



OFFICE OF THE
City Auditor

Neighbourhood Renewal Program Audit

April 4, 2016

The Office of the City Auditor conducted
this project in accordance with the
*International Standards for the
Professional Practice of Internal Auditing*

Neighbourhood Renewal Program Audit

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Executive Summary

The Transportation Neighbourhood Renewal Program repairs and replaces streets, sidewalks, and other infrastructure in Edmonton neighbourhoods. The Program was initiated in 2009 with a goal of having all Edmonton neighbourhoods in acceptable condition by the end of 2038 – 30 years.

We assessed four aspects of the Neighbourhood Renewal Program to determine if it has the appropriate structures and supports in place to achieve this long-term objective.

We assessed the Program's

- Funding
- Project Management Effectiveness
- Quality of Work
- Community Relations

The majority of our audit work focused on the neighbourhood reconstruction projects undertaken by the Neighbourhood Renewal Section. The Program allocates approximately 70-80% of its budget to the reconstruction projects.

Overall, we found that the Transportation Neighbourhood Renewal Program has the appropriate structures and supports in place to achieve its long-term objective.

We concluded that funding is sufficient at this time, and that it is more sustainable than it was when the Program began in 2009. However, Program funding is not necessarily secure. We made one recommendation to improve the Program reporting that is provided to Council and the public.

The Neighbourhood Renewal Section is managing construction projects effectively. We identified two risks – one related to bonus payment controls and one related to contract compliance. We made one recommendation to address both of these risks.

Sufficient controls are in place to support the quality of the construction work being completed by the Neighbourhood Renewal Section.

We found that residents are reasonably satisfied with the results of the Program, but there is an opportunity to improve the information provided to neighbourhood residents and enhance the existing process used for managing resident inquiries. We have made two recommendations to support improvements.

Neighbourhood Renewal Program Audit

1. Introduction

Audit Committee requested a review of the Neighbourhood Renewal Program to be part of the Office of the City Auditor's 2015 Annual Work Plan.

Building Great Neighbourhoods is the corporate-level initiative that coordinates three programs that invest in neighbourhood infrastructure. These three programs are:

1. Transportation Neighbourhood Renewal
2. Drainage Neighbourhood Renewal
3. Community Services Great Neighbourhood Capital Program

Each of these programs is coordinated with the others; however, each has its own purpose and serves its own mandate.

This audit focused on the Transportation Neighbourhood Renewal Program. All references to the "Neighbourhood Renewal Program" or "Program" in this report refer to Transportation.

2. Background

2.1. Program Overview

Prior to 1987, no significant renewal work had taken place in Edmonton's neighbourhoods. Roads, sidewalks, and sewers were reaching the end of their lifecycle. Between 1987 and 2008, the City renewed 52 neighbourhoods – just over an average of two per year. As of 2009, it was estimated that 174 neighbourhoods were in need of renewal out of the approximate 300 City of Edmonton neighbourhoods. A 2012 report to Council identified chronic underfunding as a factor for the lack of renewal work.

Neighbourhood Renewal was first developed in 2004 when Council defined a scope of work. However, it was not considered a Program until 2009 with the establishment of a stable source of funding through a dedicated tax levy.

The objective for the Neighbourhood Renewal Program is to have the average condition of all neighbourhoods at a 'B' condition (good) or higher and all individual neighbourhoods at a 'C' condition (fair) or higher by the end of 2038.

The Program undertakes six different types of work:

1. Neighbourhood Reconstruction – Road bases are reconstructed and roads are repaved. Sidewalks, curbs and gutters, and streetlights are replaced. Reconstruction neighbourhood candidates have poor sidewalk and poor road conditions.

2. Neighbourhood Overlay – Roads are repaved and sidewalk panels treated to eliminate trip hazards. Overlay neighbourhood candidates have fair to poor road condition and good sidewalk condition.
3. Collector/Local Road Renewal – Collector and local roads are renewed with a priority on bus routes.
4. North East Road Reconstruction – Replacement of road with special drainage enhancement, selective concrete repair due to soft subgrade conditions that exist in the area.
5. Microsurfacing – Includes crack sealing and microsurfacing where roads are resealed with a thin asphalt surface. Neighbourhood microsurfacing candidates have good road conditions and are applied 10-12 years after road reconstruction or resurfacing.
6. Rural Neighbourhood Road Renewal – Renewal of both paved and unpaved rural neighbourhood roadways.

2.2. Program Funding

The Program is funded from three sources: the dedicated Neighbourhood Renewal Program tax levy, Local Improvement project funds, and the provincial MSI grant. Council may also choose to add funding to the Program from general revenue tax levy funds or other sources that may be available.

As shown in Table 1, assuming there are no significant scope changes to the Program, management has estimated that it will cost the City between \$137 million and \$157.5 million annually to reach the 30-year goal.

Table 1 –Estimated Neighbourhood Renewal Program Allocation

Type of Work	Approximate Annual Cost (in millions)
Neighbourhood Reconstruction	\$100 – \$120
Neighbourhood Overlay	\$15
Collector/Local Road Renewal	\$10
North East Road Reconstruction	\$8
Microsurfacing	\$2.5
Rural Neighbourhood Road Renewal	\$1.5 – \$2
Total	\$137 - \$157.5

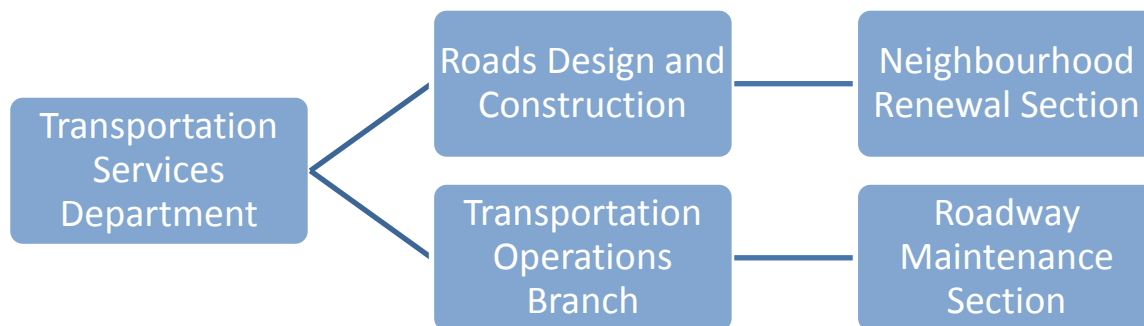
2.3. Program/Organizational Structure

At the time of our audit, the entirety of the Neighbourhood Renewal Program was contained within the Transportation Services Department. As a result of the organizational changes implemented at the end of 2015, much of the Program work has been moved to the Integrated Infrastructure Services Department.

Figure 1 provides a high-level overview of the responsibilities of the organizational units that were responsible for some aspect of the Program at the time of our audit.

Throughout this report, we refer to each organizational unit by the name they used at the time of the audit.

Figure 1: Transportation Neighbourhood Renewal Program Organizational Stakeholders



The Roads Design and Construction Branch and the Neighbourhood Renewal Section are responsible for all reconstruction and renewal projects. This includes developing the detailed neighbourhood designs and the tendering of construction work to private industry. It also includes a portion of local and collector road renewal.

The Transportation Operations Branch and Roadway Maintenance Section are responsible for the overall Program planning and forecasting. They are also responsible for a portion of overlay work and microsurfacing work, and a portion of local and collector road renewal.

3. Program Risks

Through our risk assessment process, we identified key risk areas for the Program:

1. Funding
2. Project Management
3. Quality of Work
4. Community Relations

3.1. Funding Risk

Our risk assessment identified funding changes as high risk for the Neighbourhood Renewal Program. The 30 year goal of the Neighbourhood Renewal Program is dependent upon sufficient, sustainable, and secure funding being available to allow for Program planning and execution over the long term. As such, we included an assessment of funding risk in our audit objectives.

3.2. Project Management and Quality of Work Risks

The risk assessment identified a number of risks associated with project management and quality of work including project budgets, timelines, monitoring, and training. Additionally, there is a significant risk that the Program may not achieve its 30-year goal if projects are not managed to ensure that they are delivered on-time, on-budget, and are resulting in high-quality work.

We included a variety of procedures in this audit to address the risks associated with the different aspects of project management and quality of work.

