



City of Edmonton
Office of the City Auditor

Open Spaces Asset Transfer Audit

March 29, 2021



1200 Scotia Place, Tower 1
10060 Jasper Ave
Edmonton, AB T5J 3R8
780-496-8300
edmonton.ca/auditor

Report Highlights

Report Summary	2
Open Space Assets	3
Quality Inspections	10
Communication of Inspections	13
Information System	15
Conclusion	17

Audit Objective

The objective for this audit was to determine if the City has an effective process to transfer open space assets to the Parks and Roads Services Branch (PARS) for ongoing maintenance.

Scope and Methodology

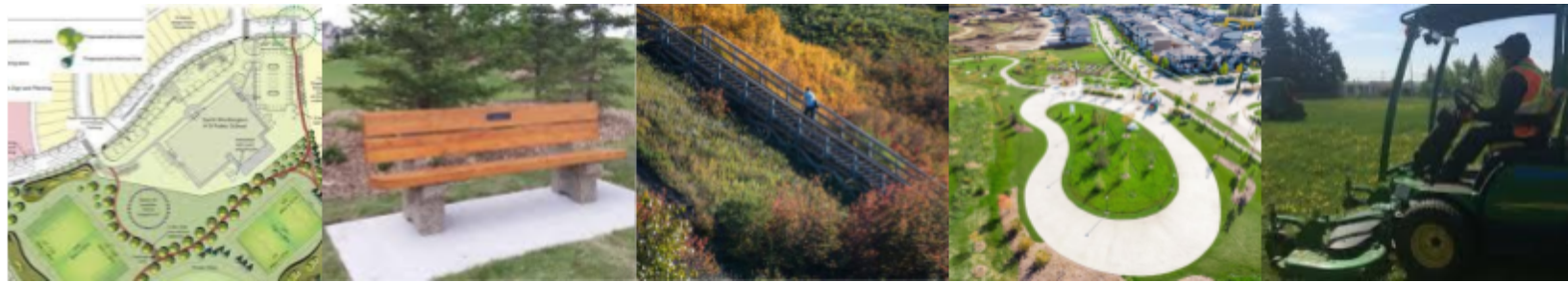
The scope of this audit included a review of the documentation, controls, and procedures related to the City's process to transfer open space assets.

We used the following methods to gather evidence to conclude on the above objective:

- Review related standards, procedures, guidelines, and manuals;
- Discussions with management and staff;
- Site visits, including Construction Completion Certificate and Final Acceptance Certificate inspections;
- Analysis of project management and financial data; and
- Judgemental sampling of inspection documents for the acceptance of open space assets in 2019 and 2020.

Statement of Professional Practice

This project was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.



Report Summary

Conclusion

The City has an effective process to accept open space assets. However, opportunities exist to improve on documenting inspections, communicating inspections, and recording the transfer of open space assets for maintenance.

Risks

Inspections are not consistently documented by City inspectors which can impact the quality of open space assets. If open space assets are not entered into the information system used to schedule maintenance, a risk exists that the asset will not be maintained.

Key Findings

We reviewed the open spaces asset transfer process and found that:

Roles and responsibilities are clearly defined, documented, communicated and understood by the three City Departments.

The documentation for completing inspection reports can be improved. The inspection of open space assets is not being consistently communicated to PARS.

Open space assets are not being recorded in the City's information system on a timely basis in order to complete maintenance and repair.

Recommendations

We made 3 recommendations:

