# CITY OF SOUTH PORTLAND

# CAPITAL IMPROVEMENT PROGRAM
# FISCAL YEAR 2022



**CASH CORNER FIRE STATION**
**RENDERING FURNISHED BY SEBAGO TECHNICS**

Presented by

Scott T. Morelli
City Manager

City of South Portland

~~March 15, 2021~~
April 30, 2021

# CITY OF SOUTH PORTLAND

# Capital Improvement Program

# FY 2022

## City Council

*Misha C. Pride, Mayor*
*Katelyn S. Bruzgo*
*April L. Caricchio*
*Deqa Dhalac*
*Susan J. Henderson*
*Jocelyn E. Leighton*
*Katherine W. Lewis*

## City Manager

*Scott T. Morelli*

~~**March 15, 2021**~~
April 30, 2021

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~~May 15, 2021~~ April 30, 2021

South Portland City Councilors
City of South Portland
25 Cottage Road
South Portland, ME 04106

Re: FY 2022 to FY 2028 Capital Improvement Program

Dear Mayor Pride and City Councilors:

In accordance with §502, §514, and §515 of the City Charter, I am submitting the fiscal years 2022 - 2028 (FY22-28) Capital Improvement Program (CIP) for the City of South Portland.

A CIP establishes the funding priorities for capital investments in a community. In South Portland, our CIP serves as a roadmap for projects not just in the upcoming fiscal year, but also for an additional six years out. Our CIP guides investments in safe and efficient road and transportation systems; capital-intensive environmental infrastructure projects, such as wastewater collection and treatment facilities; and public safety equipment through a planned and continuous investment program. The CIP also establishes a plan to purchase, construct, and maintain public land and buildings that house educational, governmental, cultural, or recreational activities to serve our citizens and students.

For the upcoming fiscal year (FY22), City Council is being asked to approve actual funding for the projects listed herein. For the remaining CIP years (FY23-28), Council is not being asked to commit to funding *per se* but rather to the understanding that these projects (and likely others to be added, especially in years farther out) will require funding and are in a queue to be financed.

**Funding Sources**
South Portland's CIP is funded via seven different sources:

- General Obligation (GO) Bonds/Lease (long-term debt or leasing)
- Tax Increment Financing (TIF) (public infrastructure fund reserves for eligible capital projects)
- General Fund Reserves (planned savings and investment program contained within the operating budget)
- Other Fund Reserves/Surplus (such as reserves in the sewer user budget, cable franchise capital reserve, etc.)
- Grants (including State and Federal, as well as other private sources)

- Prior Years' CIP Balances and Interest (dollars remaining from previous CIP projects that can be reprogrammed for new capital needs)
- General Fund Fund Balance (funded through the General Fund)

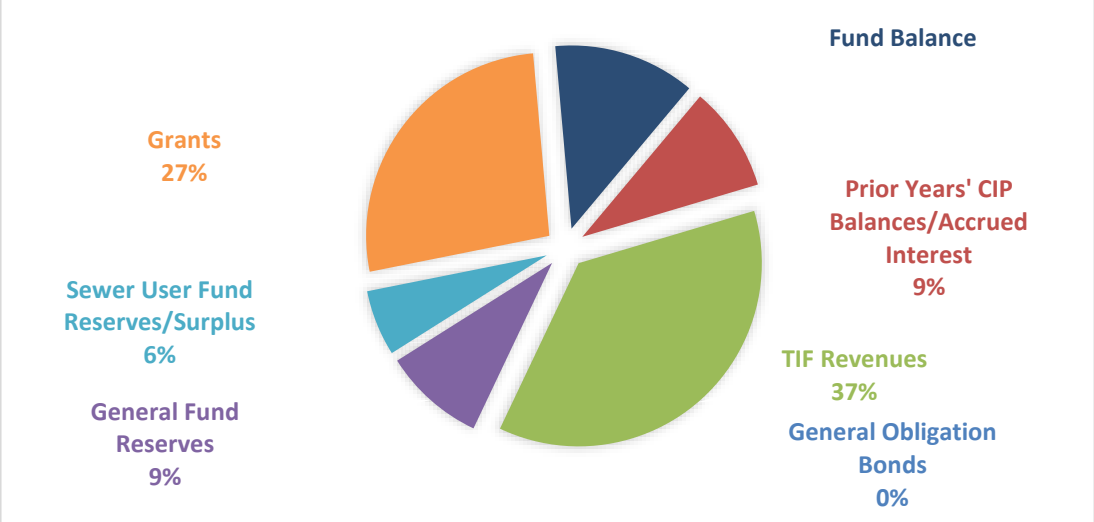
Many of these funds are restricted in their use. For example, TIF funds can only be used for specific purposes that are related to the district and approved by the State of Maine. It is important to understand this when looking at why some items have been funded and others, which may better address a Council goal, have not been.

The FY22 portion of the CIP totals $9,578,441.

**Table I**
**FY 2022 Capital Improvement Program**
**By Funding Sources**

| | |
|---|---|
| General Obligation Bonds | $0 |
| Prior Years' CIP Balances/Accrued Interest | $888,894 |
| TIF Revenues | $3,512,425 |
| General Fund Reserves | $860,483 |
| Other User Fund Reserves/Surplus (ex. Sewer) | $556,666 |
| Grants | $2,559,973 |
| Franchise | $0 |
| Fund Balance | $1,200,000 |
| **Total** | **$9,578,441** |

**Chart I**
**FY 2022 Capital Improvement Program**
**By Funding Sources**




**Functional Areas**

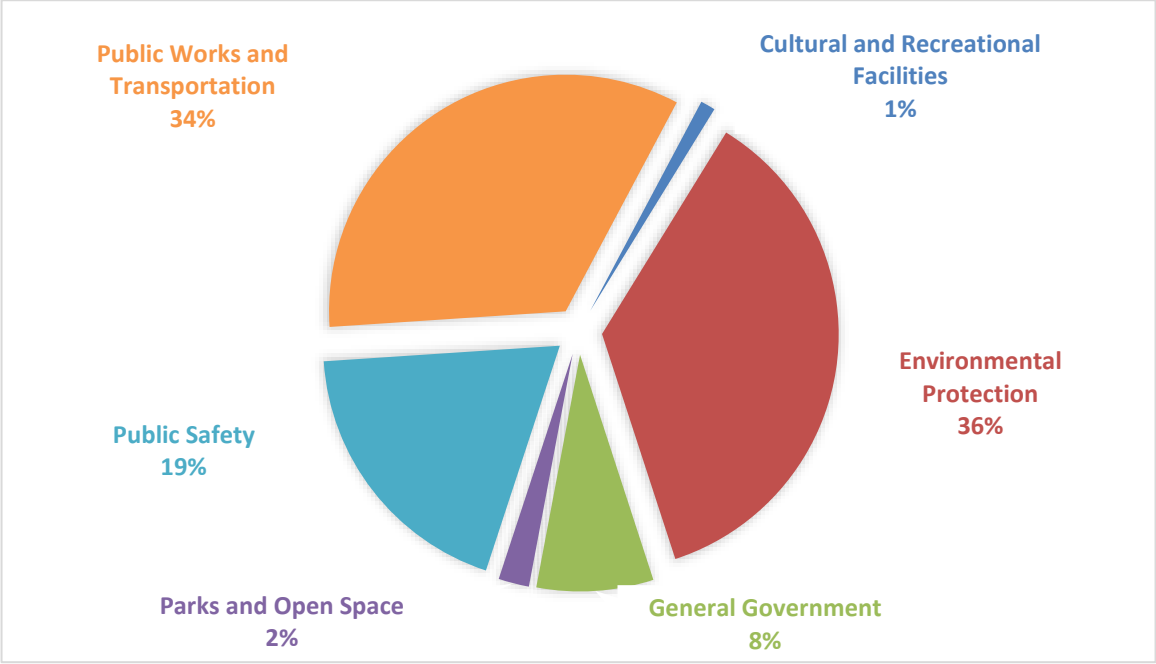
There are six functional areas within the CIP and each project falls within one of these areas. Placing projects in the areas is useful to help better understand where money is being spent to help ensure that the investments align with the Council's goals and vision. The FY22 CIP funds 39

projects within these functional areas, as further detailed in Table II and Chart II below. As you will note, the Environmental Protection and Public Works and Transportation categories are slated to receive a preponderance of the funding in FY22.

**Table II**
**FY 2022 Capital Improvement Program**
**By Functional Area**

| | |
|---|---|
| Cultural and Recreational Facilities | $96,850 |
| Environmental Protection | $3,467,096 |
| General Government | $764,190 |
| Parks and Open Space | $200,438 |
| Public Safety | $1,809,575 |
| Public Works and Transportation | $3,240,292 |
| **Total** | **$9,578,441** |

**Chart II**
**FY 2022 Capital Improvement Program**
**By Functional Area**




Below you will find a listing of the projects within each of the six functional areas.

*Cultural and Recreational Facilities*
The proposed seven-year Capital Improvement Plan includes an investment of $4,638,450 for these types of projects. FY22 includes the following projects totaling $96,850:

**Table III**
**FY 2022 Cultural and Recreational Facilities**
**Capital Improvement Projects**

| | | |
|---|---|---|
| Main Library – Building Assessment | $ 30,000 | Fund Balance |
| Recreation – Redbank Community Garden Project | $ 66,850 | Grants ($51,850), Other Fund Reserves ($5,000), & Fund Balance ($10,000) |
| **Total Cultural and Recreational Facilities** | **$ 96,850** | |

*Environmental Protection*
One of the most important obligations of a City is its role in environmental stewardship to protect the health and safety of its residents, protect its natural environment, and meet the obligations of state and federal environmental law. The City Council has committed significant resources recently to meet this obligation.

The proposed seven-year Capital Improvement Plan continues this commitment, with an investment of $13,097,668 for Environmental Protection projects, all of which are accomplished through the Water Resource Protection (WRP) department.

FY22 includes the following Environmental Protection projects totaling $3,467,096:

**Table IV**
**FY 2022 Environmental Protection**
**Capital Improvement Projects**

| | | |
|---|---|---|
| Water Resource Protection – Main Pump Station Force Main | $ 90,592 | Sewer User Fund Reserves |
| Water Resource Protection – Holding Tank Blower Replacement | $ 22,500 | Sewer User Fund Reserves |
| Water Resource Protection – Western Ave Generator Replacement | $ 55,000 | Sewer User Fund Reserves |
| Water Resource Protection – Meeting House Hill Utility Improvements Phase 1 | $ 2,992,425 | Sewer User Fund Reserves |
| Water Resource Protection – Sewer Lining | $ 200,000 | Sewer User Fund Reserves |
| Water Resource Protection – Electrical Van | $ 52,141 | Sewer User Fund Reserves |
| Water Resource Protection – Service Van | $ 54,438 | Sewer User Fund Reserves |
| **Total Environmental Protection** | **$ 3,467,096** | |

*General Government*
This functional area includes municipal buildings, equipment, and technology investments across all municipal departments. The proposed seven-year CIP includes an investment of $54,860,190 for these types of expenditures.

The first year of the CIP (FY22) includes the following General Government projects totaling $764,190:

**Table V**
**FY 2022 General Government**
**Capital Improvement Projects**

| | | |
|---|---|---|
| Executive – Brownfields | $ 120,000 | TIF Reserves |
| Economic Development – Wayfinding Signs (Phase Two) | $ 25,000 | TIF Reserves |
| Economic Development/Finance/Information Services – Community Broadband Network | $ 410,000 | TIF Reserves ($350,000), Prior CIP ($60,000) |
| Information Systems – Computer Reserve | $ 70,000 | Fund Balance |
| Planning & Development – Comprehensive Plan | $ 66,190 | Fund Balance ($10,000), Prior CIP ($56,190) |
| Code Enforcement – Filing System | $ 48,000 | Fund Balance |
| **Total General Government** | **$ 764,190** | |

*Parks and Open Space*
Historically, taxpayers have made a substantial commitment to provide parks and open space for future generations of this City. With steady growth in residential and commercial development, it is important to continue to enhance the livability and quality of life for our residents by providing access to nature through the development of urban parks and open space.

The proposed CIP includes an investment of $2,962,419 for Parks and Open Space projects over the next seven years. FY22 includes the following projects totaling $200,438:

**Table VI**
**FY 2022 Parks and Open Space**
**Capital Improvement Projects**

| | | |
|---|---|---|
| Parks – School Street Playground Replacement | $ 97,438 | Grants ($87,694), Fund Balance ($9,744) |
| Parks – One-half Ton Truck Replacement | $ 28,000 | Fund Balance ($21,443), Prior CIP ($6,557) |

| | | |
|---|---|---|
| Parks/Golf – 4100D Outfront Mower (Tier 4 Emissions) – Replacement | $ 75,000 | Fund Balance |
| **Total Parks and Open Space** | **$ 200,438** | |

*Public Safety*

The proposed seven-year CIP includes an investment of $20,779,525 for Public Safety buildings and equipment. FY22 includes nine Public Safety projects totaling $1,809,575:

**Table VII**
**FY 2022 Public Safety**
**Capital Improvement Projects**

| | | |
|---|---|---|
| Fire – Ladder 42 (and Engine 42) 2nd Quint Purchase | $ 1,300,000 | Prior CIP ($502,500), GF Reserves ($660,000), Fund Balance ($127,500) |
| Fire – Defibrillator | $ 36,000 | Prior CIP ($5,000), GF Reserves ($21,000), Grants ($10,000) |
| Fire – Command Vehicle (Car 45) | $ 49,500 | Prior CIP |
| Police – Regional Crime Lab | $ 12,000 | Fund Balance |
| Police – Taser Replacement | $ 41,760 | Prior CIP ($21,065), Fund Balance ($20,695) |
| Police – Body Armor Replacement | $ 24,750 | GF Reserves ($12,375), Grants ($12,375) |
| Police – Portable Radio Replacement | $ 227,500 | Fund Balance |
| Police – AED Equipment Replacement | $ 8,000 | Fund Balance |
| Police – Vehicle Camera Replacement | $ 75,000 | Fund Balance |
| Police – Radar Equipment Replacement | $ 11,065 | Fund Balance |
| Police – Digital Storage (for body-worn and in-car video) | $ 24,000 | Fund Balance |
| **Total Public Safety** | **$ 1,809,575** | |

*Public Works and Transportation*

The final major functional area is Public Works and Transportation. This includes programs and activities of the Public Works, Planning and Development, and Bus Service Departments. The

proposed seven-year CIP includes an investment of $22,198,792 for Public Works and Transportation projects. FY22 includes the following projects totaling $3,240,292:

**Table VIII**
**FY 2022 Public Works and Transportation**
**Capital Improvement Project**

| | | |
|---|---|---|
| Planning & Development – Crosstown Road Environmental Permitting | $ 10,000 | Fund Balance |
| Transportation – Transit Stop Access Project | $ 315,000 | Prior CIP ($14,500), Grants ($252,000), Fund Balance ($48,500) |
| Transportation – Transit Bus Purchase | $ 1,500,000 | Prior CIP ($74,843), GF Reserves ($138,608), Other Reserves ($76,995), Grants ($1,209,554) |
| Transportation – Transit Signal Priority | $ 151,000 | Grants |
| Public Works – MSF Exterior Improvements | $ 14,980 | Prior CIP |
| Public Works – Landfill Venting System | $ 213,000 | Prior CIP ($30,000), Grants ($170,000), Fund Balance ($13,000) |
| Public Works – Loader | $ 260,000 | Grants |
| Public Works – Two Single-Axle Plow Trucks | $ 404,000 | Prior CIP ($20,000), GF Reserves ($28,500), Grants ($355,500) |
| Public Works – Sidewalk Plow | $ 157,000 | Prior CIP ($28,500), Fund Balance ($128,500) |
| Public Works – Sidewalk Program | $ 215,312 | Prior CIP ($5,259), Fund |

| | | |
|---|---|---|
| | | Balance ($210,053) |
| **Total Public Works and Transportation** | **$ 3,240,292** | |

**Intersection with Council Goals**

Although the overall CIP is a seven-year plan, it is the FY22 portion that Council is committing to fund for the upcoming year. Numerous Council goals (as discussed at your February 23, 2021 workshop though yet to be formally approved) have been addressed in the FY22 CIP, including:

- Redbank Community Garden Project – Goal #1: Actively Address the Climate Crisis
- Brownfields – Goal #1: Actively Address the Climate Crisis
- Community Broadband – Goal #4: Support Public Health & Human Services
- Supplemental Funding – Comprehensive Plan – Goal #1: Actively Address the Climate Crisis AND Goal #3: Keep Housing Affordable and Available
- School Street Playground Replacement – Goal #4: Support Public Health & Human Services
- 4100D Outfront Mower (Tier 4 Emissions) – Goal #1: Actively Address the Climate Crisis
- Transit Stop Access Project – Goal #1: Actively Address the Climate Crisis
- Transit Bus Purchase – Goal #1: Actively Address the Climate Crisis
- Landfill Venting System – Goal #1: Actively Address the Climate Crisis

In addition, virtually all of the items for Water Resource Protection address Goal #1: Actively Address the Climate Crisis.

**Unfunded Requests**

This budget utilizes $1,200,000 in undesignated fund balance to either partially or wholly fund 21 of the 41 CIP items in FY22. This leaves our available undesignated fund balance at approximately 10.5% of our overall budget, which is within our policy range of 8 – 12%. In order to remain at that level, a number of requested projects were unable to be included in the FY22 plan. (Some projects were also not funded due to insufficient funds in various reserve accounts, etc.) See Table IX.

**Table IX**
**FY 2022 Unfunded**
**Capital Improvement Projects**

| | |
|---|---|
| Main Library – Heating Controls | $ 28,500 |
| Branch Library – Bridge Rehabilitation | $ 50,000 |
| Main Library – Electrical Upgrades | $ 175,000 |
| City Clerk – Translation Services | $ 10,000 |
| City Clerk – Upgrade City Website & Hosting Platform | $ 75,000 |
| Information Systems – Document Archiving Solutions | $ 22,000 |

| | |
|---|---|
| Parks and Open Space – Land Bank | $ 35,000 |
| Planning & Development – Historic Designation Assessment | $ 12,000 |
| Planning & Development – File Digitization | $ 32,000 |
| Parks – Fence Replacement Along the Greenbelt in Pleasantdale | $ 12,500 |
| Fire – Foam Pumper Engine #46 | $ 600,000 |
| Fire – Standard Coverage of Strategic Plan Study | $ 38,000 |
| Fire – Repair Western Ave. Floor | $ 50,000 |
| Police – Service Truck (Maintenance/Snow Plow/SU Transportation) | $ 50,000 |
| Police – Stress Reduction Equipment | $ 4,050 |
| Police – Motorcycle Replacement | $ 20,000 |
| Police – Digital Archive System | $ 15,000 |
| Public Works – Pavement Roller | $ 43,500 |
| Parks – Multi Pro 5800 Foam Sprayer | $ 55,000 |
| **Total of Unfunded FY22 Projects** | **$ 1,327,550** |

These items have been moved to the FY23 CIP so that they may be reconsidered during next year's budget process. Some of these projects may also be able to be funded with surplus funds within a department's operating budget at the end of FY22.

**FY22-28 CIP**

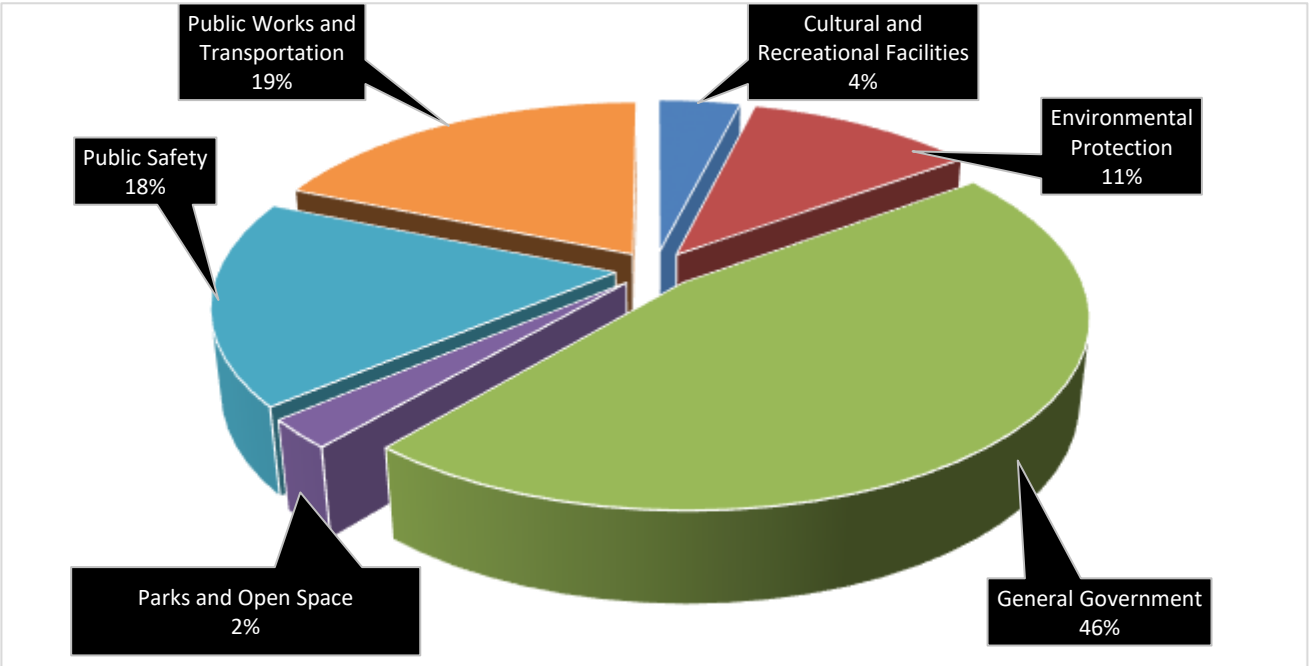
The long-range CIP contemplates significant funding in the areas of Environmental Protection, General Government, Public Safety, and Public Works and Transportation. It is important to note that the further out a CIP goes, the less accurate it becomes. Therefore, while I have a high level of confidence that the items appearing on the FY23 CIP sheet will closely reflect what is actually requested by departments next year, I have less confidence that the list for FY28 will resemble what Council sees seven years from now. We know, for example, that major, long-term decisions still need to be made about Central Fire and the Police stations, Hamlin School, and even City Hall. In addition, we expect a number of recommendations from current and near-term studies to result in significant capital outlay requests. For example, the Willard Beach Master Plan and Wainwright Master Plan will both result in future CIP requests with large price tags, just to name a few. Therefore, what is included herein is our best understanding of current needs based on available information, but will likely change as these and other plans unfold.

Overall, the seven-year CIP is distributed across major functional areas as follows:

**Table X**
**Distribution of Capital Projects**
**Across Major Functional Areas**
**FY 2022 to FY 2028**

| | |
|---|---|
| Cultural and Recreational Facilities | $ 4,638,450 |
| Environmental Protection | $ 13,553,868 |
| General Government | $ 54,860,190 |
| Parks and Open Space | $ 2,962,419 |
| Public Safety | $ 20,779,525 |
| Public Works and Transportation | $22,198,772 |
| **Total** | **$118,993,244** |

**Chart X**
**Distribution of Capital Projects**
**Across Major Functional Areas**
**FY 2022 to FY 2028**



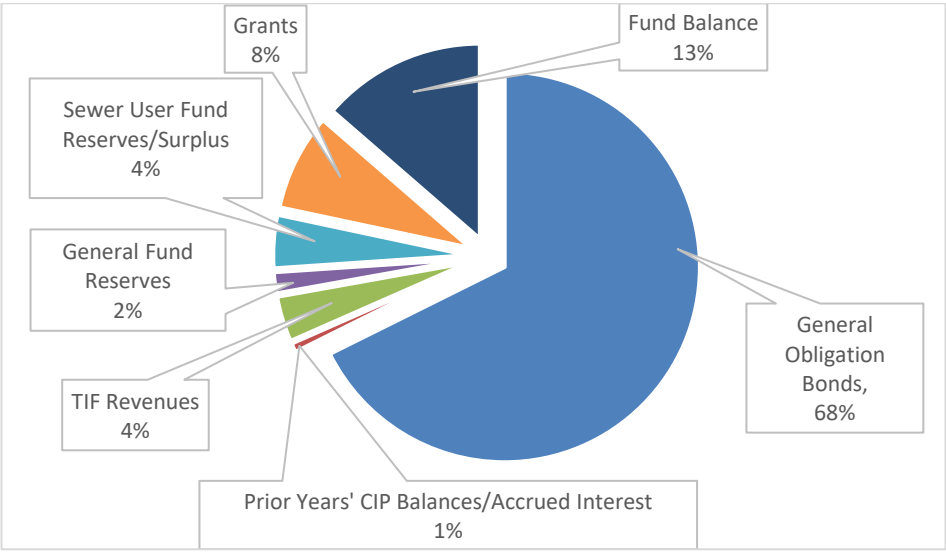

The following table shows the distribution of funding sources proposed to be used to fund this seven-year CIP.

**Table XI**
**Distribution of Funding Sources**
**For Capital Improvement Spending**
**FY 2022 to FY 2028**

| | |
|---|---|
| General Obligation Bonds | $80,500,000 |
| Prior Years' CIP Balances/Accrued Interest | $890,894 |
| TIF Revenues | $4,492,425 |
| General Fund Reserves | $2,077,483 |

| | |
|---|---|
| Other User Fund Reserves/Surplus | $4,787,238 |
| Grants | $9,574,801 |
| Fund Balance | $16,214,203 |
| **Total** | **$118,537,044** |

**Chart XI**
**Distribution of Funding Sources**
**For Capital Improvement Spending**
**FY 2022 to FY 2028**




Approximately 68% of the total CIP will be funded with long-term GO bonds through the City's property-tax-supported general fund. Approximately 32% will be funded through non-borrowing sources, including user fees, state or federal grants, TIF revenues, fund balance, prior years' CIP balances/accrued interest, or on a pay-as-you-go basis through the establishment of annual contributions to reserve accounts to fund the replacement of capital infrastructure and equipment.

**Educational Capital Program**

The School Department has not yet submitted its FY22 CIP for Section V of this Capital Improvement Program. Once this material is received, it will be forwarded to the Council and uploaded to the City's website.

**Conclusion**

The City Council has approved and/or completed a number of important capital improvement projects to repair, replace, or in some cases expand the quality of public facilities, infrastructure, and equipment that serve our residents, businesses, and visitors. While significant, yet unknown, investments loom large over the next several years, this CIP continues with South Portland's commitment to the health and safety of its inhabitants, and to improving the quality of life for those who call South Portland home.

I would like to thank Finance Director Greg L'Heureux and Controller Jordan Shelburne for the numerous meetings and behind-the-scenes work that was required to transmit this proposal to Council. I would like to give special thanks to Executive Assistant Mary Perry for all her work in

gathering, compiling, and organizing all of the CIP information spanning seven years contained herein.

I look forward to presenting this plan for the future to the City Council and the public at the Council meeting on April 6, 2021.

Sincerely,



Scott T. Morelli
City Manager

cc: South Portland School Board (via email only)
Ken Kunin, Superintendent of Schools
Department Heads (via email only)
South Portland Human Rights Commission (via email only)

# SECTION I

## Seven-year Capital Improvement Program

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| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2022 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Library -Building Assessment (Main Library) | $ 30,000 | $ 30,000 | | | | | | | $ 30,000 |
| Cultural and Recreational Facilities | Recreation - Redbank Community Garden Project | $ 66,850 | $ 66,850 | | | | | $ 5,000 | $ 51,850 | $ 10,000 |
| Environmental Protection | Water Resource Protection - Main Pump Station Force Main | $ 90,592 | $ 90,592 | | | | | $ 90,592 | | $ - |
| Environmental Protection | Water Resource Protection - Holding Tank Blower Replacement | $ 22,500 | $ 22,500 | | | | | $ 22,500 | | $ - |
| Environmental Protection | Water Resource Protection - Secondary Splitter Upgrade | $ 158,000 | $ 158,000 | | | | | $ 158,000 | | $ - |
| Environmental Protection | Water Resource Protection - Western Ave Generator Replacement | $ 55,000 | $ 55,000 | | | | | $ 55,000 | | $ - |
| Environmental Protection | Water Resource Protection - Aeration Train 2 Upgrade | $ 298,200 | $ 298,200 | | | | | $ 298,200 | | $ - |
| Environmental Protection | Water Resource Protection - Meeting House Hill Utility Improvements Phase 1 | $ 2,992,425 | $ 2,992,425 | | | $ 2,992,425 | | | | $ - |
| Environmental Protection | Water Resource Protection - Sewer Lining | $ 200,000 | $ 200,000 | | | | | $ 200,000 | | $ - |
| Environmental Protection | Water Resource Protection - Electrical Van | $ 52,141 | $ 52,141 | | | | | $ 52,141 | | $ - |
| Environmental Protection | Water Resource Protection - Service Van | $ 54,438 | $ 54,438 | | | | | $ 54,438 | | $ - |
| General Government | Executive - Brownfields | $ 120,000 | $ 120,000 | | | $ 120,000 | | | | |
| General Government | Economic Development - Wayfinding Signs - Phase Two | $ 75,000 | $ 50,000 | | | $ 50,000 | | | | $ - |
| General Government | Economic Development - Finance - Information Services - Community Broadband Network | $ 410,000 | $ 410,000 | | $ 60,000 | $ 350,000 | | | | |
| General Government | Information Systems - Computer Reserve | $ 50,000 | $ 70,000 | | | | | | | $ 70,000 |
| General Government | Planning & Development - Comprehensive Plan | $ 10,000 | $ 66,190 | | $ 56,190 | | | | | $ 10,000 |
| General Government | Code Enforcement - Filing System | $ 48,000 | $ 48,000 | | | | | | | $ 48,000 |
| Parks and Open Space | Parks - School Street Playground Replacement | $ 97,438 | $ 97,438 | | | | | | $ 87,694 | $ 9,744 |
| Parks and Open Space | Parks - One-half Ton Truck Replacement | $ 28,000 | $ 28,000 | | $ 6,557 | | | | | $ 21,443 |
| Public Safety | Fire - Ladder 42 (and Engine 42) 2nd Quint Purchase | $ 1,300,000 | $ 1,300,000 | | $ 502,500 | | $ 660,000 | | | $ 137,500 |
| Public Safety | Fire - Defibrillator | $ 36,000 | $ 36,000 | | $ 5,000 | | $ 21,000 | | $ 10,000 | $ - |
| Public Safety | Fire - Command Vehicle - Car 45 | $ 49,500 | $ 49,500 | | $ 49,500 | | | | | |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | | $ 21,065 | | | | | $ 20,695 |
| Public Safety | Police - Body Armor Replacement | $ 24,750 | $ 24,750 | | | | $ 12,375 | | $ 12,375 | $ - |
| Public Safety | Police - Portable Radio Replacement | $ 227,500 | $ 227,500 | | | | | | | $ 227,500 |
| Public Safety | Police - AED Equipment Replacement | $ 8,000 | $ 8,000 | | | | | | | $ 8,000 |
| Public Safety | Police - Vehicle Camera Replacement | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| Public Safety | Police - Radar Equipment Replacement | $ 11,065 | $ 11,065 | | | | | | | $ 11,065 |
| Public Safety | Police - Digital Storage (for body-worn and in-car video) | $ 24,000 | $ 24,000 | | | | | | | $ 24,000 |
| Public Works and Transportation | Planning & Development - Crosstown Road Environmental Permitting | $ 10,000 | $ 10,000 | | | | | | | $ 10,000 |
| Public Works and Transportation | Transportation - Transit Stop Access Project | $ 315,000 | $ 315,000 | | $ 14,500 | | | | $ 252,000 | $ 48,500 |
| Public Works and Transportation | Transportation - Transit Bus Purchase | $ 1,500,000 | $ 1,500,000 | | $ 74,843 | | $ 138,608 | $ 76,995 | $ 1,209,554 | |
| Public Works and Transportation | Transportation - Transit Signal Priority | $ 151,000 | $ 151,000 | | | | | | $ 151,000 | |
| Public Works and Transportation | MSF Exterior Improvements | $ 14,980 | $ 14,980 | | $ 14,980 | | | | | |
| Public Works and Transportation | Landfill Venting System | $ 213,000 | $ 213,000 | | $ 30,000 | | | | $ 170,000 | $ 13,000 |
| Public Works and Transportation | Public Works Loader | $ 260,000 | $ 260,000 | | | | | | $ 260,000 | |
| Public Works and Transportation | Public Works - Two Single-Axle Plow Trucks | $ 404,000 | $ 404,000 | | $ 20,000 | | $ 28,500 | | $ 355,500 | |
| Public Works and Transportation | Public Works - Sidewalk Plow | $ 157,000 | $ 157,000 | | $ 28,500 | | | | | $ 128,500 |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 500,000 | $ 215,312 | | $ 5,259 | | | | | $ 210,053 |
| Parks and Open Space | Parks/Golf - 4100D Outfront Mower (Tier 4 Emissions) - Replacement | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| | **FY22 TOTAL** | **$ 10,268,139** | **$ 10,034,641** | **$ -** | **$ 888,894** | **$ 3,512,425** | **$ 860,483** | **$ 1,012,866** | **$ 2,559,973** | **$ 1,200,000** |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2023 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Main Library - Heating Controls | $ 28,500 | $ 28,500 | | | | | | | $ 28,500 |
| Cultural and Recreational Facilities | Branch Library - Bridge Rehabilitation | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Cultural and Recreational Facilities | Electrical Upgrades | $ 175,000 | $ 175,000 | | | | | | | $ 175,000 |
| Cultural and Recreational Facilities | Library - Main Library Parking Lot | $ 685,500 | $ 685,500 | | | | | | | $ 685,500 |
| Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Final Engineering | $ 150,000 | $ 150,000 | | | $ 100,000 | | | | $ 50,000 |
| Cultural and Recreational Facilities | Parks/Planning & Development - Greenbelt Pedestrian Bridge Preliminary Engineering | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Cultural and Recreational Facilities | Recreation - Purchase a 25 Passenger Bus for Senior Trips and Teen Center Trips (15% CDBG match) | $ 76,500 | $ 76,500 | | | | | | $ 47,328 | $ 29,172 |
| Cultural and Recreational Facilities | Recreation - Pool - New Starter Blocks | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| Cultural and Recreational Facilities | Recreation - High School Track - Resurfacing | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Cultural and Recreational Facilities | Recreation - Curbing at Community Center - Nelson Road | $ 15,000 | $ 15,000 | | | | | | | $ 15,000 |
| Cultural and Recreational Facilities | Recreation - Community Center Parking Lot Re-surfacing - Nelson Road | $ 38,800 | $ 38,800 | | | | | | | $ 38,800 |
| Cultural and Recreational Facilities | Recreation - Pool - New Showers - Men's and Women's Locker Rooms | $ 100,000 | $ 100,000 | | | | | | | $ 100,000 |
| Cultural and Recreational Facilities | Recreation - Rehab Redbank Field Phase II - Rec Improvements (CDBG match) | $ 75,000 | $ 75,000 | | | | | | $ 67,500 | $ 7,500 |
| Cultural and Recreational Facilities | Recreation - Portable Bleachers for WFRC and Other Sites | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Cultural and Recreational Facilities | Parks - Planning & Development - Pleasantdale Greenbelt Walkway - Year Two | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex Parking Lots per Master Plan | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex - Additional Fields per Master Plan | $ 250,000 | $ 250,000 | | | | | | | $ 250,000 |
| Environmental Protection | Water Resource Protection - AerationTrain 1 Upgrade | $ 298,200 | $ 298,200 | | | | | $ 298,200 | | |
| Environmental Protection | Water Resource Protection - Main Pump Station Boiler | $ 60,000 | $ 60,000 | | | | | $ 60,000 | | |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Environmental Protection | Water Resource Protection - Clorination Update | $ 90,000 | $ 90,000 | | | | | $ 90,000 | | |
| Environmental Protection | Water Resource Protection - Disinfection Pump Replacement | $ 37,918 | $ 37,918 | | | | | $ 37,918 | | $ - |
| Environmental Protection | Water Resource Protection - Main Pump Station Wall Repair | $ 54,000 | $ 54,000 | | | | | $ 54,000 | | |
| Environmental Protection | Water Resource Protection - Operatoins Building Design HVAC Upgrade | $ 34,950 | $ 34,950 | | | | | $ 34,950 | | |
| Environmental Protection | Water Resource Protection - Pump Stations Arc Flash Violatoins Corrections | $ 50,000 | $ 50,000 | | | | | $ 50,000 | | |
| General Government | City Clerk - Translation Services | $ 10,000 | $ 10,000 | | | | | | | $ 10,000 |
| General Government | City Clerk - Upgrade City Website & Hosting Platform | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| General Government | Executive - Brownfields | $ 80,000 | $ 80,000 | | | $ 80,000 | | | | |
| General Government | Facilites - Study - Long Term Facilities Plan for Mahoney/City Buildings | $ 70,000 | $ 70,000 | | | | | | | $ 70,000 |
| General Government | Information Systems - Document Archiving Solutions | $ 22,000 | $ 22,000 | | | | | | | $ 22,000 |
| General Government | Information Systems - Network Core Upgrade | $ 100,000 | $ 100,000 | | | | $ 50,000 | | | $ 50,000 |
| General Government | Information Systems - Email Server Upgrade | $ 100,000 | $ 100,000 | | | | | | | $ 100,000 |
| General Government | Information Systems - City Phone System | $ 50,000 | $ 50,000 | | | | $ 50,000 | | | $ - |
| General Government | Parks and Open Space - Land Bank Account FY22 contribution cut | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| General Government | Parks and Open Space - Land Bank Account | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| General Government | Planning & Development - Historic Designation Assessment | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| General Government | Planning & Development - File Digitization | $ 32,000 | $ 32,000 | | | | | | | $ 32,000 |
| General Government | Planning & Development - Comprehensive Plan | $ 75,000 | $ 75,000 | | | | $ 75,000 | | | |
| Parks and Open Space | Parks - Fence replacement along the Greenbelt in Pleasantdale | $ 12,500 | $ 12,500 | | | | | | | $ 12,500 |
| Parks and Open Space | Parks - Master Plan Development Hinckley Park | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Parks and Open Space | Parks - Wainwright - Rehab Softball #2 | $ 24,000 | $ 24,000 | | | | | | | $ 24,000 |
| Parks and Open Space | Parks - 1/2 Ton Truck w/plow Replacement | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Parks and Open Space | Waterfront - Portland Street Pier Rehabilitation | $ 165,500 | $ 165,500 | | | | $ 100,000 | | | $ 65,500 |
| Public Safety | Fire - Foam Pumper Engine #46 | $ 600,000 | $ 600,000 | $ 600,000 | | | | | | |
| Public Safety | Fire - Standard Coverage of Strategic Plan Study | $ 38,000 | $ 38,000 | | | | | | | $ 38,000 |
| Public Safety | Fire - Repair Western Ave Floor | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Public Safety | Fire - Ambulance 44 and Power Stretcher | $ 250,000 | $ 250,000 | | | | $ 250,000 | | | $ - |
| Public Safety | Fire - Service Truck PM-402 (One Ton) | $ 50,000 | $ 50,000 | | | | $ 50,000 | | | $ - |
| Public Safety | Fire - 1/2 Ton Pick-up Car 44 | $ 50,000 | $ 50,000 | | | | $ 50,000 | | | $ - |
| Public Safety | Police - Service Truck (Maintenance/Snow Plow/SU Transp.) | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Public Safety | Police - Stress Reduction Equipment | $ 4,050 | $ 4,050 | | $ 2,000 | | | | | $ 2,050 |
| Public Safety | Police - Motorcycle Replacement | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| Public Safety | Police - Digital Archive System | $ 15,000 | $ 15,000 | | | | | | | $ 15,000 |
| Public Safety | Police - Computer Replacement - Mobile | $ 60,000 | $ 60,000 | | | | | | | $ 60,000 |
| Public Safety | Police - Specialty Equipment Truck (for tactical and dive equipment) | $ 60,100 | $ 60,100 | | | | | | | $ 60,100 |
| Public Safety | Police - Parking Lot Pavement | $ 60,000 | $ 60,000 | | | | | | | $ 60,000 |
| Public Safety | Police - Interior modeling | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Public Safety | Police - Digital Archive System | $ 15,000 | $ 15,000 | | | | | | | $ 15,000 |
| Public Safety | Police - Taser Replaement | $ 41,760 | $ 41,760 | | | | | | | $ 41,760 |
| Public Safety | Police - Police Digital De-escalation Video System | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Public Safety | Police - Crisis Negotiators Communications Equipment | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| Public Safety | Police - Roof Replacement (Old Section and Garage) | $ 45,000 | $ 45,000 | | | | | | | $ 45,000 |
| Public Safety | Police - Electrical Circutry Identification and Panel Updates | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Public Works and Transportation | Transportation - Transit Bus Reserve | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Public Works and Transportation | Transportation - Transit Stop Access Project | $ 125,000 | $ 125,000 | | | | | | $ 100,000 | $ 25,000 |
| Public Works and Transportation | Planning & Develoment - Crosstown Road - Design and Construction | $ 9,500,000 | $ 9,500,000 | $ 9,500,000 | | | | | | |
| Public Works and Transportation | Public Works - Pavement Roller | $ 43,500 | $ 43,500 | | | | | | | $ 43,500 |
| Public Works and Transportation | Public Works - Director Vehicle | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| Public Works and Transportation | Public Works - Dump Truck | $ 175,000 | $ 175,000 | | | | | | $ 175,000 | |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Cultural and Recreational Facilities | Recreation - Pool - Pool Roof Replacement | $ 500,000 | $ 500,000 | | | | | | | $ 500,000 |
| Cultural and Recreational Facilities | Recreation - Pool - Electricity Solar Power | $ 200,000 | $ 200,000 | | | | | | | $ 200,000 |
| Parks and Open Space | Parks - Multi Pro 5800 Foam Sprayer | $ 55,000 | $ 55,000 | | | | | | | $ 55,000 |
| Parks and Open Space | Golf/Wainwright - ProCore Deep Tine Aerator for ogranic program | $ 32,000 | $ 32,000 | | | | | | | $ 32,000 |
| Parks and Open Space | Parks - Robot Line Painter | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| Parks and Open Space | Parks - Tractor Replacement | $ 65,000 | $ 65,000 | | | | | | | $ 65,000 |
| Parks and Open Space | Parks - Community Garden Rehab | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |
| Parks and Open Space | Parks - Ventrac Mower | $ 26,561 | $ 26,561 | | | | | | | $ 26,561 |
| Parks and Open Space | Parks - Workman GTX Electric Utility Cart | $ 11,319 | $ 11,319 | | | | | | | $ 11,319 |
| Parks and Open Space | Parks - Bucket Truck Replacement (Electric?) | $ 140,000 | $ 140,000 | | | | | | | $ 140,000 |
| | **FY23 TOTAL** | **$ 16,453,658** | **$ 16,453,658** | **$ 10,100,000** | **$ 2,000** | **$ 180,000** | **$ 625,000** | **$ 625,068** | **$ 389,828** | **$ 4,531,762** |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2024 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | | | $ 100,000 | | | | |
| Cultural and Recreational Facilities | Recreation - Community Center Walking Track Resurface | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex - New 8 Lane Track per Master Plan | $ 500,000 | $ 500,000 | | | | | | | $ 500,000 |
| Cultural and Recreational Facilities | Recreation - Pool - Inflatable Obstacle Course | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Environmental Protection | Water Resource Protection - Operations Building HVAC Upgrade | $ 314,550 | $ 314,550 | | | | | $ 314,550 | | |
| Environmental Protection | Water Resource Protection - Disinfection Pump Replacement | $ 37,918 | $ 37,918 | | | | | $ 37,918 | | |
| Environmental Protection | Water Resource Protection - Facility Plan Update | $ 40,000 | $ 40,000 | | | | | $ 40,000 | | |
| Environmental Protection | Water Resource Protection - Holding Tank Odor Control Design | $ 137,000 | $ 137,000 | | | | | $ 137,000 | | |
| Environmental Protection | Water Resource Protection - Outfall Marker Replace/Repair | $ 25,000 | $ 25,000 | | | | | $ 25,000 | | |
| Environmental Protection | Water Resource Protection - Front End Loader Replacement | $ 175,000 | $ 175,000 | | | | | $ 175,000 | | |
| Environmental Protection | Water Resource Protection - Unit #4 4 x 4 Plow Truck Replacement | $ 50,000 | $ 50,000 | | | | | $ 50,000 | | |
| Environmental Protection | Water Resource Protection - Unit #18 Blazer Replacement | $ 45,000 | $ 45,000 | | | | | $ 45,000 | | |
| Environmental Protection | Water Resource Protection - Unit #5 Treatment Plant Pick-up Replacement | $ 45,000 | $ 45,000 | | | | | $ 45,000 | | |
| Environmental Protection | Water Resource Protection - Unit #21 Engineering Pick-up Replacement | $ 45,000 | $ 45,000 | | | | | $ 45,000 | | |
| Environmental Protection | Water Resource Protection - CCTV Unit #13 | $ 175,000 | $ 175,000 | | | | | $ 175,000 | | |
| General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | | | $ 40,000 | | | | |
| General Government | Facilities - Design/Engineering for New City Facilities | $ 2,500,000 | $ 2,500,000 | | | | | | | $ 2,500,000 |
| General Government | Facilities - Auto Scrubber, Carpet Cleaners | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| General Government | Information Systems - Virtual Network Storage | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| General Government | Information Systems - Data center Hardware replacement | $ 165,000 | $ 165,000 | | | | $ 70,000 | | | $ 95,000 |
| General Government | Information Systems - City Phone Systems | $ 50,000 | $ 50,000 | | | | $ 25,000 | | | $ 25,000 |
| General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| General Government | Parks and Open Space - Land Bank Account | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| General Government | Planning & Development - Comprehensive Plan | $ 65,000 | $ 65,000 | | | | $ 65,000 | | | |
| Parks and Open Space | Parks - Beach House Deck per Willard Master Plan | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |
| Parks and Open Space | Parks - Beach Renourishment Project - per Willard Beach Master Plan | $ 1,000,000 | $ 1,000,000 | | | | | | | $ 1,000,000 |
| Parks and Open Space | Parks - Security Upgrades Willard Beach and Thomas Knight Park | $ 30,000 | $ 30,000 | | | | | | | $ 30,000 |
| Parks and Open Space | Parks - Master Plan Development Bug Light Park | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |
| Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Parks and Open Space | Parks - Pavilion for Rentals at Bug Light Park per Master Plan | $ 140,000 | $ 140,000 | | | | | | | $ 140,000 |
| Parks and Open Space | Parks - Hardscape Under Benches Bug Light and Fishermans Point | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| Parks and Open Space | Parks - Bug Light Community Access Station | $ 150,000 | $ 150,000 | | | | $ 50,000 | | | $ 100,000 |
| Parks and Open Space | Parks - O'Neil Street Park | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Public Safety | Fire - Defibrilator | $ 37,000 | $ 37,000 | | | | $ 37,000 | | | $ - |
| Public Safety | Fire - Tactical Body Armor Replacement | $ 30,000 | $ 30,000 | | | | | | | $ 30,000 |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Public Safety | Police - Binocular Night Vision Equipment | $ 85,000 | $ 85,000 | | | | | | | $ 85,000 |
| Public Safety | Police - Indoor Firearms Range | $ 100,000 | $ 100,000 | | | | | | | $ 100,000 |
| Public Safety | Police - Animal Control Vehicle | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | | | | | | | $ 41,760 |
| Public Safety | Police - Electronic Sign | $ 30,000 | $ 30,000 | | | | | | | $ 30,000 |
| Public Safety | Police - Motorcycle Replacement | $ 20,000 | $ 20,000 | | | | | | | $ 20,000 |
| Public Safety | Police - Computer Replacement - Offices | $ 60,000 | $ 60,000 | | | | | | | $ 60,000 |
| Public Works and Transportation | Transportation - Transit Bus Reserve | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Public Works and Transportation | Transportation - Transit Stop Access Project | $ 125,000 | $ 125,000 | | | | | | $ 100,000 | $ 25,000 |
| Public Works and Transportation | Public Works - Dump Truck | $ 175,000 | $ 175,000 | | | | | | $ 175,000 | |
| Public Works and Transportation | Public Works - Sidewalk Tractor | $ 150,000 | $ 150,000 | | | | | | $ 150,000 | |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Parks and Open Space | Water Truck Replacement | $ 70,000 | $ 70,000 | | | | | | | $ 70,000 |
| | **FY24 TOTAL** | **$ 7,467,228** | **$ 7,467,228** | **$ -** | **$ -** | **$ 140,000** | **$ 247,000** | **$ 1,089,468** | **$ 425,000** | **$ 5,565,760** |

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| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2025 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | | | $ 100,000 | | | | |
| Cultural and Recreational Facilities | Recreation - Community Center Walking Track Rehab | $ 55,000 | $ 55,000 | | | | | | | $ 55,000 |
| Cultural and Recreational Facilities | Recreation - Redbank Community Center - Repaving Parking Lot | $ 45,000 | $ 45,000 | | | | | | | $ 45,000 |
| Cultural and Recreational Facilities | Recreation - Wainwright - Light 2 fields per Master Plan | $ 500,000 | $ 500,000 | | | | | | | $ 500,000 |
| Environmental Protection | Water Resource Protection - Holding Tank Odor Control | $ 550,000 | $ 550,000 | | | | | $ 550,000 | | |
| Environmental Protection | Water Resource Protection - Headworks Odor Control Design | $ 28,000 | $ 28,000 | | | | | $ 28,000 | | |
| Environmental Protection | Water Resource Protection - Preliminary Treatment (Grit and Screenings) Design | $ 143,000 | $ 143,000 | | | | | $ 143,000 | | |
| Environmental Protection | Water Resource Protection - 14 yard Dump Truck | $ 146,600 | $ 146,600 | | | | | $ 146,600 | | |
| Environmental Protection | Water Resource Protection - Combination Sewer Cleaner | $ 481,436 | $ 481,436 | | | | | $ 481,436 | | |
| General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | | | $ 40,000 | | | | |
| General Government | Facilities - Construction of New Facilities | $ 50,000,000 | $ 50,000,000 | $ 50,000,000 | | | | | | |
| General Government | Facilities - Pick-up Truck | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| General Government | Information Systems - City Phone Systems | $ 50,000 | $ 50,000 | | | | $ 25,000 | | | $ 25,000 |
| General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| General Government | Parks and Open Space - Land Bank Account | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Parks and Open Space | Parks - New Boat Ramp Attendant Building | $ 100,000 | $ 100,000 | | | | | | | $ 100,000 |
| Parks and Open Space | Parks - Playground at Bug Light per Master Plan | $ 65,000 | $ 65,000 | | | | | | | $ 65,000 |
| Public Safety | Fire - Mechanic's Service Truck - One Ton ST-410 | $ 45,000 | $ 45,000 | | | | | | | $ 45,000 |
| Public Safety | Fire - Central Station Renovation/Replacement | $ 10,000,000 | $ 10,000,000 | $ 10,000,000 | | | | | | |
| Public Safety | Fire - Command Vehicle Car 49 | $ 55,000 | $ 55,000 | | | | | | | $ 55,000 |
| Public Safety | Police - Building Replacement | $ 5,000,000 | $ 5,000,000 | $ 5,000,000 | | | | | | $ - |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | | | | | | | $ 41,760 |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Public Safety | Police - Body Armor Replacement Tactical | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| Public Works and Transportation | Transportation - Transit Bus Reserve | $ 3,000,000 | $ 3,000,000 | | | | $ 300,000 | | $ 2,565,000 | $ 135,000 |
| Public Works and Transportation | Transportation - Transit Stop Access Project | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Public Works and Transportation | Public Works - Service Truck | $ 80,000 | $ 80,000 | | | | | | $ 80,000 | |
| Public Works and Transportation | Public Works - Dump Truck | $ 180,000 | $ 180,000 | | | | | | $ 180,000 | |
| Parks and Open Space | Parks -Workman Utility Cart | $ 25,000 | $ 25,000 | | | | | | | $ 25,000 |
| | **FY25 TOTAL** | **$ 71,117,796** | **$ 71,117,796** | **$ 65,000,000** | **$ -** | **$ 140,000** | **$ 325,000** | **$ 1,349,036** | **$ 2,825,000** | **$ 1,478,760** |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2026 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | | | $ 100,000 | | | | |
| Cultural and Recreational Facilities | Recreation - SPCC or Redbank - Storage Addition | $ 100,000 | $ 100,000 | | | | | | | $ 100,000 |
| Cultural and Recreational Facilities | Recreation - Resurface Pool Deck | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | | | $ 40,000 | | | | |
| General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Environmental Protection | Water Resource Protection - Headworks Odor Control | $ 315,000 | $ 315,000 | | | | | $ 315,000 | | |
| Environmental Protection | Water Resource Protection - Preliminary Treatment (Grit and Screenings) | $ 314,000 | $ 314,000 | | | | | $ 314,000 | | |
| Environmental Protection | Water Resource Protection - Unit #11 1-Ton Utility Truck Replacement | $ 55,000 | $ 55,000 | | | | | $ 55,000 | | |
| Environmental Protection | Water Resource Protection - Unit #2 Compliance Van Replacement | $ 35,000 | $ 35,000 | | | | | $ 35,000 | | |
| Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Parks and Open Space | Parks - Greenbelt Expansion at Bug Light per Master Plan | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| Public Safety | Fire - Engine 41 | $ 550,000 | $ 550,000 | | | | | | | $ 550,000 |
| Public Safety | Fire - Defibrillator | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| Public Safety | Police and Fire - Stand-by - Generator | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | | | | | | | $ 41,760 |
| Public Safety | Police - GPS Vehicle Pre-emption Emitters | $ 65,000 | $ 65,000 | | | | | | | $ 65,000 |
| Public Safety | Police - Armored Vehicle Replacement | $ 350,000 | $ 350,000 | | | | | | | $ 350,000 |
| Public Works and Transportation | Bus Service - Transit Bus Reserve | $ 200,000 | $ 200,000 | | | | | | | $ 200,000 |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 200,000 | $ 200,000 | | | | | | | $ 200,000 |
| Public Works and Transportation | Public Works - Loader | $ 275,000 | $ 275,000 | | | | | | $ 275,000 | |
| Public Works and Transportation | Public Works - Dump Truck | $ 180,000 | $ 180,000 | | | | | | $ 180,000 | |
| Parks and Open Space | Parks - Golf - 4100D Outfront Mower (Tier 4 Emissions) - replacement | $ 65,732 | $ 65,732 | | | | | | | $ 65,732 |
| | **FY26 TOTAL** | **$ 3,323,492** | **$ 3,323,492** | **$ -** | **$ -** | **$ 140,000** | **$ -** | **$ 719,000** | **$ 455,000** | **$ 2,009,492** |

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| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY2027 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | | | $ 100,000 | | | | |
| Cultural and Recreational Facilities | Recreation - SPCC - Pool Pump Motors | $ 15,300 | $ 15,300 | | | | | | | $ 15,300 |
| Environmental Protection | Water Resource Protection - Treatment Plant - Biological Nutrient Removal | $ 5,400,000 | $ 5,400,000 | $ 5,400,000 | | | | | | |
| Environmental Protection | Water Resource Protectoin - Unit #30 - Portable Air Compresssor Replacement | $ 15,000 | $ 15,000 | | | | | $ 15,000 | | |
| Environmental Protection | Water Resource Protection - Treatment Plant Dewatering Odor Control | $ 290,000 | $ 290,000 | | | | | $ 290,000 | | |
| General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | | | $ 40,000 | | | | |
| General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Parks and Open Space | Parks - One-half ton Truck w/Plow Replacement | $ 35,000 | $ 35,000 | | | | | | | $ 35,000 |
| Public Safety | Fire - Ambulance 43 and Power Stretcher | $ 260,000 | $ 260,000 | | | | | | | $ 260,000 |
| Public Safety | Fire - Gator Replacement | $ 30,000 | $ 30,000 | | | | | | | $ 30,000 |
| Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | | | | | | | $ 12,000 |
| Public Safety | Police - Body Armor Replacement | $ 40,000 | $ 40,000 | | | | $ 20,000 | | $ 20,000 | $ - |
| Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | | | | | | | $ 41,760 |
| Public Safety | Police - Patrol Rifle Replacement | $ 75,000 | $ 75,000 | | | | | | | $ 75,000 |
| Public Safety | Police - Body Camera Replacement | $ 60,000 | $ 60,000 | | | | | | | $ 60,000 |
| Public Works and Transportation | Bus Service - Transit Bus Reserve | $ 3,000,000 | $ 3,000,000 | | | $ 200,000 | | | $ 2,565,000 | $ 235,000 |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 250,000 | $ 250,000 | | | | | | | $ 250,000 |
| Public Works and Transportation | Public Works - Front End Loader | $ 250,000 | $ 250,000 | | | | | | $ 250,000 | |
| Public Works and Transportation | Public Works - Sidewalk Plow | $ 150,000 | $ 150,000 | | | | | | | $ 150,000 |
| Public Works and Transportation | Public Works - One-ton Truck | $ 85,000 | $ 85,000 | | | | | | $ 85,000 | |
| Cultural and Recreational Facilities | Recreation - SPCC - Electric Vehicle Replacement | $ 50,000 | $ 50,000 | | | | | | | $ 50,000 |
| Parks and Open Space | Parks - Toro Outcross | $ 110,000 | $ 110,000 | | | | | | | $ 110,000 |
| Parks and Open Space | Parks - Snowrator - 1 Unit | $ 14,369 | $ 14,369 | | | | | | | $ 14,369 |
| | **FY27 TOTAL** | **$ 10,373,429** | **$ 10,373,429** | **$ 5,400,000** | **$ -** | **$ 340,000** | **$ 20,000** | **$ 305,000** | **$ 2,920,000** | **$ 1,388,429** |

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| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds/Lease | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY2028 CIP REQUEST** | | | | | | | | | | |
| Environmental Protection | Water Resource Protection - Secondary Upgrade BNR Study | $ 143,000 | $ 143,000 | | | | | $ 143,000 | | |
| General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | | | $ 40,000 | | | | |
| Public Safety | Fire - Defibrillator | $ 40,000 | $ 40,000 | | | | | | | $ 40,000 |
| | **FY28 TOTAL** | **$ 223,000** | **$ 223,000** | **$ -** | **$ -** | **$ 40,000** | **$ -** | **$ 143,000** | **$ -** | **$ 40,000** |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | **FY 2022 Capital Improvement Plan** | **$ 10,268,139** | **$ 10,034,641** | **$ -** | **$ 888,894** | **$ 3,512,425** | **$ 860,483** | **$ 1,012,866** | **$ 2,559,973** | **$ 1,200,000** |
| | | | | | | | | | | |
| | **FY 2023 Capital Improvement Plan** | **$ 16,453,658** | **$ 16,453,658** | **$ 10,100,000** | **$ 2,000** | **$ 180,000** | **$ 625,000** | **$ 625,068** | **$ 389,828** | **$ 4,531,762** |
| | | | | | | | | | | |
| | **FY2024 Capital Improvement Plan** | **$ 7,467,228** | **$ 7,467,228** | **$ -** | **$ -** | **$ 140,000** | **$ 247,000** | **$ 1,089,468** | **$ 425,000** | **$ 5,565,760** |
| | | | | | | | | | | |
| | **FY2025 Capital Improvement Plan** | **$ 71,117,796** | **$ 71,117,796** | **$ 65,000,000** | **$ -** | **$ 140,000** | **$ 325,000** | **$ 1,349,036** | **$ 2,825,000** | **$ 1,478,760** |
| | | | | | | | | | | |
| | **FY2026 Capital Improvement Plan** | **$ 3,323,492** | **$ 3,323,492** | **$ -** | **$ -** | **$ 140,000** | **$ -** | **$ 719,000** | **$ 455,000** | **$ 2,009,492** |
| | | | | | | | | | | |
| | **FY2027 Capital Improvement Plan** | **$ 10,373,429** | **$ 10,373,429** | **$ 5,400,000** | **$ -** | **$ 340,000** | **$ 20,000** | **$ 305,000** | **$ 2,920,000** | **$ 1,388,429** |
| | | | | | | | | | | |
| | **FY2028 Capital Improvement Plan** | **$ 223,000** | **$ 223,000** | **$ -** | **$ -** | **$ 40,000** | **$ -** | **$ 143,000** | **$ -** | **$ 40,000** |
| | | | | | | | | | | |
| | **GRAND TOTAL FY22-28** | **$ 119,226,742** | **$ 118,993,244** | **$ 80,500,000** | **$ 890,894** | **$ 4,492,425** | **$ 2,077,483** | **$ 5,243,438** | **$ 9,574,801** | **$ 16,214,203** |