3.3. Community Relations Risk

A key risk for the Program is that it may not meet the expectations of the community. This could result in complaints from citizens and affect the reputation of the Program. To understand where the Program may not be meeting citizen expectations, we contacted eight citizens who had previously expressed concerns about the Program to their Councillor or the media. These citizens shared with us their experiences with the Neighbourhood Renewal Program.

These citizens identified eight specific areas of concern where the Program was not meeting their expectations.

1. They did not reach the person who could fix the problem.
2. It was taking too long to fix the problem.
3. The fix wasn't right or didn't work.
4. They were told it wasn't going to be fixed.
5. They weren't being taken seriously.
6. They weren't being treated equitably.
7. They were not given a say in what was happening in their community.
8. They were generally frustrated with the length of construction overall.

Some of these issues are associated with project management and quality of work. We ensured our procedures related to project management included these issues.

The remainder of the identified issues are associated with the process of resolving a complaint or the quality of communication. As such, we included a review of the complaint management process in this audit.

4. Audit Objectives, Scope, and Methodology

The objective of this audit was to determine if the Neighbourhood Renewal Program has the appropriate structures and supports in place to achieve its long-term objectives.

The topics we addressed in this audit correspond with the four areas of higher risk identified from our risk assessment: Funding, Project Management, Quality of Work, and Community Relations.

The scope of our work was limited to the Transportation Neighbourhood Renewal Program. Neighbourhood renewal work managed through the Community Services Department or Drainage Services Branch was out of scope.

Within the Transportation Neighbourhood Renewal Program, we focused our audit work primarily on the Neighbourhood Renewal Section in the Roads Design and Construction Branch. This Section is responsible for the majority of reconstruction and rehabilitation work within the Program. Neighbourhood reconstructions account for approximately 70-80% of Program funding.

The effectiveness of the public involvement/community involvement process that occurs prior to construction was out of scope. The Office of the City Auditor completed an audit of the City's public involvement process in 2014 and a Council/Administration initiative is currently in progress to address issues.¹

The process through which neighbourhood renewal projects are prioritized and chosen was out of scope. The City Streets Audit assessed this in 2014².

This audit reviewed a large number of processes and practices within the Neighbourhood Renewal Program. As such, our methodologies included:

- Interviews with internal stakeholders from Transportation, Finance, Community Services, and Drainage
- Interviews with citizens
- Financial analysis
- Statistical analysis
- Best practice literature review
- Consultation with internal and external subject matter experts in the areas of engineering, law, and customer service
- Site visits of nine neighbourhoods
- Direct observations during a construction completion inspection with project stakeholders
- Review of on-site inspection procedures
- Review of material testing procedures

¹ Office of the City Auditor (2014) Public Involvement Audit

² Office of the City Auditor (2014) City Streets Audit

5. Observations and Findings

To assess if the Neighbourhood Renewal Program has the appropriate structures and supports in place to achieve its long-term objective we reviewed:

- If funding is sufficient, sustainable, and secure to support the Program objectives and goals,
- If projects are being managed effectively,
- If appropriate controls are in place to support high-quality construction work, and
- Specific community relations activities for efficiency and effectiveness.

5.1. Funding

To determine if the approach to funding the Neighbourhood Renewal Program is effective, we assessed if funding was sufficient, sustainable, and secure. If funding for the Program is not sufficient, sustainable, and secure, then the Program is unlikely to achieve its goal of having all City of Edmonton neighbourhoods in acceptable condition by the end of 2038.

Sufficient funding means that the amount of funds available for the Program is adequate to complete planned work.

Sustainable funding must be able to be maintained at a certain level over time.

Secure funding must be controlled in some manner that ensures that it remains available for program use.

We found that the funding for the Program is sufficient at this time, and that it is currently more sustainable than it was in 2009. However, Program funding is not necessarily secure.

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5.1.1. Funding Approach

To fund the Neighbourhood Renewal Program, Council made the decision in 2008 to add an annual increase to property taxes each year until 2018 and allocate these dollars to the Program.

Starting in 2009, Council allocated a 2% tax levy increase to the Program resulting in \$15,613 million (approximately \$29 per household) collected. In each of the subsequent years, the amount collected in the previous year(s) was included in the tax base and an additional tax levy increase ranging from 1% to 2% was added in order to build up the Program funding. It was anticipated that by 2018 the annual funding received through the tax levy would have increased to the point where it could fund the program in its entirety. Table 2 shows the amount of funds collected each year.

Table 2: Compounding effect of annual tax levy increases

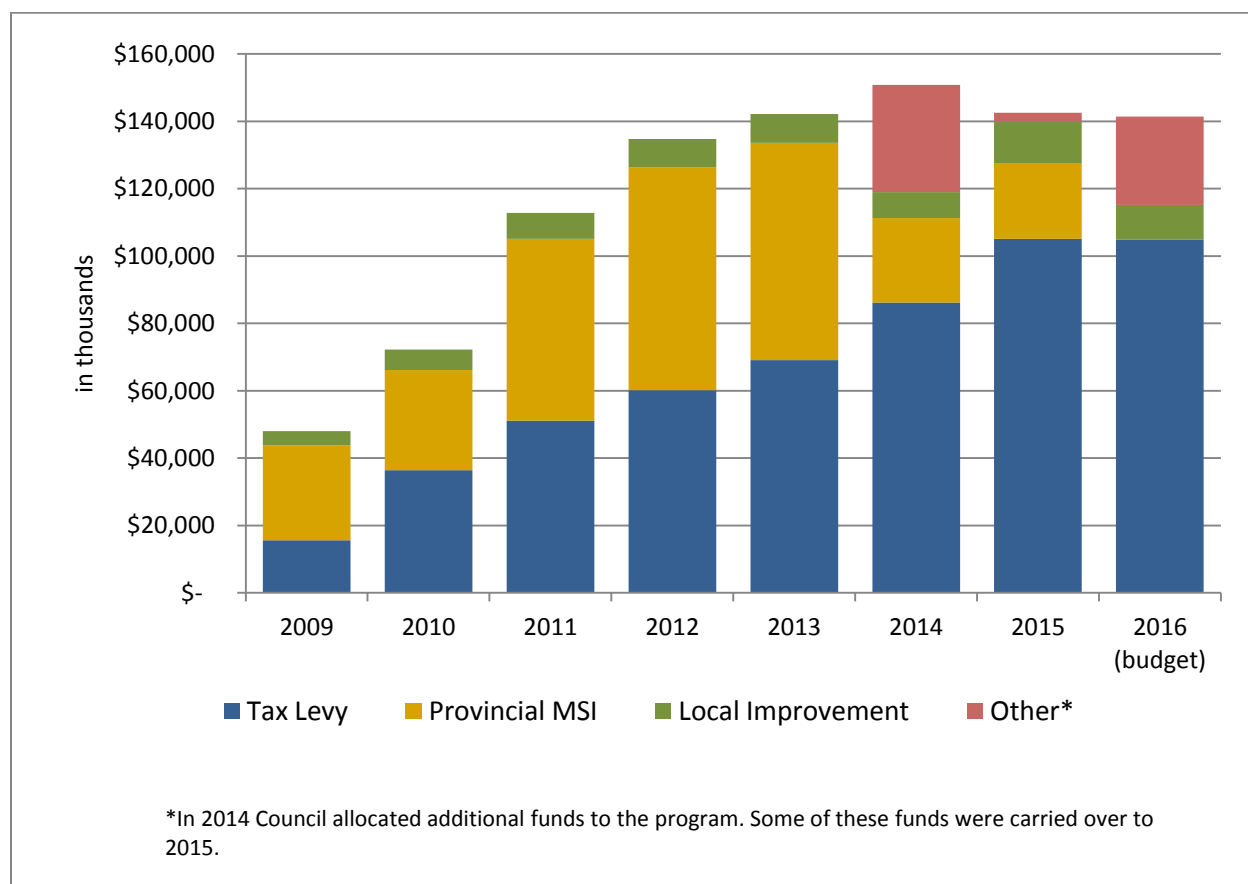
Year	Assessed Value of Home*	Tax levy increase allocated for Neighbourhood Renewal	Amount for Neighbourhood Renewal paid by property owner on tax bill	Total levy for Neighbourhood Renewal (in thousands)
2009	\$400,000	2%	\$29	\$15,613
2010	\$361,500	2%	\$58	\$36,377
2011	\$330,000	1.5%	\$80	\$51,091
2012	\$357,000	1.5%	\$91	\$60,191
2013	\$364,000	1%	\$101	\$69,115
2014	\$374,000	1.5%	\$134	\$86,226
2015	\$401,000	1.5%	\$178	\$105,112
2016	\$408,000	0%	\$178	\$105,112

*Based on the assessed value of the typical single-family detached home for that year as calculated by the Assessment and Taxation Branch.

