correspondence indicates HRM staff were engaged in discussions with the developer regarding who was responsible for the storm water and downstream capacity along the Washmill Lake Court extension on the eastern side of the highway. The correspondence included some HRM staff questioning the level of HRM responsibility suggested by the developer and the Development Engineering section of Community Development.

The OAG questions why these types of issues were only raised at this point, particularly as the requirements (as noted by the developer) were addressed in the HRM Municipal Services Systems design standards, known as the ‘Red Book’.

HRM staff advised the OAG these lands were originally designated as watershed lands by the Halifax Regional Water Commission and as a result, there was no development considered for these lands and therefore, the upstream developer, not HRM should have been responsible for the resulting costs. This assertion is particularly concerning to the OAG.

While we can agree the lands may have originally been designated as watershed, this status had changed and HRM staff were fully aware of the plan for these lands to be developed. The position taken by some HRM staff is particularly puzzling to the OAG, given they all knew or

should have known HRM obtained the land required for the extension of Washmill through the approval of a development agreement for the upstream lands.

To suggest development was not planned or anticipated at this point is confusing to the OAG.

In addition, Section 5.2.4.1 of the 'Red Book' as it existed at the time, was clear "the storm system is to be designed for flows from all lands within the watershed in which the system is situated, and lands anticipated to be tributary to the watershed, either by future development or re-grading".¹² In addition, Section 5.2.3 states "the downstream storm system shall have the capacity to convey discharge from its fully-developed watershed."¹³ This was specifically relevant in this situation as the topography of the upstream land being developed resulted in water runoff naturally flowing down to the road area being constructed by HRM. The OAG understands the regular application of these sections of the 'Red Book' resulted in the so-called downstream party being responsible to build the infrastructure to accommodate the storm water flows from fully developed upstream lands. As a result, the OAG questions why some of HRM's staff expected HRM to treat itself differently from any other party constructing infrastructure in HRM and if they truly felt this should have been the responsibility of the upstream developer, the OAG questions why the requirement was not included as part of the development agreement for greater certainty.

Even more concerning is the Design and Construction Services section was responsible for the standards included in the 'Red Book', which ensures (when adhered to) all the infrastructure in HRM aligns and is consistent irrespective of the parties who are responsible for construction, and arguably should have been fully aware of the requirements from the start of the project.

¹² Halifax Regional Municipality Public Works and Transportation Services 2002 Municipal Service Systems (Red Book), page 28

¹³ Ibid

- A week after asking the engineering services consultant about the expected costs of phase II, HRM received a response indicating the cost estimate for the remaining portion of the project was not yet finalized but at last review it was higher than \$8 million but not significantly higher. HRM staff advised the OAG this lack of timely responses from the consultant was a consistent issue throughout the project.

- Shortly thereafter, correspondence began among HRM staff discussing the possibility of the deadline for completing the project being extended under the infrastructure stimulus program. However, based on the documentation provided to the OAG, there was no communication to Regional Council at this point to advise them of the risk or likelihood of not meeting the deadline.
- In late May 2010, the tender for Phase II construction of the road closed.

Only one bid was received and it was in excess of \$12.3 million (including net HST), significantly more than the \$8 million staff were expecting based on the feedback from the engineering services consultant.

As a result, staff again tried to revise the scope of the project in an attempt to bring the cost down.

The OAG questions why this was still an option at this point. One would assume when the plans were revised after the first estimate, a full assessment would have been completed with the minimum requirements identified and specified in the tender.

Estimated cost of HRM's portion was now \$16.235 million for a reduced scope of work. The combined budget remained unchanged at \$10.196 million.

The OAG also has to question why the estimates were so far off (bid was 54% higher than anticipated based on the information from the consultant). It appears HRM issued the tender before receiving Class A cost estimates from the engineering services consultant. The OAG understands there was significant pressure to get the project completed by the March 31, 2011 deadline, but proceeding to tender before Class A estimates were provided, which resulted in splitting the project into additional phases and having to

tender the work twice, does not seem to be an efficient or cost effective approach.

Why would HRM expect to be able to issue a realistic tender based on anything other than a Class A estimate given their stated lack of experience with these types of projects and even experiences to that time with the current project?

The OAG notes there is also a disconnect between the detailed \$14.729 million estimate previously provided by the engineering services consultant and the current tender amounts which totalled more than \$14 million for Phases I and II, and with a reduced scope of work. The OAG understands the \$14.729 million estimate was provided based on 60% drawings, which were subsequently changed.

It appears, staff reduced the scope of work but the cost estimate increased. Were the initial changes not effective to reduce the cost, was the \$14.729 million estimate that far off, or both? The OAG was advised the contract strategy (splitting the work into phases) likely increased costs.

The OAG is curious to understand what was missing in the process which allowed HRM to repeatedly receive or prepare estimates for so much less than the tendered price. The OAG is also concerned with why staff did not return to Regional Council for direction at this point as the project had clearly changed, both in scope and estimated cost?

- In late May 2010 (four days later), the capital budget for 2010/11 was tabled with Regional Council for approval. The budget included \$8.5 million for 2010/11 and nothing for subsequent years for the Washmill project. Although it is not stated in the budget documents, the total budget for the project was still \$10.0 million. It is interesting to note the project description included in the budget book did not discuss any of the scope reductions staff were implementing and did not indicate the potential budget increases required based on the most recent tender submission and did not address the \$1.383 million required for the oversizing costs. It is concerning to the OAG although it should have been clear at this point this would not be a \$10.0 million project, HRM staff continued to use this amount and did not provide timely, accurate

Estimated cost of HRM's portion with a reduced scope of work is unknown; the combined budgets remained unchanged at \$10.196 million.

Estimated cost of HRM's portion, with the reduced scope of work is unknown but has increased by +\$0.5 million. The combined budgets remained unchanged at \$10.196 million.

information to Regional Council when asking them to make decisions.

- Also in late May 2010, the Director of the business unit responsible for 'managing the project' provided an update to HRM's senior management which indicated:
 - 1) "we expect to be about \$500k over budget" (24%) related to Phase I.
 - 2) the tender for Phase II had closed and was several million over budget,
 - 3) staff were trying to identify where cuts could be made but they would not be able to finish the project on budget and
 - 4) there were on-going discussions with the developer regarding HRM's responsibility to accommodate storm water flows as HRM was seen to be the downstream developer.

This update raises a number of concerns for the OAG, specifically:

- senior staff knew in late May 2010 the project would exceed budget but yet Regional Council was not advised,
- there was disagreement with the developer regarding HRM responsibility to accommodate storm water flows from upstream development even though the responsibilities suggested by the developer were in line with what were laid out in HRM's own standards (known as the 'Red Book'),

The OAG has to question why staff appeared to be unfamiliar with HRM's standards applicable to the project, why the standards were unclear or why they expected to be treated differently from any other party constructing this type of infrastructure.

- at this point in time staff estimated the tender for Phase I of the project would be \$500,000 or 24% over 'budget' (presumably meaning the original award amount). As noted previously, according to the Procurement Policy, this should have required the CAO approval.

Although the OAG requested all documentation related to the project, there was no documentation provided to the OAG indicating any such approvals were sought or obtained. In addition, it appears Regional Council was not advised of these

overages until January 2011, more than six months later and well after the work had been completed. The OAG notes this is again, in our view, not compliant with the requirements of the procurement policy or, at a minimum, the spirit of the policy.

According to staff, based on their interpretation of this policy, the CAO had the authority to approve contract increases of any amount up to the total budget for the project and only once the total project budget is reached are additional approval(s) by Regional Council required.

This may not seem like a significant concern when considering a simple project with one tender or purchase order for the entire project, but when considering a large, complex project (such as the Washmill project) or a bundled account with multiple tenders it raises significant concerns.

For example, if you consider the Washmill project, it is conceivable the tender for Phase I of the Washmill project which was awarded for \$2 million could have been subsequently increased to \$10 million before Regional Council approval was required, leaving no funding for the subsequent phases or the completion of the project.

The OAG doubts this outcome was what was intended when the policy was written and if it was, the policy is severely flawed.

June 2010

➤ In early June 2010, there continued to be correspondence among staff regarding possible scope changes in order to further reduce the estimated costs.

One of the suggested changes was questioned by a staff member who indicated they felt the original plan was developed in order to accommodate the road alignment and the anticipated traffic it was going to carry.

The staff person goes on to question why the items were originally included if they were not needed.

The OAG did not see any response addressing these concerns but the items in question appear to have been removed from the project. It is interesting to note this project, like many others at HRM, was undertaken with participation from a number of professionals with a variety

of backgrounds and expertise.

However, there appears to be no professional standards mechanism in place to deal with situations which could arise relating to 'professional disagreements and application of professional judgement'.

The OAG is of the strong opinion the creation of a professional standards or risk resolution committee would be appropriate to resolve instances where there is disagreement among HRM's professionals regarding project requirements, particularly with respect to engineering and safety items.

- In early June 2010, a revised tender for Phase II (based on a further reduced scope) was issued.

The OAG was originally advised by HRM staff the items and quantities presented in this tender were specified by the engineering services consultant as part of the contract awarded in February 2009.

However, when the documentation supporting this assertion was requested, the OAG was eventually advised this tender was generally based on the previous (cancelled) tender and the engineering services consultant may not have fully endorsed the quantities used.

On further review, the OAG noted, although the original tender items and quantities were signed off by the external engineering services consultant for the previous tender, there were significant changes made by HRM staff in Addendum 2 which resulted in the engineering services consultant suggesting HRM replace themselves (the engineering services consultant) as the 'Engineer's representative' in the "Information to Tenderers" section as HRM was "really leading this version of the tender".

This suggests to the OAG the quantities specified in the tender were the responsibility of HRM staff, not the engineering services consultant.

The OAG questions the logic of HRM staff taking responsibility for determining the tender quantities required if, as they have repeatedly asserted, they did not have the appropriate experience and expertise for this project.

The OAG understands staff felt the consultant was not reacting in a timely manner, but has to question the judgement of taking ownership for this type of requirement if they did not have the appropriate experience and expertise. In the view of the OAG, they either did not have the experience and should not have been involved in this manner or did have the experience and should not have had to rely so heavily on the consultant.

The OAG also understands this tender was not for the total remaining work on the project and a number of items had been removed and were to be tendered in yet another phase – known as ‘Phase III’ when funds became available.

Estimated cost of HRM's portion appears to be reduced to \$12.813 million for a further reduced scope of work and excluding items moved to Phase III. The combined budget increased to \$11.167 million.

In late June 2010, the revised tender for Phase II closed with two bids received.

- Six days later, the award report for the Phase II tender was approved by the CAO under Section 9 (5) of the Procurement Policy (Administrative Order #35) which:
 - 1) Increased the budget for the project by \$971,421 by transferring the funds from two other existing but unrelated projects (to a total approved budget to date of \$11,167,360)
 - 2) Awarded the tender for Phase II in the amount of \$8,478,024 (net HST included)
 - 3) Appointed consultants for construction inspection and environmental monitoring for \$182,000.