Recommendation 1
Document Inspections & Deficiencies

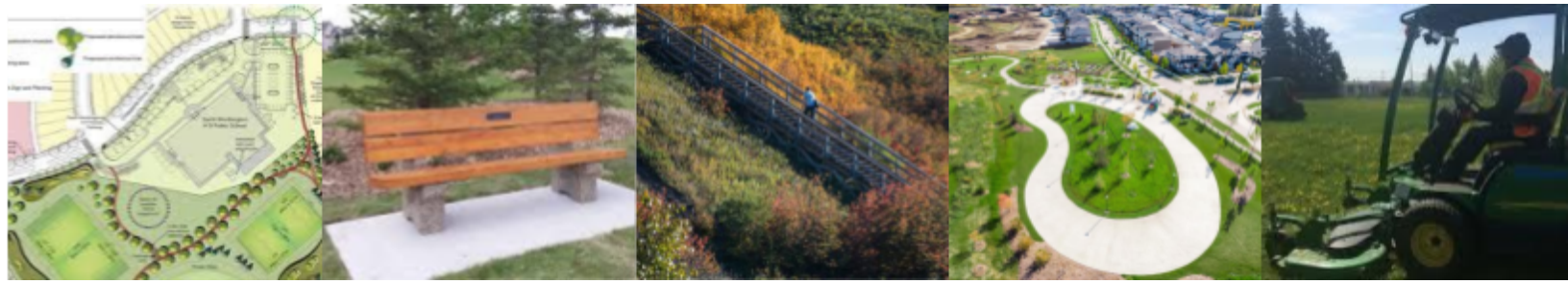
Formalize the process to document inspections to ensure that information is complete and all deficiencies are compiled and addressed.

Recommendation 2
Communication of Inspections

Establish a formal process to ensure PARS is informed of and has the opportunity to attend all CCC and FAC inspections with open space assets.

Recommendation 3
Formalize the Process to Input Assets into SLIM

Formalize the process to input open space assets into the Spatial Land Inventory Management system to ensure that PARS is receiving complete information on a timely basis.



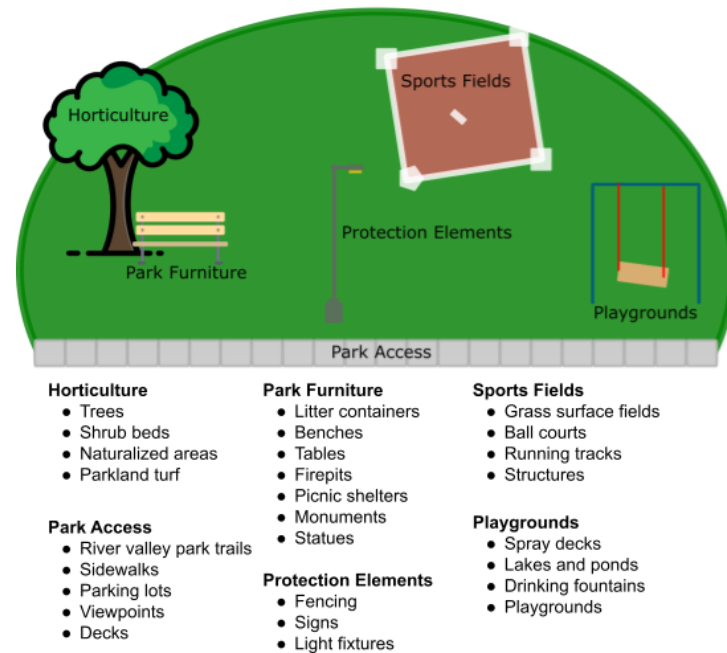
Open Space Assets

Definition

The City's open spaces include parks, natural areas, plazas, outdoor areas adjacent to school sites and storm-water infrastructure areas.

Open space assets includes:

The City has \$906 million worth of open space assets.

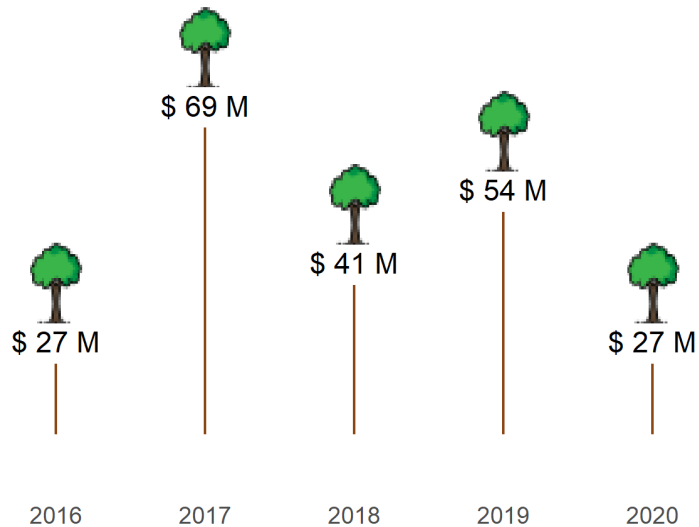


Newly transferred open space assets include a combination of growth and renewal projects.

