



Staff Report

Operations – Capital Projects Division

Report To: COW-Operations_Planning_and_Development_Services
Meeting Date: July 2, 2024
Report Number: CSOPS.24.031
Title: Bay Street East Reconstruction PIC 1 Follow-up
Prepared by: Mike Humphries, Senior Infrastructure Capital Project Coordinator

A. Recommendations

THAT Council receive Staff Report CSOPS.24.031, entitled “Bay Street East Reconstruction PIC 1 Follow-up”;

AND THAT Council receive the “Bay Street East Reconstruction PIC 1 Follow-up Presentation included as Attachment 1 and Follow-up Summary included as Attachment 2;

AND THAT Council direct Staff to proceed with the design of Bay Street East including sanitary forcemain, sanitary sewer, storm sewer and watermain with restoration to the Town Standard Local Urban 20m ROW with No Parking Cross-section with 7.5m asphalt width, and 2.7m multi-use trail;

AND THAT Council direct staff to proceed with the design of Grey Street from Bay Street East to the Thornbury Wastewater Treatment Plant including the installation of the outfall, sanitary forcemain, storm sewer and watermain with restoration to the Town Standard Local Urban 20m ROW with No Parking Cross-section with 7.5m asphalt width and 2.7m multi-use trail;

B. Overview

The project area is located in Thornbury immediately east of the downtown core adjacent to the urban centre of Town. It includes Bay St E from Mill St to Grey St and Grey St from Bay St to the Thornbury Wastewater Treatment Plant (TWWTP). Both Bay St E and Grey St are Local Urban Roads with 20m right-of -ways within the settlement area of Thornbury.

The project will include the full reconstruction (including a new forcemain) of Bay St E from Mill St to Grey St and Grey St from Bay St E to the Thornbury Wastewater Treatment Plant. Grey St will also have an outfall installed from the TWWTP to the Bay.

C. Background

The original project included upgrades to the Mill St Pump Station and the provision of a second forcemain from the Mill St Pump Station to the Thornbury Wastewater Treatment Plant. This

project is related to growth in the Thornbury and Lora Bay area. The current pumping station and forcemain are currently over allocated. The pumping station is not able to meet the Town's level of service standard under any wet weather event. No new development can move forward in Thornbury west to Lora Bay until these upgrades are completed. This project is a top priority for the Town to protect homes from sewage surcharge, replace failing infrastructure, address infiltration into the existing system, and provide allocation to existing development projects (such as Campus of Care) – it is critical to be completed without delay.

The existing infrastructure on Bay St E, specifically the watermain and the gravity sewer are approaching end of life. The watermain was installed around 1954 and is asbestos cement. The watermain is in poor condition and has been repaired 20 times since 2013. The most recent being just a few weeks ago. Watermain failures have the potential to put the entire drinking water system at risk of contamination. The sanitary sewer is also asbestos cement and is also in poor condition. It has been identified as a significant source of inflow and infiltration (see Attachment 3) and must be addressed as soon as possible.

At the same time, the design of the Thornbury Wastewater Treatment Plant outfall was being initiated and staff identified areas of overlap between the projects. Both the forcemain and outfall were proposed to be installed on Grey St. When considering the project such as this, staff always thoroughly investigate and consider the existing infrastructure and look for efficiencies and opportunities. Through this background review it was identified that both the watermain and sanitary sewer were at the end of their useful lives and that the road on Bay St E required drainage upgrades and road improvements to bring it up to current standards. Considering the required watermain and sanitary sewer replacements and roadwork along with the forcemain and outfall, it was very apparent that there was an opportunity to combine the works into a single project. The project was approved by Council in August 2023. See Staff report [CSOPS.23.044](#) for details.