As shown in Table 2, the growth from the tax levy was possible due to the compounding effect of the annual tax levy increases combined with the increases to the tax base. During budget deliberations in 2015, City Council decided to suspend the increase to the tax levy in 2016, thus the amount to be collected remains at \$105 million, as it is part of the 2016 tax base.

As the tax levy portion of the program was building up, Council supplemented the Program funding with Provincial MSI funds and other transfers. This resulted in a total of \$48 million available to fund the Program in 2009, and approximately \$140 million each year from 2012 to 2015. In 2016, the Program is budgeted for \$141 million. Figure 2 shows the sources of the funds used for the Program, and the total amount available to fund the Program from 2009-2016.

Figure 2: Sources and Growth of Neighbourhood Renewal Funding since 2009



As seen in Figure 2, the tax levy provided 33% of the Program’s funding in 2009 (\$16 million of total \$48 million). Each subsequent year, the percentage of the Program funding provided by the tax levy increased. In 2013, 49% of Program funds came from the tax levy. By 2015, tax levy funds accounted for almost 74% of the Program funds. Approximately \$141 million is required to fully fund the work planned by the Program in 2016. The tax levy will provide approximately \$105 million of this amount. Therefore, the Program will require funds from MSI, or another source, to fully fund the 2016 planned work.

5.1.2. Sufficient Funding

Funding is sufficient if the Program has funds available to complete the annual work as planned in order to achieve the Program’s 30-year goal.

We have based our determination of sufficient funding on three criteria:

1. The amount of reconstruction work planned for each year must be consistent with the amount of work that needs to be done overall to reach the 30-year goal.
2. The annual funding estimates used by the Program must be consistent with the actual costs. If annual estimates are not accurate, it is likely that long-term projections are not accurate.

3. Historical Program budgets must indicate the sufficiency of funding in the past. If the Program had funds left over at the end of a year, the Program may be overfunded. If the Program was over budget, they may have had insufficient funds to complete the work required.

Annual Work Planning

To assess if the amount of annual work is consistent with the achievement of the 30-year goal, we identified the total amount of neighbourhoods requiring reconstruction and reviewed the number of neighbourhoods that have reconstructions planned for completion between 2016 and 2022.

The Program indicated in a 2015 Neighbourhood Renewal Program status update report that there were 103 neighbourhoods requiring reconstruction. Based on this number, the Program would need to complete reconstruction of 4.3 neighbourhoods each year between 2016 and 2038.

We reviewed the number of neighbourhood reconstructions that the Program expects to complete between 2016 and 2022³. We found that the Program has scheduled the completion of 5.1 neighbourhoods each year. Additionally, we found that between 2013 and 2015 - the years where the Program was considered fully funded - the Program completed 4.3 neighbourhoods per year.

The Program has plans in place to complete more neighbourhoods each year than the minimum required to meet their goal. Additionally, their past performance has indicated that they are capable of performing the required amount of work each year. As such, we conclude that the current annual estimates and work plans are consistent with what is required to achieve the 30-year goal.

Condition Tracking and Reporting

Without a consistent approach to determining how many neighbourhoods require reconstruction, there is a risk that the amount of work may be over or underestimated. This, in turn, affects the sufficiency of funding.

We identified that the Program has reported the overall number of

neighbourhoods requiring reconstruction inconsistently between 2009 and 2015. The total number of neighbourhoods that require reconstruction is based on a calculated condition index. This index is calculated using different methods for different operational purposes. A single methodology for public reporting has not been established. This has resulted in the public reporting of inconsistent numbers. For example, in 2012, one report estimated that 104 neighbourhoods required reconstruction. In 2015, a report indicated that there were 103 neighbourhoods requiring reconstruction even though 5 had been completed in 2013 and 6 had been completed in 2014.

A consistent methodology for reporting the condition of neighbourhoods to Council would allow for more effective tracking of Program progress towards its goal.

³ Specific neighbourhoods planned for reconstruction have been identified up to 2022.

If the Program established and documented a consistent methodology and format for reporting the condition of neighbourhoods, City Council and citizens would be able to better understand the progress of the Neighbourhood Renewal Program in reaching its goal. This can also help support better decision-making.

Recommendation 1

The OCA recommends the Branch Manager, Transportation Operations develop a consistent methodology to track, reconcile, and report on the progress of the Program as it is working toward the 30-year goal.

Management Response

Accepted

Action plan: This work is currently contained in the Road Renewal Strategy, which is under development and will be presented to Council in the 2nd quarter of 2016. The Road Renewal Strategy is being completed in response to Recommendations 1, 2 and 3 that were made in the 2014 City Streets Audit.

Planned Implementation Date: December, 2016

Responsible Party: Branch Manager, Transportation Operations

Annual Funding Estimates

To assess the accuracy of the annual funding estimates, we compared the high-level estimate of the cost of a single neighbourhood reconstruction as provided by the Program with the average actual cost of a neighbourhood reconstruction completed between 2009 and 2015. As the neighbourhood reconstruction work comprises approximately 75% of the Program's total funding, we assessed only the costs of reconstruction rather than all of the different types of work completed by the Program.

The Program has estimated that the cost of a full neighbourhood reconstruction is approximately \$20 million. The average actual cost for a neighbourhood reconstructed between 2009 and 2015 was \$18 million. We also found that there has been a general upward trend in the actual costs of neighbourhood reconstructions since 2009. Based on this information we find that the current cost estimate of approximately \$20 million per neighbourhood reconstruction is reasonably accurate at this time.

Historical and Current Budget Adequacy

To conclude on the sufficiency of Program funding, we assessed the adequacy of the current and historical budget.

The purpose of this review was to identify:

- If the 2016 budget is consistent with the estimated financial requirements of the Program, and
- If the Program had been using all of the funds in their budget each year.

The Program estimates that it needs between \$137 million and \$157.5 million annually to complete planned work. The 2016 budget for the Program is approximately \$141 million. As such, we find that the 2016 budget is consistent with the estimated financial requirements of the Program.

When the Program was established in 2009, a reserve fund was set up so that any unused funds from one year would be carried forward to a subsequent year. We found that the amounts transferred to the reserve fund for carry over were relatively low. This indicates that the Program is typically using the full amount of their annual budget.

Overall, we found that Program funding is sufficient at this time. However, to remain sufficient there needs to be consistent tracking of the total number of neighbourhoods requiring renewal, and the cost estimates used for planning purposes will need updating as required.

5.1.3. Sustainable Funding

To be sustainable, funding must be able to be maintained at a certain level over time.

The most sustainable funding approach for the Neighbourhood Renewal Program would be to have the Program fully funded by the tax levy for the life of the Program. This is a predictable, stable source of revenue that is within the control of City Council. MSI funding is not as sustainable since it is under the control of the provincial government.

Based on our review, funding for the Neighbourhood Renewal Program has grown more sustainable since 2009 because of the dedicated tax levy increase. This funding approach has resulted in the growth of funds from this source and growth of funds for the Program overall. As of 2015, funds from the tax levy comprise approximately 75% of the Program budget.

Council made the decision in 2015 to remove the dedicated levy increase from the 2016 budget. In the short term, Council can address the shortfall between the funds available for the Program from the tax levy and the \$141 million needed to fully fund the Program in 2016 using other funding sources - similar to what has been done to date. Over

Having the Program fully funded by the tax levy would be the most sustainable option; however, the current state is considerably more sustainable than was the case in 2009.

the long-term, if Council does not reinstate the annual dedicated increase to reach the Program's full funding requirement, funds will need to be requisitioned from other priorities each year in the budget process. Alternatively, the Program could reduce the amount of work performed on an annual basis to match the available funding. This could potentially push out the 30-year goal.

Although having the Program fully funded by the tax levy would be the most sustainable option, the current state where the tax levy provides approximately 75% of the Program's funding is still considerably more sustainable than was the case in 2009.

5.1.4. Secure Funding

To be secure, the funding must be controlled in some manner that ensures that it remains available for Program use.