- Growth projects would consist of new developments or new parks. Ideally, the growth assets would receive additional budgeted dollars in order to account for the extra maintenance, equipment, and personnel that is required.
- Renewal projects would consist of redeveloping an existing park with new features or replacing it with amenities. Maintenance dollars for renewal projects would already be accounted for in the budget or may even be reduced due to the asset being in a renewed condition.

Figure 1 - Yearly Acquisition Value of Open Space Assets from 2016 to 2020

The City has acquired \$218 million of open space assets from 2016 to 2020. The majority of the increase is from horticulture assets (\$100 million) and park access assets (\$40 million).



City & Developer Built

The construction of open spaces assets is conducted by the City and developers:

1. City-built projects are managed by the Integrated Infrastructure Services Department (IIS). These projects are built and accepted by IIS and transferred to the Parks and Roads Services Branch (PARS) for maintenance.
2. Development projects are overseen by the Urban Form & Corporate Strategic Development Department (UFCSD). The open space assets from these projects are built by developers, accepted by UFCSD and transferred to PARS for maintenance.

Three Departments

The acceptance and transfer process involves three City Departments.

Integrated Infrastructure Services Department (IIS) includes Open Space Infrastructure Delivery within Building Great

Neighbourhoods and is responsible for managing city built projects through the *contract(s)*¹ that are in place.

Urban Form & Corporate Strategic Development Department includes Development Services and is responsible for preparing and administering the *Servicing Agreement*².

Parks and Roads Services Branch includes the Strategic Planning and Process Integration (SPPI) area. They are responsible for the quality inspections of open spaces to support the transfer to Infrastructure Operations for ongoing maintenance and repairs.

Open Space Asset Transfer Process

BUILD PHASE

City-built projects can include school and community parks, transportation, and buildings. IIS manages these projects which includes administering the contract such as design drawing, tender contractor(s), and monitor construction.

Developers complete construction on raw land resulting in new developments. The developer will build in accordance to design drawing, tender contractor(s) and monitoring construction as specified in the Servicing Agreement. UFCSD will administer the terms and conditions specified in the Servicing Agreement.

PARS is informed during the build process and provided the opportunity to provide comments, such as to the design drawings for consideration.

INSPECT PHASE

Staff in IIS complete the inspections to ensure the projects are built to City Standards³ and contractual obligations. This includes the necessary sign-off required for the project.

Staff in UFCSD complete the inspections to ensure the projects are built to City Standards and obligations of the Servicing Agreement. This includes the necessary sign-off required for the development.

PARS assists in the completion of inspections from a maintenance perspective. This includes attending inspections

¹ A Contract is an agreement between the contractor and the City. It specifies the work to be completed by the contractor.

² A Servicing Agreement is a contractual agreement between a developer and the City. It specifies the contractual obligations and the terms and conditions for the construction and warranty of municipal improvements.

³ Standards include the Design and Construction Standards, Volume 1 General and Volume 5 Landscaping.

and providing notes relating to items which may impact the maintenance of the open space asset.

TRANSFER and MAINTAIN

IIS staff issues the Final Acceptance Certificate⁴ (FAC). The date of the FAC signifies acceptance of the asset from the contractor and consequently the open space asset is transferred to the City. PARS is notified to maintain the asset.

UFCSD staff issues the FAC. The date of the FAC signifies acceptance of the asset from the Developer and consequently the open space asset is transferred to the City. PARS is notified to maintain the asset.

All open space assets accepted by the City are automatically the responsibility of PARS to maintain and repair. This would include the regularly scheduled turf mowing, litter removal from garbage bins, watering, etc. It is important that PARS has the opportunity to be involved in the inspection process and is aware of all open space assets accepted by IIS and UFCSD.

Roles and Responsibility

In 2020, IIS developed a roles and responsibility matrix in consultation with PARS to clarify the roles of the various inspectors and stakeholders involved in the process. The RACI (Responsible, Accountable, Consulted, Informed) matrix was chosen as it applies to identifying roles within an organization with cross functional responsibilities.

