

Staff Report



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| To | Committee of the Whole |
| Service Area | Infrastructure, Development and Enterprise Services |
| Date | Tuesday, February 7, 2023 |
| Subject | Operations Facilities Long-Term Plan Update |

Recommendation

1. That staff continue to design a new Guelph Transit and Fleet Services facility at the municipal-owned site located at the northwest corner of Watson Parkway South and Stone Road East.
 2. That staff proceed with developing the revised Operations Facilities Long-Term Plan to utilize existing municipal-owned sites 45 Municipal Street, 50 Municipal Street, 170 Watson Road South, 69 Marilyn Drive and 186 Eastview Road for operating services Public Works, Solid Waste Collections, Parks, and Corporate Building Maintenance.
 3. That staff proceed with the planning and design of the Operations Facilities Long-Term Plan and be directed to seek Council approval through the multi-year budget process.
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Executive Summary

Purpose of Report

To provide an update on the planning and design of the Watson-Stone site as part of the Operations Facilities Long-Term Plan.

Key Findings

City operating facilities required for delivering critical community services are beyond capacity and are near or at end-of-life. Service levels will be further constrained as the city grows and existing health and safety risks exacerbated if operating services remain in the current facilities and are expected to meet growing demand.

The Watson-Stone site is a multifaceted site with varying terrain that is rich with cultural and natural heritage assets and situated northeast of the Eramosa River in the Guelph Innovation District (GID) Lands. Key site design parameters have been determined based on the site analysis findings:

- Add buffer zones around the various features of the natural heritage and cultural heritage systems.
- Situate the programming at the eastern portion of the site.
- Condense the design.

With a deeper understanding of the Watson-Stone site characteristics, a reconsideration of the plan for this site was required to incorporate the site design parameters and appropriately match the assigned operating services to the Watson-Stone site. It was determined that the space requirements and the electrical infrastructure needs are well-suited to effectively accommodate Guelph Transit and Fleet Services. A site plan concept is presented.

With only Fleet Services and Guelph Transit being located at the Watson-Stone site, the Operations Facilities Long-Term Plan was developed to locate the remaining operating services by leveraging existing lands and repurposing/renewing facilities. This will ensure that operating needs are met for the efficient delivery of community services.

The site plan design stage is currently underway with the site plan application package being completed based on the design parameters and the Operations Facilities Long-Term Plan. Detailed building design of the Guelph Transit and Fleet Services facility at the Watson-Stone site will commence following the consultant selection process.

Strategic Plan Alignment

The Operations Facilities Long-Term Plan directly aligns with the Strategic Plan and enables progress on several strategic initiatives, as follows:

- Sustaining our Future – Mitigating climate change and aligning to the Race-to-Zero initiative by reducing Guelph’s carbon footprint through supporting transit expansion and transit electrification, as well as the development of new facilities that will meet or exceed latest efficiency standards.
- Building our Future – Developing the new Guelph Transit and Fleet Services facility and the Operations Facilities Long-Term Plan responds to Guelph’s growing and changing social, economic and environmental needs.
- Navigating our Future – Enabling operations to improve and maintain the safety, efficiency and connectivity of the whole transportation system.
- Working Together for our Future – Improving health and safety conditions and functionality of City operations.

Financial Implications

Staff will continue to proceed with the planning and design of the Watson-Stone site and the development of the Operations Facilities Long-Term Plan. Council approval of the budget for the new Guelph Transit and Fleet Services facility will be sought through the 2024-2027 multi-year budget process based on the detailed design work that is underway in 2023. Budgets for the remainder of the Operations Facilities Long-Term Plan will also be included in the 2024-2033 multi-year budget and forecast for Council approval.

Report

Background

City operating facilities required for delivering critical community services (such as Fleet Services, Public Works, and Guelph Transit) are beyond capacity and are near or at end-of-life. Service levels will be further constrained as the city grows and existing health and safety risks exacerbated if operating services remain in the current facilities and are expected to meet growing demand. To address this

concern, the municipal-owned site located at the northwest corner of Watson Parkway South and Stone Road East (Watson-Stone site) was approved as the site for new facilities for these critical services. **Error! Reference source not found.** illustrates the Watson-Stone site. The site is bounded by Cargill, Dunlop Drive and the Waste Resource Innovation Centre (WRIC) lands to the northwest, Watson Parkway South to the northeast, Stone Road to the southeast, and the Eramosa River to the southwest.