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| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | Cultural and Recreational Facilities | Library -Building Assessment (Main Library) | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 30,000 |
| 2022 | Cultural and Recreational Facilities | Recreation - Redbank Community Garden | $ 66,850 | $ 66,850 | $ - | $ - | $ - | $ - | $ 5,000 | $ 51,850 | $ 10,000 |
| 2023 | Cultural and Recreational Facilities | Main Library - Heating Controls | $ 28,500 | $ 28,500 | $ - | $ - | $ - | $ - | $ - | $ - | $ 28,500 |
| 2023 | Cultural and Recreational Facilities | Branch Library - Bridge Rehabilitation | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Cultural and Recreational Facilities | Electrical Upgrades | $ 175,000 | $ 175,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 175,000 |
| 2023 | Cultural and Recreational Facilities | Library - Main Library Parking Lot | $ 685,500 | $ 685,500 | $ - | $ - | $ - | $ - | $ - | $ - | $ 685,500 |
| 2023 | Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Final Engineering | $ 150,000 | $ 150,000 | $ - | $ - | $ 100,000 | $ - | $ - | $ - | $ 50,000 |
| 2023 | Cultural and Recreational Facilities | Parks/Planning & Development - Greenbelt Pedestrian Bridge Preliminary Engineering | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2023 | Cultural and Recreational Facilities | Senior Trips and Teen Center Trips (15% CDBG match) | $ 76,500 | $ 76,500 | $ - | $ - | $ - | $ - | $ - | $ 47,328 | $ 29,172 |
| 2023 | Cultural and Recreational Facilities | Recreation - Pool - New Starter Blocks | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - High School Track - Resurfacing | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Curbing at Community Center - Nelson Road | $ 15,000 | $ 15,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 15,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Community Center Parking Lot Re-surfacing - Nelson Road | $ 38,800 | $ 38,800 | $ - | $ - | $ - | $ - | $ - | $ - | $ 38,800 |
| 2023 | Cultural and Recreational Facilities | Recreation - Pool - New Showers - Men's and Women's Locker Rooms | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 100,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Rehab Redbank Field Phase II - Rec Improvements (CDBG match) | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ 67,500 | $ 7,500 |
| 2023 | Cultural and Recreational Facilities | Recreation - Portable Bleachers for WFRC and Other Sites | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Cultural and Recreational Facilities | Parks - Planning & Development - Pleasantdale Greenbelt Walkway - Year Two | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex Parking Lots per Master Plan | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex - Additional Fields per Master Plan | $ 250,000 | $ 250,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 250,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Pool - Pool Roof Replacement | $ 500,000 | $ 500,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 500,000 |
| 2023 | Cultural and Recreational Facilities | Recreation - Pool - Electricity Solar Power | $ 200,000 | $ 200,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 200,000 |
| 2024 | Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | $ - | $ - | $ 100,000 | $ - | $ - | $ - | $ - |
| 2024 | Cultural and Recreational Facilities | Recreation - Community Center Walking Track Resurface | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2024 | Cultural and Recreational Facilities | Recreation - Wainwright Recreation Complex - New 8 Lane Track per Master Plan | $ 500,000 | $ 500,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 500,000 |
| 2024 | Cultural and Recreational Facilities | Recreation - Pool - Inflatable Obstacle Course | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2025 | Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | $ - | $ - | $ 100,000 | $ - | $ - | $ - | $ - |
| 2025 | Cultural and Recreational Facilities | Rehab | $ 55,000 | $ 55,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 55,000 |
| 2025 | Cultural and Recreational Facilities | Recreation - Redbank Community Center - Repaving Parking Lot | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 45,000 |
| 2025 | Cultural and Recreational Facilities | Recreation - Wainwright - Light 2 fields per Master Plan | $ 500,000 | $ 500,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 500,000 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2026 | Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | $ - | $ - | $ 100,000 | $ - | $ - | $ - | $ - |
| 2026 | Cultural and Recreational Facilities | Recreation - SPCC or Redbank - Storage | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 100,000 |
| 2026 | Cultural and Recreational Facilities | Recreation - Resurface Pool Deck | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2027 | Cultural and Recreational Facilities | Parks - Greenbelt Pedestrian Bridge - Construction Reserve | $ 100,000 | $ 100,000 | $ - | $ - | $ 100,000 | $ - | $ - | $ - | $ - |
| 2027 | Cultural and Recreational Facilities | Recreation - SPCC - Pool Pump Motors | $ 15,300 | $ 15,300 | $ - | $ - | $ - | $ - | $ - | $ - | $ 15,300 |
| 2027 | Cultural and Recreational Facilities | Recreation - SPCC - Electric Vehicle | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| | | **Total Cultural and Recreational Facilities** | **$ 4,638,450** | **$ 4,638,450** | **$ -** | **$ -** | **$ 500,000** | **$ -** | **$ 5,000** | **$ 166,678** | **$ 3,966,772** |

| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | Environmental Protection | Water Resource Protection - Main Pump Station Force Main | $ 90,592 | $ 90,592 | $ - | $ - | $ - | $ - | $ 90,592 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Holding Tank Blower Replacement | $ 22,500 | $ 22,500 | $ - | $ - | $ - | $ - | $ 22,500 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Secondary Splitter Upgrade | $ 158,000 | $ 158,000 | $ - | $ - | $ - | $ - | $ 158,000 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Western Ave Generator Replacement | $ 55,000 | $ 55,000 | $ - | $ - | $ - | $ - | $ 55,000 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Aeration Train 2 Upgrade | $ 298,200 | $ 298,200 | $ - | $ - | $ - | $ - | $ 298,200 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Meeting House Hill Utility Improvements Phase 1 | $ 2,992,425 | $ 2,992,425 | $ - | $ - | $ 2,992,425 | $ - | $ - | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Sewer Lining | $ 200,000 | $ 200,000 | $ - | $ - | $ - | $ - | $ 200,000 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Electrical Van | $ 52,141 | $ 52,141 | $ - | $ - | $ - | $ - | $ 52,141 | $ - | $ - |
| 2022 | Environmental Protection | Water Resource Protection - Service Van | $ 54,438 | $ 54,438 | $ - | $ - | $ - | $ - | $ 54,438 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - AerationTrain 1 Upgrade | $ 298,200 | $ 298,200 | $ - | $ - | $ - | $ - | $ 298,200 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Main Pump Station Boiler | $ 60,000 | $ 60,000 | $ - | $ - | $ - | $ - | $ 60,000 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Clorination Update | $ 90,000 | $ 90,000 | $ - | $ - | $ - | $ - | $ 90,000 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Disinfection Pump Replacement | $ 37,918 | $ 37,918 | $ - | $ - | $ - | $ - | $ 37,918 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Main Pump Station Wall Repair | $ 54,000 | $ 54,000 | $ - | $ - | $ - | $ - | $ 54,000 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Operatoins Building Design HVAC Upgrade | $ 34,950 | $ 34,950 | $ - | $ - | $ - | $ - | $ 34,950 | $ - | $ - |
| 2023 | Environmental Protection | Water Resource Protection - Pump Stations Arc Flash Violatoins Corrections | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ 50,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Operations Building HVAC Upgrade | $ 314,550 | $ 314,550 | $ - | $ - | $ - | $ - | $ 314,550 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Disinfection Pump Replacement | $ 37,918 | $ 37,918 | $ - | $ - | $ - | $ - | $ 37,918 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Facility Plan Update | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ 40,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Holding Tank Odor Control Design | $ 137,000 | $ 137,000 | $ - | $ - | $ - | $ - | $ 137,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Outfall Marker Replace/Repair | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ 25,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Front End Loader Replacement | $ 175,000 | $ 175,000 | $ - | $ - | $ - | $ - | $ 175,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Unit #4 4 x 4 Plow Truck Replacement | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ 50,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Unit #18 Blazer Replacement | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ 45,000 | $ - | $ - |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2024 | Environmental Protection | Water Resource Protection - Unit #5 Treatment Plant Pick-up Replacement | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ 45,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - Unit #21 Engineering Pick-up Replacement | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ 45,000 | $ - | $ - |
| 2024 | Environmental Protection | Water Resource Protection - CCTV Unit #13 | $ 175,000 | $ 175,000 | $ - | $ - | $ - | $ - | $ 175,000 | $ - | $ - |
| 2025 | Environmental Protection | Water Resource Protection - Holding Tank Odor Control | $ 550,000 | $ 550,000 | $ - | $ - | $ - | $ - | $ 550,000 | $ - | $ - |
| 2025 | Environmental Protection | Water Resource Protection - Headworks Odor Control Design | $ 28,000 | $ 28,000 | $ - | $ - | $ - | $ - | $ 28,000 | $ - | $ - |
| 2025 | Environmental Protection | Water Resource Protection - Preliminary Treatment (Grit and Screenings) Design | $ 143,000 | $ 143,000 | $ - | $ - | $ - | $ - | $ 143,000 | $ - | $ - |
| 2025 | Environmental Protection | Water Resource Protection - 14 yard Dump | $ 146,600 | $ 146,600 | $ - | $ - | $ - | $ - | $ 146,600 | $ - | $ - |
| 2025 | Environmental Protection | Water Resource Protection - Combination Sewer Cleaner | $ 481,436 | $ 481,436 | $ - | $ - | $ - | $ - | $ 481,436 | $ - | $ - |
| 2026 | Environmental Protection | Control | $ 315,000 | $ 315,000 | $ - | $ - | $ - | $ - | $ 315,000 | $ - | |
| 2026 | Environmental Protection | Water Resource Protection - Preliminary Treatment (Grit and Screenings) | $ 314,000 | $ 314,000 | $ - | $ - | $ - | $ - | $ 314,000 | $ - | |
| 2026 | Environmental Protection | Water Resource Protection - Unit #11 1-Ton Utility Truck Replacement | $ 55,000 | $ 55,000 | $ - | $ - | $ - | $ - | $ 55,000 | $ - | |
| 2026 | Environmental Protection | Water Resource Protection - Unit #2 Compliance Van Replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ 35,000 | $ - | |
| 2027 | Environmental Protection | Water Resource Protection - Treatment Plant - Biological Nutrient Removal | $ 5,400,000 | $ 5,400,000 | $ 5,400,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2027 | Environmental Protection | Water Resource Protectoin - Unit #30 - Portable Air Compresssor Replacement | $ 15,000 | $ 15,000 | $ - | $ - | $ - | $ - | $ 15,000 | $ - | $ - |
| 2027 | Environmental Protection | Water Resource Protection - Treatment Plant Dewatering Odor Control | $ 290,000 | $ 290,000 | $ - | $ - | $ - | $ - | $ 290,000 | $ - | $ - |
| 2028 | Environmental Protection | Water Resource Protection - Secondary Upgrade BNR Study | $ 143,000 | $ 143,000 | $ - | $ - | $ - | $ - | $ 143,000 | $ - | $ - |
| | | **Total Environmental Protection** | **$ 13,553,868** | **$ 13,553,868** | **$5,400,000** | **$ -** | **$ 2,992,425** | **$ -** | **$ 5,161,443** | **$ -** | **$ -** |

| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | General Government | Executive - Brownfields | $ 120,000 | $ 120,000 | $ - | $ - | $ 120,000 | $ - | $ - | $ - | $ - |
| 2022 | General Government | Economic Development - Wayfinding Signs - Phase Two | $ 75,000 | $ 50,000 | $ - | $ - | $ 50,000 | $ - | $ - | $ - | $ - |
| 2022 | General Government | Economic Development - Finance - Information Services - Community Broadband Network | $ 410,000 | $ 410,000 | $ - | $ 60,000 | $ 350,000 | $ - | $ - | $ - | $ - |
| 2022 | General Government | Information Systems - Computer Reserve | $ 50,000 | $ 70,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 70,000 |
| 2022 | General Government | Plan | $ 10,000 | $ 66,190 | $ - | $ 56,190 | $ - | $ - | $ - | $ - | $ 10,000 |
| 2022 | General Government | Code Enforcement - Filing System | $ 48,000 | $ 48,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 48,000 |
| 2023 | General Government | City Clerk - Translation Services | $ 10,000 | $ 10,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 10,000 |
| 2023 | General Government | City Clerk - Upgrade City Website & Hosting Platform | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2023 | General Government | Executive - Brownfields | $ 80,000 | $ 80,000 | $ - | $ - | $ 80,000 | $ - | $ - | $ - | $ - |
| 2023 | General Government | Facilites - Study - Long Term Facilities Plan for Mahoney/City Buildings | $ 70,000 | $ 70,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 70,000 |
| 2023 | General Government | Information Systems - Document Archiving Solutions | $ 22,000 | $ 22,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 22,000 |
| 2023 | General Government | Upgrade | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ 50,000 | $ - | $ - | $ 50,000 |
| 2023 | General Government | Upgrade | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 100,000 |
| 2023 | General Government | Information Systems - City Phone System | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ 50,000 | $ - | $ - | $ - |
| 2023 | General Government | Parks and Open Space - Land Bank Account FY22 contribution cut | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2023 | General Government | Account | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2023 | General Government | Planning & Development - Historic Designation Assessment | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2023 | General Government | Planning & Development - File Digitization | $ 32,000 | $ 32,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 32,000 |
| 2023 | General Government | Plan | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ 75,000 | $ - | $ - | $ - |
| 2024 | General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | $ - | $ - | $ 40,000 | $ - | $ - | $ - | $ - |
| 2024 | General Government | Facilities - Design/Engineering for New City Facilities | $ 2,500,000 | $ 2,500,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,500,000 |
| 2024 | General Government | Facilities - Auto Scrubber, Carpet Cleaners | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2024 | General Government | Information Systems - Virtual Network | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2024 | General Government | Information Systems - Data center Hardware replacement | $ 165,000 | $ 165,000 | $ - | $ - | $ - | $ 70,000 | $ - | $ - | $ 95,000 |
| 2024 | General Government | Information Systems - City Phone Systems | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ 25,000 | $ - | $ - | $ 25,000 |
| 2024 | General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2024 | General Government | Account | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2024 | General Government | Planning & Development - Comprehensive | $ 65,000 | $ 65,000 | $ - | $ - | $ - | $ 65,000 | $ - | $ - | $ - |
| 2025 | General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | $ - | $ - | $ 40,000 | $ - | $ - | $ - | $ - |
| 2025 | General Government | Facilities - Construction of New Facilities | $ 50,000,000 | $ 50,000,000 | $ 50,000,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2025 | General Government | Facilities - Pick-up Truck | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2025 | General Government | Information Systems - City Phone Systems | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ 25,000 | $ - | $ - | $ 25,000 |
| 2025 | General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2025 | General Government | Parks and Open Space - Land Bank | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2026 | General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | $ - | $ - | $ 40,000 | $ - | $ - | $ - | $ - |
| 2026 | General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2027 | General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | $ - | $ - | $ 40,000 | $ - | $ - | $ - | $ - |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | General Government | Information Systems - Computer Reserve | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2028 | General Government | Executive - Brownfields | $ 40,000 | $ 40,000 | $ - | $ - | $ 40,000 | $ - | $ - | $ - | $ - | $ - |
| | | **Total General Government** | **$ 54,809,000** | **$ 54,860,190** | **$ 50,000,000** | **$ 116,190** | **$ 800,000** | **$ 360,000** | **$ -** | **$ -** | **$** | **3,584,000** |

| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | Parks and Open Space | Parks - School Street Playground Replacement | $ 97,438 | $ 97,438 | $ - | $ - | $ - | $ - | $ - | $ 87,694 | $ 9,744 |
| 2022 | Parks and Open Space | Parks - One-half Ton Truck Replacement | $ 28,000 | $ 28,000 | $ - | $ 6,557 | $ - | $ - | $ - | $ - | $ 21,443 |
| 2022 | Parks and Open Space | Parks/Golf - 4100D Outfront Mower (Tier 4 Emissions) - Replacement | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2023 | Parks and Open Space | Parks - Fence replacement along the Greenbelt in Pleasantdale | $ 12,500 | $ 12,500 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,500 |
| 2023 | Parks and Open Space | Parks - Master Plan Development Hinckley Park | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2023 | Parks and Open Space | Parks - Wainwright - Rehab Softball #2 | $ 24,000 | $ 24,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 24,000 |
| 2023 | Parks and Open Space | Parks - 1/2 Ton Truck w/plow Replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2023 | Parks and Open Space | Waterfront - Portland Street Pier Rehabilitation | $ 165,500 | $ 165,500 | $ - | $ - | $ - | $ 100,000 | $ - | $ - | $ 65,500 |
| 2023 | Parks and Open Space | Parks - Multi Pro 5800 Foam Sprayer | $ 55,000 | $ 55,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 55,000 |
| 2023 | Parks and Open Space | Golf/Wainwright - ProCore Deep Tine Aerator for ogranic program | $ 32,000 | $ 32,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 32,000 |
| 2023 | Parks and Open Space | Parks - Robot Line Painter | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2023 | Parks and Open Space | Parks - Tractor Replacement | $ 65,000 | $ 65,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 65,000 |
| 2023 | Parks and Open Space | Parks - Community Garden Rehab | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2023 | Parks and Open Space | Parks - Ventrac Mower | $ 26,561 | $ 26,561 | $ - | $ - | $ - | $ - | $ - | $ - | $ 26,561 |
| 2023 | Parks and Open Space | Parks - Workman GTX Electric Utility Cart | $ 11,319 | $ 11,319 | $ - | $ - | $ - | $ - | $ - | $ - | $ 11,319 |
| 2023 | Parks and Open Space | Parks - Bucket Truck Replacement (Electric?) | $ 140,000 | $ 140,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 140,000 |
| 2024 | Parks and Open Space | Parks - Beach House Deck per Willard Master Pla | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2024 | Parks and Open Space | Parks - Beach Renourishment Project - per Willard | $ 1,000,000 | $ 1,000,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,000,000 |
| 2024 | Parks and Open Space | Parks - Security Upgrades Willard Beach and Tho | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 30,000 |
| 2024 | Parks and Open Space | Parks - Master Plan Development Bug Light Park | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2024 | Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2024 | Parks and Open Space | Parks - Pavilion for Rentals at Bug Light Park per | $ 140,000 | $ 140,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 140,000 |
| 2024 | Parks and Open Space | Parks - Hardscape Under Benches Bug Light and I | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2024 | Parks and Open Space | Parks - Bug Light Community Access Station | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ 50,000 | $ - | $ - | $ 100,000 |
| 2024 | Parks and Open Space | Parks - O'Neil Street Park | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2024 | Parks and Open Space | Water Truck Replacement | $ 70,000 | $ 70,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 70,000 |
| 2025 | Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2025 | Parks and Open Space | Parks - New Boat Ramp Attendant Building | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 100,000 |
| 2025 | Parks and Open Space | Parks - Playground at Bug Light per Master Plan | $ 65,000 | $ 65,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 65,000 |
| 2025 | Parks and Open Space | Parks -Workman Utility Cart | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2026 | Parks and Open Space | Parks - 1/2 Ton Truck w/plow replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2026 | Parks and Open Space | Parks - Greenbelt Expansion at Bug Lightper Mas | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2026 | Parks and Open Space | Parks - Golf - 4100D Outfront Mower (Tier 4 Emi | $ 65,732 | $ 65,732 | $ - | $ - | $ - | $ - | $ - | $ - | $ 65,732 |
| 2027 | Parks and Open Space | Parks - One-half ton Truck w/Plow Replacement | $ 35,000 | $ 35,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 35,000 |
| 2027 | Parks and Open Space | Parks - Toro Outcross | $ 110,000 | $ 110,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 110,000 |
| 2027 | Parks and Open Space | Parks - Snowrator - 1 Unit | $ 14,369 | $ 14,369 | $ - | $ - | $ - | $ - | $ - | $ - | $ 14,369 |
| | | **Total Parks and Open Space** | **$ 2,962,419** | **$ 2,962,419** | **$ -** | **$ 6,557** | **$ -** | **$ 150,000** | **$ -** | **$ 87,694** | **$ 2,718,168** |

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| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | Public Safety | Fire - Ladder 42 (and Engine 42) 2nd Quint Purch | $ 1,300,000 | $ 1,300,000 | $ - | $ 502,500 | $ - | $ 660,000 | $ - | $ - | $ 137,500 |
| 2022 | Public Safety | Fire - Defibrillator | $ 36,000 | $ 36,000 | $ - | $ 5,000 | $ - | $ 21,000 | $ - | $ 10,000 | $ - |
| 2022 | Public Safety | Fire - Command Vehicle - Car 45 | $ 49,500 | $ 49,500 | $ - | $ 49,500 | $ - | $ - | $ - | $ - | $ - |
| 2022 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2022 | Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | $ - | $ 21,065 | $ - | $ - | $ - | $ - | $ 20,695 |
| 2022 | Public Safety | Police - Body Armor Replacement | $ 24,750 | $ 24,750 | $ - | $ - | $ - | $ 12,375 | $ - | $ 12,375 | $ - |
| 2022 | Public Safety | Police - Portable Radio Replacement | $ 227,500 | $ 227,500 | $ - | $ - | $ - | $ - | $ - | $ - | $ 227,500 |
| 2022 | Public Safety | Police - AED Equipment Replacement | $ 8,000 | $ 8,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 8,000 |
| 2022 | Public Safety | Police - Vehicle Camera Replacement | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2022 | Public Safety | Police - Radar Equipment Replacement | $ 11,065 | $ 11,065 | $ - | $ - | $ - | $ - | $ - | $ - | $ 11,065 |
| 2022 | Public Safety | Police - Digital Storage (for body-worn and in-car | $ 24,000 | $ 24,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 24,000 |
| 2023 | Public Safety | Fire - Foam Pumper Engine #46 | $ 600,000 | $ 600,000 | $ 600,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2023 | Public Safety | Fire - Standard Coverage of Strategic Plan Study | $ 38,000 | $ 38,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 38,000 |
| 2023 | Public Safety | Fire - Repair Western Ave Floor | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Public Safety | Fire - Ambulance 44 and Power Stretcher | $ 250,000 | $ 250,000 | $ - | $ - | $ - | $ 250,000 | $ - | $ - | $ - |
| 2023 | Public Safety | Fire - Service Truck PM-402 (One Ton) | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ 50,000 | $ - | $ - | $ - |
| 2023 | Public Safety | Fire - 1/2 Ton Pick-up Car 44 | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ 50,000 | $ - | $ - | $ - |
| 2023 | Public Safety | Police - Service Truck (Maintenance/Snow Plow/S | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Public Safety | Police - Stress Reduction Equipment | $ 4,050 | $ 4,050 | $ - | $ 2,000 | $ - | $ - | $ - | $ - | $ 2,050 |
| 2023 | Public Safety | Police - Motorcycle Replacement | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2023 | Public Safety | Police - Digital Archive System | $ 15,000 | $ 15,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 15,000 |
| 2023 | Public Safety | Police - Computer Replacement - Mobile | $ 60,000 | $ 60,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 60,000 |
| 2023 | Public Safety | Police - Specialty Equipment Truck (for tactical ar | $ 60,100 | $ 60,100 | $ - | $ - | $ - | $ - | $ - | $ - | $ 60,100 |
| 2023 | Public Safety | Police - Parking Lot Pavement | $ 60,000 | $ 60,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 60,000 |
| 2023 | Public Safety | Police - Interior modeling | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Public Safety | Police - Digital Archive System | $ 15,000 | $ 15,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 15,000 |
| 2023 | Public Safety | Police - Taser Replaement | $ 41,760 | $ 41,760 | $ - | $ - | $ - | $ - | $ - | $ - | $ 41,760 |
| 2023 | Public Safety | Police - Police Digital De-escalation Video Systen | $ 50,000 | $ 50,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 50,000 |
| 2023 | Public Safety | Police - Crisis Negotiators Communications Equip | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2023 | Public Safety | Police - Roof Replacement (Old Section and Gara | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 45,000 |
| 2023 | Public Safety | Police - Electrical Circutry Identification and Pane | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2023 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2024 | Public Safety | Fire - Defibrilator | $ 37,000 | $ 37,000 | $ - | $ - | $ - | $ 37,000 | $ - | $ - | $ - |
| 2024 | Public Safety | Fire - Tactical Body Armor Replacement | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 30,000 |
| 2024 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2024 | Public Safety | Police - Binocular Night Vision Equipment | $ 85,000 | $ 85,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 85,000 |
| 2024 | Public Safety | Police - Indoor Firearms Range | $ 100,000 | $ 100,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 100,000 |
| 2024 | Public Safety | Police - Animal Control Vehicle | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2024 | Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | $ - | $ - | $ - | $ - | $ - | $ - | $ 41,760 |
| 2024 | Public Safety | Police - Electronic Sign | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 30,000 |
| 2024 | Public Safety | Police - Motorcycle Replacement | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 20,000 |
| 2024 | Public Safety | Police - Computer Replacement - Offices | $ 60,000 | $ 60,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 60,000 |
| 2025 | Public Safety | Fire - Mechanic's Service Truck - One Ton ST-4 | $ 45,000 | $ 45,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 45,000 |
| 2025 | Public Safety | Fire - Central Station Renovation/Replacement | $ 10,000,000 | $ 10,000,000 | $ 10,000,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2025 | Public Safety | Fire - Command Vehicle Car 49 | $ 55,000 | $ 55,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 55,000 |
| 2025 | Public Safety | Police - Building Replacement | $ 5,000,000 | $ 5,000,000 | $ 5,000,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2025 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2025 | Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 41,760 |
| 2025 | Public Safety | Police - Body Armor Replacement Tactical | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2026 | Public Safety | Fire - Engine 41 | $ 550,000 | $ 550,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 550,000 |
| 2026 | Public Safety | Fire - Defibrillator | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2026 | Public Safety | Police and Fire - Stand-by - Generator | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2026 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2026 | Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 41,760 |
| 2026 | Public Safety | Police - GPS Vehicle Pre-emption Emitters | $ 65,000 | $ 65,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 65,000 |
| 2026 | Public Safety | Police - Armored Vehicle Replacement | $ 350,000 | $ 350,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 350,000 |
| 2027 | Public Safety | Fire - Ambulance 43 and Power Stretcher | $ 260,000 | $ 260,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 260,000 |
| 2027 | Public Safety | Fire - Gator Replacement | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 30,000 |
| 2027 | Public Safety | Police - Regional Crime Lab | $ 12,000 | $ 12,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 12,000 |
| 2027 | Public Safety | Police - Body Armor Replacement | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ 20,000 | $ - | $ 20,000 | $ - | $ - |
| 2027 | Public Safety | Police - Taser Replacement | $ 41,760 | $ 41,760 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 41,760 |
| 2027 | Public Safety | Police - Patrol Rifle Replacement | $ 75,000 | $ 75,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 75,000 |
| 2027 | Public Safety | Police - Body Camera Replacement | $ 60,000 | $ 60,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 60,000 |
| 2028 | Public Safety | Fire - Defibrillator | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| | | **Total Public Safety** | **$ 20,779,525** | **$ 20,779,525** | **$15,600,000** | **$ 580,065** | **$ -** | **$ 1,100,375** | **$ -** | **$ 42,375** | **$** | **3,456,710** |

| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | Public Works and Transportation | Planning & Development - Crosstown Road Envir | $ 10,000 | $ 10,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 10,000 |
| 2022 | Public Works and Transportation | Transportation - Transit Stop Access Project | $ 315,000 | $ 315,000 | $ - | $ 14,500 | $ - | $ - | $ - | $ 252,000 | $ 48,500 |
| 2022 | Public Works and Transportation | Transportation - Transit Bus Purchase | $ 1,500,000 | $ 1,500,000 | $ - | $ 74,843 | $ - | $ 138,608 | $ 76,995 | $ 1,209,554 | $ - |
| 2022 | Public Works and Transportation | Transportation - Transit Signal Priority | $ 151,000 | $ 151,000 | $ - | $ - | $ - | $ - | $ - | $ 151,000 | $ - |
| 2022 | Public Works and Transportation | MSF Exterior Improvements | $14,980 | $14,980 | $0 | $14,980 | $0 | $0 | $0 | $0 | $0 |
| 2022 | Public Works and Transportation | Landfill Venting System | $ 213,000 | $ 213,000 | $ - | $ 30,000 | $ - | $ - | $ - | $ 170,000 | $ 13,000 |
| 2022 | Public Works and Transportation | Public Works Loader | $ 260,000 | $ 260,000 | $ - | $ - | $ - | $ - | $ - | $ 260,000 | $ - |
| 2022 | Public Works and Transportation | Public Works - Two Single-Axle Plow Trucks | $ 404,000 | $ 404,000 | $ - | $ 20,000 | $ - | $ 28,500 | $ - | $ 355,500 | $ - |
| 2022 | Public Works and Transportation | Public Works - Sidewalk Plow | $ 157,000 | $ 157,000 | $ - | $ 28,500 | $ - | $ - | $ - | $ - | $ 128,500 |
| 2022 | Public Works and Transportation | Public Works - Sidewalk Program | $ 500,000 | $ 215,312 | $ - | $ 5,259 | $ - | $ - | $ - | $ - | $ 210,053 |
| 2023 | Public Works and Transportation | Transportation - Transit Bus Reserve | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2023 | Public Works and Transportation | Transportation - Transit Stop Access Project | $ 125,000 | $ 125,000 | $ - | $ - | $ - | $ - | $ - | $ 100,000 | $ 25,000 |
| 2023 | Public Works and Transportation | Planning & Develoment - Crosstown Road - Desig | $ 9,500,000 | $ 9,500,000 | $9,500,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| 2023 | Public Works and Transportation | Public Works - Pavement Roller | $ 43,500 | $ 43,500 | $ - | $ - | $ - | $ - | $ - | $ - | $ 43,500 |
| 2023 | Public Works and Transportation | Public Works - Director Vehicle | $ 40,000 | $ 40,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 40,000 |
| 2023 | Public Works and Transportation | Public Works - Dump Truck | $ 175,000 | $ 175,000 | $ - | $ - | $ - | $ - | $ - | $ 175,000 | $ - |
| 2023 | Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2024 | Public Works and Transportation | Transportation - Transit Bus Reserve | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2024 | Public Works and Transportation | Transportation - Transit Stop Access Project | $ 125,000 | $ 125,000 | $ - | $ - | $ - | $ - | $ - | $ 100,000 | $ 25,000 |
| 2024 | Public Works and Transportation | Public Works - Dump Truck | $ 175,000 | $ 175,000 | $ - | $ - | $ - | $ - | $ - | $ 175,000 | $ - |
| 2024 | Public Works and Transportation | Public Works - Sidewalk Tractor | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ 150,000 | $ - |
| 2024 | Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2025 | Public Works and Transportation | Transportation - Transit Bus Reserve | $ 3,000,000 | $ 3,000,000 | $ - | $ - | $ - | $ 300,000 | $ - | $ 2,565,000 | $ 135,000 |
| 2025 | Public Works and Transportation | Transportation - Transit Stop Access Project | $ 25,000 | $ 25,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 25,000 |
| 2025 | Public Works and Transportation | Public Works - Sidewalk Program | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2025 | Public Works and Transportation | Public Works - Service Truck | $ 80,000 | $ 80,000 | $ - | $ - | $ - | $ - | $ - | $ 80,000 | $ - |
| 2025 | Public Works and Transportation | Public Works - Dump Truck | $ 180,000 | $ 180,000 | $ - | $ - | $ - | $ - | $ - | $ 180,000 | $ - |
| 2026 | Public Works and Transportation | Bus Service - Transit Bus Reserve | $ 200,000 | $ 200,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 200,000 |
| 2026 | Public Works and Transportation | Public Works - Sidewalk Program | $ 200,000 | $ 200,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 200,000 |
| 2026 | Public Works and Transportation | Public Works - Loader | $ 275,000 | $ 275,000 | $ - | $ - | $ - | $ - | $ - | $ 275,000 | $ - |
| 2026 | Public Works and Transportation | Public Works - Dump Truck | $ 180,000 | $ 180,000 | $ - | $ - | $ - | $ - | $ - | $ 180,000 | $ - |
| 2027 | Public Works and Transportation | Bus Service - Transit Bus Reserve | $ 3,000,000 | $ 3,000,000 | $ - | $ - | $ 200,000 | $ - | $ - | $ 2,565,000 | $ 235,000 |
| 2027 | Public Works and Transportation | Public Works - Sidewalk Program | $ 250,000 | $ 250,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 250,000 |
| 2027 | Public Works and Transportation | Public Works - Front End Loader | $ 250,000 | $ 250,000 | $ - | $ - | $ - | $ - | $ - | $ 250,000 | $ - |
| 2027 | Public Works and Transportation | Public Works - Sidewalk Plow | $ 150,000 | $ 150,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ 150,000 |
| 2027 | Public Works and Transportation | Public Works - One-ton Truck | $ 85,000 | $ 85,000 | $ - | $ - | $ - | $ - | $ - | $ 85,000 | $ - |
| | | **Total Public Works and Transportation** | **$ 22,483,480** | **$ 22,198,792** | **$9,500,000** | **$ 188,082** | **$ 200,000** | **$ 467,108** | **$ 76,995** | **$ 9,278,054** | **$ 2,488,553** |

| Year | Functional Area | CIP Project | Departments Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Cultural and Recreational Facilities** | **$ 4,638,450** | **$ 4,638,450** | **$ -** | **$ -** | **$ 500,000** | **$ -** | **$ 5,000** | **$ 166,678** | **$ 3,966,772** |
| | | | | | | | | | | | |
| | | **Total Environmental Protection** | **$ 13,553,868** | **$ 13,553,868** | **$ 5,400,000** | **$ -** | **$ 2,992,425** | **$ -** | **$ 5,161,443** | **$ -** | **$ -** |
| | | | | | | | | | | | |
| | | **Total General Government** | **$ 54,809,000** | **$ 54,860,190** | **$ 50,000,000** | **$ 116,190** | **$ 800,000** | **$ 360,000** | **$ -** | **$ -** | **$ 3,584,000** |
| | | | | | | | | | | | |
| | | **Total Parks and Open Space** | **$ 2,962,419** | **$ 2,962,419** | **$ -** | **$ 6,557** | **$ -** | **$ 150,000** | **$ -** | **$ 87,694** | **$ 2,718,168** |
| | | | | | | | | | | | |
| | | **Total Public Safety** | **$ 20,779,525** | **$ 20,779,525** | **$ 15,600,000** | **$ 580,065** | **$ -** | **$ 1,100,375** | **$ -** | **$ 42,375** | **$ 3,456,710** |
| | | | | | | | | | | | |
| | | **Total Public Works and Transportation** | **$ 22,483,480** | **$ 22,198,792** | **$ 9,500,000** | **$ 188,082** | **$ 200,000** | **$ 467,108** | **$ 76,995** | **$ 9,278,054** | **$ 2,488,553** |
| | | | | | | | | | | | |
| | | **GRAND TOTAL FY22-FY28** | **$ 119,226,742** | **$ 118,993,244** | **$ 80,500,000** | **$ 890,894** | **$ 4,492,425** | **$ 2,077,483** | **$ 5,243,438** | **$ 9,574,801** | **$ 16,214,203** |

# SECTION II

## Year One – FY 2022 Requests

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# YEAR I

# FY 2022 CIP REQUEST

## Cultural and Recreational Facilities

| | | |
|---|---|---|
| Building Assessment (Main Library) | $ | 30,000 |
| Recreation - Redbank Community Garden Project | $ | 66,850 |
| **Total Cultural and Recreational Facilities** | **$** | **96,850** |

## Environmental Protection

| | | |
|---|---|---|
| Water Resource Protection - Main Pump Station Force Main | $ | 90,592 |
| Water Resource Protection - Holding Tank Blower Replacement | $ | 22,500 |
| Water Resource Protection - Western Ave Generator Replacement | $ | 55,000 |
| Water Resource Protection - Meeting House Hill Utility Improvements Phase 1 | $ | 2,992,425 |
| Water Resource Protection - Sewer Lining | $ | 200,000 |
| Water Resource Protection - Electrical Van | $ | 52,141 |
| Water Resource Protection - Service Van | $ | 54,438 |
| **Total Environmental Protection** | **$** | **3,467,096** |

## General Government

| | | |
|---|---|---|
| Executive - Brownfields | $ | 120,000 |
| Economic Development - Wayfinding Signs - Phase Two | $ | 50,000 |
| Economic Development - Finance - Information Services - Community Broadband Network | $ | 410,000 |
| Information Systems - Computer Reserve | $ | 70,000 |
| Planning & Development - Comprehensive Plan | $ | 66,190 |

| | | |
|---|---|---|
| Code Enforcement - Filing System | $ | 48,000 |
| **Total General Government** | **$** | **764,190** |

**Parks and Open Space**

| | | |
|---|---|---|
| Parks - School Street Playground Replacement | $ | 97,438 |
| Parks - One-half Ton Truck Replacement | $ | 28,000 |
| Parks/Golf - 4100D Outfront Mower (Tier 4 Emissions) - Replacement | $ | 75,000 |
| **Total Parks and Open Space** | **$** | **200,438** |

**Public Safety**

| | | |
|---|---|---|
| Fire - Ladder 42 (and Engine 42) 2nd Quint Purchase | $ | 1,300,000 |
| Fire - Defibrillator | $ | 36,000 |
| Fire - Command Vehicle - Car 45 | $ | 49,500 |
| Police - Regional Crime Lab | $ | 12,000 |
| Police - Taser Replacement | $ | 41,760 |
| Police - Body Armor Replacement | $ | 24,750 |
| Police - Portable Radio Replacement | $ | 227,500 |
| Police - AED Equipment Replacement | $ | 8,000 |
| Police - Vehicle Camera Replacement | $ | 75,000 |
| Police - Radar Equipment Replacement | $ | 11,065 |

| | | |
|---|---|---|
| Police - Digital Storage (for body-worn and in-car video) | $ | 24,000 |
| **Total Public Safety** | **$** | **1,809,575** |

**Public Works and Transportation**

| | | |
|---|---|---|
| Planning & Development - Crosstown Road Environmental Permitting | $ | 10,000 |
| Transportation - Transit Stop Access Project | $ | 315,000 |
| Transportation - Transit Bus Purchase | $ | 1,500,000 |
| Transportation - Transit Signal Priority | $ | 151,000 |
| MSF Exterior Improvements | $ | 14,980 |
| Landfill Venting System | $ | 213,000 |
| Public Works Loader | $ | 260,000 |
| Public Works - Two Single-Axle Plow Trucks | $ | 404,000 |
| Public Works - Sidewalk Plow | $ | 157,000 |
| Public Works - Sidewalk Program | $ | 215,312 |
| **Total Public Works and Transportation** | **$** | **3,240,292** |

| | | |
|---|---|---|
| **Total Year I Request** | **$** | **9,578,441** |

# CULTURAL
# AND
# RECREATIONAL FACILITIES



Courtesy of Denise Michaud

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Main Library - Building Assessment** | | |
| **Department** | Library | **Dept. Priority** | 1 |
| **Division** | Main Library | **Div. Priority** | 1 |
| **CIP Category** | Cultural & Recreational Facilities | | |

## Purchase/Project Description

The Main Library building was built in 1966 and has remained pretty much the same since, with some system replacements over the years as equipment has failed.

As we become aware of compounding issues with the building, it would be wise to step back and perform a full assessment of the facility so that we can best prioritize, plan for and address these needs going forward

Presently, we are aware of:

- HVAC system which is obsolete and requiring increasing maintenance
- Energy inefficiencies inherent to the architecture
- Obsolete electrical equipment, inadequate to handle the capacity for exterior lighting or EV charging
- Aging plumbing
- Accessibility issues
- Safety issues around the grounds
- Moisture issues in the lower level of the building
- Asbestos in the underlying flooring material throughout the building
- Functioning, but past expected end of life elevator mechanical equipment
- Functioning, but past expected end of life roof

Beyond these known, specific, issues, we also face ongoing challenges presented by a building built to be a library in 1965 the way librarys functioned in the 1960s and still utilized as a library 55+ years later, when the library business has changed so significantly.

An assessment of the facility will give the City a better idea of the true needs, capacity and viability of the existing facility and will help us to more effectively plan for future needs instead of simply responding to emergency needs.

## Financial Impact of this Purchase/Project

A building assement will generate no direct income, but will allow the city to more holistically approach the needs of the building as well as the Library Department's continued functioning within it.

## Environmental Considerations

My hope would be that, following the assessment, the City will then have the information it needs to more reasonably address the many shortcomings of the building and to improve on the outdated and inefficient building systems currently in place.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 30,000.00 | $ 30,000.00 | | | | | $ 30,000.00 | $ 30,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 30,000.00** | **$ 30,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 30,000.00** | **$ 30,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Estimate, based on previous proposal from Sebago for a larger - multi-building - assessment project. | | | | |
| **Est. Annual Operating Costs** | Unknown | **Projected Useful Life** | Indefinite | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Redbank Community Garden Project** | | |
| **Department** | Parks, Rec, Waterfront | **Dept. Priority** | 4 |
| **Division** | Recreation | **Div. Priority** | 1 |
| **CIP Category** | Cultural & Recreational Facilities | | |

**Purchase/Project Description**

South Portland Parks, Recreation & Waterfront is partnering with the Community Garden Collective (CGC) to create a much needed community garden in the Redbank neighborhood, located in a portion of the field next to the Redbank Community Center.

Together, our department and the CGC have applied for a CDBG grant to construct this garden. We are requesting a $10,000 match in Capital Improvement Funds to help fully fund the project and reduce the asking amount in the CDBG grant.

With the City's help, the CGC is ready to build a 17,000 square foot garden comprising up to 49 raised beds, an irrigation system, compost bins, stone dust pathways throughout, various circular gathering areas for learning and areas for garden material storage. The West End Master Plan, adopted by the City Council on August 21, 2017, includes the development of a community garden as an objective under Recreation Open Space. The City has designated this area for a community garden and, in 2020 extended a water line to the garden site; a necessity for a successful garden.

The garden will be located right next to a recently renovated soccer field that is actively used throughout the year. On the side of the garden facing the soccer field, a 6 foot high fence with a 15 foot netting system attached to the top will need to be installed to prevent soccer balls from entering the garden and help delineate these two active spaces. The remaining fence around the garden will be 4 feet high and run approximately 200 feet. This fencing is a crucial component to the success and effective operation of this community garden. The estimated cost of this fencing system is $35,500.

**Financial Impact of this Purchase/Project**

The entire project is anticipated to cost $66,850 not including any in-kind donations from the City or CGC such as labor to construct garden beds, pathways, shed and site grading. We have applied for $51,850 in CBDG funds and the CGC will commit $5,000 in private funds. A $10,000 award through CIP would allow us to move forward with this project on July 1, 2021. Attached is a quote for the cost of fence installation around the entire garden.

**Environmental Considerations**

Food insecurity is on an upward trend due to the COVID-19 pandemic. This proposal would greatly help provide increased food security and access to healthy food for low to moderate income residents of the Redbank and surrounding communities. CDBG and CIP funds are both required for this project to move forward. Acquiring these funds will allow the Redbank and surrounding neighborhoods to finally have what it needs to start growing its own food.

| **Funding Source(s)** | **Year 1** | | **Year 2** | | **Year(s) 3+** | | **TOTALS** | |
|---|---|---|---|---|---|---|---|---|
| | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 10,000.00 | $ 10,000.00 | | | | | $ 10,000.00 | $ 10,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 51,850.00 | $ 51,850.00 | | | | | $ 51,850.00 | $ 51,850.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | $ 5,000.00 | $ 5,000.00 | | | | | $ 5,000.00 | $ 5,000.00 |
| **TOTALS** | **$ 66,850.00** | **$ 66,850.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 66,850.00** | **$ 66,850.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Turf Prep LLC (cost of fencing) | | | | |
| **Est. Annual Operating Costs** | $1,000 | **Projected Useful Life** | 20 + years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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**Turf Prep LLC.**
5 Aberjona Dr.
Woburn, MA 01801
877-774-8873
info@turfprep.com
www.turfprep.com

# Estimate

**ADDRESS**
Anthony Johnson

**ESTIMATE #** EST2361
**DATE** 10/28/2020

| DATE | ACTIVITY | QTY | RATE | AMOUNT |
|---|---|---|---|---|
| | **Construction:Fence**<br>200 Ft. 9 gauge chainlink fence install | 1 | 7,500.00 | 7,500.00 |
| | **Construction:Netting Install**<br>15 Ft. Netting system w/11 poles | 11 | 2,000.00 | 22,000.00 |
| | **Construction:Fence**<br>200ft of 4ft chain link fence with top and bottom rail and 2 gates. | 1 | 6,000.00 | 6,000.00 |

TOTAL **$35,500.00**

Accepted By

Accepted Date

We appreciate your business and look forward to working with you again soon!

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# ENVIRONMENTAL



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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **MAIN PUMP STATION FORCE MAIN** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 1 |
| **Division** | Treatment Systems | **Div. Priority** | 1 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

The South Portland Wastewater Treatment Plant receives flow from two major pumping stations. Flow from the western portion of the city flows primarilty into and through the Pearl Street pump station before discharge to the influent flume located at the Treatment Plant. Flow from the eastern part of the City flows into the Main Pump Station located at the treatment plant.

The Main Pump Station has two influent wetwells that hold incoming flow for pumping into the treatment process. Each wetwell has two pumps that discharge into a common discharge pipe (often called a force main) that carries the pumped wastewater into the treatment process. Flow from the #2 wetwell is pumped through a discharge pipe that runs through into the wetwell area before commoning with the discharge pipe from the #1 wetwell. This pipe has corroded and is in need of replacement.

In order to replace this pipe section the influent flow will need to bypass the main pump station to allow the force main to be drained before removal. Pricing was obtained from an estimate done by a local contractor experienced in pipe work.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

Failure of the discharge pipe between the #2 and #1 influent wetwell would compromise the Main Pump Stations ability to pump influent flow from the eastern side of the city; potentially causing sanitary sewer overflows and requiring emergency bypass pumping and repairs.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 90,592.00 | $ 90,592.00 | | | | | $ 90,592.00 | $ 90,592.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 90,592.00** | **$ 90,592.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 90,592.00** | **$ 90,592.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Contractor estimate | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 40 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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**Johnson and Jordan**
**Mechanical Contractors**
**18 Mussey Road**
**Scarborough Maine 04074**

**5/30/18**

## SCOPE OF WORK

**SOUTH PORTLAND MAIN PUMP STATION REPAIR**

**JOHNSON AND JORDAN WILL**

- Install blind flange and install thrust support for well pumping system.
- Install 16" sch 40 PVC bypass line to 24" VFD driven overflow pump. Line will be dumped into well before grit building. Bypass line will be installed in such a way as line can be reused to bypass pump station in the future. Line will be four sections connected by bolted flanges. A test ball will be placed in 18" pipe going from well back to pump station during bypass.
- Demo and replace existing 16" ductile line passing thru well room from 90 to reducer. New pipe will have two coats of factory applied Tnemec series N69 epoxy paint and coated a third time onsite after installation with a finishing paint of your choice.
- Replace all associated hangers. All newly installed hardware will be 316 stainless steel.
- Dispose of removed pipe.
- Core two new holes in walls to accommodate new pipe with link seals.
- Install single point 1000lb. lifting points according to districts engineered design and label for future use.
- Demo bypass line when complete and move to an onsite storage site of your choice.

For the lump sum of.....$68,361.00

**EXCLUSIONS.....**

- Bid, performance and payment bonds.
- Anything not listed above.

Bill O'Neil Project Manager: boneil@johnsonandjordan.com

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Holding Tank Blower Replacement** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 2 |
| **Division** | Treatment Systems | **Div. Priority** | 2 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

This CIP request is for the replacment of the original (1974) sludge holding tank blowers. These two blowers supply mixing air and concurrently oxygen to the waste sludge holding tank to keep the wasted activated sludge solids mixed and in suspension to keep the sludge oxygenated to reduce odor generation in the holding tank and during the dewatering operation.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

The sludge holding tank blowers are necessary to maintain efficient dewatering of waste activated sludge. Sludge holding tank blowers also minimize generation of potentially undesireable odors from the sludge holding tank by keeping the sludge aerated.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 22,500.00 | $ 22,500.00 | | | | | $ 22,500.00 | $ 22,500.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 22,500.00** | **$ 22,500.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 22,500.00** | **$ 22,500.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Vendor Quote | | | | |
| **Est. Annual Operating Costs** | $ 225.00 | **Projected Useful Life** | 20 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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**THE MAHER CORPORATION**
WATER & WASTEWATER PROCESS, PUMPING & VALVE SYSTEMS

192 PLEASANT STREET
ROCKLAND, MASSACHUSETTS 02370
(781) 421-2600 • FAX (781) 878-1219

**22 December 2020**

Job Name: South Portland, ME

To: **Frank Moulton – South Portland, ME**

As the New England Agent for **HOWDEN/ROOTS**, we are pleased to furnish you with the equipment listed below in our budget proposal.

Two (2) ROOTS Model 45 URAI-J blower to deliver 270 SCFM @ 4.85 psi utilizing a 10 HP 1800 rpm TEFC motor. Items included are shown below.

- ROOTS Blower
- Baldor 1800-RPM Motor
- Baldor Adjustable Motor Slide Base
- V-Belt Drive with Guard
- Custom Base
- Vibration Pads (*4 per package)*

The MAHER Corporation will **NOT** provide the following:

- VFDs
- Installation
- Field Painting
- Anchor Bolts
- Electrical Wiring
- Interconnecting Piping
- Valves (unless listed above)
- Sales Tax

**SERVICE:** **One (1) Day of Service is added for Start-Up**
**PRICE:** **F.O.B. with freight allowed to South Portland, ME**
**DELIVERY:** **Approximately 8 weeks after drawing approval**
**TERMS:** **Net thirty (30) days**

**$ 22,500.00**

Sincerely,
The MAHER Corporation

*Matthew Kibble*

Matthew Kibble

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **WESTERN AVE GENERATOR REPLACEMENT** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 4 |
| **Division** | Treatment Systems | **Div. Priority** | 4 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

The Western Avenue #2 wastewater pumping station sevices a portion of Western Avenue including the semiconductor industries. The station was equiped with an emergency power stand-by generator in cases of power outages.

The generator experienced a complete failure as a result of a fire that caused significant damage. The WRP maintenace staff worked with local generator repair vendors in an attempt to find replacement parts and materials for the generator but were unable due, in part, to the age of the generator.

A new generator is necessary to insure pump station full operational status and pumping capacity in case of a power failure. Wright Pierce, the City's current engineer, has been tasked with developing up to date specifications for the replacement generator.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

Failure of the generator to operate during a power outage could lead to a SSO (sanitary sewer overflow).

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 55,000.00 | $ 55,000.00 | | | | | $ 55,000.00 | $ 55,000.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 55,000.00** | **$ 55,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 55,000.00** | **$ 55,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Vendor Estimate | | | | |
| **Est. Annual Operating Costs** | $ 300.00 | **Projected Useful Life** | 20 years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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Milliken Brothers, Inc.
Electrical Contractors
474 Riverside Industrial Parkway
Portland, Maine 04103
Telephone (207) 797-8375
Facsimile (207) 797-0895
E-mail: mbi@millikenbrosinc.com

October 13, 2020

City of South Portland
Water Resource Protection
Frank Moulton
111 Waterman Drive
South Portland, Maine 04106

RE: 257 Western Avenue Pump Station Generator

We propose to replace existing CAT 60kW generator with new CAT 60KW (now rated 57KW).
We include new generator, select demolition, crane and rigging, rework natural gas connection, new electrical connections, start up and testing.
We expect the existing generator will be put on a truck of yours for removal from site.

Lead time on a new CAT DG60-2 is 18-20 weeks.
Submittals for approval will be provided.

We exclude bonds, temporary power, SCADA or other controls wiring.
Proposal based on normal work hours.

**Lot total $44,710.00** less sales tax.

We appreciate the opportunity to be of service.
Please let us know of any questions or concerns.

Regards,

Shawn Henderson
Shawn Henderson
Estimator – Project Manager

Cc Jeff Milliken

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Meeting House Hill Utility Improvements - Phase 1** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 9 |
| **Division** | Collections Systems | **Div. Priority** | 9 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

The proposed Meetinghouse Hill Utility Improvement Project is a three year/three phase project to address the undersized stormwater drainage system in Cottage Rd and Highland Ave; separate the combined sewer system on Meetinghouse Hill; and improve the street scape in the project area. Phase 1 of construction, slated for 2021, includes the drainage work in Cottage Road from O'Neill Street to Highland; drainage through the library parking lot and across Broadway; and reconstruction of the Highland streetscape from Cottage to Ocean. In addition drainage along Highland Avenue will continue from the Library area down to Trout Brook. Portland Water District will be installing new water mains as part of this project as well.

The scope also includes street scape improvements in Highland from the Trout Brook crossing to Ocean Street and pedestrian signal improvements at Ocean and Highland. That work is independent of the utility upgrades and is being done to address the poor condition of the road and sidewalks in this area. The cost associated with that work is approximately $420,000 and will be funded out of the 2021 paving budget and surplus funds from past paving budgets.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

The proposed drainage improvements are critically important to maintain the capacity and resilience needed to be adequately prepared for rising sea levels in intensifying storm surges. Additionally, Phase 1 of the Meetinghouse Hill project will facilitate the future separation of the combined sewers in the neighborhood.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | $ 2,992,425.00 | $ 2,992,425.00 | | | | | $ 2,992,425.00 | $ 2,992,425.00 |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 2,992,425.00** | **$ 2,992,425.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 2,992,425.00** | **$ 2,992,425.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Sebago Technics | | | | |
| **Est. Annual Operating Costs** | NA | **Projected Useful Life** | 75 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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# Meetinghouse Hill and Library Drainage Improvements

Preliminary Design Report

For

City of South Portland, Maine
Water Resources Protection Department

Prepared by:

Sebago Technics, Inc.
75 John Roberts Road – Suite 4A
South Portland, Maine 04106

**May 7, 2020**

STATE OF MAINE
DANIEL
L
RILEY
No. 9967
LICENSED
PROFESSIONAL ENGINEER

05/06/2020

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## List of Attachments

Attachment 1 – Schematic Design Plans of Separtation Alternatives
Attachment 2 – Concept Plans of Library Site
Attachment 3 - Library Electrical Report
Attachment 4 - Cost Estimates

## Appendices

Appendix 1 Watershed plans
Appendix 2 Preliminary Plans O'Neill Street Redevelopment
Appendix 3 Hydrologic Analysis (SCS Method) Summaries
Appendix 4 Hydraulic Grade Line Analysis Summaries

## Introduction

This memorandum summarizes the results of a study to evaluate alternatives for storm drain improvements and combined sewer separation in the collection system tributary to outfalls MC-4 and MC-16, at Trout Brook and Mill Creek. The study area is identified in Figure 1 and includes storm drainage across the South Portland Public Library site and locations in Broadway, Highland Avenue, and Cottage Road extending from Mill Creek to O'Neill Street.




**Figure 1 Study Area**

The City of South Portland's former Public Works site on O'Neill Street is planned for residential redevelopment. The redevelopment of the site is expected to separate runoff from approximately 6.7 acres, redirecting runoff from the combined sewer system in Walnut Street and Cottage Road to the separated storm drain system in Cottage Road.

The South Portland Library site at 482 Broadway is currently served by the separated drainage system that conveys runoff from upstream sources along Highland Avenue, South Richland Street, and Cottage Road from Highland Avenue to O'Neill Street. This system crosses below the Library parking and under Broadway, discharging to Outfall MC-4 in Mill Creek Park. The library parking lot has flooded during past storm events and flows are expected to increase in the future due to the planned redevelopment of the former Public Works facility on O'Neill Street.

This study evaluates options to upgrade the drainage system through the Library site to Outfall MC-4 or to install a new drainage system in Highland Avenue to Outfall MC-16 at Trout Brook. The study evaluates alternatives to add separation of combined sewers in the West Meetinghouse Hill neighborhood south of

Highland Avenue; including portions of Jordan Avenue, Providence Avenue, Walnut Street, Pitt Street, and South Richland Street.

Four alternatives have been considered. Alternatives A1 and A2 (improvements discharging to Outfall MC-4) and Alternatives B1 and B2 (improvements discharging to Outfall MC-16).

- Alternative A1 – Includes upsizing the drainage system in Cottage Road from O'Neill Street to Highland Avenue to accommodate runoff from the former Public Works site redevelopment. This alternative will upgrade the system through the Library Site and across Broadway to MC-4.

- Alternative A2 – Expands the scope of Alternative A1 to add separation of stormwater runoff from the combined sewers in Jordan Avenue, Providence Avenue, South Richland Avenue, Boothby Avenue and a portion of Pitt Street. Directing the separated runoff through the Library site and across Broadway to Outfall MC-4.

- Alternative B1 – Includes upsizing the drainage system in Cottage Road from O'Neill Street to Highland Avenue to accommodate runoff from the former Public Works site redevelopment. This alternative proposes a new storm drain in Highland Avenue from Cottage Road to Outfall MC-16 at Trout Brook. In Alternative B1, flows across the Library Site are reduced and the existing on-site system remains, draining under Broadway to Outfall MC-4.

- Alternative B2 – Expands the scope of Alternative B1 to add separation of stormwater runoff from combined sewers in Jordan Avenue, Providence Avenue, South Richland Avenue, Boothby Avenue and a portion of Pitt Street directing the separated runoff to Highland Avenue and Outfall MC-16.

## Data Collection and Surveys

Aerials were obtained using public GIS data. Topographic information for the library site is based upon field work performed by Sebago Technics, Inc. in April of 2019. All other topographic information shown on design plans is LIDAR derived and was acquired from the NOAA Office for Coastal Management using the NOAA Data Access Viewer at https://coast.noaa.gov/dataviewer/#/.

The majority of utility information depicted on plans was obtained using City of South Portland GIS; this includes existing sanitary rim elevations and inverts and storm drain rim elevations. Supplemental information regarding storm drain pipe invert elevations was obtained via either ground survey of existing structures or using as-built drawings featuring the surrounding area. No topographic survey of the streets in the study area has been completed.

## Hydrologic and Hydraulic Modeling

A hydrologic and hydraulic grade line analysis was performed to size the proposed separated storm drainage alternatives. The hydrologic analysis was completed to determine flow rates and the hydraulic grade line analysis was completed to confirm flow rates and for preliminary pipe sizing. The analyses presented in this report have been performed based on commonly accepted engineering methods, but are preliminary and intended for the purpose of defining the general scope of the project and to support 30% design documents for the proposed improvements.

The naming convention for existing storm drainage and sanitary sewer structures are referenced to the City of South Portland Geographic Information System (GIS) sewer system geodatabase.

**Study Areas**

The project drainage area is identified in the Watershed Plans presented in Appendix 1.

Alternative A1 Evaluates a 23.5-acre watershed area that is tributary to Outfall MC-4 in Mill Creek Park. The Alternative A1 watershed area includes stormwater runoff from the separated storm drains in Broadway, the South Portland Library Site, and portions of Cottage Road, O'Neill Street, Walnut Street, and South Richland Avenue. Alternative A1 also includes separating runoff from the 6.7-acre former Public Works site on O'Neill Street to the Cottage Road system.

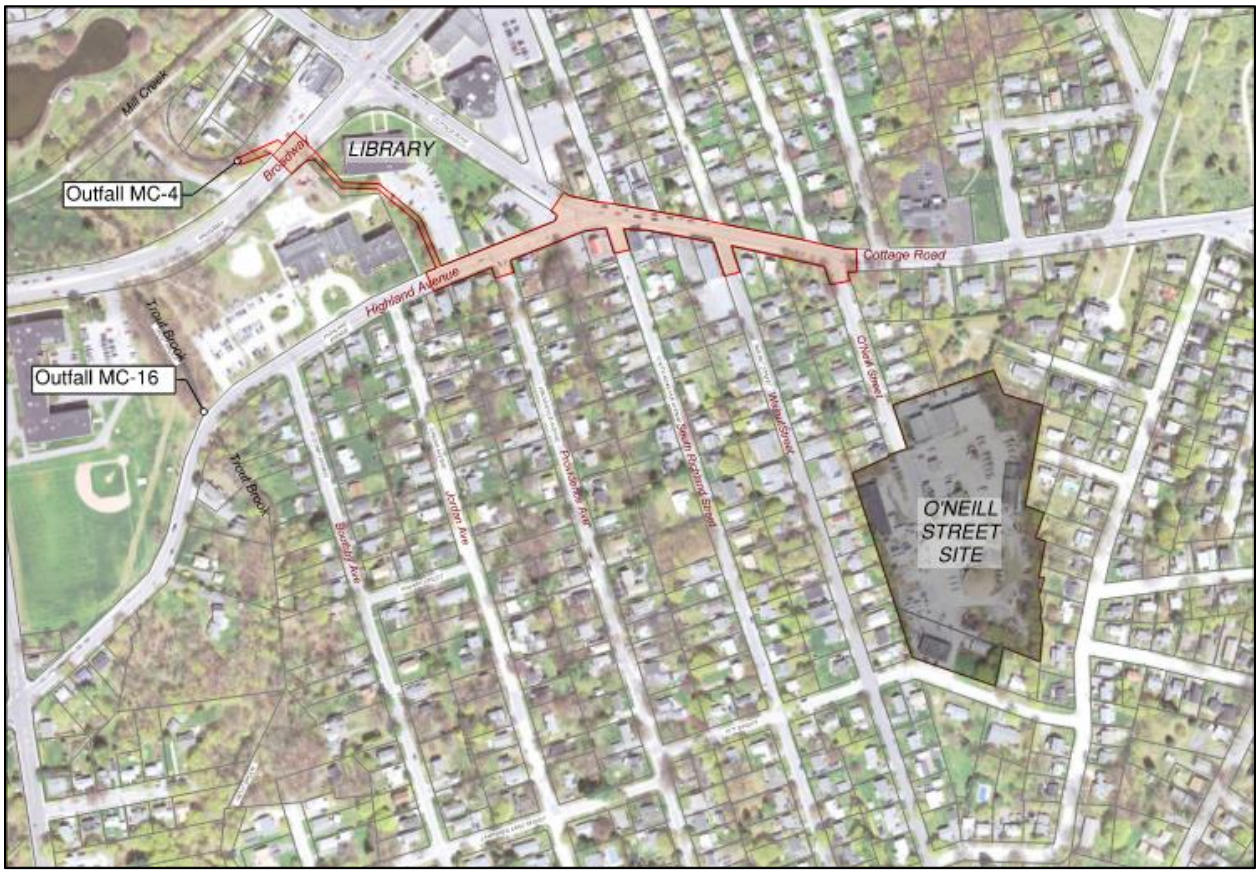



**Figure 2 Alternative A1 Improvements Area**

Alternative A2 expands the A1 study area, adding 32.8 acres, which represents the separation of stormwater runoff from the combined sewers in Jordan Avenue, Providence Avenue, South Richland Avenue, Boothby Avenue, and a portion of Pitt Street directing runoff to Outfall MC-4.

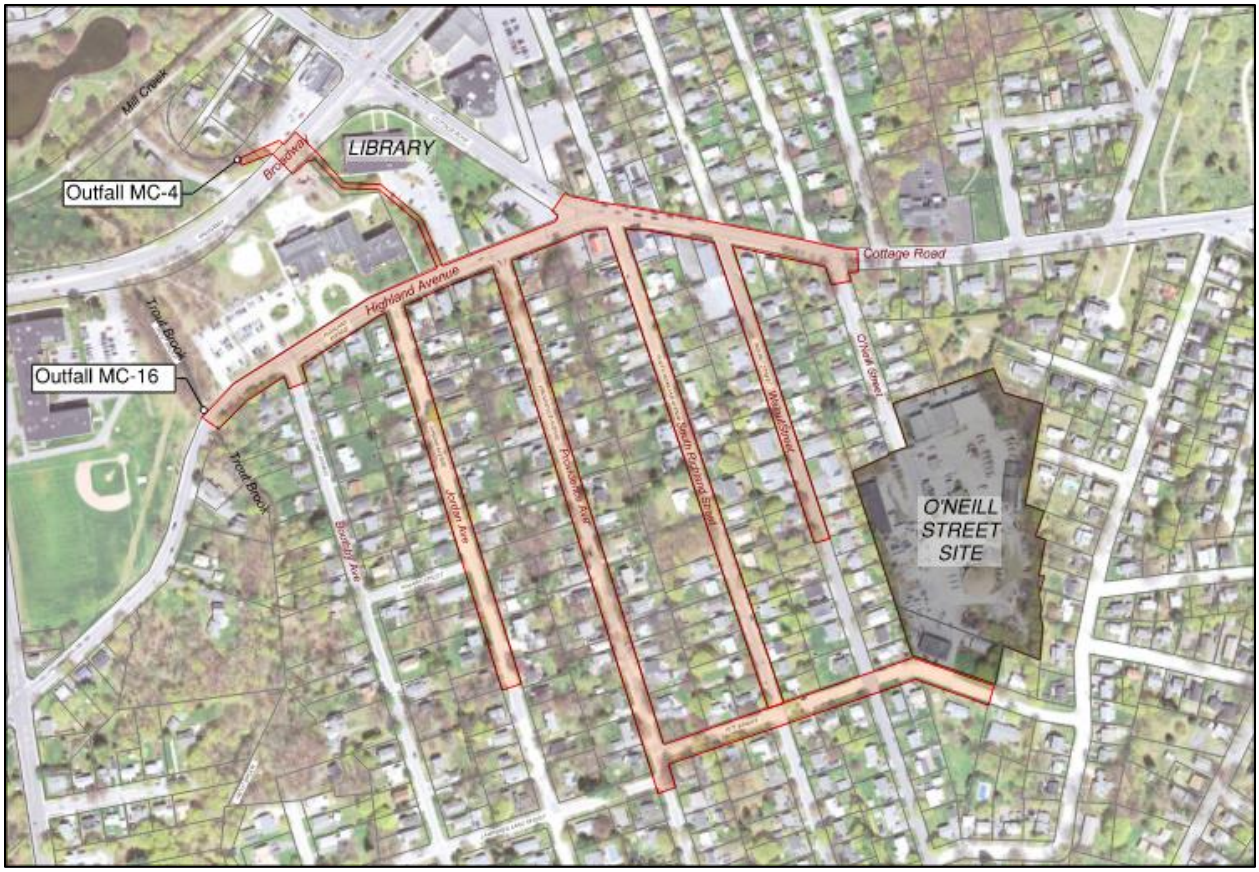



**Figure 3 Alternative A2 Improvements Area**

Alternative B1 evaluates a 21.7-acre watershed that is tributary to Outfall MC-16. This alternative includes constructing a new storm drain from MC-16 at Trout Brook along Highland Avenue to Cottage Road and along Cottage Road to O'Neill street. This alternative includes adding separated runoff from the 6.7-acre former Public Works site on O'Neill Street and directing that runoff to MC-16. In this alternative the area tributary to Broadway crossing to MC-4 is reduced by redirecting areas of Highland Avenue and Cottage Road to the east, leaving the library site to drain in its existing condition.

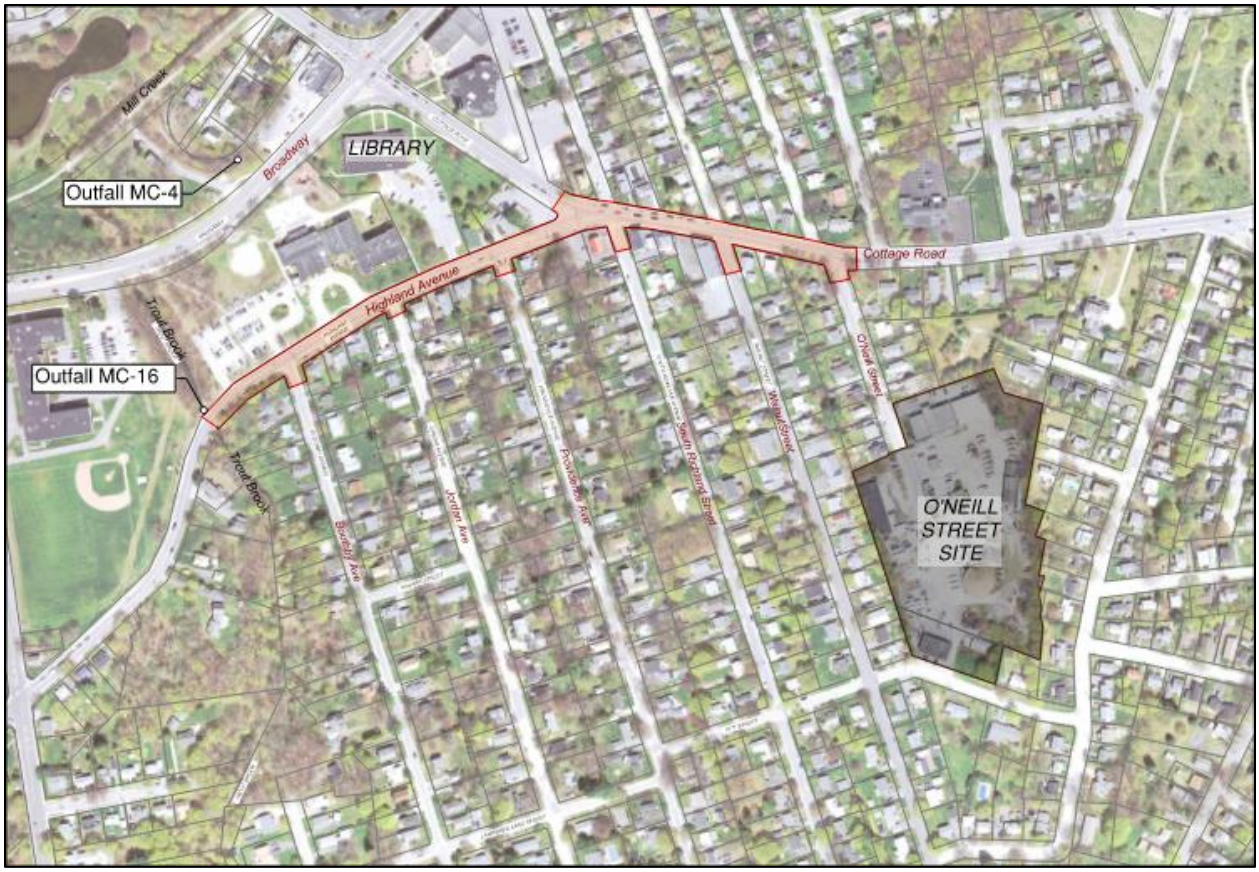



**Figure 4 Alternative B1 Improvements Area**

Alternative B2 expands the B1 study area adding 32.8 acres representing the separation of stormwater runoff from the combined sewers in Jordan Avenue, Providence Avenue, South Richland Avenue, and a portion of Pitt Street to Outfall MC-16.