The OAG has several concerns with the report and its subsequent approval:

- 1) This ‘requested’ increase did not include any of the specifically identified overages on the tender for Phase I.
- 2) The budget increase recommended did not provide sufficient funds to cover existing commitments as well as the award of the tender for Phase II as illustrated below:

\$2,073,751 Original tender award-Phase I
500,000 Phase I cost overrun (identified in
the update to Senior Management in
May 2010)

8,478,024 Award Phase II

182,000 Construction Inspection and
Environmental Monitoring

1,383,376 Oversizing Regency Park portion of
extension

12,617,151 Total Commitments to that date

11,167,360 Washmill project budgets with CAO
approved increase

\$1,449,791 OAG Estimated Budget Shortfall after
award (see Methodology Section)

The CAO award report indicated the cumulative unspent budget was \$7,688,604. This amount however, was apparently based on the items posted to the financial system for payment and does not appear to have included the cost overruns identified the previous month but not yet paid or entered into the system.

- 3) In reviewing the report submitted to the CAO for approval a significant area of concern is the proposed budget increase.

The OAG understands tenders can only be approved under Section 9 (5) if there are sufficient budget funds available in the project budget.

The policy specifically states the funds and the program must have been previously approved by Halifax Regional Council and the expenditure will not result in an over-expenditure of the entire budget.

In this circumstance, the award of the tender would have exceeded the total budget for the project and was for a reduced scope.

To the best knowledge of the OAG, there is no provision in any policy which allows the CAO to transfer budget funds from one project to another or increase the budget on a capital project unless it is related to new cost sharing, with no net impact to HRM.

In fact, Section 35 (2) (d) (i) of the Halifax Regional Municipality Charter is clear the authority of the CAO to make or authorize expenditures is limited to items “where the amount of the expenditure is budgeted or within the amount determined by the Council by policy”.¹⁴

For this reason, the OAG suggests the CAO did not have the authority to approve the recommendations in the CAO award report and not only likely violated the Procurement Policy, but also possibly violated the Charter.

The OAG is very concerned once again there is a situation where the CAO appears to have violated one of the key clauses in the Charter and questions:

1) why this action was recommended as staff should have known it was not allowed and 2) why it was approved by the CAO who should have known he did not have the authority to approve the budget transfer.

In fact, by this point in the project, it is difficult to understand how the project was not considered significantly out of scope, unless one were to assume the scope of the project was no longer clear to essentially everyone.

Again the OAG has to question the purpose of the staff approvals provided on the CAO Award report. The report was approved by two Managers and the Acting Director before being approved by the Acting Deputy CAO and CAO, yet it contained recommendations which in the view of the OAG were not within the authority of the CAO and likely violated the Charter.

- 4) The OAG is also concerned the CAO award approved a budget increase for only a portion of the project. The funding transfer only considered the funds required to award the tender for Phase II of the project. It did not discuss the estimated cost of Phase III, the known cost overruns on Phase I or the cost required to oversize the Regency Park Drive portion of the road. In the report, staff increased the budget but did not note the revised total estimated cost of the project. Although a budget increase was requested, there was no discussion in the report as to the full reasons why the increase was needed and it was

¹⁴ Halifax Regional Municipality Charter, 2008 C.39, Section 35 (2) (d) (i), page 30.

silent on the additional \$500,000 (24% increase) which was needed to complete Phase I.

Additionally, the report states “all work from Chain Lake Drive to the existing cul de sac [sic] were removed from the tender including signals, sidewalks, street lighting and widening work” and then indicates the remaining items such as sidewalk, signals, trees and upgrades to the existing section of Washmill Lake Court will be completed in Phase III when budgets became available and approved. It did not provide any suggestion of what the estimated cost for these items was, how critical they were in the context of the project or when they might be completed. According to staff, these items were removed as they were not a requirement to obtain the infrastructure funding and the road could still be functional. Again, the OAG has to question why these were included to this point, if they were not required.

At this point, the budget for the portion HRM was responsible to construct had increased from \$4.544 million to \$11.430 million. This is an increase of 152%, with a reduced scope of work and not including the final phase of the project. Staff apparently did not feel it was appropriate or necessary to provide a full, transparent update to Regional Council. The OAG questions the controls, or lack thereof, present in the capital processes which allowed this situation to develop.

According to staff, this was mainly due to a lack of time to complete the project by the infrastructure program deadline. The OAG however, has to question why the two were mutually exclusive. Surely, staff could have provided an update without stopping the work on the project.

- 5) The timing of this approval was, in the experience of the OAG, the subject of much discussion. It is interesting the report was dated June 22, 2010 and was scheduled to go to Regional Council on June 28. The June 28 meeting was cancelled for a number of reasons but according to staff, they felt strongly delaying the award of this tender, even by one week, would jeopardize completion of the project by the infrastructure program deadline and would therefore jeopardize the \$6.667 million in cost-shared funding.

- 6) Staff also indicated they felt Regional Council could make themselves aware of the issue if they were concerned as they receive a regular report of tenders awarded by the CAO without Regional Council approval. The OAG questions why staff would expect Regional Council to search a regular report looking for potential issues on a project when staff had not provided any updates suggesting there was an issue.

The OAG is also very concerned staff did not seem to feel it was necessary to advise Regional Council of the significant scope reductions and cost increases being implemented.

September 2010

- In September 2010, HRM Administration received a letter from the Canada–Nova Scotia Infrastructure Secretariat advising there appeared to be “a degree of risk of non-completion by March 31, 2011” for the Washmill project, as well as others.

The OAG questions how it can be apparent to an external party the deadline was in jeopardy yet staff did not feel it was important to raise this issue with Regional Council.

December 2010

- In December 2010, staff issued a Director’s report to acquire a strip of land from HRWC required to accommodate the planned extension of Washmill Lake Drive and HRM’s oversizing requirements for a four-lane street on Regency Park Drive.

The total cost of the transaction was noted as \$7,090; the purchase was approved by the Director, Transportation & Public Works and was charged to the project titled Bayers Lake & Ragged Lake Infill. The OAG questions:

- 1) why this land was not acquired before the project was approved and submitted for infrastructure stimulus funding ,
- 2) why the land was not acquired before the construction tenders were issued and
- 3) why the costs were not charged to the Washmill project. Once again, the OAG is concerned with what appears to be a relatively regular practice of charging items to a project based on where budgeted funds are available rather than charging them to the appropriate project.

This is concerning because it makes it difficult, if not impossible, to track the true cost of any project and is contrary to the process of identifying the cost of each project to Regional Council when requesting approval.

January 2011

This lack of transparency and accuracy by staff in dealings with Regional Council is very concerning to the OAG.

- In early January 2011, HRM received a letter from the engineering services consultant identifying the potential reasons (in their opinion) why construction costs were higher than expected. Their explanations included tendering under the pressures of the infrastructure program (likely meaning increased demand for contractor services causing higher prices), liability clauses in HRM's contracts likely increased bid prices due to contractors being required to assume additional risk, inconsistencies in contract documents between various tenders, splitting the project into phases, multiple design changes, field construction decisions which differed from original design as well as others.
- In mid-January 2011, a verbal presentation was provided to Regional Council regarding the Washmill project. The OAG understands staff identified several significant issues to Regional Council at this point, including advising the "\$10 million project is now estimated to be closer to \$18 million to complete" as well as addressing other contractual issues.

Based on the update, Regional Council requested a supplementary report dealing with a number of specific questions and deferred consideration of the matter for a week so it could be considered in conjunction with the supplemental report requested.

The OAG understands this is the first update to Regional Council advising them of the issues related to both the cost of the project and the concerns with meeting the March 31, 2011 deadline, which was less than three months away at that point. It is interesting to note the deadline was January 31, 2011 to apply to extend the required completion date. This application required Regional Council approval, which might explain the timing of the return to Regional Council on this issue.

Estimated cost of HRM's portion appears to be \$13.091 million for the reduced scope of work and excluding items moved to Phase III. The combined budget increased to \$11.765 million (+\$0.598 million). Once again, less than the estimated costs, now by \$1.326 million.

- Two weeks later, four additional reports were submitted to Regional Council regarding the Washmill project. The first two reports contained legal advice and an information report which presented a chronology of the Washmill project. The remaining two reports dealt with approvals required in order for the project to proceed and provided information as requested by Regional Council.

The following items were approved by Regional Council based on these two reports:

- 1) Application to the infrastructure funding program for an extension to have the project substantially complete by October 31, 2011 instead of March 31, 2011 as the March 31, 2011 deadline was not achievable.
- 2) An Increase in the Washmill project budget of an additional \$597,881. It is interesting to note the costs were now being reported as HST exempt. Previously, they had been reported and approved at net HST. This resulted in reduced costs of approximately 4%. Previously, the costs had been reported and approved including net HST. There was no explanation provided in the report for the change.

This increase brought the total combined Washmill project budget to \$11.765 million (a 159% increase from the cost estimate provided to Regional Council when requesting approval to proceed with the project in 2008) excluding the oversizing of the Regency Park Drive portion of the road, calculated assuming the OAG assumptions and interpretations are correct (see Methodology Section):

\$1,500,000	Revised approved 2009/10 budget book - Jan 2010
8,642,000	Proposed 2010/11 budget in approved 2009/10 budget book - Jan 2010
(142,000)	Discrepancy between 2010/11 budget included in 2009/10 approved book - Jan
195,939	Engineering design consulting services
53,447	CAO award June 2010
917,974	CAO award June 2010
597,881	Report to Council Jan 2011
<u>\$11,765,241</u>	

The OAG cannot help but question the effectiveness of a process which adjusts the funding for a major capital project in such a disjointed and changeable manner.

- 3) An increase in the tender for Phase I of \$994,137. This brought the total for Phase I to \$3,199,637. This increase is almost double the overage identified to senior management by the Director in May 2010.

The OAG is puzzled as to why this increase was not brought forward for approval previously as the Procurement Policy (Administrative Order #35) requires approval prior to work being undertaken. The report to Regional Council requesting the increase indicated the work had already been undertaken and documentation received by the OAG shows this work had actually been completed six months earlier.

It is also interesting to the OAG when these increases were requested, the progress billings for Phase II totalled 87% of the total contract value. Given the extension being requested for completion of construction, the OAG suggests it would be reasonable to assume at this point, this portion of the project was less than 87% complete (or 13% incomplete) and would likely need additional funding.

In fact, internal project tracking documents dated Dec 2, 2010 and Feb 3, 2011 show the percentage completions for the Washmill project as 65% and 70% respectively. If the project was 87% spent but only 65% or 70% complete, it would seem reasonable for a project manager to foresee potentially running out of funding. As a result, the OAG suggests staff should have assessed the situation critically and requested the estimated additional funding expected to be required at the time. This is particularly important as the policy requires funding approval before the work is undertaken.