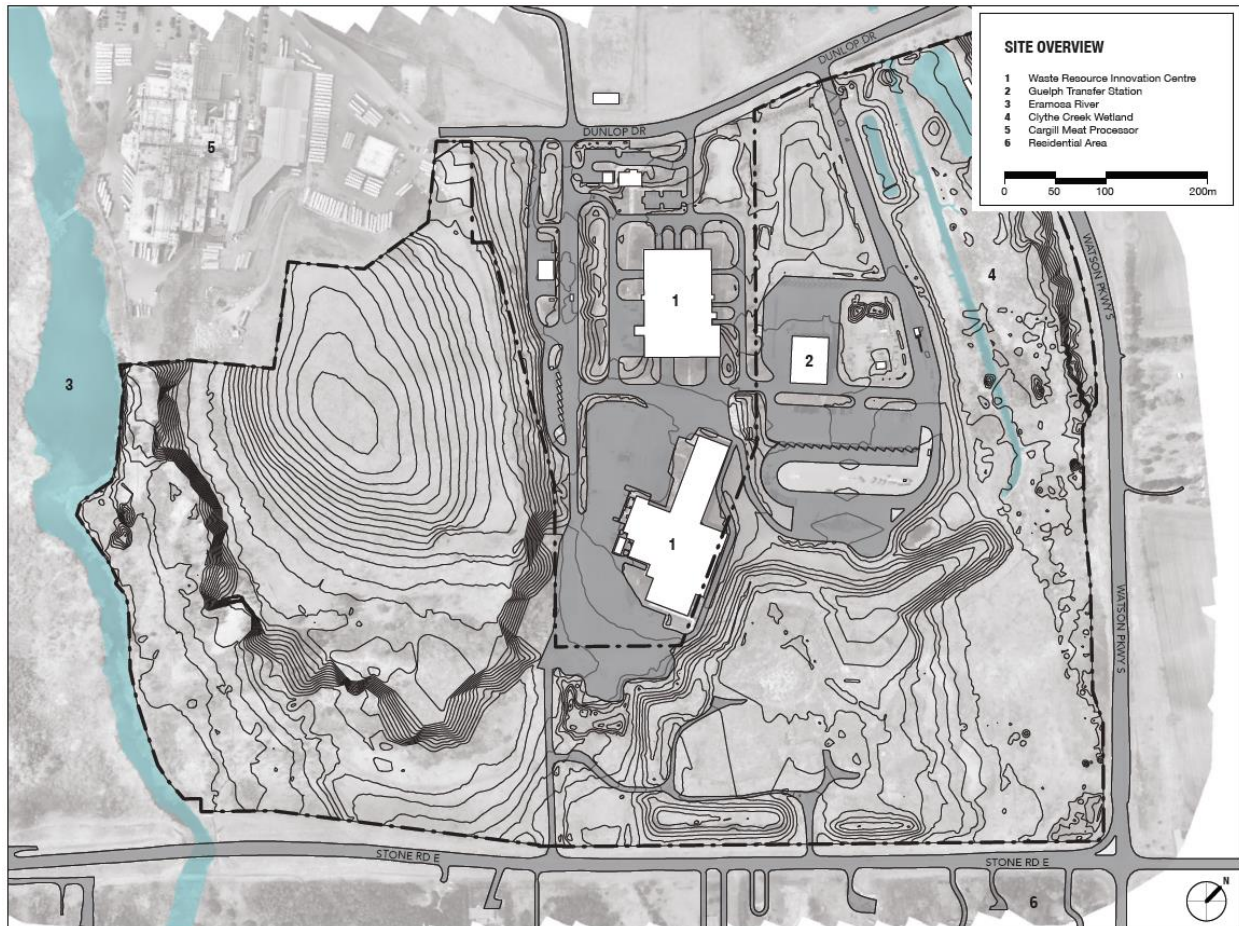


Figure 1: Watson-Stone site overview

In addition, the City is expanding Guelph Transit services and also electrifying the transit bus fleet to significantly reduce greenhouse gas emissions and progress towards the Corporate 100 per cent renewable energy target and support the City's Race-to-Zero commitments to be a net zero carbon community by 2050 or earlier. As mentioned, the new Guelph Transit facility will be located at the Watson-Stone site and will be an electric transit garage that can hold more than 170 buses and is the foundation of the transit route expansion and electrification initiatives. As part of the transit electrification initiative, electrical infrastructure upgrades have been completed at the existing 170 Watson Road South Guelph Transit garage for the installation of pilot electric bus chargers and four battery electric buses to be delivered by Spring 2023.