Table 1 - RACI Role Descriptions

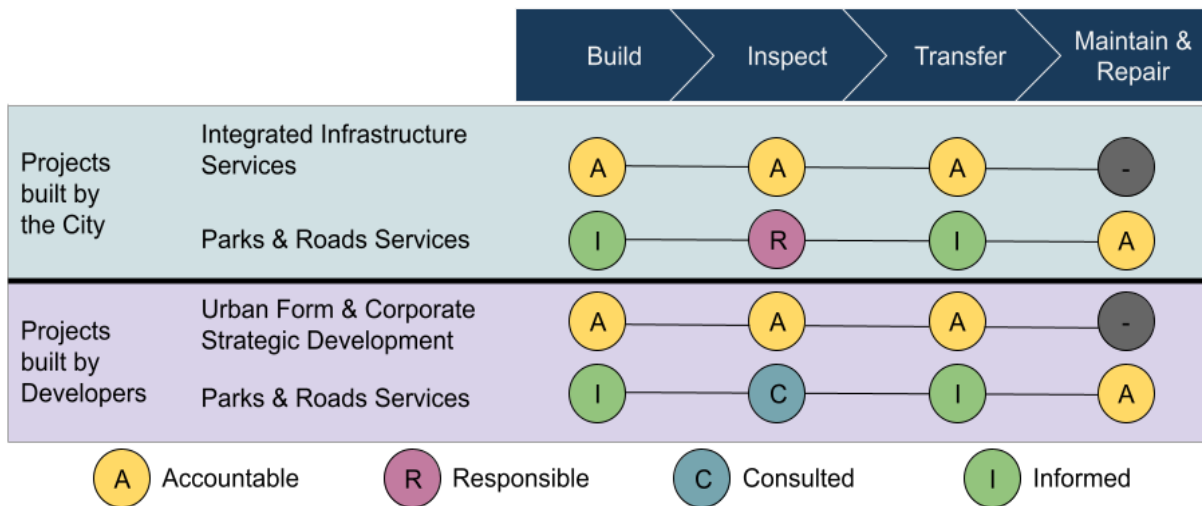
Role Title	Task	Individual Assigned
Informed	Keeping someone up-to-date on a task, one-way communication	Multiple
Consulted	Seeking opinion, typically a subject matter expert, two-way communication	Multiple
Responsible	Doing the work to complete a task, multiple participants may be delegated to complete the task	Multiple

⁴ A Final Acceptance Certificate certifies that the asset has been constructed and maintained in accordance with the applicable approved engineering drawings.

Accountable Person ultimately answerable for the completion of the task. One Person
Includes sign-off and delegate work

Using the RACI chart, we compared the roles and responsibilities of PARS to both the City-built and Development process.

Figure 2 - Roles and Responsibility - City-Built vs Development Process



The roles of IIS and UFCSD during the build, inspect, transfer for their respective projects is that of being accountable. They do not have a role in maintaining and repairing once the asset is accepted and transferred to PARS.

The role of PARS during the build and transfer stage is similar with that of being informed. PARS is accountable to maintain and repair once the asset is accepted by IIS and UFCSD. The difference is the inspection role. PARS has had a greater involvement with IIS projects due to historical quality concerns and serves in a more involved role compared to a consulting role with UFCSD.

In our discussions with management from all three departments, the roles and responsibilities are clear and understood. Based on our site visits and sample testing, PARS is fulfilling their responsibility by conducting inspections from a

maintenance perspective. This includes providing inspections notes to IIS inspectors. For developer projects, PARS is fulfilling their consulting role by serving as subject matter experts and providing input when requested by UFCSD inspectors.

Since PARS is accountable for maintaining and repairing open space assets, it is important that they continue to work with both IIS and UFCSD to ensure that any identified maintenance issues are addressed.

Operating Budget

There is a risk that new assets may not be maintained to the acceptable standards and may impact the maintenance of existing assets if operating costs for the new assets are not funded. PARS received a yearly average of \$1.3 million in 2016 and 2017 to maintain newly acquired open space assets. They have not received any additional funding since then.

Unfunded operating impacts of \$9.1 million.

PARS estimates the amount of operating dollars required to maintain newly transferred growth and renewal assets using a combination of historical trends, service levels, maintenance standards, and design standards. For the period 2019 to 2022, PARS calculated the operating impacts to be approximately \$9.1 million. This consisted of \$6.3 million for City-built assets and \$2.8 million for contributed assets from developers.