WT Infrastructure started their background work and preliminary design in the fall of 2023 completing/initiating surveys, geotechnical work, tree inventory etc. At this time, it became clear that construction of this project would have a significant impact to the residents. Staff and WT Infrastructure arranged for a "Neighbourhood Meeting". The notice was sent out in early November for a December 2, 2023, meeting. Normally the first Public Meeting would not be scheduled until the preliminary 30% design was completed. Staff initiated this added form of communication to ensure greater transparency with residents about the project's complexities and challenges. The purpose of the meeting was to thoroughly inform residents about the difficulties posed by existing conditions and necessary underground work. An on-site meeting was the most effective way to demonstrate the scope of the underground work and its impact on the above-ground design. The first Public Information Centre was held on March 27, 2024. A copy of the presentation by WT Infrastructure is included as Attachment 1. The presentation included discussion on the feedback gathered from the neighbourhood meeting on December 2, 2023, relevant studies, Active Transportation, and Background information. The forcemain alignment and considerations were also presented to help residents understand how the forcemain route was chosen. It is important to note that the route was already chosen and approved by Council, the discussion in the PIC was to help the residents understand how this decision was made, the Town was not asking for input on the route.

The PIC presented road cross-section alternatives for discussion purposes. The cross-sections are very preliminary at this time. Once a cross-section is chosen, the utilities will be consulted and the locations may have to be revised and cross-sections modified accordingly but the general intent would remain the same.

The alternatives selected for discussion were as follows:

- 1) Town Standard Urban Cross-section with sidewalk – 8.5m asphalt with cycling on the road.
- 2) South Offset -Urban Cross-section with sidewalk -8.5m asphalt with cycling on the road.
- 3) South Offset- Urban Cross-section with multi-use trail -7.5m Asphalt.
- 4) South Offset -One Way Street with Multi-use Trail.

At the first PIC, there were over 50 attendees, including Staff, some members of Council, Bay St E residents, and people from the community. All comments received up to May 8, 2024, have been included in Attachment 2 Comment Summary, all others were forwarded directly to Council.

The main concerns collected from the comments submitted after PIC 1 are summarized below:

- 1) Commentors did not agree with the forcemain alignment on Bay St E and wanted the Town to select another route.
- 2) Many commentors wanted to retain the narrow 6.0m road in its current offset location, although there were a few in favour of moving the road to the center of the right-of -way.
- 3) There were many comments received that opposed the idea of an urban road with curb, preferring to retain the current road.
- 4) Many comments received were not in favour of Active Transportation, specifically rejecting bike lanes, sidewalk and a multi-use trail.
- 5) Many comments indicated that they did not want any trees to be removed.
- 6) There were some comments that suggested that residents wanted to be able to park in the Town boulevard.

D. Analysis

Forcemain Alignment

Alternatives for the forcemain alignment were considered at the very beginning of the project and the preferred alternative was selected as Bay St E and Grey St. Council approved this alignment, including the use of the Town's standard urban cross-section, with the budget increase in August 2023. WT Infrastructure was then brought on as the project engineer. WT Infrastructure also completed a review of the proposed alignment and confirmed staff's recommendation. PIC 1 (Attachment 1) showed the alternatives that were considered and the

reasons why. This was done to help the residents understand how this decision was made. The Bay St E and Grey St Alternative is the ideal choice and was considered the best alternative by a very large margin.

The Bay St E alignment was selected for the following reasons:

- 1) It provides redundancy in the forcemain. i.e. provides a route separated from the existing forcemain. This is a key design requirement.
- 2) Provides an opportunity to combine the three projects (Forcemain, reconstruction of Bay St to current Standards and Outfall) for efficiency and huge cost savings.
- 3) Alignment would provide long term access to the forcemain for maintenance, repairs and eventually replacement.
- 4) Opportunity to potentially eliminate the Elgin St Pumping Station. It is currently undersized and will need upgrades otherwise.
- 5) The watermain and sanitary sewer were at the end of their useful lives on Bay St E and this street would be reconstructed to Town Standards in the very near future regardless of the forcemain requirements.
- 6) This area has been identified as an area of concern for infiltration and inflow. See Attachment #3 – Inflow and Infiltration Rates -Thornbury by JL Richards as part of the Wastewater Master Plan. Replacing the sanitary sewer on Bay St E will allow the Town to address I&I and eliminate any illegal storm connections to see long term cost savings.
- 7) Allows for road upgrades and drainage upgrades along Bay St E and Grey St.
- 8) Allows for Active Transportation improvements as outlined in the Transportation Master Plan.
- 9) Allows for intersection improvements at Bay St E and Elgin St intersection.