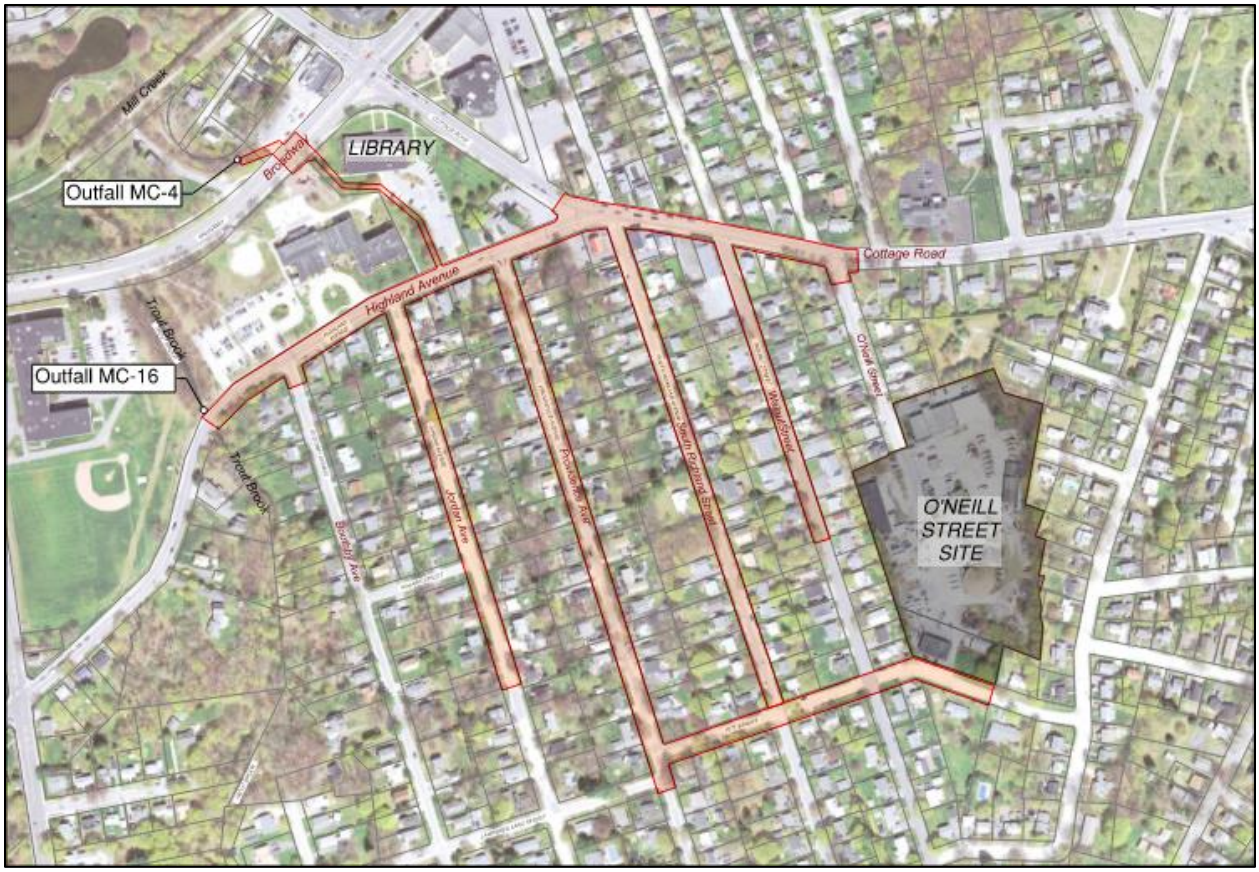



**Figure 5 Alternative B2 Improvements Area**

It is to be noted that Mill Creek (MC-4) and Trout Brook MC-16 are tidally influenced with a Mean High Water (MHW) elevation of approximately 4.2 feet. In addition, the City has experienced flooding of Highland Avenue due to restrictions represented by the culvert crossing of Trout Brook at Broadway. This flooding was investigated in a report by Sebago Technics, Inc. titled *Trout Brook Culvert Replacement Study Report* dated May 2, 2019. The impact of the Broadway culvert is potentially significant for the "B" alternatives and are discussed in the study conclusions and recommendations.

**Watershed Conditions**

Land Cover

The project area is comprised of relatively densely developed, residential neighborhoods with more impervious, multi-family, commercial, and municipal uses along Broadway and Cottage Road. Residential development is generally characterized by single family residences and smaller multi-family properties on lots with relatively small yards.

The residential and commercial areas are located within the City's Meetinghouse Hill Community Commercial (MHCC) and Limited Business (LB) zoning districts. Residential properties generally range from 1/8 to1/4 acre lots with a few larger properties. Impervious coverage varies from roughly 25% to 45% for detached single family lots to over 70% on some multi-family and commercial properties.

The former Public Works site on O'Neill Street is fully developed with existing buildings and gravel/bituminous parking areas. The proposed redevelopment of this site is anticipated to be comprised of single family and multi-family residential properties, likely reducing impervious cover. This area has been modeled under the assumption that the land cover will consist of ¼-acre lots with roughly 40% impervious area. Appendix 2 includes preliminary plans of the site provided by Acorn Engineering in February 2020. Watershed parameters and preliminary post development flow rates for the redevelopment were provided by Acorn Engineering based on this preliminary design. The projected flow rates by Acorn are slightly lower than the rates assumed in our report.

Site Topography

The study area generally slopes to the north and west from high ground in the area of the O'Neill Street site with steeper slopes in the range of 5% to 12% in the residential neighborhoods along Cottage Road and above Highland Avenue. Slopes in the lower watershed are more moderate, ranging from 1% to 5% on the library site and along Broadway.

Surface Water Features

Trout Brook is located west of the study area crossing below Highland Avenue and is the receiving water at Outfall MC-16. After crossing Broadway, Trout brook is referred to as Mill Creek as it drains north of Broadway to the Fore River. MC-4 discharges to a channel that is tributary to Mill Creek up stream of the bridge at Cottage Road.

Soils

Soil characteristics were obtained from the Soil Conservation Service (SCS) Medium Intensity Soil Survey of Cumberland County.

| **Soil Types and Characteristics** | | |
|---|---|---|
| Soil Type | Symbol | HSG |
| Deerfield Loamy Fine Sand | DeB | A |
| Elmwood Fine Sandy Loam | EmB | B |
| Hinckley Loamy Sand | HlB | A |
| Swanton Fine Sandy Loam | Sz | C/D |
| Windsor Loamy Sand | WmB | A |

The hydrologic soil group (HSG) designation is based on a rating of the relative permeability of a soil, with Group “A” being extremely permeable such as coarse sand, to Group “D” having low permeability such as clay.

**Hydrologic Analysis**

Runoff calculations were performed using the Rational Method and the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds, Technical Release #55" and HydroCAD Stormwater Modeling System software. A 24-hour, SCS Type-III storm distribution was used for analysis.

The Rational method is a locally acceptable methodology for pipe sizing and closed drainage design and is a recommended Practice in the Maine Department of Transportation (MDOT) Highway Design Guide for street drainage. This method is suitable for small urban watersheds where the SCS may overestimate peak flows. The evaluation included in this report only considers the mainline run of storm drains. Catch basin inlet capacity, gutter spread and storm drain lateral capacity has not been analyzed.

Rainfall

Storm parameters including rainfall depth, storm duration and storm distributions for the analysis were selected from the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rules, Appendix H which presents 24-hour duration rainfalls for various return periods. The MDEP Chapter 500 Appendix H data has been Data extracted by the Maine Department of Environmental Protection from the Northeast Regional Climate Center website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration’s Regional Climate Center Program, June 2014. The rainfall amounts for Cumberland County are as follows:

| Storm Frequency | 24-hr Duration Rainfall (in.) |
|---|---|
| 2-yr | 3.1 |
| 10-year | 4.6 |
| 25-year | 5.8 |

Rainfall for Rational method calculations are based on intensity, duration, and frequency curves obtained from the Northeast Regional Climate Center website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration’s Regional Climate Center Program.

Land Cover, Curve Number and Runoff Coefficient (C) Values

Curve number and Rational Method C value parameters for the subject watersheds were estimated from aerial photographs, hydrologic soil group mapping, and assessor’s parcel maps. Curve numbers for different combinations of land cover and soil type were assigned based on Table 2-2 of the SCS/TR-55 publication and based on engineering judgement. The scope of this analysis did not include a detailed measurement of impervious cover. Estimates of the level of directly connected impervious areas or other urban impervious area adjustments are outlined in the TR-55 publication.

Summaries of the land cover categories selected can be found in the hydrologic modeling results attached in Appendix 3. Land cover categories for residential areas were estimated by visual review of aerial photographs overlaid with assessor parcel maps. The selection of land cover categories for residential lots was based primarily on a visual estimate of impervious cover. For example, in some cases, a group of smaller residential lots (1/8-1/4 acre) were assigned a 1/3- or 1/2-acre land use curve number if the visually estimated impervious areas appeared to be more in line with the larger lot category. No adjustment was made to account for potential disconnected impervious areas using composite curve numbers based on Figure 2-3 or 2-5 of the SCS/TR-55 publication.

Land cover in the commercial areas was assumed to be 85% impervious per the TR-55 Table 2-2 averages.

C values for the Rational method and hydraulic grade line analysis were estimated based on coefficient values presented in the Maine Department of Environmental Protection (MDEP) Stormwater Management Manual, the Maine Department of Transportation (MDOT) Highway Design Guide and engineering judgment.

**Hydraulic Grade Line Analysis**

The hydraulic grade line calculations were performed using Hydraflow Storm Sewer Extension Version 10.3 for AutoCAD Civil 3D by Autodesk, Inc. The software uses the energy-based Standard Step method to compute the hydraulic profile. This method is an iterative procedure that applies Bernoulli's Energy Equation between the downstream and upstream ends of each line in the system. It uses Manning's Equation to determine head losses due to pipe friction and includes calculations of junction losses in structures.

Summaries of the grade line analysis are presented in Appendix 4.

## Preliminary Design Summary

**Library Site Conceptual Design**

The South Portland library site has experienced periodic flooding in its parking lot. The parking lot drainage system is connected to the City's separated storm drain system crossing the site from Cottage Road and Highland Avenue, crossing Broadway to outfall MC-4 at Mill Creek. Adding separated runoff from the O'Neill Street site redevelopment will increase flow in this system potentially increasing flooding risk. It is the City's intent that as part of any storm drainage improvement the preliminary design include a conceptual design and cost estimate for improvements to the library site parking areas.

Although the library building's front door faces Broadway, the majority of patrons access the site from the driveway and parking lot along Highland Avenue. It is desired that any reconstruction of the Library site related to storm drain capacity also address site improvement with the following objectives:

- Enhance the visibility of the Library signage and entrance on Highland Avenue, particularly for traffic approaching from the east. Visibility is restricted by grade and the proximity of the residence east of the driveway to the street line.
- Enhance the area at the building entrance at the south side of the building to create a sense of entry to the building.
- Create a book drop area at the rear door with the understanding that a maintenance access driveway to the adjacent elementary school is to remain unimpeded.

- Organize and if cost effective, increase the number of parking spaces. Create space for employee parking and ADA accessible parking. Expansion into the green space between the existing lot and Cottage Road is to be limited.
- Include sidewalks to enhance the parking area and provide organized pedestrian access.
- To the extent possible, protect the mature trees between the existing parking area and the adjacent elementary school site
- Include provisions for site lighting to enhance the site and patron experience

Two concept designs were prepared for discussion with City Staff and are presented in the figures below.

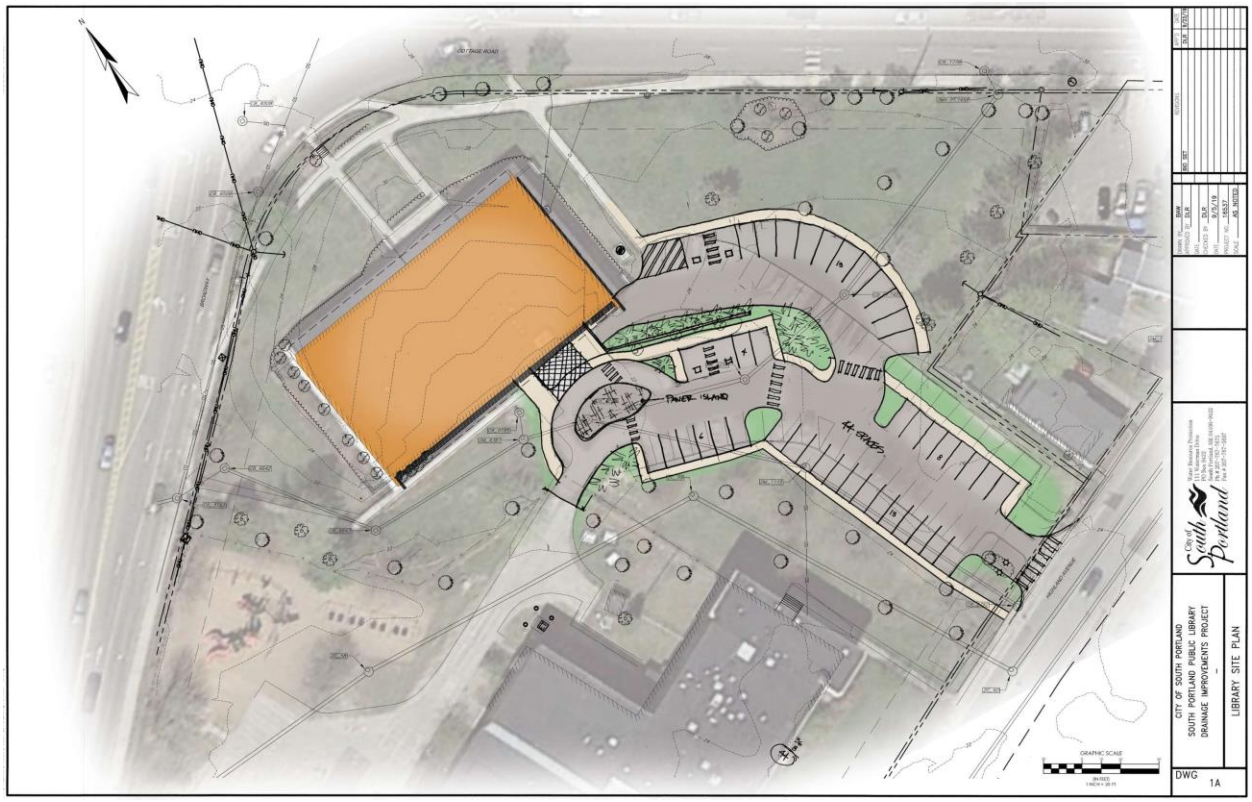



**Figure 6 Library Site Concept 1**

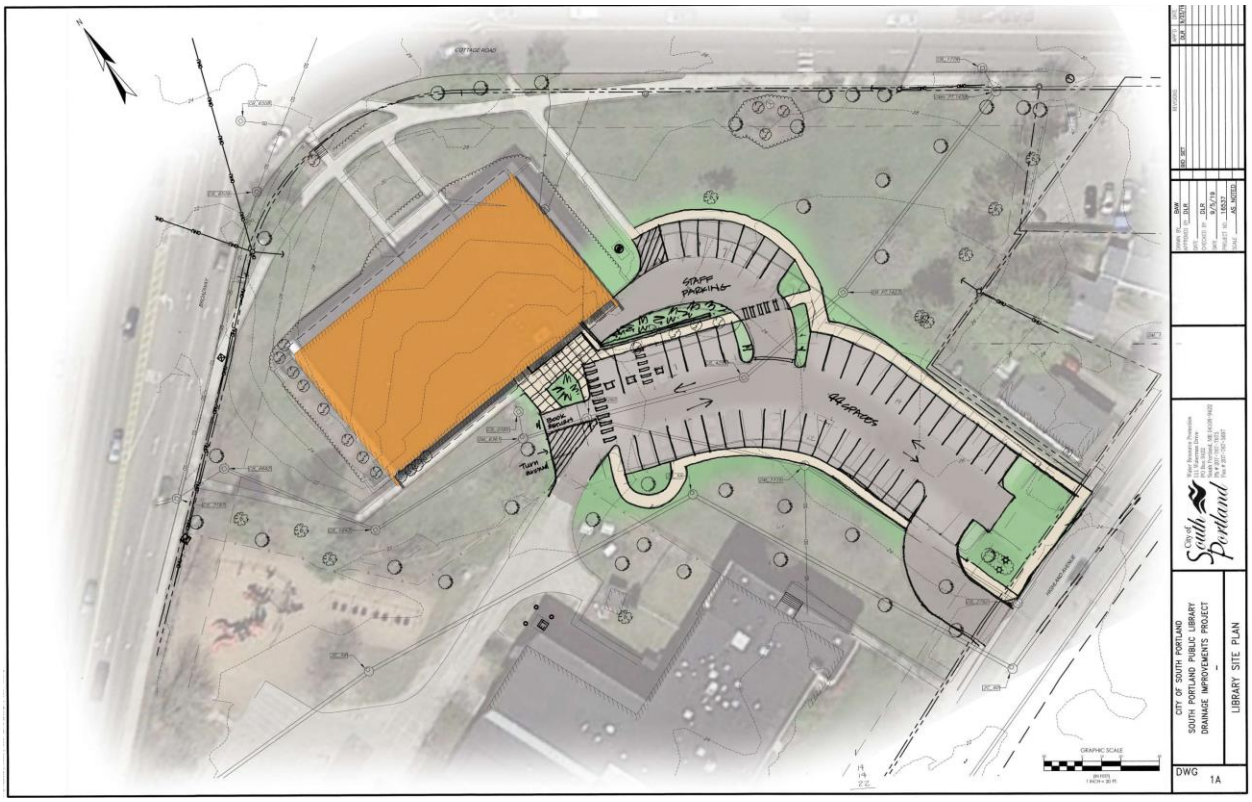



**Figure 7 Library Site Concept 2**

Building Electrical Improvements

The Library's electrical service and equipment is original to the 1966 building construction. City staff have identified concerns related to the reliability of the electrical equipment due to its age, its corresponding limited availability of replacement parts and its capacity for new loads associated with building systems and site lighting. The building does not currently have an emergency power source.

Allied Engineering of Portland Maine was engaged to complete an assessment of the existing electrical power distribution system at the Library for the purpose of developing a scope for upgrades to the electrical service as necessary to support the current and future power needs of the facility.

Allied's complete report is attached in Attachment 3.

In general, the electrical distribution system is beyond its useful life and will increasingly become a maintenance and reliability challenge. It will become increasingly difficult to acquire repair or replacement parts. The equipment manufacturer (FPE) has not been in business for many years. There is only one disconnect switch that is new enough to consider maintaining.

Depending on the future program goals for the facility; the existing 400 Amp, 208- volt, 3 phase electrical service may not have appropriate capacity for potential electrical needs in the future related to possible mechanical, electrical and plumbing (MEP) loads such as increased cooling, humidification or ventilation capacity, parking lot and site lighting, building additions or facility program offering increases.

Allied's report in Attachment 3 presents a series of recommended improvements organized by priority.

- Priority 1 improvements to address system condition deficiencies due to age and limited availability of replacement parts

- Priority 2 improvements to address code requirements
- Priority 3 improvements related to energy savings and equipment upgrades include a stand by sized sufficiently to maintain the building heating equipment, fire alarm system and emergency egress lighting loads.

**Sewer Separation Alternatives**

Preliminary Design plans for the storm drainage separation alternatives are included in Attachment 1. Preliminary opinions cost including estimated construction quantities for each Alternative are included in Attachment 4.

Quantities have been estimated from the preliminary plans with unit costs for construction items based on unit pricing from similar street drainage and sewer separations bid by the City over the past 5 years. A contingency of 30% has been added to the estimated costs due to recent increase in construction costs in southern Maine and unknown project costs. It is noted that no subsurface investigations have been performed and therefore, any estimate of rock excavation, poor soil conditions, and high groundwater/running sand conditions must be verified during final design.

The following factors were assumed in the hydraulic analyses performed to size the proposed improvements.

*Design Storm Flow Rates, Rational Method vs SCS Method*

The City's typical criteria for sizing storm drains is to size for crown full flow in 10-year storm event and check that structure rims do not surcharge in a 25-year event. This is a typical practice in Maine with a long history of acceptable designs.

Recent storm patterns over the last 50 years indicate increased frequency of larger storms and increased peak intensities. In response the National Oceanic and Atmospheric Administration's Regional Climate Center Program revaluated design storms for the northeast United States and publishes design rainfall and intensity-duration-frequency (IDF) curves through the Northeast Regional Climate Center (NRCC) website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. In 2015 MDEP published revised design rainfall depths for use in Maine. This change significantly increases flows in a 25-year storm where the new rainfall depth is roughly equivalent to what had been considered a 100-year rainfall event.

For this study an initial analysis was performed using SCS TR-55 methods using the NRCC and MDEP design rainfall depths and a Type III distribution. A second analysis was performed using the rational method and IDF curves, also from the NRCC data set. A comparison of the results indicated that the Rational method results for a 25-year storm were consistently lower than the TR-55 results.

However, when the C values were adjusted to a larger storm range and the 50-year storm IDF curve was applied, the Rational Method analysis very closely matched the 25-year results from the TR-55 study. Based on this correlation of results a 50-year IDF curve was used in the hydraulic grade line analysis.

*Starting Hydraulic Grade Line Assumptions for Pipe Sizing*

The Rational Method grade line and pipe sizing analysis assumes a starting hydraulic grade line at the crown of the most downstream pipe at Outfall MC-4 for the "A" alternatives and at MC-16 for the "B" alternatives.

At MC-4 in Mill Creek Park, the crown full depth in a 25-year storm is at or above the 25-year water surface elevation at that location estimated in the City's 2019 Trout Brook Culvert Replacement Study report and was determined to be a reasonable starting condition for these alternatives.

Flooding Conditions at MC-16 where Trout Brook crosses Highland Avenue can be significantly higher, with Highland Avenue overtopping above the crown of the road (elevation 13+-) with some observed frequency. The flooding conditions are attributed to an undersized culvert at Broadway which causes significant tailwater extending upstream past Highland Avenue. The flooding conditions at the Highland Avenue crossing are estimated to be elevation 13.1 feet in a 25 year storm based on the 2019 Trout Brook study.

This will impact any storm drain system discharging to Trout Brook. *The reader must understand that the pipe sizing in the B Alternates assumes that the restricting culvert at the downstream Broadway crossing is replaced and that the 25-year water surface elevation is no higher than the crown of the proposed outfall at MC-16. Flooding in Highland Avenue will continue, and may increase if the B alternative(s) are constructed prior to increasing the culvert capacity at the Trout Brook/Broadway crossing*. The sizing and cost of replacing the Broadway culvert is not included in this study but is expected to increase the cost of the B Alternates in excess of $750,000 due to the size and depth of the crossing and potential utility conflicts with a new culvert installation.

## Summary

**Table 1 Separation Alternative Summary**

| Sewer Separation<br>Alternative Comparison | |
|---|---|
| | **Total Estimated Cost** |
| **Alternative A1**<br>**Storm Drainage upgrade O'Neill Street to Highland Avenue to MC-4** | $2,747,000 |
| **Alternative A2**<br>**Storm Drain upgrade and combined Sewer Separation to MC-4** | $6,450,000 |
| **Alternative B1**<br>**Storm Drainage upgrade O'Neill Street to Highland Avenue new drainage Highland Ave to MC-16** | $2,496,000 |
| **Alternative B2**<br>**Storm Drainage upgrade O'Neill Street to Highland Avenue new drainage Highland Ave to MC-16** | $6,160,000 |

**Table 2 Library Site Plan Summary**

| Library Site Plan Summary | |
|---|---|
| **Library Site Improvements**<br>**Concept 1** | $685,000 |

**Table 3 Library Electrical Alternatives**

| Library Electrical Alternatives Summary | | |
|---|---|---|
| **Library Electrical Priority 1** | • Replace the power distribution equipment (load centers, disconnect switches and main distribution panel). | $15,000 |
| **Library Electrical Priority 2** | • Install missing covers over the low voltage wireways and junction boxes.<br>• Apply appropriate cable training/routing and support for loose low voltage wiring.<br>• Maintain NEC required working clearances in front of line voltage power equipment | $2,000 |
| **Library Electrical Priority 3** | A. Upgrade the existing electrical service to a 400 Amp, 480 Volt, 3 phase, 4 wire rating.<br>B. Provide a stand-by power source sized sufficiently to maintain the building heating equipment, fire alarm system and emergency egress lighting loads. The egress lighting and fire alarm loads must still maintain their DC code required power sources. | $120,000<br><br>$20,000 |
| | Total Budget Range for Priority 1, 2 and 3 Items: | $160,000 to $175,000 |

## Recommendations

The recommended option for improvements is the “A” Alternate(s) to include a new storm drain system in Cottage Road from O’Neill Street to Highland Avenue, crossing the Library site and Broadway to MC-4.

The City will need to determine whether available funding and CSO abatement priorities recommend the selection of the A2 Alternative to expand separation into the Meetinghouse Hill neighborhood either now or in the future.

If a future expansion is envisioned, the initial project can be limited to the Alternative A1 extents (Broadway, Library site, Highland Avenue and Cottage Road to O’Neill Street) with the storm drain sized and located to accommodate increased flow from future separation in the A2 Alternate. This will provide capacity and depth required for a future separation projects extending into the neighborhoods south of Highland Avenue and Cottage Road.

As presented in the estimates the “B” Alternatives, constructing the new drainage down Highland Avenue to Trout Brook (MC-16), are slightly less expensive than the “A” Alternatives. These options are not recommended based on the existing flooding conditions at Highland Avenue attributed to the size of the Trout Brook Crossing at Broadway.

The evaluation of a new crossing at Broadway is outside the scope of the study and is not included in the B Alternate estimates. However, it is expected that a new crossing could cost in excess of $750,000 due to the size and depth of the crossing and the extent of utilities that are likely to be impacted. This crossing is on a state highway and the timing and amount of state funds for replacement are unknown.

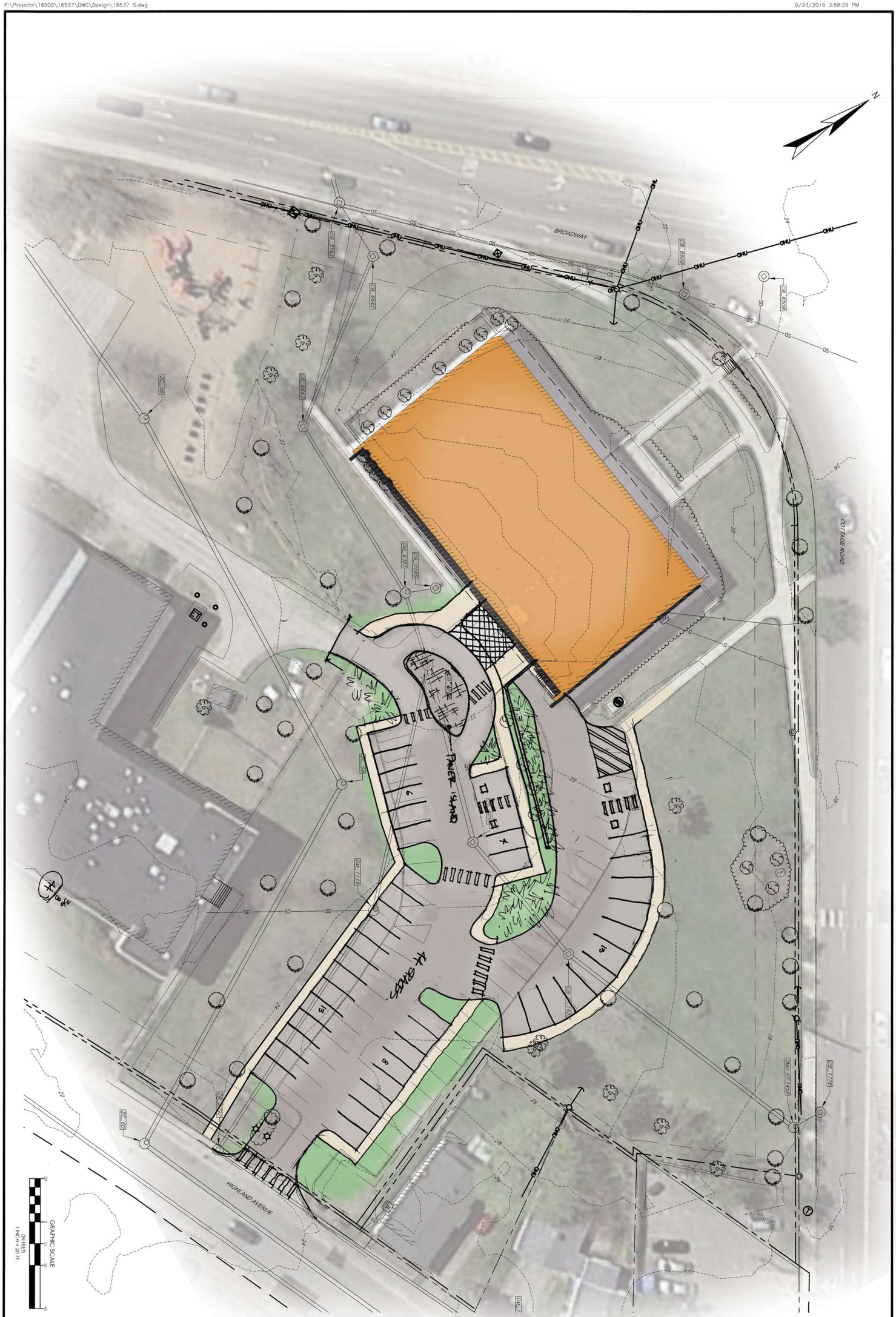
The B Alternatives are recommended only if they are constructed concurrent with or following the replacement of the Broadway Culvert. Until that time, Highland Avenue will continue to flood until the tailwater on the new system can be reduced to an elevation closer to the crown of proposed pipes shown in the preliminary design. It is not practical, due to cost and physical constraints, to construct the B Alternatives large enough or high enough to negate the current tailwater impacts.

Constructing the B alternates prior to reducing tailwater elevations at Trout Brook could increase flooding in Highland Avenue east of Trout Brook due to increased flow in the system and tailwater induced surcharges. The B alternates are more cost effective if the Broadway Culvert replacement cost is not considered or if the City determines that continued and potentially increased flooding at Highland Avenue is acceptable in the near term until the culvert capacity at Broadway is addressed.

# Attachment 1: Schematic Design Plans
# Sewer Separation Alternatives

# Attachment 2: Library Site Concepts

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DWG 1A

CITY OF SOUTH PORTLAND
SOUTH PORTLAND PUBLIC LIBRARY
DRAINAGE IMPROVEMENTS PROJECT
–
LIBRARY SITE PLAN

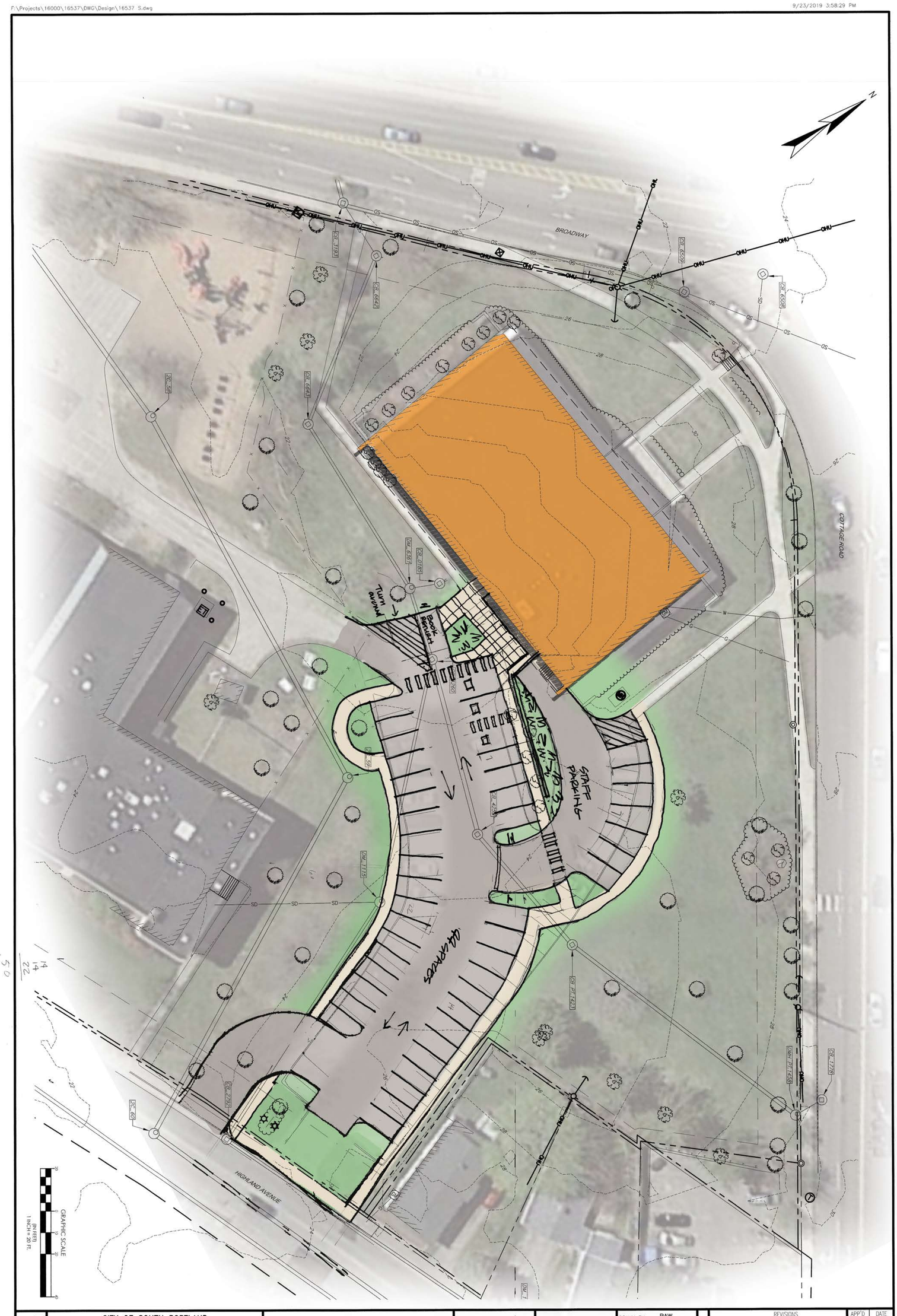
City of South Portland
Water Resource Protection
111 Waterman Drive
PO Box 9422
South Portland, ME 04106-9422
Ph # 207-767-7675
Fax # 207-767-5697

| | |
|---|---|
| DRAWN BY | BAW |
| APPROVED BY | DLR |
| DATE | |
| CHECKED BY | DLR |
| DATE | 9/5/19 |
| PROJECT NO. | 16537 |
| SCALE | AS NOTED |

| REVISIONS | APP'D | DATE |
|---|---|---|
| BID SET | DLR | 9/23/19 |

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DWG 1A

CITY OF SOUTH PORTLAND
SOUTH PORTLAND PUBLIC LIBRARY
DRAINAGE IMPROVEMENTS PROJECT
-
LIBRARY SITE PLAN

City of South Portland
Water Resource Protection
111 Waterman Drive
PO Box 9422
South Portland, ME 04106-9422
Ph # 207-767-7675
Fax # 207-767-5697

| | |
|---|---|
| DRAWN BY | BAW |
| APPROVED BY | DLR |
| DATE | |
| CHECKED BY | DLR |
| DATE | 9/5/19 |
| PROJECT NO. | 16537 |
| SCALE | AS NOTED |

| REVISIONS | APP'D | DATE |
|---|---|---|
| BID SET | DLR | 9/23/19 |

# Attachment 3: Library Electrical Report

Allied Engineering
Structural Mechanical Electrical Commissioning

## I. Introduction and Scope

**Allied Engineering, Inc. (AEI)** was contracted by South Portland to complete an assessment of the existing electrical power distribution system at the South Portland Library Facility for the purpose of developing a scope for upgrades to the electrical service as necessary to support the current and future power needs for the facility.

The assessment is conducted to address concerns with the condition, dependability, capacity and maintainability for the electrical service and distribution system. In conducting the assessment for the existing electrical distribution system, age and condition of equipment, maintainability of existing system, energy efficiency, capacity and code compliance have been considered.

The project assessment and scoping include the following:

1. Meet with designated representatives of the facility to gain an understanding of the use and electrical requirements of each functional space.
2. Conduct field visit to assess the configuration and condition of existing electrical distribution system, analyze existing building design documentation, become familiar with prior renovations and functional space changes throughout the facility.
3. Gather information relative to future growth potential, diversity of functional spaces, potential use changes, space conditioning requirements, and prioritization of upgrades.
4. Develop a report that identifies existing conditions, discussions and recommendations for upgrades to the electrical service and distribution based upon information collected during the assessment phase, complete with opinions of probable related construction costs.
5. Review and evaluate effects of positioning new electrical distribution equipment in the existing main electrical room (shared with the mechanical equipment).

The assessment incorporates the following items:

1. Visual assessment of systems condition and operation
2. Interview of designated facility personnel to gather information relative to electrical distribution system efficiency, maintainability, and other relevant information.
3. Review of system design documentation to analyze the ability for the electrical distribution system to meet current code requirements and industry standards.

## II. Existing Conditions

### A. General

1. The facility is a one-story masonry and steel building with a partial ground floor level. It comprises approximately 18,500 gross total sf and was originally constructed in 1966.
2. The first floor is primarily consistent of the front entry, library space and administrative offices

3. The Ground floor contains a meeting space, storage space, rear entry and electrical/mechanical room.

B. Electrical

1. The facility is served by a pole mounted CMP owned oil filled transformer; manufacture and age unknown. The unit has a 12470-volt, three phase, three wire (delta) overhead primary and a 120/208 volt, three phase, four wire (wye) underground secondary. The unit is assumed to be rated at between 125 and 150 kva, however unconfirmed at time of survey.

2. The secondary underground feeder serves the main switchboard located in the basement level electrical room (shared with mechanical equipment). The 120/208-volt, three phase, four wire main switchboard (labeled MDP) is protected via a 400 Amp, 3 pole, solid neutral service entrance fused disconnect switch (and CT cabinet/meter). The MDP has a 400 Amp bus with a fused distribution disconnect switches to serve the loads. The switchboard is manufactured by FPE (Federal Pacific Electric) in 1966.

3. The facility does not have an emergency power source. The egress lighting and the fire alarm system have integral DC power back up sources.

4. The branch circuit power distribution system for the building consists of two adjacent load centers per floor (basement and first). These load centers serve the interior lighting and miscellaneous power loads; these panels are located in the corridors and are flush mounted.

5. The lighting and power load centers as well as the main distribution panel are manufactured by FPE (Federal Pacific Electric). They appear to be consistent with age of the facility.

6. Major mechanical equipment serving the facility consists of oil-fired boiler for heat, hot water storage tank, and a VFD controlled Trane Air Handling unit with associated A/C condenser unit.

7. There is (1) elevator; HP unconfirmed at time of visit (assumed 20HP).

## III. Discussion

A. Electrical Power Distribution System

1. In general, the electrical distribution system is beyond its useful life and will increasingly become a maintenance and reliability challenge. It would be difficult to acquire repair or replacement parts. The equipment manufacturer (FPE) has not been in business for many years. There is only one disconnect switch that is new enough to consider maintaining

(AC condenser – 200 Amp, 3 Pole).

2. The CMP historical billing indicates the peak demand in July of 2018 was (50 kW). This equates to approximately (140 Amps) of demand load on a service with (400 Amps) of rated capacity or (35%). The existing service would appear to be lightly loaded; however, we should re-check against the peak demand load value for 2019 to determine whether the demand load has increased.

3. Depending on what program goals there are for the facility; the existing 400 Amp, 208-volt, 3 phase electrical service may not have appropriate capacity for potential electrical needs in the future related to possible MEP (increased cooling, humidification or ventilation capacity), site/civil scope (parking lot and site lighting) related to building upgrades, building addition or facility program offering increases.

4. One way to get more electrical capacity without running new underground conduits to the building (challenging since half of the basement is unexcavated) would be to consider changing the service from 208 Volt three phase to 480 Volt three phase , however, keeping the amperage rating at 400 amps so that the existing secondary conduit can be reused. This will require a step-down transformer in the building for low voltage (120 volt) loads. The revised service rating would also be better utilized if the elevator, the AHU and the A/C condenser (and other large loads) were changed to 480-volt three phase input instead of the current 208-volt three phase input (smaller wires and circuit breakers at 480 volt). Having a 480-volt system will also permit the interior and exterior lighting to be replaced and operate at 277 volts instead of 120 volts (fewer circuits)

5. The facility does not have a stand-by power source or related distribution equipment. Prolonged loss of power places the building at risk for pipe freeze and resultant damage.

## IV. Statement of Needs Summary

A. *Description*: Provide replacement and upgrades to the existing electrical distribution system to include: replace power distribution equipment; replace service entrance feeder; add stand-by power source and related power distribution equipment; install new service entrance equipment.

B. *Justification*: There were a few goals in mind when assessing this facility; life safety, shelter in place capability, systems maintainability, and energy savings. As noted throughout this report, the current electrical distribution system is beyond its published service life, in poor condition, and non-code compliant in many instances. As such, the electrical distribution system is not dependable and will introduce potential for uninhabitability in the event of failure

## V. Recommendations/Considerations

### A. Electrical

1. Recommendations for upgrades to existing systems:

Priority 1 Items (System Condition)

a. Replace the power distribution equipment (load centers, disconnect switches and main distribution panel).

Priority 2 (Code Requirements)

a. Install missing covers over the low voltage wireways and junction boxes.
b. Apply appropriate cable training/routing and support for loose low voltage wiring.
c. Maintain NEC required working clearances in front of line voltage power equipment.

Priority 3 (Energy Savings/Equipment Upgrades)

a. Upgrade the existing electrical service to a 400 Amp, 480 Volt, 3 phase, 4 wire rating.
b. Provide a stand-by power source sized sufficiently to maintain the building heating equipment, fire alarm system and emergency egress lighting loads. The egress lighting and fire alarm loads must still maintain their DC code required power sources. Recommended stand-by diesel generator size would be between 15 and 20 kW at 208-volt, 3 phase, 4 wire output. (size confirmed as part of design process)

B. Opinion of probable cost for recommendations listed above.

Priority 1 Items (System Condition)

a. Replace the power distribution equipment (main panel, (3) sub panels) - $ 15,000

Priority 2 (Code Requirements)

b. Misc. work - $3,000

Priority 3 (Energy Savings/Equipment Upgrades)

a. Upgrade the existing electrical service - $120,000.
b. Provide a stand-by power source (generator, panel) - $ 20,000

c. Total budget range for the listed Priority 1,2,3 items above: $145,000 to $175,000

## VI. Closing

It is with pleasure that this report is submitted for your use and consideration. We look forward to working with South Portland in the design development for this project.

The following exclusions apply to the recommendations herein:

2. ADA and Life Safety Upgrades. An independent study may be required to analyze these aspects.
3. The cost for hazardous materials remediation is not included.

# Attachment 4: Cost Estimate Summaries

**City of South Portland**
**Drainage Outfall MC-4 and MC-16 Evaluation**
**and Meeting House Hill Sewer Separation**
**Preliminary Engineers Opinion of Cost**
**Alternative A1**

| Item No. | Item | Unit | Unit Price | Quantity | Total Cost |
|---|---|---|---|---|---|
| 201.24 | Remove Street Tree and Stump | EA | $ 750.00 | 12 | $ 9,000.00 |
| 202.15 | Remove Existing Manhole or Catch Basin | EA | $ 1,500.00 | 11 | $ 16,500.00 |
| 202.2 | Remove Bituminous Concrete Pavement (Plan Quantity) | SY | $ 4.50 | 9570 | $ 43,065.00 |
| 202.6 | Remove Storm Drain or Sewer Pipe | LF | $ 75.00 | 1580 | $ 118,500.00 |
| 203.25 | Granular Borrow | CY | $ 15.00 | 660 | $ 9,900.00 |
| 203.28 | Test Pits | EA | $ 750.00 | 6 | $ 4,500.00 |
| 203.35 | Crushed Stone (Overdepth) | CY | $ 40.00 | 110 | $ 4,400.00 |
| 206.07 | Structural Rock Excavation | CY | $ 150.00 | 250 | $ 37,500.00 |
| 206.061 | Structural Earth Excavation (Overdepth) | CY | $ 25.00 | 110 | $ 2,750.00 |
| 304.1 | Agg Subbase Course Type D | CY | $ 45.00 | 4250 | $ 191,250.00 |
| 304.14 | Agg Base Course Type A | CY | $ 40.00 | 1600 | $ 64,000.00 |
| 312.1 | Bituminous Driveway Apron | SY | $ 12.00 | 210 | $ 2,520.00 |
| 403.207 | Hot Mix Asphalt 19.0 MM | T | $ 145.00 | 1370 | $ 198,650.00 |
| 403.21 | Hot Mix Asphalt 9.5 MM | T | $ 110.00 | 790 | $ 86,900.00 |
| 603.132 | 8-Inch Diameter PVC Storm Drain/Sewer Pipe (ALL DEPTHS) | LF | $ 75.00 | 11 | $ 825.00 |
| 603.159 | 12-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 85.00 | 388 | $ 32,980.00 |
| 603.169 | 15-inch Diameter PVC or HDPE Storm Drain Pipe | LF | $ 95.00 | 287 | $ 27,265.00 |
| 603.179 | 18-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 125.00 | 475 | $ 59,375.00 |
| 603.199 | 24-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 175.00 | 573 | $ 100,275.00 |
| 603.209 | 30-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 200.00 | 724 | $ 144,800.00 |
| 604.131 | 4-foot Diameter Catch Basin | EA | $ 5,500.00 | 20 | $ 110,000.00 |
| 604.132 | 5-foot Diameter Catch Basin | EA | $ 7,500.00 | 7 | $ 52,500.00 |
| 604.15 | 4-foot Diameter Manhole | EA | $ 5,500.00 | 14 | $ 77,000.00 |
| 604.153 | 5-foot Diameter Manhole | EA | $ 7,500.00 | 4 | $ 30,000.00 |
| 608.5 | Bituminous Sidewalk | SY | $ 52.00 | 810 | $ 42,120.00 |
| 609.21 | Slipform Concrete Curb | LF | $ 15.00 | 250 | $ 3,750.00 |
| 609.38 | Remove and Reset Granite Curb | LF | $ 25.00 | 690 | $ 17,250.00 |
| 610.08 | Plain Riprap | CY | $ 300.00 | 10 | $ 3,000.00 |
| 615.072 | Loam, Seed and Mulch | SY | $ 15.00 | 1600 | $ 24,000.00 |
| 652.39 | Work Zone Traffic Control | LS | $ 120,000.00 | 1 | $ 120,000.00 |
| 656.75 | Temporary Soil Erosion and Water Pollution Control | LS | $ 74,000.00 | 1 | $ 74,000.00 |
| 803.204 | 4"/6" Service Leads | LF | $ 100.00 | 80 | $ 8,000.00 |
| **Total** | | | | | **$ 1,716,575** |
| 659.1 | Mobilization and General Conditions | | | 10% | $ 171,658 |
| | Design and Construction Administration | | | 20% | $ 343,315 |
| | Contingency | | | 30% | $ 514,973 |
| | | | | **Estimate** | **$ 2,746,520** |

**City of South Portland**
**Drainage Outfall MC-4 and MC-16 Evaluation**
**and Meeting House Hill Sewer Separation**
**Preliminary Engineers Opinion of Cost**
**Alternative A2**

| Item No. | Item | Unit | Unit Price | Quantity | Total Cost |
|---|---|---|---|---|---|
| 201.24 | Remove Street Tree and Stump | EA | $ 750.00 | 37 | $ 27,750.00 |
| 202.15 | Remove Existing Manhole or Catch Basin | EA | $ 1,500.00 | 13 | $ 19,500.00 |
| 202.2 | Remove Bituminous Concrete Pavement (Plan Quantity) | SY | $ 4.50 | 19400 | $ 87,300.00 |
| 202.6 | Remove Storm Drain or Sewer Pipe | LF | $ 75.00 | 1840 | $ 138,000.00 |
| 203.25 | Granular Borrow | CY | $ 15.00 | 2180 | $ 32,700.00 |
| 203.28 | Test Pits | EA | $ 750.00 | 30 | $ 22,500.00 |
| 203.35 | Crushed Stone (Overdepth) | CY | $ 40.00 | 370 | $ 14,800.00 |
| 206.061 | Structural Earth Excavation (Overdepth) | CY | $ 25.00 | 370 | $ 9,250.00 |
| 206.07 | Structural Rock Excavation | CY | $ 150.00 | 440 | $ 66,000.00 |
| 304.1 | Agg Subbase Course Type D | CY | $ 45.00 | 8600 | $ 387,000.00 |
| 304.14 | Agg Base Course Type A | CY | $ 40.00 | 3240 | $ 129,600.00 |
| 312.1 | Bituminous Driveway Apron | SY | $ 12.00 | 1125 | $ 13,500.00 |
| 403.207 | Hot Mix Asphalt 19.0 MM | T | $ 145.00 | 2640 | $ 382,800.00 |
| 403.21 | Hot Mix Asphalt 9.5 MM | T | $ 110.00 | 1590 | $ 174,900.00 |
| 603.159 | 12-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 85.00 | 2552 | $ 216,920.00 |
| 603.169 | 15-inch Diameter PVC or HDPE Storm Drain Pipe | LF | $ 95.00 | 1461 | $ 138,795.00 |
| 603.179 | 18-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 125.00 | 2135 | $ 266,875.00 |
| 603.199 | 24-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 175.00 | 802 | $ 140,350.00 |
| 603.209 | 30-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 200.00 | 505 | $ 101,000.00 |
| 603.219 | 36-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 280.00 | 713 | $ 199,640.00 |
| 604.094 | 72" Catch Basin Type B1 | EA | $ 9,000.00 | 7 | $ 63,000.00 |
| 604.131 | 4-foot Diameter Catch Basin | EA | $ 5,500.00 | 72 | $ 396,000.00 |
| 604.132 | 5-foot Diameter Catch Basin | EA | $ 7,500.00 | 1 | $ 7,500.00 |
| 604.15 | 4-foot Diameter Manhole | EA | $ 5,500.00 | 36 | $ 198,000.00 |
| 604.153 | 5-foot Diameter Manhole | EA | $ 7,500.00 | 7 | $ 52,500.00 |
| 604.154 | 6-foot Diameter Manhole | EA | $ 9,000.00 | 4 | $ 36,000.00 |
| 608.5 | Bituminous Sidewalk | SY | $ 52.00 | 810 | $ 42,120.00 |
| 609.21 | Slipform Concrete Curb | LF | $ 15.00 | 1130 | $ 16,950.00 |
| 609.38 | Remove and Reset Granite Curb | LF | $ 25.00 | 690 | $ 17,250.00 |
| 610.08 | Plain Riprap | CY | $ 300.00 | 20 | $ 6,000.00 |
| 615.072 | Loam, Seed and Mulch | SY | $ 15.00 | 2680 | $ 40,200.00 |
| 652.39 | Work Zone Traffic Control | LS | $ 282,750.00 | 1 | $ 282,750.00 |
| 656.75 | Temporary Soil Erosion and Water Pollution Control | LS | $ 189,000.00 | 1 | $ 189,000.00 |
| 803.204 | 4"/6" Service Leads | LF | $ 100.00 | 1150 | $ 115,000.00 |
| **Total** | | | | | **$ 4,031,450.00** |
| 659.1 | Mobilization and General Conditions | | | 10% | $ 403,145 |
| | Design and Construction Administration | | | 20% | $ 806,290 |
| | Contingency | | | 30% | $ 1,209,435 |

**Estimate $ 6,450,320**

**City of South Portland**
**Drainage Outfall MC-4 and MC-16 Evaluation**
**and Meeting House Hill Sewer Separation**
**Preliminary Engineers Opinion of Cost**
**Alternative B1**

| Item No. | Item | Unit | Unit Price | Quantity | Total Cost |
|---|---|---|---|---|---|
| 201.24 | Remove Street Tree and Stump | EA | $ 750.00 | 15 | $ 11,250.00 |
| 202.15 | Remove Existing Manhole or Catch Basin | EA | $ 1,500.00 | 7 | $ 10,500.00 |
| 202.2 | Remove Bituminous Concrete Pavement (Plan Quantity) | SY | $ 4.50 | 9030 | $ 40,635.00 |
| 202.6 | Remove Storm Drain or Sewer Pipe | LF | $ 75.00 | 1574 | $ 118,050.00 |
| 203.25 | Granular Borrow | CY | $ 15.00 | 560 | $ 8,400.00 |
| 203.28 | Test Pits | EA | $ 750.00 | 10 | $ 7,500.00 |
| 203.35 | Crushed Stone (Overdepth) | CY | $ 40.00 | 100 | $ 4,000.00 |
| 206.061 | Structural Earth Excavation (Overdepth) | CY | $ 25.00 | 100 | $ 2,500.00 |
| 206.07 | Structural Rock Excavation | CY | $ 150.00 | 250 | $ 37,500.00 |
| 304.1 | Agg Subbase Course Type D | CY | $ 45.00 | 4010 | $ 180,450.00 |
| 304.14 | Agg Base Course Type A | CY | $ 40.00 | 1510 | $ 60,400.00 |
| 312.1 | Bituminous Driveway Apron | SY | $ 12.00 | 210 | $ 2,520.00 |
| 403.207 | Hot Mix Asphalt 19.0 MM | T | $ 145.00 | 1230 | $ 178,350.00 |
| 403.21 | Hot Mix Asphalt 9.5 MM | T | $ 110.00 | 740 | $ 81,400.00 |
| 603.159 | 12-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 75.00 | 387 | $ 29,025.00 |
| 603.169 | 15-inch Diameter PVC or HDPE Storm Drain Pipe | LF | $ 95.00 | 75 | $ 7,125.00 |
| 603.179 | 18-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 125.00 | 275 | $ 34,375.00 |
| 603.199 | 24-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 175.00 | 709 | $ 124,075.00 |
| 603.209 | 30-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 200.00 | 641 | $ 128,200.00 |
| 604.131 | 4-foot Diameter Catch Basin | EA | $ 5,500.00 | 18 | $ 99,000.00 |
| 604.132 | 5-foot Diameter Catch Basin | EA | $ 7,500.00 | 1 | $ 7,500.00 |
| 604.15 | 4-foot Diameter Manhole | EA | $ 5,500.00 | 11 | $ 60,500.00 |
| 604.153 | 5-foot Diameter Manhole | EA | $ 7,500.00 | 6 | $ 45,000.00 |
| 608.5 | Bituminous Sidewalk | SY | $ 52.00 | 860 | $ 44,720.00 |
| 609.21 | Slipform Concrete Curb | LF | $ 15.00 | 410 | $ 6,150.00 |
| 609.38 | Remove and Reset Granite Curb | LF | $ 25.00 | 940 | $ 23,500.00 |
| 610.08 | Plain Riprap | CY | $ 300.00 | 20 | $ 6,000.00 |
| 615.072 | Loam, Seed and Mulch | SY | $ 15.00 | 1520 | $ 22,800.00 |
| 652.39 | Work Zone Traffic Control | LS | $ 96,750.00 | 1 | $ 96,750.00 |
| 656.75 | Temporary Soil Erosion and Water Pollution Control | LS | $ 74,000.00 | 1 | $ 74,000.00 |
| 803.204 | 4"/6" Service Leads | LF | $ 100.00 | 80 | $ 8,000.00 |
| **Total** | | | | | **$ 1,560,175.00** |
| 659.1 | Mobilization and General Conditions | | | 10% | $ 156,018 |
| | Design and Construction Administration | | | 20% | $ 312,035 |
| | Contingency | | | 30% | $ 468,053 |
| | | | | **Estimate** | **$ 2,496,280** |

**City of South Portland**
**Drainage Outfall MC-4 and MC-16 Evaluation**
**and Meeting House Hill Sewer Separation**
**Preliminary Engineers Opinion of Cost**
**Alternative B2**

| Item No. | Item | Unit | Unit Price | Quantity | Total Cost |
|---|---|---|---|---|---|
| 201.24 | Remove Street Tree and Stump | EA | $ 750.00 | 38 | $ 28,500.00 |
| 202.15 | Remove Existing Manhole or Catch Basin | EA | $ 1,500.00 | 13 | $ 19,500.00 |
| 202.2 | Remove Bituminous Concrete Pavement (Plan Quantity) | SY | $ 4.50 | 20810 | $ 93,645.00 |
| 202.6 | Remove Storm Drain or Sewer Pipe | LF | $ 75.00 | 1645 | $ 123,375.00 |
| 203.25 | Granular Borrow | CY | $ 15.00 | 2040 | $ 30,600.00 |
| 203.28 | Test Pits | EA | $ 750.00 | 30 | $ 22,500.00 |
| 203.35 | Crushed Stone (Overdepth) | CY | $ 40.00 | 340 | $ 13,600.00 |
| 206.061 | Structural Earth Excavation (Overdepth) | CY | $ 25.00 | 340 | $ 8,500.00 |
| 206.07 | Structural Rock Excavation | CY | $ 150.00 | 440 | $ 66,000.00 |
| 304.1 | Agg Subbase Course Type D | CY | $ 45.00 | 9230 | $ 415,350.00 |
| 304.14 | Agg Base Course Type A | CY | $ 40.00 | 3470 | $ 138,800.00 |
| 312.1 | Bituminous Driveway Apron | SY | $ 12.00 | 1125 | $ 13,500.00 |
| 403.207 | Hot Mix Asphalt 19.0 MM | T | $ 145.00 | 2830 | $ 410,350.00 |
| 403.21 | Hot Mix Asphalt 9.5 MM | T | $ 110.00 | 1700 | $ 187,000.00 |
| 603.159 | 12-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 75.00 | 2314 | $ 173,550.00 |
| 603.169 | 15-inch Diameter PVC or HDPE Storm Drain Pipe | LF | $ 95.00 | 1589 | $ 150,955.00 |
| 603.179 | 18-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 125.00 | 1832 | $ 229,000.00 |
| 603.199 | 24-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 175.00 | 770 | $ 134,750.00 |
| 603.209 | 30-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 200.00 | 483 | $ 96,600.00 |
| 603.219 | 36-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 280.00 | 640 | $ 179,200.00 |
| 604.094 | 72" Catch Basin Type B1 | EA | $ 9,000.00 | 1 | $ 9,000.00 |
| 604.131 | 4-foot Diameter Catch Basin | EA | $ 5,500.00 | 65 | $ 357,500.00 |
| 604.15 | 4-foot Diameter Manhole | EA | $ 5,500.00 | 31 | $ 170,500.00 |
| 604.153 | 5-foot Diameter Manhole | EA | $ 7,000.00 | 6 | $ 42,000.00 |
| 604.154 | 6-foot Diameter Manhole | EA | $ 9,000.00 | 7 | $ 63,000.00 |
| 608.5 | Bituminous Sidewalk | SY | $ 52.00 | 860 | $ 44,720.00 |
| 609.21 | Slipform Concrete Curb | LF | $ 15.00 | 540 | $ 8,100.00 |
| 609.38 | Remove and Reset Granite Curb | LF | $ 25.00 | 940 | $ 23,500.00 |
| 610.08 | Plain Riprap | CY | $ 300.00 | 20 | $ 6,000.00 |
| 615.072 | Loam, Seed and Mulch | SY | $ 15.00 | 2510 | $ 37,650.00 |
| 652.39 | Work Zone Traffic Control | LS | $ 256,500.00 | 1 | $ 256,500.00 |
| 656.75 | Temporary Soil Erosion and Water Pollution Control | LS | $ 181,000.00 | 1 | $ 181,000.00 |
| 803.204 | 4"/6" Service Leads | LF | $ 100.00 | 1150 | $ 115,000.00 |
| **Total** | | | | | **$ 3,849,745.00** |
| 659.1 | Mobilization and General Conditions | | | 10% | $ 384,974.50 |
| | Design and Construction Administration | | | 20% | $ 769,949.00 |
| | Contingency | | | 30% | $ 1,154,923.50 |

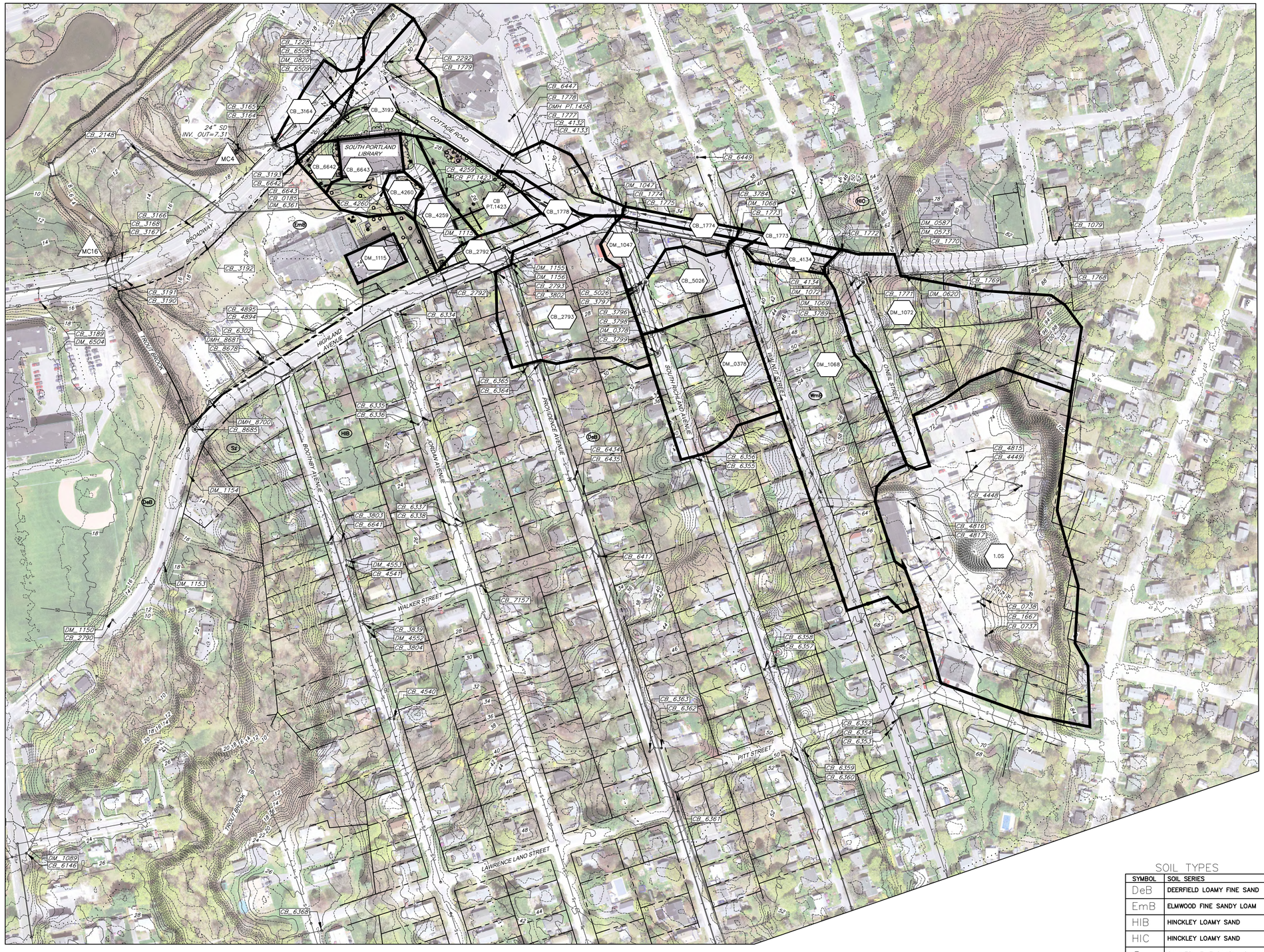
**Estimate $ 6,159,592.00**

**City of South Portland**
**South Portland Public Library Site Concept**
**Preliminary Engineers Opinion of Cost**
**Library Site Concept 1**

| Item No. | Item | Unit | Unit Price | Quantity | Total Cost |
|---|---|---|---|---|---|
| 201.24 | Remove Street Tree and Stump | EA | $ 750.00 | 4 | $ 3,000.00 |
| 202.2 | Remove Bituminous Concrete Pavement (Plan Quantity) | SY | $ 6.00 | 2250 | $ 13,500.00 |
| 304.1 | Agg Subbase Course Type D | CY | $ 45.00 | 910 | $ 40,950.00 |
| 304.14 | Agg Base Course Type A | CY | $ 40.00 | 340 | $ 13,600.00 |
| 403.207 | Hot Mix Asphalt 19.0 MM | T | $ 145.00 | 280 | $ 40,600.00 |
| 403.21 | Hot Mix Asphalt 9.5 MM | T | $ 110.00 | 170 | $ 18,700.00 |
| 603.159 | 12-Inch Diameter Storm Drain Pipe (ALL DEPTHS) | LF | $ 85.00 | 300 | $ 25,500.00 |
| 604.131 | 4-foot Diameter Catch Basin | EA | $ 5,000.00 | 4 | $ 20,000.00 |
| 608.08 | Reinforced Concrete Sidewalk | SY | $ 65.00 | 520 | $ 33,800.00 |
| 609.11 | Vertical Curb Type 1 | LF | $ 35.00 | 1174 | $ 41,078.45 |
| 615.072 | Loam, Seed and Mulch | SY | $ 15.00 | 480 | $ 7,200.00 |
| 626.22 | Non-Metallic Conduit | LF | $ 10.00 | 634 | $ 6,344.90 |
| 627.7 | Pavement Markings | LS | $ 2,000.00 | 1 | $ 2,000.00 |
| 621 | Landscape Plants (Plan Quantity) | LS | $ 20,000.00 | 1 | $ 20,000.00 |
| 634.1 | Street Lighting Type 1 Pole and Fixture | EA | $ 10,525.00 | 10 | $ 105,250.00 |
| | Wall Rail/Fence | LF | $ 80.00 | 75.00 | $ 6,000.00 |
| | Permeable Pavers | SF | $ 18.00 | 2440 | $ 43,920.00 |
| | Modular Block Retaining Wall | SF | $ 45.00 | 250 | $ 11,250.00 |
| | Signage | LS | $ 20,000.00 | 1 | $ 20,000.00 |
| **Total** | | | | | **$ 472,693.35** |
| 659.1 | Mobilization and General Conditions | | | 10% | $ 47,269.34 |
| | Design and Construction Administration | | | 20% | $ 94,538.67 |
| | Contingency | | | 15% | $ 70,904.00 |
| | | | | **Estimate** | **$ 685,405.36** |

# Appendix 1: Watershed Plans

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GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 INCH = 120 FT.