Site Analysis

The Watson-Stone location is a multifaceted site with varying terrain that is rich with cultural and natural heritage assets and situated northeast of the Eramosa River in the Guelph Innovation District (GID) Lands.

Ongoing detailed analysis is being performed to employ due diligence and gain further knowledge of the site to inform planning and design constraints. Several key site constraints have been identified from the site analysis work.

- Topography – Aerial imagery was taken for the overall site and used to develop [topography maps and cross-section models](#). The Watson-Stone site has a significant elevation change of approximately 35 m. The topography, with dissecting steep slopes and cliffs, separate the site into two distinct areas with the elevated plateau area to the northwest and the lower elevation eastern area with excess soil piles and landscaped berms.
- Natural environment – The [Phase 1 Environmental Impact Study Natural Heritage Characterization Report](#) has been completed. The environmental impact study identified and located the various ecological land classifications at the Watson-Stone site. The site included various natural areas largely represented by cultural meadow, thicket and woodland interspersed with remnant forest and marsh indicating a high degree of past human influence. Significant woodlands have been identified in the southern area of the plateau. The previously identified provincially significant wetland (PSW) along Watson Parkway South was reassessed and two additional wetland areas were added to the adjacent PSW complex. Confirmed significant wildlife habitat have also been identified with key areas being in proximity to the river, the cliffs and the southern end of the plateau.
- Cultural heritage – A [Cultural Heritage Resource Impact Assessment](#) of the Watson-Stone site was conducted and determined that the site is rich with cultural heritage assets concentrated within the western portion of the Watson-Stone site. Along the southern edge of the plateau is the site's most prominent feature, the former Ontario Reformatory (OR) Quarry, which is designated a Provincially Significant Earth Science ANSI and listed as a non-designated property under Section 27 of the Ontario Heritage Act on the City's Municipal Register of Cultural Heritage Properties. The quarry is seemingly separated into three different extraction sites, consisting of exposed quarry face walls and flat form bottom floors. The quarry face is heavily overgrown with foliage, including cedar trees. The exposed quarry wall can be observed from Stone Road (seasonally) and the unpaved OR Side Trail (year-round) that runs along the northeast side of the Eramosa River. The OR Side Trail is part of the 2020 Radial Line Trail which is maintained by the Guelph Hiking Trail Club.

The following site analysis reports are currently being completed:

- Arborist report and tree management plan
- Geotechnical investigation
- Hydrogeological investigation
- Phase 2 environmental site assessment
- Preliminary noise study
- Stage 2 archaeological assessment
- Traffic impact study

- Urban design masterplan

As seen in **Error! Reference source not found.**, the findings from the various site analysis work have been layered and combined to determine the developable area within the Watson-Stone site.



Figure 2: Watson-Stone site developable area

Site Design Parameters

Key site design parameters have been determined based on the site analysis findings. These site design parameters apply strong environmental stewardship and directly address concerns regarding development impact on natural environment, cultural heritage and trails at the Watson-Stone site.

- Add buffer zones around the various features of the natural heritage and cultural heritage systems – 30 metre buffer around PSW, 10 metre buffer around significant woodlands, 30 metre buffer from Eramosa River for cool water fish habitat and 15 metre buffer for warm water fish habitat, 25 metre around the OR Quarry.
- Situate the programming at the eastern portion of the site – Development will be focused at the eastern portion of the site, as illustrated in Figure 3. Areas towards the Eramosa River and on or near the plateau contain sensitive natural areas, cultural assets and significant elevation changes. The eastern portion is more appropriate for the development and will greatly reduce impacts to the existing lands.

- Condense the design – Site plan design will condense and optimize the facility footprints and hardscapes while meeting the operational needs. This will reduce encroachment on natural areas and impacts to cultural heritage assets, while also reducing stormwater management and utility servicing requirements.