- 4) Development of a funding plan for the remaining work (now called Phase III) which was anticipated to cost an additional \$5 to \$7 million.

For clarity, what appears to have happened is:

- The scope (or deliverables) for the project were reduced to align with the remaining budget
- Portions of the project were pushed to the future with no real plan as to when and how they would be funded.

The OAG is very concerned the initial project scope included items which were not required and which were never identified to Regional Council as optional. Again, the OAG has to question how often HRM spends significant funds to build according to the 'desires' of staff or members of Regional Council instead of building what it truly needed.

In addition, the report to Regional Council responded to questions from Council regarding a number of issues, including the process for obtaining quotes (with particular clarification regarding accepting verbal quotes).

Staff identified the Procurement Policy did not specifically set out guidelines pertaining to verbal quotes, except in circumstances when the purchase is between \$1,000 and \$10,000 and there is insufficient time to obtain a written quote.

Based on the OAG's understanding of the policy, this would be the only situation when a verbal quote would be acceptable; however,

staff indicated there could be circumstances where funding obligations/ applications come into play when it could be acceptable to accept a verbal quote provided there was full disclosure to Regional Council.

The OAG notes there was not full disclosure in this situation as Regional Council was not advised of the verbal estimate until January 2011, more than a year after it was accepted and acted upon.

Additionally, the OAG is concerned with staff's understanding of the situation. To refer to the verbal estimate as a quote, with references to the Procurement Policy, is inappropriate. The engineering services consultant was hired to provide engineering drawings and cost estimates. Provision of cost estimates for planning purposes is not covered by the Procurement Policy, which deals with the acquisition of goods and services.

How the acceptance of a verbal estimate for a cost-sharing application relates to the Procurement Policy is puzzling to the OAG.

The OAG also has to question the governance model in place and the judgement of staff who would suggest it would ever be in the best interests of HRM to use a high-level verbal estimate in a contractual cost-sharing agreement for a multi-million dollar project.

The OAG suggests if a similar circumstance occurs where, as has been suggested by staff, there is no choice but to participate in a project due to political pressures, staff have a responsibility to ensure Regional Council is made fully aware of the strength, reliability and basis of any estimates to be used and the potential consequences, before HRM is contractually committed.

April 2011

- In April 2011, HRM apparently reached an agreement in principle to re-purchase a small portion of land in the BLBP which was required to provide for an additional turning lane as well as a bike lane, curb and sidewalk as part of improvements to the Chain Lake Drive/Susie Lake Drive intersection area required under the Washmill project. The total cost of this transaction was estimated to be \$126,696 including appraisal, closing costs and a contingency.

However, the transaction was not submitted to the CAO for approval until November 2011.

- In mid-April 2011, staff presented a report to Regional Council recommending:
 - 1) An additional \$4.5 million be added to the Washmill budget as per the 2011/12 Draft Project Budget. This brought the HRM portion of the Washmill project budget to \$16.265 million, \$11.721 million higher than the \$4.544 million budget originally requested (not including the \$1.383 million for oversizing of the Regency Park Drive portion).
 - 2) The tender awarded for Phase II of the project be increased by 33% (\$2.7 million) primarily due to the requirement for additional common and rock excavation and to increase the quantity of reinforcing steel in the bridge. Based on discussions, the OAG understands staff knew the steel for the bridge needed to be reinforced before the tender was issued. However, there was an undetected error in the spreadsheet used to calculate the quantity required, which resulted in an inaccurate amount being included in the tender. Again, the OAG has to question the quality control processes used in Design and Construction Services given this error was not noticed until the actual costs were received.

These costs were partially offset by items originally included in Phase II but which were moved to Phase III after the tender was awarded.

The report stated “The total combined cost to date for Phase 1 and 2 [sic] is approximately \$11,000,000”.¹⁵ The OAG is confused by this as the report also states the final costs for Phase I were \$3,199,637, Phase II was originally approved for \$8,129,590, and the estimated cost overrun for Phase II were \$2,700,000. This totals \$14,029,227 – approximately \$3 million more than the \$11 million stated.

¹⁵ Report to Regional Council, subject Washmill Lake Court Underpass, April 19, 2011, page 2

The report also stated the “original” estimate for the overall project was \$10 million. It is again concerning to see the lack of clarity in the information provided to Regional Council. While it was not specifically stated, it appears the budget provided to Regional Council in 2008, on which approval to proceed was granted, included approximately \$4.544 million for HRM’s portion of the project (did not include the \$1.383 million for oversizing of the Regency Park Drive portion).

Estimated cost of HRM’s portion was now between \$18.091 million and \$20.091 million for the reduced scope of work (change +\$5 to +\$7 million). The combined budget increased to \$16.265 million (+\$4.5 million), \$1.826 million to \$3.826 million less than the estimated cost.

Additionally, the report states the work remaining in Phase III of the project was estimated to cost between \$5 and \$7 million. If the estimated remaining costs were truly \$5 to \$7 million, why did staff not request a budget increase sufficient to cover these costs as the approach used resulted in the project continuing to not be fully funded?

Staff also indicated there were further scope reductions being implemented in order to be able to meet current budgets.

Again, the OAG has to question why staff did not identify these possible savings when the scope was previously revised and why they were included in the original scope if they were not required or the project could be completed without them.

The report recommendations were approved by Regional Council.

The OAG notes, given the situation, this approval appears to be a formality as it does not appear there were any viable options presented.

Estimated cost of HRM’s portion appeared to remain between \$18.091 million and \$20.091 million for the reduced scope of work. The combined budget increased to \$17.615 million, between \$0.476 million and \$2.476 million less than the estimated cost.

- One week later, the 2011/12 annual capital budget was approved by Regional Council and included an additional \$4.5 million for the Washmill project.

In addition, the budget finally included an additional \$1.35 million but in a separate project for oversizing of the portion of Washmill Lake Court around where it intersects with Regency Park Drive. This was not mentioned in the report to Regional Council in mid-April. Under the approved development agreement, the developer constructed the road to a public collector street standard. The developer

was responsible for the cost of the local portion of the road only and HRM was responsible for the cost of the oversized portion. These costs were apparently included in the \$8.642 million budget originally presented to Regional Council in 2008 but apparently were not included in the most recent estimates (\$16 to \$18 million) presented to Regional Council the previous week.

Also, the oversizing costs were charged to a separate project, again increasing the difficulty in tracking the total cost of the project.

June 2011

Estimated cost of HRM's portion appears to be \$17.237 million for the reduced scope of work. The combined budget remained \$17.615 million, \$0.378 million more than the estimated cost.

- In early June 2011, the tender for Phase III was awarded for \$1,479,800 (no HST included; 100% recoverable) bringing the total amount authorized at that time for this project to \$17.237 million against the current total project budget of \$17.615 million.

November 2011

Estimated cost of HRM's portion appears to be \$17.364 million for the reduced scope of work the combined budget remained \$17.615 million, and was now \$0.251 million more than the estimated cost.

- Early November 2011, a report was submitted to the CAO to approve the purchase of the lands required for the Chain Lake Drive/Susie Lake Drive intersection area which was negotiated in April 2011. The OAG questions a process which apparently allows construction to proceed on land which had not yet been legally acquired. It is also interesting to note, the report was not approved until a month and a half later (ten days after the road opened) and the transaction was not finalized until May 2012.

December 2011

- Early December 2011, the road officially opens.

March 2013

- March 2013, the contract amount was increased by the CAO for additional environmental monitoring required. The discussion section of the report indicates the project duration was longer than intended and additional downstream storm water infrastructure was added which resulted in an additional two years of monitoring being required.

The OAG questions why this was not known until February 2013, more than a year after the road opened.

The OAG notes the close out process for capital projects is another potential area for review.

The OAG noted charges for environmental monitoring were posted to the project as late as October 2013 but had document dates of almost a year earlier and additional costs related to Washmill were charged to a separate project in March 2014.

Additionally, the OAG understands there may be a “Phase IV” for the Washmill project which has yet to be started and is not currently included in the five-year capital budget. Due to the lack of detailed information provided regarding what was originally contemplated versus what has been completed to date and the lack of documentation regarding what portions of the project were removed, the OAG is unable to identify what work is remaining, what the potential estimated costs are and if there is in fact a need for, or actually, a planned Phase IV.

Late May
2014

- The OAG was advised in late May 2014, the final report and inspection certificate for the bridge structure may not yet have been received by HRM from the engineering services consultant.

Given the potential importance of the items understood to likely be outstanding, the OAG immediately raised the issue with the CAO. Several days later, payment of an invoice for the engineering services consultant (approximately 12% of the amount identified as being in dispute) appeared to be approved. When the staff person responsible was asked about this approval, he indicated it was for a purchase order which was linked to final inspection services required at the completion of the bridge construction phase and that HRM had yet to receive the final package from the engineering consultant.

It is interesting to note the purchase order quoted on the invoice (and the description on the invoice) was for engineering design services and the original award amount for this purchase order appeared to have been fully paid, meaning processing this invoice would result in an over expenditure on the purchase order. According to policy, increasing the purchase order to accommodate the current payment would require approval by the Director. Instead, the invoice appears to have been authorized to be processed against a separate purchase order which had a

slight balance remaining unpaid.

The OAG questions why the invoice would be posted to a purchase order different from the one noted on the invoice, with no explanation for the change. Additionally, given the items covered by the invoice were previously identified as being under dispute with the engineering services provider, the OAG questions why additional approvals were not presented (perhaps Legal Services). After these concerns were raised to Senior Management by the OAG, the expected payment was reversed.

2.0 Total Project Cost

The OAG is not able to state definitively the total cost of the Washmill project due to:

- 1) the lack of a complete file for the project,
- 2) the known number and variety of accounts where costs were charged and the resulting possibility additional costs were charged to other, unidentified projects,
- 3) the ongoing charges for environmental monitoring,
- 4) the possible Phase IV which has not yet been started and
- 5) charges posted as late as March 2014, but to a separate account.

However, the OAG is able to comfortably state the HRM portion of total project cost is in excess of \$17 million (charged to at least three separate accounts) against a budget of \$5,927,244 (excluding developer portion) originally approved by Regional Council in 2008 (see Exhibit 2 below). The OAG also notes costs continued to be charged to the Washmill project as late as March 2014, more than two full years after the road was opened and it appears there may be a contemplated Phase IV, which has not yet been started (the true status of the phase is not clear). As a result, the OAG notes this total could still rise.