NOTES:
1. OFFSITE SOIL INFORMATION FOR THE PROJECT WAS OBTAINED VIA THE USDA UNITED STATES DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES CONSERVATION SERVICE'S WEB SOIL SURVEY. THE HYDROLOGIC SOIL GROUP (HSG) OF THE SITE SOILS ARE CLASSIFIED BY TECHNICAL RELEASE TR-55 OF THE SOIL CONSERVATION SERVICE.
2. Tc PATHS NOT SHOWN ARE ASSUMED TO HAVE A MINIMUM VALUE OF 6 MINUTES BASED ON TR-55 STANDARDS.

LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION (B — C)
- REACH
- 1 — WATERSHED LABEL
- 1 — REACH
- 1 — DETENTION POND
- SOILS BOUNDARY

SOIL TYPES

| SYMBOL | SOIL SERIES | SLOPE | HSG | DRAINAGE CLASS |
|---|---|---|---|---|
| DeB | DEERFIELD LOAMY FINE SAND | 3–8% | A | VERY WELL DRAINED |
| EmB | ELMWOOD FINE SANDY LOAM | 0–8% | B | MODERATELY WELL DRAINED |
| HIB | HINCKLEY LOAMY SAND | 3–8% | A | VERY WELL DRAINED |
| HIC | HINCKLEY LOAMY SAND | 8–15% | A | VERY WELL DRAINED |
| Sz | SWANTON FINE SANDY LOAM | – | C/D | VERY POORLY DRAINED |
| WmB | WINDSOR LOAMY SAND | 0–8% | A | VERY WELL DRAINED |

| REVISIONS | APP'D | DATE |
|---|---|---|
| PRELIMINARY | DLR | 4/15/20 |
| PRELIMINARY SUMMARY REPORT | DLR | 5/4/20 |

DRAWN BY: BVD
APPROVED BY: DLR
DATE
CHECKED BY: DLR
DATE: 5/7/20
PROJECT NO.: 16537
SCALE: AS NOTED

STATE OF MAINE · DANIEL L RILEY · No. 9422 · PROFESSIONAL ENGINEER
05/06/2020


Water Resource Protection
111 Waterman Drive
PO Box 9422
South Portland, ME 04106-9422
Ph # 207-767-7655
Fax # 207-767-5897


City of South Portland

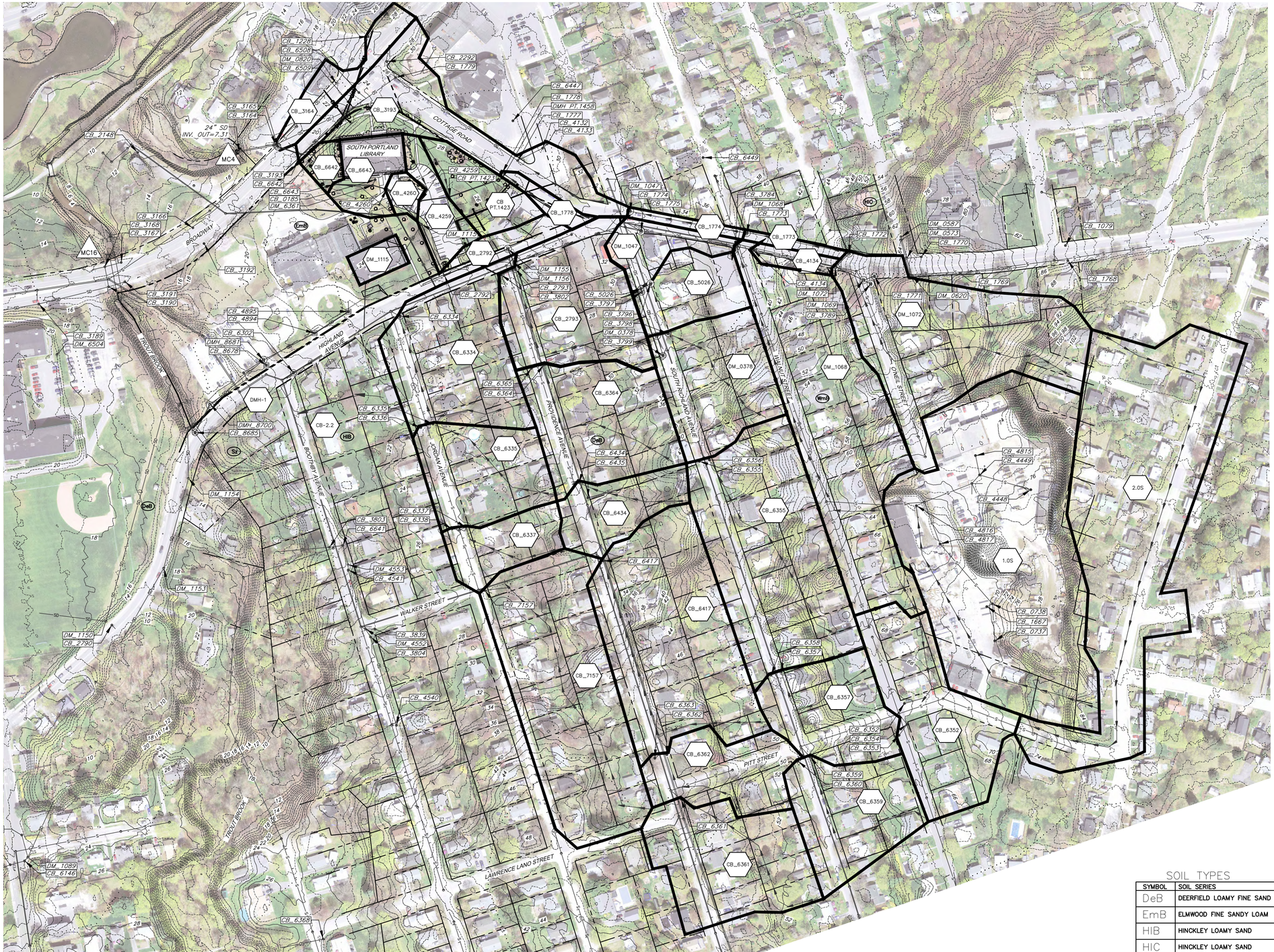
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SOUTH PORTLAND PUBLIC LIBRARY
DRAINAGE IMPROVEMENTS PROJECT
–

WATERSHED PLAN – ALT. A1

DWG 28

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GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 INCH = 120 FT.

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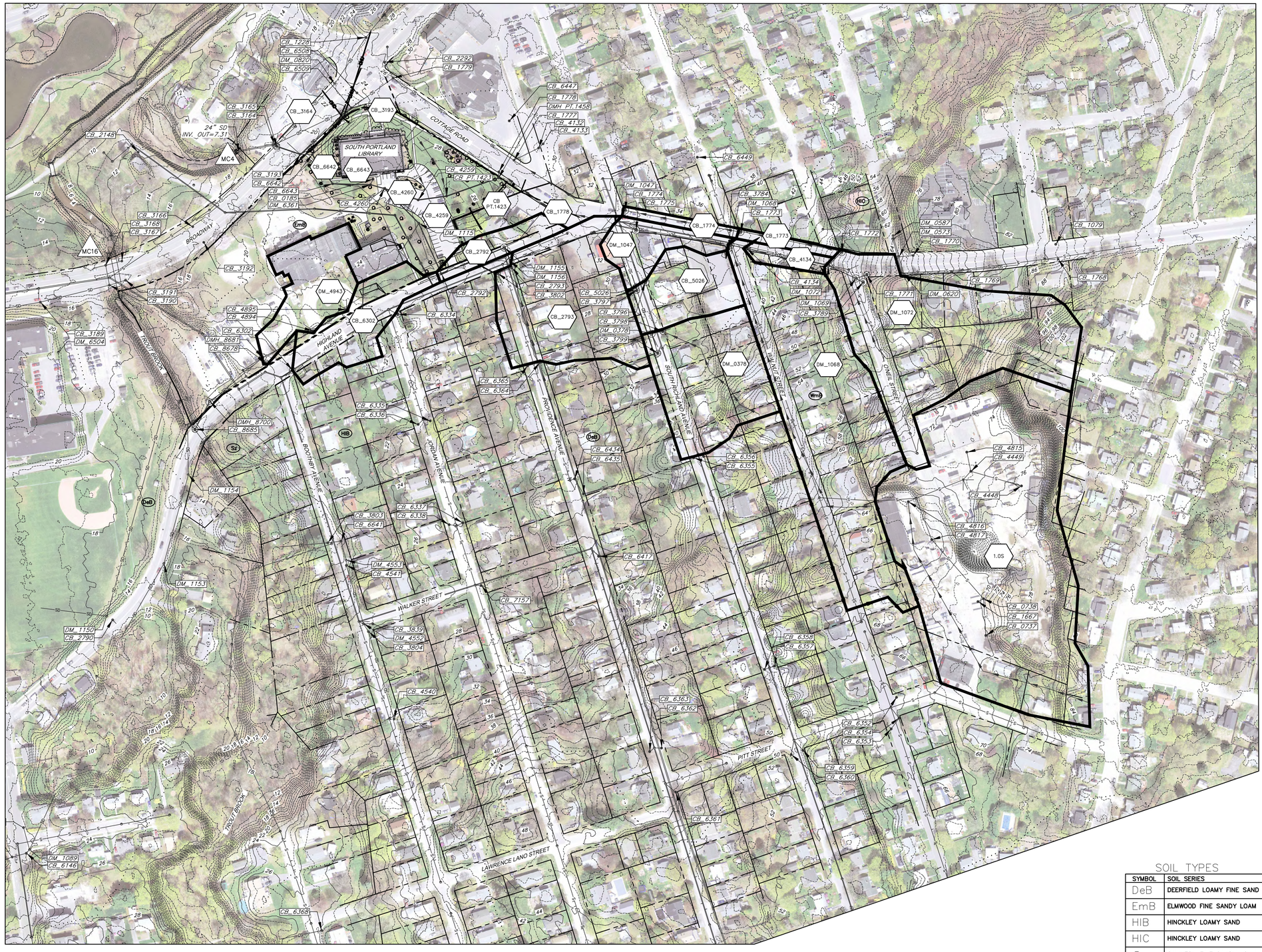
STATE OF MAINE · DANIEL L RILEY · No. 9422 · REGISTERED PROFESSIONAL ENGINEER
05/06/2020

City of South Portland
Water Resource Protection
111 Waterman Drive
PO Box 9422
South Portland, ME 04106-9422
Ph # 207-767-7615
Fax # 207-767-5897

CITY OF SOUTH PORTLAND
SOUTH PORTLAND PUBLIC LIBRARY
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–
WATERSHED PLAN – ALT. A2

DWG 29

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N

GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 INCH = 120 FT.

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STATE OF MAINE · DANIEL L RILEY · No. 9422 · PROFESSIONAL ENGINEER
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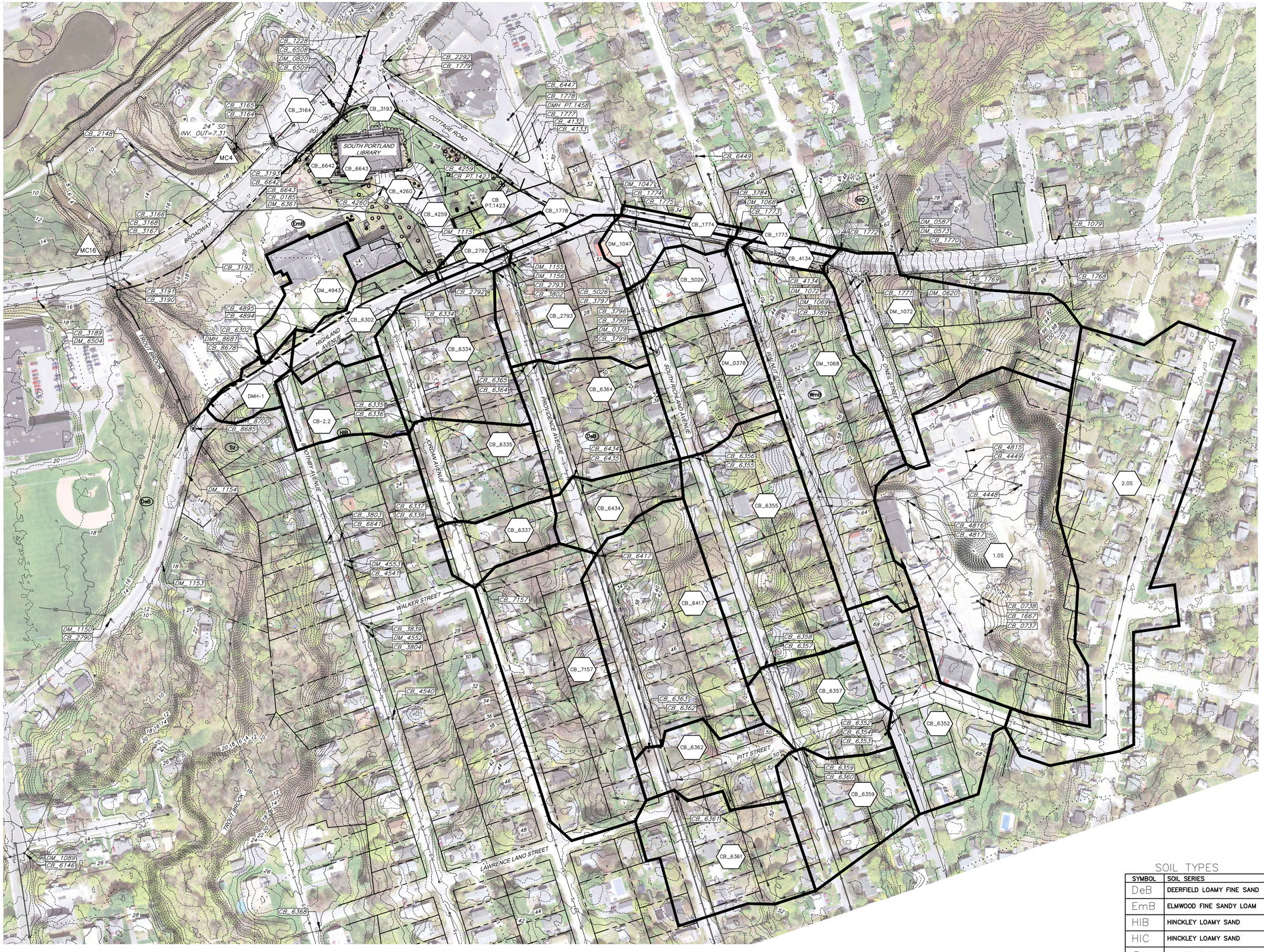
CITY OF SOUTH PORTLAND
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DRAINAGE IMPROVEMENTS PROJECT
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# WATERSHED PLAN – ALT. B1

DWG 30

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N

GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 INCH = 120 FT.

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DRAWN BY: BVD
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SCALE: AS NOTED

STATE OF MAINE · DANIEL L FOLEY · No. 9422 · PROFESSIONAL ENGINEER
05/06/2020


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City of South Portland

CITY OF SOUTH PORTLAND
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–

WATERSHED PLAN – ALT. B2

DWG 31

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# Appendix 2: Preliminary Plans O’Neill Street Redevelopment

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CITY OF SOUTH PORTLAND ORDINANCES.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. EROSION CONTROL MIX BERM TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL.
6. ALL STORM MAIN SHALL BE 12" PVC SDR35 OR ADS HDPE DUAL WALL PIPE.
7. FILTERRA UNITS MAY BE SUBSTITUTED WITH ACF FOCAL POINTS AS AN APPROVED EQUIVALENT
8. ALL FIELD INLETS SHALL HAVE FLAT GRATES UNLESS OTHERWISE NOTED.
9. BW, TW REFER TO SPOT GRADES AT BOTTOM OF WALL AND TOP OF WALL.

## AVERAGE GRADES AND BUILDING HEIGHT

| BUILDING | AVERAGE GRADE | ELEVATION AT ROOF | BUILDING HEIGHT |
|---|---|---|---|
| MULTI-FAMILY BUILDINGS | | | |
| A | 74.97' | 101.25' | 26.28' |
| B | 76.18' | 112.88' | 36.70' |
| C | 76.48' | 103.10' | 26.62' |
| D | 74.45' | 102.80' | 28.35' |
| SINGLE FAMILY HOUSES | | | |
| LOT 1 | 70.81' | 92.15' | 21.34' |
| LOT 2 | 71.18' | 92.90' | 21.73' |
| LOT 3 | 71.79' | 93.40' | 21.61' |
| LOT 4 | 72.20' | 93.90' | 21.70' |
| LOT 5 | 72.43' | 91.40' | 18.98' |
| LOT 6 | 72.10' | 90.15' | 18.05' |
| LOT 7 | 71.60' | 89.15' | 17.55' |
| LOT 8 | 70.78' | 89.15' | 18.38' |
| LOT 9 | 69.75' | 88.40' | 18.65' |

## STRUCTURE TABLE

| NAME | DIA | RIM | INV. IN (SIZE) | INV. OUT (SIZE) | STA / OFFSET |
|---|---|---|---|---|---|
| CB-A | 48" | 73.04' | 61.59' (12")<br>61.59' (12")<br>70.07' (8") | 61.49' (15") | 5+02.58 / 10.97 (R) |
| CB-B | 48" | 73.04' | 68.24' (8") | 62.69' (12") | 5+02.71 / -10.95 (L) |
| CB-C | 48" | 74.13' | 68.92' (6")<br>71.18' (8") | 63.23' (12") | 6+12.85 / -10.98 (L) |
| CB-D | 48" | 72.05' | 67.80' (6")<br>68.93' (6") | 67.70' (12") | 8+75.01 / -11.91 (L) |
| CB-E | 48" | 68.90' | 64.72' (12")<br>64.00' (6")<br>66.04' (8") | 63.90' (12") | 10+10.12 / 10.97 (R) |
| CB-F | 48" | 68.95' | 65.50' (6") | 64.95' (12") | 10+10.17 / -11.57 (L) |
| CB-G | 48" | 75.11' | | 70.00' (10") | |
| CB-H | 48" | 74.00' | | 69.00' (10") | |
| DMH-D | 48" | 69.36' | 61.06' (15")<br>61.06' (6") | 60.96' (15") | 3+94.60 / 9.19 (R) |
| DMH-E | 48" | 74.13' | 62.13' (12")<br>62.13' (12") | 62.03' (12") | 6+12.54 / 10.97 (R) |
| DMH-F | 48" | 75.06' | 62.71' (12")<br>62.71' (10") | 62.61' (12") | 7+32.95 / 10.86 (R) |
| DMH-G | 48" | 72.07' | 63.37' (12")<br>67.59' (12") | 63.27' (12") | 8+74.92 / 10.74 (R) |
| DMH-H | 48" | 75.07' | 69.49' (6")<br>69.49' (6")<br>69.49' (6") | 69.39' (8") | |



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

| ISSUED FOR | BY DATE |
|---|---|
| MDEP | WHS 2/11/20 |

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: MEETING HOUSE HILL PARK REDEVELOPMENT

CLIENT: MEETING HOUSE HILL PARK DEVELOPMENT, LLC

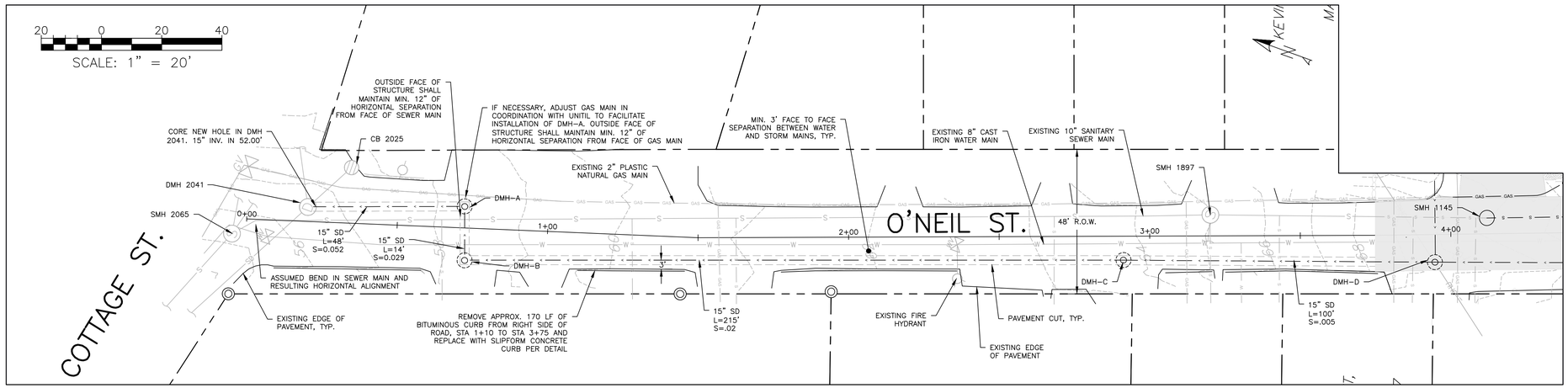
ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

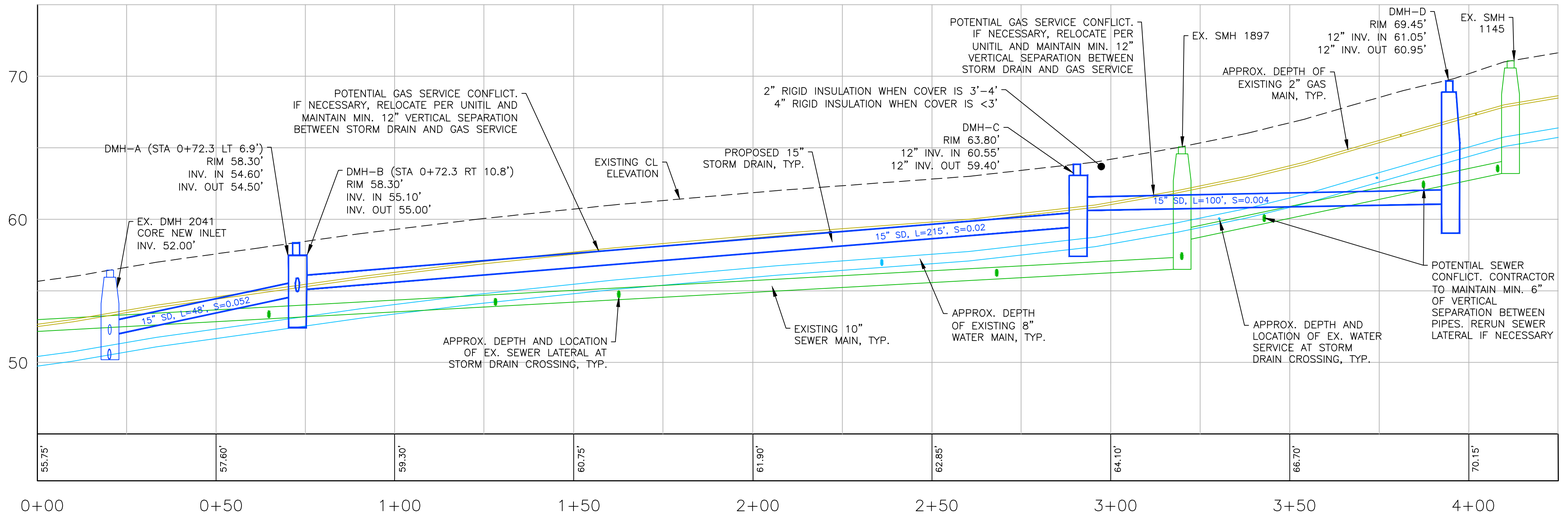
THESE PLANS ARE NOT TO BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

| | |
|---|---|
| FILE: | 1106_CIVIL |
| JN: | 1106 |
| SCALE: | 1"=30' |
| DESIGNED BY: | SJL |
| DRAWN BY: | KRB |
| CHECKED BY: | WHS |

STATE OF MAINE WILLIAM H. SAVAGE No. 15419 2-13-2020 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-30




## O'NEIL ST PROFILE

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

NOTES:

1. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING SEWER, WATER, AND GAS MAINS AND SERVICES HAVE BEEN MAPPED FROM VARIOUS SOURCES AND IN SOME CASES, INTERPOLATED BETWEEN STRUCTURES/VALVES.
2. MAPPING OF UTILITY SERVICES TO EXISTING DWELLINGS IS INCOMPLETE. CONTRACTOR SHOULD ASSUME EACH PROPERTY HAS EXISTING SEWER AND WATER SERVICES AT A MINIMUM. CONTRACTOR SHOULD ALSO ASSUME AT LEAST ONE SEWER SERVICE CONFLICT AND TWO GAS SERVICE CONFLICTS. ANY CONFLICTING SERVICES SHALL BE ALTERED AND RERUN IN COORDINATION WITH AND UNDER THE SUPERVISION OF THE RESPECTIVE UTILITY ENTITY.
3. ANY ALTERATIONS TO EXISTING UTILITY SERVICES SHALL BE COORDINATED WITH THE CORRESPONDING LAND OWNER. MIN. 48 HOURS OF NOTICE SHALL BE GIVEN.
4. ALL EXISTING WATER AND SEWER SERVICES SHALL MAINTAIN A MIN. 6" OF VERTICAL SEPARATION BETWEEN THE STORM DRAIN AT CROSSING. WATER SERVICES SHALL MAINTAIN A MINIMUM OF 5.5' OF COVER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR TEST PITTING AND CONFIRMATION OF EXISTING UTILITY ELEVATIONS AND LOCATIONS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO ANY FURTHER WORK.
6. ALL WORK SHALL BE CONTAINED WITHIN THE CITY STREET RIGHT OF WAY AND SHALL MEET CITY OF SOUTH PORTLAND STANDARDS.
7. 4" LOAM AND SEED IN ALL DISTURBED LAWN AREAS. ANY DISTURBED HARDSCAPE OR LANDSCAPE ETC. SHALL BE RESTORED TO ITS PREVIOUS CONDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS.
8. PIPE MATERIAL SHALL BE EITHER ADS N-12 DUAL WALL SMOOTH INTERIOR HDPE OR PVC SDR 35.
9. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, TRAFFIC CONTROL, AND COORDINATION WITH UTILITIES, LANDOWNERS, AND CITY OF SOUTH PORTLAND.

EXISTING STRUCTURE SCHEDULE

| STRUCTURE I.D. | RIM | INVERT IN | INVERT(S) OUT |
|---|---|---|---|
| CB 2025 | 57.19' | – | 54.59' (8" VC)<br>52.79' (8" VC) |
| DMH 2041 | 56.68' | 52.28' (8" VC)<br>50.86' (8" VC) | 50.83' (UNKNOWN SIZE VC) |
| SMH 1145 | 70.97' | – | 63.10' (10" VC) |
| SMH 1897 (DROP STRUCTURE) | 64.91' | 58.60' (10" VC)<br>56.88' (6" VC) | 56.49' (10" VC) |
| SMH 2065 | 55.16' | 52.11' (6" VC)<br>52.17' (8" VC)<br>52.12' (10" VC)<br>49.84' (10 VC) | 49.35' (10" VC) |

STRUCTURES RECORDED BY SEBAGO TECHNICS ON 'EXISTING CONDITIONS SURVEY OF O'NEIL STREET' FOR THE CITY OF SOUTH PORTLAND. SMH 1897 AND 1145 INVERTS PROVIDED BY SOUTH PORTLAND PUBLIC WORKS.

PROPOSED STRUCTURE SCHEDULE

| STRUCTURE I.D. | RIM | INVERT IN | INVERT OUT | SIZE OF STRUCTURE |
|---|---|---|---|---|
| DMH-A | 58.30' | 54.60' (15") | 54.50' (15") | 4' DIA. |
| DMH-B | 58.30' | 55.10' (15") | 55.00' (15") | 4' DIA. |
| DMH-C | 63.80' | 60.50' (15") | 59.40' (15") | 4' DIA. |
| DMH-D | 69.45' | 61.05' (15") | 60.95' (15") | 4' DIA. |

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

| ISSUED FOR | BY | DATE |
|---|---|---|
| MDEP | WHS | 2/11/20 |
| ATS | WHS | 3/3/20 |

DRAWING NAME: O'NEIL STREET MS4 EXTENSION PLAN
PROJECT NAME: MEETING HOUSE HILL PARK REDEVELOPMENT
CLIENT: MEETING HOUSE HILL PARK DEVELOPMENT, LLC

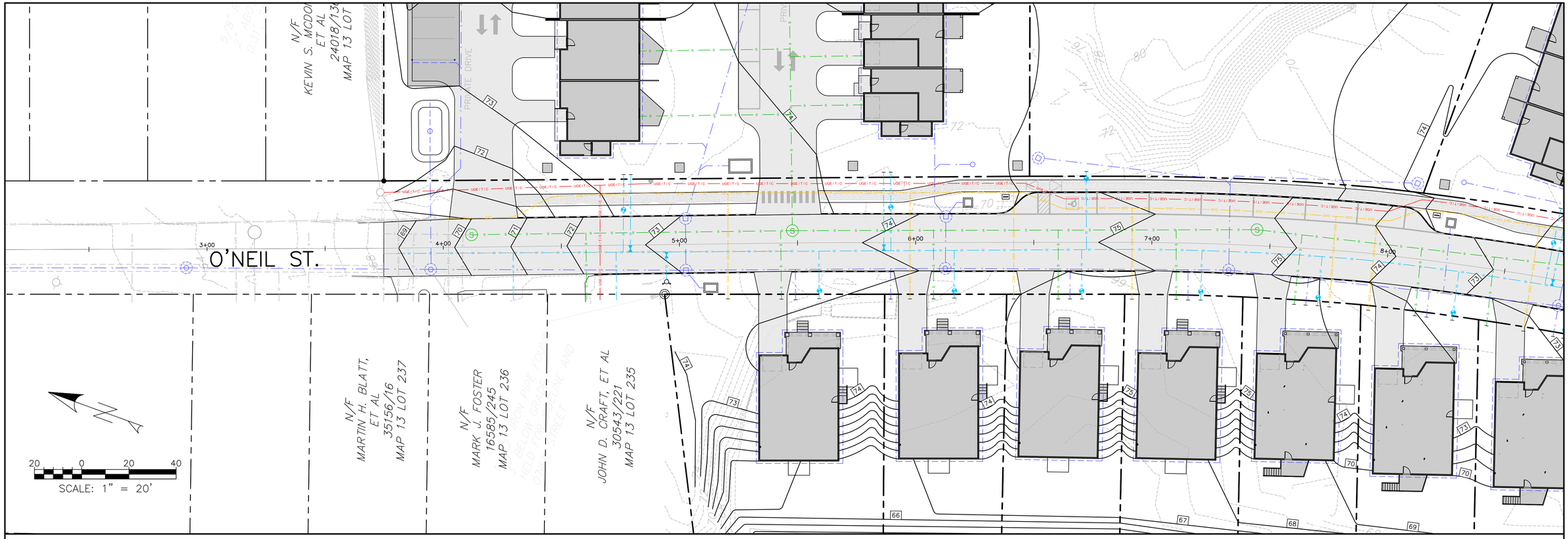
ACORN ENGINEERING, INC.
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65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

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JN: 1106
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: SJL
CHECKED BY: WHS

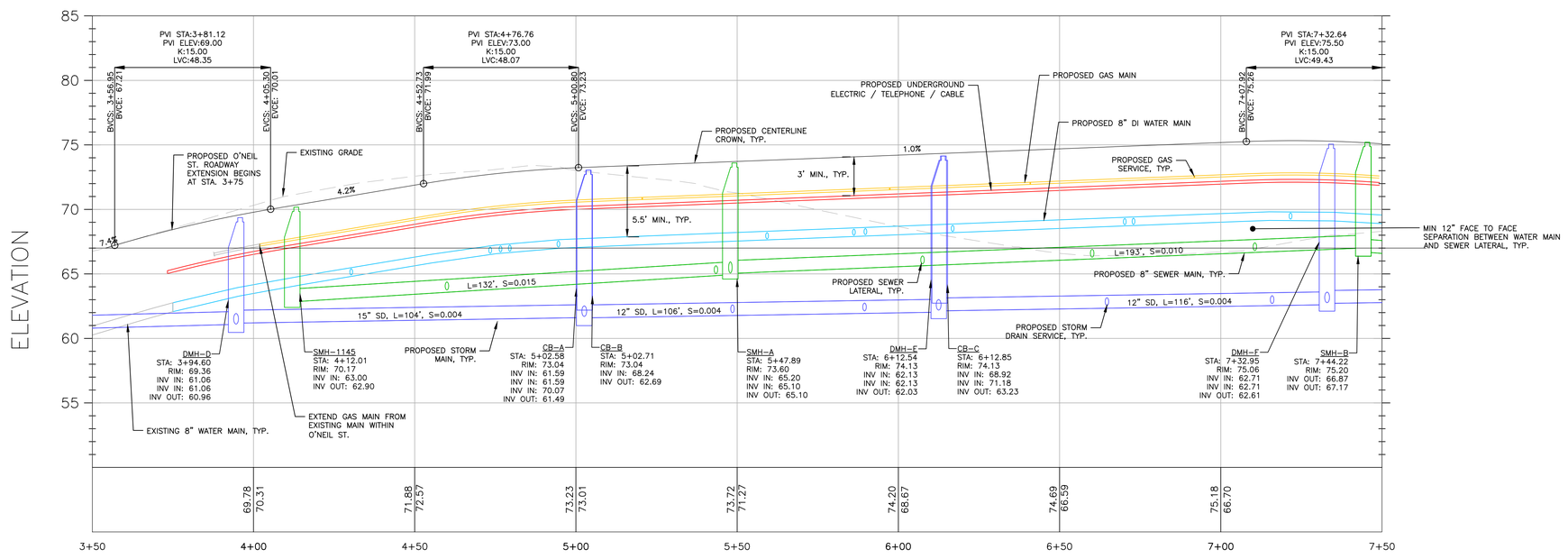
STATE OF MAINE
WILLIAM H. RAVAGE
No. 11419
REGISTERED PROFESSIONAL ENGINEER
2-13-2020

DRAWING NO.
C-31




NOTES:

1. SEWER MAIN AND STORM DRAIN MATERIALS SHALL CONFORM WITH TYPICAL STORM DRAIN AND SEWER TRENCH DETAIL.
2. TEST PIT TO CONFIRM DEPTHS OF EXISTING UTILITIES AND TIE-IN POINTS PRIOR TO UTILITY CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR PROPOSED DEVIATION FROM THE PLANS.




O'NEIL ST PROFILE

HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=5'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

| ISSUED FOR | BY | DATE |
|---|---|---|
| MDEP | WHS | 2/11/20 |
| ATS | WHS | 3/3/20 |

DRAWING NAME: O'NEIL STREET ROADWAY EXTENSION PROFILE – 1

PROJECT NAME: MEETING HOUSE HILL PARK REDEVELOPMENT

CLIENT: MEETING HOUSE HILL PARK DEVELOPMENT, LLC

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(207) 775-2655

| | |
|---|---|
| FILE: | 1106_CIVIL |
| JN: | 1106 |
| SCALE: | AS NOTED |
| DESIGNED BY: | SJL |
| DRAWN BY: | KRB |
| CHECKED BY: | WHS |

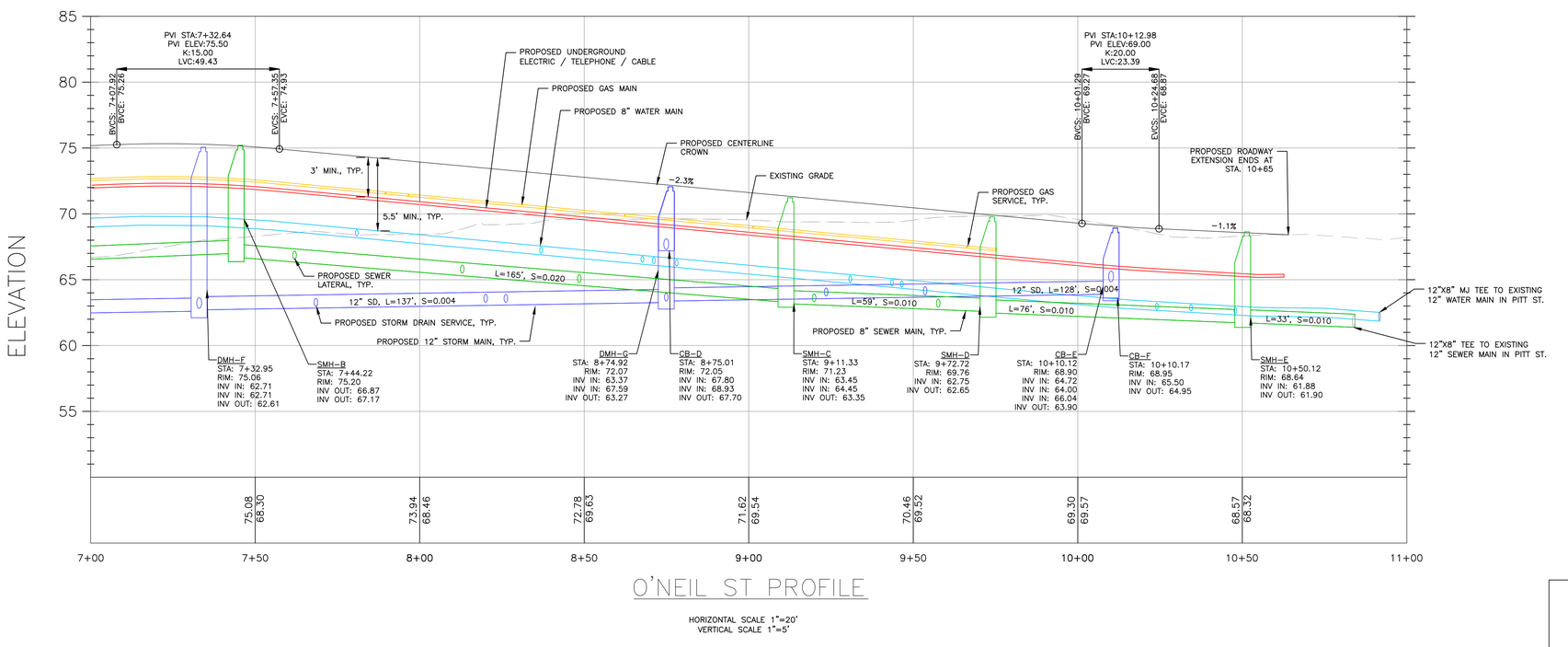



DRAWING NO.
C-32




NOTES:

1. SEWER MAIN AND STORM DRAIN MATERIALS SHALL CONFORM WITH TYPICAL STORM DRAIN AND SEWER TRENCH DETAIL.
2. TEST PIT TO CONFIRM DEPTHS OF EXISTING UTILITIES AND TIE-IN POINTS PRIOR TO UTILITY CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR PROPOSED DEVIATION FROM THE PLANS.




## O'NEIL ST PROFILE

HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=5'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

| ISSUED FOR | BY DATE |
|---|---|
| MDEP | WHS 2/11/20 |
| ATS | WHS 3/3/20 |

DRAWING NAME: O'NEIL STREET ROADWAY EXTENSION PROFILE – 2

PROJECT NAME: MEETING HOUSE HILL PARK REDEVELOPMENT

CLIENT: MEETING HOUSE HILL PARK DEVELOPMENT, LLC

ACORN ENGINEERING, INC.

THESE PLANS SHALL NOT BE MODIFIED, WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

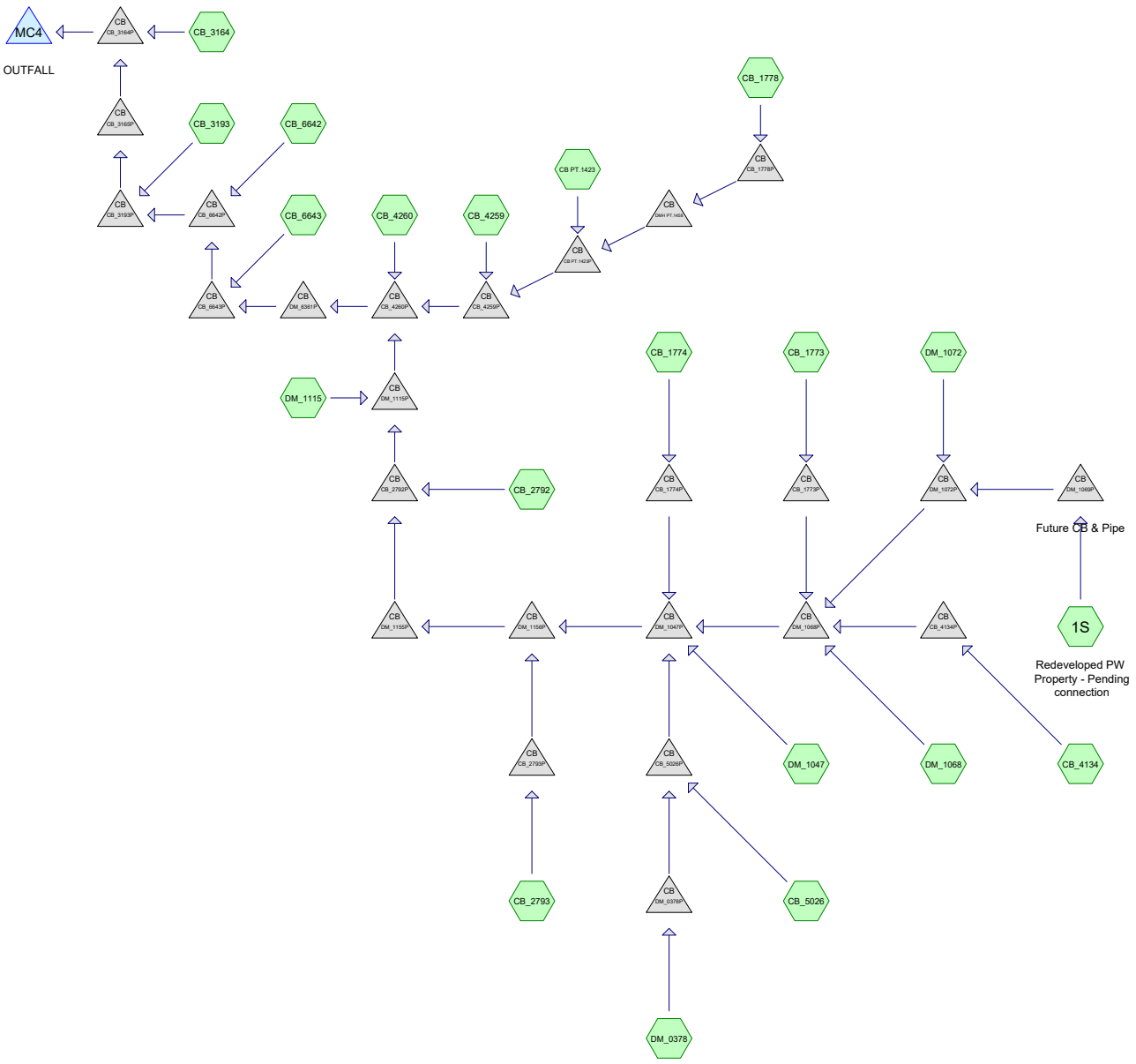
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| | |
|---|---|
| FILE: | 1106_CIVIL |
| JN: | 1106 |
| SCALE: | AS NOTED |
| DESIGNED BY: | SJL |
| DRAWN BY: | KRB |
| CHECKED BY: | WHS |

STATE OF MAINE — WILLIAM H. SAVAGE — 2-13-2020 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-33

# Appendix 3: Hydrologic Analysis (SCS Method)




Subcat Reach Pond Link

**Routing Diagram for 16537 POST-SIZING Alternative A1**
Prepared by Sebago Technics, Inc, Printed 5/6/2020
HydroCAD® 10.00-24 s/n 01856 © 2018 HydroCAD Software Solutions LLC

## Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 0.705 | 70 | 1/2 acre lots, 25% imp, HSG B (CB PT.1423) |
| 18.723 | 61 | 1/4 acre lots, 38% imp, HSG A (1S, CB_2793, CB_5026, DM_0378, DM_1068, DM_1072) |
| 0.632 | 61 | >75% Grass cover, Good, HSG B (CB_4259, CB_4260, CB_6642, CB_6643) |
| 0.507 | 98 | Paved parking, HSG B (CB_4259, CB_4260, CB_6642, CB_6643) |
| 0.194 | 83 | Paved roads w/open ditches, 50% imp, HSG A (CB_4134) |
| 0.210 | 98 | Roofs, HSG A (DM_1115) |
| 0.314 | 98 | Roofs, HSG B (CB_6643) |
| 0.864 | 89 | Urban commercial, 85% imp, HSG A (CB_1773, CB_1774, DM_1047) |
| 3.118 | 92 | Urban commercial, 85% imp, HSG B (CB_1778, CB_2792, CB_3164, CB_3193) |
| **25.268** | **68** | **TOTAL AREA** |

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.14"
Tc=20.0 min CN=61 Runoff=5.25 cfs 0.634 af

**Subcatchment CB PT.1423:** Runoff Area=30,715 sf 25.00% Impervious Runoff Depth=1.74"
Flow Length=157' Tc=9.5 min CN=70 Runoff=1.24 cfs 0.103 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.52 cfs 0.038 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.61 cfs 0.044 af

**Subcatchment CB_1778:** Runoff Area=8,665 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=245' Slope=0.0150 '/' Tc=6.0 min CN=92 Runoff=0.82 cfs 0.061 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=126' Tc=6.0 min CN=92 Runoff=1.65 cfs 0.123 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=475' Tc=20.0 min CN=61 Runoff=1.66 cfs 0.200 af

**Subcatchment CB_3164:** Runoff Area=25,240 sf 85.00% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=92 Runoff=2.40 cfs 0.179 af

**Subcatchment CB_3193:** Runoff Area=84,500 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=875' Tc=13.2 min CN=92 Runoff=6.41 cfs 0.598 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.57 cfs 0.046 af

**Subcatchment CB_4259:** Runoff Area=23,270 sf 57.22% Impervious Runoff Depth=2.72"
Flow Length=171' Slope=0.0200 '/' Tc=8.8 min CN=82 Runoff=1.55 cfs 0.121 af

**Subcatchment CB_4260:** Runoff Area=6,825 sf 72.89% Impervious Runoff Depth=3.29"
Flow Length=90' Slope=0.0400 '/' Tc=6.0 min CN=88 Runoff=0.59 cfs 0.043 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=194' Tc=10.9 min CN=61 Runoff=0.85 cfs 0.081 af

**Subcatchment CB_6642:** Runoff Area=7,920 sf 6.38% Impervious Runoff Depth=1.26"
Flow Length=90' Slope=0.0170 '/' Tc=9.8 min CN=63 Runoff=0.21 cfs 0.019 af

**Subcatchment CB_6643:** Runoff Area=25,275 sf 67.04% Impervious Runoff Depth=3.10"
Flow Length=161' Slope=0.0100 '/' Tc=14.6 min CN=86 Runoff=1.60 cfs 0.150 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=340' Tc=13.0 min CN=61 Runoff=1.60 cfs 0.163 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.23 cfs 0.162 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=3.02 cfs 0.370 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=715' Tc=13.2 min CN=61 Runoff=3.14 cfs 0.323 af

**Subcatchment DM_1115:** Runoff Area=9,153 sf 100.00% Impervious Runoff Depth=4.36"
Flow Length=180' Tc=6.0 min CN=98 Runoff=0.94 cfs 0.076 af

**Pond CB PT.1423P:** Peak Elev=20.03' Inflow=1.97 cfs 0.164 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0207 '/' Outflow=1.97 cfs 0.164 af

**Pond CB_1773P:** Peak Elev=33.96' Inflow=0.52 cfs 0.038 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.52 cfs 0.038 af

**Pond CB_1774P:** Peak Elev=29.90' Inflow=0.61 cfs 0.044 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.61 cfs 0.044 af

**Pond CB_1778P:** Peak Elev=23.64' Inflow=0.82 cfs 0.061 af
12.0" Round Culvert n=0.012 L=14.0' S=0.0393 '/' Outflow=0.82 cfs 0.061 af

**Pond CB_2792P:** Peak Elev=18.47' Inflow=17.30 cfs 2.185 af
36.0" Round Culvert n=0.012 L=132.0' S=0.0016 '/' Outflow=17.30 cfs 2.185 af

**Pond CB_2793P:** Peak Elev=23.11' Inflow=1.66 cfs 0.200 af
12.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=1.66 cfs 0.200 af

**Pond CB_3164P:** Peak Elev=10.47' Inflow=30.15 cfs 3.535 af
42.0" Round Culvert n=0.012 L=88.0' S=0.0082 '/' Outflow=30.15 cfs 3.535 af

**Pond CB_3165P:** Peak Elev=11.37' Inflow=28.63 cfs 3.356 af
42.0" Round Culvert n=0.012 L=8.0' S=0.1150 '/' Outflow=28.63 cfs 3.356 af

**Pond CB_3193P:** Peak Elev=11.98' Inflow=28.63 cfs 3.356 af
42.0" Round Culvert n=0.012 L=58.0' S=0.0105 '/' Outflow=28.63 cfs 3.356 af

**Pond CB_4134P:** Peak Elev=34.97' Inflow=0.57 cfs 0.046 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.57 cfs 0.046 af

**Pond CB_4259P:** Peak Elev=18.96' Inflow=3.52 cfs 0.285 af
18.0" Round Culvert n=0.012 L=85.0' S=0.0221 '/' Outflow=3.52 cfs 0.285 af

**Pond CB_4260P:** Peak Elev=17.64' Inflow=20.48 cfs 2.589 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0129 '/' Outflow=20.48 cfs 2.589 af

**Pond CB_5026P:** Peak Elev=26.26' Inflow=2.43 cfs 0.245 af
18.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=2.43 cfs 0.245 af

**Pond CB_6642P:** Peak Elev=12.72' Inflow=22.27 cfs 2.758 af
36.0" Round Culvert n=0.012 L=29.0' S=0.0210 '/' Outflow=22.27 cfs 2.758 af

**Pond CB_6643P:** Peak Elev=16.24' Inflow=22.08 cfs 2.739 af
36.0" Round Culvert n=0.012 L=85.0' S=0.0081 '/' Outflow=22.08 cfs 2.739 af

**Pond DMH PT.1458:** Peak Elev=22.56' Inflow=0.82 cfs 0.061 af
12.0" Round Culvert n=0.012 L=130.0' S=0.0192 '/' Outflow=0.82 cfs 0.061 af

**Pond DM_0378P:** Peak Elev=26.65' Inflow=1.60 cfs 0.163 af
12.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=1.60 cfs 0.163 af

**Pond DM_1047P:** Peak Elev=25.91' Inflow=14.96 cfs 1.861 af
30.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=14.96 cfs 1.861 af

**Pond DM_1068P:** Peak Elev=33.70' Inflow=11.53 cfs 1.410 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=11.53 cfs 1.410 af

**Pond DM_1069P: Future CB & Pipe** Peak Elev=66.36' Inflow=5.25 cfs 0.634 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=5.25 cfs 0.634 af

**Pond DM_1072P:** Peak Elev=48.54' Inflow=8.00 cfs 0.957 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=8.00 cfs 0.957 af

**Pond DM_1115P:** Peak Elev=18.11' Inflow=17.73 cfs 2.261 af
36.0" Round Culvert n=0.012 L=116.0' S=0.0034 '/' Outflow=17.73 cfs 2.261 af

**Pond DM_1155P:** Peak Elev=19.09' Inflow=16.54 cfs 2.061 af
30.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=16.54 cfs 2.061 af

**Pond DM_1156P:** Peak Elev=19.25' Inflow=16.54 cfs 2.061 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=16.54 cfs 2.061 af

**Pond DM_6361P:** Peak Elev=17.08' Inflow=20.48 cfs 2.589 af
36.0" Round Culvert n=0.012 L=90.0' S=0.0081 '/' Outflow=20.48 cfs 2.589 af

**Pond MC4: OUTFALL** Inflow=30.15 cfs 3.535 af
Primary=30.15 cfs 3.535 af

**Total Runoff Area = 25.268 ac Runoff Volume = 3.535 af Average Runoff Depth = 1.68"**
**53.29% Pervious = 13.464 ac 46.71% Impervious = 11.804 ac**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.87"
Tc=20.0 min CN=61 Runoff=9.33 cfs 1.045 af

**Subcatchment CB PT.1423:** Runoff Area=30,715 sf 25.00% Impervious Runoff Depth=2.65"
Flow Length=157' Tc=9.5 min CN=70 Runoff=1.93 cfs 0.156 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.69 cfs 0.051 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.80 cfs 0.059 af

**Subcatchment CB_1778:** Runoff Area=8,665 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=245' Slope=0.0150 '/' Tc=6.0 min CN=92 Runoff=1.07 cfs 0.081 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=126' Tc=6.0 min CN=92 Runoff=2.15 cfs 0.162 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=475' Tc=20.0 min CN=61 Runoff=2.95 cfs 0.330 af

**Subcatchment CB_3164:** Runoff Area=25,240 sf 85.00% Impervious Runoff Depth=4.87"
Tc=6.0 min CN=92 Runoff=3.11 cfs 0.235 af

**Subcatchment CB_3193:** Runoff Area=84,500 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=875' Tc=13.2 min CN=92 Runoff=8.32 cfs 0.788 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.78 cfs 0.063 af

**Subcatchment CB_4259:** Runoff Area=23,270 sf 57.22% Impervious Runoff Depth=3.80"
Flow Length=171' Slope=0.0200 '/' Tc=8.8 min CN=82 Runoff=2.15 cfs 0.169 af

**Subcatchment CB_4260:** Runoff Area=6,825 sf 72.89% Impervious Runoff Depth=4.43"
Flow Length=90' Slope=0.0400 '/' Tc=6.0 min CN=88 Runoff=0.79 cfs 0.058 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=194' Tc=10.9 min CN=61 Runoff=1.51 cfs 0.134 af

**Subcatchment CB_6642:** Runoff Area=7,920 sf 6.38% Impervious Runoff Depth=2.04"
Flow Length=90' Slope=0.0170 '/' Tc=9.8 min CN=63 Runoff=0.37 cfs 0.031 af

**Subcatchment CB_6643:** Runoff Area=25,275 sf 67.04% Impervious Runoff Depth=4.22"
Flow Length=161' Slope=0.0100 '/' Tc=14.6 min CN=86 Runoff=2.16 cfs 0.204 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=340' Tc=13.0 min CN=61 Runoff=2.84 cfs 0.269 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.94 cfs 0.217 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=5.37 cfs 0.610 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=715' Tc=13.2 min CN=61 Runoff=5.60 cfs 0.533 af

**Subcatchment DM_1115:** Runoff Area=9,153 sf 100.00% Impervious Runoff Depth=5.56"
Flow Length=180' Tc=6.0 min CN=98 Runoff=1.19 cfs 0.097 af

**Pond CB PT.1423P:** Peak Elev=20.21' Inflow=2.88 cfs 0.236 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0207 '/' Outflow=2.88 cfs 0.236 af

**Pond CB_1773P:** Peak Elev=34.03' Inflow=0.69 cfs 0.051 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.69 cfs 0.051 af

**Pond CB_1774P:** Peak Elev=29.97' Inflow=0.80 cfs 0.059 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.80 cfs 0.059 af

**Pond CB_1778P:** Peak Elev=23.72' Inflow=1.07 cfs 0.081 af
12.0" Round Culvert n=0.012 L=14.0' S=0.0393 '/' Outflow=1.07 cfs 0.081 af

**Pond CB_2792P:** Peak Elev=19.38' Inflow=29.70 cfs 3.475 af
36.0" Round Culvert n=0.012 L=132.0' S=0.0016 '/' Outflow=29.70 cfs 3.475 af

**Pond CB_2793P:** Peak Elev=23.73' Inflow=2.95 cfs 0.330 af
12.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=2.95 cfs 0.330 af

**Pond CB_3164P:** Peak Elev=11.40' Inflow=46.83 cfs 5.294 af
42.0" Round Culvert n=0.012 L=88.0' S=0.0082 '/' Outflow=46.83 cfs 5.294 af

**Pond CB_3165P:** Peak Elev=12.24' Inflow=44.95 cfs 5.058 af
42.0" Round Culvert n=0.012 L=8.0' S=0.1150 '/' Outflow=44.95 cfs 5.058 af

**Pond CB_3193P:** Peak Elev=12.85' Inflow=44.95 cfs 5.058 af
42.0" Round Culvert n=0.012 L=58.0' S=0.0105 '/' Outflow=44.95 cfs 5.058 af

**Pond CB_4134P:** Peak Elev=35.05' Inflow=0.78 cfs 0.063 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.78 cfs 0.063 af

**Pond CB_4259P:** Peak Elev=19.24' Inflow=5.02 cfs 0.406 af
18.0" Round Culvert n=0.012 L=85.0' S=0.0221 '/' Outflow=5.02 cfs 0.406 af

**Pond CB_4260P:** Peak Elev=18.66' Inflow=34.25 cfs 4.036 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0129 '/' Outflow=34.25 cfs 4.036 af

**Pond CB_5026P:** Peak Elev=26.68' Inflow=4.32 cfs 0.404 af
18.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=4.32 cfs 0.404 af

**Pond CB_6642P:** Peak Elev=13.88' Inflow=36.72 cfs 4.271 af
36.0" Round Culvert n=0.012 L=29.0' S=0.0210 '/' Outflow=36.72 cfs 4.271 af

**Pond CB_6643P:** Peak Elev=17.38' Inflow=36.40 cfs 4.240 af
36.0" Round Culvert n=0.012 L=85.0' S=0.0081 '/' Outflow=36.40 cfs 4.240 af

**Pond DMH PT.1458:** Peak Elev=22.64' Inflow=1.07 cfs 0.081 af
12.0" Round Culvert n=0.012 L=130.0' S=0.0192 '/' Outflow=1.07 cfs 0.081 af

**Pond DM_0378P:** Peak Elev=27.30' Inflow=2.84 cfs 0.269 af
12.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=2.84 cfs 0.269 af

**Pond DM_1047P:** Peak Elev=27.17' Inflow=25.87 cfs 2.982 af
30.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=25.87 cfs 2.982 af

**Pond DM_1068P:** Peak Elev=34.49' Inflow=20.25 cfs 2.302 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=20.25 cfs 2.302 af

**Pond DM_1069P: Future CB & Pipe** Peak Elev=67.68' Inflow=9.33 cfs 1.045 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=9.33 cfs 1.045 af

**Pond DM_1072P:** Peak Elev=49.50' Inflow=14.24 cfs 1.578 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=14.24 cfs 1.578 af

**Pond DM_1115P:** Peak Elev=18.96' Inflow=30.26 cfs 3.572 af
36.0" Round Culvert n=0.012 L=116.0' S=0.0034 '/' Outflow=30.26 cfs 3.572 af

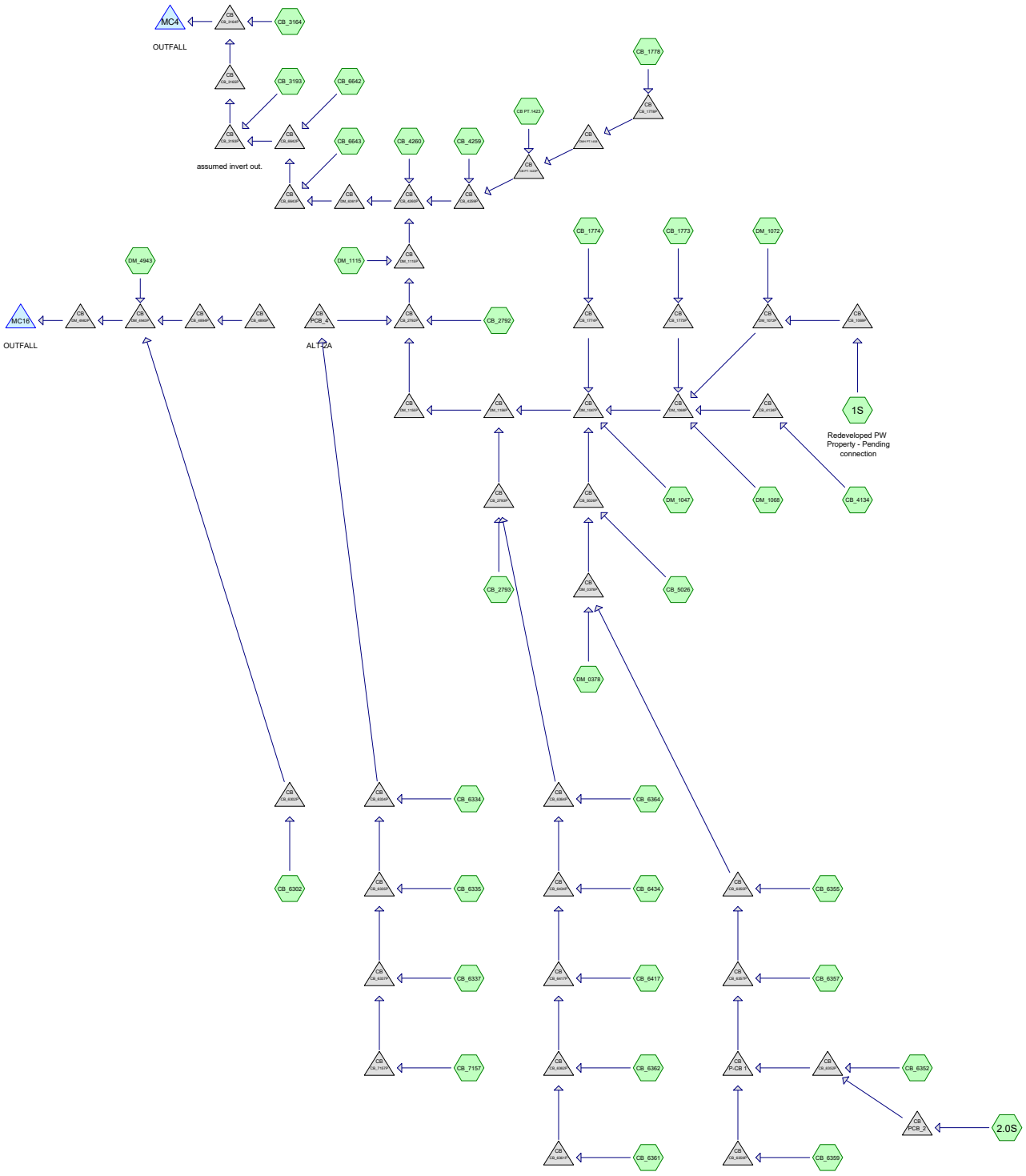
**Pond DM_1155P:** Peak Elev=20.56' Inflow=28.68 cfs 3.313 af
30.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=28.68 cfs 3.313 af