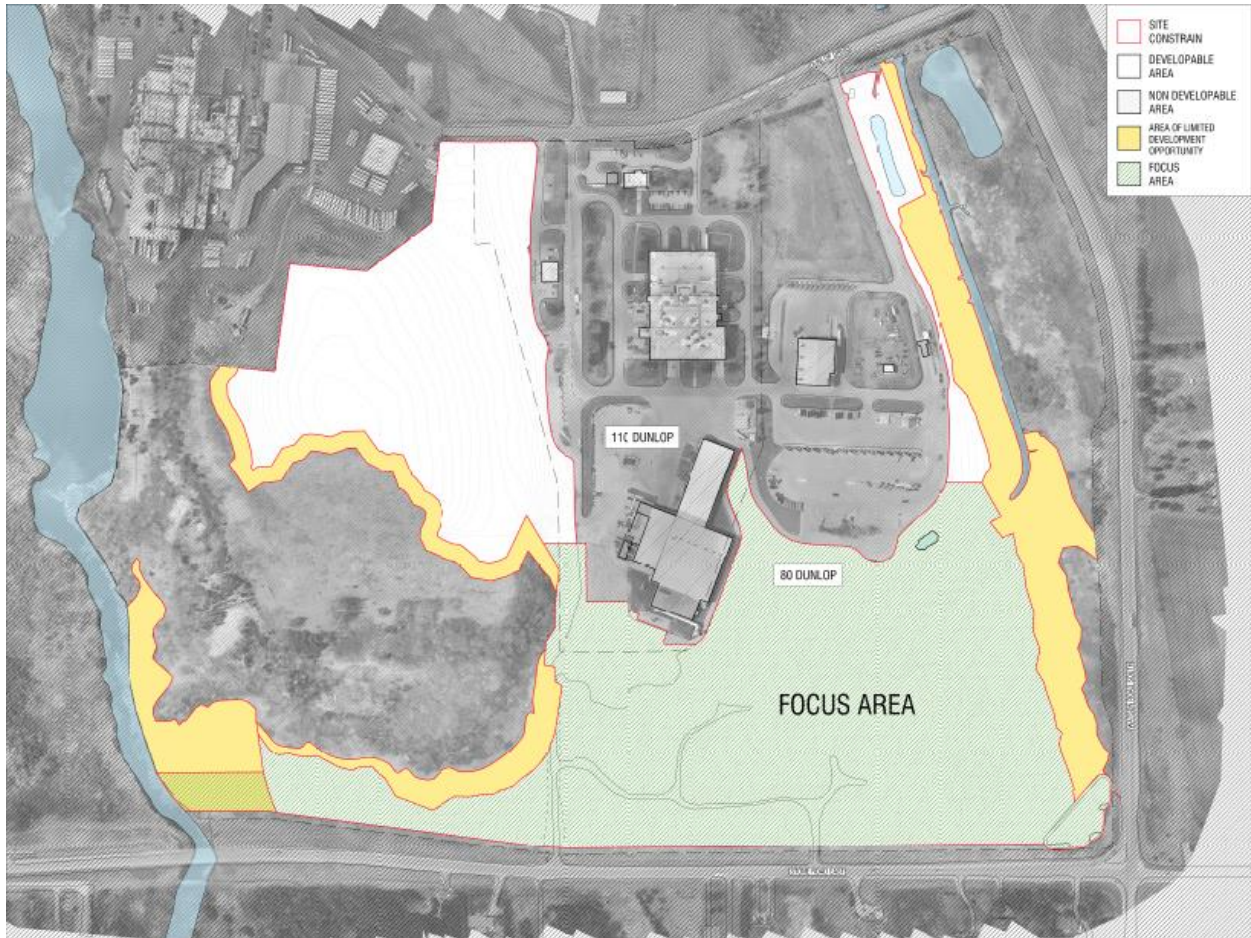


Figure 3: Watson-Stone site development focus area

Site Plan Concept

Conceptual site plans for the Watson-Stone site underwent several iterations while integrating the site design parameters. Several site concepts were tested to include the originally proposed service areas: Fleet Services, Guelph Transit, Public Works, and Corporate Building Maintenance at the Watson-Stone site, with separate development of a new Solid Waste Collections facility located in the adjacent WRIC and Parks relocating to a renovated 170 Watson Rd (following the exit of Guelph Transit from that facility). Fitting the originally proposed service areas within the reduced available land area at the Watson-Stone site, as dictated by the site design parameters, greatly constrained the footprint of the concept site plan designs. This led to proposed layouts with compressed single-storey or multi-storey facilities, leaving limited room for effective vehicular circulation and increased design complexity.