Exhibit 2 - Analysis of Original Budget to Actual Costs (estimated by OAG based on available information (see Methodology Section))

	Dec-08 Budget	Mar-14 Actual	Change over/(under)	% Change
Bridge	\$2,000,000	\$5,690,485	\$3,690,485	185%
Street - HRM portion	2,543,868	10,706,847	8,162,979	321%
Oversizing - developer section	1,383,376	1,206,797	(176,579)	(13%)
Total - HRM Paid	5,927,244	17,604,129	11,676,885	197%
Additional right of way	170,658	170,658 *	-	
Street - developer portion	2,543,869	2,543,869 *	-	
Developer provided	2,714,527	2,714,527	-	
Project total	\$8,641,772	\$20,318,656	\$11,676,884	135%

*This amount is an estimate. It is included here for comparison purposes as it was included in the original budget provided to Regional Council. There has been no information requested regarding the actual costs incurred by the private developer as it was not relevant or appropriate for this review. The project is represented including the HRM and developer costs as this was the manner in which it was presented to Regional Council.

When considering the nearly \$12 million in increased costs, it is also critically important to remember these were the costs incurred to deliver what appears to be a reduced project scope from what was intended when the project was submitted to Regional Council for approval in Fall of 2008. In essence, it cost almost 200% more for HRM's portion than originally advised, for what appears to be a reduced scope of work. The OAG has to question what additional costs would have been incurred to deliver the full scope (unfortunately the intended scope is not clear to the OAG or what specifically changed).

The cost comparison is further broken down to highlight the impact the available cost sharing had on the portion incurred specifically by HRM and the net cost to HRM (see Exhibit 3).

Exhibit 3 - Analysis of Total Budget to Actual Costs by Funding Source (estimated by OAG based on available information (see Methodology Section))

	Dec-08 Budget	Mar-14 Actual	Change over/(under)	% Change
Portion Constructed by Developer (at their cost)	\$2,714,527	\$2,714,527 *	-	
Cost share with bulk land purchaser	1,694,223	-	(1,694,223)	
Federal Provincial Cost Sharing	-	6,666,666	6,666,666	
HRM Net Cost	4,233,022	10,937,463	6,704,441	158%
Total	\$8,641,772	\$20,318,656	\$11,676,884	135%

*This amount is an estimate. It is included here for comparison purposes as it was included in the original budget provided to Regional Council. There has been no information requested regarding the actual costs incurred by the private developer as it was not relevant or appropriate for this review.

3.0 Analysis of Construction Cost Overruns

During the course of the review of the Washmill project, the OAG noted three main phases of construction, with each phase tendered separately. The OAG understands construction was separated into phases in order to have the ability to manage scheduling challenges and meet key project milestones while the design was being finalized. Upon review of the tender versus actual costs for the three construction phases, the OAG became aware of significant variances, especially in Phases I and II, as noted in Exhibit 4 below.

Exhibit 4 - Analysis of Tendered Amount vs. Actual Amount Paid (estimated by OAG based on available information (see Methodology Section))

	Tender Amount*	Actual Amount*	Variance \$	
	\$	\$	over/(under)	Variance %
Phase I	\$2,005,000	\$3,199,637	\$1,194,637	60%
Phase II	8,428,250	10,828,999	2,400,749	28%
Phase III	1,479,800	1,572,250	92,450	6%
Total	\$11,913,050	\$15,600,886	\$3,687,836	31%

*Both the tender amount and the actual amount exclude HST. The amounts noted here are for the construction tenders only and therefore differ from the total project costs noted in Section 2.0.

As noted above, Phase I and II had cost overruns of 60% and 28%, respectively. Staff advised Regional Council the increased costs for Phase I were due to both cost overruns and work included in Phase I which was originally intended to be carried out in Phase II.

When queried further by the OAG, staff provided the following more detailed explanations regarding the cost overruns associated with Phase I (but did not identify the Phase II items which were completed under the Phase I tender):

- Additional excavation of sulphide-bearing material costing \$810,000 (16,230m³) (an increase of 66%). HRM staff did not specifically comment on why the actual quantity was so significantly higher than what was estimated in the tender.

Their explanation was the tender quantities were provided by the engineering services consultant and HRM staff did not have the details of how they (the engineering services consultant) determined the quantities.

The OAG is very concerned with the lack of accountability in this response. This represents an increase of 66% from the originally expected quantities (and cost). Given the significance of the variance, the OAG has to question why staff did not request an explanation in writing from the engineering services consultant.

The OAG understands there is a process in place within Design and Construction Services which assists them in verifying the amount of materials removed (regardless of the amount specified in the tender) in the case of unit price contracts such as this and ensures HRM does not overpay the contractor. While this provides some comfort to the OAG given the amount paid reflected the actual amount removed, the OAG must once again suggest with more robust systems and project management processes, the reasons for the differences would likely be clearer. Hopefully, a documented understanding of any differences in any project may aid in preventing similar situations from recurring in the future.

The OAG sees value in a more formal and prescribed process for variance analysis. The OAG suggests if staff had perhaps more fully investigated the overages for Phase I when they happened, they might have been able to understand the causes and provide better understanding and management of estimates for the other phases and have further reduced additional overages from occurring.

The magnitude of the overage cannot be overstated by the OAG. In a city well known for having significant amounts of pyritic slate and in an area well known for and expected to have pyritic slate (based on correspondence from as early as 2002), the tenders underestimated the amount of pyritic slate in the area by 16,230 cubic metres,

which is roughly the equivalent of 160 – 40-foot (12-metre) transit buses. This many buses parked double file would stretch almost the entire length of Washmill Lake Court from the eastern boundary of the 102 underpass to Main Ave. The OAG is hopeful many of the recommendations contained within this report will lead to stronger controls around estimates and project reporting to assist staff in future projects.

- Additional borrow¹⁶ added \$198,000 (7,926m³) and was required to construct the detour road. HRM staff indicated additional borrow was necessary after HRM was informed

¹⁶ Borrow is a term in a construction context, generally used to describe material such as earth, rock or select subgrade material required from outside the right-of-way.

the sulphide-bearing material would not be allowed to be used for the temporary detour road.

- An additional \$188,000 was required to construct a retaining wall due to limited space between the detour road and bridge footings. The OAG understands this was due to the Nova Scotia Department of Transportation and Infrastructure Renewal requirement to further widen Highway 102 late in the project. HRM staff identified the required geometry of the detour road did not allow for relocating the temporary detour. Without the retaining wall, it would not be possible to excavate for the east bridge footings. The OAG understands the retaining wall blocks were reused in areas of Washmill below the bridge.

The OAG has to question why HRM staff did not ensure they had appropriate agreement on the design requirements with all critical stakeholders at a much earlier stage and particularly before the tender was issued.

According to staff, the cost overruns of approximately \$2.4 million for Phase II were primarily due to the following items:

- The redesign of the storm-water system at a cost of \$220,000 as per HRM development standards and approval process, due to capacity changes as a result of the upstream development.

As noted previously in the report, the OAG questions why this was not known before the project tender was issued, particularly given the early internal estimates included a provision for storm sewer requirements and the required standards were HRM's.

- The construction of unplanned retaining walls required below the bridge structure at a cost of \$200,000. This became necessary due to the road alignment redesign from the bridge to Chain Lake Drive. The original design alignment required land which was not able to be acquired in time to complete the project.

The OAG again has to question the wisdom of proceeding with a project before the required land had been acquired. In this situation, the decision potentially cost HRM an additional \$200,000.

- An additional \$550,000 was a result of mass excavation for common rock (4,800 m³) and sulphide-bearing material (4,300 m³) at the bridge structure.

These are increases from the estimates HRM provided in the tender of 96% and 87% respectively.

Again, staff did not comment on why the actual quantities of common rock and sulphide-bearing material excavated were significantly higher than what was included in the tender. The OAG again points to the possible value in previous comments around Phase I variances and controls in preventing overages in Phase II. This may have assisted HRM in projecting the additional amount of excavation required by an additional 9,100 m³ (common rock and sulphide-bearing material combined) of material, in addition to the 16,230 m³ missed in Phase I.

At this point, the amount of common and sulphide-bearing rock to be excavated had been underestimated by approximately 25,000 m³ (or 250 40-foot (12 metre) transit buses) for a 700 metre section of road.

The OAG saw no evidence of any type of substantive peer or supervisory review of estimates. The OAG strongly suggests this would be a good practice and control point, particularly in a project such as Washmill.

- Even further mass excavation was required below the bridge structure at a cost of \$794,000 for common rock (5,088m³) and sulphide-bearing material (6,680m³). Apparently, the original road alignment was very close to, and at a higher elevation than, a major retaining wall. To avoid impacting the wall from construction and future traffic flow, the road was realigned and lowered from the existing retaining wall. Large boulders also had to be removed as a result of the realignment.

Once again, the OAG has to wonder why this was not known prior to the tendering of the project.

When combined with the retaining wall costs noted above, it appears the decision to proceed prior to obtaining the required land may possibly have cost HRM taxpayers almost

\$1 million in additional construction costs.

- A concrete slab, costing \$110,000, was required for the bridge footing due to an unstable subgrade determined by a geotechnical engineer at the time of excavation.
- An additional \$292,000 was incurred for reinforced steel for the bridge structure.

As noted previously, the OAG understands this was due to an incorrect quantity included in the tender prepared by HRM as a result of an unnoticed error in the spreadsheet used to calculate the required amount.

- Standard HRM guidelines suggested single post guide rails would be required on the 102 highway. However, Nova Scotia Transportation & Infrastructure Renewal's required standard on a 100 Series Highway is double post guide rails, resulting in an additional cost overage of \$200,000. The OAG questions why this was not known at the time of tender.

The significant variances noted in Phases I and II above caused the OAG to further analyse the specific areas of cost overruns. As a result, the OAG identified high-level categories of work performed in the various phases and reviewed the cost overruns against these categories.

Based on this analysis, the OAG identified earthwork as the main driver of the cost overruns accounting for approximately 60%, or \$2.2 million of the cost overruns on the tenders. Exhibit 5 contains a comparison between the tendered amount and actual amount as estimated by the OAG.