**Pond DM_1156P:** Peak Elev=20.11' Inflow=28.68 cfs 3.313 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=28.68 cfs 3.313 af

**Pond DM_6361P:** Peak Elev=18.11' Inflow=34.25 cfs 4.036 af
36.0" Round Culvert n=0.012 L=90.0' S=0.0081 '/' Outflow=34.25 cfs 4.036 af

**Pond MC4: OUTFALL** Inflow=46.83 cfs 5.294 af
Primary=46.83 cfs 5.294 af

**Total Runoff Area = 25.268 ac Runoff Volume = 5.294 af Average Runoff Depth = 2.51"**
**53.29% Pervious = 13.464 ac 46.71% Impervious = 11.804 ac**




**Routing Diagram for 16537 POST-SIZING Alternative A2**
Prepared by Sebago Technics, Inc, Printed 5/6/2020
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## Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 0.705 | 70 | 1/2 acre lots, 25% imp, HSG B (CB PT.1423) |
| 32.733 | 57 | 1/3 acre lots, 30% imp, HSG A (2.0S, CB_6334, CB_6335, CB_6337, CB_6352, CB_6355, CB_6357, CB_6359, CB_6361, CB_6362, CB_6364, CB_6417, CB_6434, CB_7157) |
| 18.723 | 61 | 1/4 acre lots, 38% imp, HSG A (1S, CB_2793, CB_5026, DM_0378, DM_1068, DM_1072) |
| 0.632 | 61 | >75% Grass cover, Good, HSG B (CB_4259, CB_4260, CB_6642, CB_6643) |
| 0.507 | 98 | Paved parking, HSG B (CB_4259, CB_4260, CB_6642, CB_6643) |
| 1.110 | 83 | Paved roads w/open ditches, 50% imp, HSG A (CB_4134, CB_6302) |
| 0.591 | 98 | Roofs, HSG A (DM_1115, DM_4943) |
| 0.314 | 98 | Roofs, HSG B (CB_6643) |
| 0.864 | 89 | Urban commercial, 85% imp, HSG A (CB_1773, CB_1774, DM_1047) |
| 3.118 | 92 | Urban commercial, 85% imp, HSG B (CB_1778, CB_2792, CB_3164, CB_3193) |
| 0.571 | 81 | Urban industrial, 72% imp, HSG A (DM_4943) |
| **59.869** | **62** | **TOTAL AREA** |

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.14"
Tc=20.0 min CN=61 Runoff=5.25 cfs 0.634 af

**Subcatchment 2.0S:** Runoff Area=257,120 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=1,394' Tc=25.1 min CN=57 Runoff=3.06 cfs 0.442 af

**Subcatchment CB PT.1423:** Runoff Area=30,715 sf 25.00% Impervious Runoff Depth=1.74"
Flow Length=157' Tc=9.5 min CN=70 Runoff=1.24 cfs 0.103 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.52 cfs 0.038 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.61 cfs 0.044 af

**Subcatchment CB_1778:** Runoff Area=8,665 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=245' Slope=0.0150 '/' Tc=6.0 min CN=92 Runoff=0.82 cfs 0.061 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=126' Tc=6.0 min CN=92 Runoff=1.65 cfs 0.123 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=495' Tc=22.4 min CN=61 Runoff=1.59 cfs 0.200 af

**Subcatchment CB_3164:** Runoff Area=25,240 sf 85.00% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=92 Runoff=2.40 cfs 0.179 af

**Subcatchment CB_3193:** Runoff Area=84,500 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=875' Tc=13.2 min CN=92 Runoff=6.41 cfs 0.598 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.57 cfs 0.046 af

**Subcatchment CB_4259:** Runoff Area=23,270 sf 57.22% Impervious Runoff Depth=2.72"
Flow Length=171' Slope=0.0200 '/' Tc=8.8 min CN=82 Runoff=1.55 cfs 0.121 af

**Subcatchment CB_4260:** Runoff Area=6,825 sf 72.89% Impervious Runoff Depth=3.29"
Flow Length=90' Slope=0.0400 '/' Tc=6.0 min CN=88 Runoff=0.59 cfs 0.043 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=194' Tc=10.9 min CN=61 Runoff=0.85 cfs 0.081 af

**Subcatchment CB_6302:** Runoff Area=39,903 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=240' Tc=12.6 min CN=83 Runoff=2.44 cfs 0.215 af

**Subcatchment CB_6334:** Runoff Area=95,695 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=480' Tc=19.6 min CN=57 Runoff=1.25 cfs 0.164 af

**Subcatchment CB_6335:** Runoff Area=64,158 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=360' Slope=0.0200 '/' Tc=20.8 min CN=57 Runoff=0.82 cfs 0.110 af

**Subcatchment CB_6337:** Runoff Area=33,850 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=274' Tc=17.4 min CN=57 Runoff=0.46 cfs 0.058 af

**Subcatchment CB_6352:** Runoff Area=95,334 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=268' Tc=18.5 min CN=57 Runoff=1.27 cfs 0.164 af

**Subcatchment CB_6355:** Runoff Area=155,874 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=587' Tc=18.8 min CN=57 Runoff=2.07 cfs 0.268 af

**Subcatchment CB_6357:** Runoff Area=64,138 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=322' Tc=17.3 min CN=57 Runoff=0.88 cfs 0.110 af

**Subcatchment CB_6359:** Runoff Area=71,080 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=445' Tc=15.5 min CN=57 Runoff=1.01 cfs 0.122 af

**Subcatchment CB_6361:** Runoff Area=91,580 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=468' Tc=20.1 min CN=57 Runoff=1.19 cfs 0.157 af

**Subcatchment CB_6362:** Runoff Area=53,657 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=396' Tc=16.9 min CN=57 Runoff=0.74 cfs 0.092 af

**Subcatchment CB_6364:** Runoff Area=87,777 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=461' Tc=14.2 min CN=57 Runoff=1.29 cfs 0.151 af

**Subcatchment CB_6417:** Runoff Area=153,985 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=706' Tc=19.3 min CN=57 Runoff=2.02 cfs 0.265 af

**Subcatchment CB_6434:** Runoff Area=39,623 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=280' Tc=12.4 min CN=57 Runoff=0.61 cfs 0.068 af

**Subcatchment CB_6642:** Runoff Area=7,920 sf 6.38% Impervious Runoff Depth=1.26"
Flow Length=90' Slope=0.0170 '/' Tc=9.8 min CN=63 Runoff=0.21 cfs 0.019 af

**Subcatchment CB_6643:** Runoff Area=25,275 sf 67.04% Impervious Runoff Depth=3.10"
Flow Length=161' Slope=0.0100 '/' Tc=14.6 min CN=86 Runoff=1.60 cfs 0.150 af

**Subcatchment CB_7157:** Runoff Area=161,968 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=735' Tc=32.5 min CN=57 Runoff=1.73 cfs 0.278 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=340' Tc=13.0 min CN=61 Runoff=1.60 cfs 0.163 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.23 cfs 0.162 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=3.02 cfs 0.370 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=715' Tc=13.2 min CN=61 Runoff=3.14 cfs 0.323 af

**Subcatchment DM_1115:** Runoff Area=9,153 sf 100.00% Impervious Runoff Depth=4.36"
Flow Length=180' Tc=6.0 min CN=98 Runoff=0.94 cfs 0.076 af

**Subcatchment DM_4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=3.29"
Flow Length=207' Tc=9.5 min CN=88 Runoff=3.21 cfs 0.261 af

**Pond CB PT.1423P:** Peak Elev=20.03' Inflow=1.97 cfs 0.164 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0207 '/' Outflow=1.97 cfs 0.164 af

**Pond CB_1069P:** Peak Elev=66.36' Inflow=5.25 cfs 0.634 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=5.25 cfs 0.634 af

**Pond CB_1773P:** Peak Elev=33.96' Inflow=0.52 cfs 0.038 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.52 cfs 0.038 af

**Pond CB_1774P:** Peak Elev=29.90' Inflow=0.61 cfs 0.044 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.61 cfs 0.044 af

**Pond CB_1778P:** Peak Elev=23.64' Inflow=0.82 cfs 0.061 af
12.0" Round Culvert n=0.012 L=14.0' S=0.0393 '/' Outflow=0.82 cfs 0.061 af

**Pond CB_2792P:** Peak Elev=19.12' Inflow=33.93 cfs 4.636 af
48.0" Round Culvert n=0.012 L=132.0' S=0.0016 '/' Outflow=33.93 cfs 4.636 af

**Pond CB_2793P:** Peak Elev=23.75' Inflow=7.20 cfs 0.934 af
24.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=7.20 cfs 0.934 af

**Pond CB_3164P:** Peak Elev=10.91' Inflow=44.30 cfs 5.985 af
48.0" Round Culvert n=0.012 L=88.0' S=0.0082 '/' Outflow=44.30 cfs 5.985 af

**Pond CB_3165P:** Peak Elev=11.84' Inflow=43.20 cfs 5.807 af
48.0" Round Culvert n=0.012 L=8.0' S=0.1150 '/' Outflow=43.20 cfs 5.807 af

**Pond CB_3193P: assumed invert out.** Peak Elev=12.46' Inflow=43.20 cfs 5.807 af
48.0" Round Culvert n=0.012 L=58.0' S=0.0105 '/' Outflow=43.20 cfs 5.807 af

**Pond CB_4134P:** Peak Elev=34.97' Inflow=0.57 cfs 0.046 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.57 cfs 0.046 af

**Pond CB_4259P:** Peak Elev=18.96' Inflow=3.52 cfs 0.285 af
18.0" Round Culvert n=0.012 L=85.0' S=0.0221 '/' Outflow=3.52 cfs 0.285 af

**Pond CB_4260P:** Peak Elev=18.36' Inflow=36.51 cfs 5.040 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0129 '/' Outflow=36.51 cfs 5.040 af

**Pond CB_4894P:** Peak Elev=13.31' Inflow=0.00 cfs 0.000 af
6.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=0.00 cfs 0.000 af

**Pond CB_4895P:** Peak Elev=0.00'
15.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Primary=0.00 cfs 0.000 af

**Pond CB_5026P:** Peak Elev=27.00' Inflow=9.85 cfs 1.351 af
30.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=9.85 cfs 1.351 af

**Pond CB_6302P:** Peak Elev=13.83' Inflow=2.44 cfs 0.215 af
18.0" Round Culvert n=0.012 L=77.0' S=0.0130 '/' Outflow=2.44 cfs 0.215 af

**Pond CB_6334P:** Peak Elev=16.94' Inflow=3.94 cfs 0.611 af
18.0" Round Culvert n=0.012 L=50.0' S=0.0060 '/' Outflow=3.94 cfs 0.611 af

**Pond CB_6335P:** Peak Elev=19.20' Inflow=2.80 cfs 0.447 af
18.0" Round Culvert n=0.012 L=265.0' S=0.0094 '/' Outflow=2.80 cfs 0.447 af

**Pond CB_6337P:** Peak Elev=21.75' Inflow=2.08 cfs 0.337 af
18.0" Round Culvert n=0.012 L=255.0' S=0.0102 '/' Outflow=2.08 cfs 0.337 af

**Pond CB_6352P:** Peak Elev=56.16' Inflow=4.24 cfs 0.606 af
18.0" Round Culvert n=0.012 L=252.0' S=0.0476 '/' Outflow=4.24 cfs 0.606 af

**Pond CB_6355P:** Peak Elev=35.46' Inflow=7.98 cfs 1.106 af
24.0" Round Culvert n=0.012 L=312.0' S=0.0256 '/' Outflow=7.98 cfs 1.106 af

**Pond CB_6357P:** Peak Elev=42.22' Inflow=5.94 cfs 0.838 af
24.0" Round Culvert n=0.012 L=532.0' S=0.0132 '/' Outflow=5.94 cfs 0.838 af

**Pond CB_6359P:** Peak Elev=44.60' Inflow=1.01 cfs 0.122 af
12.0" Round Culvert n=0.012 L=37.0' S=0.0270 '/' Outflow=1.01 cfs 0.122 af

**Pond CB_6361P:** Peak Elev=35.85' Inflow=1.19 cfs 0.157 af
12.0" Round Culvert n=0.012 L=110.0' S=0.0100 '/' Outflow=1.19 cfs 0.157 af

**Pond CB_6362P:** Peak Elev=34.72' Inflow=1.91 cfs 0.250 af
18.0" Round Culvert n=0.012 L=480.0' S=0.0135 '/' Outflow=1.91 cfs 0.250 af

**Pond CB_6364P:** Peak Elev=23.85' Inflow=5.66 cfs 0.733 af
30.0" Round Culvert n=0.012 L=235.0' S=0.0002 '/' Outflow=5.66 cfs 0.733 af

**Pond CB_6417P:** Peak Elev=28.60' Inflow=3.93 cfs 0.514 af
18.0" Round Culvert n=0.012 L=193.0' S=0.0098 '/' Outflow=3.93 cfs 0.514 af

**Pond CB_6434P:** Peak Elev=26.53' Inflow=4.45 cfs 0.582 af
24.0" Round Culvert n=0.012 L=290.0' S=0.0107 '/' Outflow=4.45 cfs 0.582 af

**Pond CB_6642P:** Peak Elev=13.13' Inflow=38.01 cfs 5.209 af
48.0" Round Culvert n=0.012 L=29.0' S=0.0210 '/' Outflow=38.01 cfs 5.209 af

**Pond CB_6643P:** Peak Elev=16.66' Inflow=37.85 cfs 5.190 af
48.0" Round Culvert n=0.012 L=85.0' S=0.0081 '/' Outflow=37.85 cfs 5.190 af

**Pond CB_7157P:** Peak Elev=23.38' Inflow=1.73 cfs 0.278 af
18.0" Round Culvert n=0.012 L=155.0' S=0.0103 '/' Outflow=1.73 cfs 0.278 af

**Pond DMH PT.1458:** Peak Elev=22.56' Inflow=0.82 cfs 0.061 af
12.0" Round Culvert n=0.012 L=130.0' S=0.0192 '/' Outflow=0.82 cfs 0.061 af

**Pond DM_0378P:** Peak Elev=27.30' Inflow=9.24 cfs 1.269 af
30.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=9.24 cfs 1.269 af

**Pond DM_1047P:** Peak Elev=26.22' Inflow=22.51 cfs 2.967 af
36.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=22.51 cfs 2.967 af

**Pond DM_1068P:** Peak Elev=33.70' Inflow=11.53 cfs 1.410 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=11.53 cfs 1.410 af

**Pond DM_1072P:** Peak Elev=48.54' Inflow=8.00 cfs 0.957 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=8.00 cfs 0.957 af

**Pond DM_1115P:** Peak Elev=18.92' Inflow=34.29 cfs 4.712 af
42.0" Round Culvert n=0.012 L=116.0' S=0.0034 '/' Outflow=34.29 cfs 4.712 af

**Pond DM_1155P:** Peak Elev=19.51' Inflow=29.69 cfs 3.901 af
42.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=29.69 cfs 3.901 af

**Pond DM_1156P:** Peak Elev=19.92' Inflow=29.69 cfs 3.901 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=29.69 cfs 3.901 af

**Pond DM_4943P:** Peak Elev=13.26' Inflow=5.55 cfs 0.476 af
18.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=5.55 cfs 0.476 af

**Pond DM_4982P:** Peak Elev=10.42' Inflow=5.55 cfs 0.476 af
18.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=5.55 cfs 0.476 af

**Pond DM_6361P:** Peak Elev=17.76' Inflow=36.51 cfs 5.040 af
42.0" Round Culvert n=0.012 L=90.0' S=0.0081 '/' Outflow=36.51 cfs 5.040 af

**Pond MC16: OUTFALL** Inflow=5.55 cfs 0.476 af
Primary=5.55 cfs 0.476 af

**Pond MC4: OUTFALL** Inflow=44.30 cfs 5.985 af
Primary=44.30 cfs 5.985 af

**Pond P-CB 1:** Peak Elev=44.12' Inflow=5.11 cfs 0.728 af
24.0" Round Culvert n=0.012 L=175.0' S=0.0114 '/' Outflow=5.11 cfs 0.728 af

**Pond PCB_2:** Peak Elev=64.94' Inflow=3.06 cfs 0.442 af
18.0" Round Culvert n=0.012 L=280.0' S=0.0321 '/' Outflow=3.06 cfs 0.442 af

**Pond PCB_4: ALT-2A** Peak Elev=16.60' Inflow=3.94 cfs 0.611 af
18.0" Round Culvert n=0.012 L=108.0' S=0.0056 '/' Outflow=3.94 cfs 0.611 af

**Total Runoff Area = 59.869 ac Runoff Volume = 6.461 af Average Runoff Depth = 1.30"**
**61.79% Pervious = 36.995 ac 38.21% Impervious = 22.874 ac**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.87"
Tc=20.0 min CN=61 Runoff=9.33 cfs 1.045 af

**Subcatchment 2.0S:** Runoff Area=257,120 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=1,394' Tc=25.1 min CN=57 Runoff=5.94 cfs 0.765 af

**Subcatchment CB PT.1423:** Runoff Area=30,715 sf 25.00% Impervious Runoff Depth=2.65"
Flow Length=157' Tc=9.5 min CN=70 Runoff=1.93 cfs 0.156 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.69 cfs 0.051 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.80 cfs 0.059 af

**Subcatchment CB_1778:** Runoff Area=8,665 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=245' Slope=0.0150 '/' Tc=6.0 min CN=92 Runoff=1.07 cfs 0.081 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=126' Tc=6.0 min CN=92 Runoff=2.15 cfs 0.162 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=495' Tc=22.4 min CN=61 Runoff=2.81 cfs 0.330 af

**Subcatchment CB_3164:** Runoff Area=25,240 sf 85.00% Impervious Runoff Depth=4.87"
Tc=6.0 min CN=92 Runoff=3.11 cfs 0.235 af

**Subcatchment CB_3193:** Runoff Area=84,500 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=875' Tc=13.2 min CN=92 Runoff=8.32 cfs 0.788 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.78 cfs 0.063 af

**Subcatchment CB_4259:** Runoff Area=23,270 sf 57.22% Impervious Runoff Depth=3.80"
Flow Length=171' Slope=0.0200 '/' Tc=8.8 min CN=82 Runoff=2.15 cfs 0.169 af

**Subcatchment CB_4260:** Runoff Area=6,825 sf 72.89% Impervious Runoff Depth=4.43"
Flow Length=90' Slope=0.0400 '/' Tc=6.0 min CN=88 Runoff=0.79 cfs 0.058 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=194' Tc=10.9 min CN=61 Runoff=1.51 cfs 0.134 af

**Subcatchment CB_6302:** Runoff Area=39,903 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=240' Tc=12.6 min CN=83 Runoff=3.36 cfs 0.298 af

**Subcatchment CB_6334:** Runoff Area=95,695 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=480' Tc=19.6 min CN=57 Runoff=2.44 cfs 0.285 af

**Subcatchment CB_6335:** Runoff Area=64,158 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=360' Slope=0.0200 '/' Tc=20.8 min CN=57 Runoff=1.60 cfs 0.191 af

**Subcatchment CB_6337:** Runoff Area=33,850 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=274' Tc=17.4 min CN=57 Runoff=0.91 cfs 0.101 af

**Subcatchment CB_6352:** Runoff Area=95,334 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=268' Tc=18.5 min CN=57 Runoff=2.49 cfs 0.284 af

**Subcatchment CB_6355:** Runoff Area=155,874 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=587' Tc=18.8 min CN=57 Runoff=4.05 cfs 0.464 af

**Subcatchment CB_6357:** Runoff Area=64,138 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=322' Tc=17.3 min CN=57 Runoff=1.72 cfs 0.191 af

**Subcatchment CB_6359:** Runoff Area=71,080 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=445' Tc=15.5 min CN=57 Runoff=1.99 cfs 0.212 af

**Subcatchment CB_6361:** Runoff Area=91,580 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=468' Tc=20.1 min CN=57 Runoff=2.32 cfs 0.273 af

**Subcatchment CB_6362:** Runoff Area=53,657 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=396' Tc=16.9 min CN=57 Runoff=1.45 cfs 0.160 af

**Subcatchment CB_6364:** Runoff Area=87,777 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=461' Tc=14.2 min CN=57 Runoff=2.54 cfs 0.261 af

**Subcatchment CB_6417:** Runoff Area=153,985 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=706' Tc=19.3 min CN=57 Runoff=3.96 cfs 0.458 af

**Subcatchment CB_6434:** Runoff Area=39,623 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=280' Tc=12.4 min CN=57 Runoff=1.21 cfs 0.118 af

**Subcatchment CB_6642:** Runoff Area=7,920 sf 6.38% Impervious Runoff Depth=2.04"
Flow Length=90' Slope=0.0170 '/' Tc=9.8 min CN=63 Runoff=0.37 cfs 0.031 af

**Subcatchment CB_6643:** Runoff Area=25,275 sf 67.04% Impervious Runoff Depth=4.22"
Flow Length=161' Slope=0.0100 '/' Tc=14.6 min CN=86 Runoff=2.16 cfs 0.204 af

**Subcatchment CB_7157:** Runoff Area=161,968 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=735' Tc=32.5 min CN=57 Runoff=3.34 cfs 0.482 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=340' Tc=13.0 min CN=61 Runoff=2.84 cfs 0.269 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.94 cfs 0.217 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=5.37 cfs 0.610 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=715' Tc=13.2 min CN=61 Runoff=5.60 cfs 0.533 af

**Subcatchment DM_1115:** Runoff Area=9,153 sf 100.00% Impervious Runoff Depth=5.56"
Flow Length=180' Tc=6.0 min CN=98 Runoff=1.19 cfs 0.097 af

**Subcatchment DM_4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=4.43"
Flow Length=207' Tc=9.5 min CN=88 Runoff=4.27 cfs 0.352 af

**Pond CB PT.1423P:** Peak Elev=20.21' Inflow=2.88 cfs 0.236 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0207 '/' Outflow=2.88 cfs 0.236 af

**Pond CB_1069P:** Peak Elev=67.68' Inflow=9.33 cfs 1.045 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=9.33 cfs 1.045 af

**Pond CB_1773P:** Peak Elev=34.03' Inflow=0.69 cfs 0.051 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.69 cfs 0.051 af

**Pond CB_1774P:** Peak Elev=29.97' Inflow=0.80 cfs 0.059 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.80 cfs 0.059 af

**Pond CB_1778P:** Peak Elev=23.72' Inflow=1.07 cfs 0.081 af
12.0" Round Culvert n=0.012 L=14.0' S=0.0393 '/' Outflow=1.07 cfs 0.081 af

**Pond CB_2792P:** Peak Elev=20.46' Inflow=62.61 cfs 7.719 af
48.0" Round Culvert n=0.012 L=132.0' S=0.0016 '/' Outflow=62.61 cfs 7.719 af

**Pond CB_2793P:** Peak Elev=24.58' Inflow=13.77 cfs 1.600 af
24.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=13.77 cfs 1.600 af

**Pond CB_3164P:** Peak Elev=12.63' Inflow=77.08 cfs 9.538 af
48.0" Round Culvert n=0.012 L=88.0' S=0.0082 '/' Outflow=77.08 cfs 9.538 af

**Pond CB_3165P:** Peak Elev=13.51' Inflow=75.63 cfs 9.303 af
48.0" Round Culvert n=0.012 L=8.0' S=0.1150 '/' Outflow=75.63 cfs 9.303 af

**Pond CB_3193P: assumed invert out.** Peak Elev=14.12' Inflow=75.63 cfs 9.303 af
48.0" Round Culvert n=0.012 L=58.0' S=0.0105 '/' Outflow=75.63 cfs 9.303 af

**Pond CB_4134P:** Peak Elev=35.05' Inflow=0.78 cfs 0.063 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.78 cfs 0.063 af

**Pond CB_4259P:** Peak Elev=19.24' Inflow=5.02 cfs 0.406 af
18.0" Round Culvert n=0.012 L=85.0' S=0.0221 '/' Outflow=5.02 cfs 0.406 af

**Pond CB_4260P:** Peak Elev=20.59' Inflow=66.41 cfs 8.280 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0129 '/' Outflow=66.41 cfs 8.280 af

**Pond CB_4894P:** Peak Elev=13.31' Inflow=0.00 cfs 0.000 af
6.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=0.00 cfs 0.000 af

**Pond CB_4895P:** Peak Elev=0.00'
15.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Primary=0.00 cfs 0.000 af

**Pond CB_5026P:** Peak Elev=27.90' Inflow=18.99 cfs 2.319 af
30.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=18.99 cfs 2.319 af

**Pond CB_6302P:** Peak Elev=14.00' Inflow=3.36 cfs 0.298 af
18.0" Round Culvert n=0.012 L=77.0' S=0.0130 '/' Outflow=3.36 cfs 0.298 af

**Pond CB_6334P:** Peak Elev=17.85' Inflow=7.65 cfs 1.059 af
18.0" Round Culvert n=0.012 L=50.0' S=0.0060 '/' Outflow=7.65 cfs 1.059 af

**Pond CB_6335P:** Peak Elev=19.69' Inflow=5.40 cfs 0.774 af
18.0" Round Culvert n=0.012 L=265.0' S=0.0094 '/' Outflow=5.40 cfs 0.774 af

**Pond CB_6337P:** Peak Elev=22.12' Inflow=4.00 cfs 0.583 af
18.0" Round Culvert n=0.012 L=255.0' S=0.0102 '/' Outflow=4.00 cfs 0.583 af

**Pond CB_6352P:** Peak Elev=57.25' Inflow=8.23 cfs 1.049 af
18.0" Round Culvert n=0.012 L=252.0' S=0.0476 '/' Outflow=8.23 cfs 1.049 af

**Pond CB_6355P:** Peak Elev=36.70' Inflow=15.57 cfs 1.916 af
24.0" Round Culvert n=0.012 L=312.0' S=0.0256 '/' Outflow=15.57 cfs 1.916 af

**Pond CB_6357P:** Peak Elev=42.92' Inflow=11.56 cfs 1.452 af
24.0" Round Culvert n=0.012 L=532.0' S=0.0132 '/' Outflow=11.56 cfs 1.452 af

**Pond CB_6359P:** Peak Elev=44.94' Inflow=1.99 cfs 0.212 af
12.0" Round Culvert n=0.012 L=37.0' S=0.0270 '/' Outflow=1.99 cfs 0.212 af

**Pond CB_6361P:** Peak Elev=36.30' Inflow=2.32 cfs 0.273 af
12.0" Round Culvert n=0.012 L=110.0' S=0.0100 '/' Outflow=2.32 cfs 0.273 af

**Pond CB_6362P:** Peak Elev=35.07' Inflow=3.73 cfs 0.432 af
18.0" Round Culvert n=0.012 L=480.0' S=0.0135 '/' Outflow=3.73 cfs 0.432 af

**Pond CB_6364P:** Peak Elev=24.50' Inflow=11.09 cfs 1.270 af
30.0" Round Culvert n=0.012 L=235.0' S=0.0002 '/' Outflow=11.09 cfs 1.270 af

**Pond CB_6417P:** Peak Elev=29.56' Inflow=7.69 cfs 0.891 af
18.0" Round Culvert n=0.012 L=193.0' S=0.0098 '/' Outflow=7.69 cfs 0.891 af

**Pond CB_6434P:** Peak Elev=27.04' Inflow=8.70 cfs 1.009 af
24.0" Round Culvert n=0.012 L=290.0' S=0.0107 '/' Outflow=8.70 cfs 1.009 af

**Pond CB_6642P:** Peak Elev=14.57' Inflow=68.59 cfs 8.515 af
48.0" Round Culvert n=0.012 L=29.0' S=0.0210 '/' Outflow=68.59 cfs 8.515 af

**Pond CB_6643P:** Peak Elev=18.09' Inflow=68.33 cfs 8.484 af
48.0" Round Culvert n=0.012 L=85.0' S=0.0081 '/' Outflow=68.33 cfs 8.484 af

**Pond CB_7157P:** Peak Elev=23.70' Inflow=3.34 cfs 0.482 af
18.0" Round Culvert n=0.012 L=155.0' S=0.0103 '/' Outflow=3.34 cfs 0.482 af

**Pond DMH PT.1458:** Peak Elev=22.64' Inflow=1.07 cfs 0.081 af
12.0" Round Culvert n=0.012 L=130.0' S=0.0192 '/' Outflow=1.07 cfs 0.081 af

**Pond DM_0378P:** Peak Elev=28.05' Inflow=17.89 cfs 2.185 af
30.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=17.89 cfs 2.185 af

**Pond DM_1047P:** Peak Elev=27.81' Inflow=40.84 cfs 4.898 af
36.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=40.84 cfs 4.898 af

**Pond DM_1068P:** Peak Elev=34.49' Inflow=20.25 cfs 2.302 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=20.25 cfs 2.302 af

**Pond DM_1072P:** Peak Elev=49.50' Inflow=14.24 cfs 1.578 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=14.24 cfs 1.578 af

**Pond DM_1115P:** Peak Elev=20.79' Inflow=63.10 cfs 7.816 af
42.0" Round Culvert n=0.012 L=116.0' S=0.0034 '/' Outflow=63.10 cfs 7.816 af

**Pond DM_1155P:** Peak Elev=20.89' Inflow=54.60 cfs 6.498 af
42.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=54.60 cfs 6.498 af

**Pond DM_1156P:** Peak Elev=21.35' Inflow=54.60 cfs 6.498 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=54.60 cfs 6.498 af

**Pond DM_4943P:** Peak Elev=13.84' Inflow=7.50 cfs 0.650 af
18.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=7.50 cfs 0.650 af

**Pond DM_4982P:** Peak Elev=11.00' Inflow=7.50 cfs 0.650 af
18.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=7.50 cfs 0.650 af

**Pond DM_6361P:** Peak Elev=20.04' Inflow=66.41 cfs 8.280 af
42.0" Round Culvert n=0.012 L=90.0' S=0.0081 '/' Outflow=66.41 cfs 8.280 af

**Pond MC16: OUTFALL** Inflow=7.50 cfs 0.650 af
Primary=7.50 cfs 0.650 af

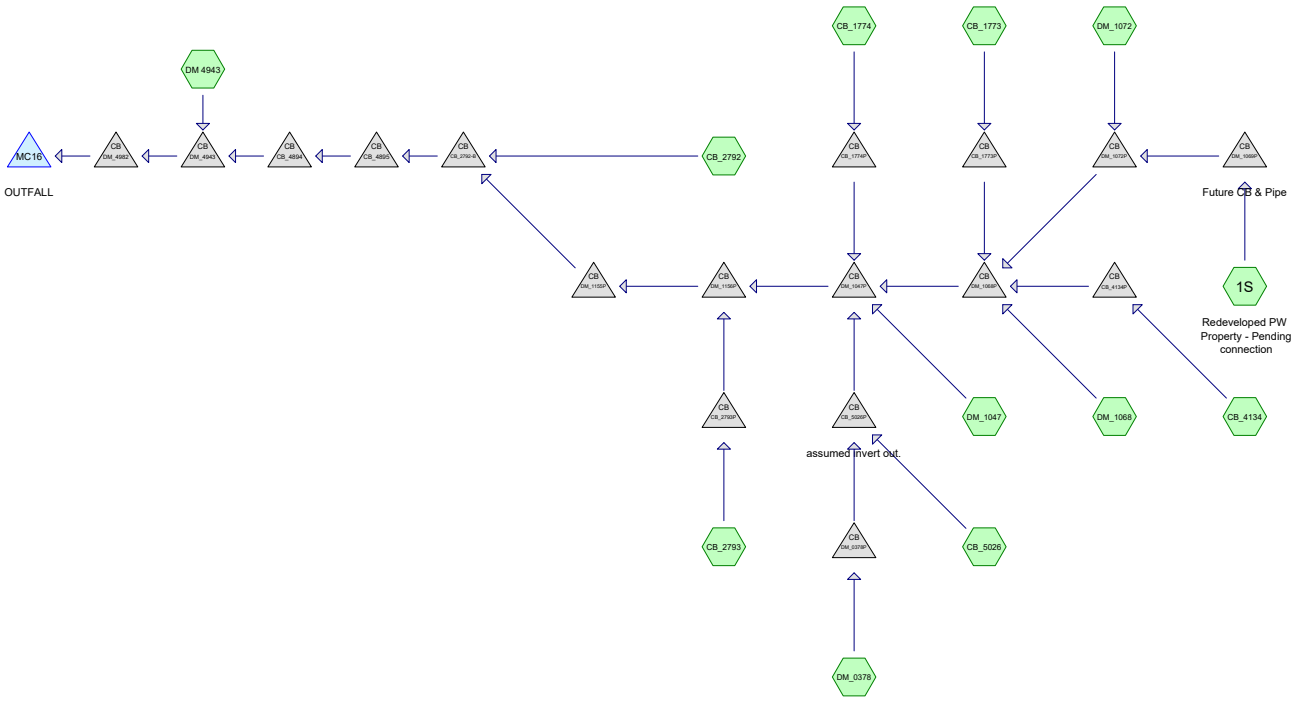
**Pond MC4: OUTFALL** Inflow=77.08 cfs 9.538 af
Primary=77.08 cfs 9.538 af

**Pond P-CB 1:** Peak Elev=44.70' Inflow=9.94 cfs 1.261 af
24.0" Round Culvert n=0.012 L=175.0' S=0.0114 '/' Outflow=9.94 cfs 1.261 af

**Pond PCB_2:** Peak Elev=65.53' Inflow=5.94 cfs 0.765 af
18.0" Round Culvert n=0.012 L=280.0' S=0.0321 '/' Outflow=5.94 cfs 0.765 af

**Pond PCB_4: ALT-2A** Peak Elev=17.55' Inflow=7.65 cfs 1.059 af
18.0" Round Culvert n=0.012 L=108.0' S=0.0056 '/' Outflow=7.65 cfs 1.059 af

**Total Runoff Area = 59.869 ac Runoff Volume = 10.188 af Average Runoff Depth = 2.04"**
**61.79% Pervious = 36.995 ac 38.21% Impervious = 22.874 ac**




Subcat Reach Pond Link

**Routing Diagram for 16537 POST-SIZING Alternative B1**
Prepared by Sebago Technics, Inc, Printed 5/6/2020
HydroCAD® 10.00-24 s/n 01856 © 2018 HydroCAD Software Solutions LLC

## Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 18.723 | 61 | 1/4 acre lots, 38% imp, HSG A (1S, CB_2793, CB_5026, DM_0378, DM_1068, DM_1072) |
| 0.194 | 83 | Paved roads w/open ditches, 50% imp, HSG A (CB_4134) |
| 0.381 | 98 | Roofs, HSG A (DM 4943) |
| 0.864 | 89 | Urban commercial, 85% imp, HSG A (CB_1773, CB_1774, DM_1047) |
| 0.400 | 92 | Urban commercial, 85% imp, HSG B (CB_2792) |
| 0.571 | 81 | Urban industrial, 72% imp, HSG A (DM 4943) |
| **21.134** | **64** | **TOTAL AREA** |

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.14"
Tc=20.0 min CN=61 Runoff=5.25 cfs 0.634 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.52 cfs 0.038 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.61 cfs 0.044 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=126' Tc=6.0 min CN=92 Runoff=1.65 cfs 0.123 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=475' Tc=20.0 min CN=61 Runoff=1.66 cfs 0.200 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.57 cfs 0.046 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=194' Tc=10.9 min CN=61 Runoff=0.85 cfs 0.081 af

**Subcatchment DM 4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=3.29"
Flow Length=207' Tc=9.5 min CN=88 Runoff=3.21 cfs 0.261 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=340' Tc=13.0 min CN=61 Runoff=1.60 cfs 0.163 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.23 cfs 0.162 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=3.02 cfs 0.370 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=715' Tc=13.2 min CN=61 Runoff=3.14 cfs 0.323 af

**Pond CB_1773P:** Peak Elev=33.96' Inflow=0.52 cfs 0.038 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.52 cfs 0.038 af

**Pond CB_1774P:** Peak Elev=29.90' Inflow=0.61 cfs 0.044 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.61 cfs 0.044 af

**Pond CB_2792-B:** Peak Elev=18.37' Inflow=17.30 cfs 2.185 af
30.0" Round Culvert n=0.012 L=236.0' S=0.0083 '/' Outflow=17.30 cfs 2.185 af

**Pond CB_2793P:** Peak Elev=23.11' Inflow=1.66 cfs 0.200 af
12.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=1.66 cfs 0.200 af

**Pond CB_4134P:** Peak Elev=34.97' Inflow=0.57 cfs 0.046 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.57 cfs 0.046 af

**Pond CB_4894:** Peak Elev=15.42' Inflow=17.30 cfs 2.185 af
30.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=17.30 cfs 2.185 af

**Pond CB_4895:** Peak Elev=16.31' Inflow=17.30 cfs 2.185 af
30.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Outflow=17.30 cfs 2.185 af

**Pond CB_5026P: assumed invert out.** Peak Elev=26.26' Inflow=2.43 cfs 0.245 af
18.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=2.43 cfs 0.245 af

**Pond DM_0378P:** Peak Elev=26.65' Inflow=1.60 cfs 0.163 af
12.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=1.60 cfs 0.163 af

**Pond DM_1047P:** Peak Elev=25.91' Inflow=14.96 cfs 1.861 af
30.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=14.96 cfs 1.861 af

**Pond DM_1068P:** Peak Elev=33.70' Inflow=11.53 cfs 1.410 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=11.53 cfs 1.410 af

**Pond DM_1069P: Future CB & Pipe** Peak Elev=66.36' Inflow=5.25 cfs 0.634 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=5.25 cfs 0.634 af

**Pond DM_1072P:** Peak Elev=48.54' Inflow=8.00 cfs 0.957 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=8.00 cfs 0.957 af

**Pond DM_1155P:** Peak Elev=19.09' Inflow=16.54 cfs 2.061 af
30.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=16.54 cfs 2.061 af

**Pond DM_1156P:** Peak Elev=19.25' Inflow=16.54 cfs 2.061 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=16.54 cfs 2.061 af

**Pond DM_4943:** Peak Elev=13.87' Inflow=19.55 cfs 2.446 af
36.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=19.55 cfs 2.446 af

**Pond DM_4982:** Peak Elev=11.03' Inflow=19.55 cfs 2.446 af
36.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=19.55 cfs 2.446 af

**Pond MC16: OUTFALL** Inflow=19.55 cfs 2.446 af
Primary=19.55 cfs 2.446 af

**Total Runoff Area = 21.134 ac Runoff Volume = 2.446 af Average Runoff Depth = 1.39"**
**57.04% Pervious = 12.055 ac 42.96% Impervious = 9.079 ac**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.87"
Tc=20.0 min CN=61 Runoff=9.33 cfs 1.045 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.69 cfs 0.051 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.80 cfs 0.059 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=126' Tc=6.0 min CN=92 Runoff=2.15 cfs 0.162 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=475' Tc=20.0 min CN=61 Runoff=2.95 cfs 0.330 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.78 cfs 0.063 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=194' Tc=10.9 min CN=61 Runoff=1.51 cfs 0.134 af

**Subcatchment DM 4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=4.43"
Flow Length=207' Tc=9.5 min CN=88 Runoff=4.27 cfs 0.352 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=340' Tc=13.0 min CN=61 Runoff=2.84 cfs 0.269 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.94 cfs 0.217 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=5.37 cfs 0.610 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=715' Tc=13.2 min CN=61 Runoff=5.60 cfs 0.533 af

**Pond CB_1773P:** Peak Elev=34.03' Inflow=0.69 cfs 0.051 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.69 cfs 0.051 af

**Pond CB_1774P:** Peak Elev=29.97' Inflow=0.80 cfs 0.059 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.80 cfs 0.059 af

**Pond CB_2792-B:** Peak Elev=20.04' Inflow=29.70 cfs 3.475 af
30.0" Round Culvert n=0.012 L=236.0' S=0.0083 '/' Outflow=29.70 cfs 3.475 af

**Pond CB_2793P:** Peak Elev=23.73' Inflow=2.95 cfs 0.330 af
12.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=2.95 cfs 0.330 af

**Pond CB_4134P:** Peak Elev=35.05' Inflow=0.78 cfs 0.063 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.78 cfs 0.063 af

**Pond CB_4894:** Peak Elev=17.09' Inflow=29.70 cfs 3.475 af
30.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=29.70 cfs 3.475 af

**Pond CB_4895:** Peak Elev=17.98' Inflow=29.70 cfs 3.475 af
30.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Outflow=29.70 cfs 3.475 af

**Pond CB_5026P: assumed invert out.** Peak Elev=26.68' Inflow=4.32 cfs 0.404 af
18.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=4.32 cfs 0.404 af

**Pond DM_0378P:** Peak Elev=27.30' Inflow=2.84 cfs 0.269 af
12.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=2.84 cfs 0.269 af

**Pond DM_1047P:** Peak Elev=27.17' Inflow=25.87 cfs 2.982 af
30.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=25.87 cfs 2.982 af

**Pond DM_1068P:** Peak Elev=34.49' Inflow=20.25 cfs 2.302 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=20.25 cfs 2.302 af

**Pond DM_1069P: Future CB & Pipe** Peak Elev=67.68' Inflow=9.33 cfs 1.045 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=9.33 cfs 1.045 af

**Pond DM_1072P:** Peak Elev=49.50' Inflow=14.24 cfs 1.578 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=14.24 cfs 1.578 af

**Pond DM_1155P:** Peak Elev=20.56' Inflow=28.68 cfs 3.313 af
30.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=28.68 cfs 3.313 af

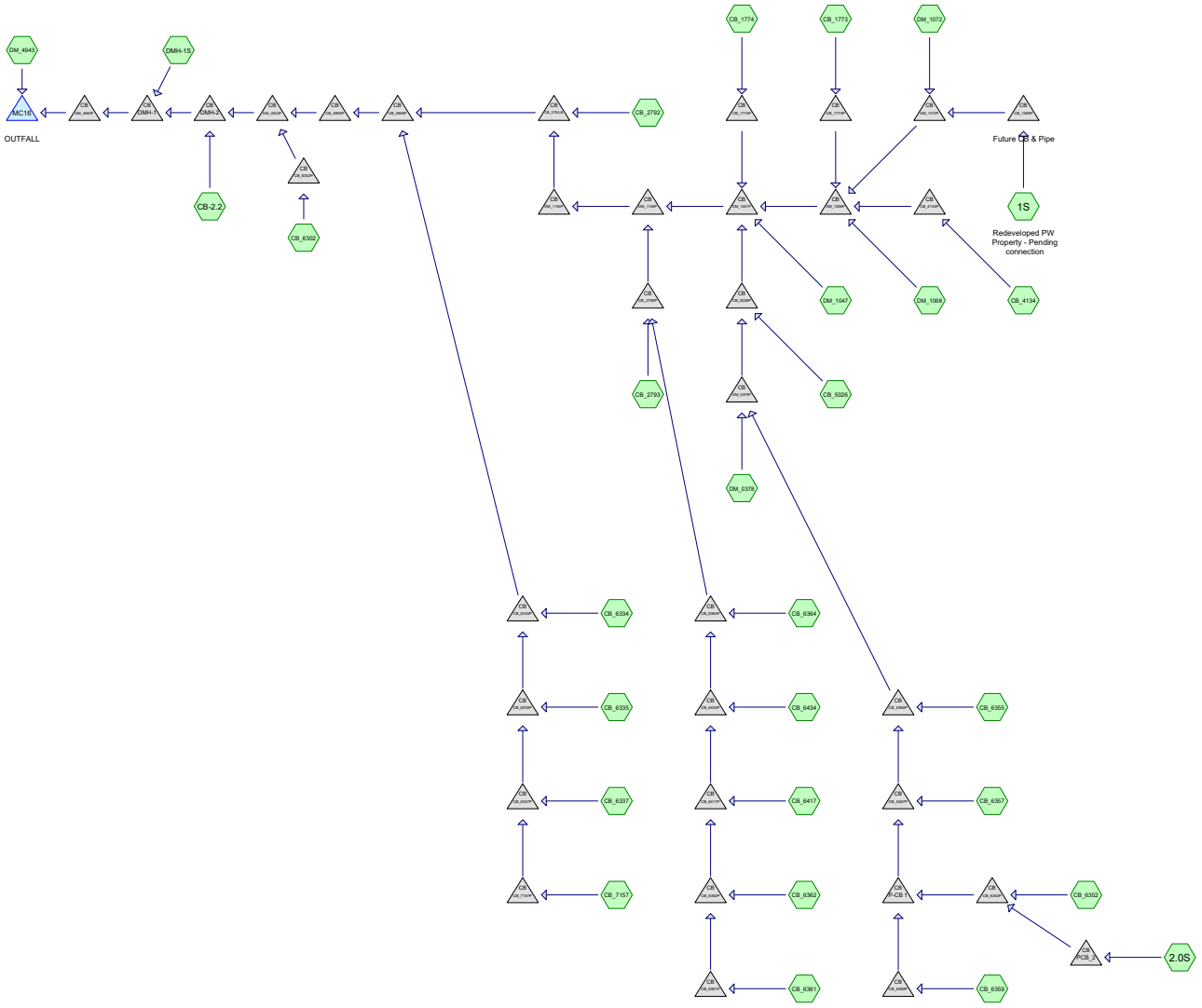
**Pond DM_1156P:** Peak Elev=20.11' Inflow=28.68 cfs 3.313 af
36.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=28.68 cfs 3.313 af

**Pond DM_4943:** Peak Elev=14.82' Inflow=32.78 cfs 3.827 af
36.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=32.78 cfs 3.827 af

**Pond DM_4982:** Peak Elev=11.98' Inflow=32.78 cfs 3.827 af
36.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=32.78 cfs 3.827 af

**Pond MC16: OUTFALL** Inflow=32.78 cfs 3.827 af
Primary=32.78 cfs 3.827 af

**Total Runoff Area = 21.134 ac Runoff Volume = 3.827 af Average Runoff Depth = 2.17"**
**57.04% Pervious = 12.055 ac 42.96% Impervious = 9.079 ac**




Subcat Reach Pond Link

**Routing Diagram for 16537 POST-SIZING Alternative B2**
Prepared by Sebago Technics, Inc, Printed 5/6/2020
HydroCAD® 10.00-24 s/n 01856 © 2018 HydroCAD Software Solutions LLC

## Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 33.784 | 57 | 1/3 acre lots, 30% imp, HSG A (2.0S, CB-2.2, CB_6334, CB_6335, CB_6337, CB_6352, CB_6355, CB_6357, CB_6359, CB_6361, CB_6362, CB_6364, CB_6417, CB_6434, CB_7157) |
| 18.723 | 61 | 1/4 acre lots, 38% imp, HSG A (1S, CB_2793, CB_5026, DM_0378, DM_1068, DM_1072) |
| 1.558 | 83 | Paved roads w/open ditches, 50% imp, HSG A (CB_4134, CB_6302, DMH-1S) |
| 0.381 | 98 | Roofs, HSG A (DM_4943) |
| 0.864 | 89 | Urban commercial, 85% imp, HSG A (CB_1773, CB_1774, DM_1047) |
| 0.400 | 92 | Urban commercial, 85% imp, HSG B (CB_2792) |
| 0.571 | 81 | Urban industrial, 72% imp, HSG A (DM_4943) |
| **56.281** | **60** | **TOTAL AREA** |

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.14"
Tc=20.0 min CN=61 Runoff=5.25 cfs 0.634 af

**Subcatchment 2.0S:** Runoff Area=257,120 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=1,394' Tc=25.1 min CN=57 Runoff=3.06 cfs 0.442 af

**Subcatchment CB-2.2:** Runoff Area=45,780 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=150' Slope=0.0270 '/' Tc=18.9 min CN=57 Runoff=0.61 cfs 0.079 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.52 cfs 0.038 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.61 cfs 0.044 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=3.70"
Flow Length=126' Tc=6.0 min CN=92 Runoff=1.65 cfs 0.123 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=495' Tc=22.4 min CN=61 Runoff=1.59 cfs 0.200 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.57 cfs 0.046 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=194' Tc=10.9 min CN=61 Runoff=0.85 cfs 0.081 af

**Subcatchment CB_6302:** Runoff Area=39,903 sf 50.00% Impervious Runoff Depth=2.81"
Flow Length=240' Tc=12.6 min CN=83 Runoff=2.44 cfs 0.215 af

**Subcatchment CB_6334:** Runoff Area=95,695 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=480' Tc=19.6 min CN=57 Runoff=1.25 cfs 0.164 af

**Subcatchment CB_6335:** Runoff Area=64,158 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=360' Slope=0.0200 '/' Tc=20.8 min CN=57 Runoff=0.82 cfs 0.110 af

**Subcatchment CB_6337:** Runoff Area=33,850 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=274' Tc=17.4 min CN=57 Runoff=0.46 cfs 0.058 af

**Subcatchment CB_6352:** Runoff Area=95,334 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=268' Tc=18.5 min CN=57 Runoff=1.27 cfs 0.164 af

**Subcatchment CB_6355:** Runoff Area=155,874 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=587' Tc=18.8 min CN=57 Runoff=2.07 cfs 0.268 af

**Subcatchment CB_6357:** Runoff Area=64,138 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=322' Tc=17.3 min CN=57 Runoff=0.88 cfs 0.110 af

**Subcatchment CB_6359:** Runoff Area=71,080 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=445' Tc=15.5 min CN=57 Runoff=1.01 cfs 0.122 af

**Subcatchment CB_6361:** Runoff Area=91,580 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=468' Tc=20.1 min CN=57 Runoff=1.19 cfs 0.157 af

**Subcatchment CB_6362:** Runoff Area=53,657 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=396' Tc=16.9 min CN=57 Runoff=0.74 cfs 0.092 af

**Subcatchment CB_6364:** Runoff Area=87,777 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=461' Tc=14.2 min CN=57 Runoff=1.29 cfs 0.151 af

**Subcatchment CB_6417:** Runoff Area=153,985 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=706' Tc=19.3 min CN=57 Runoff=2.02 cfs 0.265 af

**Subcatchment CB_6434:** Runoff Area=39,623 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=280' Tc=12.4 min CN=57 Runoff=0.61 cfs 0.068 af

**Subcatchment CB_7157:** Runoff Area=161,968 sf 30.00% Impervious Runoff Depth=0.90"
Flow Length=735' Tc=32.5 min CN=57 Runoff=1.73 cfs 0.278 af

**Subcatchment DMH-1S:** Runoff Area=19,500 sf 50.00% Impervious Runoff Depth=2.81"
Tc=8.0 min CN=83 Runoff=1.38 cfs 0.105 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=340' Tc=13.0 min CN=61 Runoff=1.60 cfs 0.163 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=3.39"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.23 cfs 0.162 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=3.02 cfs 0.370 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.14"
Flow Length=715' Tc=13.2 min CN=61 Runoff=3.14 cfs 0.323 af

**Subcatchment DM_4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=3.29"
Flow Length=207' Tc=9.5 min CN=88 Runoff=3.21 cfs 0.261 af

**Pond CB_1069P: Future CB & Pipe** Peak Elev=66.36' Inflow=5.25 cfs 0.634 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=5.25 cfs 0.634 af

**Pond CB_1773P:** Peak Elev=33.96' Inflow=0.52 cfs 0.038 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.52 cfs 0.038 af

**Pond CB_1774P:** Peak Elev=29.90' Inflow=0.61 cfs 0.044 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.61 cfs 0.044 af

**Pond CB_2792-B:** Peak Elev=18.72' Inflow=30.37 cfs 4.024 af
42.0" Round Culvert n=0.012 L=236.0' S=0.0083 '/' Outflow=30.37 cfs 4.024 af

**Pond CB_2793P:** Peak Elev=23.75' Inflow=7.20 cfs 0.934 af
24.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=7.20 cfs 0.934 af

**Pond CB_4134P:** Peak Elev=34.97' Inflow=0.57 cfs 0.046 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.57 cfs 0.046 af

**Pond CB_4894P:** Peak Elev=15.95' Inflow=33.93 cfs 4.636 af
42.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=33.93 cfs 4.636 af

**Pond CB_4895P:** Peak Elev=16.84' Inflow=33.93 cfs 4.636 af
42.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Outflow=33.93 cfs 4.636 af

**Pond CB_5026P:** Peak Elev=27.00' Inflow=9.85 cfs 1.351 af
30.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=9.85 cfs 1.351 af

**Pond CB_6302P:** Peak Elev=13.83' Inflow=2.44 cfs 0.215 af
18.0" Round Culvert n=0.012 L=77.0' S=0.0130 '/' Outflow=2.44 cfs 0.215 af

**Pond CB_6334P:** Peak Elev=16.60' Inflow=3.94 cfs 0.611 af
18.0" Round Culvert n=0.012 L=120.0' S=0.0083 '/' Outflow=3.94 cfs 0.611 af

**Pond CB_6335P:** Peak Elev=19.20' Inflow=2.80 cfs 0.447 af
18.0" Round Culvert n=0.012 L=265.0' S=0.0102 '/' Outflow=2.80 cfs 0.447 af

**Pond CB_6337P:** Peak Elev=21.75' Inflow=2.08 cfs 0.337 af
18.0" Round Culvert n=0.012 L=255.0' S=0.0102 '/' Outflow=2.08 cfs 0.337 af

**Pond CB_6352P:** Peak Elev=56.16' Inflow=4.24 cfs 0.606 af
18.0" Round Culvert n=0.012 L=252.0' S=0.0476 '/' Outflow=4.24 cfs 0.606 af

**Pond CB_6355P:** Peak Elev=35.46' Inflow=7.98 cfs 1.106 af
24.0" Round Culvert n=0.012 L=312.0' S=0.0256 '/' Outflow=7.98 cfs 1.106 af

**Pond CB_6357P:** Peak Elev=42.22' Inflow=5.94 cfs 0.838 af
24.0" Round Culvert n=0.012 L=532.0' S=0.0132 '/' Outflow=5.94 cfs 0.838 af

**Pond CB_6359P:** Peak Elev=44.60' Inflow=1.01 cfs 0.122 af
12.0" Round Culvert n=0.012 L=37.0' S=0.0270 '/' Outflow=1.01 cfs 0.122 af

**Pond CB_6361P:** Peak Elev=35.85' Inflow=1.19 cfs 0.157 af
12.0" Round Culvert n=0.012 L=110.0' S=0.0100 '/' Outflow=1.19 cfs 0.157 af

**Pond CB_6362P:** Peak Elev=34.72' Inflow=1.91 cfs 0.250 af
18.0" Round Culvert n=0.012 L=480.0' S=0.0135 '/' Outflow=1.91 cfs 0.250 af

**Pond CB_6364P:** Peak Elev=23.85' Inflow=5.66 cfs 0.733 af
30.0" Round Culvert n=0.012 L=235.0' S=0.0002 '/' Outflow=5.66 cfs 0.733 af

**Pond CB_6417P:** Peak Elev=28.60' Inflow=3.93 cfs 0.514 af
18.0" Round Culvert n=0.012 L=193.0' S=0.0098 '/' Outflow=3.93 cfs 0.514 af

**Pond CB_6434P:** Peak Elev=26.53' Inflow=4.45 cfs 0.582 af
24.0" Round Culvert n=0.012 L=290.0' S=0.0107 '/' Outflow=4.45 cfs 0.582 af

**Pond CB_7157P:** Peak Elev=23.38' Inflow=1.73 cfs 0.278 af
18.0" Round Culvert n=0.012 L=155.0' S=0.0103 '/' Outflow=1.73 cfs 0.278 af

**Pond DMH-1:** Peak Elev=17.61' Inflow=37.02 cfs 5.034 af
24.0" Round Culvert n=0.012 L=50.0' S=0.0200 '/' Outflow=37.02 cfs 5.034 af

**Pond DMH-2:** Peak Elev=17.24' Inflow=36.31 cfs 4.929 af
24.0" Round Culvert n=0.012 L=50.0' S=0.0200 '/' Outflow=36.31 cfs 4.929 af

**Pond DM_0378P:** Peak Elev=27.30' Inflow=9.24 cfs 1.269 af
30.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=9.24 cfs 1.269 af

**Pond DM_1047P:** Peak Elev=26.22' Inflow=22.51 cfs 2.967 af
36.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=22.51 cfs 2.967 af

**Pond DM_1068P:** Peak Elev=33.70' Inflow=11.53 cfs 1.410 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=11.53 cfs 1.410 af

**Pond DM_1072P:** Peak Elev=48.54' Inflow=8.00 cfs 0.957 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=8.00 cfs 0.957 af

**Pond DM_1155P:** Peak Elev=19.51' Inflow=29.69 cfs 3.901 af
42.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=29.69 cfs 3.901 af

**Pond DM_1156P:** Peak Elev=19.92' Inflow=29.69 cfs 3.901 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=29.69 cfs 3.901 af

**Pond DM_4943P:** Peak Elev=14.57' Inflow=35.71 cfs 4.850 af
42.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=35.71 cfs 4.850 af

**Pond DM_4982P:** Peak Elev=11.79' Inflow=37.02 cfs 5.034 af
42.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=37.02 cfs 5.034 af

**Pond MC16: OUTFALL** Inflow=38.88 cfs 5.295 af
Primary=38.88 cfs 5.295 af

**Pond P-CB 1:** Peak Elev=44.12' Inflow=5.11 cfs 0.728 af
24.0" Round Culvert n=0.012 L=175.0' S=0.0114 '/' Outflow=5.11 cfs 0.728 af

**Pond PCB_2:** Peak Elev=64.94' Inflow=3.06 cfs 0.442 af
18.0" Round Culvert n=0.012 L=280.0' S=0.0321 '/' Outflow=3.06 cfs 0.442 af

**Total Runoff Area = 56.281 ac Runoff Volume = 5.295 af Average Runoff Depth = 1.13"**
**64.65% Pervious = 36.385 ac 35.35% Impervious = 19.896 ac**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Redeveloped PW** Runoff Area=291,700 sf 38.00% Impervious Runoff Depth=1.87"
Tc=20.0 min CN=61 Runoff=9.33 cfs 1.045 af

**Subcatchment 2.0S:** Runoff Area=257,120 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=1,394' Tc=25.1 min CN=57 Runoff=5.94 cfs 0.765 af

**Subcatchment CB-2.2:** Runoff Area=45,780 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=150' Slope=0.0270 '/' Tc=18.9 min CN=57 Runoff=1.19 cfs 0.136 af

**Subcatchment CB_1773:** Runoff Area=5,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=235' Tc=6.0 min CN=89 Runoff=0.69 cfs 0.051 af

**Subcatchment CB_1774:** Runoff Area=6,830 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=270' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=0.80 cfs 0.059 af

**Subcatchment CB_2792:** Runoff Area=17,410 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=126' Tc=6.0 min CN=92 Runoff=2.15 cfs 0.162 af

**Subcatchment CB_2793:** Runoff Area=92,222 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=495' Tc=22.4 min CN=61 Runoff=2.81 cfs 0.330 af

**Subcatchment CB_4134:** Runoff Area=8,460 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=192' Slope=0.0400 '/' Tc=9.6 min CN=83 Runoff=0.78 cfs 0.063 af

**Subcatchment CB_5026:** Runoff Area=37,490 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=194' Tc=10.9 min CN=61 Runoff=1.51 cfs 0.134 af

**Subcatchment CB_6302:** Runoff Area=39,903 sf 50.00% Impervious Runoff Depth=3.91"
Flow Length=240' Tc=12.6 min CN=83 Runoff=3.36 cfs 0.298 af

**Subcatchment CB_6334:** Runoff Area=95,695 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=480' Tc=19.6 min CN=57 Runoff=2.44 cfs 0.285 af

**Subcatchment CB_6335:** Runoff Area=64,158 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=360' Slope=0.0200 '/' Tc=20.8 min CN=57 Runoff=1.60 cfs 0.191 af

**Subcatchment CB_6337:** Runoff Area=33,850 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=274' Tc=17.4 min CN=57 Runoff=0.91 cfs 0.101 af

**Subcatchment CB_6352:** Runoff Area=95,334 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=268' Tc=18.5 min CN=57 Runoff=2.49 cfs 0.284 af

**Subcatchment CB_6355:** Runoff Area=155,874 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=587' Tc=18.8 min CN=57 Runoff=4.05 cfs 0.464 af

**Subcatchment CB_6357:** Runoff Area=64,138 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=322' Tc=17.3 min CN=57 Runoff=1.72 cfs 0.191 af

**Subcatchment CB_6359:** Runoff Area=71,080 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=445' Tc=15.5 min CN=57 Runoff=1.99 cfs 0.212 af

**Subcatchment CB_6361:** Runoff Area=91,580 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=468' Tc=20.1 min CN=57 Runoff=2.32 cfs 0.273 af

**Subcatchment CB_6362:** Runoff Area=53,657 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=396' Tc=16.9 min CN=57 Runoff=1.45 cfs 0.160 af

**Subcatchment CB_6364:** Runoff Area=87,777 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=461' Tc=14.2 min CN=57 Runoff=2.54 cfs 0.261 af

**Subcatchment CB_6417:** Runoff Area=153,985 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=706' Tc=19.3 min CN=57 Runoff=3.96 cfs 0.458 af

**Subcatchment CB_6434:** Runoff Area=39,623 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=280' Tc=12.4 min CN=57 Runoff=1.21 cfs 0.118 af

**Subcatchment CB_7157:** Runoff Area=161,968 sf 30.00% Impervious Runoff Depth=1.56"
Flow Length=735' Tc=32.5 min CN=57 Runoff=3.34 cfs 0.482 af

**Subcatchment DMH-1S:** Runoff Area=19,500 sf 50.00% Impervious Runoff Depth=3.91"
Tc=8.0 min CN=83 Runoff=1.89 cfs 0.146 af

**Subcatchment DM_0378:** Runoff Area=75,150 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=340' Tc=13.0 min CN=61 Runoff=2.84 cfs 0.269 af

**Subcatchment DM_1047:** Runoff Area=24,990 sf 85.00% Impervious Runoff Depth=4.54"
Flow Length=268' Slope=0.0200 '/' Tc=6.0 min CN=89 Runoff=2.94 cfs 0.217 af

**Subcatchment DM_1068:** Runoff Area=170,275 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=1,031' Tc=20.7 min CN=61 Runoff=5.37 cfs 0.610 af

**Subcatchment DM_1072:** Runoff Area=148,750 sf 38.00% Impervious Runoff Depth=1.87"
Flow Length=715' Tc=13.2 min CN=61 Runoff=5.60 cfs 0.533 af

**Subcatchment DM_4943:** Runoff Area=41,482 sf 83.21% Impervious Runoff Depth=4.43"
Flow Length=207' Tc=9.5 min CN=88 Runoff=4.27 cfs 0.352 af

**Pond CB_1069P: Future CB & Pipe** Peak Elev=67.68' Inflow=9.33 cfs 1.045 af
18.0" Round Culvert n=0.012 L=580.0' S=0.0307 '/' Outflow=9.33 cfs 1.045 af

**Pond CB_1773P:** Peak Elev=34.03' Inflow=0.69 cfs 0.051 af
12.0" Round Culvert n=0.012 L=39.0' S=0.0136 '/' Outflow=0.69 cfs 0.051 af

**Pond CB_1774P:** Peak Elev=29.97' Inflow=0.80 cfs 0.059 af
12.0" Round Culvert n=0.012 L=42.0' S=0.1298 '/' Outflow=0.80 cfs 0.059 af

**Pond CB_2792-B:** Peak Elev=20.32' Inflow=55.53 cfs 6.660 af
42.0" Round Culvert n=0.012 L=236.0' S=0.0083 '/' Outflow=55.53 cfs 6.660 af

**Pond CB_2793P:** Peak Elev=24.58' Inflow=13.77 cfs 1.600 af
24.0" Round Culvert n=0.012 L=17.0' S=0.0076 '/' Outflow=13.77 cfs 1.600 af

**Pond CB_4134P:** Peak Elev=35.05' Inflow=0.78 cfs 0.063 af
12.0" Round Culvert n=0.012 L=40.0' S=0.0345 '/' Outflow=0.78 cfs 0.063 af

**Pond CB_4894P:** Peak Elev=17.99' Inflow=62.61 cfs 7.719 af
42.0" Round Culvert n=0.012 L=136.0' S=0.0104 '/' Outflow=62.61 cfs 7.719 af

**Pond CB_4895P:** Peak Elev=18.88' Inflow=62.61 cfs 7.719 af
42.0" Round Culvert n=0.012 L=93.0' S=0.0077 '/' Outflow=62.61 cfs 7.719 af

**Pond CB_5026P:** Peak Elev=27.90' Inflow=18.99 cfs 2.319 af
30.0" Round Culvert n=0.012 L=156.0' S=0.0017 '/' Outflow=18.99 cfs 2.319 af

**Pond CB_6302P:** Peak Elev=14.00' Inflow=3.36 cfs 0.298 af
18.0" Round Culvert n=0.012 L=77.0' S=0.0130 '/' Outflow=3.36 cfs 0.298 af