Many of the residents sent in a group letter for Council suggesting another Alternative route. The proposed route is through the park on the south side of Bay St E and down the Georgian Trail and Huron St. This route was never considered as it is not a feasible route. It would be difficult to access and would not provide the required redundancy as it overlaps with the current forcemain in areas. It is proposed to run through the middle of a park and down the Georgian Trail resulting in loss of numerous additional trees. The Town would still need to reconstruct Bay St E and Grey St. This would effectively more than double the environmental impact unnecessarily. This is not considered a viable option. The proper location for infrastructure is in the road allowance where possible.

Changing the routing is not recommended. Staff have selected the best possible route, and it has been confirmed by the project engineer and approved by Council. Changing the route at this stage in the project would delay the project by 18 months to 24 months. All the work completed to date would be tabled and the design would have to start over. All this would do is shift the work to someone else's street. Then the same issues would arise with a less efficient route. Staff would have to either negotiate with WT Infrastructure for the new scope of work or start the RFP process to retain a new engineer at a considerable loss of time and money.

Cross-section Elements

Roadway

When reconstructing a road, there is a responsibility to bring the road up to current standards. The design must consider regulatory requirements, Town's Engineering Standards, utility requirements, industry best practices, safety requirements, as well as guiding documents such as the Town's Official Plan, Transportation Master Plan, Drainage Master Plan etc. It is not as simple as putting the road back the way it was. The current road is 6.0m wide, this is not safe or an appropriate width. Staff and the project engineers have attended and witnessed how the road operates. The existing 6.0m asphalt is not adequate or safe for current or future needs.

The required road width in the new Town Engineering Standard for an urban local road is 8.5m (see Attachment 4). The 8.5 m asphalt width is appropriate and would allow additional width for on road cycling and on street parking.

The new Town Standards also include a 7.5m local urban road without parking (see Attachment 5). It would not allow for on street parking and is not ideal for cyclists. The 7.5m width is the minimum road width recommended by the Engineering Standards. This option could only be used in conjunction with a multi-use trail as the pavement width is too narrow for on road cycling. This option also would require the road to be posted as no parking.

Although there are exceptions, it is universally standard that roads are centered in the right-of-way. This is the safest configuration for all users. It allows for proper sight lines for safety. There are many road sections and driveways within the project limits that currently do not meet minimum sight line requirements. The road cannot be left offset to the south as per the existing condition.

Drainage

It is the Town's responsibility to address drainage within the right-of-way. When reconstructing a roadway we must consider this and manage the drainage. An urban cross-section with Barrier Curb and Gutter will direct rainwater off the road and into the proposed storm sewer and to an acceptable outlet. This will reduce maintenance costs and extend the life of the road.

Preliminary geotechnical sampling has identified poor draining soils within the road allowance, dense native soils will not allow infiltration. Conveying rainwater to an outlet will prevent overland flow onto properties adjacent to the reconstructed streets.

Curb

There were some concerns regarding the installation of curb. Curbs are a fundamental component of the urban roadway. The two curbs considered are listed below.