In 2015, Council made the decision to remove the dedicated tax levy increase from the 2016 budget; however, the current tax base still contains the amounts raised from the dedicated increases made each year since 2009 – approximately \$105 million. As previously shown in Table 2, in 2016, approximately \$178 of an individual household's property tax bill⁴ is the result of dedicated tax increases from 2009 to 2015.

Although this money is being raised for the specific purpose of neighbourhood renewal, currently this total \$105 million annual amount from the tax levy has no formal administrative or policy restrictions on its use. It is part of the general tax base and is allocated to the Neighbourhood Renewal Program using the same budget process as most other City programs. This means that present and future Councils have the ability to reallocate this funding where they deem necessary.

Although a portion of the tax levy is intended for Neighbourhood Renewal, this \$105 million has no formal administrative or policy restrictions on its use.

All City programs that rely specifically on tax levy funding face a similar risk in that City Council can reallocate funding away from the program. This Program differs in that these funds were raised specifically for the purpose of neighbourhood renewal and this purpose was indicated on the homeowner's tax bill. As such, City Council may wish to consider options to ensure that future budget reallocation decisions consider the history and intent of raising those funds. This may help address the risk of organizational memory loss and support transparency for future decisions.

⁴ Based on an assessed property value of \$401,000

5.2. Project Management Effectiveness

Based on our risk assessment and the feedback provided by citizens, we assessed the effectiveness of the project management practices used by the Neighbourhood Renewal Section. Specifically we examined:

- The accuracy of budgeting,
- If the progression of projects was being monitored appropriately,
- If projects were being delivered on time, and
- Controls related to contractor payments and compliance with contracts.

5.2.1. Budgeting

Cost overruns are a concern for any project. As such, it is important that project costs are budgeted as accurately as possible. Budgeting is a particular challenge for the Neighbourhood Renewal Program because of the length of time between the conceptual planning for a neighbourhood reconstruction project and its completion. In some cases, there can be a span of nine years between when the Program initially identifies a neighbourhood for reconstruction and when that reconstruction is complete.

Conceptual Budgets

Planning for neighbourhood renewal projects starts approximately 3-6 years ahead of actual construction. The Program creates conceptual budgets for these projects to provide a high-level understanding of the costs associated with different types of construction projects. These conceptual budgets are recorded in a corporate system once Council has approved the project through the capital budgeting process. As more detailed project planning occurs, adjustments are made to these conceptual budgets – as per capital budget adjustment procedures.

Because these budgets are developed without knowing the details of a project, there can be a significant variance between this conceptual budget and the final actual costs. According to the Project Management Reference Guide (PMRG) developed by the City's Project Management Office, conceptual budgets with a variance of +/- 50% are acceptable.

The average variance between conceptual budgets for reconstruction projects and the actual costs is +/-16%.

We compared the conceptual budgets to the actual costs of 22 neighbourhood reconstruction projects between 2009 and 2015. All of the projects had budget variances within the acceptable limits and the average variance was +/-16%. As such, we find that the conceptual budgeting process is reasonably accurate.

In our analysis, we reviewed the actual costs of neighbourhood renewal based on the cost per lane kilometre. We found there was a limited variance (22%) in the actual cost per lane kilometre. We believe there may be an opportunity to use this information to supplement the current budgeting process for neighbourhood reconstruction projects. Management has indicated that they will assess how this information can be incorporated into the budgeting process.

Increases in project scope can be one reason why projects may go over budget. We reviewed how the Program manages project scope to better understand this risk.

The Neighbourhood Renewal Section has indicated that they manage the risk of scope growth by committing up to 5% of the Neighbourhood Renewal Program annual budget on work that is 'growth' rather than 'renewal.' Growth spending includes such things as increasing the quantity of roadway or sidewalk, or installing new traffic signals – activities that expand the scope of a project beyond what was conceptually estimated. Growth activities that exceed the 5% are managed through coordination with other City programs.

As the City continues to implement initiatives such as traffic shortcutting prevention measures, complete streets, and active transportation modes, the Program will need to continue to ensure that project scope does not outpace the available funding, otherwise the current estimates for program funding may not be sufficient.

Based on our analysis, we conclude that the conceptual budgeting for the Program is reasonably accurate and that the Program is currently managing the risk of scope growth effectively.

5.2.2. Monitoring Project Progression and Schedule

The Project Managers in the Neighbourhood Renewal Section appropriately monitor their project progression and schedules. The Program provides operational, financial, and public reporting on a regular basis.

We found that the City's Project Managers use a number of methods to monitor the progress of projects depending on the type and detail of information required. Operational project progress is reported to Branch management, internal stakeholders (e.g., project owners), and external stakeholders (e.g., utilities) on a monthly basis. Reports identify the progress of the project in terms of both schedule and budget.

The Program provides financial reporting on a quarterly basis. Budget status, variances, and total project projections are discussed with Finance.

Public reporting on projects is provided three times per year. In 2015, these reports were provided in May (notification of upcoming projects), in August (a mid-season update with status on schedule and budget), and in November (a construction season wrap-up notice with status on schedule and budget).

5.2.3. Delivering Projects on Schedule

The Neighbourhood Renewal Program uses long-term contracts for the reconstruction projects. These are typically six years in length and the City has an option to terminate the contract at three years. Each year of the long-term contract has a unique scope of work defined and a specified date by which the contractor must complete the construction work in order to receive a bonus. If the contractor has not completed the work required by that date, they are required to pay the City site occupancy costs. The purpose of the bonuses and site occupancy costs are to encourage the contractors to complete the work on time.

Construction is considered complete when the sidewalks, asphalt, and landscaping is in place as per the City's specifications. Contractors are not required to have all sod completed, as construction of sidewalks, curbs, gutters, and streets can continue past the season when it is advisable to place sod. The completion date is supported by the documented quantities of construction materials used and an informal physical inspection of the work completed, conducted by the Project Manager.

Between 2012 and 2015, 93% of reconstruction projects were completed on time.

Between 2009 and 2015, the City entered into eight long-term contracts with 41 opportunities for contractors to receive bonuses or be assessed site occupancy costs. From 2009 to 2015, 76% of the time the contractor completed the work before the date specified in the contract and received a bonus. However, this percentage increases to 93% between 2012 and 2015. This strongly suggests that the Section and the industry have improved on their timely delivery of reconstruction projects.

In 2015, the City awarded bonuses for the on-time completion of all eight contracts.

5.2.4. Contractor Payments Controls and Contract Compliance

In our review, we found that there were good controls around contractor payments for construction work completed. The role of the City's on-site Inspector includes the task of monitoring and measuring the work completed by the contractor. The Project Manager reviews the documentation created by the Inspector and then initiates payment to the contractor. This process means that there is little risk that the City will pay a contractor for work that was not completed.

We identified a need to improve controls around contractor bonus payments. Currently the Project Manager is responsible for verifying that the contractor completes construction by the date required to receive a bonus. This individual is also responsible for approving and authorizing the contractor bonuses based on that completion date. Having the same person verify construction completion, and authorize the bonus increases the risk of error as there is no additional check to ensure accuracy. It could also provide an opportunity for unethical behaviour under certain circumstances.

There was a risk that bonuses could be awarded inappropriately. Our testing found no evidence suggesting that this has occurred.

Bonuses are approximately 5% of the actual contract value. In 2015, the City awarded approximately \$3.9 million to contractors as bonuses based on a total contract value of \$78 million. Individual bonus payments ranged from approximately \$340,000 to \$595,000. There is a high financial and reputational risk to the City if these amounts were awarded inappropriately.

To assess this risk, we reviewed eight projects completed between 2013 and 2015. We chose these projects based on risk factors including the value of the contract, the

experience of the project manager, the experience of the contractor, and known issues with the project as per the General Supervisor. We also ensured that there was coverage of multiple contractors and multiple project managers.

We found no evidence in the documentation that would suggest that a contractor received a bonus to which they were not entitled; however, given the value of these bonuses, and the potential risk of error in the approval, additional formal authorization and oversight of this process is required.

In our bonus testing process, we also identified one project in the sample set where the completion date for the contract was changed. There was an acceptable rationale for this change; however, the contract's General Conditions require a change order be completed in such cases. In this instance, there was informal documentation; however, no change order was completed. The Neighbourhood Renewal Section indicated that this was their typical practice. Following proper procedures related to contract changes reduces the risk to the City.