Exhibit 5 - Cost Comparison of Earthwork from Combined Tenders to Actual (estimated by OAG based on available information (see Methodology Section))

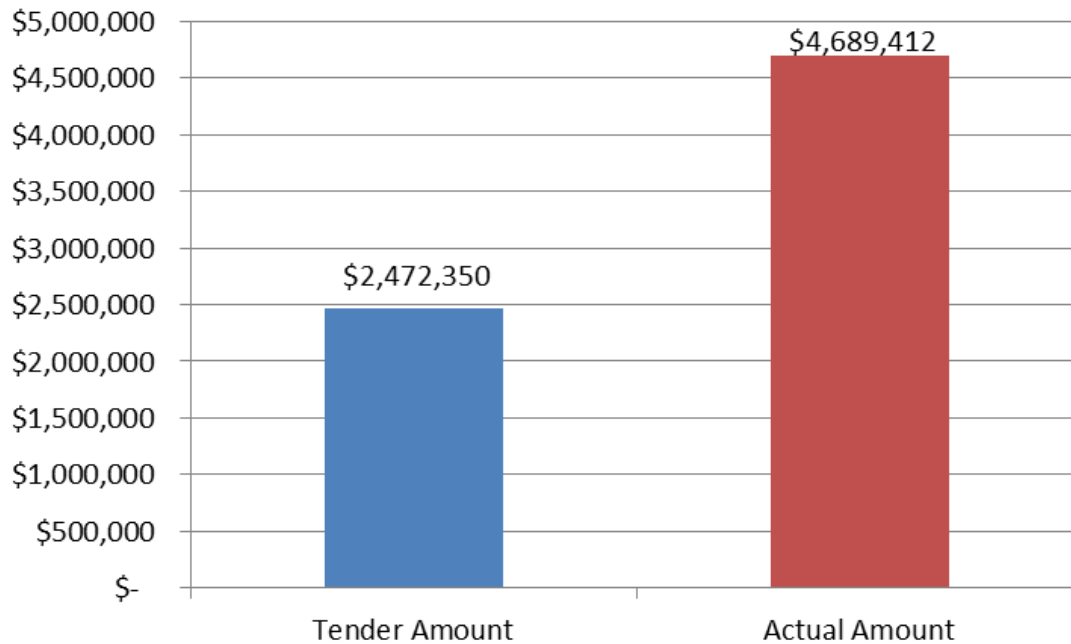
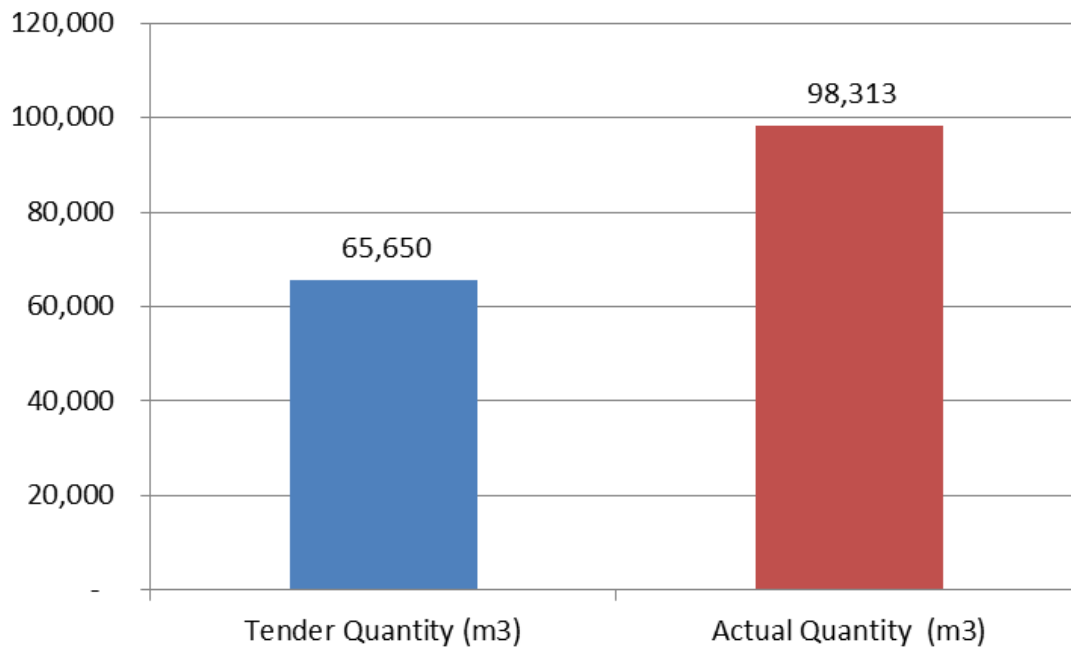


Exhibit 6 - Quantity Comparison of Earthwork from Combined Tenders to Actual (estimated by OAG based on available information (see Methodology Section))



The OAG notes when discussing the cost overruns related to the pyritic slate with staff, a frequent response was to discuss the fact HRM did not receive approval to use the pyritic slate to construct the temporary detour road, implying this was the cause (at least partially) of the cost overrun.

The OAG does not agree with this assertion as the amount of pyritic slate did not change as a result of not being able to use it for the detour road, only the timing of its disposal changed.

Instead, if the detour road was really the issue, the OAG would have expected to see significant cost overruns related to the amount of gravel and other materials which had to be purchased and disposed of in order to create the detour road, not increases in the amount of rock and pyritic slate which had to be excavated.

The OAG suggests a reasonable practice would be to conduct adequate testing prior to issuing construction tenders in order to quantify, with a reasonable level of assurance, the amount and type of rock expected to be encountered throughout the construction.

The OAG understands for unit price tenders, such as the ones used for the Washmill project, many of the cost overruns are related to volume variance, not to specific changes in requirements. As a result, the OAG understands the approvals for these overages cannot necessarily be done in advance and have work stop as implied in the Procurement Policy. However, the OAG also feels the solution to this is not to simply ignore the rules and proceed ahead without approval because it is not convenient. In addition, the OAG notes a number of instances in this project where if the monthly progress billings had been tracked appropriately against the tender quantities and the percentage completion of the work, staff should have been aware much earlier the budget would not be sufficient and could have sought Regional Council approval at a much earlier point.

Overall, the OAG notes with unit price contracts, the issues of cost overruns are possibly not as clear cut as they would be in other types of projects and the current Procurement Policy does not address this business difference. This being said, the OAG cannot emphasize strongly enough the solution is not to violate policy and deny Regional Council their legislated role of approving budget increases.

Appendix A – Management Response

RICHARD BUTTS
CHIEF ADMINISTRATIVE OFFICER



July 16, 2014

Larry Munroe
HRM Municipal Auditor General
Belmont House, Suite 620
33 Alderney Drive
Dartmouth, Nova Scotia
B3J 3A5

Re: A Performance Review of the Washmill Lake Court Extension Project

Dear Mr. Munroe:

I have reviewed the report, *A Performance Review of the Washmill Lake Court Extension Project*, submitted to me by your office. I am in general agreement with its content and the overall direction proposed. As with all reports you have released to date, HRM Administration will take the recommendations under consideration and ensure that a plan to address the issues identified in the report is developed. Detailed responses to each of the report recommendations are attached to this letter.

The Washmill report highlights a number of breakdowns in communication, project management, and decision-making. These are issues that need attention. It is important to note that, since the completion of the Washmill project, several senior leaders have been replaced in the organization, operational areas within the administration have been reorganized, a new Council has been elected, and several revised policies and standard practices have been adopted. Although these changes have resulted in several improvements, we recognize that there is still work ahead.

On this note, we have initiated some activity in the past year which I expect will further address the issues raised in your report. Your recommendations will play a significant role in how these initiatives are implemented. These include:

- The ongoing realignment of corporate structure, primarily in the area of infrastructure development, construction, and management. We are assessing further reorganization which will better align decision-making in relation to capital projects. The content of the Washmill report will help to inform this process.

HALIFAX

Halifax Regional Municipality
City Hall, 1841 Argyle Street, PO Box 1749
Halifax, Nova Scotia, Canada B3J 3A5

t. 902.490.4026
f. 902.490.4044
halifax.ca

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- Strengthening the process of financial reporting. Under the leadership of the current CFO, reporting on the budget and financial situation of the municipality has become increasingly more robust, and further enhancements are planned. Again, the suggestions provided in your report will be helpful in developing these further enhancements.
- Recent introduction of a new Council report development process which aims to ensure better accountability and clarity in the process of providing information to support Council's decision-making. Several of the issues raised in your report will be addressed as this process is implemented.

Overall, we expect to derive substantial corporate benefits from a continued focus on these activities.

The administration will strive to address the key themes identified in the report with an eye toward improving issues within our organization and building on areas of success. As usual, we will do so with a focus on transparency and accountability to Regional Council and residents of HRM.

Sincerely,

HALIFAX REGIONAL MUNICIPALITY

Original Signed

Richard Butts
Chief Administrative Officer

HALIFAX

Halifax Regional Municipality
City Hall, 1841 Argyle Street, PO Box 1749
Halifax, Nova Scotia, Canada B3J 3A5

t. 902.490.4026
f. 902.490.4044
halifax.ca

A Performance Review of the Washmill Lake Court Extension Project

Detailed HRM Management Response (July 15, 2014)

Recommendations	Management Responses
1.0.1 The OAG recommends it be made clear to the current CAO and future CAOs, they have total responsibility for oversight of HRM and for demonstrating value for money with respect to all programs and expenditures and ensuring Regional Council receives all information necessary to make appropriate decisions.	The role of the CAO is well defined in the HRM Charter - Part II - Administration, Section 34 - Council and CAO Relationship. This role is reinforced in the job offer agreement (contract) with the current CAO, in which responsibilities and expectations are clearly stated. It is expected that a similar process will be undertaken with future CAOs, but responsibility for this process lies with the Mayor and Council.
1.0.2 The OAG strongly recommends HRM Administration review whether it has a collaborative culture and ensure all tools necessary for collaboration are made available to managers.	HRM Administration has re-organized the organizational structure since the Washmill project. HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.
1.0.3 The OAG strongly recommends HRM Administration review whether it has a culture of accountability and demonstrates actual accountability through set outcomes and where necessary take appropriate steps to ensure this is developed and supported. As with a previous OAG recommendation with respect to ethics, HRM Administration should implement appropriate training to support greater development and understanding around accountability, particularly for management positions.	HRM Administration has re-organized the organizational structure since the Washmill project. HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration. In regard to accountability, HRM Administration now performs financial projections compared to budget on a monthly basis. These are reported to the CFA and CAO monthly, and to the Audit and Finance Committee quarterly. Administration is in the process of initiating a similar process for individual projects. In addition, HRM has developed a web based accountability tool which tracks deliverables against strategic outcomes. Information from this tool is reviewed bi-monthly with the senior management team.
1.0.4 It is clear to the OAG that organizational fragmentation and siloing occurred throughout the Washmill project. It also occurs to the OAG that in the previous structure with two DCAOs or in the current structure with one DCAO and a CAO with shared responsibility for overseeing business units, these positions should be responsible for ensuring business units work collaboratively in all appropriate situations. The OAG recommends HRM Administration take whatever steps are necessary in order to ensure this guidance and oversight is happening and Regional Council should ensure the Administration accepts direct responsibility.	HRM Administration has re-organized the organizational structure since the Washmill project. HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration. In addition, as per the response to recommendation 1.0.1, the contract of the current CAO clearly outlines his responsibilities and the expectations of the Mayor and Council regarding his role.
1.0.5 Given that as of late May 2014 the OAG understands HRM had not yet received the certification package for the bridge structure at Washmill confirming it meets all appropriate standards. The OAG recommends the administration meet with stakeholders to ensure the Washmill project meets all appropriate standards, including HRM standards for road construction as prescribed in HRM's Municipal Service Standards guideline manual (known as the "Red Book") and CSA standard CAN/CSA-S6-00 Canadian Highway Bridge Design Code. This concern is also raised as it occurs to the OAG, what was finally designed and constructed was what the Administration apparently	This issue was immediately acted upon and clarified once identified by the AG. It has been confirmed by staff at the Province of Nova Scotia that the province officially accepted ownership of the Washmill Bridge when it was opened to traffic. The Province has confirmed it conducted an inspection of the bridge, approved the opening of the highway to traffic (over the new structure) and is maintaining it on an annual basis. HRM has requested a formal confirmation of this from the Province and is in the process of obtaining the certification package from the contractor.