1) **Barrier Curb and Gutter:**

This is the recommended curb for this project. Concrete Barrier Curb and Gutter is the Town Standard curb. It is the industry standard and is preferred by almost all municipalities. It has many benefits:

- **Safety:** Barrier Curb acts as a physical barrier that helps to prevent vehicles from leaving the road unintentionally. It provides a clear delineation between the roadway and pedestrian areas. This helps to reduce the risk of accidents especially in urban areas where pedestrians are present. It also protects the driver by helping to reduce collisions with poles, trees, hydrants etc.
- **Drainage:** Barrier curbs channel rainwater away from the road surface and into the storm sewer system and help to prevent flooding. The higher back on barrier curb keeps the water on the road during heavy storm events (storage) and thereby helping to prevent flooding and damage on private property.
- **Traffic Control:** Barrier curbs are more pronounced and help to guide vehicles and regulate traffic flow by providing physical boundaries (traffic calming). They also can be used to better delineate driveways and discourage illegal parking in the Town's boulevard.
- **Aesthetics:** Barrier curbs can enhance visual appeal of the road and surrounding area. i.e instead of sand, ruts and potholes along the road edge they provide a much cleaner finished look.
- **Accessibility:** Curbs play a crucial role in providing accessibility for pedestrians, cyclists and individuals with disabilities. They help to define safe paths for pedestrians and provide a barrier between the road and the sidewalk or multi-use path.
- **Maintenance:** Barrier curb also protects the road edges, road base and reduces erosion of the boulevard extending the life of the road. Barrier curb is preferred by the Roads Division for ease of plowing snow and reducing damage and costly repairs in the boulevard.

Mountable Curb: Mountable curbs are less common and are not typically used on low speed local urban roads such as Bay St E. These curbs do not meet the Town's Engineering Standards and are not recommended by Staff or the project engineer.

- Mountable curbs have a much lower profile that makes it very easy for vehicles to drive over them. They were considered for this project but quickly discounted as mountable curb does not provide the physical barrier for safety that the barrier curb and gutter does. Pedestrian safety is paramount.

- Mountable curb also does not discourage illegal use (per by-law 2022-49) of the Town's Boulevard which is also a safety concern (sight lines). Areas with mountable curb sustain damage on a regular basis causing costly repairs. In the past, mountable curb was used in the Town in new developments where the driveway locations were not known when the road was built. This practice was stopped in the Town over 10 years ago.
- From an engineering perspective the mountable curb does channel some rainwater but does not do as good a job as the barrier curb and gutter. It also does not provide as much on road storage during heavy rainfall, which leads to less flood protection.
- If mountable curb were selected, the Town standard cross-sections would not be able to be utilized. A new cross-section would have to be developed with increased clear zone behind the curb. The Town standards requires a minimum 1.2m clear zone behind barrier curb and a minimum 3.0m clear zone behind a mountable curb. This means that all above ground infrastructure such as trees, hydro poles, hydrants, etc. would be pushed back in the right-of-way close to property line. This would have an increased impact on existing trees both in the Town's right-of-way and on private property.
- The TAC Guide recommends mountable curbs for higher speed roads 70km/hr or greater.
- On past projects it has been suggested that barrier curb is not safe for cyclists. Staff and the project engineers investigated this claim and could not find any information to substantiate the claim. There is no mention of this in the MTO Book 18 or in the TAC Guidelines. There is no requirement anywhere that the project engineer or Staff could find. Staff note that Barrier Curb and Gutter is the industry standard and are used adjacent to cycle lanes almost everywhere.

Active Transportation:

There are many guiding documents that we can rely on for guidance as it pertains to Active Transportation. These include the Town's Official Plan, the Transportation Master Plan (2022), the Engineering Standards (2023), and Campus of Care Active Transportation Study (2024).

The Town's Official Plan outlines policies on how land in the Town should be used. It is prepared with input from residents and stakeholders and helps ensure that future planning and development will meet the specific needs of the community. The Official Plan has numerous references that provide some guidance:

- Section A1 The Community Vision and Guiding Principles, the last bullet states "enable residents to walk or cycle to work or shop".