Recommendation 2

The OCA recommends the Branch Manager, Transportation Infrastructure implement changes to their existing processes to:

1. Ensure that bonuses and site occupancy costs are appropriately verified and authorized, and
2. Ensure change orders are used when required.

Management Response

Accepted

Action plan: Transportation Infrastructure is currently developing a formalized process to ensure oversight and project completion where all bonus/penalties and site occupancy costs are reviewed and approved by General Supervisor and Director.

Following the City of Edmonton, Project Management Reference Guide, Transportation Infrastructure will integrate the use of change orders as required throughout project delivery.

Planned Implementation Date: May 2016 for completion December 2016

Responsible Party: Director of Neighbourhood Renewal in consultation with the Corporate and Financial Services Department.

5.3. Quality of Work

It is important that the City receives high-quality work from its construction contracts. We assessed a number of activities and processes that are intended to support the quality of construction work in neighbourhoods.

These included:

- The processes for dealing with construction deficiencies
- The training of Construction Inspectors
- The testing of construction materials
- The protection for neighbourhood trees

5.3.1. Dealing with Construction Deficiencies

Residents expect new construction in their neighbourhood to look new. As such, it can be frustrating to see new concrete with cracks, sod that is lumpy or missing, or water and ice pooling on new asphalt or sidewalks because of problems with the grade or the quality of construction. The Neighbourhood Renewal Program considers these to be construction deficiencies.

Deficiencies are a normal part of the construction process and can be caused by many factors including; site conditions, weather, quality of workmanship, and quality of materials. Some of these factors are controllable by the contractor, such as quality of workmanship and materials, but others such as site conditions and weather are not within the control of the contractor.

All deficiencies, regardless of their cause, are identified by the Project Manager throughout the project and are formally addressed in two inspection processes – one at the end of construction and one at the end of the warranty period. We reviewed these two inspection processes to assess whether or not they are adequate to support high-quality construction.

Construction Completion Inspection and Holdbacks

The first formal inspection occurs when the construction is complete - typically at the end of the construction season in the fall. The City's on-site construction Inspector, the City's Project Manager, and the contractor complete this inspection. These individuals walk through the neighbourhood and inspect all asphalt, concrete, and landscaping. Any problems are marked and numbered, such as the concrete crack in Figure 3. All numbered items are documented on an inspection report. A cost is assigned to each of the deficiencies in this report. The City withholds this amount from payment until the contractor corrects the deficiencies at their cost.

Figure 3 - Example of concrete deficiency marked for removing and replacement

We reviewed the inspection reports for nine neighbourhoods. Holdbacks for construction deficiencies ranged from approximately \$7,000 (Meadowlark Park) to \$430,000 (Fulton Place). A typical holdback was between \$25,000 and \$75,000. Contractors are required to fix all deficiencies at their own cost as specified in the contract agreement.

Bonus payments and site occupancy costs are unaffected by the identification of construction deficiencies. These are based solely on the construction completion date. Contractors are always required to adhere to the construction standards. We observed that the contractor for Fulton Place with the substantially higher holdback did not complete the project on time and paid site occupancy costs to the City.

Although we identified the potential for the City to award bonuses to contractors for work that had significant deficiencies, we have chosen to make no recommendations to address this risk. Management has indicated that they have accepted this risk because they believe that changing the bonus conditions would increase the risk that contractors would not complete projects on time – a much more expensive problem for the City to address.

Deficiencies in New Construction

We examined the list of deficiencies identified in construction completion inspection reports for nine neighbourhoods that were reconstructed between 2010 and 2014. As indicated in Table 3, we found that problems with concrete were the most common, followed by landscaping, and then asphalt.

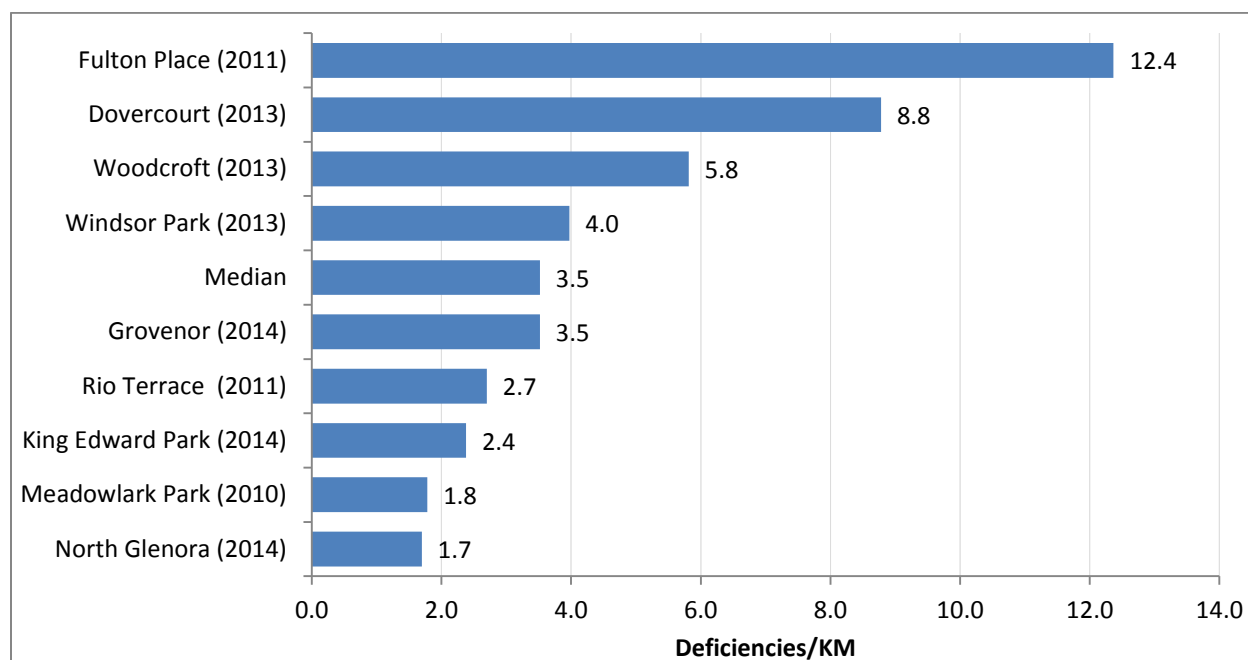
Table 3 - Deficiency Types

Deficiency Type	% of all Deficiencies
Concrete	56%
Landscaping	32%
Asphalt	12%

We also calculated the number of deficiencies per lane kilometre built. This allowed us to compare the number of deficiencies in different sized neighbourhoods.

As shown in Figure 4, for every lane kilometre of new construction, there was a median of 3.5 construction deficiencies. Fulton Place had the highest number of deficiencies at 12.4 per KM and North Glenora had the fewest at 1.7 per KM. There can be many causes for construction deficiencies - some that are within the control of the contractor and some that are not.

Figure 4 – Construction deficiencies from a sample of nine neighbourhoods at the construction completion inspection



The Section expects that deficiencies identified at construction completion to be fixed early in the next construction season. However, there is no formal deadline for the contractor to fix these. The City does not pay out the money held back for each deficiency identified during the inspection until the contractor fixes all of the deficiencies and the City has completed a re-inspection.