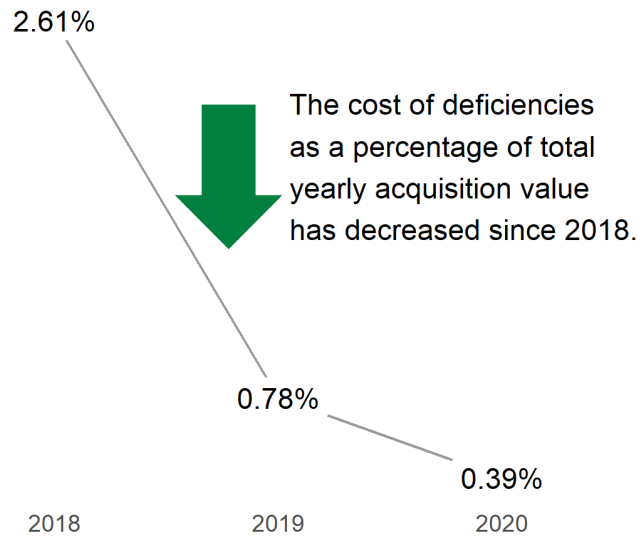
Effectiveness of Process

To assess effectiveness, we also looked at the quality of the asset being transferred to PARS. PARS indicated that there were no deficiencies identified for developer projects.

PARS completed quality inspections of selected⁵ city-built projects. The number of new projects identified with quality issues has decreased from 10 projects in 2018 to 2 projects in 2020. Furthermore, the estimated dollar value of deficiencies for these sites has decreased from \$1 million (2.61% of yearly acquisition value) in 2018 to \$0.1 million in 2020 (0.39% of yearly acquisition value).

⁵ Results based on the yearly PARS End of Season Update report. Inspections are not completed for all projects. Additionally, not all projects have received a Final Acceptance Certificate.

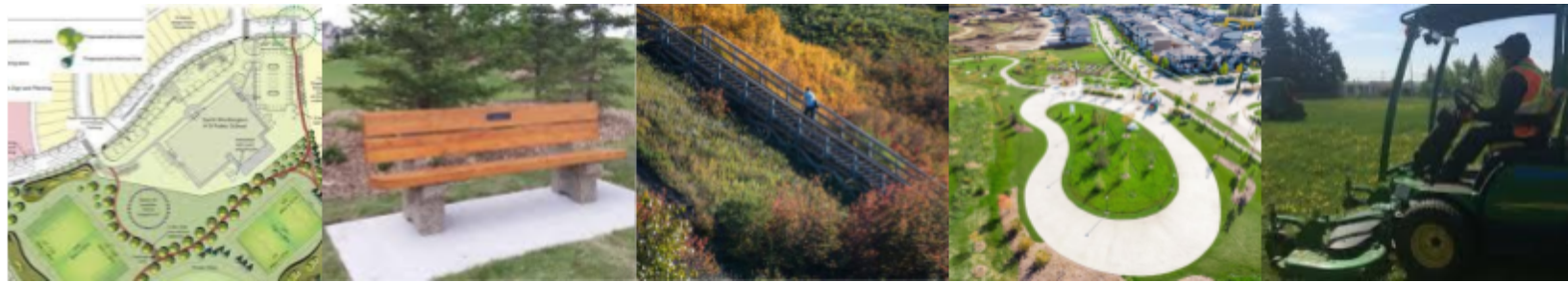
Figure 3 - Estimated Deficiency Costs



We conclude that the City has an effective process to accept open space assets. We observed that there are defined roles and responsibilities for accepting these assets and the three City departments understand their role in the process. Additionally, the number of new projects identified with quality issues has decreased as well as the percentage of deficiency cost to acquisition value.

However, through our review we identified opportunities to improve the asset transfer process which are discussed in the following sections:

1. Quality Inspections
2. Communication of Inspections
3. Information System



Quality Inspections

Key Findings

We reviewed a judgemental sample of 10 projects (selected samples known to have deficiencies). The following improvements were identified to the inspection process:

1. Formalize the process to document deficiencies.
2. Formalize the process to address deficiencies.

Documenting Deficiencies

A site inspection report documents the results of the inspection. This includes deficiencies and relevant information regarding the inspection. Deficiencies for open space assets can include unhealthy trees, the number or type of shrubs planted not matching the design drawings, drainage issues, or slope issues for maintenance vehicles.