A Performance Review of the Washmill Lake Court Extension Project

Detailed HRM Management Response (July 15, 2014)

Recommendations	Management Responses
felt it had budget for, not what was originally contemplated and portions (phases) of the project are still, at May 2014, not completed and not identified in the current capital budget.	
1.0.6 The OAG also recommends HRM Administration determine what part of the process failed such that the certification package was not received and forwarded to the Province of Nova Scotia in a timely and appropriate basis (i.e. it was not appropriately actioned until the OAG advised the Chair of the Audit and Finance Committee and the CAO – almost 2.5 years after the road opened to the public) and take corrective action to ensure this situation does not reoccur in the future.	The development and implementation of the new organizational structure referenced in response to previous recommendations will establish clear accountabilities and roles to address this issue. Staff will undertake an internal review of project management best practices to ensure project deliverables are tracked for future projects of this nature.
1.0.7 The OAG recommends Regional Council request an immediate update on the remaining phase(s) of the project, including the work yet to be completed, the expected costs and timing.	Administration has no issue or concern with this recommendation.
1.0.8 The OAG recommends HRM Administration immediately engage qualified external assistance to develop and implement a formal leading practice “cradle-to-grave” project management methodology and require this methodology be applied to all capital construction and renovation projects undertaken by HRM.	The development and implementation of the new organizational structure referenced in responses to previous recommendations will establish clear accountabilities and roles to address this issue. For example, a Major Projects group is being created in facility development; their role will be to take projects from concept through to design focussing on industry standard project management practises. This practise will extend to managing contracts and consultants.
1.0.9 In conjunction with implementing the project management methodology in Recommendation 1.0.8, the OAG also recommends HRM provide specific training for staff responsible for delivering capital construction and renovation projects in appropriate project management methodologies and ensure they learn and understand why project management processes with appropriate reporting, documentation, control points and clarity of information provided for decision making are important.	Administration has no issue or concern with this recommendation. Staff in Facility Development are taking project management training following industry standard practises, and projects are now launched with a project charter that clearly detailed areas of responsibility, decision making and critical paths.
1.0.10 The OAG recommends HRM Administration implement a policy requiring every capital construction and renovation project have an assigned Project Manager who is responsible for the oversight and coordination of all aspects of the project and who is ultimately accountable.	Agreed, this recommendation will be considered in planning future large capital projects – i.e. see response to 1.0.9 above regarding the requirement for a project charter. It should be noted that municipal infrastructure projects vary in scope and are sometimes years in the conceptual stage, so the timing of project initiation (i.e. the actual project start date) and size of project will have to be considered when identifying the need for / role of a project manager.
1.0.11 The OAG recommends the budget implications section of reports for Regional Council for capital projects be changed to show the history of any changes to the project budget, including the original budget, any increases (listed individually by date) and the revised total budget. In addition, they should show total commitments-to-date and the remaining amount available. The committed-to-date information should include the total amount committed for all tenders or contracts issued, as well as any anticipated cost overruns, not just the invoices processed to date.	In 2013, Planning and Infrastructure introduced a capital forecasting process. All project managers are required to report the status of projects on a monthly basis. In 2014/15, this information will be presented to Audit and Finance along with the operating budget forecast. In regard to specific projects, Transportation and Public Works has adopted this process. Recent examples include the Cow Bay Road Storm Sewer Project and North Park Street Upgrades reports that were approved by Regional Council on June 24, 2014, via the Audit and Finance Standing Committee.
1.0.12 The OAG recommends HRM Administration reinforce to	The current policy (adopted since the Washmill process)

A Performance Review of the Washmill Lake Court Extension Project

Detailed HRM Management Response (July 15, 2014)

Recommendations	Management Responses
staff the requirement for Regional Council to approve any increases to capital project budgets.	requires that all spending above the approved annual budget amount must go through the Audit and Finance Standing Committee, and then to Council for approval.
1.0.13 The OAG recommends HRM Administration and Regional Council require any requests for budget changes include a detailed, fulsome explanation for why the changes are required.	Agreed. In addition, a process for approving change requests was introduced in Facility Development (Planning and Infrastructure) in 2013 where the Director signs off on all change requests.
1.0.14 The OAG recommends budget estimates provided to Regional Council for all capital projects should describe the basis and quality of the estimate so that Regional Council can understand the level of reliance which can be placed on the estimate.	The capital budget process has been revised for the upcoming 2015-16 budget year. The new capital budget forms request an evaluation of the status of the estimate.
1.0.15 The OAG recommends HRM Administration immediately cease the use of "place holders" for budget information in requests to proceed with any capital project. If a reliable budget estimate cannot be provided, the project should not be considered ready to request approval to proceed to a tender or construction phase.	Agreed. In addition to the improvements noted above, the capital budget will fund detailed design for projects as part of the decision making process for Regional Council. The project budget will be estimated on the basis of engineered design.
1.0.16 To enhance the quality of decision-making and create greater effectiveness of outcomes, the OAG recommends the following with respect to large (perhaps \$1,000,000 or greater) capital projects: 1) HRM Administration adopt a widely accepted guideline for capital project estimation and the level of confidence which can be placed on any estimate be communicated as part of any report to Regional Council. 2) With projects contained in the Multi-year capital plan, the level of cost estimate of each project be clearly outlined. 3) Regional Council not commit final approval for any project until the level of cost estimate provided is at least 10% of expected final cost.	Agreed with points 1 and 2. See above responses identifying changes to the capital project process. Administration is unclear on point 3. Currently, Council approves the tender award at the time the project cost is established based on detailed engineering design. Moreover, in any Budget Year Council approves a Multi-year Capital Budget which has some conceptual projects, some 30% complete, some 60%, some 90% and some tendered.
1.0.17 The OAG recommends Regional Council implement a policy specifically prohibiting the approval of significant budget changes to capital projects within the annual budget process. A request for an increase could easily be overlooked when it is part of the larger total budget request, particularly given the way and in the form information is provided in the budget book. The OAG suggests Regional Council require specific, individual approval for budget changes for all capital projects estimated to cost in excess of \$1 million or changes to projects effecting the scope by plus or minus \$100,000 (cumulatively) and that this approval be requested before it is tabled in the annual capital budget.	Agree in most cases, but this approach may not be feasible for some projects that are under construction. Despite best efforts, construction projects may encounter unforeseen situations and approval of in-year adjustments maybe required. An approach may be to ensure that any in-year requests provide a fulsome description of the issue causing the budget change, as well as any mitigation efforts by the contractor and staff for Council's review and decision.
1.0.18 The OAG recommends those responsible for determining the scope of capital construction projects be required to prepare and retain a documented needs assessment which justifies the level of infrastructure proposed and identifies any items which are optional and why they are suggested.	Agreed. Changes have been made to the capital project templates. Business cases will be required for growth projects as well as significant service improvement projects. In addition, HRM will explore better use of standard tools (i.e. cost/benefit analyses and Environmental Assessment processes) to address this issue.
1.0.19 The OAG recommends HRM Administration develop a framework for providing a robust and thorough peer review of design work performed by internal staff, including ensuring the	The majority of design work is carried out by external consultants with a review by professional staff in HRM. The peer review process is carried out by a team of professionals.

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Director responsible has the appropriate subject matter expertise. The individuals involved would vary depending on the type and magnitude of the project.	It is difficult to ensure that a Director become a subject matter expert in all cases, as the Director's role is primarily one of leadership as opposed to technical review. However, in recent (and ongoing) work on organizational structure, the role of the Director as a subject matter expert is being closely considered. This principle has been reflected in recent senior and executive management hires.
1.0.20 The OAG recommends a formal review process be implemented in the Design and Construction Services group such that any estimate provided by any member of the group receive review and approval by the Manager before it is provided to the client department. These estimates need to be supported by appropriate working papers, including detailed calculations and assumptions as well as an indication of the level of the estimate (i.e. Class A, Class D).	Agree in principle. See the references to organizational change in responses to other recommendations, as well as the recent changes to capital budget templates requiring that the estimate level be indicated.
1.0.21 The OAG recommends HRM Administration create a dispute/opinion resolution mechanism for professionals applying judgement in their work so there is a means to resolve professional differences of opinion and ensure projects move forward as appropriate, particularly with respect to engineering requirements.	The use of Project Charters (referenced in the responses to recommendations 1.0.9 and 1.0.10 in this report) will clearly establish who has decision making authority for a given project.
1.0.22 As noted in a number of OAG reports, particularly the "Concerts on the North Commons" report released in June 2011, the OAG once again strongly recommends HRM establish the role of Chief Risk Officer who, given the importance of the role, should have a reporting relationship with the Finance and Audit Committee.	As per HRM's response to the Concert Report, HRM has developed a risk management model for organizational decision-making. Since the Concert Report was released, HRM has hired a Corporate Strategic Risk Analyst, a full time position reporting directly to the Chief Financial Officer (CFO). The CFO fills the role of Chief Risk Officer, negating the need for an additional senior position. As a part of the planning cycle for the 2014/15 fiscal year, risk assessments were performed for all corporate strategic outcomes, and mitigation actions were built into the 2014/15 business plan and budget. This work will be given increased profile in the 2015/16 business plan.
1.0.23 The OAG recommends if or when future cost-sharing infrastructure funding programs are considered, staff be required to provide full and accurate information to Regional Council specifically regarding risks related to any projects proposed for submission. The OAG anticipates this would highlight such things as (but not limited to) the quality of the estimates being relied on, status of deliverables currently outstanding on the project, and anticipated timelines compared to any program deadlines.	Agreed. As noted in the response to 1.0.22, HRM has been implementing an Enterprise Risk Management program. Work in the 2013/14 fiscal year focused on policy, governance and strategic risks. Work in 2015/16 will look at operational risks, including project risks.
1.0.24 As noted in previous reports, the OAG recommends all reports to regional Council include a Risk Assessment section which identifies and analyzes the risks associated with the topic of the report both in relation to the recommended action as well as the alternatives not recommended. The OAG is concerned this recommendation is becoming a recurring item in multiple OAG reports and suggests HRM Administration either prioritize its implementation so that Regional Council is provided with the appropriate information on which to make decisions or explain to Regional Council why it does not intend to implement this	As per HRM's response to the Farmer's Market report (the previous AG report which included this recommendation), the Executive Standing Committee of Council requested a staff report on the potential of including a Risk Management section in staff reports. The Committee directed that staff include a Risk Management section only in specific instances, as it may not be required for every report. As this section will only be required on a minority of reports, a policy is being developed to help assess when a risk section is required in a Council report.