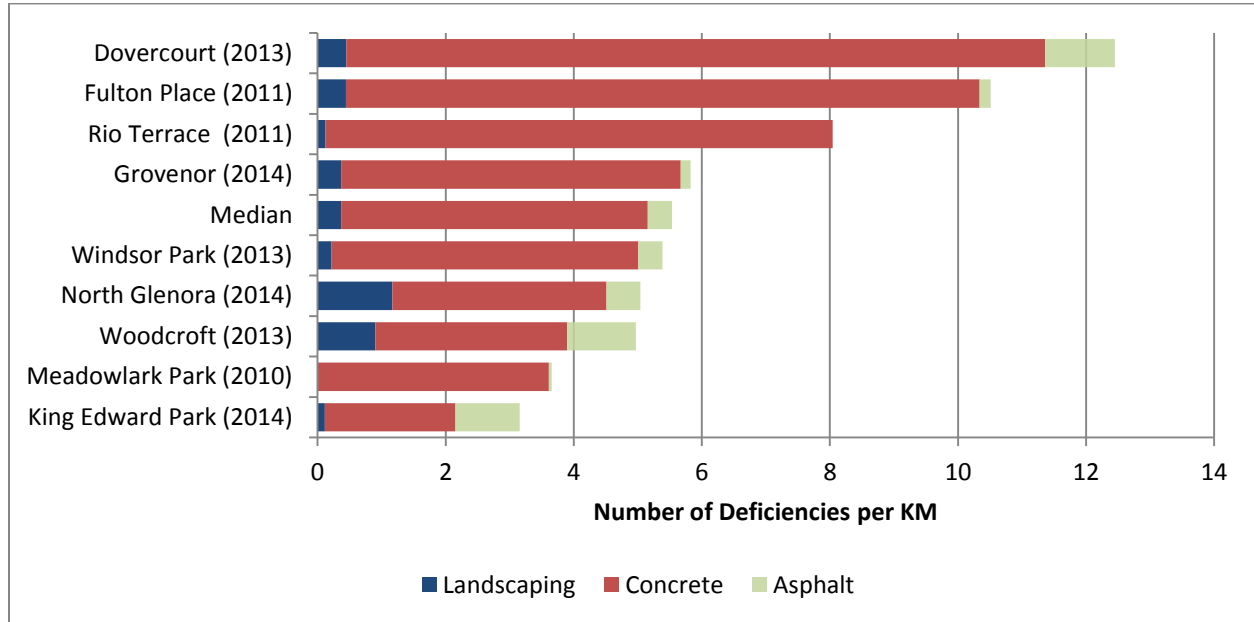
The Warranty Period and Final Inspection

Once the construction completion inspection is complete, and the City issues a construction completion certificate, the two-year warranty period commences. This warranty period provides an opportunity for the new construction to be tested by regular use. During this period, sidewalks, curbs, gutters, pavement, and landscaping is fully available for use. After two years, the warranty period is concluded when:

- a) the final inspection is completed,
- b) all deficiencies are fixed by the contractor, and
- c) the City issues the Final Acceptance Certificate.

We looked at the types of problems that emerge during the two years after construction. Concrete issues were, by far, the most common. We were informed that weather conditions is one of the primary drivers of concrete deficiencies as the new concrete is exposed to Edmonton’s freeze-thaw cycles. As shown in Figure 5, the final inspection identified landscaping and asphalt issues less often.

Figure 5: Deficiencies/KM found in 9 sample neighbourhoods at final inspection by type and neighbourhood



An independent City inspector, who had no previous involvement with the project, completes the final inspection in consultation with the Project Manager and contractor. This independent review helps to support an objective assessment of the construction. This inspector does all of the final acceptance certificate inspections for the former Roads Design and Construction Branch in order to ensure a consistent quality standard for all final construction.

All deficiencies, such as concrete or asphalt cracks, identified in the final inspection must be corrected at the cost of the contractor. There is no warranty period for the fixed deficiencies; however, the City will not issue the Final Acceptance Certificate until the corrections have been re-inspected. Once the City issues the Final Acceptance Certificate, the warranty period is concluded and the City assumes full responsibility for the condition of the infrastructure. The requirement for contractors to fix all identified deficiencies prior to being given a Final Acceptance Certificate helps to ensure that the construction being provided by the contractor is of acceptable quality.

The Final Acceptance Certificate is not issued until all deficiencies are corrected and re-inspected.

Based on our review of both the construction completion and final acceptance inspection processes, we found that the inspection processes are sufficient to detect and correct visible quality issues with construction.

5.3.2. Inspector Training

City Inspectors are required to be physically on-site during the majority of construction activities. They monitor the contractor, measure and initiate payment for work done, and order tests required to ensure the quality of materials and workmanship. They are the on-site eyes and ears of the City's Project Manager who has the authority to halt work if necessary.

The training program provides appropriate topics, coverage, and resources to support Inspectors.

The Inspector is expected to be highly knowledgeable about the technical construction and the role is a critical control to ensure that the City receives high-quality work from the contractor that meets the City's Construction Standards. As such, we assessed the content of the Inspector training program, reviewed training attendance records, and assessed the Inspector performance appraisal process.

Based on our review we conclude that the training program provides appropriate topics, coverage, and resources to support Inspectors. The performance appraisal process provides the Program two formal opportunities to identify knowledge and performance issues that could affect the quality of the Inspector's work, and thus the quality of the construction.

5.3.3. Materials Testing

The City of Edmonton's Design and Construction Standards and contract documents detail the materials and methods that the City and external contractors must use to build City infrastructure. The purpose of these Standards is to ensure that there is consistent

All contractors who are building within the Neighbourhood Renewal Program must comply with the City's Construction Standards.

quality of construction regardless of the contractor. All contractors who are building within the Neighbourhood Renewal Program must comply with the Standards. The City's on-site Inspector(s) is primarily responsible for identifying and initiating the required tests as per the Standards.

As the responsibility to identify and request testing can fall to one Inspector, there is the risk that this individual may miss requesting a test. Management indicated that there are a number of ways they manage this risk.

- Generally, the City's Engineering Services Section (Testing Lab) will contact the plants that produce materials on a daily basis to ensure that appropriate testing is being carried out for those products being produced and placed by the contractor.

- If a test required by the City is missed, other tests are used to compensate. In the one neighbourhood where density testing was missed along six roadway blocks, 'proof rolling' was used to identify soft spots that would otherwise have been detected by density testing.

Although these compensating controls are in place, these tests are a key component of the quality assurance process. As such, we reviewed the types and frequency of tests from four construction projects completed in 2015 to determine if testing was being completed as required.

Testing is occurring as required and compensating controls are in place to mitigate the risk that tests are missed.

We found that the actual number of tests that were performed were consistent with the estimated number of tests that were required.

Based on our review, we conclude that testing is occurring as required and that compensating controls are in place to mitigate the risk that tests are missed.

5.3.4. Protecting Trees

The mature trees that line residential streets are highly valued by residents for the character they add to the neighbourhood. They are also highly valued by the City for their positive impact on drainage, air quality, biodiversity, and wildlife. Trees are one of the few assets of the City of Edmonton that rise in value as they age. We assessed the process used by the Neighbourhood Renewal Program to protect trees from construction impacts.

Based on our review, the Neighbourhood Renewal Program has sufficient controls and practices in place to minimize the impact of construction on neighbourhood trees.

Minimizing Damage

When curbs, gutters, sidewalks, and streets are reconstructed, there is a risk that tree roots will be impacted or damaged. The Neighbourhood Renewal Program mitigates this risk through their partnership with the Urban Forestry section of the Community Services department. Urban Foresters provide expertise related to tree management and care at the design stage of a project, through construction, and monitor the health of the trees for up to five years after the end of construction. This is paid for by the Neighbourhood Renewal Program at just over \$4.5 million from 2012-2015. In 2015, Urban Foresters monitored and managed 6,850 trees for the Neighbourhood Renewal Program.

Urban Foresters provide expertise related to tree management and care, and monitor the health of trees for up to five years after the end of construction.

Trees are also at risk of unexpected damage from ongoing construction activities. The Program mitigates this risk in a number of ways.

- As per the policy *Corporate Tree Management*, the on-site construction Inspectors are trained to be aware of possible issues with trees.
- Contractors are required to adhere to City standards while working around trees as per the Special Provisions in their contract.
- Contractors are not permitted to use certain types of equipment within two metres of a tree. They also may be required to use specialized equipment such as hand tools or air spades as per Urban Forestry.
- Contractors may be required to use specialized designs for sidewalks so as not to damage the tree or roots.

Since 2013, construction activities related to Neighbourhood Renewal have damaged 291 trees on City property. This damage was unexpected and considered to have been avoidable. This is approximately 1.5% of the 20,000 trees in the neighbourhoods undergoing renewal. When a tree is damaged during construction, the value of the loss (partial or full) is calculated. The contractor is required to pay the amount of this loss into the City Tree Reserve Fund. These contractor-generated funds are then used as part of the tree planting program in future years. Since 2013, approximately \$200,000 has been contributed to the City Tree Reserve Fund because of Neighbourhood Renewal activities.

The Neighbourhood Renewal Program prioritizes the preservation of trees over the visual perfection of new infrastructure.

Avoiding Removal

From 2013 to the end of 2015, the Neighbourhood Renewal Program planned and executed the removal of 86 trees out of the approximate 20,000 in the neighbourhoods undergoing renewal. An additional 17 were transplanted to another location. This was done primarily to accommodate changes to neighbourhood design.