- Section A1.1 Guiding Principles, “To establish an integrated transportation system that safely and efficiently accommodates various modes of transportation including walking, cycling, automobiles and trucks”.
- Section A3.1.2 Strategic Objectives, “Encourage reductions in the use of private automobiles by promoting active transportation and the use of Transportation Demand Management measures such as public transit, cycling and walking.
- The Official Plan discusses Active Transportation in Section D2.5. The section states, “Active Transportation (walking and cycling) is an important component of building active communities and reducing dependence on single occupant vehicles. In order to plan for and encourage walking and cycling, Council shall (note only clauses applicable are listed):
 - promote a connected safe and well-designed active transportation network which can include exclusive facilities for pedestrians and cyclists (sidewalks, bicycle lanes, trails, etc.) that are connected to origins and destinations within and beyond the Town; e) require the provision of sidewalks in settlement areas and hamlets, where appropriate; g) investigate and provide for bicycle lanes wherever possible in the construction or reconstruction of roads and bridges; h) encourage and support measures which will provide for barrier-free design of pedestrian facilities; i) support an accessible network that allows for use by all members of the community, which includes barrier-free design of pedestrian facilities which considers the location and width of sidewalks, use of curb cuts, pedestrian crosswalks and signals, etc. k) encourage pedestrian and cycling amenities, both on the active transportation network and at key destinations, ... and water fountains and benches along trail network; m) ensure that all pedestrian and cycling routes are designed to be safe.
 - Section A3.5.2 Rural and Open Space Character Strategic Objectives, Item 3 “Preserve and improve access to open space and shoreline areas, including the Niagara Escarpment, Nipissing Ridge and the Georgian Bay shoreline”.
 - From Section A3.8.2 Tourism and Recreation Strategic Objectives, Item 6 “Recognize and maintain the Georgian Trail as a regionally significant trail link, and to encourage appropriate access points in the long-term development of a Town-wide trail system”,
 - Section A3.9.2 Infrastructure Strategic Objectives, Item 3 “Encourage the establishment of an integrated transportation system that safely and efficiently accommodates various modes of transportation including cycling, walking, automobiles and trucks, and public transit where feasible”, and Item 4 “Ensure the construction of all infrastructure, or expansions to existing infrastructure, occurs in a manner that is compatible with adjacent land uses, is cost effective and with a minimum of social and environmental impact”.
- The Official Plan discusses Active Transportation in Section D2.5. The section states, “Active Transportation (walking and cycling) is an important component of building active

communities and reducing dependence on single occupant vehicles. In order to plan for and encourage walking and cycling, Council shall (note only clauses applicable are listed):

- a) promote a connected, safe and well-designed active transportation network which can include exclusive facilities for pedestrians and cyclists (sidewalks, bicycle lanes, trails, etc.) that are connected to origins and destinations within and beyond the Town;
- e) require the provision of sidewalks in settlement areas and hamlets, where appropriate.
- g) investigate and provide for bicycle lanes wherever possible in the construction or reconstruction of roads and bridges;
- h) encourage and support measures which will provide for barrier-free design of pedestrian facilities;
- i) support an accessible network that allows for use by all members of the community, which includes barrier-free design of pedestrian facilities which considers the location and width of sidewalks, use of curb cuts, pedestrian crosswalks and signals, etc.
- k) encourage pedestrian and cycling amenities, both on the active transportation network and at key destinations, ... and water fountains and benches along trail network;
- m) ensure that all pedestrian and cycling routes are designed to be safe.

The Transportation Master Plan was completed in 2022. It has identified Bay St E within the project boundaries as a “General Active Transportation Route”. The objective of the general network is to facilitate the movement of cyclists and pedestrians relying on shared facilities.

The Towns Engineering Standards outlines the standards at which active transportation facilities should be constructed. For instance, it outlines that sidewalks are required on at least one side of all Local Urban roads. It also requires that active transportation facilities shall be implemented and designed in accordance with the TAC Geometric Design Guide for Canadian Roads, the corresponding MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads, Ontario Traffic Manuals (specifically Books 12A, 15 and 18), and the Town’s Official Plan.