**Pond CB_6334P:** Peak Elev=17.55' Inflow=7.65 cfs 1.059 af
18.0" Round Culvert n=0.012 L=120.0' S=0.0083 '/' Outflow=7.65 cfs 1.059 af

**Pond CB_6335P:** Peak Elev=19.69' Inflow=5.40 cfs 0.774 af
18.0" Round Culvert n=0.012 L=265.0' S=0.0102 '/' Outflow=5.40 cfs 0.774 af

**Pond CB_6337P:** Peak Elev=22.12' Inflow=4.00 cfs 0.583 af
18.0" Round Culvert n=0.012 L=255.0' S=0.0102 '/' Outflow=4.00 cfs 0.583 af

**Pond CB_6352P:** Peak Elev=57.25' Inflow=8.23 cfs 1.049 af
18.0" Round Culvert n=0.012 L=252.0' S=0.0476 '/' Outflow=8.23 cfs 1.049 af

**Pond CB_6355P:** Peak Elev=36.70' Inflow=15.57 cfs 1.916 af
24.0" Round Culvert n=0.012 L=312.0' S=0.0256 '/' Outflow=15.57 cfs 1.916 af

**Pond CB_6357P:** Peak Elev=42.92' Inflow=11.56 cfs 1.452 af
24.0" Round Culvert n=0.012 L=532.0' S=0.0132 '/' Outflow=11.56 cfs 1.452 af

**Pond CB_6359P:** Peak Elev=44.94' Inflow=1.99 cfs 0.212 af
12.0" Round Culvert n=0.012 L=37.0' S=0.0270 '/' Outflow=1.99 cfs 0.212 af

**Pond CB_6361P:** Peak Elev=36.30' Inflow=2.32 cfs 0.273 af
12.0" Round Culvert n=0.012 L=110.0' S=0.0100 '/' Outflow=2.32 cfs 0.273 af

**Pond CB_6362P:** Peak Elev=35.07' Inflow=3.73 cfs 0.432 af
18.0" Round Culvert n=0.012 L=480.0' S=0.0135 '/' Outflow=3.73 cfs 0.432 af

**Pond CB_6364P:** Peak Elev=24.50' Inflow=11.09 cfs 1.270 af
30.0" Round Culvert n=0.012 L=235.0' S=0.0002 '/' Outflow=11.09 cfs 1.270 af

**Pond CB_6417P:** Peak Elev=29.56' Inflow=7.69 cfs 0.891 af
18.0" Round Culvert n=0.012 L=193.0' S=0.0098 '/' Outflow=7.69 cfs 0.891 af

**Pond CB_6434P:** Peak Elev=27.04' Inflow=8.70 cfs 1.009 af
24.0" Round Culvert n=0.012 L=290.0' S=0.0107 '/' Outflow=8.70 cfs 1.009 af

**Pond CB_7157P:** Peak Elev=23.70' Inflow=3.34 cfs 0.482 af
18.0" Round Culvert n=0.012 L=155.0' S=0.0103 '/' Outflow=3.34 cfs 0.482 af

**Pond DMH-1:** Peak Elev=39.88' Inflow=67.43 cfs 8.299 af
24.0" Round Culvert n=0.012 L=50.0' S=0.0200 '/' Outflow=67.43 cfs 8.299 af

**Pond DMH-2:** Peak Elev=38.92' Inflow=66.41 cfs 8.154 af
24.0" Round Culvert n=0.012 L=50.0' S=0.0200 '/' Outflow=66.41 cfs 8.154 af

**Pond DM_0378P:** Peak Elev=28.05' Inflow=17.89 cfs 2.185 af
30.0" Round Culvert n=0.012 L=117.0' S=0.0050 '/' Outflow=17.89 cfs 2.185 af

**Pond DM_1047P:** Peak Elev=27.81' Inflow=40.84 cfs 4.898 af
36.0" Round Culvert n=0.012 L=263.0' S=0.0259 '/' Outflow=40.84 cfs 4.898 af

**Pond DM_1068P:** Peak Elev=34.49' Inflow=20.25 cfs 2.302 af
30.0" Round Culvert n=0.012 L=280.0' S=0.0146 '/' Outflow=20.25 cfs 2.302 af

**Pond DM_1072P:** Peak Elev=49.50' Inflow=14.24 cfs 1.578 af
24.0" Round Culvert n=0.012 L=238.0' S=0.0579 '/' Outflow=14.24 cfs 1.578 af

**Pond DM_1155P:** Peak Elev=20.89' Inflow=54.60 cfs 6.498 af
42.0" Round Culvert n=0.012 L=162.0' S=0.0033 '/' Outflow=54.60 cfs 6.498 af

**Pond DM_1156P:** Peak Elev=21.35' Inflow=54.60 cfs 6.498 af
42.0" Round Culvert n=0.012 L=35.0' S=0.0011 '/' Outflow=54.60 cfs 6.498 af

**Pond DM_4943P:** Peak Elev=16.77' Inflow=65.23 cfs 8.017 af
42.0" Round Culvert n=0.012 L=160.0' S=0.0177 '/' Outflow=65.23 cfs 8.017 af

**Pond DM_4982P:** Peak Elev=14.15' Inflow=67.43 cfs 8.299 af
42.0" Round Culvert n=0.012 L=56.0' S=0.0357 '/' Outflow=67.43 cfs 8.299 af

**Pond MC16: OUTFALL** Inflow=70.07 cfs 8.651 af
Primary=70.07 cfs 8.651 af

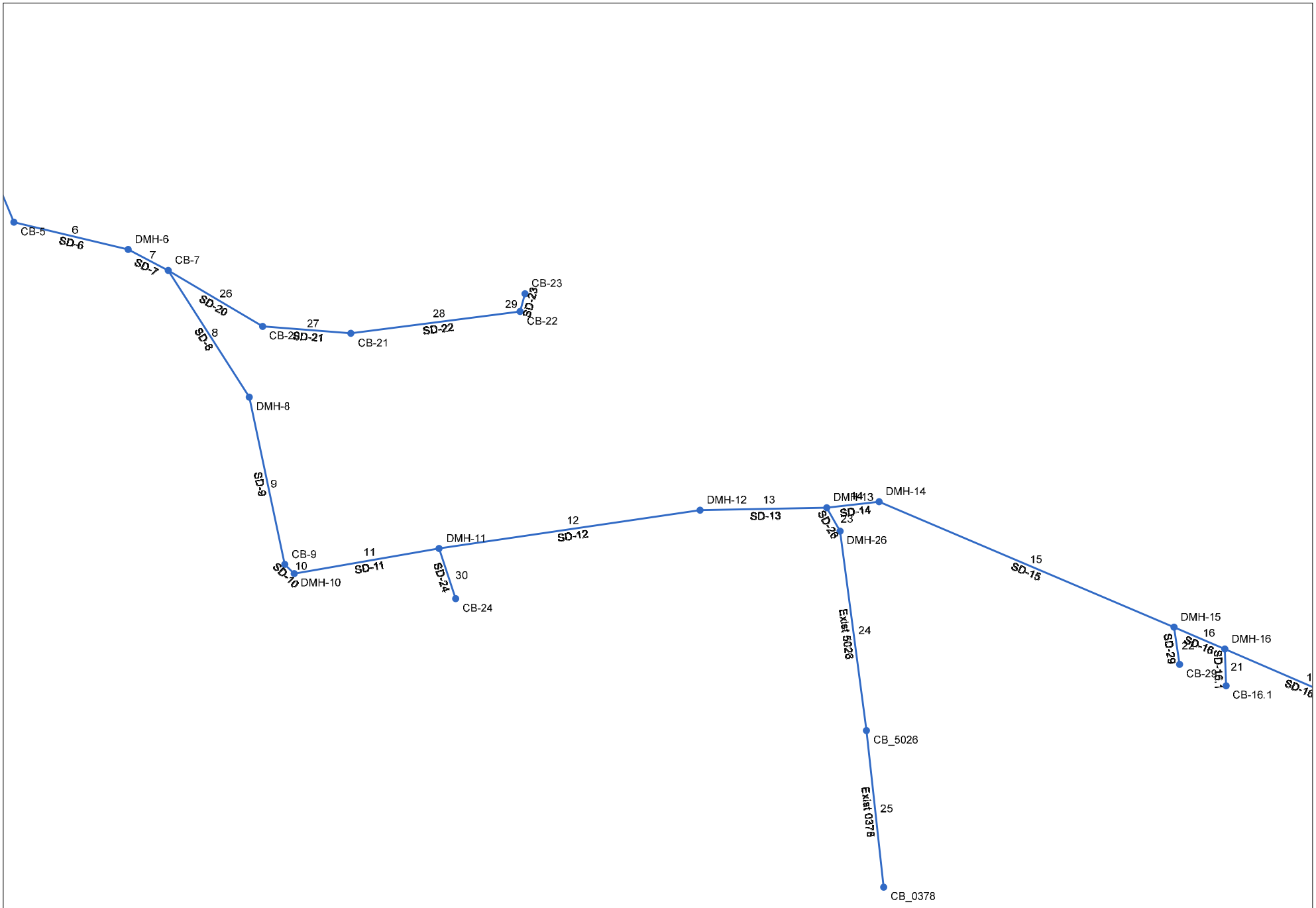
**Pond P-CB 1:** Peak Elev=44.70' Inflow=9.94 cfs 1.261 af
24.0" Round Culvert n=0.012 L=175.0' S=0.0114 '/' Outflow=9.94 cfs 1.261 af

**Pond PCB_2:** Peak Elev=65.53' Inflow=5.94 cfs 0.765 af
18.0" Round Culvert n=0.012 L=280.0' S=0.0321 '/' Outflow=5.94 cfs 0.765 af

**Total Runoff Area = 56.281 ac Runoff Volume = 8.651 af Average Runoff Depth = 1.84"**
**64.65% Pervious = 36.385 ac 35.35% Impervious = 19.896 ac**

# Appendix 4: Hydraulic Grade Line Analysis Summaries

# Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan




| Project File: 16537 Alternate A1 2020-05-05.stm | Number of lines: 30 | Date: 5/6/2020 |
|---|---|---|

Storm Sewers v2018.30

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SD-1 | 49.30 | 30 | Cir | 85.721 | 6.83 | 7.35 | 0.607 | 9.13* | 10.24* | 1.29 | 11.53 | End | Manhole |
| 2 | SD-2 | 47.54 | 30 | Cir | 10.548 | 7.45 | 7.50 | 0.474 | 11.53* | 11.65* | 0.61 | 12.26 | 1 | Manhole |
| 3 | SD-3 | 47.67 | 30 | Cir | 58.112 | 8.37 | 9.26 | 1.532 | 12.26* | 12.93* | n/a | 13.46 | 2 | Manhole |
| 4 | SD-4 | 40.66 | 30 | Cir | 29.143 | 9.26 | 10.10 | 2.882 | 13.46* | 13.70* | n/a | 14.60 | 3 | Manhole |
| 5 | SD-5 | 40.63 | 30 | Cir | 84.816 | 10.10 | 10.50 | 0.472 | 14.60* | 15.31* | n/a | 16.20 | 4 | Manhole |
| 6 | SD-6 | 39.12 | 30 | Cir | 90.169 | 10.50 | 12.10 | 1.774 | 16.20* | 16.90* | n/a | 17.19 | 5 | Manhole |
| 7 | SD-7 | 39.20 | 30 | Cir | 34.747 | 12.10 | 12.60 | 1.439 | 17.19* | 17.46* | n/a | 18.00 | 6 | Manhole |
| 8 | SD-8 | 35.77 | 30 | Cir | 115.856 | 12.60 | 14.00 | 1.208 | 18.00* | 18.76* | n/a | 19.09 | 7 | Manhole |
| 9 | SD-9 | 35.31 | 30 | Cir | 131.746 | 14.00 | 16.00 | 1.518 | 19.09* | 19.93* | n/a | 20.42 | 8 | Manhole |
| 10 | SD-10 | 33.83 | 30 | Cir | 10.238 | 16.10 | 16.20 | 0.977 | 20.42* | 20.48* | n/a | 21.10 | 9 | Manhole |
| 11 | SD-11 | 34.08 | 30 | Cir | 113.018 | 16.30 | 17.50 | 1.062 | 21.10* | 21.76* | n/a | 22.51 | 10 | Manhole |
| 12 | SD-12 | 32.90 | 24 | Cir | 202.491 | 18.00 | 23.50 | 2.716 | 22.51* | 26.16* | n/a | 26.41 | 11 | Manhole |
| 13 | SD-13 | 33.05 | 24 | Cir | 97.277 | 24.00 | 26.80 | 2.878 | 26.41 | 28.70 | n/a | 28.70 | 12 | Manhole |
| 14 | SD-14 | 24.56 | 24 | Cir | 40.517 | 26.80 | 27.20 | 0.987 | 28.70 | 28.95 | n/a | 28.95 | 13 | Manhole |
| 15 | SD-15 | 24.29 | 24 | Cir | 246.271 | 27.20 | 31.60 | 1.787 | 28.95 | 33.34 | n/a | 33.34 | 14 | Manhole |
| 16 | SD-16 | 18.28 | 18 | Cir | 42.593 | 32.10 | 32.44 | 0.798 | 33.60* | 34.70* | n/a | 36.23 | 15 | Manhole |
| 17 | SD-16A | 17.17 | 18 | Cir | 131.000 | 32.54 | 38.00 | 4.168 | 36.23 | 39.44 | n/a | 39.44 | 16 | Manhole |
| 18 | SD-17 | 17.25 | 18 | Cir | 87.000 | 40.45 | 46.64 | 7.115 | 41.26 | 48.08 | n/a | 48.08 | 17 | Manhole |
| 19 | SD-18 | 17.27 | 15 | Cir | 33.465 | 46.99 | 49.10 | 6.305 | 48.08 | 50.34 | n/a | 50.34 | 18 | Manhole |
| 20 | SD-19 | 11.46 | 15 | Cir | 49.000 | 49.20 | 50.50 | 2.653 | 50.34 | 51.71 | n/a | 51.71 | 19 | Manhole |
| 21 | SD-16.1 | 0.91 | 12 | Cir | 28.382 | 33.75 | 34.15 | 1.409 | 36.23* | 36.25* | n/a | 36.27 | 16 | Manhole |
| 22 | SD-29 | 7.66 | 12 | Cir | 29.005 | 32.20 | 32.50 | 1.034 | 33.34* | 34.49* | n/a | 35.97 | 15 | Manhole |
| 23 | SD-26 | 10.76 | 15 | Cir | 20.800 | 20.70 | 21.30 | 2.885 | 28.70* | 29.19* | n/a | 29.71 | 13 | Manhole |
| 24 | Exist 5026 | 7.96 | 10 | Cir | 155.000 | 24.00 | 25.26 | 0.813 | 29.71* | 47.17* | n/a | 47.66 | 23 | Manhole |

Project File: 16537 Alternate A1 2020-05-05.stm | Number of lines: 30 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown).

# Storm Sewer Summary Report

| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | Exist 0378 | 3.69 | 12 | Cir | 121.540 | 25.28 | 25.86 | 0.477 | 47.66* | 48.78* | n/a | 49.12 | 24 | Manhole |
| 26 | SD-20 | 4.48 | 18 | Cir | 84.323 | 16.05 | 17.93 | 2.230 | 18.00 | 18.74 | n/a | 18.74 | 7 | Manhole |
| 27 | SD-21 | 2.26 | 15 | Cir | 68.014 | 17.91 | 19.30 | 2.044 | 18.74 | 19.90 | n/a | 19.90 | 26 | Manhole |
| 28 | SD-22 | 1.20 | 15 | Cir | 131.197 | 19.53 | 22.03 | 1.906 | 19.90 | 22.46 | n/a | 22.46 | 27 | Manhole |
| 29 | SD-23 | 1.21 | 12 | Cir | 14.189 | 22.56 | 23.11 | 3.876 | 22.83 | 23.57 | n/a | 23.57 | 28 | Manhole |
| 30 | SD-24 | 2.71 | 12 | Cir | 40.717 | 21.80 | 22.18 | 0.933 | 22.51 | 22.89 | n/a | 22.89 | 11 | Manhole |

Project File: 16537 Alternate A1 2020-05-05.stm | Number of lines: 30 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown).

# Hydraulic Grade Line Computations



| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 1 | 30 | 49.30 | 6.83 | 9.13 | 2.30 | 4.72 | 10.43 | 1.69 | 10.82 | 1.069 | 85.721 | 7.35 | 10.24 | 2.50 | 4.91 | 10.04 | 1.57 | 11.81 | 1.231 | 1.150 | 0.986 | 0.82 | 1.29 |
| 2 | 30 | 47.54 | 7.45 | 11.53 | 2.50 | 4.91 | 9.69 | 1.46 | 12.99 | 1.146 | 10.548 | 7.50 | 11.65 | 2.50 | 4.91 | 9.69 | 1.46 | 13.11 | 1.145 | 1.145 | 0.121 | 0.42 | 0.61 |
| 3 | 30 | 47.67 | 8.37 | 12.26 | 0.00 | 0.00 | 9.71 | 0.00 | 12.26 | 0.000 | 58.112 | 9.26 | 12.93 | 0.00** | 0.00 | 9.71 | 0.00 | 12.93 | 0.000 | 0.000 | 0.000 | 0.36 | n/a |
| 4 | 30 | 40.66 | 9.26 | 13.46 | 0.00 | 0.00 | 8.28 | 0.00 | 13.46 | 0.000 | 29.143 | 10.10 | 13.70 | 0.00** | 0.00 | 8.28 | 0.00 | 13.70 | 0.000 | 0.000 | 0.000 | 0.84 | n/a |
| 5 | 30 | 40.63 | 10.10 | 14.60 | 0.00 | 0.00 | 8.28 | 0.00 | 14.60 | 0.000 | 84.816 | 10.50 | 15.31 | 0.00** | 0.00 | 8.28 | 0.00 | 15.31 | 0.000 | 0.000 | 0.000 | 0.84 | n/a |
| 6 | 30 | 39.12 | 10.50 | 16.20 | 0.00 | 0.00 | 7.97 | 0.00 | 16.20 | 0.000 | 90.169 | 12.10 | 16.90 | 0.00** | 0.00 | 7.97 | 0.00 | 16.90 | 0.000 | 0.000 | 0.000 | 0.29 | n/a |
| 7 | 30 | 39.20 | 12.10 | 17.19 | 0.00 | 0.00 | 7.99 | 0.00 | 17.19 | 0.000 | 34.747 | 12.60 | 17.46 | 0.00** | 0.00 | 7.99 | 0.00 | 17.46 | 0.000 | 0.000 | 0.000 | 0.55 | n/a |
| 8 | 30 | 35.77 | 12.60 | 18.00 | 0.00 | 0.00 | 7.29 | 0.00 | 18.00 | 0.000 | 115.856 | 14.00 | 18.76 | 0.00** | 0.00 | 7.29 | 0.00 | 18.76 | 0.000 | 0.000 | 0.000 | 0.41 | n/a |
| 9 | 30 | 35.31 | 14.00 | 19.09 | 0.00 | 0.00 | 7.19 | 0.00 | 19.09 | 0.000 | 131.746 | 16.00 | 19.93 | 0.00** | 0.00 | 7.19 | 0.00 | 19.93 | 0.000 | 0.000 | 0.000 | 0.61 | n/a |
| 10 | 30 | 33.83 | 16.10 | 20.42 | 0.00 | 0.00 | 6.89 | 0.00 | 20.42 | 0.000 | 10.238 | 16.20 | 20.48 | 0.00** | 0.00 | 6.89 | 0.00 | 20.48 | 0.000 | 0.000 | 0.000 | 0.84 | n/a |
| 11 | 30 | 34.08 | 16.30 | 21.10 | 0.00 | 0.00 | 6.94 | 0.00 | 21.10 | 0.000 | 113.018 | 17.50 | 21.76 | 0.00** | 0.00 | 6.94 | 0.00 | 21.76 | 0.000 | 0.000 | 0.000 | 0.99 | n/a |
| 12 | 24 | 32.90 | 18.00 | 22.51 | 0.00 | 0.00 | 10.47 | 0.00 | 22.51 | 0.000 | 202.491 | 23.50 | 26.16 | 0.00** | 0.00 | 10.47 | 0.00 | 26.16 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 13 | 24 | 33.05 | 24.00 | 26.41 | 0.00 | 0.00 | 10.52 | 0.00 | 26.41 | 0.000 | 97.277 | 26.80 | 28.70 | 0.00** | 0.00 | 10.72 | 0.00 | 28.70 | 0.000 | 0.000 | 0.000 | 0.90 | n/a |
| 14 | 24 | 24.56 | 26.80 | 28.70 | 0.00 | 0.00 | 7.97 | 0.00 | 28.70 | 0.000 | 40.517 | 27.20 | 28.95 | 0.00** | 0.00 | 8.43 | 0.00 | 28.95 | 0.000 | 0.000 | 0.000 | 0.55 | n/a |
| 15 | 24 | 24.29 | 27.20 | 28.95 | 0.00 | 0.00 | 8.34 | 0.00 | 28.95 | 0.000 | 246.271 | 31.60 | 33.34 | 0.00** | 0.00 | 8.36 | 0.00 | 33.34 | 0.000 | 0.000 | 0.000 | 0.88 | n/a |
| 16 | 18 | 18.28 | 32.10 | 33.60 | 0.00* | 0.00 | 10.35 | 0.00 | 33.60 | 0.000 | 42.593 | 32.44 | 34.70 | 0.00** | 0.00 | 10.35 | 0.00 | 34.70 | 0.000 | 0.000 | 0.000 | 0.92 | n/a |
| 17 | 18 | 17.17 | 32.54 | 36.23 | 0.00 | 0.00 | 9.72 | 0.00 | 36.23 | 0.000 | 131.000 | 38.00 | 39.44 | 0.00** | 0.00 | 9.85 | 0.00 | 39.44 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 18 | 18 | 17.25 | 40.45 | 41.26 | 0.00 | 0.00 | 17.72 | 0.00 | 41.26 | 0.000 | 87.000 | 46.64 | 48.08 | 0.00** | 0.00 | 9.89 | 0.00 | 48.08 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 19 | 15 | 17.27 | 46.99 | 48.08 | 0.00 | 0.00 | 15.18 | 0.00 | 48.08 | 0.000 | 33.465 | 49.10 | 50.34 | 0.00** | 0.00 | 14.08 | 0.00 | 50.34 | 0.000 | 0.000 | 0.000 | 0.92 | n/a |
| 20 | 15 | 11.46 | 49.20 | 50.34 | 0.00 | 0.00 | 9.75 | 0.00 | 50.34 | 0.000 | 49.000 | 50.50 | 51.71 | 0.00** | 0.00 | 9.43 | 0.00 | 51.71 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 21 | 12 | 0.91 | 33.75 | 36.23 | 0.00 | 0.00 | 1.16 | 0.00 | 36.23 | 0.000 | 28.382 | 34.15 | 36.25 | 0.00** | 0.00 | 1.16 | 0.00 | 36.25 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 22 | 12 | 7.66 | 32.20 | 33.34 | 0.00 | 0.00 | 9.76 | 0.00 | 33.34 | 0.000 | 29.005 | 32.50 | 34.49 | 0.00** | 0.00 | 9.75 | 0.00 | 34.49 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |

Project File: 16537 Alternate A1 2020-05-05.stm | Number of lines: 30 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth. ; c = cir e = ellip b = box

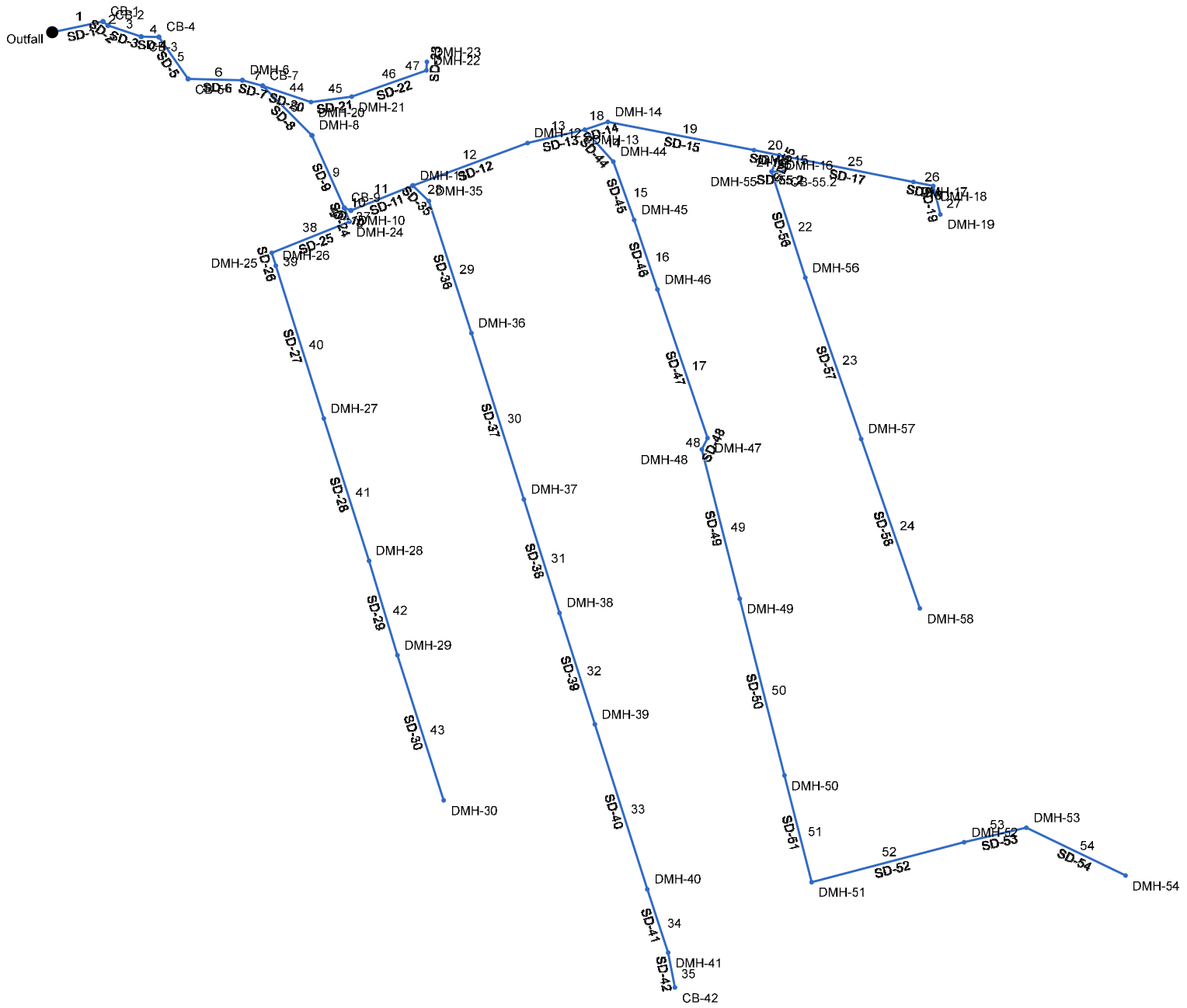
# Hydraulic Grade Line Computations

| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (cfs) | Invert elev (ft) | HGL elev (ft) | Depth (ft) | Area (sqft) | Vel (ft/s) | Vel head (ft) | EGL elev (ft) | Sf (%) | (ft) | Invert elev (ft) | HGL elev (ft) | Depth (ft) | Area (sqft) | Vel (ft/s) | Vel head (ft) | EGL elev (ft) | Sf (%) | Ave Sf (%) | Enrgy loss (ft) | (K) | (ft) |
| 23 | 15 | 10.76 | 20.70 | 28.70 | 0.00 | 0.00 | 8.77 | 0.00 | 28.70 | 0.000 | 20.800 | 21.30 | 29.19 | 0.00** | 0.00 | 8.77 | 0.00 | 29.19 | 0.000 | 0.000 | 0.000 | 0.43 | n/a |
| 24 | 10 | 7.96 | 24.00 | 29.71 | 0.00 | 0.00 | 14.60 | 0.00 | 29.71 | 0.000 | 155.000 | 25.26 | 47.17 | 0.00** | 0.00 | 14.60 | 0.00 | 47.17 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 25 | 12 | 3.69 | 25.28 | 47.66 | 0.00 | 0.00 | 4.70 | 0.00 | 47.66 | 0.000 | 121.540 | 25.86 | 48.78 | 0.00** | 0.00 | 4.70 | 0.00 | 48.78 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 26 | 18 | 4.48 | 16.05 | 18.00 | 0.00 | 0.00 | 2.53 | 0.00 | 18.00 | 0.000 | 84.323 | 17.93 | 18.74 | 0.00** | 0.00 | 4.59 | 0.00 | 18.74 | 0.000 | 0.000 | 0.000 | 0.50 | n/a |
| 27 | 15 | 2.26 | 17.91 | 18.74 | 0.00 | 0.00 | 2.61 | 0.00 | 18.74 | 0.000 | 68.014 | 19.30 | 19.90 | 0.00** | 0.00 | 3.88 | 0.00 | 19.90 | 0.000 | 0.000 | 0.000 | 0.25 | n/a |
| 28 | 15 | 1.20 | 19.53 | 19.90 | 0.00 | 0.00 | 3.96 | 0.00 | 19.90 | 0.000 | 131.197 | 22.03 | 22.46 | 0.00** | 0.00 | 3.19 | 0.00 | 22.46 | 0.000 | 0.000 | 0.000 | 0.94 | n/a |
| 29 | 12 | 1.21 | 22.56 | 22.83 | 0.00 | 0.00 | 7.08 | 0.00 | 22.83 | 0.000 | 14.189 | 23.11 | 23.57 | 0.00** | 0.00 | 3.40 | 0.00 | 23.57 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 30 | 12 | 2.71 | 21.80 | 22.51 | 0.00 | 0.00 | 4.58 | 0.00 | 22.51 | 0.000 | 40.717 | 22.18 | 22.89 | 0.00** | 0.00 | 4.58 | 0.00 | 22.89 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |

Project File: 16537 Alternate A1 2020-05-05.stm | Number of lines: 30 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth. ; c = cir e = ellip b = box

# Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan




| Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Date: 5/6/2020 |
|---|---|---|

Storm Sewers v2018.30

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SD-1 | 69.97 | 36 | Cir | 86.000 | 6.55 | 7.10 | 0.640 | 9.80* | 10.61* | 1.25 | 11.86 | End | Manhole |
| 2 | SD-2 | 68.40 | 36 | Cir | 10.588 | 7.15 | 7.25 | 0.944 | 11.86* | 11.95* | 0.60 | 12.55 | 1 | Manhole |
| 3 | SD-3 | 68.51 | 36 | Cir | 58.112 | 7.30 | 8.50 | 2.065 | 12.55* | 13.07* | 0.53 | 13.60 | 2 | Manhole |
| 4 | SD-4 | 63.22 | 36 | Cir | 29.143 | 8.50 | 8.80 | 1.029 | 13.60* | 13.82* | 1.04 | 14.87 | 3 | Manhole |
| 5 | SD-5 | 63.23 | 36 | Cir | 84.816 | 8.80 | 9.60 | 0.943 | 14.87* | 15.52* | 1.04 | 16.56 | 4 | Manhole |
| 6 | SD-6 | 62.12 | 36 | Cir | 90.169 | 9.60 | 10.20 | 0.665 | 16.56* | 17.23* | 0.35 | 17.58 | 5 | Manhole |
| 7 | SD-7 | 62.19 | 36 | Cir | 34.747 | 10.30 | 10.50 | 0.576 | 17.58* | 17.83* | 0.66 | 18.50 | 6 | Manhole |
| 8 | SD-8 | 59.48 | 36 | Cir | 115.856 | 10.60 | 11.30 | 0.604 | 18.50* | 19.28* | 0.45 | 19.73 | 7 | Manhole |
| 9 | SD-9 | 59.18 | 36 | Cir | 131.746 | 11.40 | 12.30 | 0.683 | 19.73* | 20.62* | 0.82 | 21.44 | 8 | Manhole |
| 10 | SD-10 | 54.21 | 36 | Cir | 11.882 | 14.30 | 15.10 | 6.733 | 21.44* | 21.50* | 0.67 | 22.17 | 9 | Manhole |
| 11 | SD-11 | 54.47 | 36 | Cir | 110.371 | 15.10 | 18.10 | 2.718 | 22.17* | 22.80* | 0.86 | 23.66 | 10 | Manhole |
| 12 | SD-12 | 41.30 | 30 | Cir | 202.491 | 18.60 | 19.70 | 0.543 | 23.66* | 25.41* | 0.17 | 25.57 | 11 | Manhole |
| 13 | SD-13 | 41.46 | 30 | Cir | 97.307 | 19.70 | 20.20 | 0.514 | 25.57* | 26.42* | 1.00 | 27.42 | 12 | Manhole |
| 14 | SD-44 | 22.70 | 30 | Cir | 71.126 | 20.20 | 20.60 | 0.562 | 27.42* | 27.60* | 0.14 | 27.75 | 13 | Manhole |
| 15 | SD-45 | 21.06 | 24 | Cir | 103.090 | 22.50 | 25.50 | 2.910 | 27.75* | 28.51* | 0.10 | 28.61 | 14 | Manhole |
| 16 | SD-46 | 18.52 | 24 | Cir | 121.590 | 25.60 | 26.25 | 0.535 | 28.61* | 29.31* | 0.08 | 29.39 | 15 | Manhole |
| 17 | SD-47 | 16.44 | 18 | Cir | 260.592 | 26.75 | 37.10 | 3.972 | 29.39 | 38.53 | n/a | 38.53 j | 16 | Manhole |
| 18 | SD-14 | 22.62 | 24 | Cir | 40.489 | 26.20 | 27.00 | 1.976 | 27.42 | 28.69 | n/a | 28.69 | 13 | Manhole |
| 19 | SD-15 | 22.36 | 24 | Cir | 246.259 | 27.00 | 31.21 | 1.710 | 28.69 | 32.90 | n/a | 32.90 j | 18 | Manhole |
| 20 | SD-16 | 22.42 | 24 | Cir | 42.618 | 31.21 | 31.60 | 0.915 | 32.90 | 33.29 | 0.98 | 33.29 | 19 | Manhole |
| 21 | SD-55 | 6.23 | 15 | Cir | 30.171 | 32.55 | 33.05 | 1.657 | 33.32 | 34.06 | n/a | 34.06 | 20 | Manhole |
| 22 | SD-56 | 5.69 | 15 | Cir | 184.941 | 33.15 | 36.15 | 1.622 | 34.06 | 37.12 | n/a | 37.12 | 21 | Manhole |
| 23 | SD-57 | 5.79 | 12 | Cir | 283.667 | 36.50 | 46.60 | 3.561 | 37.17 | 47.55 | 0.13 | 47.55 | 22 | Manhole |
| 24 | SD-58 | 5.89 | 12 | Cir | 297.722 | 48.50 | 60.00 | 3.863 | 49.16 | 60.95 | 0.91 | 60.95 | 23 | Manhole |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | SD-17 | 17.25 | 15 | Cir | 226.590 | 32.45 | 42.25 | 4.325 | 33.70* | 47.48* | 0.46 | 47.94 | 20 | Manhole |
| 26 | SD-18 | 17.27 | 15 | Cir | 33.490 | 42.35 | 45.25 | 8.659 | 47.94* | 49.98* | 2.83 | 52.81 | 25 | Manhole |
| 27 | SD-19 | 11.46 | 15 | Cir | 48.892 | 45.50 | 48.00 | 5.113 | 52.81* | 54.13* | 1.36 | 55.48 | 26 | Manhole |
| 28 | SD-35 | 15.83 | 30 | Cir | 36.930 | 18.95 | 19.20 | 0.677 | 23.66* | 23.70* | 0.09 | 23.79 | 11 | Manhole |
| 29 | SD-36 | 13.59 | 24 | Cir | 230.564 | 19.80 | 20.95 | 0.499 | 23.79* | 24.50* | 0.04 | 24.54 | 28 | Manhole |
| 30 | SD-37 | 11.00 | 18 | Cir | 289.775 | 21.40 | 24.80 | 1.173 | 24.54* | 27.25* | 0.09 | 27.34 | 29 | Manhole |
| 31 | SD-38 | 9.86 | 18 | Cir | 197.672 | 24.90 | 26.65 | 0.885 | 27.34* | 28.83* | 0.07 | 28.90 | 30 | Manhole |
| 32 | SD-39 | 4.88 | 15 | Cir | 194.137 | 27.10 | 30.60 | 1.803 | 28.90 | 31.50 | n/a | 31.50 j | 31 | Manhole |
| 33 | SD-40 | 4.98 | 12 | Cir | 287.579 | 30.95 | 35.30 | 1.513 | 31.82 | 36.22 | 0.10 | 36.22 | 32 | Manhole |
| 34 | SD-41 | 3.18 | 12 | Cir | 110.766 | 35.40 | 35.95 | 0.497 | 36.40* | 37.15* | 0.04 | 37.19 | 33 | Manhole |
| 35 | SD-42 | 3.20 | 12 | Cir | 59.067 | 36.20 | 38.70 | 4.232 | 37.19 | 39.47 | n/a | 39.47 j | 34 | Manhole |
| 36 | SD-55.2 | 0.91 | 12 | Cir | 19.582 | 33.40 | 33.80 | 2.043 | 34.06 | 34.20 | n/a | 34.20 j | 21 | Manhole |
| 37 | SD-24 | 7.74 | 30 | Cir | 24.584 | 12.40 | 12.55 | 0.610 | 21.44* | 21.44* | 0.04 | 21.48 | 9 | Manhole |
| 38 | SD-25 | 7.93 | 30 | Cir | 138.729 | 12.55 | 16.41 | 2.782 | 21.48* | 21.53* | 0.04 | 21.57 | 37 | Manhole |
| 39 | SD-26 | 7.95 | 24 | Cir | 22.453 | 16.91 | 17.45 | 2.405 | 21.57* | 21.59* | 0.01 | 21.60 | 38 | Manhole |
| 40 | SD-27 | 5.94 | 18 | Cir | 266.154 | 17.95 | 20.15 | 0.827 | 21.60* | 22.33* | 0.03 | 22.36 | 39 | Manhole |
| 41 | SD-28 | 4.57 | 15 | Cir | 248.146 | 20.40 | 23.50 | 1.249 | 22.36 | 24.37 | n/a | 24.37 j | 40 | Manhole |
| 42 | SD-29 | 3.81 | 12 | Cir | 163.748 | 23.75 | 24.60 | 0.519 | 24.75* | 26.35* | 0.06 | 26.41 | 41 | Manhole |
| 43 | SD-30 | 3.87 | 12 | Cir | 253.013 | 24.73 | 26.00 | 0.502 | 26.41* | 28.96* | 0.38 | 29.34 | 42 | Manhole |
| 44 | SD-20 | 4.82 | 18 | Cir | 84.318 | 16.05 | 17.93 | 2.230 | 18.50 | 18.77 | n/a | 18.77 j | 7 | Manhole |
| 45 | SD-21 | 2.60 | 15 | Cir | 68.013 | 17.91 | 19.30 | 2.044 | 18.77 | 19.95 | n/a | 19.95 j | 44 | Manhole |
| 46 | SD-22 | 1.20 | 15 | Cir | 131.136 | 19.53 | 22.03 | 1.906 | 19.95 | 22.46 | 0.15 | 22.46 | 45 | Manhole |
| 47 | SD-23 | 1.21 | 12 | Cir | 14.242 | 22.56 | 23.11 | 3.862 | 22.83 | 23.57 | 0.18 | 23.57 | 46 | Manhole |
| 48 | SD-48 | 16.45 | 18 | Cir | 21.000 | 36.95 | 37.15 | 0.952 | 38.53* | 38.97* | 0.94 | 39.91 | 17 | Manhole |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 | SD-49 | 12.30 | 18 | Cir | 256.068 | 37.25 | 41.45 | 1.640 | 39.91 | 42.95 | 0.11 | 43.06 | 48 | Manhole |
| 50 | SD-50 | 12.48 | 18 | Cir | 302.814 | 41.55 | 43.90 | 0.776 | 43.06* | 46.71* | 0.12 | 46.82 | 49 | Manhole |
| 51 | SD-51 | 10.77 | 18 | Cir | 183.014 | 44.00 | 45.25 | 0.683 | 46.82* | 48.46* | 0.58 | 49.04 | 50 | Manhole |
| 52 | SD-52 | 9.02 | 15 | Cir | 260.754 | 46.65 | 58.65 | 4.602 | 49.04 | 59.81 | n/a | 59.81 j | 51 | Manhole |
| 53 | SD-53 | 6.63 | 15 | Cir | 105.789 | 59.50 | 62.65 | 2.978 | 60.16 | 63.69 | n/a | 63.69 | 52 | Manhole |
| 54 | SD-54 | 6.70 | 15 | Cir | 182.556 | 62.75 | 66.65 | 2.136 | 63.69 | 67.69 | 0.59 | 67.69 | 53 | Manhole |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

# Hydraulic Grade Line Computations



| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 1 | 36 | 69.97 | 6.55 | 9.80 | 3.00 | 7.07 | 9.90 | 1.52 | 11.32 | 0.938 | 86.000 | 7.10 | 10.61 | 3.00 | 7.07 | 9.90 | 1.52 | 12.13 | 0.938 | 0.938 | 0.807 | 0.82 | 1.25 |
| 2 | 36 | 68.40 | 7.15 | 11.86 | 3.00 | 7.07 | 9.68 | 1.46 | 13.31 | 0.897 | 10.588 | 7.25 | 11.95 | 3.00 | 7.07 | 9.68 | 1.46 | 13.41 | 0.896 | 0.896 | 0.095 | 0.41 | 0.60 |
| 3 | 36 | 68.51 | 7.30 | 12.55 | 3.00 | 7.07 | 9.69 | 1.46 | 14.01 | 0.900 | 58.112 | 8.50 | 13.07 | 3.00 | 7.07 | 9.69 | 1.46 | 14.53 | 0.899 | 0.899 | 0.523 | 0.36 | 0.53 |
| 4 | 36 | 63.22 | 8.50 | 13.60 | 3.00 | 7.07 | 8.95 | 1.24 | 14.84 | 0.766 | 29.143 | 8.80 | 13.82 | 3.00 | 7.07 | 8.94 | 1.24 | 15.07 | 0.766 | 0.766 | 0.223 | 0.84 | 1.04 |
| 5 | 36 | 63.23 | 8.80 | 14.87 | 3.00 | 7.07 | 8.95 | 1.24 | 16.11 | 0.766 | 84.816 | 9.60 | 15.52 | 3.00 | 7.07 | 8.94 | 1.24 | 16.76 | 0.766 | 0.766 | 0.650 | 0.84 | 1.04 |
| 6 | 36 | 62.12 | 9.60 | 16.56 | 3.00 | 7.07 | 8.79 | 1.20 | 17.76 | 0.740 | 90.169 | 10.20 | 17.23 | 3.00 | 7.07 | 8.79 | 1.20 | 18.43 | 0.739 | 0.739 | 0.667 | 0.29 | 0.35 |
| 7 | 36 | 62.19 | 10.30 | 17.58 | 3.00 | 7.07 | 8.80 | 1.20 | 18.78 | 0.741 | 34.747 | 10.50 | 17.83 | 3.00 | 7.07 | 8.80 | 1.20 | 19.04 | 0.741 | 0.741 | 0.257 | 0.55 | 0.66 |
| 8 | 36 | 59.48 | 10.60 | 18.50 | 3.00 | 7.07 | 8.42 | 1.10 | 19.60 | 0.678 | 115.856 | 11.30 | 19.28 | 3.00 | 7.07 | 8.41 | 1.10 | 20.38 | 0.678 | 0.678 | 0.785 | 0.41 | 0.45 |
| 9 | 36 | 59.18 | 11.40 | 19.73 | 3.00 | 7.07 | 8.37 | 1.09 | 20.82 | 0.671 | 131.746 | 12.30 | 20.62 | 3.00 | 7.07 | 8.37 | 1.09 | 21.71 | 0.671 | 0.671 | 0.884 | 0.75 | 0.82 |
| 10 | 36 | 54.21 | 14.30 | 21.44 | 3.00 | 7.07 | 7.67 | 0.91 | 22.35 | 0.563 | 11.882 | 15.10 | 21.50 | 3.00 | 7.07 | 7.67 | 0.91 | 22.42 | 0.563 | 0.563 | 0.067 | 0.73 | 0.67 |
| 11 | 36 | 54.47 | 15.10 | 22.17 | 3.00 | 7.07 | 7.71 | 0.92 | 23.09 | 0.569 | 110.371 | 18.10 | 22.80 | 3.00 | 7.07 | 7.71 | 0.92 | 23.72 | 0.568 | 0.568 | 0.627 | 0.93 | 0.86 |
| 12 | 30 | 41.30 | 18.60 | 23.66 | 2.50 | 4.91 | 8.42 | 1.10 | 24.76 | 0.865 | 202.491 | 19.70 | 25.41 | 2.50 | 4.91 | 8.41 | 1.10 | 26.51 | 0.864 | 0.864 | 1.750 | 0.15 | 0.17 |
| 13 | 30 | 41.46 | 19.70 | 25.57 | 2.50 | 4.91 | 8.45 | 1.11 | 26.68 | 0.871 | 97.307 | 20.20 | 26.42 | 2.50 | 4.91 | 8.45 | 1.11 | 27.53 | 0.871 | 0.871 | 0.848 | 0.90 | 1.00 |
| 14 | 30 | 22.70 | 20.20 | 27.42 | 2.50 | 4.91 | 4.63 | 0.33 | 27.75 | 0.261 | 71.126 | 20.60 | 27.60 | 2.50 | 4.91 | 4.62 | 0.33 | 27.94 | 0.261 | 0.261 | 0.186 | 0.43 | 0.14 |
| 15 | 24 | 21.06 | 22.50 | 27.75 | 2.00 | 3.14 | 6.70 | 0.70 | 28.45 | 0.739 | 103.090 | 25.50 | 28.51 | 2.00 | 3.14 | 6.70 | 0.70 | 29.21 | 0.739 | 0.739 | 0.762 | 0.15 | 0.10 |
| 16 | 24 | 18.52 | 25.60 | 28.61 | 2.00 | 3.14 | 5.90 | 0.54 | 29.15 | 0.572 | 121.590 | 26.25 | 29.31 | 2.00 | 3.14 | 5.90 | 0.54 | 29.85 | 0.572 | 0.572 | 0.695 | 0.15 | 0.08 |
| 17 | 18 | 16.44 | 26.75 | 29.39 | 1.50 | 1.74 | 9.30 | 1.35 | 30.74 | 2.089 | 260.592 | 37.10 | 38.53 j | 1.43** | 1.74 | 9.46 | 1.39 | 39.92 | 1.812 | 1.950 | n/a | 0.75 | n/a |
| 18 | 24 | 22.62 | 26.20 | 27.42 | 1.22 | 2.00 | 11.29 | 0.99 | 28.41 | 0.000 | 40.489 | 27.00 | 28.69 | 1.69** | 2.84 | 7.97 | 0.99 | 29.68 | 0.000 | 0.000 | n/a | 0.55 | n/a |
| 19 | 24 | 22.36 | 27.00 | 28.69 | 1.69 | 2.83 | 7.88 | 0.97 | 29.67 | 0.000 | 246.259 | 31.21 | 32.90 j | 1.69** | 2.83 | 7.92 | 0.97 | 33.87 | 0.000 | 0.000 | n/a | 0.15 | n/a |
| 20 | 24 | 22.42 | 31.21 | 32.90 | 1.69 | 2.83 | 7.94 | 0.98 | 33.87 | 0.000 | 42.618 | 31.60 | 33.29 | 1.69** | 2.83 | 7.93 | 0.98 | 34.26 | 0.000 | 0.000 | n/a | 1.00 | 0.98 |
| 21 | 15 | 6.23 | 32.55 | 33.32 | 0.77* | 0.79 | 7.92 | 0.54 | 33.85 | 0.000 | 30.171 | 33.05 | 34.06 | 1.01** | 1.06 | 5.88 | 0.54 | 34.60 | 0.000 | 0.000 | n/a | 1.00 | n/a |
| 22 | 15 | 5.69 | 33.15 | 34.06 | 0.91 | 0.95 | 5.97 | 0.49 | 34.54 | 0.000 | 184.941 | 36.15 | 37.12 | 0.97** | 1.02 | 5.60 | 0.49 | 37.60 | 0.000 | 0.000 | n/a | 0.15 | n/a |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

# Hydraulic Grade Line Computations

| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 23 | 12 | 5.79 | 36.50 | 37.17 | 0.67* | 0.56 | 10.29 | 0.88 | 38.05 | 0.000 | 283.667 | 46.60 | 47.55 | 0.95** | 0.77 | 7.52 | 0.88 | 48.43 | 0.000 | 0.000 | n/a | 0.15 | 0.13 |
| 24 | 12 | 5.89 | 48.50 | 49.16 | 0.66* | 0.55 | 10.67 | 0.91 | 50.07 | 0.000 | 297.722 | 60.00 | 60.95 | 0.95** | 0.77 | 7.64 | 0.91 | 61.86 | 0.000 | 0.000 | n/a | 1.00 | 0.91 |
| 25 | 15 | 17.25 | 32.45 | 33.70 | 1.25* | 1.23 | 14.06 | 3.07 | 36.77 | 6.082 | 226.590 | 42.25 | 47.48 | 1.25** | 1.23 | 14.06 | 3.07 | 50.55 | 6.079 | 6.081 | 13.78 | 0.15 | 0.46 |
| 26 | 15 | 17.27 | 42.35 | 47.94 | 1.25 | 1.23 | 14.07 | 3.08 | 51.02 | 6.096 | 33.490 | 45.25 | 49.98 | 1.25** | 1.23 | 14.07 | 3.08 | 53.06 | 6.093 | 6.094 | 2.041 | 0.92 | 2.83 |
| 27 | 15 | 11.46 | 45.50 | 52.81 | 1.25 | 1.23 | 9.34 | 1.36 | 54.17 | 2.685 | 48.892 | 48.00 | 54.13 | 1.25 | 1.23 | 9.34 | 1.36 | 55.48 | 2.684 | 2.685 | 1.313 | 1.00 | 1.36 |
| 28 | 30 | 15.83 | 18.95 | 23.66 | 2.50 | 4.91 | 3.22 | 0.16 | 23.82 | 0.127 | 36.930 | 19.20 | 23.70 | 2.50 | 4.91 | 3.22 | 0.16 | 23.87 | 0.127 | 0.127 | 0.047 | 0.53 | 0.09 |
| 29 | 24 | 13.59 | 19.80 | 23.79 | 2.00 | 3.14 | 4.33 | 0.29 | 24.08 | 0.308 | 230.564 | 20.95 | 24.50 | 2.00 | 3.14 | 4.32 | 0.29 | 24.79 | 0.307 | 0.308 | 0.709 | 0.15 | 0.04 |
| 30 | 18 | 11.00 | 21.40 | 24.54 | 1.50 | 1.77 | 6.22 | 0.60 | 25.14 | 0.935 | 289.775 | 24.80 | 27.25 | 1.50 | 1.77 | 6.22 | 0.60 | 27.85 | 0.935 | 0.935 | 2.709 | 0.15 | 0.09 |
| 31 | 18 | 9.86 | 24.90 | 27.34 | 1.50 | 1.77 | 5.58 | 0.48 | 27.83 | 0.751 | 197.672 | 26.65 | 28.83 | 1.50 | 1.77 | 5.58 | 0.48 | 29.31 | 0.751 | 0.751 | 1.485 | 0.15 | 0.07 |
| 32 | 15 | 4.88 | 27.10 | 28.90 | 1.25 | 0.94 | 3.98 | 0.25 | 29.15 | 0.487 | 194.137 | 30.60 | 31.50 j | 0.90** | 0.94 | 5.19 | 0.42 | 31.91 | 0.655 | 0.571 | n/a | 0.15 | 0.06 |
| 33 | 12 | 4.98 | 30.95 | 31.82 | 0.87* | 0.73 | 6.84 | 0.68 | 32.50 | 0.000 | 287.579 | 35.30 | 36.22 | 0.92** | 0.75 | 6.61 | 0.68 | 36.89 | 0.000 | 0.000 | n/a | 0.15 | 0.10 |
| 34 | 12 | 3.18 | 35.40 | 36.40 | 1.00* | 0.79 | 4.05 | 0.25 | 36.65 | 0.679 | 110.766 | 35.95 | 37.15 | 1.00 | 0.79 | 4.05 | 0.25 | 37.41 | 0.679 | 0.679 | 0.752 | 0.15 | 0.04 |
| 35 | 12 | 3.20 | 36.20 | 37.19 | 0.99 | 0.65 | 4.08 | 0.38 | 37.57 | 0.000 | 59.067 | 38.70 | 39.47 j | 0.77** | 0.65 | 4.96 | 0.38 | 39.85 | 0.000 | 0.000 | n/a | 1.00 | n/a |
| 36 | 12 | 0.91 | 33.40 | 34.06 | 0.66 | 0.29 | 1.66 | 0.15 | 34.21 | 0.000 | 19.582 | 33.80 | 34.20 j | 0.40** | 0.29 | 3.11 | 0.15 | 34.35 | 0.000 | 0.000 | n/a | 1.00 | 0.15 |
| 37 | 30 | 7.74 | 12.40 | 21.44 | 2.50 | 4.91 | 1.58 | 0.04 | 21.47 | 0.030 | 24.584 | 12.55 | 21.44 | 2.50 | 4.91 | 1.58 | 0.04 | 21.48 | 0.030 | 0.030 | 0.007 | 1.00 | 0.04 |
| 38 | 30 | 7.93 | 12.55 | 21.48 | 2.50 | 4.91 | 1.61 | 0.04 | 21.52 | 0.032 | 138.729 | 16.41 | 21.53 | 2.50 | 4.91 | 1.61 | 0.04 | 21.57 | 0.032 | 0.032 | 0.044 | 1.00 | 0.04 |
| 39 | 24 | 7.95 | 16.91 | 21.57 | 2.00 | 3.14 | 2.53 | 0.10 | 21.67 | 0.105 | 22.453 | 17.45 | 21.59 | 2.00 | 3.14 | 2.53 | 0.10 | 21.69 | 0.105 | 0.105 | 0.024 | 0.15 | 0.01 |
| 40 | 18 | 5.94 | 17.95 | 21.60 | 1.50 | 1.77 | 3.36 | 0.18 | 21.78 | 0.273 | 266.154 | 20.15 | 22.33 | 1.50 | 1.77 | 3.36 | 0.18 | 22.51 | 0.273 | 0.273 | 0.726 | 0.15 | 0.03 |
| 41 | 15 | 4.57 | 20.40 | 22.36 | 1.25 | 0.91 | 3.72 | 0.22 | 22.57 | 0.426 | 248.146 | 23.50 | 24.37 j | 0.87** | 0.91 | 5.04 | 0.39 | 24.76 | 0.626 | 0.526 | n/a | 0.15 | 0.06 |
| 42 | 12 | 3.81 | 23.75 | 24.75 | 1.00* | 0.79 | 4.86 | 0.37 | 25.12 | 0.978 | 163.748 | 24.60 | 26.35 | 1.00 | 0.79 | 4.86 | 0.37 | 26.72 | 0.978 | 0.978 | 1.601 | 0.15 | 0.06 |
| 43 | 12 | 3.87 | 24.73 | 26.41 | 1.00 | 0.79 | 4.93 | 0.38 | 26.78 | 1.009 | 253.013 | 26.00 | 28.96 | 1.00 | 0.79 | 4.93 | 0.38 | 29.34 | 1.009 | 1.009 | 2.552 | 1.00 | 0.38 |
| 44 | 18 | 4.82 | 16.05 | 18.50 | 1.50 | 1.02 | 2.73 | 0.12 | 18.61 | 0.180 | 84.318 | 17.93 | 18.77 j | 0.84** | 1.02 | 4.71 | 0.35 | 19.12 | 0.488 | 0.334 | n/a | 0.50 | n/a |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

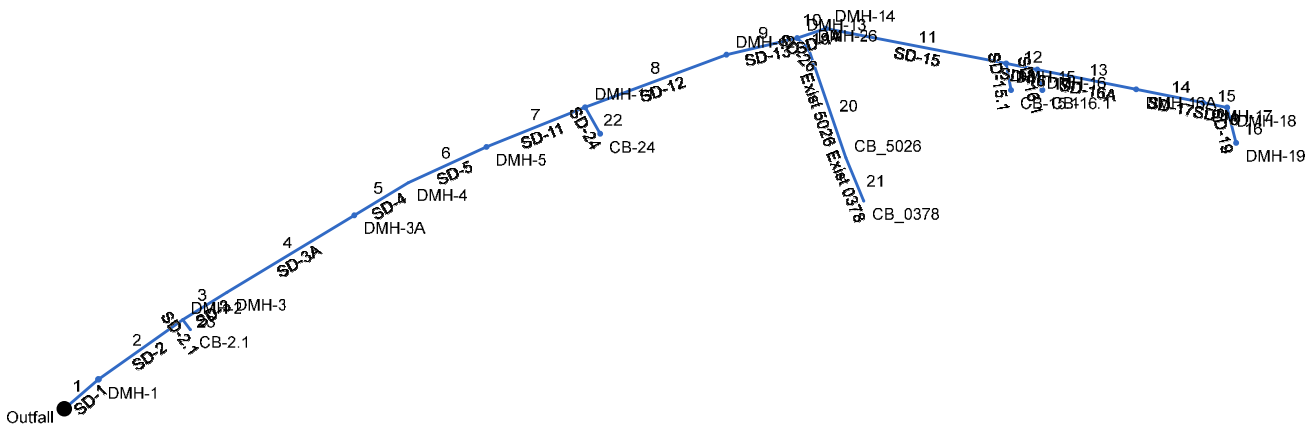
# Hydraulic Grade Line Computations

| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in) | (cfs) | Invert elev (ft) | HGL elev (ft) | Depth (ft) | Area (sqft) | Vel (ft/s) | Vel head (ft) | EGL elev (ft) | Sf (%) | (ft) | Invert elev (ft) | HGL elev (ft) | Depth (ft) | Area (sqft) | Vel (ft/s) | Vel head (ft) | EGL elev (ft) | Sf (%) | Ave Sf (%) | Enrgy loss (ft) | (K) | (ft) |
| 45 | 15 | 2.60 | 17.91 | 18.77 | 0.86 | 0.64 | 2.87 | 0.26 | 19.03 | 0.000 | 68.013 | 19.30 | 19.95 j | 0.65** | 0.64 | 4.06 | 0.26 | 20.20 | 0.000 | 0.000 | n/a | 0.25 | 0.06 |
| 46 | 15 | 1.20 | 19.53 | 19.95 | 0.42 | 0.36 | 3.36 | 0.16 | 20.10 | 0.000 | 131.136 | 22.03 | 22.46 | 0.43** | 0.38 | 3.19 | 0.16 | 22.62 | 0.000 | 0.000 | n/a | 0.94 | 0.15 |
| 47 | 12 | 1.21 | 22.56 | 22.83 | 0.27* | 0.17 | 7.06 | 0.18 | 23.01 | 0.000 | 14.242 | 23.11 | 23.57 | 0.46** | 0.36 | 3.40 | 0.18 | 23.75 | 0.000 | 0.000 | n/a | 1.00 | 0.18 |
| 48 | 18 | 16.45 | 36.95 | 38.53 | 1.50 | 1.77 | 9.31 | 1.35 | 39.88 | 2.092 | 21.000 | 37.15 | 38.97 | 1.50 | 1.77 | 9.31 | 1.35 | 40.32 | 2.091 | 2.091 | 0.439 | 0.70 | 0.94 |
| 49 | 18 | 12.30 | 37.25 | 39.91 | 1.50 | 1.77 | 6.96 | 0.75 | 40.67 | 1.169 | 256.068 | 41.45 | 42.95 | 1.50 | 1.77 | 6.96 | 0.75 | 43.70 | 1.170 | 1.169 | 2.994 | 0.15 | 0.11 |
| 50 | 18 | 12.48 | 41.55 | 43.06 | 1.50 | 1.77 | 7.06 | 0.78 | 43.84 | 1.203 | 302.814 | 43.90 | 46.71 | 1.50 | 1.77 | 7.06 | 0.78 | 47.48 | 1.203 | 1.203 | 3.644 | 0.15 | 0.12 |
| 51 | 18 | 10.77 | 44.00 | 46.82 | 1.50 | 1.77 | 6.10 | 0.58 | 47.40 | 0.897 | 183.014 | 45.25 | 48.46 | 1.50 | 1.77 | 6.10 | 0.58 | 49.04 | 0.897 | 0.897 | 1.641 | 1.00 | 0.58 |
| 52 | 15 | 9.02 | 46.65 | 49.04 | 1.25 | 1.19 | 7.36 | 0.84 | 49.88 | 1.665 | 260.754 | 58.65 | 59.81 j | 1.16** | 1.19 | 7.62 | 0.90 | 60.71 | 1.442 | 1.553 | n/a | 0.15 | 0.14 |
| 53 | 15 | 6.63 | 59.50 | 60.16 | 0.66* | 0.66 | 10.06 | 0.58 | 60.74 | 0.000 | 105.789 | 62.65 | 63.69 | 1.04** | 1.09 | 6.10 | 0.58 | 64.26 | 0.000 | 0.000 | n/a | 0.68 | n/a |
| 54 | 15 | 6.70 | 62.75 | 63.69 | 0.94 | 0.98 | 6.81 | 0.59 | 64.27 | 0.000 | 182.556 | 66.65 | 67.69 | 1.04** | 1.09 | 6.14 | 0.59 | 68.28 | 0.000 | 0.000 | n/a | 1.00 | 0.59 |

Project File: 16537 Alternate A2 2020-05-05.stm | Number of lines: 54 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

# Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan




| Project File: 16537 Alternate B1 2020-05-05.stm | Number of lines: 23 | Date: 5/6/2020 |
|---|---|---|

Storm Sewers v2018.30

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SD-1 | 39.56 | 30 | Cir | 60.459 | 7.00 | 7.40 | 0.662 | 9.50* | 9.98* | 0.15 | 10.13 | End | Manhole |
| 2 | SD-2 | 38.39 | 30 | Cir | 138.762 | 7.50 | 8.80 | 0.937 | 10.13 | 10.94 | 1.15 | 12.08 | 1 | Manhole |
| 3 | SD-3 | 37.25 | 30 | Cir | 69.662 | 10.00 | 10.60 | 0.861 | 12.08 | 12.66 | n/a | 12.66 | 2 | Manhole |
| 4 | SD-3A | 34.84 | 30 | Cir | 199.700 | 10.60 | 14.82 | 2.113 | 12.66 | 16.82 | n/a | 16.82 | 3 | Manhole |
| 5 | SD-4 | 35.02 | 30 | Cir | 84.500 | 14.82 | 15.98 | 1.373 | 16.82 | 17.99 | n/a | 17.99 | 4 | Manhole |
| 6 | SD-5 | 35.27 | 30 | Cir | 115.718 | 16.12 | 17.10 | 0.847 | 17.99 | 19.11 | n/a | 19.11 | 5 | Manhole |
| 7 | SD-11 | 34.07 | 30 | Cir | 142.436 | 17.10 | 19.66 | 1.797 | 19.11 | 21.64 | n/a | 21.64 | 6 | Manhole |
| 8 | SD-12 | 32.89 | 24 | Cir | 202.395 | 20.16 | 22.00 | 0.909 | 22.16* | 25.80* | n/a | 26.05 | 7 | Manhole |
| 9 | SD-13 | 33.03 | 24 | Cir | 97.338 | 22.00 | 23.19 | 1.223 | 26.05* | 27.82* | n/a | 29.29 | 8 | Manhole |
| 10 | SD-14 | 24.55 | 24 | Cir | 40.494 | 26.80 | 27.20 | 0.988 | 29.29* | 29.70* | n/a | 30.22 | 9 | Manhole |
| 11 | SD-15 | 24.28 | 24 | Cir | 246.310 | 27.30 | 31.60 | 1.746 | 30.22 | 33.34 | n/a | 33.34 | 10 | Manhole |
| 12 | SD-16 | 18.28 | 18 | Cir | 42.584 | 31.70 | 32.10 | 0.939 | 33.34* | 34.44* | n/a | 35.96 | 11 | Manhole |
| 13 | SD-16A | 17.17 | 18 | Cir | 135.154 | 32.10 | 38.00 | 4.365 | 35.96 | 39.44 | n/a | 39.44 | 12 | Manhole |
| 14 | SD-17 | 17.25 | 18 | Cir | 91.513 | 40.45 | 46.64 | 6.764 | 41.27 | 48.08 | n/a | 48.08 | 13 | Manhole |
| 15 | SD-18 | 17.27 | 15 | Cir | 33.000 | 46.99 | 49.12 | 6.455 | 48.08 | 50.36 | n/a | 50.36 | 14 | Manhole |
| 16 | SD-19 | 11.46 | 15 | Cir | 49.079 | 49.22 | 50.50 | 2.608 | 50.36 | 51.71 | n/a | 51.71 | 15 | Manhole |
| 17 | SD-16.1 | 0.91 | 12 | Cir | 28.352 | 33.80 | 34.15 | 1.234 | 35.96* | 35.98* | n/a | 36.00 | 12 | Manhole |
| 18 | SD-15.1 | 7.66 | 12 | Cir | 36.432 | 31.60 | 31.90 | 0.823 | 33.34* | 34.78* | n/a | 36.26 | 11 | Manhole |
| 19 | SD-26 | 10.85 | 18 | Cir | 20.824 | 23.69 | 23.90 | 1.008 | 29.29* | 29.48* | n/a | 29.78 | 9 | Manhole |
| 20 | Exist 5026 | 8.03 | 10 | Cir | 155.000 | 24.00 | 25.26 | 0.813 | 29.78* | 47.53* | n/a | 48.04 | 19 | Manhole |
| 21 | Exist 0378 | 3.69 | 12 | Cir | 63.000 | 28.36 | 28.80 | 0.698 | 48.04* | 48.61* | n/a | 48.96 | 20 | None |
| 22 | SD-24 | 2.71 | 12 | Cir | 41.000 | 21.81 | 22.02 | 0.512 | 22.61 | 22.82 | n/a | 23.07 | 7 | Manhole |
| 23 | SD-2.1 | 1.38 | 12 | Cir | 16.671 | 9.50 | 10.80 | 7.798 | 12.08* | 12.11* | n/a | 12.15 | 2 | Manhole |

Project File: 16537 Alternate B1 2020-05-05.stm | Number of lines: 23 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown).