To minimize the need to remove trees, the Neighbourhood Renewal Program prioritizes the preservation of trees over the visual perfection of the new infrastructure. This means that residents in reconstructed neighbourhoods may see sidewalks that are not straight. They will curve around a tree in order to preserve it, such as shown in Figure 6. They may notice that a sidewalk is not level, but has a hump next to the tree in order to protect the roots.

Figure 6: Sidewalk configured to avoid tree



This sidewalk curves to avoid the trees on the right.

5.4. Community Relations

Neighbourhood construction undertaken by the Neighbourhood Renewal Program can be very disruptive for the neighbourhood. Each year, up to 19,000 households may be required to make inconvenient changes to their lifestyle. Sidewalks may not be available, street parking is lost or severely limited, noise and dirt can impact enjoyment of property, and sod or landscaping may be affected. This disruption can be as short as two or three days for minor renewal work or as long as three years when there is extensive reconstruction in a neighbourhood. Positive community relations can help to mitigate this disruption and reduce the reputational risk to the Program and the City.

We reviewed four aspects of community relations:

- Satisfaction of neighbourhood residents with their neighbourhood renewal
- Perspective of residents on quality
- Process of managing inquiries
- Process for Local Improvements

5.4.1. Resident Satisfaction

The Neighbourhood Renewal Program collects feedback from a neighbourhood once reconstruction is complete. Prior to 2014, the Program distributed surveys to a random sample of reconstructed neighbourhoods. Starting in 2014, all neighbourhoods that have undergone reconstruction have received surveys.

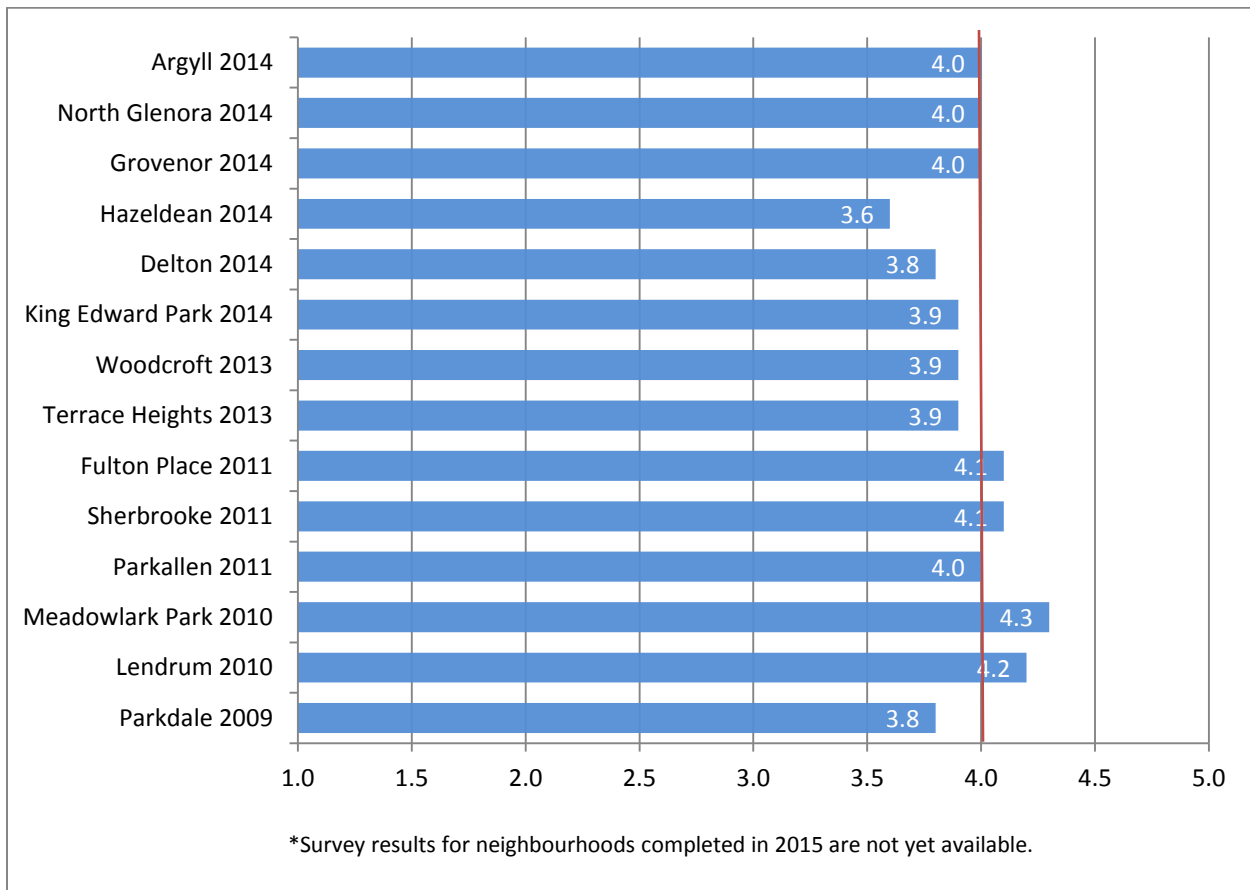
Residents are asked to rate their agreement with the following six statements:

1. Advance information on the program was provided
2. Neighbourhood access was provided during construction
3. I had contact information to follow up on concerns if needed
4. City of Edmonton staff were courteous and competent
5. Private contractor staff were courteous and competent
6. I am satisfied with the overall end product

A scale is provided with a 1 indicating strong disagreement and a 5 indicating strong agreement. The Neighbourhood Renewal Section has target rating of 4 out of 5. As shown in Figure 7, the Neighbourhood Renewal Program has met this target in 10 of the 14 neighbourhoods surveyed with the lowest score at 3.6 in Hazeldean and the highest score at 4.3 in Meadowlark Park.

Although the Program is not meeting its target all of the time, these results suggest that overall, residents are reasonably satisfied with the Program.

Figure 7 - Neighbourhood Resident Satisfaction Ratings



5.4.2. Resident Perspective on Quality

Residents are in a unique position to observe issues. They also have a stake in the quality of work. Given that sidewalk reconstruction is 50% funded directly by the property owner as a Local Improvement, real or perceived poor value can result in significant anger and frustration. This in turn, negatively impacts the reputation of the Program.

The Program monitors the quality of construction on an on-going basis and it is formally assessed by the City at two key points in the construction process – when construction is completed, and when the warranty is set to expire - approximately two years later.

These inspections identify visible deficiencies in the construction, such as cracks in the sidewalks, curbs, gutters, and roads – the same deficiencies that residents may encounter every day. The quality assurance process used by the Program will result in the contractor correcting most of these deficiencies; however,

The quality assurance process used by the Program will result in deficiencies being corrected by the contractor at their cost. However, residents may not see these deficiencies corrected for up to two years.

depending upon the timing, the resident may not see these problems fixed for up to two years. This can result in a perception of poor quality work and that concerns are being ignored.

Improvements to public communication throughout the construction process may help to reduce the public escalation of issues and improve the reputation of the Program. Proactively requesting feedback from residents will help the Program to be aware of emerging issues in a neighbourhood before they require escalation. Providing residents with clear information about the construction process may help to reduce frustration and uncertainty with the process.

See Recommendation 3

5.4.3. Managing Inquiries

The Section does not differentiate between inquiries or complaints. Regardless of whether a resident has a question or an issue, the approach used by the Neighbourhood Renewal Section is to connect that resident with the Project Manager as quickly as possible. The Project Manager is the individual who is responsible for ensuring that citizen inquiries are addressed within the 72-hour internal target. This is accomplished by providing the Project Manager's direct contact information to citizens via a bulletin delivered to each residence in the neighbourhood, at a public open house, and on the City's website.

When the resident does not retain the construction bulletin provided at the beginning of the construction season, it can be challenging to reach the Project Manager directly. This information can be requested from the City's Construction Inspector or other City or contractor staff on-site. It can also be found on edmonton.ca; however, it is not easily located on the website. There are other options available for a resident to reach the Project Manager, including 311 but these may not be as efficient as direct contact. The response time and the complexity of an inquiry can increase when it takes longer to reach the Project Manager and when additional stakeholders become involved in the process. By increasing the visibility of the Project Manager's contact information to residents, the Program may be able to improve the efficiency of the existing process by reducing the number of contacts that require redirection.