In Summary, the provision of a multi-use trail on Bay St E and Grey St would expand the active transportation network and provide connectivity to the Georgian Trail, Bayview Park Trail, Harbour Trail, and Beaver River Trail. See Attachment 6 – Thornbury Trails Mapping. It would also provide an opportunity to highlight Bayview Park with the addition of lighting, seating and other amenities along the trail.

“Cottage Road” or “Cottage Lane” vs Local Urban Road

Through the PIC and the consultation process Bay St E has been repeatedly referred to incorrectly as a “Cottage Road” or Cottage Lane”. Although Bay St E is in close proximity to the water it is not considered a Cottage Street, Cottage Road or Cottage Lane.

There are many definitions for a "Cottage Street," "Cottage Road," or "Cottage Lane." During public meetings, Councilors and residents asked Staff about the "Cottage Street Study" in Saugeen Shores. The Saugeen Shores Study defines "Cottage Streets" as streets in the town's

urban beachfront areas that deviate from typical engineering standards, generally having narrower rights-of-way. Specifically, the presentation mentions rights-of-way of 6m to 10m. This is a key criterion. Bay St E, with a full 20m right-of-way, does not meet this criterion. Bay St E is a local urban roadway in the urban area of Thornbury.

“Cottage Roads” or “Cottage Lanes” are generally private roads that provide access from one piece of land to another. These types of roads are not owned or maintained by the municipality.

In summary, Bay St E is a "Local Urban Roadway" with a 20m right-of-way, maintained by the Town. It is not classified as a cottage road and should adhere to the current Town standards.

‘Complete Street’ Approach – Town’s Transportation Master Plan

Complete Streets are essential communal spaces where townspeople connect, children play, and all modes of transportation coexist harmoniously. This approach designs streets to be safe and accessible for everyone, whether they walk, cycle, take transit, or drive, promoting an inclusive and multi-modal transportation network. The concept is adaptable, balancing the needs of various users and enhancing public health by encouraging active transportation. Complete Streets are applicable not only in urban but also in rural areas, where they improve safety and accessibility, and support active tourism and local economies.

Recommendation

In order to have some flexibility staff have provided two options that will meet Town standards and provide safety for all users. Both options have in boulevard facilities (MUT or Sidewalk) in accordance with the Town standard and provide for pedestrian safety as this will be an active transportation route.

Preferred Option:

Considering the guiding documents above, industry standards, and best practices the recommended option is the Town Standard Local Urban 20m ROW with No Parking Cross-section which includes barrier curb and gutter, 7.5m asphalt width, along with a 2.7m in-boulevard multi-use trail along the north side of Bay St E. The multi-use trail will be designed to the Town’s Active Transportation Standards. The multi-use trail would carry cyclists and pedestrians and allow for a narrower roadway asphalt width for traffic calming. With this option cyclists would use the in-boulevard multi-use trail and the road would be posted no parking. The narrower road width will allow for traffic calming and the barrier curb and gutter would act as a physical barrier to improve pedestrian and cyclist safety in the boulevard. This meets Town standards and provides the maximum safety for all users. The narrower road and multi-use trail would allow some flexibility and may allow for some trees to be retained close to property lines provided Barrier Curb and Gutter is used. This option is only viable when cyclists will be directed to the multi-use trail. Without a multi-use trail, 8.5m asphalt width would be required as per the alternative option. A rendering of the preferred option is attached as Attachment 7 and page 2 of Attachment 8.

Alternative Option:

Staff believe the multi-use trail is the best option considering the opportunity to connect to and expand the existing trail network, but a 1.5-1.8m wide sidewalk would also meet Town Standards. This option would put the cyclists back onto the roadway so the required asphalt width would have to be at least 8.5m as per the Town Standard 20m ROW Urban Cross-section with parking (Attachment 4 or page 17 of PIC 1). Combined with the Barrier Curb and Gutter for safety, this is also considered a safe and viable option. There are a few drawbacks such as the wider roadway may promote higher speeds and less opportunity to retain existing trees. A aerial view with a sketch of this alternative are provided in Attachment 8 Page 3.