# Hydraulic Grade Line Computations



| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 1 | 30 | 39.56 | 7.00 | 9.50 | 2.50 | 4.91 | 8.06 | 1.01 | 10.51 | 0.793 | 60.459 | 7.40 | 9.98 | 2.50 | 4.91 | 8.06 | 1.01 | 10.99 | 0.793 | 0.793 | 0.479 | 0.15 | 0.15 |
| 2 | 30 | 38.39 | 7.50 | 10.13 | 2.50 | 4.91 | 7.82 | 0.95 | 11.08 | 0.747 | 138.762 | 8.80 | 10.94 | 2.14 | 4.47 | 8.59 | 1.15 | 12.08 | 0.698 | 0.722 | 1.002 | 1.00 | 1.15 |
| 3 | 30 | 37.25 | 10.00 | 12.08 | 0.00 | 0.00 | 8.52 | 0.00 | 12.08 | 0.000 | 69.662 | 10.60 | 12.66 | 0.00** | 0.00 | 8.59 | 0.00 | 12.66 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 4 | 30 | 34.84 | 10.60 | 12.66 | 0.00 | 0.00 | 8.04 | 0.00 | 12.66 | 0.000 | 199.700 | 14.82 | 16.82 | 0.00** | 0.00 | 8.26 | 0.00 | 16.82 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 5 | 30 | 35.02 | 14.82 | 16.82 | 0.00 | 0.00 | 8.31 | 0.00 | 16.82 | 0.000 | 84.500 | 15.98 | 17.99 | 0.00** | 0.00 | 8.29 | 0.00 | 17.99 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 6 | 30 | 35.27 | 16.12 | 17.99 | 0.00 | 0.00 | 8.96 | 0.00 | 17.99 | 0.000 | 115.718 | 17.10 | 19.11 | 0.00** | 0.00 | 8.32 | 0.00 | 19.11 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 7 | 30 | 34.07 | 17.10 | 19.11 | 0.00 | 0.00 | 8.04 | 0.00 | 19.11 | 0.000 | 142.436 | 19.66 | 21.64 | 0.00** | 0.00 | 8.16 | 0.00 | 21.64 | 0.000 | 0.000 | 0.000 | 0.99 | n/a |
| 8 | 24 | 32.89 | 20.16 | 22.16 | 0.00* | 0.00 | 10.45 | 0.00 | 22.16 | 0.000 | 202.395 | 22.00 | 25.80 | 0.00** | 0.00 | 10.45 | 0.00 | 25.80 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 9 | 24 | 33.03 | 22.00 | 26.05 | 0.00 | 0.00 | 10.50 | 0.00 | 26.05 | 0.000 | 97.338 | 23.19 | 27.82 | 0.00** | 0.00 | 10.50 | 0.00 | 27.82 | 0.000 | 0.000 | 0.000 | 0.86 | n/a |
| 10 | 24 | 24.55 | 26.80 | 29.29 | 0.00 | 0.00 | 7.80 | 0.00 | 29.29 | 0.000 | 40.494 | 27.20 | 29.70 | 0.00** | 0.00 | 7.80 | 0.00 | 29.70 | 0.000 | 0.000 | 0.000 | 0.55 | n/a |
| 11 | 24 | 24.28 | 27.30 | 30.22 | 0.00 | 0.00 | 7.72 | 0.00 | 30.22 | 0.000 | 246.310 | 31.60 | 33.34 | 0.00** | 0.00 | 8.35 | 0.00 | 33.34 | 0.000 | 0.000 | 0.000 | 0.94 | n/a |
| 12 | 18 | 18.28 | 31.70 | 33.34 | 0.00 | 0.00 | 10.33 | 0.00 | 33.34 | 0.000 | 42.584 | 32.10 | 34.44 | 0.00** | 0.00 | 10.33 | 0.00 | 34.44 | 0.000 | 0.000 | 0.000 | 0.92 | n/a |
| 13 | 18 | 17.17 | 32.10 | 35.96 | 0.00 | 0.00 | 9.70 | 0.00 | 35.96 | 0.000 | 135.154 | 38.00 | 39.44 | 0.00** | 0.00 | 9.83 | 0.00 | 39.44 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 14 | 18 | 17.25 | 40.45 | 41.27 | 0.00 | 0.00 | 17.37 | 0.00 | 41.27 | 0.000 | 91.513 | 46.64 | 48.08 | 0.00** | 0.00 | 9.87 | 0.00 | 48.08 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 15 | 15 | 17.27 | 46.99 | 48.08 | 0.00 | 0.00 | 15.17 | 0.00 | 48.08 | 0.000 | 33.000 | 49.12 | 50.36 | 0.00** | 0.00 | 14.07 | 0.00 | 50.36 | 0.000 | 0.000 | 0.000 | 0.92 | n/a |
| 16 | 15 | 11.46 | 49.22 | 50.36 | 0.00 | 0.00 | 9.75 | 0.00 | 50.36 | 0.000 | 49.079 | 50.50 | 51.71 | 0.00** | 0.00 | 9.43 | 0.00 | 51.71 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 17 | 12 | 0.91 | 33.80 | 35.96 | 0.00 | 0.00 | 1.16 | 0.00 | 35.96 | 0.000 | 28.352 | 34.15 | 35.98 | 0.00** | 0.00 | 1.16 | 0.00 | 35.98 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 18 | 12 | 7.66 | 31.60 | 33.34 | 0.00 | 0.00 | 9.76 | 0.00 | 33.34 | 0.000 | 36.432 | 31.90 | 34.78 | 0.00** | 0.00 | 9.75 | 0.00 | 34.78 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 19 | 18 | 10.85 | 23.69 | 29.29 | 0.00 | 0.00 | 6.14 | 0.00 | 29.29 | 0.000 | 20.824 | 23.90 | 29.48 | 0.00** | 0.00 | 6.14 | 0.00 | 29.48 | 0.000 | 0.000 | 0.000 | 0.52 | n/a |
| 20 | 10 | 8.03 | 24.00 | 29.78 | 0.00 | 0.00 | 14.72 | 0.00 | 29.78 | 0.000 | 155.000 | 25.26 | 47.53 | 0.00** | 0.00 | 14.72 | 0.00 | 47.53 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 21 | 12 | 3.69 | 28.36 | 48.04 | 0.00 | 0.00 | 4.70 | 0.00 | 48.04 | 0.000 | 63.000 | 28.80 | 48.61 | 0.00** | 0.00 | 4.70 | 0.00 | 48.61 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 22 | 12 | 2.71 | 21.81 | 22.61 | 0.00 | 0.00 | 4.01 | 0.00 | 22.61 | 0.000 | 41.000 | 22.02 | 22.82 | 0.00** | 0.00 | 4.01 | 0.00 | 22.82 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |

Project File: 16537 Alternate B1 2020-05-05.stm | Number of lines: 23 | Run Date: 5/6/2020

Notes: * depth assumed; ** Critical depth. ; c = cir e = ellip b = box

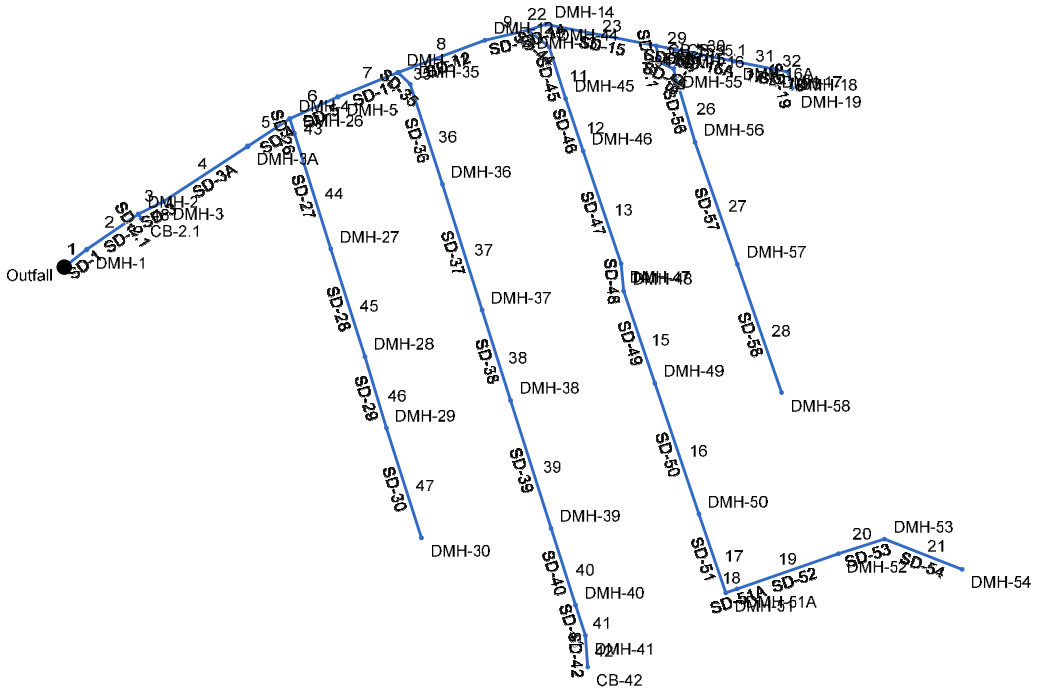
# Hydraulic Grade Line Computations

| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 23 | 12 | 1.38 | 9.50 | 12.08 | 0.00 | 0.00 | 1.76 | 0.00 | 12.08 | 0.000 | 16.671 | 10.80 | 12.11 | 0.00** | 0.00 | 1.76 | 0.00 | 12.11 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |

Project File: 16537 Alternate B1 2020-05-05.stm | Number of lines: 23 | Run Date: 5/6/2020

Notes: * depth assumed; ** Critical depth. ; c = cir e = ellip b = box

# Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan




| Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Date: 5/6/2020 |
|---|---|---|

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SD-1 | 64.55 | 36 | Cir | 62.721 | 6.00 | 7.00 | 1.594 | 8.58 | 9.58 | n/a | 9.58 | End | Manhole |
| 2 | SD-2 | 63.69 | 36 | Cir | 137.000 | 7.10 | 9.20 | 1.533 | 9.58 | 11.76 | 1.53 | 11.76 | 1 | Manhole |
| 3 | SD-3 | 62.81 | 36 | Cir | 62.000 | 9.70 | 11.15 | 2.339 | 11.77 | 13.71 | n/a | 13.71 | 2 | Manhole |
| 4 | SD-3A | 61.07 | 36 | Cir | 220.000 | 11.25 | 15.10 | 1.750 | 13.71 | 17.62 | n/a | 17.62 | 3 | Manhole |
| 5 | SD-4 | 61.31 | 36 | Cir | 110.000 | 15.25 | 16.55 | 1.182 | 17.62 | 19.08 | n/a | 19.08 | 4 | Manhole |
| 6 | SD-5 | 55.49 | 36 | Cir | 115.519 | 16.50 | 17.60 | 0.952 | 19.08 | 20.02 | n/a | 20.02 | 5 | Manhole |
| 7 | SD-11 | 54.51 | 30 | Cir | 142.348 | 17.50 | 18.80 | 0.913 | 20.02* | 22.21* | n/a | 24.02 | 6 | Manhole |
| 8 | SD-12 | 41.34 | 30 | Cir | 202.472 | 18.90 | 19.92 | 0.504 | 24.02* | 25.80* | n/a | 25.97 | 7 | Manhole |
| 9 | SD-13 | 41.50 | 30 | Cir | 97.277 | 20.22 | 20.60 | 0.391 | 25.97* | 26.83* | n/a | 27.76 | 8 | Manhole |
| 10 | SD-44 | 22.70 | 30 | Cir | 58.878 | 20.60 | 21.00 | 0.679 | 27.76* | 27.91* | n/a | 28.12 | 9 | Manhole |
| 11 | SD-45 | 21.07 | 24 | Cir | 118.997 | 22.00 | 22.65 | 0.546 | 28.12* | 29.01* | n/a | 29.12 | 10 | Manhole |
| 12 | SD-46 | 18.54 | 24 | Cir | 121.579 | 24.00 | 25.40 | 1.152 | 29.12* | 29.82* | n/a | 29.90 | 11 | Manhole |
| 13 | SD-47 | 16.45 | 18 | Cir | 260.603 | 25.50 | 36.50 | 4.221 | 29.90 | 37.93 | n/a | 37.93 | 12 | Manhole |
| 14 | SD-48 | 16.49 | 18 | Cir | 60.445 | 36.60 | 36.90 | 0.496 | 38.10* | 39.38* | n/a | 39.75 | 13 | Manhole |
| 15 | SD-49 | 12.30 | 18 | Cir | 213.483 | 37.00 | 40.10 | 1.452 | 39.75* | 42.27* | n/a | 42.39 | 14 | Manhole |
| 16 | SD-50 | 12.48 | 18 | Cir | 302.814 | 40.20 | 43.50 | 1.090 | 42.39* | 46.06* | n/a | 46.18 | 15 | Manhole |
| 17 | SD-51 | 10.77 | 18 | Cir | 183.014 | 43.60 | 44.90 | 0.710 | 46.18* | 47.84* | n/a | 48.42 | 16 | Manhole |
| 18 | SD-51A | 10.78 | 15 | Cir | 26.110 | 45.20 | 46.49 | 4.941 | 48.42* | 49.04* | n/a | 49.23 | 17 | Manhole |
| 19 | SD-52 | 9.02 | 15 | Cir | 234.645 | 46.74 | 58.10 | 4.841 | 49.23 | 59.26 | n/a | 59.26 | 18 | Manhole |
| 20 | SD-53 | 6.63 | 15 | Cir | 105.789 | 58.50 | 61.00 | 2.363 | 59.26 | 62.04 | n/a | 62.04 | 19 | Manhole |
| 21 | SD-54 | 6.70 | 15 | Cir | 182.556 | 61.10 | 64.60 | 1.917 | 62.04 | 65.64 | n/a | 65.64 | 20 | Manhole |
| 22 | SD-14 | 22.63 | 24 | Cir | 40.541 | 26.20 | 27.00 | 1.973 | 27.76 | 28.70 | n/a | 28.70 | 9 | Manhole |
| 23 | SD-15 | 22.38 | 24 | Cir | 246.299 | 27.10 | 31.37 | 1.734 | 28.70 | 33.06 | n/a | 33.06 | 22 | Manhole |
| 24 | SD-15.1 | 6.23 | 15 | Cir | 36.235 | 31.96 | 33.03 | 2.953 | 33.06 | 34.04 | n/a | 34.04 | 23 | Manhole |

Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown).

# Storm Sewer Summary Report



| Line No. | Line ID | Flow rate (cfs) | Line Size (in) | Line shape | Line length (ft) | Invert EL Dn (ft) | Invert EL Up (ft) | Line Slope (%) | HGL Down (ft) | HGL Up (ft) | Minor loss (ft) | HGL Junct (ft) | Dns Line No. | Junction Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | SD-55 | 6.24 | 15 | Cir | 34.722 | 33.23 | 33.40 | 0.490 | 34.48* | 34.76* | n/a | 35.16 | 24 | Manhole |
| 26 | SD-56 | 5.69 | 15 | Cir | 167.956 | 33.40 | 34.35 | 0.566 | 35.16* | 36.29* | n/a | 36.34 | 25 | Manhole |
| 27 | SD-57 | 5.79 | 12 | Cir | 283.667 | 36.50 | 45.60 | 3.208 | 37.20 | 46.55 | n/a | 46.55 | 26 | Manhole |
| 28 | SD-58 | 5.89 | 12 | Cir | 297.722 | 48.50 | 60.00 | 3.863 | 49.16 | 60.95 | n/a | 60.95 | 27 | Manhole |
| 29 | SD-16 | 17.60 | 18 | Cir | 42.586 | 31.47 | 32.10 | 1.479 | 33.06* | 34.08* | n/a | 34.32 | 23 | Manhole |
| 30 | SD-16A | 17.18 | 18 | Cir | 131.000 | 32.54 | 38.00 | 4.168 | 34.32 | 39.44 | n/a | 39.44 | 29 | Manhole |
| 31 | 17 | 17.26 | 18 | Cir | 87.000 | 40.45 | 46.64 | 7.115 | 41.26 | 48.08 | n/a | 48.08 | 30 | Manhole |
| 32 | SD-18 | 17.28 | 15 | Cir | 33.498 | 46.99 | 49.10 | 6.299 | 48.08 | 50.34 | n/a | 50.34 | 31 | Manhole |
| 33 | SD-19 | 11.46 | 15 | Cir | 37.168 | 49.10 | 50.50 | 3.767 | 50.34 | 51.71 | n/a | 51.71 | 32 | Manhole |
| 34 | SD-55.1 | 0.91 | 12 | Cir | 18.321 | 33.40 | 33.80 | 2.183 | 35.16* | 35.17* | n/a | 35.20 | 25 | Manhole |
| 35 | SD-35 | 15.82 | 24 | Cir | 36.930 | 19.20 | 19.50 | 0.812 | 24.02* | 24.18* | n/a | 24.39 | 7 | Manhole |
| 36 | SD-36 | 13.58 | 24 | Cir | 230.564 | 20.10 | 21.75 | 0.716 | 24.39* | 25.11* | n/a | 25.15 | 35 | Manhole |
| 37 | SD-37 | 10.99 | 18 | Cir | 289.775 | 21.90 | 24.70 | 0.966 | 25.15* | 27.89* | n/a | 27.98 | 36 | Manhole |
| 38 | SD-38 | 9.86 | 18 | Cir | 207.910 | 25.20 | 26.80 | 0.770 | 27.98* | 29.56* | n/a | 29.63 | 37 | Manhole |
| 39 | SD-39 | 4.94 | 15 | Cir | 294.885 | 27.30 | 32.50 | 1.763 | 29.63 | 33.40 | n/a | 33.40 | 38 | Manhole |
| 40 | SD-40 | 5.00 | 12 | Cir | 176.592 | 32.75 | 33.80 | 0.595 | 33.75* | 36.72* | n/a | 36.81 | 39 | Manhole |
| 41 | SD-41 | 3.18 | 12 | Cir | 69.978 | 33.90 | 35.20 | 1.858 | 36.81* | 37.29* | n/a | 37.36 | 40 | Manhole |
| 42 | SD-42 | 3.20 | 12 | Cir | 69.347 | 35.30 | 37.00 | 2.452 | 37.36 | 37.77 | n/a | 38.15 | 41 | Manhole |
| 43 | SD-26 | 8.00 | 18 | Cir | 33.145 | 16.60 | 16.84 | 0.724 | 19.08* | 19.24* | n/a | 19.29 | 5 | Manhole |
| 44 | SD-27 | 5.94 | 15 | Cir | 266.154 | 17.09 | 18.30 | 0.455 | 19.29* | 21.23* | n/a | 21.28 | 43 | Manhole |
| 45 | SD-28 | 4.57 | 15 | Cir | 248.146 | 18.55 | 21.20 | 1.068 | 21.28 | 22.27 | n/a | 22.30 | 44 | Manhole |
| 46 | SD-29 | 3.81 | 12 | Cir | 163.748 | 21.45 | 23.30 | 1.130 | 22.30 | 24.13 | n/a | 24.13 | 45 | Manhole |
| 47 | SD-30 | 3.87 | 12 | Cir | 253.013 | 23.40 | 26.00 | 1.028 | 24.21 | 26.84 | n/a | 26.84 | 46 | Manhole |
| 48 | SD-2.1 | 1.38 | 12 | Cir | 11.679 | 11.20 | 14.42 | 27.572 | 11.77 | 14.92 | n/a | 14.92 | 2 | Manhole |

Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Run Date: 5/6/2020

NOTES: Return period = 50 Yrs. ; *Surcharged (HGL above crown).

# Hydraulic Grade Line Computations



| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 1 | 36 | 64.55 | 6.00 | 8.58 | 2.58 | 6.46 | 9.98 | 1.55 | 10.13 | 0.000 | 62.721 | 7.00 | 9.58 | 2.58** | 6.46 | 9.99 | 1.55 | 11.13 | 0.000 | 0.000 | n/a | 0.15 | n/a |
| 2 | 36 | 63.69 | 7.10 | 9.58 | 2.48 | 6.24 | 10.21 | 1.53 | 11.10 | 0.000 | 137.000 | 9.20 | 11.76 | 2.56** | 6.43 | 9.90 | 1.53 | 13.29 | 0.000 | 0.000 | n/a | 1.00 | 1.53 |
| 3 | 36 | 62.81 | 9.70 | 11.77 | 0.00 | 0.00 | 12.16 | 0.00 | 11.77 | 0.000 | 62.000 | 11.15 | 13.71 | 0.00** | 0.00 | 9.86 | 0.00 | 13.71 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 4 | 36 | 61.07 | 11.25 | 13.71 | 0.00 | 0.00 | 9.91 | 0.00 | 13.71 | 0.000 | 220.000 | 15.10 | 17.62 | 0.00** | 0.00 | 9.67 | 0.00 | 17.62 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 5 | 36 | 61.31 | 15.25 | 17.62 | 0.00 | 0.00 | 10.26 | 0.00 | 17.62 | 0.000 | 110.000 | 16.55 | 19.08 | 0.00** | 0.00 | 9.69 | 0.00 | 19.08 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 6 | 36 | 55.49 | 16.50 | 19.08 | 0.00 | 0.00 | 8.66 | 0.00 | 19.08 | 0.000 | 115.519 | 17.60 | 20.02 | 0.00** | 0.00 | 9.15 | 0.00 | 20.02 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 7 | 30 | 54.51 | 17.50 | 20.02 | 0.00 | 0.00 | 11.20 | 0.00 | 20.02 | 0.000 | 142.348 | 18.80 | 22.21 | 0.00** | 0.00 | 11.20 | 0.00 | 22.21 | 0.000 | 0.000 | 0.000 | 0.93 | n/a |
| 8 | 30 | 41.34 | 18.90 | 24.02 | 0.00 | 0.00 | 8.49 | 0.00 | 24.02 | 0.000 | 202.472 | 19.92 | 25.80 | 0.00** | 0.00 | 8.49 | 0.00 | 25.80 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 9 | 30 | 41.50 | 20.22 | 25.97 | 0.00 | 0.00 | 8.52 | 0.00 | 25.97 | 0.000 | 97.277 | 20.60 | 26.83 | 0.00** | 0.00 | 8.52 | 0.00 | 26.83 | 0.000 | 0.000 | 0.000 | 0.82 | n/a |
| 10 | 30 | 22.70 | 20.60 | 27.76 | 0.00 | 0.00 | 4.66 | 0.00 | 27.76 | 0.000 | 58.878 | 21.00 | 27.91 | 0.00** | 0.00 | 4.66 | 0.00 | 27.91 | 0.000 | 0.000 | 0.000 | 0.61 | n/a |
| 11 | 24 | 21.07 | 22.00 | 28.12 | 0.00 | 0.00 | 6.75 | 0.00 | 28.12 | 0.000 | 118.997 | 22.65 | 29.01 | 0.00** | 0.00 | 6.75 | 0.00 | 29.01 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 12 | 24 | 18.54 | 24.00 | 29.12 | 0.00 | 0.00 | 5.94 | 0.00 | 29.12 | 0.000 | 121.579 | 25.40 | 29.82 | 0.00** | 0.00 | 5.94 | 0.00 | 29.82 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 13 | 18 | 16.45 | 25.50 | 29.90 | 0.00 | 0.00 | 9.36 | 0.00 | 29.90 | 0.000 | 260.603 | 36.50 | 37.93 | 0.00** | 0.00 | 9.51 | 0.00 | 37.93 | 0.000 | 0.000 | 0.000 | 0.27 | n/a |
| 14 | 18 | 16.49 | 36.60 | 38.10 | 0.00* | 0.00 | 9.38 | 0.00 | 38.10 | 0.000 | 60.445 | 36.90 | 39.38 | 0.00** | 0.00 | 9.38 | 0.00 | 39.38 | 0.000 | 0.000 | 0.000 | 0.27 | n/a |
| 15 | 18 | 12.30 | 37.00 | 39.75 | 0.00 | 0.00 | 6.99 | 0.00 | 39.75 | 0.000 | 213.483 | 40.10 | 42.27 | 0.00** | 0.00 | 6.99 | 0.00 | 42.27 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 16 | 18 | 12.48 | 40.20 | 42.39 | 0.00 | 0.00 | 7.09 | 0.00 | 42.39 | 0.000 | 302.814 | 43.50 | 46.06 | 0.00** | 0.00 | 7.09 | 0.00 | 46.06 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 17 | 18 | 10.77 | 43.60 | 46.18 | 0.00 | 0.00 | 6.12 | 0.00 | 46.18 | 0.000 | 183.014 | 44.90 | 47.84 | 0.00** | 0.00 | 6.12 | 0.00 | 47.84 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 18 | 15 | 10.78 | 45.20 | 48.42 | 0.00 | 0.00 | 8.82 | 0.00 | 48.42 | 0.000 | 26.110 | 46.49 | 49.04 | 0.00** | 0.00 | 8.82 | 0.00 | 49.04 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 19 | 15 | 9.02 | 46.74 | 49.23 | 0.00 | 0.00 | 7.38 | 0.00 | 49.23 | 0.000 | 234.645 | 58.10 | 59.26 | 0.00** | 0.00 | 7.64 | 0.00 | 59.26 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 20 | 15 | 6.63 | 58.50 | 59.26 | 0.00 | 0.00 | 8.54 | 0.00 | 59.26 | 0.000 | 105.789 | 61.00 | 62.04 | 0.00** | 0.00 | 6.11 | 0.00 | 62.04 | 0.000 | 0.000 | 0.000 | 0.68 | n/a |
| 21 | 15 | 6.70 | 61.10 | 62.04 | 0.00 | 0.00 | 6.80 | 0.00 | 62.04 | 0.000 | 182.556 | 64.60 | 65.64 | 0.00** | 0.00 | 6.14 | 0.00 | 65.64 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 22 | 24 | 22.63 | 26.20 | 27.76 | 0.00 | 0.00 | 8.72 | 0.00 | 27.76 | 0.000 | 40.541 | 27.00 | 28.70 | 0.00** | 0.00 | 8.03 | 0.00 | 28.70 | 0.000 | 0.000 | 0.000 | 0.55 | n/a |

Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth. ; c = cir e = ellip b = box

# Hydraulic Grade Line Computations



| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 23 | 24 | 22.38 | 27.10 | 28.70 | 0.00 | 0.00 | 8.36 | 0.00 | 28.70 | 0.000 | 246.299 | 31.37 | 33.06 | 0.00** | 0.00 | 7.96 | 0.00 | 33.06 | 0.000 | 0.000 | 0.000 | 0.94 | n/a |
| 24 | 15 | 6.23 | 31.96 | 33.06 | 0.00 | 0.00 | 5.48 | 0.00 | 33.06 | 0.000 | 36.235 | 33.03 | 34.04 | 0.00** | 0.00 | 5.90 | 0.00 | 34.04 | 0.000 | 0.000 | 0.000 | 0.84 | n/a |
| 25 | 15 | 6.24 | 33.23 | 34.48 | 0.00* | 0.00 | 5.12 | 0.00 | 34.48 | 0.000 | 34.722 | 33.40 | 34.76 | 0.00** | 0.00 | 5.12 | 0.00 | 34.76 | 0.000 | 0.000 | 0.000 | 0.99 | n/a |
| 26 | 15 | 5.69 | 33.40 | 35.16 | 0.00 | 0.00 | 4.67 | 0.00 | 35.16 | 0.000 | 167.956 | 34.35 | 36.29 | 0.00** | 0.00 | 4.67 | 0.00 | 36.29 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 27 | 12 | 5.79 | 36.50 | 37.20 | 0.00 | 0.00 | 9.86 | 0.00 | 37.20 | 0.000 | 283.667 | 45.60 | 46.55 | 0.00** | 0.00 | 7.54 | 0.00 | 46.55 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 28 | 12 | 5.89 | 48.50 | 49.16 | 0.00 | 0.00 | 10.67 | 0.00 | 49.16 | 0.000 | 297.722 | 60.00 | 60.95 | 0.00** | 0.00 | 7.64 | 0.00 | 60.95 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 29 | 18 | 17.60 | 31.47 | 33.06 | 0.00 | 0.00 | 9.98 | 0.00 | 33.06 | 0.000 | 42.586 | 32.10 | 34.08 | 0.00** | 0.00 | 9.98 | 0.00 | 34.08 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 30 | 18 | 17.18 | 32.54 | 34.32 | 0.00 | 0.00 | 9.74 | 0.00 | 34.32 | 0.000 | 131.000 | 38.00 | 39.44 | 0.00** | 0.00 | 9.86 | 0.00 | 39.44 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 31 | 18 | 17.26 | 40.45 | 41.26 | 0.00 | 0.00 | 17.72 | 0.00 | 41.26 | 0.000 | 87.000 | 46.64 | 48.08 | 0.00** | 0.00 | 9.89 | 0.00 | 48.08 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 32 | 15 | 17.28 | 46.99 | 48.08 | 0.00 | 0.00 | 15.19 | 0.00 | 48.08 | 0.000 | 33.498 | 49.10 | 50.34 | 0.00** | 0.00 | 14.09 | 0.00 | 50.34 | 0.000 | 0.000 | 0.000 | 0.92 | n/a |
| 33 | 15 | 11.46 | 49.10 | 50.34 | 0.00 | 0.00 | 9.35 | 0.00 | 50.34 | 0.000 | 37.168 | 50.50 | 51.71 | 0.00** | 0.00 | 9.43 | 0.00 | 51.71 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 34 | 12 | 0.91 | 33.40 | 35.16 | 0.00 | 0.00 | 1.16 | 0.00 | 35.16 | 0.000 | 18.321 | 33.80 | 35.17 | 0.00** | 0.00 | 1.16 | 0.00 | 35.17 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 35 | 24 | 15.82 | 19.20 | 24.02 | 0.00 | 0.00 | 5.08 | 0.00 | 24.02 | 0.000 | 36.930 | 19.50 | 24.18 | 0.00** | 0.00 | 5.08 | 0.00 | 24.18 | 0.000 | 0.000 | 0.000 | 0.53 | n/a |
| 36 | 24 | 13.58 | 20.10 | 24.39 | 0.00 | 0.00 | 4.35 | 0.00 | 24.39 | 0.000 | 230.564 | 21.75 | 25.11 | 0.00** | 0.00 | 4.35 | 0.00 | 25.11 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 37 | 18 | 10.99 | 21.90 | 25.15 | 0.00 | 0.00 | 6.26 | 0.00 | 25.15 | 0.000 | 289.775 | 24.70 | 27.89 | 0.00** | 0.00 | 6.26 | 0.00 | 27.89 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 38 | 18 | 9.86 | 25.20 | 27.98 | 0.00 | 0.00 | 5.61 | 0.00 | 27.98 | 0.000 | 207.910 | 26.80 | 29.56 | 0.00** | 0.00 | 5.61 | 0.00 | 29.56 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 39 | 15 | 4.94 | 27.30 | 29.63 | 0.00 | 0.00 | 4.03 | 0.00 | 29.63 | 0.000 | 294.885 | 32.50 | 33.40 | 0.00** | 0.00 | 5.22 | 0.00 | 33.40 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 40 | 12 | 5.00 | 32.75 | 33.75 | 0.00* | 0.00 | 6.37 | 0.00 | 33.75 | 0.000 | 176.592 | 33.80 | 36.72 | 0.00** | 0.00 | 6.37 | 0.00 | 36.72 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 41 | 12 | 3.18 | 33.90 | 36.81 | 0.00 | 0.00 | 4.05 | 0.00 | 36.81 | 0.000 | 69.978 | 35.20 | 37.29 | 0.00** | 0.00 | 4.05 | 0.00 | 37.29 | 0.000 | 0.000 | 0.000 | 0.29 | n/a |
| 42 | 12 | 3.20 | 35.30 | 37.36 | 0.00 | 0.00 | 4.08 | 0.00 | 37.36 | 0.000 | 69.347 | 37.00 | 37.77 | 0.00** | 0.00 | 4.95 | 0.00 | 37.77 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 43 | 18 | 8.00 | 16.60 | 19.08 | 0.00 | 0.00 | 4.55 | 0.00 | 19.08 | 0.000 | 33.145 | 16.84 | 19.24 | 0.00** | 0.00 | 4.55 | 0.00 | 19.24 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 44 | 15 | 5.94 | 17.09 | 19.29 | 0.00 | 0.00 | 4.86 | 0.00 | 19.29 | 0.000 | 266.154 | 18.30 | 21.23 | 0.00** | 0.00 | 4.86 | 0.00 | 21.23 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |

Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth. ; c = cir e = ellip b = box

# Hydraulic Grade Line Computations

| Line | Size | Q | Downstream | | | | | | | | Len | Upstream | | | | | | | | Check | | JL coeff | Minor loss |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | | Invert elev | HGL elev | Depth | Area | Vel | Vel head | EGL elev | Sf | Ave Sf | Enrgy loss | | |
| | (in) | (cfs) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (ft) | (ft) | (ft) | (ft) | (sqft) | (ft/s) | (ft) | (ft) | (%) | (%) | (ft) | (K) | (ft) |
| 45 | 15 | 4.57 | 18.55 | 21.28 | 0.00 | 0.00 | 3.73 | 0.00 | 21.28 | 0.000 | 248.146 | 21.20 | 22.27 | 0.00** | 0.00 | 4.11 | 0.00 | 22.27 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 46 | 12 | 3.81 | 21.45 | 22.30 | 0.00 | 0.00 | 5.34 | 0.00 | 22.30 | 0.000 | 163.748 | 23.30 | 24.13 | 0.00** | 0.00 | 5.48 | 0.00 | 24.13 | 0.000 | 0.000 | 0.000 | 0.15 | n/a |
| 47 | 12 | 3.87 | 23.40 | 24.21 | 0.00 | 0.00 | 5.68 | 0.00 | 24.21 | 0.000 | 253.013 | 26.00 | 26.84 | 0.00** | 0.00 | 5.53 | 0.00 | 26.84 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |
| 48 | 12 | 1.38 | 11.20 | 11.77 | 0.00 | 0.00 | 2.99 | 0.00 | 11.77 | 0.000 | 11.679 | 14.42 | 14.92 | 0.00** | 0.00 | 3.55 | 0.00 | 14.92 | 0.000 | 0.000 | 0.000 | 1.00 | n/a |

Project File: 16537 Alternate B2 2020-05-05.stm | Number of lines: 48 | Run Date: 5/6/2020

Notes: * Normal depth assumed; ** Critical depth. ; c = cir e = ellip b = box

**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **SEWER LINING** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 10 |
| **Division** | Collections Systems | **Div. Priority** | 10 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

The 2018 video for line segment **1C_2-1C_1** clearly indicates it is collapsing at two locations. It is also only 7' away from the face of a building, which would make excavation and replacement very challenging. Therefore, this project is an excellent candidate for a "trenchless technology" utilizing a liner to reinforce and effectively replace the existing deteriorating sewer line. This "pipe within a pipe" approach has been used successfully for decades to minimize the disruption created by traditional excavation and replacement projects.

The video for line segment **4A_68D-4A_68C** clearly indicates significant cracking and potential risk of collapse. Because it is a cross country line in a difficult area to access with construction equipment, this project is an excellent candidate for a "trenchless technology" utilizing a liner to reinforce and effectively replace the existing deteriorating sewer line. This "pipe within a pipe" approach has been used successfully for decades to minimize the disruption created by traditional excavation and replacement projects.

The video for line segment **6A_5A-6A_5** clearly indicates the pipe is in poor condition with significant cracking and potential risk of collapse. Because it is located across several residential properties and traditional construction methods would be highly disruptive, this project is an excellent candidate for a "trenchless technology" utilizng a liner to reinforce and effectively replace the existing deteriorating sewer line. This "pipe within a pipe" approach has been used successfully for decades to minimize the disruption created by traditional excavation and replacement projects.

The video for line segment **1C_17-1C_18** clearly indicates the pipe is in poor condition with significant cracking and potential risk of collapse. Because it is located in a densely developed residential area and traditional construction methods would be highly disruptive, this project is an excellent candidate for a "trenchless technology" utilizing a liner to reinforce and effectively replace the existing deteriorating sewer line. This "pipe within a pipe" approach has been used successfully for decades to minimize the disruption created by traditional excavation and replacement projects.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

The proper functioning of the City's sewer system is essential in ensuring compliance with state and federal water quality regulations. Additionally, the relationship between minimizing infiltration and/or exfiltration for the City's sewers is critically important for our stormwater system to maintain the capacity and resilience needed to be adequately prepared for rising sea levels in intensifying storm surges.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 200,000.00 | $ 200,000.00 | | | | | $ 200,000.00 | $ 200,000.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 200,000.00** | **$ 200,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 200,000.00** | **$ 200,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Vortex Services - Northeast | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 75 | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **ELECTRICAL VAN** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 11 |
| **Division** | Treatment Systems | **Div. Priority** | 11 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

This Capital Improvement request is for the purchase of a utility/maintenance van for the department's Maintenance System Division. This item will replace two 2006 ¾ ton cargo vans with a single more economical option.

The van will be used to transport tools, equipment and staff to the city's 28 wastewater-pumping stations. This vehicle will respond to equipment failures within these critical systems and will be outfitted with many of the necessary replacement mechanical and electrical components needed to ensure 24hr operational capabilities.

The estimated cost of the vehicle is $52,141.00 and was obtained from a truck dealership.

## Financial Impact of this Purchase/Project

Source of Cost Estimate from a contractor. 10% Contingency and 20% Engineering added to the contractor's cost estimate.

## Environmental Considerations

The proper and continuous functioning of the city's wastewater pumping stations are mandatory to maintain regulatory compliance with state and federal water quality protection requirements. The maintenance van is an essential component in ensuring these systems operate effectively and efficiently in perpetuity. In keeping with the city's climate action goals, the replacement of two vans with a single van also reduces the maintenance division's overall carbon footprint. Finally, the new van is equipped with the latest emissions control technology.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 45,141.00 | $ 52,141.00 | | | | | $ 45,141.00 | $ 52,141.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | $ 7,000.00 | | | | | | $ 7,000.00 | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 52,141.00** | **$ 52,141.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 52,141.00** | **$ 52,141.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Yankee Ford | | | | |
| **Est. Annual Operating Costs** | $ 743.00 | **Projected Useful Life** | 10 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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## Weeks,Brad

**From:** Thomes,David
**Sent:** Thursday, January 21, 2021 12:49 PM
**To:** Weeks,Brad
**Subject:** add this to the 148" WB High Top ford transit CIP request ( electrical van)
**Attachments:** Est_2157_from_Messer_Truck_Equipment_3864.pdf

Brad, add this please

So the new request will be:
Truck $52,141.00
Shelving and latter rack $7391.00
Total: $59,532.00
Less trade $ 7,000.00
Net: $52,532.00

Dave Thomes
Collection Systems Division Manager
Department of Water Resource Protection
City of South Portland
Office 207-767-7680
Fax 207-767-5697
dthomes@southportland.org

Yankee Ford Sales
165 Waterman Drive
South Portland, ME 04106
Phone: (207)799-5591
Fax: (207)799-9412

Attention: David Thomes

Water Resource Protection

2021 Budget quote for a 2021 Transit 350 high roof van with AWD and a 148" wheelbase.

Quote: $52,141.00

Scott Bonney
Fleet manager
Yankee Ford Sales
scott@yankeeford.com
(207)799-5591

# MAJOR PRODUCT CHANGES

## OVERVIEW

The Transit Connect lineup consists of 16 Body Codes that offer various side and rear-door glass configurations, as well as multiple seating options that enable owners to customize the Transit Connect to meet their specific business and/or personal-use needs. With two powertrain choices; class-exclusive driver-assist features; enhanced interior comfort and convenience, and a stylish appearance, the 2021MY Transit Connect will continue to dominate the compact van segment. To learn more about the features on this vehicle, go to www.fordesourcebook.com.

## EXTERIOR

— Kapoor Red (AW) and Diffused Silver (FK) exterior paint colors have been deleted
— Sedona Orange (BP) and Solar Silver (HE) exterior paint colors have been added

## INTERIOR/COMFORT

— No changes

## DRIVER ASSIST

— Lane Keeping System (53C) has been removed, features of this package are now included with Adaptive Cruise Control (526)

## FUNCTIONAL

— The 2.5L Gas Engine and 6-Speed Transmission (997/446) with the CNG/LPG Engine Prep Package (98G) are now optional

## SAFETY & SECURITY

— No changes

## PACKAGES/OPTIONS DELETED

— Deleted Taxi Package (86T)

## LATEST ORDER GUIDE UPDATES

— Lane-Keeping Aid (previously Lane-Keeping Assist) remains standard on XLT and Titanium and is now reflected on the Major Product Summary page
— Ford Telematics™and Data Services Prep available to fleets with the standard FordPass™ Connect / Telematics Modem
— Kapoor Red (AW) and Diffused Silver (FK) exterior paint colors have been deleted
— Sedona Orange (BP) and Solar Silver (HE) exterior paint colors have been added
— Dark Blue (UV) exterior paint color is now restricted to XL trim level on Cargo Van and Passenger Wagon

**Product Changes and Features Availability**

Features, options and package content subject to change. Please check www.fmcdealer.com for the most current information.

★ = New for this model year

# MAJOR PRODUCT SUMMARY

## AVAILABLE CONFIGURATIONS

| Body Code | Body Style | Series | Wheelbase | Wheelbase Length (in) | Side Doors | Second Row Side Door Glass | Third Row/Rear Side Glass | Rear Doors | Rear Door Glass | Seating |
|---|---|---|---|---|---|---|---|---|---|---|
| **Transit Connect Cargo Van** | | | | | | | | | | |
| S5E | VAN | XL | SHORT | 104.8 | DUAL SLIDING | Optional (fixed) | n/a | 50/50 180° Swing-Out Cargo Doors | Optional (fixed) | 2 |
| S7E | VAN | XL | LONG | 120.6 | DUAL SLIDING | Optional (fixed) | n/a | 50/50 180° Swing-Out Cargo Doors | Optional (fixed) | 2 |
| S5F | VAN | XLT | SHORT | 104.8 | DUAL SLIDING | Optional (fixed) | n/a | 50/50 180° Swing-Out Cargo Doors | Optional (fixed) | 2 |
| S7F | VAN | XLT | LONG | 120.6 | DUAL SLIDING | Optional (fixed) | n/a | 50/50 180° Swing-Out Cargo Doors | Optional (fixed) | 2 |
| E5E | VAN | XL | SHORT | 104.8 | DUAL SLIDING | Optional (fixed) | n/a | Liftgate | Standard (fixed) | 2 |
| E7E | VAN | XL | LONG | 120.6 | DUAL SLIDING | Optional (fixed) | n/a | Liftgate | Standard (fixed) | 2 |
| E5F | VAN | XLT | SHORT | 104.8 | DUAL SLIDING | Optional (fixed) | n/a | Liftgate | Standard (fixed) | 2 |
| E7F | VAN | XLT | LONG | 120.6 | DUAL SLIDING | Optional (fixed) | n/a | Liftgate | Standard (fixed) | 2 |
| **Transit Connect Passenger Wagon** | | | | | | | | | | |
| S9E | WAGON | XL | LONG | 120.6 | DUAL SLIDING | Standard (power) | Standard (fixed) | 50/50 180° Swing-Out Cargo Doors | Standard (fixed) | up to 7 |
| S9F | WAGON | XLT | LONG | 120.6 | DUAL SLIDING | Standard (power) | Standard (fixed) | 50/50 180° Swing-Out Cargo Doors | Standard (fixed) | up to 7 |
| E9E | WAGON | XL | LONG | 120.6 | DUAL SLIDING | Standard (power) | Standard (fixed) | Liftgate | Standard (fixed) | up to 7 |
| E9F | WAGON | XLT | LONG | 120.6 | DUAL SLIDING | Standard (power) | Standard (fixed) | Liftgate | Standard (fixed) | up to 7 |
| E9G | WAGON | TITANIUM | LONG | 120.6 | DUAL SLIDING | Standard (power) | Standard (fixed) | Liftgate | Standard (fixed) | up to 7 |

★ = New for this model year

# MAJOR PRODUCT SUMMARY

**The following equipment is standard as indicated. Each series includes the standard equipment of the previous series, except where additions/exceptions are noted:**

## XL Cargo Van

**MECHANICAL/FUNCTIONAL**
- Alternator – Standard Duty
- Battery – Heavy Duty
- Brakes – Power 4-Wheel Disc
- Engine – 2.0L GDI I-4 Gas
- Transmission – 8-Speed SelectShift® Automatic
- Drivetrain – Front Wheel Drive
- Fuel Tank – 15.8 Gal
- Steering – Electric Power-Assisted Steering (EPAS)
- Suspension – Macpherson Strut Independ. Front/Twist-Beam Rear

**EXTERIOR**
- Bodyside Moldings – Black, Molded-In Color (MIC)
- Front/ Rear Bumper – Black, MIC
- Grille – 3-Bar Black Grill with Black Surround
- Side & Rear Cargo Door Handles – Black, MIC
- Headlamps – Halogen
- Headlamp Bezel – Black, MIC
- Automatic Headlamps On/Off (XL only)
- Mirrors – Manual Adjust with Manual Fold, Black MIC
- Tires – 215/55 R16 97H XL All-Season
- Wheels – 16" Steel w/Full Covers

**INTERIOR/COMFORT**
- Air Conditioning – Front Manual Climate Control
- Audio:
  - AM/FM Radio with Bluetooth
  - FordPass™ Connect
  - 4.2" LCD Multi-Function Display (MFD) Screen
  - 1 USB Port
  - 4 Front Speakers
- Comfort/Convenience:
  - 4-Way Adjustable Deluxe Steering Column
  - 12V Powerpoint in Center Console
  - 2 Front Cupholders
  - Front Row Full-Width Overhead Storage Shelf with Front Grab Handles
  - Front Dome Light
  - Rear Cargo Area Light
- Cargo Tie Down Hooks
- Floor Cover – Vinyl
- Seating:
  - 6-Way Manual Driver Seat (fore/aft, up/down, recline)
  - 4-Way Manual Passenger Seat (fore/aft, recline) with Fold-Flat Back
  - Vinyl Seating Surfaces
- Power Front-Row Windows

**SAFETY/SECURITY**
- First-Row Safety Canopy® Side-Curtain Airbags
- Driver & Passenger Front Airbags
- Driver & Passenger Side Airbags
- Seatbelt Minder
- Power Central Single Door-Locks w/One-Step Unlock
- Remote Keyless-Entry with 2 Key Fobs
- SecuriLock® Passive Anti-Theft System (PATS)
- Tire Pressure Monitoring System (TPMS)

**DRIVER-ASSIST**
- Auto Start/Stop Technology
- EcoMode
- EcoCoach
- Hill Start Assist
- Side Wind Stabilization
- Pre-Collision Assist with Automatic Emergency Braking (AEB)
  - Pedestrian Detection
  - Forward Collision Warning
  - Dynamic Brake Support
- Rear View Camera

## XLT Cargo Van

*Includes all XL content, plus:*

**EXTERIOR**
- Front Bumper – Body Color, Painted
- Rear Bumper End Caps – Body Color, Painted
- Fog Lamps – Halogen
- Mirrors – Power Adjust, PowerFold®, Heated Exterior Mirrors – Black, MIC
- XLT Badge

**INTERIOR**
- Audio:
  - SYNC® 3 (Less NAV)
  - 6.5" Touch Screen
  - SiriusXM® Satellite Radio
- Comfort/Convenience:
  - Premium Front Center Closed Console
  - 4-Spoke Steering Wheel with Satin Chrome Shells
  - Satin Chrome Front-Door Inner Release Handles
  - Driver Sunvisor with Vanity Mirror and Ticket Strap
  - Passenger Visor with Vanity Mirror
  - Dual Front Map Lights
  - Wireless Charging
  - 2 Smart-Charging USB Ports
- Seating:
  - 6-Way Manual Driver Seat (fore/aft, up/down, recline) with Manual Lumbar
  - Cloth Seating Surfaces
- Floor Cover – Carpeted
- Front Carpeted Floor Mats

**DRIVER-ASSIST**
- Cruise Control
- MyKey®

***Ford Co-Pilot360™***
- BLIS (Blind Spot Information System with Cross-Traffic Alert)
- Lane Keeping Aid
- Pre-Collision Assist with Automatic Emergency Braking (AEB)
  - Pedestrian Detection
  - Forward Collision Warning
  - Dynamic Brake Support
- Rear View Camera
- Auto High Lamps

## XL Passenger Wagon

**MECHANICAL/FUNCTIONAL**
- Alternator – Heavy Duty
- Battery – Heavy Duty
- Brakes – Power 4-Wheel Disc
- Engine – 2.0L GDI I-4 Gas
- Transmission – 8-Speed SelectShift® Automatic
- Drivetrain – Front Wheel Drive
- Fuel Tank – 15.8 Gal
- Steering – Electric Power-Assisted Steering (EPAS)
- Suspension – Macpherson Strut Independ. Front/Twist-Beam Rear

**EXTERIOR**
- Bodyside Moldings – Black, MIC
- Front/Rear Bumper – Black, MIC
- Grille – 3-Bar Black Grill with Black Surround
- Headlamps – Halogen
- Headlamp Bezel – Black, MIC
- Automatic Headlamps On/Off (XL only)
- Rain-Sensing Front Wipers
- Mirrors – Manual Adjust with Manual Fold, Black MIC
- Side & Rear Cargo Door Handles
- Tires – 215/55 R16 97H XL A/S
- Wheels – 16" Steel w/Full Covers

**INTERIOR/COMFORT**
- Air Conditioning – Front and Rear Seat Manual Climate Control
- Audio:
  - AM/FM Radio with Bluetooth
  - FordPass™ Connect
  - 4.2" LCD MFD Screen
  - 4 Front/2 Rear Speakers
- Comfort/Convenience:
  - 4-Spoke Steering Wheel with Satin Chrome Shells
  - 4-Way Adjust. Steering Column
  - Premium Front Center Closed Console w/12V Powerpoint
  - 12V ppt. in Rear Cargo Area
  - 6 Cupholders (2 Front/4 Rear)
  - Front Row Full-Width Overhead Storage Shelf w/Grab Handles
- Dual Front Map Lights
- Floor Cover – Carpeted (6-Passenger)
- Seating:
  - 6-Way Manual Driver Seat (fore/aft, up/down, recline) with Manual Lumbar, plus Rear Map Pocket
  - 4-Way Manual Passenger Seat (fore/aft, recline) with Fold-Flat Back
  - Second and Third-Row Fold-Flat Bucket Seats
  - Cloth Seating Surfaces
- Power Driver's Window with One-Touch Up/Down
- Power Second-Row Windows
- Rear-Window Defroster

**SAFETY/SECURITY**
- First-Row Safety Canopy® Side-Curtain Airbags
- Driver & Passenger Front Airbags
- Driver & Passenger Side Airbags
- Seatbelt Minder (front row only)
- Power Central Single Door-Locks w/One-Step Unlock
- Remote Keyless-Entry/2 Key Fobs SecuriLock® Passive Anti-Theft System (PATS)
- Tire Pressure Monitoring System

**DRIVER-ASSIST**
- Auto Start/Stop Technology
- Cruise Control
- EcoMode and EcoCoach
- Hill Start Assist
- Side Wind Stabilization
- Pre-Collision Assist with Automatic Emergency Braking (AEB)
  - Pedestrian Detection
  - Forward Collision Warning
  - Dynamic Brake Support
- Rear View Camera
- Reverse Sensing System

## XLT Passenger Wagon

*Includes all XL content, plus:*

**EXTERIOR**
- Front Bumper – Body-Color, Painted
- Rear Bumper and End Caps – Body-Color, Painted
- Bodyside Moldings – Body-Color, Painted
- Grille – 5-Bar Black Grill with Chrome Surround
- Side & Rear Cargo Door Handles – Body-Color, Painted
- Fog Lamps – Halogen
- Mirrors – Power Adjust, PowerFold®, Heated Exterior Mirrors – Black, MIC
- XLT Badge

**INTERIOR/COMFORT**
- Air Conditioning – Dual-Zone Electronic Auto Temperature Control
- Manual Rear Seat Climate Controls (LWB only)
- Audio:
  - SYNC® 3 (less NAV) – includes AM/FM Radio, SiriusXM® Satellite Radio
  - 6.5" LCD Touch Screen
  - 2 Smart-Charging USB Ports
- Comfort/Convenience:
  - Satin Chrome Front-Door Inner Release Handles
  - 6 Cupholders on LWB
  - Auto-Dimming Rear View Mirror
  - Child Observation Mirror
  - Driver Sunvisor with Vanity Mirror and Ticket Strap
  - Passenger Sunvisor with Vanity Mirror
  - Sunglass Holder
  - Wireless Charging
- Front/Rear Carpeted Floor Mats
- Seating:
  - 6-Way Power Driver Seat (fore/aft, up/down, recline) with Manual Lumbar, plus Rear Map Pocket
  - 4-Way Manual Passenger Seat (fore/aft, recline) with Manual Lumbar (non-folding back), plus Rear Map Pocket
  - Cloth Seating Surfaces
- Power Front-Row Windows with One-Touch Up/Down
- Power Second-Row Windows with One-Touch Up/Down

**DRIVER-ASSIST**
- MyKey®

***Ford Co-Pilot360™***
- BLIS (Blind Spot Information System with Cross-Traffic Alert)
- Lane Keeping Aid
- Pre-Collision Assist with Automatic Emergency Braking (AEB)
  - Pedestrian Detection
  - Forward Collision Warning
  - Dynamic Brake Support
- Rear View Camera
- Auto High Lamps

## Titanium Passenger Wagon

*Includes all XLT content, plus:*

**MECHANICAL/FUNCTIONAL**
- Passive Entry/Passive Start (includes Push Button Start/Stop)

**EXTERIOR**
- Headlamps – HID (High Intensity Discharge)
- Headlamp Bezel – Chrome
- Fog Lamps – LED
- Mirrors – Power Adjust, PowerFold®, Heated Exterior Mirrors – Body-Color, Painted
- Titanium Badge
- Wheels – 16" Premium Aluminum

**INTERIOR**
- Audio:
  - SYNC® 3 (with NAV, plus HD Radio™)
  - 9-Speaker Premium Audio
- Comfort/Convenience:
  - Leather Gearshift Knob
  - Vinyl Soft Door Armrest
  - Locking and Illuminated Glovebox
- Seating:
  - 6-Way Power Heated Driver Seat (fore/aft, up/down, recline) with Manual Lumbar, plus Rear Map Pocket
  - 4-Way Manual Heated Passenger Seat (fore/aft, recline) with Manual Lumbar (non-folding back), plus Rear Map Pocket
  - Leather Seating Surfaces

Please see Standard Equipment pages for more details.

**Product Features Availability**

Features, options and package content subject to change.