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<p>recommendation.</p> <p>1.0.25 The OAG recommends the Administration ensure project management processes are very clear as to when legal services should be appraised of perceived non-performance on the part of independent contractors and consultants in order to ensure HRM's interests are fully protected. This also contemplates HRM Administration developing and implementing a corporate policy addressing how and when issues related to unacceptable performance and missed deadlines by a consultant should be addressed.</p>	<p>Some work in this area has been initiated as a result of a previous AG report on hiring external consultants. Procurement and Legal staff will be further engaged to consider this recommendation in the context of that work.</p>
<p>1.0.26 The OAG recommends HRM Administration implement a policy which requires legal title to any required lands be obtained prior to issuing construction tenders which will involve work on the lands.</p>	<p>This recommendation will be consider as either a policy or risk management issue. The finalization of land deals is often a long term process.</p>
<p>1.0.27 As the OAG is repeatedly forced to comment on the lack of documentation and the poor quality of the limited documentation available, the OAG recommends HRM Administration immediately implement a program to ensure appropriate organizational records management practices are immediately developed and implemented. Staff at the most senior level in the organization (likely the DCAO) should be assigned responsibilities to oversee the program and be held accountable to ensure its effectiveness.</p>	<p>Agreed – Corporate Information Management has done significant work in this area and an on-line training tool has been developed as a required training course for all staff. Further work in this area is being developed.</p>
<p>1.0.28 Within this project, the OAG noted reports submitted to Regional Council often addressed multiple issues. For example, the sale of bulk lands for development in the Business Park and approval of the project to extend Washmill Lake Court were both contained within the same report to Regional Council. The OAG recommends significant, distinct issues should be provided in separate reports.</p>	<p>Agree, but sometimes this approach is necessary. As a rule, administration will attempt to define "significant, distinct" issues and ensure that relevant information is fully disclosed to Regional Council, in one report if the issue allows.</p>
<p>1.0.29 The OAG recommends Regional Council explore the possibility of creating a Capital Projects Committee as a sub-committee of Audit and Finance Standing Committee. This recommendation is made, given the Administration is authorized to spend in excess of \$140 million on capital projects in 2014/15, and with Regional Council only seeming to have the opportunity to focus on the allocations and issues at budget time. The OAG suggests the current process does not provide sufficient time for oversight of a significant area of expenditure and risk.</p>	<p>Council and staff have worked in the previous few budget cycles to increase the time frame, oversight, and transparency of the budget process. In addition, most major capital projects a circulated to Council as discreet reports in order that Council has the appropriate amount of time to consider each project.</p>
<p>1.0.30 The OAG recommends HRM Administration clarify the intent and expectation regarding approval of reports to Regional Council such that accountability for the information contained in the report is clear to all who are named as authors or approvers, including ensuring the information and recommendations in the report are: 1) in compliance with the HRM Charter, 2) in compliance with HRM's related policies and procedures and 3) ensuring the information contained in the report is accurate and presented in a clear and unbiased manner.</p>	<p>In response to the OAG's previous report on Concerns on the Common, HRM Legal Services' role in this area has been clarified as part of the re-alignment of the Business Unit. In addition, the FinTrack process for Council report review has been enhanced, and a new Council report development process implemented which emphasizes Director accountability for reports they sign (i.e. internal differences of opinion must be declared).</p>
<p>1.0.31 The OAG recommends HRM Administration review its process for determining when an item can or should be provided to Regional Council on an in-camera basis. The OAG recommends it be the Municipal Solicitor who provides this</p>	<p>This approach has been adopted as the standard operating procedure as a result of the Legal Services re-alignment referenced in the response to 1.0.30.</p>

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advice and ensures the position taken is supported by either section 19(2) of the Halifax Regional Municipality Charter or the spirit of section 19.	
1.0.32 In order to ensure that there are full historical records of discussions with and decisions made by Regional Council, the OAG recommends Regional Council request a legal opinion as to the possibility of having in-camera sessions recorded and the recordings be retained for an appropriate records retention period.	HRM Legal Services will provide an opinion on this issue if requested by Regional Council.
1.0.33 The OAG recommends HRM Administration undertake a complete review and possibly a significant restructuring of the Design and Construction Services section. The OAG suggests the first step in this recommendation would be to obtain independent expertise and advice related to the appropriate structure and practices including (but not limited to) operational structure, staffing levels, appropriate professional processes and standards of practice, appropriate performance measures and services standards. This should help to ensure Design and Construction can meet the needs of their business unit clients and deliver on the projects they are specifically responsible for, while adhering to appropriate engineering and project management standards.	HRM Administration has re-organized the organizational structure since the Washmill project. HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.
1.0.34 With respect to Real Estate Services and particularly the Business Parks section, the OAG suggests HRM Administration needs to ensure there is role clarity and accountability for the group and to ensure projects do not result in staff participating in areas outside their expertise. The OAG contemplates the business parks section could be restructured to be separate from Real Estate Services and the OAG recommends HRM Administration engage independent professional expertise to identify the needed skills and appropriate structure for this organizational activity as well as the appropriate resource and staff levels.	<p>HRM Administration has re-organized the organizational structure since the Washmill project. For example, Real Estate has become part of Planning and Infrastructure as opposed to previous reporting through Transportation and Public Works. Current staff are aware of accountabilities, as the development of Business Parks is a key real estate / land development activity. Real Estate currently employs outside consultants in the development of serviced lots (provision of roads, water and sewer).</p> <p>HRM Administration is working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.</p>
1.0.35 The OAG recommends HRM Administration review the possible benefits of a consolidation of all positions responsible for capital construction or renovation projects within one operating unit, responsible to one director or consider some other organizational restructuring which would reduce and (if possible eliminate) the silos and fragmentation which existed within this project.	<p>HRM Administration has re-organized the organizational structure since the Washmill project. With the exception of transportation design and construction, all capital projects (state of good repair, service improvements and growth projects) are delivered through Planning and Infrastructure. This includes energy and environment, business parks and capital budgeting. The use of a project charter (referenced above) and establishment of a major projects team will establish accountabilities and oversight.</p> <p>HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.</p>
1.0.36 The OAG recommends HRM Administration implement	HRM Administration has re-organized the organizational

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an accountability mechanism, as contemplated in recommendation 1.0.36, for the section responsible to deliver capital projects on behalf of client business units (currently Design and Construction Services) ensuring there is accountability on the part of the section to deliver and, equally important, ensure areas of client business units do not become involved outside their accountability and expertise. The OAG contemplates this could take the form of an engagement letter or some similar project start document used by professional services organizations.	structure since the Washmill project. (see response above). HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.
1.0.37 The OAG suggests "one-time" projects require an approach and expertise which is not supported by those only familiar with ongoing recurring projects. As a result, the OAG recommends specific policies and procedures be developed for high value, non-recurring projects.	Agreed – see responses above.
1.0.38 The OAG would recommend HRM Administration seek independent advice with respect to the expertise needed to advise on or carryout non-recurring capital projects, which it would seem reasonable for HRM to have resident in the organization and support any additions which are felt appropriate.	Agreed – see responses above.
1.0.39 The OAG recommends for any future projects where the services of independent consultants are engaged by HRM, the Administration ensure whoever is responsible for overseeing the contract have the appropriate level of knowledge of both the work to be undertaken and the management of independent consultants.	Agreed – see responses above.
1.0.40 The OAG recommends for any future high-value, non-recurring projects, the responsibilities of independent contractors be very clear, so that "confusion" and "assumptions" as to what will be designed and who for instance, the project manager is, will not take place.	Agreed – see responses above.
1.0.41 With regards to HRM relying on traffic studies obtained by third parties based on HRM requirements, the OAG recommends the process be changed so that HRM is a named party in the contract for services as relying on the report and also having the ability to provide input into the terms and conditions of the work to be performed.	The most frequent use of 3 rd party traffic impact studies occurs through development applications. This approach may not be appropriate in these cases.
1.0.42 The OAG recommends HRM Administration update the Procurement Policy – Appendix B which deals with construction projects, to limit the amount of any increase which can be approved by the CAO. The OAG suggests cumulative contract increases exceeding 20% of the original award amount should require the approval of Regional Council through Audit and Finance Standing Committee.	This approach has been adopted by HRM as standard operating procedure.
1.0.43 Additionally, the OAG recommends HRM Administration clarify the Procurement Policy such that it is clear a tender/contract can only be increased by up to 10% of the tender's original value and not 10% of the total project budget and there must be budget funds available, not including the portion of the project which has yet to be tendered.	The Procurement Policy will be reviewed with this recommendation as a consideration.
1.0.44 The OAG recommends HRM Administration implement a written policy specifically prohibiting staff from entering into any contractual agreements in excess of \$10,000 (including cost-	Based on information in Administrative Order 35 (Procurement Policy), this process is in place.

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sharing arrangements) based on verbal estimates without specific approval by Regional Council.	
1.0.45 The OAG recommends HRM Administration draft an amendment to the Procurement Policy specifically addressing potential issues with unit price contracts and improving the control mechanisms for early recognition of and approval for cost overruns on these specific types of contracts.	The Procurement Policy will be reviewed with this recommendation as a consideration. Design and Construction Services will be consulted.
1.0.46 The OAG recommends Regional Council request a report from the Administration as to specific measures it has put in place or intends to put in place going forward to ensure the contractual interests of HRM are protected in order that any contemplated legal remedies are not conflicted by ambiguous legal documents.	HRM Administration has no issue or concern with this recommendation.
1.0.47 The OAG recommends Regional Council require all capital projects brought to them for approval contain a clear, detailed description of the scope of the project and identify the basis on which the scope was determined.	While this was previously done for IT projects and on an ad hoc basis for others, this is not a part of the standard capital budgeting process. Often, capital projects are brought to Council for initial approval when they are in the concept stage. For example, the ongoing Cogswell Plan would not meet these tests, as it is still high level and the business case depends on real estate values and unlocking development potential that is speculative. However, the initial Cogswell report clearly detailed when and under what conditions staff will return to Council for further approvals.
1.0.48 The OAG recommends HRM Administration implement a process and system of internal controls which prevents staff from materially changing the scope of a project (increases or decreases) without approval from Regional Council and require staff to advise Regional Council when they become aware a project will likely exceed budget.	Significant work was done during the 2014/15 capital budget process to clean up project accounts and align them with the current budget. This work continues and these controls will be in place by October 2014.
1.0.49 The OAG recommends HRM Administration immediately implement the capital project reporting requirements as set out in Section 3 (5) on page 3 of the Capital Spending Policy, which was approved by Regional Council on May 18, 1999. The OAG recognizes there is a report on Capital projects included in the quarterly financial report to Regional Council, however, it does not contain all the required information such as the status of active projects or information on completed projects.	Work is already underway to provide this level of reporting and will be in place by late fall 2014.
1.0.50 The OAG recommends HRM Administration seek external expertise to facilitate the development of a Talent Management System. This system should, at a minimum, drive basic talent management, optimal levels of performance and consistent leadership criteria.	HRM has established the primary components of a talent management system including talent acquisition, performance management, learning and development, leadership development, total rewards and workforce planning. Human Resources is using external expertise where necessary to facilitate continuous improvement.
1.0.51 The OAG recommends in conjunction with Recommendation 1.0.50, the Administration look to expected capital budget projects ten years into the future and ensure the expertise needed to deliver the program is either present in-house or can be acquired and managed when needed.	Agree – this process will be adopted.
1.0.52 In order to achieve Recommendation 1.0.51, the OAG further recommends HRM Administration immediately develop rich and in-depth employee data which includes experience, current training, interests and any special skills. This information should then be drawn upon when non-recurring projects are	As a result of a recently completed external review of HRM's Human Resources business unit, Administration is working on this issue. Human Resources is currently working in partnership with Information, Communications and Technology (ICT) to develop a technology roadmap to expand