The site inspection report used by IIS include documenting the following:

- Project name and address
- Date of inspection
- Attendees
- Itemized checklist for each category of deficiencies including surface, sod, amenities, trees, & shrub
- Detailed comments
- Signatures to sign-off

Site inspection reports are not consistently completed.

We reviewed seven IIS projects, and observed that the site inspection report was used for six projects. Additionally, when inspections reports were used, they were not consistently completed. For example:

- The checklist to track deficiencies is not always used.
- The attendees are not always documented.
- The signatures required to sign-off were not consistent.

We reviewed three UFCSD projects, and observed that site inspection reports are not used. UFCSD discontinued the completion of site inspection reports in 2018. Management noted that the extra paperwork required to transpose items onto

a site inspection report can often delay the issuance of the report. Instead, results of the inspection are documented on a map of the project site. Marking deficiencies on a map is acceptable, however, we noted that it was difficult to ensure all the deficiencies were corrected. Additionally, information such as listing attendees at the inspection site was not consistently documented on maps.

Deficiencies are not consistently documented.

We found a variety of methods for inspectors to document deficiencies. This included markings on maps or inspection reports. Use of email or verbal communication was also used. A formalized process should be in place to ensure that all deficiencies have been documented.

City inspectors do not document deficiencies consistently. There is a risk that deficiencies will not be addressed when it is not documented as a deficiency.

Addressing Deficiencies

Once a contractor receives a list of deficiencies in the site inspection report or map they will address them. Subsequently, the inspectors will go back to the site to re-inspect and determine whether it is addressed. The City is at risk of accepting assets with deficiencies if it was not identified and addressed.

Deficiencies are not consistently addressed.

Based on our review, we observed the following weaknesses which may affect the identification and addressing of deficiencies:

- When emails or verbal communication is used, the deficiency may not be documented in the site inspection report or map.
- Corrective actions for individual deficiencies were not consistently documented. The use of general comments such as “all deficiencies cleared” or “no action” was used in some site inspection reports. When concerns or issues arise afterwards, it is difficult to determine how the deficiency had been cleared.
- When maps are used, the deficiency usually has a checkmark beside it to signify that it has been addressed. However, not every deficiency has a checkmark beside it, thus it was difficult to confirm that all deficiencies were addressed.

There is an opportunity to explore more efficient and effective processes to document and manage deficiencies such as electronic programs.

Recommendation 1

Document Inspections and Deficiencies

Recommendation

Formalize the process to document inspections to ensure that information is complete and all deficiencies are compiled and addressed.



Responsible Party

Branch Manager - Building Great Neighbourhood and Branch Manager - Development Services. In partnership with Branch Manager - Parks and Roads Services



Accepted

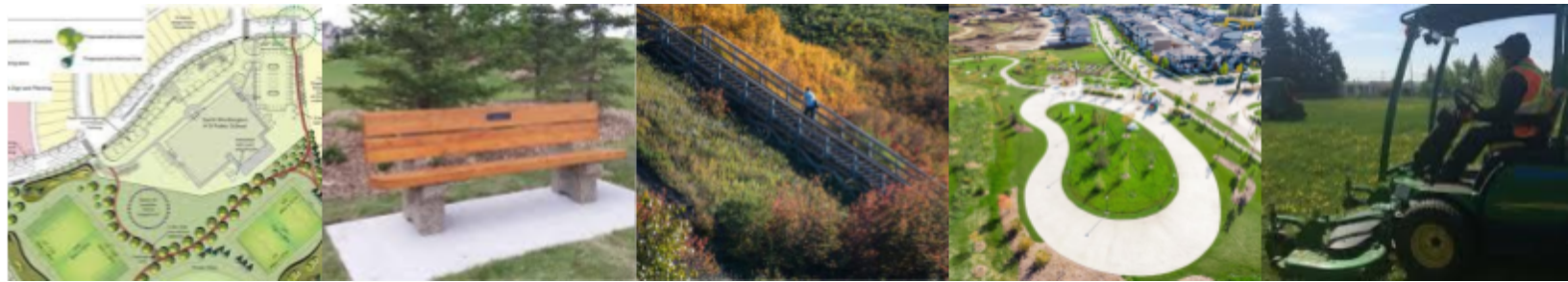
Management Response

Administration accepts this recommendation. Administration will revise the inspection process to ensure the information is complete and verifiable.