With a deeper understanding of the Watson-Stone site characteristics, a reconsideration was required to incorporate the site design parameters and appropriately match the assigned operating services to the Watson-Stone site. It

was determined that the space requirements and the electrical infrastructure needs are well-suited to effectively accommodate Guelph Transit and Fleet Services. Right-sizing the operating services to the Watson-Stone site allows for design optimization. The site plan concept in Figure 4 (and Attachment-1) illustrates the revised design direction with Guelph Transit and Fleet Services located at the Watson-Stone site.

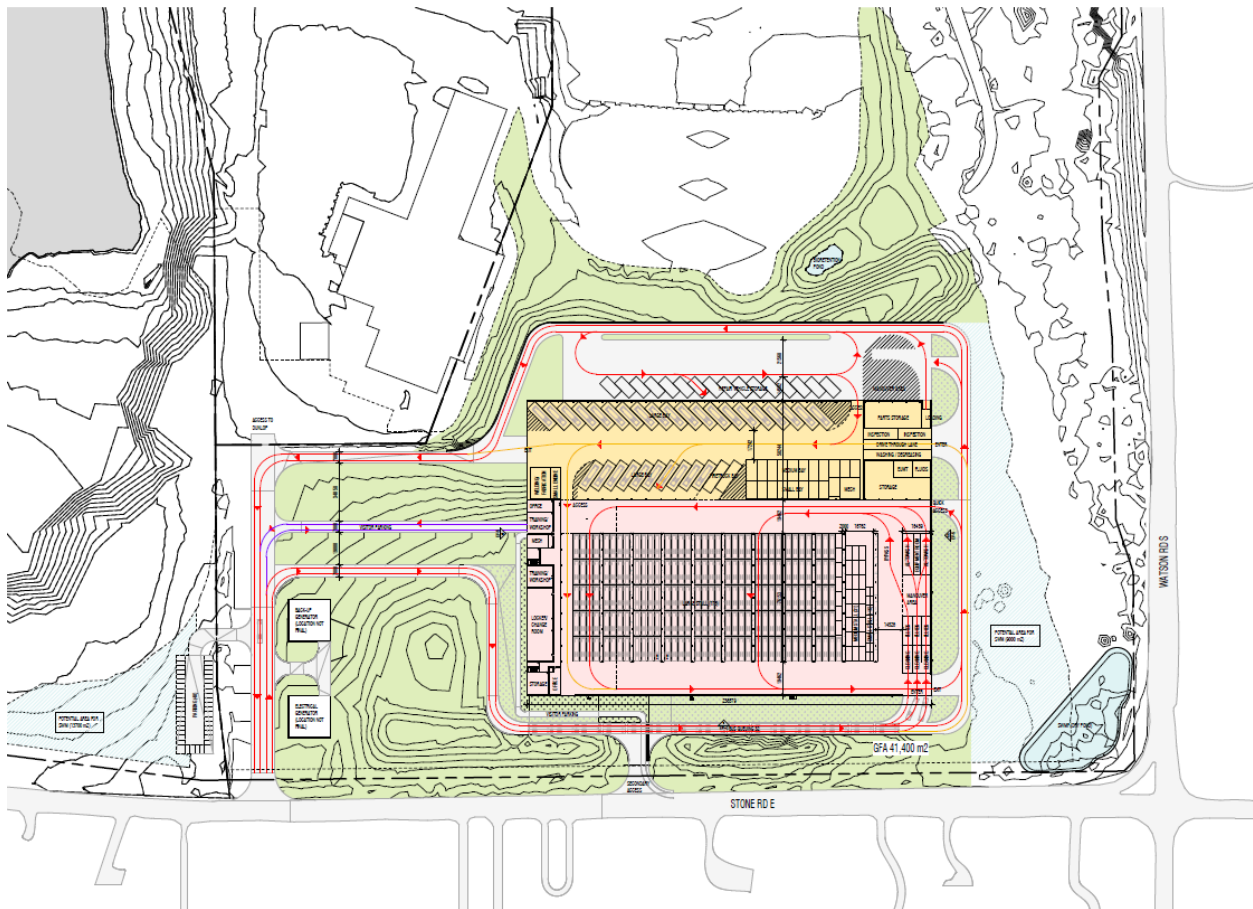


Figure 4: Site plan concept

The site plan concept includes a space efficient design that co-locates Guelph Transit and Fleet Services into a single facility that is surrounded by a circulation road network. The overall facility floor area is 40,250 square metres. Guelph Transit requires approximately 27,470 square metres, predominantly for storage and electrical charging of buses. Fleet Services requires 12,350 square metres to effectively meet the fleet maintenance demands across the range of all fleet vehicles. With the Guelph Transit fleet growing and already being the largest fleet grouping, co-locating Guelph Transit and Fleet Services improves operational efficiency for both departments.

Optimizing the footprint of the facility and road network reduces environmental and cultural impact by keeping development outside and away from the buffer zones around the various features of the natural heritage and cultural heritage systems. Footprint optimization strategies include conjoining the facilities and locating vehicle storage and parking on the roof. Reducing the hardscape footprint also reduces the stormwater management requirements. Stormwater management consists of a

larger pond located along the east side of the facility adjacent to the PSW and a smaller pond to the west of the main access lane and public parking space that will service future park space and existing trail access.

The varying site topography is incorporated into the site plan concept and greatly influenced road network design, along with facility orientation and locating facility access points. By utilizing slopes, the west side of the facility includes drive-in access to the roof vehicle storage and parking space, as well as the lower grade Fleet Services garage exit. The east side of the facility is at the lower grade level and includes access to and from the Guelph Transit garage, as well as entry into the Fleet Services garage. Through this design strategy, soil removal costs will be reduced by lowering the overall amount of excavated material and also enable material reuse from excavation that is needed for build-up of other areas at the site.

Operations Facilities Long-Term Plan

With only Fleet Services and Guelph Transit being located at the Watson-Stone site, a plan is needed to locate the remaining operating services.

Relocating Guelph Transit and Fleet Services frees up existing operating facility space. Leveraging existing lands and repurposing/renewing facilities while ensuring operating needs are met for the efficient delivery of community services can be effectively implemented to mitigate costs. For reference, relevant municipal-owned sites have been identified on a map and illustrated in Figure 5.