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undertaken to identify the most appropriate staff members to assign to the project in order to ensure success.	the capabilities of HRM's Human Resource Management System (HRIS). This will be a multi-year project.
1.0.53 The OAG recommends HRM Administration implement internal policies and processes such that additional leadership, guidance and support is provided to staff when they are working in learning situations or on projects which are unusual or not routinely undertaken. As this is a recurring theme in a number of OAG reports, it is recommended this receive priority focus.	As a result of a recently completed external review of HRM's Human Resources business unit, Administration is working on this issue. Human Resources will work with Senior Leadership to ensure that there are systems, processes and programs in place to support employees who are in developmental positions.
1.0.54 Given much of what the OAG has written in previous reports regarding responsibilities and accountabilities, and our concerns around performance, the OAG recommends the Human Resources group be immediately tasked with the development of an improved compensation process. The basis of the process should be pay for performance, which in turn creates a pay for performance culture based upon accountabilities.	HRM Administration employs a Performance Development Process (PDP) for non-union staff, under which pay increases are based on performance. Compensation and pay increments for the remainder of HRM staff are governed by the content of bargained collective agreements.
1.0.55 The OAG recommends HRM review its role descriptions for its managerial and executive positions to ensure there is absolute clarity around the focus of the role. It is the view of the OAG the focus should be one of planning and organizing, being able to deal with problems and bring them to successful conclusions. In essence, a person who is very much a self-starter who holds themselves accountable.	HRM Administration has re-organized the organizational structure since the Washmill project. HRM Administration is currently working to further re-align the Operations organizational structure and financial accountability structure to formalize key accountabilities and the horizontal linkages required to support improved accountability and collaboration.

Appendix B – Suggested Components of a Properly Governed Project

The OAG suggests the following components would be reasonable to expect in any distinct capital construction project process (i.e. projects which are not routine or regular repair work):

Project Definition

- Formal needs identification and analysis,
- Analysis of alternatives, including preliminary engineering design, high-level cost estimates, advantages and disadvantages of each option,
- Completion of a risk analysis for all options, including the skills and experience necessary to undertake the project in comparison to the skills and experience of current staff,
- After completion of the above three functions, the development of a clear project definition, including scope, objectives and assumptions made,
- If the project is complex or of a first time nature, a benchmark analysis of similar projects undertaken by others (perhaps the Province of Nova Scotia for example) would be highly beneficial,
- Documentation of intended outputs and outcomes as well as the inputs required and key performance indicators. As has been discussed in previous OAG reports, in order to ensure value for taxpayer money is achieved, outcomes must first be pre-determined and documented. The outcomes must then be supported by intended outputs and appropriate inputs. If any of these is not clearly articulated and documented, achieving value for money is left to chance and it is likely not possible to support, after the fact, if it occurred.

Project Work Plan

- Specific identification of the 'project manager', noting their responsibility and accountability for the overall project,
- Identification of the project team and their responsibilities. The team should be selected based on who can contribute most to the success of the project (matching skills and experience to needs), rather than who is available or feel they should be involved,
- Presentation to senior management and Regional Council of

options identified, including costs, advantages, disadvantages and risks for each option (with a recommended solution) and project prioritization. This presentation would also include the types and frequency of management reporting to be provided, which would be determined by the size, complexity, timeline and/or budget of the project, and a signature page where key stakeholders and the project sponsor indicate their approval and acceptance of the accountabilities,

- Approval in principal by Regional Council to move forward with the required design work, and the development of a Class A¹⁷ estimate, with approval and funding for external consultants to assist with design work if required.

Project Specific Procedures

- Identification of project management specific-to-use standardized processes (PMBOK¹⁸, PRINCE2¹⁹ are examples),
- Identification of applicable oriented-to-use standardized governance frameworks (ITIL²⁰ or others),
- Development of final engineering drawings, a Class A estimate and identification of funding source(s),
- Submission to Regional Council for approval to proceed, which would include the detailed scope of the project, total estimated cost (Class A), proposed schedule and a very thorough and robust risk analysis,
- A documented process to identify at the earliest possible opportunity, both symptoms of and actual problems which may arise,
- Communications protocols specific to each of the project team members and major stakeholders including an outline of signs the project may be off plan, such as variances in schedule and budget or insufficient project resources being available and what actions should follow,
- Defined performance measures (targets), to ensure projects are where they should be at various points in time,
- Tendering and award of contracts for construction phase(s),

¹⁷ Per Public Works and Government Services Canada, Class A (Pre-tender) estimates are based on completed construction drawings and specifications prepared prior to calling competitive tenders. These estimates are generally expected to be within 5% and 10% of the actual contract award price for new construction.

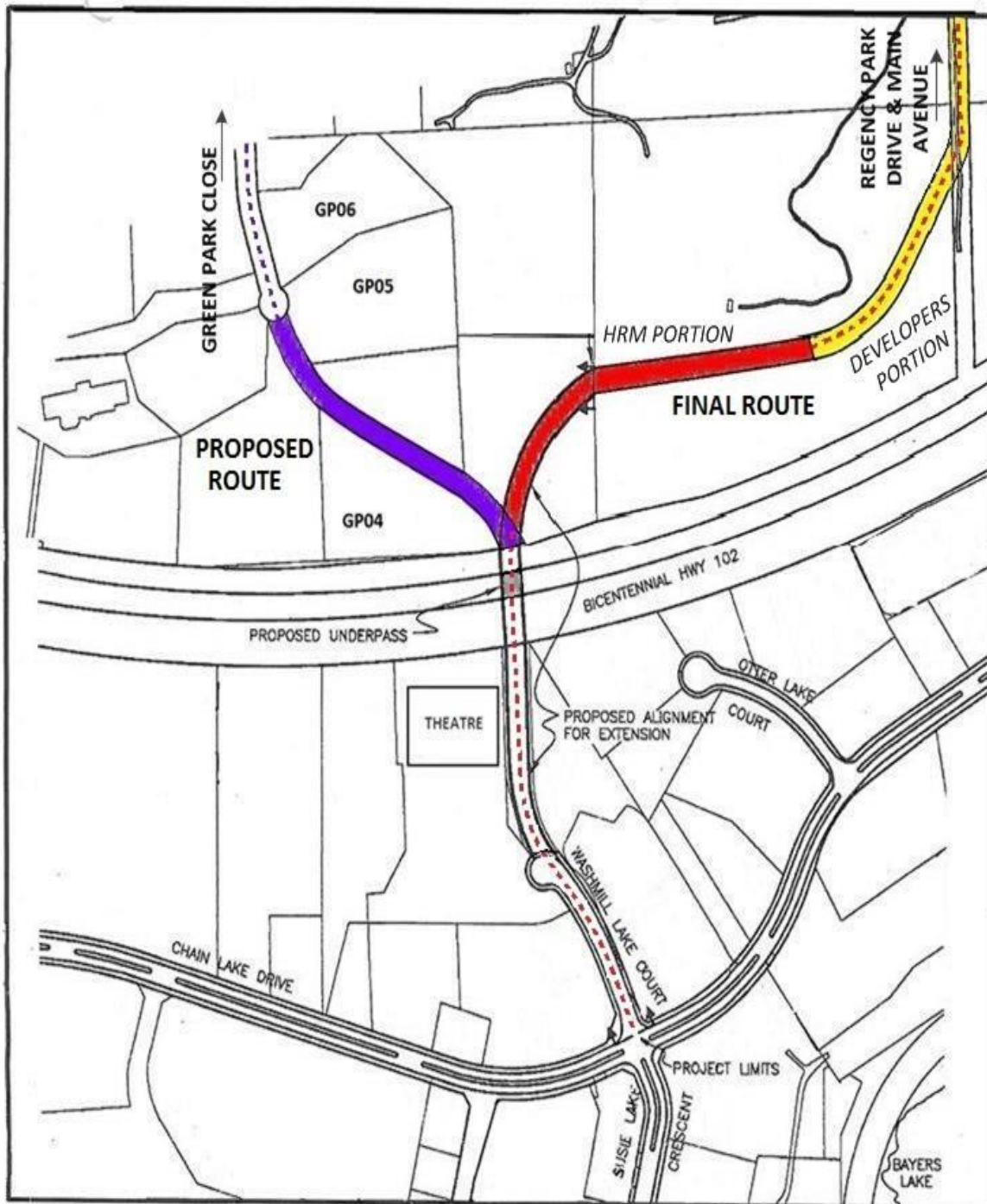
¹⁸ PMBOK – Project Management Book of Knowledge

¹⁹ PRINCE2 – PRojects IN Controlled Environments

²⁰ ITIL –Information Technology Infrastructure Library

- Start construction,
- During construction, regular reporting of project status with updates to both senior management and Regional Council. The degree and frequency would be based on the complexity of the project, size of the budget and/or the estimated time to complete. There should be established criteria to identify what circumstances require additional reporting to Regional Council such as if/when a project is noted as being off schedule, projected to go over budget or if there are scope changes,
- Additional approvals from Regional Council for scope or budget changes when changes are contemplated or required (and before the work is carried out). These should be identified well in advance of being needed due to active and engaged project management,
- Project close out - final report on project completion including reporting on variances in cost and schedule compared with what was originally approved by Regional Council, with explanations for any significant variances and
- Completion of file documentation supporting all decisions and processes, completed on an on-going basis throughout the entire project.

Appendix C – Representation of Routes Considered (See Methodology Section)



*Note: Representation of the two routes considered for the extension of Washmill Lake Court. This is not an exact, to scale drawing.