E. Strategic Priorities

1. Communication and Engagement

We will enhance communications and engagement between Town Staff, Town residents and stakeholders.

2. Organizational Excellence

We will continually seek out ways to improve the internal organization of Town Staff and the management of Town assets.

3. Community

We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

4. Quality of Life

We will foster a high quality of life for full-time and part-time residents of all ages and stages, while welcoming visitors.

F. Environmental Impacts

The construction activities will release greenhouse gases. Encouraging Active Transportation will reduce vehicle use.

Infiltration and inflow results in the capacity of the collection system being exceeded and may result in untreated wastewater being released to the natural environment or backup in resident's basements. By replacing the sanitary sewer there will be a significant reduction in infiltration and inflow lowering the risk of public safety and environmental impacts.

G. Financial Impacts

Delaying this project could put the Town in an increasingly liable position due to failed watermain, potential contamination of the drinking water system, risk due to related to sewage back-ups, inability to provide approved development with wastewater conveyance to the Plant and a reduction in available servicing allocation. It would also delay the outfall construction for the Thornbury Wastewater Treatment Plant.

H. In Consultation With

Jeff Fletcher, Acting Director of Operations

Allison Kershaw, Manager of Water and Wastewater Services

Jason Petznick, Communications Coordinator

Jim McCannell, Manager of Roads and Drainage.

I. Public Engagement

The topic of this Staff Report has been the subject of a Public Meeting and/or Public Information Centre which took place on **March 27, 2024**. Those who provided comments at the Public Meeting and/or Public Information Centre, including anyone who has asked to receive notice regarding this matter, has been provided notice of this Staff Report.

In addition to the PIC 1 an informal “Neighbourhood Meeting” was held on December 2, 2023.

Any comments regarding this report should be submitted to Mike Humpries, Senior Infrastructure Capital Project Coordinator sricpc@thebluemountains.ca .

J. Attached

1. Attachment 1 - PIC #1 Presentation
2. Attachment 2 – Comment Summary from PIC1
3. Attachment 3 – Inflow and Infiltration Rates - Thornbury by JL Richards
4. Attachment 4 – Town Standard Local Urban 20m ROW with No Parking Cross-section
5. Attachment 5 – Town Standard Local Urban 20m ROW with Parking
6. Attachment 6 – Thornbury Trail Mapping
7. Attachment 7 – Bay St E Rendering
8. Attachment 8 – Servicing Layout
9. Attachment 9 - Bay St E Aerial of Existing Conditions

Respectfully submitted,

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Report Approval Details

Document Title:	CSOPS.24.031 Bay Street East Reconstruction PIC 1 Follow-up.docx
Attachments:	<ul style="list-style-type: none">- Attachment 1 PIC 1 Presentation.pdf- Attachment 2 Comment Summary From PIC 1.pdf- Attachment 3 Inflow and Infiltration Rates - Thornbury by JL Richards.pdf- Attachment 4 Town Standard Local Urban 20m ROW with No Parking Cross-section.pdf- Attachment 5 Town Standard Local Urban 20m ROW with Parking.pdf- Attachment 6 Thornbury Trail Mapping.pdf- Attachment 7 Bay St E Rendering.pdf- Attachment 8 Servicing Layout.pdf- Attachment 9 Bay St E Aerial.pdf
Final Approval Date:	Jun 21, 2024

This report and all of its attachments were approved and signed as outlined below:

No Signature found

Pruthvi Desai - Jun 20, 2024 - 2:23 PM

Alan Pacheco - Jun 21, 2024 - 7:17 AM

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Shawn Everitt - Jun 21, 2024 - 7:32 AM