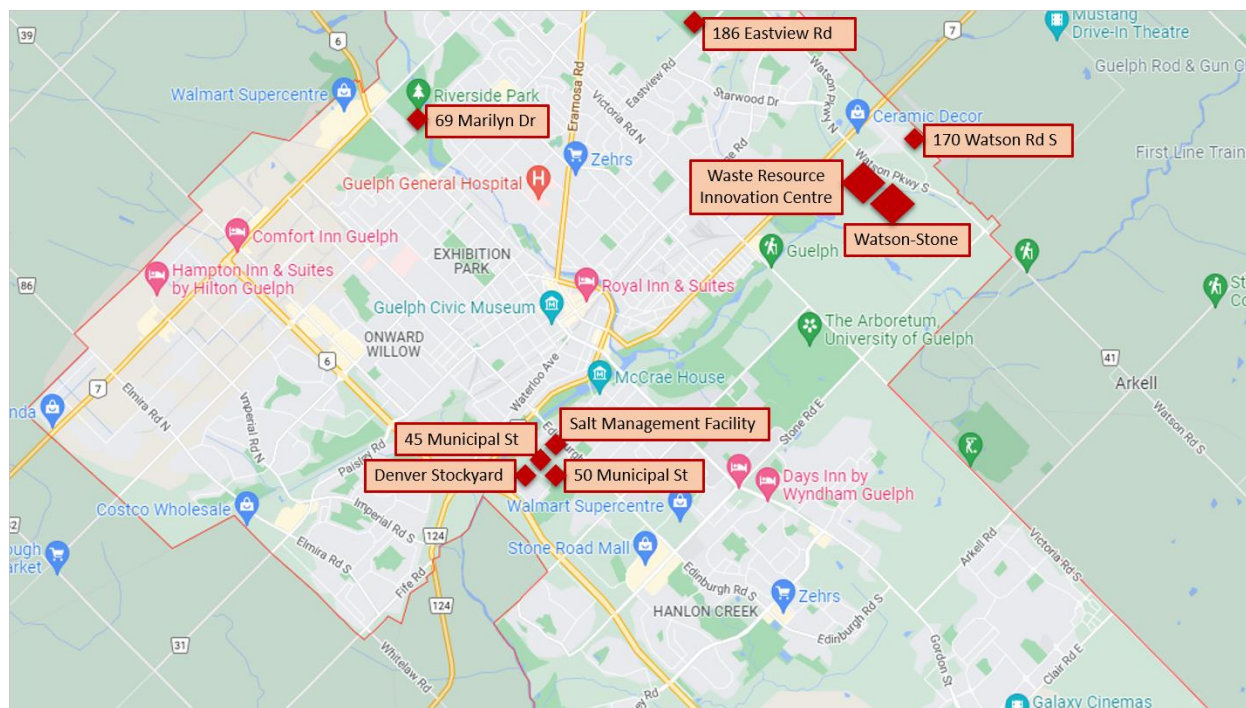


Figure 5: Map of relevant municipal-owned sites

- 170 Watson Road South (170 Watson) for Solid Waste Collections – The 170 Watson facility is currently used by Guelph Transit and has storage capacity for sixty-three full size buses and ten mobility buses. This facility is capable of storing other large vehicles and is well-suited for waste packer vehicle storage. The facility is in good condition and can be renovated to meet the

operating requirements. This eliminates the need for a new facility at the Waste Resource Innovation Centre (WRIC) while maintaining proximity to the proposed Fleet Services facility at the Watson-Stone site. The solid waste packer vehicles are the second highest fleet group (after Guelph Transit bus fleet) with respect to fleet maintenance requirements.

- 45 Municipal Street (45 Municipal) for Public Works – Public Works currently shares administrative space with Fleet Services within the 45 Municipal building. Public Works also utilizes adjacent facilities: Public Works (and Parks) construction vehicle storage at the 50 Municipal Street (50 Municipal) garage (the current 50 Municipal garage is inadequate); equipment and bulk landscaping material storage at the Denver Street Stockyard; and road salt and brine storage at the Municipal Street Salt Management Facility. Connectivity to these types of storage facilities is critical for Public Works Operations. The source water protection requirements and proximity to wetlands greatly increased the complexity of developing Public Works storage facilities at the Watson-Stone site. With the revised site plan concept having Fleet Services relocated to the Watson-Stone site, space at the 45 Municipal site becomes available and the building can be expanded and renovated to meet Public Works vehicle storage requirements more adequately. With Public Works remaining at the 45 Municipal location, the direct connectivity to the existing Denver Street Stockyard and Municipal Street Salt Management Facility is maintained and eliminates the need for new storage facilities.
- 50 Municipal and 69 Marilyn Drive (69 Marilyn) for Parks – Main sites for Parks are facilities at 50 Municipal and 69 Marilyn. With parks and open spaces located throughout the city, an effective operating model for Parks is to have multiple locations that brings them closer to the work locations. As mentioned, the 50 Municipal garage is currently used predominantly for Public Works vehicle storage with some Parks vehicle storage. As 50 Municipal becomes available following the relocation of Public Works vehicle storage, the 50 Municipal facility can be updated to accommodate Parks operating needs. Similarly, the 69 Marilyn Drive facility is to be renewed to meet latest building standards and growing operating needs.
- 186 Eastview Road (186 Eastview) for Corporate Building Maintenance – Corporate Building Maintenance is currently situated at 186 Eastview. The facility is to be renewed to meet latest building standards and growing operating needs.

Revised Staging Plan

The preliminary staging plan has been revised (refer to Attachment-2) based on the Watson-Stone site plan concept and the Operations Facilities Long-Term Plan. Near-to medium-term tasks are listed with greater certainty. Longer-term forecasts are estimated and will be revised as studies and design work progresses.

Next steps

Figure 6 is an illustrative model of the layered project stages for the design and construction of the Guelph Transit and Fleet Services facility. The holistic design process starts at the overall site level with review and analysis of the entire site and works inward to design the site plan within the focus area and further into building design and construction. Greater detail is determined as the design process progresses.