Implementation Date

December 31, 2021



Communication of Inspections

Key Findings

PARS is responsible for the ongoing maintenance of the open space assets once FAC is approved. They are the subject matter experts in open space assets. As part of their role in being responsible and consultative for open space assets, they should be attending all inspections.

Currently, there is no formal process to ensure PARS is informed of the open space asset inspections. Therefore, PARS may not be given the opportunity to attend all inspections and may not be able to fulfill their role of inspecting assets and providing comments prior to transfer.

IIS INSPECTIONS

- IIS provides PARS with a summary document at the beginning of the year of all their planned projects. However, this document does not provide a clear listing of the potential inspections for the year.
- IIS notifies PARS when projects are ready for inspections. However, PARS staff are not always available on those dates to attend the inspections.

UFCSD INSPECTIONS

- UFCSD does not provide a listing of inspections or invite PARS inspectors to their inspections.
- UFCSD will ask PARS staff to provide advice on open space assets when required. PARS does not conduct scheduled inspections of all developer projects.

PARS is not aware of and thus may not have the opportunity to attend all inspections.

IIS and UFCSD should provide PARS with a listing of all planned Construction Completion Certificate (CCC) and FAC inspections of open space assets. This listing should be provided in advance of the inspections so PARS can plan to attend the inspections.

PARS has developed a Landscape Inspection Request Form to be used to notify inspectors of upcoming inspections. However, this form is not being consistently used by requesters to notify PARS of upcoming inspections. The use of the form would

allow PARS to properly plan and schedule staff to attend inspections for both City-built and developer projects.

Recommendation 2

Communication of Inspections

Recommendation

Establish a formal process to ensure PARS is informed of and has the opportunity to attend all CCC and FAC inspections with open space assets.



Responsible Party

Branch Manager - Building Great Neighbourhoods and Branch Manager - Development Services. In partnership with Branch Manager - Parks and Roads Services



Accepted

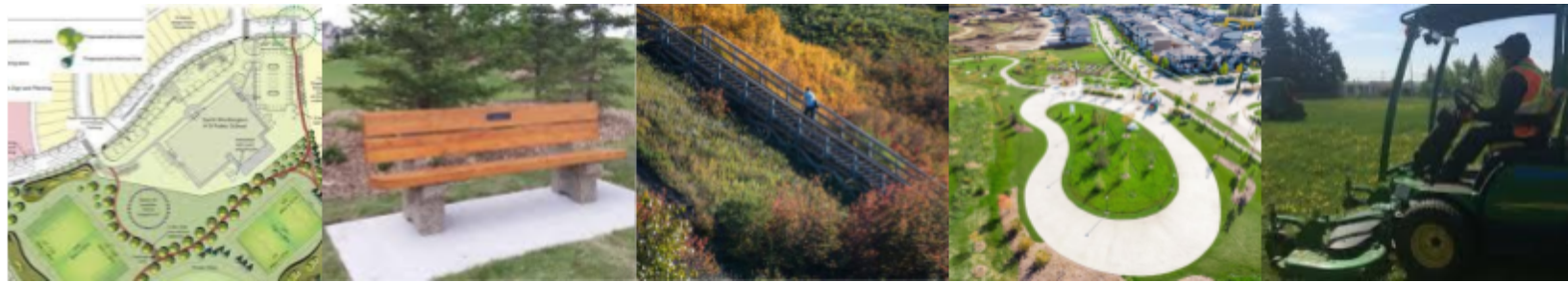
Management Response

Administration accepts this recommendation. Administration will develop a process to inform all applicable parties about open space asset CCC and FAC inspections.



Implementation Date

March 31, 2022



Information System

Key Findings

PARS uses the Spatial Land Inventory Management (SLIM⁶) system to record the open space assets transferred from IIS and UFCSD. We found that SLIM did not contain complete information for newly transferred assets.

There is a risk that when newly accepted assets are not mapped in SLIM, maintenance is not completed on these assets such as scheduled mowings and litter removal.