The Section has a clear chain of command and the ability to address issues that are escalated beyond the Project Manager. However, when the resident is dissatisfied with their experience, there is no guidance available. The resident may request this information from the Project Manager. They may also be able to find this contact information on edmonton.ca, although this is difficult. In the absence of easily accessed information informing residents about how to escalate an issue, residents may contact their Councillor or the media. By providing residents with the contact information to escalate their issue within the Section, the Program may be able to more efficiently address resident inquiries.

Recommendation 3

The OCA recommends the Branch Manager, Transportation Infrastructure adapt their approach to resident communication to be more user-friendly and customer-focused. This includes:

- Making information about the construction process easily available and accessible.
- Making contact information for Project Managers more easily available.
- Providing residents with the information about how to escalate a concern.

Management Response

Accepted

Action plan: Neighbourhood Renewal is currently developing a plan to enhance citizens ability to readily access information about the construction process, project representatives and the process to escalate a concern, if required. Utilizing various channels, this information will be provided to ensure citizens can find information easily.

Initiatives implemented in 2015 to improve communication included:

- Enhanced coordination with 311 providing information about the construction in the neighbourhoods with specific details about timelines, possible concerns they may have and the contact information.
- Development of a Neighbourhood Renewal Handbook to provide citizens with an comprehensive understanding of the Neighbourhood Renewal process.

Planned Implementation Date: May 2016 for completion December 2018

Responsible Party: Director of Neighbourhood Renewal in consultation with the Communications and Public Engagement Department and Citizen Services Department (311).

Efficiency and Effectiveness

To better understand the efficiency and effectiveness of the inquiry management process we reviewed a sample of 36 resident inquires received through email or phone in the 2015 construction season⁵. This sample was chosen to represent a variety of neighbourhoods, project managers, and different types of issues that can change as the construction season progresses.

From the sample of 36 resident inquires, we identified 19 instances where we could determine the method of contact and a

When the citizen contacted the Project Manager directly, the 72 hour response time target was consistently met.

⁵ We selected this sample to represent seasonal issues and a variety of project managers and inspectors. This sample set is not statistically representative of the program as a whole.

response time. We found that residents were most likely to contact the Program directly via the Project Manager or by contacting their Councillor.

In our sample, we found that when the resident contacted the Project Manager directly, the 72-hour response time target was consistently met. This indicates that having residents contact the Project Manager directly is efficient.

From the sample of 36 inquiries, we identified 14 where the inquiry was resolved. An additional 18 most likely had their inquiries resolved based on our assessment of the communication, however, we were unable to confirm this - usually due to a shift in communication medium, from email to phone or in-person. The remaining 4 were unresolved in the documented communications. Due to the lack of systematic tracking of inquiries, we were unable to determine if these 4 were resolved in some other manner.

The existing inquiry management process has no formal, systematic method of capturing inquiry information. In its current state information is recorded and managed informally. This means that:

1. There is no data available to understand the effectiveness of the process. Without data being recorded in a systematic way, it is not possible to know how many issues are appropriately resolved and how many require escalation or additional management.
2. Oversight is limited to when the Project Manager brings an issue to the attention of the appropriate supervisor/director, or when a resident actively escalates an issue. The lack of system means that it is not possible to provide oversight in a way that can identify systemic issues before they become more frequent or more severe. There is also no opportunity for a supervisor to review questionable decisions or outcomes before a resident is frustrated and escalates the issue.
3. The ability of the Section to continuously improve practices and communications materials is limited due to the lack of information available on inquiries. Although the Section has made some improvements, these have been based on anecdotal evidence, not an objective analysis of data.
4. Resident follow-up is limited by the approach used by an individual Project Manager. If a Project Manager has not implemented a system or technique for tracking issues, communication with a resident may not meet the resident's expectations for good customer service.

There is an opportunity to mature the existing inquiry management process to realize additional benefits.

The Neighbourhood Renewal Program is a long-term initiative that, over time, will affect a very large volume of citizens. There is an opportunity to mature existing informal processes to realize additional benefits. At a minimum, this should include:

- Clearly defining what inquiries should be documented, how they should be documented, and implementing a consistent way of doing this.
- Developing a process to ensure that communications with residents is timely and meets a reasonable expectation of service.

Recommendation 4

The OCA recommends the Branch Manager, Transportation Infrastructure establish a consistent process or system to appropriately document and manage inquiries.

Management Response

Accepted

Action plan: In addition to enhancing communication with stakeholders as identified in Recommendation 3, Transportation Infrastructure is working to formalize, document, respond to, monitor and assess citizen inquiries. This will ensure citizens an effective and efficient response and enable Administration to identify trends and assess the program delivery.

Planned Implementation Date: May 2016 for completion December 2018

Responsible Party: Director of Neighborhood Renewal in consultation with the Citizen Services Department (311).

5.4.4. Local Improvement Process

Residents and property owners often feel a sense of pride and ownership of their neighbourhood. Like a home, they see things that they would like to repair, replace, or improve. The Local Improvement process is a way for property owners to work with the City to replace or upgrade certain things in their neighbourhoods like sidewalks, alleys, streetlights, curbs and gutters. Because these things provide more benefit to the neighbourhood than to the City as a whole, neighbourhood property owners will pay for these improvements through a Local Improvement tax.

Two specific types of Local Improvements are incorporated into Neighbourhood Renewal – sidewalk replacement and upgrading to decorative streetlights. Because there is a direct cost to the property owner, a majority of the affected property owners must agree to all Local Improvements. Gaining this agreement involves considerable effort by both property owners and the City. The process is complex and sensitive, given the potential increases to a property owner's tax bill.

We found that the Neighbourhood Renewal Section had completed a detailed review of the Local Improvement Process and identified a number of complexities and inefficiencies. In response to these issues, the Section partnered with the Financial Process Management Section in the Financial and Corporate Services department and has been actively working to revise the process.

We reviewed the changes that have been proposed for the process and found that the extensive changes are likely to increase both the efficiency and effectiveness of the process.

Specifically we found that:

- Improved communication materials are likely to improve the community understanding of the process.
- Removing the need for resident volunteers to go door-to-door for signatures will reduce the burden on communities.

Additionally, an analysis completed by the Neighbourhood Renewal Section indicates that the proposed changes are expected to reduce the cost of executing the process by over 35%. This would reduce the cost of the process from over \$50,000 per neighbourhood to just over \$35,000.

There is a risk that these benefits will not be realized if the proposed process changes are not made. This is a significant risk given the extent of the changes proposed, and the amount of the collaboration required between multiple City departments, branches, and sections.

The proposed changes are expected to reduce the cost of executing the process by over 35%.

The difficulty of a process change increases when the changes are complex and involve many stakeholders.

We found that the Section is mitigating this risk. They have a comprehensive project plan in place. They have also indicated that they have secured the necessary internal resources and expertise from other departments. Staged implementation is planned for 2016 with full benefits realized in 2017.

6. Conclusions and Recommendations

Overall, we conclude that the Neighbourhood Renewal Program has the appropriate structures and supports in place to achieve its long-term objective.

We assessed the Program's funding to determine if it was sufficient, sustainable, and secure. We found that funding for the Program is sufficient at this time, and more sustainable than it was in 2009. However, the funding for the Program is not necessarily secure. We also found that there is an opportunity to improve the Program reporting provided to Council, and made one recommendation to support this improvement.

We assessed the project management practices used by the Neighbourhood Renewal Section and found that overall, the Neighbourhood Renewal Section is managing construction projects effectively. We identified two risks, one related to bonus payment controls and one related to change order usage, and have made a recommendation to address these risks.

We reviewed the controls that are in place to support the quality of the construction work being completed by the Neighbourhood Renewal Section. We found that sufficient controls are in place and made no recommendations.

Finally, we assessed four specific aspects of community relations. We found that residents are reasonably satisfied with the Program. We also found that there was an opportunity to improve the information provided to neighbourhood residents, and enhance the existing process used for managing resident inquiries and issues. Additionally, the Neighbourhood Renewal Section is actively implementing changes to the Local Improvement process.

The OCA would like to thank the Transportation Roads Design and Construction Branch and the Transportation Operations Branch for their cooperation and assistance throughout this audit. It was very much appreciated.