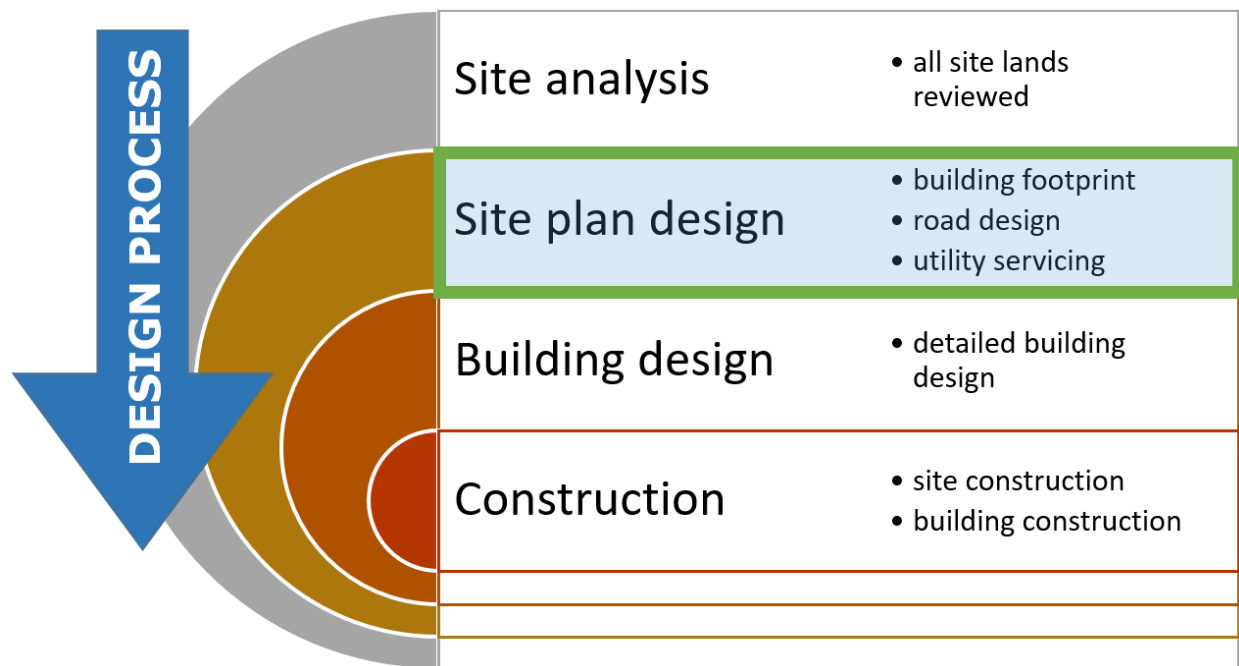


Figure 6: Design and construction stages

The site plan design stage is currently underway with the site plan application package being completed based on the design parameters and the Operations Facilities Long-Term Plan.

Detailed building design of the Guelph Transit and Fleet Services facility at the Watson-Stone site will commence. The Guelph Transit and Fleet Services facility will employ sustainable design elements and strive to meet the Canadian Green Building Council (CAGBC) Zero Carbon Building – Design Standard.

Financial Implications

Staff will continue to proceed with the planning and design of the Watson-Stone site and the development of the Operations Facilities Long-Term Plan. Council approval of the budget for the new Guelph Transit and Fleet Services facility will be sought through the 2024-2027 multi-year budget process based on the detailed design work that is underway in 2023. Budgets for the remainder of the Operations Facilities Long-Term Plan will also be included in the 2024-2033 multi-year budget and forecast for Council approval.

Consultations

Earlier communications with the Mississaugas of the Credit First Nation (MCFN) and the Six Nations of the Grand River (Six Nations) have been had to present the Watson-Stone project. Environmental Impact Studies, Cultural Heritage Resource Assessment and Archaeology reports have also been shared. Phase 2 archaeological field work was conducted with field liaison representatives from the MCFN and Six Nations.

A draft version of the Cultural Heritage Resource Impact Assessment was presented to Heritage Guelph on February 28, 2022. Feedback was received from Heritage Guelph and incorporated into the final version of the report.

Attachments

Attachment-1 Site Plan Concept

Attachment-2 Revised Staging Plan

Attachment-3 Staff Presentation

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