PARS uses SLIM to record and track all assets transferred. The transfer process involves IIS and UFCSD notifying PARS that the assets have been accepted. Additionally, PARS requires a final version of the as-built maps to record the land area and the type of assets. The information from SLIM is used to produce maps which are provided to the maintenance crews to plan their routes and complete the necessary maintenance.

Of the 10 sample projects reviewed, 9 projects were accepted by the City in either 2019 or 2020. We tested these nine projects to determine whether the transferred assets had been entered into SLIM. There were 6 IIS projects and 3 UFCSD projects.

The as-built maps required for entry into SLIM can take up to 2 years for PARS to obtain.

PARS is notified of development projects three months after the City acceptance.

Of the 6 IIS projects we looked at, only one was entered into SLIM. Management indicated that the final as-built maps can take up to 2 years to obtain. All 3 UFCSD projects were entered into SLIM. However, the average time lag between the FAC approval date and the notification date to inform PARS is 91 days. Based on discussion with management, this is due to inspectors finalizing paperwork and obtaining the final as-built maps prior to notifying PARS.

PARS currently requires the final version of the as-built maps in order to determine what open space assets have been transferred. There is an opportunity to formalize the process to improve the timeliness of entry for newly transferred assets into SLIM.

⁶ SLIM is a geographical based system used to manage all City land-related records.

Recommendation 3

Formalize the Process to
Input Assets into SLIM

Recommendation

Formalize the process to input open space assets into the Spatial Land Inventory Management system to ensure that PARS is receiving complete information on a timely basis.



Responsible Party

Branch Manager - Building Great Neighbourhoods and
Branch Manager - Development Services. In
partnership with Branch Manager - Parks and Roads
Services



Accepted

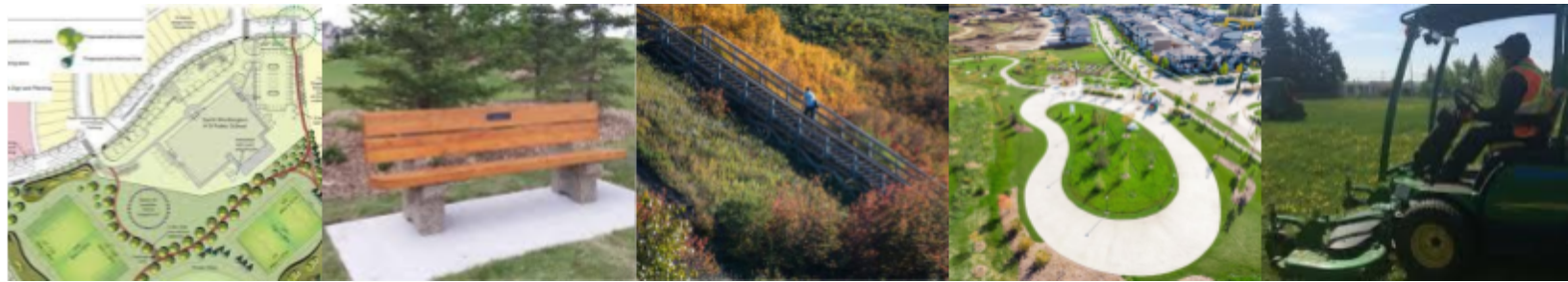
Management Response

Administration accepts this recommendation.
Administration will create a process for inputting open
space assets into the Spatial Land Inventory
Management System.



Implementation Date

December 31, 2022



Conclusion

In this audit, we reviewed the effectiveness of the open space asset transfer process. We made three recommendations to improve the process.

Three City departments all play a role in working together to inspect, communicate and record the transfer of open space assets. This is to ensure that quality assets are received and inputted into the Spatial Land Inventory Management system for appropriate maintenance.

The City needs to formalize the process to document inspections to ensure that information is complete and all deficiencies are compiled and addressed.

PARS is ultimately responsible for the assets once it is transferred to the City. They should be aware of all projects with potential assets being transferred and be given the opportunity to attend all CCC and FAC inspections.

In order for transferred assets to be maintained, the process to enter the transferred assets into the Spatial Land Inventory Management system needs to be formalized. This will ensure that transferred open space assets have been entered in a complete and timely manner.

Acknowledgment

We thank the staff in IIS, UFCSD, and PARS for their cooperation and openness in this audit.