★ = New for this model year

# 2021 TRANSIT CONNECT
# STANDARD EQUIPMENT



The following features are standard on select 2021MY TRANSIT CONNECT vehicles:

| MECHANICAL/FUNCTIONAL | XL Cargo Van SWB | XL Cargo Van LWB | XLT Cargo Van SWB | XLT Cargo Van LWB | XL Passenger Wagon LWB | XLT Passenger Wagon LWB | Titanium Passenger Wagon LWB |
|---|---|---|---|---|---|---|---|
| **Ford Co-Pilot 360™** | | | | | | | |
| BLIS® (Blind Spot Information System) with Cross-Traffic Alert | — | — | • | • | — | • | • |
| Pre-Collision Assist with Automatic Emergency Braking (AEB) – Pedestrian Detection – Forward Collision Warning – Dynamic Brake Support | • | • | • | • | • | • | • |
| Rear View Camera | • | • | • | • | • | • | • |
| Auto High-Beam Headlamps | — | — | • | • | — | • | • |
| **Alternator** | | | | | | | |
| Standard Alternator (150-amp) | • | • | • | • | — | — | — |
| Heavy Duty Alternator [2.0LGas (220-amp)] | — | — | — | — | • | • | • |
| **Battery** | | | | | | | |
| Heavy Duty Battery – 80-amp/800-CCA | • | • | • | • | • | • | • |
| **Brakes** | | | | | | | |
| Power Four-Wheel Disc Brakes | • | • | • | • | • | • | • |
| ABS (Anti-Lock Brakes) with: ESC (Electronic Stability Control) RSC® (Roll Stability Control) Traction Control Side Wind Stabilization | • | • | • | • | • | • | • |
| Hill Start Assist | • | • | • | • | • | • | • |
| **Drivetrain** | | | | | | | |
| Front-Wheel Drive (FWD) – LH | • | • | • | • | • | • | • |
| **Engine** | | | | | | | |
| 2.0L GDI I-4 Gas | • | • | • | • | • | • | • |
| Auto Start/Stop Technology (2.0L Gas) | • | • | • | • | • | • | • |
| EcoMode (2.0L Gas) | • | • | • | • | • | • | • |
| **Fuel Tank** | | | | | | | |
| 15.8 Gal (60.0L) | • | • | • | • | • | • | • |
| Easy Fuel® Capless Fuel-Filler (with fill door cover and misfuel inhibitor) | • | • | • | • | • | • | • |
| **Parking Aid** | | | | | | | |
| Reverse Sensing System | — | — | — | — | • | • | • |
| **Steering** | | | | | | | |
| Electric Power-Assisted Steering (EPAS) | • | • | • | • | • | • | • |
| Cruise Control | — | — | • | • | • | • | • |
| **Suspension** | | | | | | | |
| MacPherson Strut Independent Front Suspension | • | • | • | • | • | • | • |
| Twist-Beam Rear Suspension | • | • | • | • | • | • | • |
| **Transmission** | | | | | | | |
| 8-Speed SelectShift® Automatic (2.0L Gas) | • | • | • | • | • | • | • |
| **Tires** | | | | | | | |
| 215/55 R16 97H XL All-Season Tires | • | • | • | • | • | • | • |
| Full-Size Spare Tire | • | • | • | • | • | • | • |
| Tire Pressure Monitoring System (TPMS) | • | • | • | • | • | • | • |
| **Wheels** | | | | | | | |
| 16" Sparkle Silver-Painted Steel Wheels with Full Wheel Covers (non-locking lugs) | • | • | • | • | • | • | — |
| 16" Five-Spoke Premium Dark Stainless-Painted Aluminum-Alloy Wheels (non-locking lugs) | — | — | — | — | — | — | • |
| **KEY EXTERIOR FEATURES** | | | | | | | |
| **Badging** | | | | | | | |
| XLT Badge | — | — | • | • | — | • | — |
| Titanium Badge | — | — | — | — | — | — | • |
| **Body Side Moldings** | | | | | | | |
| Body Side Moldings – Black, Molded-In Color | • | • | • | • | • | — | — |
| Body Side Moldings – Body Color, Painted | — | — | — | — | — | • | • |
| **Bumper – Front** | | | | | | | |
| Front Bumper – Black, Molded-In Color | • | • | — | — | • | — | — |
| Front Bumper – Body Color, Painted | — | — | • | • | — | • | — |
| Front Bumper – Chrome | — | — | — | — | — | — | • |
| **Bumper – Rear** | | | | | | | |
| Rear Bumper – Black, Molded-In Color | • | • | • | • | • | — | — |
| Rear Bumper End Caps – Black, Molded-In Color | • | • | — | — | • | — | — |
| Rear Bumper – Body Color, Painted | — | — | — | — | — | • | • |
| Rear Bumper End Caps – Body Color, Painted | — | — | • | • | — | • | • |
| Rear Bumper Molding – Chrome | — | — | — | — | — | — | • |
| **Grilles** | | | | | | | |
| 3-Bar Black Grille with Black Surround | • | • | • | • | • | — | — |
| 5-Bar Black Grille with Chrome Surround | — | — | — | — | — | • | • |
| **Doors – Side** | | | | | | | |
| Dual Sliding Side Doors – No Glass | • | • | • | • | — | — | — |
| Dual Sliding Side Doors with Power Windows | — | — | — | — | • | — | — |
| Dual Sliding Side Doors with One-Touch Up/Down Power Windows | — | — | — | — | — | • | • |
| **Doors – Rear** | | | | | | | |
| 180° Swing-Out Rear Cargo Doors | • | • | • | • | — | — | — |
| Rear Liftgate with Fixed Glass | — | — | — | — | • | • | • |

★ = New for this model year

• = Standard, I = Included

# STANDARD EQUIPMENT

| KEY EXTERIOR FEATURES (continued) | XL Cargo Van SWB | XL Cargo Van LWB | XLT Cargo Van SWB | XLT Cargo Van LWB | XL Passenger Wagon LWB | XLT Passenger Wagon LWB | Titanium Passenger Wagon LWB |
|---|---|---|---|---|---|---|---|
| **Door Handles** | | | | | | | |
| Side & Rear Door Handles – Black, Molded-In Color | • | • | • | • | • | — | — |
| Side & Rear Door Handles – Body-Color, Painted | — | — | — | — | — | • | • |
| **Exterior Lighting** | | | | | | | |
| Center High-Mounted Stop Lamp | • | • | • | • | • | • | • |
| Daytime Running Lamps – User Configurable | • | • | • | • | • | • | • |
| Headlamps – Halogen | • | • | • | • | • | • | — |
| Headlamps – HID (High Intensity Discharge) | — | — | — | — | — | — | • |
| Auto Headlamp (Auto On/Off) (Includes Wiper-Activated Headlamps and Follow-Me-Home Feature) | • | • | — | — | • | — | — |
| Front Fog Lamps – Halogen | — | — | • | • | — | • | — |
| Front Fog Lamps – LED | — | — | — | — | — | — | • |
| **Exterior Mirrors** | | | | | | | |
| Manual Adjust Exterior Mirrors w/Manual Fold – Black, Molded-In Color Skull Caps | • | • | — | — | • | — | — |
| Power Adjust, PowerFold®, Heated Exterior Mirrors – I: Included with BLIS (85D) | —/I | —/I | I | I | —/I | I | I |
| Integrated Spotter Mirrors | • | • | • | • | • | • | • |
| **Windows and Glass** | | | | | | | |
| Power Front-Row Windows with One-Touch Down on Driver's Side | • | • | — | — | • | — | — |
| Power Front-Row Windows with One-Touch Up/Down I*: Included with BLIS (85D) | —/I* | —/I* | • | • | —/I* | • | • |
| Power Second-Row Windows | — | — | — | — | • | — | — |
| Power Second-Row Windows with One-Touch Up/Down | — | — | — | — | — | • | • |
| Fixed Third-Row Side Glass | — | — | — | — | • | • | • |
| Fixed Rear Door Glass *Standard on E6* and E7* body styles I: Included with Rear Door Glass (55A) | •*/I | •*/I | •*/I | •*/I | • | • | • |
| Normal Tinted Glass (second-row/rearward) *Standard on E6* and E7* body styles I: Included with glass options 55A, 59C, 59D, 59F and 59G on S6E and S7E body styles | •*/I | •*/I | •*/I | •*/I | • | — | — |
| Privacy Glass Upgrade (from normal tinted glass/excludes front row) | — | — | — | — | — | • | • |
| Standard Windshield | • | • | • | • | • | — | — |
| Acoustic-Laminate Windshield | — | — | — | — | — | • | • |
| **Wipers/Visibility** | | | | | | | |
| Rain-Sensing Front Windshield Wipers I: Included in Auto High Lamps | I | I | I | I | I | I | I |
| I: Included in Auto Headlamps (On/Off) | | | | | | | |
| Rear Window Wipers I: Included on E6*/E7* body styles and S6*/S7* body styles ordered with Rear Door Glass (55A) | I | I | I | I | • | • | • |
| Rear Window Defroster | — | — | — | — | • | • | • |
| **KEY INTERIOR FEATURES** | | | | | | | |
| **Air Conditioning/Heating** | | | | | | | |
| Manual Front Air Conditioner/Heater | • | • | • | • | — | — | — |
| Dual-Zone Electronic Automatic Temperature Control | — | — | — | — | • | • | • |
| Rear Seat Climate Control – includes rear compartment A/C and heater with manual rear controls | — | — | — | — | • | • | • |

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# STANDARD EQUIPMENT

| KEY INTERIOR FEATURES (continued) | XL Cargo Van SWB | XL Cargo Van LWB | XLT Cargo Van SWB | XLT Cargo Van LWB | XL Passenger Wagon LWB | XLT Passenger Wagon LWB | Titanium Passenger Wagon LWB |
|---|---|---|---|---|---|---|---|
| **Audio/Connectivity** | | | | | | | |
| FordPass™ Connect / Telematics Modem– Wi-Fi® hotspot connects up to 10 devices[1] – Remotely start, lock and unlock vehicle[2] – Schedule specific times to remotely start vehicle[2] – Locate parked vehicle[2] – Check vehicle status[2] Note: Ford Telematics™ and Data Services Prep included for Fleet ONLY. FordPass™ Connect 4G Wi-Fi Modem provides data to support telematics and data services including but not limited to vehicle location, speed, idle time, fuel, vehicle diagnostics and maintenance alerts. Device enables telematics services through Ford or authorized providers. Activate at www.FleetAccount.ford.com or call 833-FCS-Ford (833-327-3673). | • | • | • | • | • | • | • |
| AM/FM Radio with Bluetooth and 4.2" LCD Multi-Function Display Screen, plus 1 USB Port | • | • | — | — | • | — | — |
| SYNC® 3 with 6.5" LCD Touch Screen – includes AM/FM stereo receiver, SiriusXM® Satellite Radio, 911 Assist®, Applink®, Apple CarPlay™ compatibility and Android Auto™ compatibility, plus 2 Smart-Charging USB Ports | — | — | • | • | — | • | — |
| SYNC® 3 with 6.5" LCD Touch Screen (with Navigation) – includes AM/FM stereo receiver with SiriusXM® Satellite Radio, HD Radio™, 911 Assist®, Applink®, Apple CarPlay™ compatibility and Android Auto™ compatibility, plus 2 Smart-Charging USB Ports | — | — | — | — | — | — | • |
| 4 Front Speakers (2 Front Door Speakers and 2 A-Pillar Tweeters) | • | • | • | • | — | — | — |
| 4-Speaker System (2 Front Door and 2 Rear Door Speakers) | — | — | — | — | • | — | — |
| 6-Speaker System (4 Front Speakers and 2 Rear Door Speakers) I: Included with SYNC 3 (58Z) | — | — | — | — | I | • | — |
| 9-Speaker Premium Audio I: Included with SYNC 3 (58Y) | — | — | — | — | I | I | • |
| **Cargo Area** | | | | | | | |
| Cargo Tie-Down Hooks (floor-mounted) | • | • | • | • | — | — | — |
| Rear Coat Hooks | — | — | — | — | • | • | • |
| **Door – Trim** | | | | | | | |
| Front-Door Inner Release Handles – Black, Molded-In Color | • | • | — | — | • | — | — |
| Front-Door Inner Release Handles – Satin Chrome | — | — | • | • | — | • | • |
| Fabric Soft Door Armrest | • | • | • | • | • | • | — |
| Vinyl Soft Door Armrest | — | — | — | — | — | — | • |
| **Floor Covering** | | | | | | | |
| Front Floor Cover – Vinyl | • | • | — | — | — | — | — |
| Front and Second-Row Floor Cover – Vinyl Standard with 2nd Row 3-Passenger 60/40 Bench Seat (21M) | — | — | — | — | • | — | — |
| Front Floor Cover – Carpeted | — | — | • | • | — | — | — |
| Front and Second-Row Floor Cover – Carpeted Included with standard 2nd Row Bucket Seats | — | — | — | — | • | • | • |
| Rear Cargo Floor Cover – Vinyl | • | • | • | • | — | — | — |
| Third-Row and Rear Cargo Area Floor Cover – Vinyl Standard with 2nd Row 3-Passenger 60/40 Bench Seat (21M) | — | — | — | — | • | — | — |
| Third-Row and Rear Cargo Area Floor Cover – Carpeted Included with standard 2nd Row Bucket Seats *Included with fleet option 47H on XL LWB Wagons | — | — | — | — | •* | • | • |
| Front Driver & Passenger Carpeted Floor Mats (2 piece kit) | — | — | • | • | — | • | • |
| Rear Carpeted Floor Mats (2 piece kit) | — | — | — | — | — | • | • |
| Foot Rest | • | • | • | • | • | • | • |
| **Gearshift** | | | | | | | |
| Leather Gearshift Knob I: Included with LK Trim | — | — | — | — | — | I | • |
| **Hood Release** | | | | | | | |
| Manual Cable Hood Release | • | • | • | • | • | • | • |
| **Interior Lighting** | | | | | | | |
| Configurable Interior Lighting / Battery Saver | • | • | • | • | • | • | • |
| Header Courtesy Light (front dome light) | • | • | — | — | — | — | — |
| Rear Cargo Area Light | • | • | • | • | — | — | — |
| Dual Front Map Lights | — | — | • | • | • | • | • |
| Rear Overhead Courtesy Lamp | — | — | — | — | • | • | • |
| Glovebox Illumination | — | — | — | — | — | — | • |

[1] Includes a trial subscription of 3 months or 3 gigabytes – whichever comes first, wireless service plan required after trial subscription ends
[2] Includes service for one year from the vehicle sale date as recorded by the dealer

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• = Standard, I = Included

# STANDARD EQUIPMENT

| KEY INTERIOR FEATURES (continued) | XL Cargo Van SWB | XL Cargo Van LWB | XLT Cargo Van SWB | XLT Cargo Van LWB | XL Passenger Wagon LWB | XLT Passenger Wagon LWB | Titanium Passenger Wagon LWB |
|---|---|---|---|---|---|---|---|
| **Interior Mirrors** | | | | | | | |
| Day/Night Rearview Mirror<br>*Standard on E6* and E7* body styles<br>I: Included on S6* and S7* body styles ordered with Rear Door Glass (55A) | •*/I | •*/I | — | — | • | — | — |
| Auto-Dimming Rearview Mirror<br>I: Included with Auto Headlamps (On/Off) (94A)<br>*Requires Rear Door Glass (55A) on S6F and S7F body styles | I* | I* | I* | I* | I* | I | • |
| Child Observation Mirror | — | — | — | — | — | • | • |
| Driver Sunvisor w/Vanity Mirror / Ticket Strap | — | — | • | • | — | • | • |
| Passenger Sunvisor with Mirror | — | — | • | • | — | • | • |
| **Instrument Cluster** | | | | | | | |
| Speedometer (MPH/KPH) and Tachometer | • | • | • | • | • | • | • |
| Odometer/Trip Computer | • | • | • | • | • | • | • |
| Compass Display<br>I: Included with SYNC 3 options 58Y and 58Z | —/I | —/I | • | • | —/I | • | • |
| EcoCoach (2.0L gas) | • | • | • | • | • | • | • |
| **Power Supply** | | | | | | | |
| (1) 12V Powerpoint in Front Center Console | • | • | • | • | — | — | — |
| (2) 12V Powerpoints in Front Center Console (located in front and back of console)<br>*N/A with 2.5L gaseous fuel prep option (997) | — | — | — | — | •* | • | • |
| (1) 12V Powerpoint in Rear Cargo Area | • | • | • | • | • | • | • |
| (1) 110 Power Converter<br>I:Included with (2) 12V Powerpoints in Front Center Console | — | — | — | — | I | I | I |
| Wireless Charging | — | — | • | • | — | • | • |
| **Seats – Front Row** | | | | | | | |
| 6-Way Manual Driver Seat (fore/aft, up/down, & lever recline) | • | • | — | — | — | — | — |
| 6-Way Manual Driver Seat (fore/aft, up/down & lever recline), with Manual Lumbar | — | — | • | • | • | — | — |
| 6-Way Power Driver Seat (fore/aft, up/down & power recline) with Manual Lumbar | — | — | — | — | — | • | — |
| 6-Way Power Heated Driver Seat (fore/aft, up/down & power recline) with Manual Lumbar | — | — | — | — | — | — | • |
| 4-Way Manual Passenger Seat (fore/aft & lever recline) with Fold-Flat Back | • | • | • | • | • | — | — |
| 4-Way Manual Passenger Seat (fore/aft & lever recline) with Manual Lumbar (Non Fold-Flat Back) | — | — | — | — | — | • | — |
| 4-Way Manual Heated Passenger Seat (fore/aft & lever recline) with Manual Lumbar (Non Fold-Flat Back) | — | — | — | — | — | — | • |
| **Seats – Second Row** | | | | | | | |
| Second-Row Fold-Flat Bucket Seats | — | — | — | — | • | • | • |
| **Seats – Third Row** | | | | | | | |
| Third-Row 4-way Manual Fold-Flat Bucket Seats | — | — | — | — | • | • | • |
| **Steering Wheel** | | | | | | | |
| Tilt/Telescoping Steering Column | • | • | • | • | • | • | • |
| 4-Spoke Steering Wheel with Black Shells | • | • | — | — | • | — | — |
| 4-Spoke Steering Wheel with Satin Chrome Shells<br>I: Included with SYNC 3 (58Z)<br>I: Included with Cruise Control (525) | I | I | • | • | I | • | — |
| 4-Spoke Leather-Wrapped Steering Wheel with Satin Chrome Shells<br>I: Included with SYNC 3 (58Y) | I | I | I | I | I | I | • |
| **Storage** | | | | | | | |
| Locking Glovebox | — | — | — | — | — | — | • |
| 2 Front Cupholders (in Center Console) | • | • | • | • | • | • | • |
| 2 Second Row Cupholders | — | — | — | — | • | • | • |
| 2 Third-Row Cupholders | — | — | — | — | • | • | • |
| Front Center Open Console – includes 2 Cupholders and 12V Powerpoint | • | • | — | — | — | — | — |
| Premium Front Center Closed Console – includes 2 Cupholders and 12V Powerpoint | — | — | • | • | — | — | — |
| Premium Front Center Closed Console – includes 2 Cupholders, Front & Rear 12V Powerpoints and 110V Power Converter | — | — | — | — | • | • | • |
| Front Row Full-Width Overhead Storage Shelf w/Grab Handles | • | • | • | • | • | — | — |
| Front Row Full-Width Overhead Storage Shelf w/Grab Handles, Sunglasses Holder and Child Observation Mirror | — | — | — | — | — | • | • |
| Cargo Net (Horizontal)<br>I: Included with 3rd Row Seats Delete fleet option (87D) | — | — | — | — | —/I | —/I | —/I |

★ = New for this model year

• = Standard I = Included

# STANDARD EQUIPMENT

| SAFETY AND SECURITY | XL Cargo Van SWB | XL Cargo Van LWB | XLT Cargo Van SWB | XLT Cargo Van LWB | XL Passenger Wagon LWB | XLT Passenger Wagon LWB | Titanium Passenger Wagon LWB |
|---|---|---|---|---|---|---|---|
| Driver & Passenger Front Airbags | • | • | • | • | • | • | • |
| First-Row Safety Canopy® Side-Curtain Airbags | • | • | • | • | — | — | — |
| First and Second Row Safety Canopy® Side-Curtain Airbags | — | — | — | — | — | — | — |
| First, Second and Third Row Safety Canopy® Side-Curtain Airbags | — | — | — | — | • | • | • |
| Driver & Passenger Side Airbags | • | • | • | • | • | • | • |
| Power Central Single Door-Locks with One Step Unlocking | • | • | • | • | • | • | • |
| Remote Keyless-Entry with 2 Key Fobs | • | • | • | • | • | • | • |
| SecuriLock® Passive Anti-Theft System (PATS) | • | • | • | • | • | • | • |
| Passive Entry/Passive Start (PEPS) | — | — | — | — | — | — | • |
| LATCH (Lower Anchors and Tethers for Children) in 2nd-Row outboard seating positions | — | — | — | — | • | • | • |
| Child Safety Door Locks | — | — | — | — | • | • | • |
| MyKey® (N/A w/fleet Engine Governor options 476, 477, 916 and 917) | — | — | • | • | — | • | • |

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# FUNCTIONAL EQUIPMENT

## WHEEL AVAILABILITY



| Body Style | Seating | 16" Styled Steel Wheel Painted Shadow Silver (641) | 16" Steel Wheel with Full Wheel Cover Painted Sparkle Silver | 16" Standard Aluminum Wheel Painted Sparkle Silver (64F) | 16" Premium Aluminum Wheel Painted Luster Nickel (648) | 16" Premium Aluminum Wheel Painted Dark Stainless (64G) |
|---|---|---|---|---|---|---|
| SWB XL Cargo Van | 2-PASS | O | S | - | O | - |
| SWB XLT Cargo Van | 2-PASS | - | S | - | O | - |
| LWB XL Cargo Van | 2-PASS | O | S | - | O | - |
| LWB XLT Cargo Van | 2-PASS | - | S | O | O | - |
| LWB XL Passenger Wagon | 6-PASS | - | S* | O | O | - |
| LWB XLT Passenger Wagon | 6-PASS | - | S* | O | O | - |
| LWB Titanium Passenger Wagon | 6-PASS | - | - | O | O | S |
| LWB XL Passenger Wagon | 7-PASS (21M) | - | S* | O | O | - |
| LWB XLT Passenger Wagon | 7-PASS (21M) | - | S* | O | O | - |
| LWB Titanium Passenger Wagon | 7-PASS (21M) | - | - | O | O | S* |

*Not available on LWB wagon produced with Payload Package 450 (18E), Vehicle Overhead Storage Console (43D), Roof Rack (59H) or Trailer Tow Package (53B)

*Included with Third Row Seats Delete feature (87D)

★ = New for this model year

# OPTIONAL EQUIPMENT

| | | Cargo Van | | | | Passenger Wagon | | |
|---|---|---|---|---|---|---|---|---|
| | Order | XL SWB | XL LWB | XLT SWB | XLT LWB | XL LWB | XLT LWB | Titanium LWB |
| | Code | 100A S6E/E6E | 100A S7E/E7E | 110A S6F/E6F | 110A S7F/E7F | 200A S9E/E9E | 210A S9F/E9F | 310A E9G |
| **BODY STYLE – DUAL SLIDING SIDE DOORS** | | | | | | | | |
| Cargo Van – 180° Swing-Out Rear Cargo Doors (without glass) | | S6E | S7E | S6F | S7F | — | — | — |
| Cargo Van – Rear Liftgate with Fixed Glass | | E6E | E7E | E6F | E7F | — | — | — |
| Passenger Wagon – 180° Swing-Out Rear Cargo Doors with Fixed Glass (includes second-row power windows and third-row fixed glass) | | — | — | — | — | S9E | — | — |
| Passenger Wagon – Rear Liftgate with Fixed Glass (includes second-row power windows and third-row fixed glass) | | — | — | — | — | E9E | — | — |
| Passenger Wagon – 180° Swing-Out Rear Cargo Doors with Fixed Glass (includes one-touch up/down second-row power windows and third-row fixed glass) | | — | — | — | — | — | S9F | — |
| Passenger Wagon / Rear Liftgate with Fixed Glass – (includes one-touch up/down second-row power windows and third-row fixed glass) | | — | — | — | — | — | E9F | E9G |
| **BODY GLASS** | | | | | | | | |
| Rear Door Fixed Glass<br>*Optional on S6* and S7* body styles<br>**Standard on E6* and E7* body styles | 55A | O*/S** | O*/S** | O*/S** | O*/S** | S | S | S |
| Second Row Fixed Glass – Both Side Doors (SWB)<br>(includes steel mesh window guards)<br>*Requires Rear Door Fixed Glass (55A) on S6* body styles | 59C | O R-55A* | — | O R-55A* | — | — | — | — |
| Second Row Fixed Glass – Passenger Side Door Only (SWB)<br>(includes steel mesh window guard) | 59D | O | — | O | — | — | — | — |
| Second Row Fixed Glass – Both Side Doors (LWB)<br>(includes steel mesh window guards)<br>*Requires Rear Door Fixed Glass (55A) on S7* body styles | 59F | — | O R-55A* | — | O R-55A* | — | — | — |
| Second Row Fixed Glass – Passenger Side Door Only (LWB)<br>(includes steel mesh window guard) | 59G | — | O | — | O | — | — | — |
| Dark Tinted Glass – Privacy Glass Upgrade from Normal Tinted Glass (excludes front row)<br>*Available with glass options 55A, 59C, 59D, 59F and 59G | 924 | O* | O* | O* | O* | O | S | S |
| Panoramic Fixed-Glass Vista Roof® (includes power shade)<br>*N/A on S9F body style<br>**N/A with XLT Premium Package (47G) | 43M | — | — | — | — | — | O*/** | O |
| **Visibility** | | | | | | | | |
| Rear Window Defroster<br>S6* and S7* body styles require Rear Door Fixed Glass (55A) | 43D | O* | O* | O* | O* | S | S | S |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# OPTIONAL EQUIPMENT

| | | Cargo Van | | | | Passenger Wagon | | |
|---|---|---|---|---|---|---|---|---|
| | Order | XL SWB | XL LWB | XLT SWB | XLT LWB | XL LWB | XLT LWB | Titanium LWB |
| | Code | 100A S6E/E6E | 100A S7E/E7E | 110A S6F/E6F | 110A S7F/E7F | 200A S9E/E9E | 210A S9F/E9F | 310A E9G |
| **BODY GLASS (continued)** | | | | | | | | |
| Quickclear™ Electric Windshield Defroster – Includes Power Adjust, Heated Exterior Mirrors (545) *Includes (545) unless BLIS (85D) is ordered **N/A on XL LWB Wagon w/2.5L gaseous fuel prep option (997) | 43W | O* | O* | O | O | O*/** | O | O |
| **MECHANICAL/FUNCTIONAL** | | | | | | | | |
| Alternator | | | | | | | | |
| Heavy Duty Alternator [2.0Lgas (220-amp)] *Heavy Duty Alternator (51G) is replaced by Standard Duty Alternator when 2.5L gaseous fuel prep option (997) is ordered | 51G | O | O | O | O | S* | S | S |
| Engine/Transmission | | | | | | | | |
| 2.5L iVCT I-4 Gas Engine (includes 6-Speed SelectShift® Transmission and standard duty battery – 60amp-590CCA) Must also order 98G (CNG/LPG gaseous fuel prep pack) | 997/ 446 | O* | O* | O* | O* | O* | — | — |
| CNG/LPG Engine Prep Package (Available only w/2.5L I-4 Gas Engine (997)) | 98G | O* | O* | O* | O* | O* | — | — |
| Heavy Duty Battery (80-amp, 800 CCA)* *Optional with 2.5L CNG/LPG gaseous fuel prep option (997) | 51C | S/O* | S/O* | S/O* | S/O* | S/O* | S | S |
| Flex Fuel Capability (FFV) w/2.0L GDI I-4 Gas | 98A | O | O | O | O | O | O | O |
| Engine Block Heater | 41H | O | O | O | O | O | O | O |
| Remote Start (includes Perimeter Alarm) | 66F | — | — | O | O | — | O | O |
| Power | | | | | | | | |
| Wireless Charging *N/A with Single-Slot CD Player (96C) | 96B | O* | O* | S | S | O* | S | S |
| **DRIVER-ASSIST** | | | | | | | | |
| Cruise Control *Included in MyKey (87K) and SYNC 3 options (58Y and 58Z) | 52S | O* P-87K P-58Y P-58Z | O* P-87K P-58Y P-58Z | S | S | S | S | S |
| Adaptive Cruise Control *Contains Lane-Keeping System – Includes Lane-Keeping Assist, Lane Keeping Alert, Driver Alert, Radar Assist, Pre-Collision Assist with Automatic Emergency Braking (AEB), Forward Collision Warning, Dynamic Brake Support, Speed Control Distance Sensing with Distance Alert | 52S | — | — | O* | O* | — | O* | O* |
| Reverse Sensing System *Included with option 76S | 76R | O | O | O P-76S* | O P-76S* | S | S | S |
| Forward and Reverse Sensing Systems *Includes Cornering Fog Lamps (94F) ***Included with Enhanced Active Park Assist (53A) | 76S | — | — | O | O | O P-94F* | O | O P-53A*** |
| BLIS® (Blind Spot Information System) with Cross-Traffic Alert (includes Power Adjust, PowerFold®, Heated Exterior Mirrors) *N/A with Large Rear View Mirrors (60L) | 95D | O* | O* | S | S | O | S | S |
| Enhanced Active Park Assist *Includes Forward and Reverse Sensing (76S) | 53A | — | — | — | — | — | — | O* |
| **KEY EXTERIOR OPTIONS** | | | | | | | | |
| Body Side Molding | | | | | | | | |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# OPTIONAL EQUIPMENT

| | Order Code | Cargo Van XL SWB 100A S6E/E6E | Cargo Van XL LWB 100A S7E/E7E | Cargo Van XLT SWB 110A S6F/E6F | Cargo Van XLT LWB 110A S7F/E7F | Passenger Wagon XL LWB 200A S9E/E9E | Passenger Wagon XLT LWB 210A S9F/E9F | Passenger Wagon Titanium LWB 310A E9G |
|---|---|---|---|---|---|---|---|---|
| **KEY EXTERIOR OPTIONS (continued)** | | | | | | | | |
| Wide Body Side Molding – Body Color | 68M | — | — | O | O | — | S | S |
| **Headlamps/Lamps** | | | | | | | | |
| HID (High Intensity Discharge) Headlamps *Included with XLT Premium Package (47G) | 52D | — | — | O | O | — | O P-47G* | S |
| Daytime Running Lamps – Non-Configurable **Note:** User-Configurable Daytime Running Lamps already standard on all versions | 942 | O | O | O | O | O | O | O |
| Front Fog Lamps – LED | 943 | — | — | O | O | — | O | S |
| Adaptive Cornering Fog Lamps – halogen **Included in Forward and Reverse Sensing System (76S) on XL Wagon | 94F | — | — | O | O | O P-76S** | O | — |
| **Mirrors** | | | | | | | | |
| Power Adjust, Heated Exterior Mirrors w/Manual Fold – Black, Molded-In-Color Skull Caps *N/A with BLIS (85D) **Included with QuickClear® Windshield Defroster (43W) | 545 | O* P-43W** | O* P-43W** | — | — | O* P-43W** | — | — |
| Large Rear View Mirror Housing (recommended for trailer tow) *N/A with BLIS (85D) | 60L | O* | O* | — | — | — | — | — |
| **Roof** | | | | | | | | |
| Roof Rails *Requires Aluminum Alloy Wheels (64F or 64B) on vehicles with standard 2.0L gas engine or 2.5L gaseous prep engine option (997) **Included with Panoramic Vista Roof (43M) | 61B | O | O | O | O | O R-64F/64B* | O** R-64F/64B* | O** |
| Roof Rack – Including Crossbars *Requires Aluminum-Alloy Wheels (64F or 64B) on vehicles with standard 2.0L gas engine or 2.5L gaseous prep engine option (997) **Available with Panoramic Vista Roof (43M) | 61X | — | — | — | — | O R-64F/64B* | O** R-64F/64B* | O** |
| **Wheels/Tires – See Wheel Availability Chart on page 11 for details on wheel availability by engine and seating configuration** | | | | | | | | |
| 16" Shadow Silver-Painted Styled Steel Wheel – Includes Hubcaps/Center Ornaments/non-locking lugs (no wheel covers) | 641 | O | O | — | — | — | — | — |
| 16" Five-Spoke Sparkle Silver-Painted Aluminum-Alloy Wheels **Optional with 2.0L Gas (992) and 2.5L gaseous fuel prep option (997) | 64F | — | — | O | O | O** | O** | O |
| 16" Five-Spoke Premium Luster Nickel-Painted Premium-Alloy Wheels *Included with XLT Premium Package (47G) | 64B | O | O | O | O | O | O P-47G* | O |
| Tire Repair Kit (in lieu of full-size spare wheel) | 51B | O | O | O | O | O | O | O |
| Front Splash Guards/Mud Flaps *Included with Dark Stainless Premium Alloy Wheel (64G) | 96F | O | O | O | O | O | O | O P-64G* |
| **KEY INTERIOR OPTIONS** | | | | | | | | |
| **Air Conditioning/Heating** | | | | | | | | |
| Dual-Zone Automatic Temperature Control | 578 | — | — | O | O | S | S | S |
| **Audio** | | | | | | | | |
| Single-Slot CD Player *N/A with Wireless Charging (86B) | 96C | O* | O* | — | — | O* | — | — |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# OPTIONAL EQUIPMENT

| | | Cargo Van | | | | Passenger Wagon | | |
|---|---|---|---|---|---|---|---|---|
| | Order | XL SWB | XL LWB | XLT SWB | XLT LWB | XL LWB | XLT LWB | Titanium LWB |
| | Code | 100A S6E/E6E | 100A S7E/E7E | 110A S6F/E6F | 110A S7F/E7F | 200A S9E/E9E | 210A S9F/E9F | 310A E9G |
| **KEY INTERIOR OPTIONS (continued)** | | | | | | | | |
| SYNC® 3 with 6.5" LCD Touch Screen – includes AM/FM Stereo Receiver, SiriusXM® Satellite Radio, 911 Assist®, Applink®, Apple CarPlay™ compatibility and Android Auto™ compatibility, plus 2 Smart-Charging USB Ports | 58Z | O | O | S | S | O | S | — |
| SYNC® 3 with 6.5" LCD Touch Screen (with Navigation) (ICFAY) – includes AM/FM Stereo Receiver, SiriusXM® Satellite Radio, HD Radio™ and 911 Assist®, Applink®, Apple CarPlay™ compatibility and Android Auto™ compatibility, plus 2 Smart-Charging USB Ports<br>* Included with XLT Premium Package (47G) | 58Y | O | O | O | O | O | O<br>P-47G* | S |
| **Interior Lighting** | | | | | | | | |
| Rear Cargo Area Light – LED (in place of the standard rear cargo area light) | 76D | O | O | O | O | — | — | — |
| **Flooring** | | | | | | | | |
| Vinyl Floor Cover – Front Row (and Second Row on passenger wagon)<br>*N/A with All-Weather Floor Mats (164)<br>**Standard with 2nd Row 3-Passenger 60/40 Bench Seat (21M), N/A with standard 2nd Row Bucket Seats on XL LWB Wagon)<br>***Front & Rear Carpeted Floor Mats not included<br>****Requires Third Row Rear Cargo Vinyl Flooring (18P)<br>*****Requires 2nd Row 3-Passenger 60/40 Bench Seat (21M) | 18F | S | S | O | O | S**/– | O*/***<br>R-18P****<br>R-21M***** | — |
| Vinyl Floor Cover – Rear Cargo Area (and Third Row on LWB)<br>*Standard when 2nd Row 3-Passenger 60/40 Bench Seat (21M) is selected on XL LWB Wagon<br>**N/A with standard 2nd Row Bucket Seats<br>***N/A with carpet flooring fleet option (47H) | 18P | — | — | — | — | S*/**/*** | O** | — |
| All-Weather Floor Mats – Front | 16V | O | O | O | O | — | — | — |
| All-Weather Floor Mats – Front & Rear<br>*Available only with carpet floor cover fleet option (47H) on XL LWB Passenger Wagons<br>**N/A with Vinyl Flooring (18F) | 164 | — | — | — | — | O<br>R-47H* | O** | O |
| **Seats – Front Row** | | | | | | | | |
| 6-Way Manual Driver Seat (fore/aft, up/down & lever recline), with Manual Lumbar, and 4-Way Manual Passenger Seat (fore/aft & lever recline) with Fold-Flat Back | 90M | O | O | — | — | — | — | — |
| 6-Way Power Driver Seat (fore/aft, up/down & power recline) with Manual Lumbar, and 4-Way Manual Passenger Seat (fore/aft & lever recline) (non fold-flat back) – Contains Palazzo Grey Cloth Seats (PK) | 90P | — | — | — | — | — | O | — |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# OPTIONAL EQUIPMENT

| | Order Code | Cargo Van XL SWB 100A S6E/E6E | Cargo Van XL LWB 100A S7E/E7E | Cargo Van XLT SWB 110A S6F/E6F | Cargo Van XLT LWB 110A S7F/E7F | Passenger Wagon XL LWB 200A S9E/E9E | Passenger Wagon XLT LWB 210A S9F/E9F | Passenger Wagon Titanium LWB 310A E9G |
|---|---|---|---|---|---|---|---|---|
| **KEY INTERIOR OPTIONS (continued)** | | | | | | | | |
| 6-Way Power Driver Heated Leather Seat (fore/aft, up/down & power recline) with Manual Lumbar, and 4-Way Manual Heated Leather Passenger Seat (fore/aft, lever recline) with Manual Lumbar (non fold-flat back) *Included in XLT Premium Package (47G) | 90H | — | — | — | — | — | O P-47G* | S |
| **Seats – Second Row** | | | | | | | | |
| Second Row 3-Passenger 60/40 Bench Seat | 21M | — | — | — | — | O | O | O |
| **Storage/Cargo Containment** | | | | | | | | |
| Aircraft-Style Mid-Vehicle Overhead Console ***Requires Aluminum-Alloy Wheels (64F/648) ****N/A with Panoramic Vista Roof (43M) *****Included with XLT Premium Package (47G) | 60M | — | — | — | — | O R-64F/648*** | O**** R-64F/648*** P-47G***** | O**** |
| Cargo Net Kit – Vertical *N/A with Panoramic Vista Roof (43M) or Mid-Vehicle Overhead Console (60M) | 60V | — | — | — | — | O* | O* | O* |
| Composite Bulkhead | 66A | O | O | O | O | — | — | — |
| Composite Bulkhead w/Window | 66E | O | O | O | O | — | — | — |
| **SAFETY & SECURITY** | | | | | | | | |
| Key Fobs (2 Additional) *N/A with MyKey® (87K) | 87R | O* | O* | — | — | O* | — | — |
| Passive Entry/Passive Start (PEPS) – Includes Push Button Start/Stop *N/A on S9F body styles (only available with rear liftgate) | 67L | — | — | — | — | — | O* | S |
| MyKey® *N/A with 2 Additional Key Fobs (87R) **Contains Cruise Control (525) | 87K | O* P-525** | O* P-525** | S | S | O* | S | S |
| Perimeter Anti-Theft Alarm System *Included with Remote Start (55F) | 65D | O | O | O P-66F* | O P-66F* | O | O P-66F* | O P-66F* |
| **PACKAGES** | | | | | | | | |
| XLT Premium Package *Available only with E9F body styles ** N/A with Panoramic Vista Roof (43M) | 47G | — | — | — | — | — | O*/** | — |
| Trailer Tow Package **Requires Aluminum-Alloy Wheels (64F or 648) | 53T | O | O | O | O | O R-64F/648** | O R-64F/648** | O |
| Upfitter Wiring Harness | 86G | — | O | — | O | O | O | — |
| Smoker's Package | 94B | O | O | O | O | O | O | O |
| **FLEET ONLY OPTIONS (Valid FIN Code Required)** | | | | | | | | |
| Engine Governor – 65 MPH Speed Limiter N/A with MyKey® (87K) or 75 MPH Engine Governor (917) | 916 | O | O | — | — | O | — | — |
| Engine Governor – 75 MPH Speed Limiter N/A with MyKey® (87K) or 65 MPH Engine Governor (916) | 917 | O | O | — | — | O | — | — |
| Engine Governor – 65 MPH Speed Limiter, Less MyKey® (deletes MyKey®, which is otherwise standard on XLT Cargo Vans) | 476 | — | — | O | O | — | — | — |
| Engine Governor – 75 MPH Speed Limiter, Less MyKey® (deletes MyKey®, which is otherwise standard on XLT Cargo Vans) | 477 | — | — | O | O | — | — | — |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# OPTIONAL EQUIPMENT

| | | Cargo Van | | | | Passenger Wagon | | |
|---|---|---|---|---|---|---|---|---|
| | Order | XL SWB | XL LWB | XLT SWB | XLT LWB | XL LWB | XLT LWB | Titanium LWB |
| | Code | 100A S6E/E6E | 100A S7E/E7E | 110A S6F/E6F | 110A S7F/E7F | 200A S9E/E9E | 210A S9F/E9F | 310A E9G |
| FLEET ONLY OPTIONS (Valid FIN Code Required) (continued) | | | | | | | | |
| Third Row Rear Seats Delete *Requires Second Row 3-Passenger 60/40 Bench Seat (21M) **N/A with XLT Premium Pack (47G) | 87D | — | — | — | — | O R-21M* | O** R-21M* | O R-21M* |
| Floor Cover – Carpet (all rows) | 47H | — | — | — | — | O | — | — |
| DECAL OPTIONS | | | | | | | | |
| Decal #1 – up to 15 sq. ft. | 16B | O | O | O | O | O | O | O |
| Decal #2 – up to 25 sq. ft. | 16C | O | O | O | O | O | O | O |
| Decal #3 – up to 45 sq. ft. | 16D | O | O | O | O | O | O | O |
| Decal #4 – up to 70 sq. ft. | 16E | O | O | O | O | O | O | O |

★ = New for this model year

S = Standard, O = Optional, P = Packaged Option, R = Required

# COLOR & TRIM AVAILABILITY

| INTERIOR COLOR / MATERIAL | Availability | | | | | |
|---|---|---|---|---|---|---|
| | XL | XL | XLT | XLT | XLT | Titanium |
| Cargo Van | • | • | • | • | — | — |
| Passenger Wagon | • | • | • | • | • | • |
| Ebony Vinyl Seats (with Dark Palazzo Grey Inserts) Crosshatch/Salerno vinyl | SB | — | — | — | — | — |
| Ebony Cloth Seats (with Ebony Inserts) – Racer/City XL fabric | — | CB | — | — | — | — |
| Ebony Cloth Seats (with Ebony Inserts) – Capitol/City XLT fabric | — | — | PB | — | — | — |
| Palazzo Grey Cloth Seats (with Palazzo Grey Inserts) Capitol/City XLT fabric | — | — | — | PK | — | — |
| Palazzo Grey Leather Seats – Salerno/Salerno leather *Additional Charge Option on XLT | — | — | — | — | LK* | LK |

| EXTERIOR COLOR | CODE | Availability | | | | | |
|---|---|---|---|---|---|---|---|
| **SOLID** | | | | | | | |
| School Bus Yellow *Available only for fleet customers | BY | •* | •* | — | — | — | — |
| Race Red | PQ | • | • | • | • | • | • |
| Silver (med. solid) | TY | • | • | • | • | • | • |
| Dark Blue | UV | • | • | — | — | — | — |
| Frozen White | Z2 | • | • | • | • | • | • |
| **METALLIC (available only on wagons*)** | | | | | | | |
| ★Sedona Orange | BP | •* | •* | •* | •* | • | • |
| ★Solar Silver | HE | •* | •* | •* | •* | • | • |
| Blue Metallic | FT | •* | •* | •* | •* | • | • |
| Magnetic Metallic | J7 | •* | •* | •* | •* | • | • |
| Agate Black | UM | • | • | • | • | • | • |

★ = New for this model year

• = Available

# PACKAGED OPTIONS/EMISSIONS

**TRAILER TOW PACKAGE (53T)**

***Availability:***

- Optional on all Cargo Vans and Passenger Wagons

***Includes:***

- Trailer Tow Hitch with Trailer Sway Control (Class 1, 2,000 lbs. capability, includes trailer module and 4-Pin Connector)

**XLT PREMIUM PACKAGE (47G)**

***Availability:***

- Optional with E9F Body Styles (XLT Passenger Wagons with Liftgate)

***Includes:***

- HID Headlamp (52D)
- 16" Premium Luster Nickel-Painted Aluminum-Alloy Wheels (648)
- Aircraft Style Mid-Vehicle Overhead Console (60M)
- Leather-Trimmed Seats (LK)

**EMISSIONS STANDARD/OPTIONAL EQUIPMENT**

| | |
|---|---|
| *50-STATE EMISSIONS SYSTEM* | 425 |
| Standard equipment on all Transit Connect vehicles | |

**MISCELLANEOUS**

| | |
|---|---|
| COV Required | 79V |
| Priced DORA | C09 |

★ = New for this model year

# POWERTRAIN

## FUEL ECONOMY

| ENGINE DISPLACEMENT | TRANSAXLE/ FINAL DRIVE RATIO | 50-STATE F.E. LABEL ADJUSTED CITY | HWY | COMBINED | ESTIMATED ANNUAL FUEL COST |
|---|---|---|---|---|---|
| **Cargo Van** | | | | | |
| 2.0L Gas GDI I-4 Gas | 8-Speed Automatic / 3.80 | 24 | 27 | 25 | TBD |
| 2.5L Duratec® I-4 Gas | 6-Speed Auto Overdrive / 3.21 | 20 | 27 | 22 | TBD |
| **Passenger Wagon** | | | | | |
| 2.0L Gas GDI I-4 Gas | 8-Speed Automatic / 3.80 | 24 | 29 | 26 | TBD |
| 2.5L i-VCT I-4 Gas | 6-Speed Automatic / 3.21 | 20 | 26 | 22 | TBD |

## ENGINE HORSEPOWER AND TORQUE RATINGS

| ENGINE DISPLACEMENT | TRANSAXLE | NOMINAL COMPRESSION RATIO | 50-STATE HORSEPOWER H.P. @ RPM | TORQUE FT. LBS. @ RPM |
|---|---|---|---|---|
| 2.0L Gas GDI I-4 Gas | 8-Speed Automatic | TBD | 162 @ 6500 | 144 @ 4500 |
| 2.5L i-VCT I-4 Gas | 6-Speed Automatic | 9.7:1 | 169 @ 6000 | 171 @ 4500 |

★ = New for this model year

Electrical Van





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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **SERVICE VAN** | | |
| **Department** | Water Resource Protection | **Dept. Priority** | 12 |
| **Division** | Treatment Systems | **Div. Priority** | 12 |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

This Capital Improvement request is for the purchase of a service van for the department's Treatment and Maintenance Divisions. This item will replace a 2007 ¾-ton cargo van that has met its useful service life with a more utilitarian van outfitted with sealed outside compartments and additional workspace within the vehicle for repairing pump equipment in inclement weather.

The van will be used for maintenance and operational staff to complete daily tasks associated with inspection and maintenance of the city's 28 wastewater-pumping stations. The use of this vehicle is important to respond to alarm and equipment failures within these systems.

The estimated cost of the vehicle is $54,438.00 and was obtained from a truck dealership.

## Financial Impact of this Purchase/Project

The trading of one used van for the new van will result in $3,500 of revenue. Annual operating expenses are estimated at approximately $743 based on previous maintenance records. We would expect this to be cut by 50% ($371.00) with a new vehicle as it would need very few replacement parts for the first few years and the more economical fuel mileage.

## Environmental Considerations

The proper and continuous functioning of the city's wastewater pumping stations are mandatory to maintain regulatory compliance with state and federal water quality protection requirements. The service body van is an essential component in ensuring these systems operate effectively and efficiently in perpetuity. In keeping with the city's climate action goals, the service body van is equipped with the latest emissions control technology.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | $ 50,938.00 | $ 54,438.00 | | | | | $ 50,938.00 | $ 54,438.00 |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | $ 3,500.00 | | | | | | $ 3,500.00 | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 54,438.00** | **$ 54,438.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 54,438.00** | **$ 54,438.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | O'Connor Motor Sales | | | | |
| **Est. Annual Operating Costs** | $ 743.00 | **Projected Useful Life** | 10 to 12 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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Service Truck





**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

# City of South Portland

**Prepared For:** Dave Thomes

[Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139"



**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

[Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139" ( ✔ Complete )

## Selected Model and Options

### MODEL

| CODE | MODEL | MSRP |
|---|---|---|
| CG33503 | 2021 Chevrolet Express Commercial Cutaway 3500 Van 139" | $32,400.00 |

### COLORS

| CODE | DESCRIPTION |
|---|---|
| GAZ | Summit White |

### BODY CODE

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| ZW9 | Body, standard (STD) | $0.00 |

### REAR WHEEL CONFIGURATION

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| R04 | Wheel configuration, rear, single (STD) (Not available with (C7N) 12,300 lbs. (5579 kg.) GVWR.) | $0.00 |

### EMISSIONS

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| NE1 | Emissions, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington state requirements | $0.00 |

### ENGINE

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| L8T | Engine, 6.6L V8 with Direct Injection and Variable Valve Timing, gasoline, (401 hp [299 kW] @ 5200 rpm, 464 lb-ft of torque [629 N-m] @ 4000 rpm) (Includes external oil cooler. Requires (MYD) 6-speed heavy-duty automatic transmission. Reference the Engine/Axle page for availability.) | $1,695.00 |

### TRANSMISSION

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| MYD | Transmission, 6-speed automatic, heavy-duty electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking, Powertrain Grade Braking, and Tap-Up/Tap-Down Driver Shift Control (Requires (L8T) 6.6L gas V8 engine. Reference the Engine/Axle page availability.) | $0.00 |

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Data Version: 12284. Data Updated: Nov 5, 2020 10:30:00 PM PST.

**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

## [Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139" ( ✔ Complete )

### GVWR

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| C4M | GVWR, 9900 lbs. (4490 kg) (STD) (Includes (R04) single rear wheel configuration. Not available with (R05) dual rear wheel combination. Reference the Engine/Axle page for availability.) | $0.00 |

### AXLE

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| GU6 | Rear axle, 3.42 ratio (Requires (R04) single rear wheel configuration.) | $0.00 |

### PREFERRED EQUIPMENT GROUP

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| 1WT | Work Van Preferred Equipment Group Includes standard equipment | $0.00 |

### WHEELS

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| QB5 | Wheels, 4 - 16" x 6.5" (40.6 cm x 16.5 cm), 8-lug painted steel, heavy-duty (STD) (Only available with (R04) single rear wheel configuration.) | $0.00 |

### FRONT TIRES

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| XLP | Tires, front LT245/75R16E all-season, blackwall (STD) (Requires (R04) single rear wheel configuration. Jack and spare tire equipment bracket are not included.) | $0.00 |

### REAR TIRES

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| YLP | Tires, rear LT245/75R16E all-season, blackwall (STD) (Requires (R04) single rear wheel configuration. Jack and spare tire equipment bracket are not included.) | Inc. |

### PAINT SCHEME

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| ZY1 | Paint, solid | $0.00 |

### PAINT

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| GAZ | Summit White | $0.00 |

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Data Version: 12284. Data Updated: Nov 5, 2020 10:30:00 PM PST.

**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

[Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139" ( Complete )

## SEAT TRIM

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| 52W | Neutral, Vinyl seat trim | $0.00 |

## SEATING ARRANGEMENT

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| ZX2 | Seating arrangement, driver and front passenger high-back bucket includes head restraints and vinyl or cloth trim (STD) (Not available with (AJ3) driver-side only frontal airbag.) | $0.00 |

## AIR CONDITIONING

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| C60 | Air conditioning, single-zone manual (STD) (Not available with (R6G) air conditioning delete.) | $0.00 |

## RADIO

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| U0F | Audio system, AM/FM stereo with MP3 player seek-and-scan, digital clock, TheftLock, random select, auxiliary jack and 2 front door speakers (STD) (Not available with (U2K) SiriusXM Radio or (YF1) RV Package.) | $0.00 |

## ADDITIONAL EQUIPMENT - PACKAGE

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| ZQ2 | Power Convenience Package includes (A31) power windows and (AU3) power door locks (Included with (YF1) RV Package. Not available with (9T7) passenger side door delete. NOTE: Does not include (ATG) Remote Keyless Entry. (ATG) Remote Keyless Entry must be ordered separately.) | $475.00 |
| ZQ3 | Driver Convenience Package includes Tilt-Wheel and (K34) cruise control (Included with (YF1) RV Package or (ANC) Shuttle Bus Package.) | $395.00 |
| ZR7 | Chrome Appearance Package (Includes (V46) front chrome bumper and (V22) chrome grille. Included with (YF1) RV Package or (YF2) Ambulance Package or (ANC) Shuttle Bus Package.) | $260.00 |

## ADDITIONAL EQUIPMENT - MECHANICAL

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| 9R5 | Suspension, rear multi-leaf in lieu of the standard tapered leaf (Requires (C4M) 9900 lbs. (4490 kg) GVWR or (JFF) 10,100 lb. (4581 kg) GVWR.) | $105.00 |
| G80 | Differential, heavy-duty locking rear (Included with (YF2) Ambulance Package.) | $325.00 |

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**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

## [Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139" ( ✔ Complete )

### ADDITIONAL EQUIPMENT - EXTERIOR

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| 6M2 | Mirrors, outside mid-stance sail panel mounted Provides Velvac convex combination RH and LH outside rear view mirrors that are sail panel mounted with arms that provide a medium stance. Mirrors can be utilized with bodies that are up to 78 inches in width. Mirrors provide a 63.3 sq. inch flat glass positioned over a 30.1 sq. inch convex glass within a common head. Mirrors are shipped loose in vehicle. (Requires (R04) single rear wheels. Not available with SEO (5H5) 2.5 lb. dry chemical BC rated fire extinguisher, SEO (5H6) safety reflector triangle kit, SEO (9T7) Door, passenger side delete or with RPO (B3D) School Bus Package.) | $300.00 |
| V22 | Grille, chrome (Included and only available with (ZR7) Chrome Appearance Package.) | Inc. |
| V46 | Bumper, front chrome with step-pad (Included with (ZR7) Chrome Appearance Package.) | Inc. |

### ADDITIONAL EQUIPMENT - INTERIOR

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| A31 | Windows, power (Included and only available with (ZQ2) Power Convenience Package.) | Inc. |
| AU3 | Door locks, power with lock-out protection (Included with (ZQ2) Power Convenience Package. NOTE: Does not include (ATG) Remote Keyless Entry. (ATG) Remote Keyless Entry must be ordered separately.) | Inc. |
| BA3 | Console, engine cover with swing-out storage bin (Included with (AS5) Custom Cloth front bucket seats and (YF1) RV Package.) | $20.00 |
| K34 | Cruise control (Included and only available with (ZQ3) Driver Convenience Package, (YF2) Ambulance Package or (UF3) High idle switch.) | Inc. |

### ADDITIONAL EQUIPMENT - SAFETY-INTERIOR

| CODE | DESCRIPTION | MSRP |
|---|---|---|
| ASF | Airbags, seat-mounted side-impact for driver and right-front passenger and roof-rail mounted head-curtain side-impact (Included with (C4M) 9900 lb. (4490 kg) GVWR. Available on (JFF) 10100 lb. (4581 kg) GVWR, (C7N) 12300 lb. (5579 kg) GVWR, and (C7I) 14200 lb. (6441 kg) GVWR. Not available with (B3D) School Bus Package, (ANC) Shuttle Bus Package, (YF1) RV Package, and (9T7) right-hand door delete. Always use seat belts and child restraints. Children are safer when properly secured in a rear seat in the appropriate child restraint. See the Owner's Manual for more information.) | Inc. |
| | **Options Total** | **$3,575.00** |

## Price Summary

### PRICE SUMMARY

| | MSRP |
|---|---|
| Base Price | $32,400.00 |

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Data Version: 12284. Data Updated: Nov 5, 2020 10:30:00 PM PST.

**O'Connor Motors**
John Mynahan | 207-592-0105 | john.mynahan@oconnorwheels.com

## [Fleet] 2021 Chevrolet Express Commercial Cutaway (CG33503) Van 139" ( ✔ Complete )

### PRICE SUMMARY

| | MSRP |
|---|---|
| Total Options | $3,575.00 |
| Vehicle Subtotal | $35,975.00 |
| Destination Charge | $1,295.00 |
| **Grand Total** | **$37,270.00** |

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Data Version: 12284. Data Updated: Nov 5, 2020 10:30:00 PM PST.

**Quote #:** 10900
**Date:** 11/5/2020
**Status:** ISSUED

**Unicell Truck Equipment**
170 Cordell Rd.
Schenectady, NY 12303
**PH:** 518-393-5216 **FX:** 518-393-5218

| Quoted By: | Frank Nigro | Rep: | Frank Nigro | Area: | New England |
|---|---|---|---|---|---|

**Bill To:** John Mynahan
O'Connor Buick GMC
187 Riverside Drive
Augusta , ME 04330
Tel: 207-622-3191 Fax: 207-623-0755 Email:
john.mynahan@oconnorwheels.com

**Ship To:** Same as Billing

| CHASSIS | Mfg | Code | Pool | Year | Model | Engine | GVWR | RW | WB | Chassis Initials |
|---|---|---|---|---|---|---|---|---|---|---|
| | CHEV | C21-02EXT | Yes | 2021 | CG33503 | 6.6L GAS | 9900 | | 139" | |

| BODY | Style | Model | Length Out | Length In | Height Overall | Height In | Width Out | Width In | Body Initials |
|---|---|---|---|---|---|---|---|---|---|
| | SERVICE | AL-CSV57-132AP | ' | ' | " | " | " | " | |

| Std Equipment: | Qty: Specifications: | Price: |
|---|---|---|
| Model: | 11' SRW Aluminum Classic Service Van | $14,860.00 |
| SPEC: | LENGTH: 132" - WIDTH: 86" - HEIGHT: 57" I.D. | INCLUDED |
| SPEC: | ALL ALUMINIUM SUPERSTRUCTURE & SIDE COMPARTMENTS | INCLUDED |
| SPEC: | ALL ALUMINIUM ROOF | INCLUDED |
| SPEC: | ALUMINIUM UNDERSTRUCTURE AND ALUMINIUM FLOORING | INCLUDED |
| SPEC: | SMOOTH TAPERED SIDES TO PROVIDE CLEAN "BILLBOARD" IMAGE | INCLUDED |
| SPEC: | DUAL REAR DOORS - NO WINDOWS - 49" X 50.5" OPENING | INCLUDED |
| SPEC: | ALUMINIUM FRONT SLIDING ACCESS DOOR, 2-INTERIOR CARGO AREA DOME LIGHTS WITH SWITCH | INCLUDED |
| SPEC: | 2 FULL LENGTH SHELVES INSIDE CARGO AREA | INCLUDED |
| SPEC: | WN ACCESS DOORS AT REAR FOR STORAGE OF 10' LENGTHS OF CONDUIT | INCLUDED |
| SPEC: | POOCHED ANTI-SLIP REAR BUMPER STEEL - POWDER COATED WHITE | INCLUDED |
| SPEC: | LED STOP TURN TAIL LIGHTS AND MARKER LIGHTS | INCLUDED |
| SPEC: | STAINLESS STEEL ROTARY STYLE | INCLUDED |
| SPEC: | | INCLUDED |
| SPEC: | FACTORY-WHITE POWDER COAT FINISH INSIDE AND OUT | INCLUDED |
| **Optional Equipment (included in Subtotal below):** | | |
| ADDED: | ALCSV57132APSW-75" HIGH VERSION | $1,272.00 |
| ADDED: | LATCHMATIC-ALCSV57132SW | $1,035.00 |
| ADDED: | BACK UP ALARM | $98.00 |
| ADDED: | BACK UP CAMERA | $103.00 |
| **Discount:** | | |
| DISC: | STOCKING DEALER DISCOUNT | $(200.00) |

**Subtotal:** **$17,168.00**
**Freight:** **$0.00**
**Total:** **$17,168.00**

**TERMS** NET 30 DAYS/PO REQUIRED
Quote valid for 30 Days.
Prices subject to change with 30 days advanced notice.

Customer Approval Signature _____

## Weeks,Brad

**From:** Thomes,David
**Sent:** Monday, November 9, 2020 7:29 AM
**To:** Collins,Paul
**Subject:** RE: GMC Van with 75"Reading aluminum service body
**Attachments:** CSV aluminum budget quote.pdf; 2021 Express Standard pool chassis spec.pdf

**From:** John Mynahan
**Sent:** Friday, November 6, 2020 2:21 PM
**To:** Thomes,David DTHOMES@southportland.org

**Subject:** EXTERNAL: RE: GMC Van with 75"Reading aluminum service body

Dave,

Budget price for a unit depicted here would be $49,568.00 Please note that this is not a formal quote or bid and should only be considered for budget purposes. There was not a rear heat option available

Regards,

John Mynahan
Fleet & Commercial Sales Manager
**O'Connor Motors**
**199 Riverside Dr.**
**Augusta, Me. 04330**

207-592-0105 Mobile Phone
207-623-0755 Fax
207-622-3191 Office
Email -John.mynahan@oconnorwheels.com

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# GENERAL GOVERNMENT



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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | Brownfields Assessment and Remediation | | |
| **Department** | Planning & Development | **Dept. Priority** | 1 of 3 |
| **Division** | Economic Development | **Div. Priority** | 1 of 3 |
| **CIP Category** | General Government | | |

## Purchase/Project Description

The South Portland Brownfields Program was established in 2019 through the award of an EPA-funded Brownfields Assessment grant in the amount of $300,000. The program has been very successful in its first two years, but the grant will soon be closed out, and the City intends to be make this an ongoing sustainable program available to all property owners seeking assistance with environmental assessment or potential cleanup, to facilitate the improvement and reuse of land within the City. The City will continue to pursue grant money to replenish the program as opportunities become available, but it should nonetheless be sustained with supplemental contribution from the City to avoid long pauses while we wait for additional grant funding. Multiple Tax Increment Financing (TIF) Development programs identify brownfields as an eligible use of funds, and this CIP request the use of that funding source to sustain the program. The most significant properties currently enrolled in the program are several parcels comprising the former Liberty Shipyard Site. The City is also pursuing other properties, including former waterfront industrial uses, gas stations, dry cleaners, etc. We anticipate working with our Qualified Environmental Professional (QEP), Ransom Consulting, to enroll 1-3 new properties each year and assist them with various assessment, planning, and cleanup work.

Work to be completed in FY22 includes the following:

- Public outreach will continue in FY22, and will include, but not be limited to, two public outreach/Brownfield 101 meetings, two meetings with the Brownfields Advisory Team, and meetings/coordination with prospective property owners and the public, as necessary. Public outreach efforts are anticipated to cost $4,000 - $7,000.
- The Liberty Shipyard Site was entered into the program in 2020. Tasks completed include: site eligibility and access, a Phase I investigation, a Site-Specific Quality Assurance Project Plan (SSQAPP), some reuse and redevelopment planning, and a comprehensive Phase II investigation. Although there are no further assessment activities anticipated, there may be an opportunity for the City to assist the Site owner with planning for redevelopment and reuse. The exact scope and cost for these planning tasks are unknown and dependent on redevelopment schedules and plans; however, we anticipate that approximately $10,000 - $20,000 could be helpful to support this effort.

- This request assumes a new site entered into the program during FY21 that will require a Phase II investigation and Analysis of Brownfield Cleanup Alternatives (ABCA). These assessment costs will vary based on the size, nature, and complexity of the Site, but are expected to range from $30,000 to $35,000.

- This request assumes that in FY22, one additional Site will be entered into the program, and will require MEDEP and EPA eligibility approval, Site access, preparation of a Phase I ESA and SSQAPP, and performing a Phase II investigation with an ABCA. These assessment costs will vary based on the size, nature, and complexity of the Site, but are expected to range from $40,000 to $50,000. (It should be noted that this cost represents a "typical" cost to enter a Site into the program and perform assessment tasks as required by the EPA/MEDEP; as such, if other/additional Sites are entered into the program, similar costs can be expected.

- Programmatic costs and contingency on the above tasks will range from $5,000 to $10,000. This will provide the program with flexibility to perform the tasks necessary to sustain and supplement the overall Brownfields program.

Total cost estimate of $89,000 to $122,000; Requested amount of $120,000.

## Financial Impact of this Purchase/Project

The program is requesting $120,000 in year one (1) to continue the work ongoing, tapering to $80,000 in year two (2), and then $40,000 per year thereafter.

## Environmental Considerations

This CIP is 100% in support of environmental improvements to private property within the City, including former industrial sites, etc. The City has hired Ransom Consulting to act as Qualified Environmental Professional to conduct the work in consultation with EPA and DEP, and the City.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | $ 120,000.00 | $ 120,000.00 | $ 80,000.00 | | $ 40,000.00 | | $ 240,000.00 | $ 120,000.00 |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 120,000.00** | **$ 120,000.00** | **$ 80,000.00** | **$ -** | **$ 40,000.00** | **$ -** | **$ 240,000.00** | **$ 120,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Estimate based on 1-3 new projects each year, requiring Phase I and II ESAs, and/or other work qualified under the program. | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | Perpetuity | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **City Wayfinding - Neighborhood signs** | | |
| **Department** | Planning & Development | **Dept. Priority** | 1 of 1 |
| **Division** | Economic Development | **Div. Priority** | 1 of 1 |
| **CIP Category** | General Government | | |

## Purchase/Project Description

This project is a follow-up to the deployment of the City's Primary Street Wayfinding Sign Program - to occur in 2021. This program would place wayfinding signs at the gateways to the City's various neighborhoods. We had originally priced these out as baked enamel and sealed finish on anodized aluminum to match what is planned for the Street Wayfinding Sign program as these signs have a longer lifespan and require limited maintenance. It is estimated there would be up to twenty (20) signs. A reduction in the proposed budget from the requested $75,000 (or $3,750.00 per sign) to $50,000 (or $2,500.00 per sign) will require examining other options and / or reducing the number of signs which can be acquired.

## Financial Impact of this Purchase/Project

$75,000 to be funded from the Fairchild Development District TIF.

## Environmental Considerations

Better signage, better directions →, less time traveling to find destination = lower $CO^2$ emissions.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | $ 70,000.00 | $ 50,000.00 | | | | | $ 70,000.00 | $ 50,000.00 |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 70,000.00** | **$ 50,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 70,000.00** | **$ 50,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Other sign pricing information - on file. | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 10 years+/- | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Community Broadband Network Project** | | |
| **Department** | Finance | **Dept. Priority** | 3 |
| **Division** | IT | **Div. Priority** | 3 |
| **CIP Category** | General Government | | |

## Purchase/Project Description

We are recommending $410,000 be funded from Development District /TIF resources (recommend the Fairchild Development District) to fund:
Part A: Up to $60.0k - to be used to fund an independent external review of submissions to the Request for Interest (RFI) that the City will be issuing in February 2021 for proposals to Development a community-wide "open-access" broadband network, should submission review be deemed necessary or appropriate.

- Alternative A - If no external review is deemed necessary and the City enters into negotiations and ultimately enters into an agreement with a broadband network developer, then these funds will not be expended.
- Alternative B – If the RFI does not produce an acceptable go-forward alternative for this project, these funds will be used to further expand the City of South Portland's existing broadband fiber infrastructure network and/or to fund a study to determine the best path forward to develop a municipally owned community-wide "open-access broadband network", and how the development/building of such a community–wide network may be most efficiently financed.

Note: The City is finalizing a three-month due diligence process with a broadband infrastructure developer. This party has asked we make no public disclosure of their name until, and unless, they and the City reach some sort of agreement to move forward. We have made it clear to this developer it is important all members of our community have access at some level to high-speed broadband data service. It is expected this broadband infrastructure developer and others may respond to the above referenced RFI.

As part of the due diligence work we are completing it is expected that a successful responder to the above referenced RFI will have the following requests of the City of South Portland.

- The City (including the City School Department) to be an anchor tenant on, the to be constructed, community-wide broadband network.
- The City will provide some limited "financial backstop" for operational shortfalls in the initial years of the of the establishment of the network, See Part B, below.

Part B: Up to $350,000 in FY 2022 with additional funding in ensuing fiscal years up to a total of up to $1,000,000 thru FY 2025, to provide a municipal contribution for verified financial shortfalls related to the operation of a community-wide broadband network.

NOTE: TIF Funds may only be used to support commercial activities. Using round numbers the population of the City of South Portland is 26,000+/- residents. The City is home to 1,600+ businesses. 1,600 businesses / 26,000 residents = 6.1538%. The est. cost of the development of citywide network is $18.0MM for the areas of the City outside the Opportunity Zone. 6.1238% of $18.0MM is $1.108MM.

We are recommending the following CIP funding – TIF – 4 yr. commitment
(Up to $410.0K Yr. 1), (Up to $300.0K Yr. 2), (Up to $200.0K Yr. 3), and (Up to $150.0K Yr. 4) = Up to $1.060MM over 4 yrs.

## Financial Impact of this Purchase/Project

Up to $350,000 to be funded from the Fairchild Development District TIF- in the upcoming FY 2022 Fiscal Year and $1,060,000 thru FY -2025. The development of this network will also act as an attractor bringing to other new - clean economy - jobs to the City of South Portland, adding to the the economic base and, by inference, increased personal and real property tax collections.

## Environmental Considerations

The development of a community-wide broadband network reduce vehicular $CO^2$ emissions as more of the learners in our community - at all ages - will be able to more easliy and reliabley access remote learning,opportunities. Similarly, more indviduals will be able to reliably work remotely from their residences - at the speed of 21st Century-life.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $ 60,000.00 | | | | | $60,000.00 | $ 60,000.00 |
| TIF | $ 410,000.00 | $ 350,000.00 | $ 300,000.00 | | $ 350,000.00 | | $350,000.00 | $ 350,000.00 |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 410,000.00** | **$ 410,000.00** | **$ 300,000.00** | **$ -** | **$ 350,000.00** | **$ -** | **$ 410,000.00** | **$ 410,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Information based on conversations with perspective broadband developers and consultants. | | | | | |
| **Est. Annual Operating Costs** | Not applicable | **Projected Useful Life** | 25 yrs+ | **Additional Documentation?** | No | |
| **City Manager Comments** | | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Computer Reserve** | | |
| **Department** | Finance | **Dept. Priority** | 1 |
| **Division** | IT | **Div. Priority** | 1 |
| **CIP Category** | General Government | | |

## Purchase/Project Description

The city maintains a Computer Reserve to set aside funds for the long term replacement of the network environment including servers, switches, backup systems, firewalls and other costly pieces of equipement to connect the networks' operating system. Next year's Fiscal year 2023 Capital Improvement Plan has two costly projects planned; the city needs to do a network core upgrade and an email server upgrade at an estimated combined cost of $200,000.

In addition to these large FY23 purchases, there is a large upgrade to the City's Data Center Hardware of $165,000. This set aside to the reserve is needed to be able to proceed, as planned, with these upgrades for future years.

## Financial Impact of this Purchase/Project

The City's network environement is essential to be properly maintained, kept up-to-date, secure, and highly efficient.

## Environmental Considerations

No Enviromental conditions.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 70,000.00 | | $ 50,000.00 | | $ 75,000.00 | | $ 195,000.00 | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 70,000.00** | **$ -** | **$ 50,000.00** | **$ -** | **$ 75,000.00** | **$ -** | **$ 195,000.00** | **$ -** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | N/A | | | | |
| **Est. Annual Operating Costs** | Not applicable | **Projected Useful Life** | | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | Comprehensive Plan Update Installment 2 | | |
| **Department** | Planning & Development | **Dept. Priority** | 1 of 3 |
| **Division** | Planning | **Div. Priority** | |
| **CIP Category** | General Government | | |

## Purchase/Project Description

This CIP request seeks additional funding to support the Comprehensive Plan update, which is currently underfunded with a $120,000 CIP allocation from FY21. The Planning Division has conducted a review of comparable comprehensive plan update projects, and considered the technical requirements that are necessary to address the concerns the update will need to tackle. This additional funding will ensure the City has the capacity to develop a scope of work for the Comp Plan update that achieves the community's goals, which include:

1. Incorporating One Climate Future goals and policies, and providing more detailed direction on implementation thereof. These include:
   A. Transit Oriented Development and major overhaul to the land use program to identify key sustainable development nodes.
   B. Major circulation and transportation amendments to address infill development, sustainable development, and vehicle miles travelled reduction.
   C. Sea level rise response.
   D. Utilities infrastructure for an electrified grid.
   E. Consensus support from the community to implement all of the above.
2. Including an extensive, robust, and wide-reaching engagement process.
3. Addressing the strategic evolution of the waterfront.
4. Addressing affordable housing.
5. A detailed Comp Plan-level neighborhood plan for Cash Corner.
6. Economic development strategy aligned with emerging trends, opportunities, and risks.
7. Infrastructure assessment
8. Implementation matrix

The proposed Comp Plan budget includes immediate Zoning Ordinance amendments that are necessary to implement time-sensitive issues identified in the comprehensive plan, and to ensure the Zoning and Subdivision ordinances, in particular but not exclusively these ordinances, are consistent with the updated Comp Plan when it is adopted. The review of other Comp Plan update efforts showed the Comp Plan update processes do not typically include this immediate implementation phase, which is a critical element of the update process, therefore the Planning Division is seeking to incorporate this funding into the Comp Plan project.

## Financial Impact of this Purchase/Project

The adoption of the Comp Plan update will result in annual requests for appropriations to address the implementation of the Comp Plan policies. This should be expected to be typically in the range of $40,000 to $100,000 annually (avg. $70,000) depending on the scope of the proposed implementation actions.

## Environmental Considerations

The Comp Plan Update is critical to the successful implementation of One Climate Future, for regulating development to preserve natural resources, and to guide development toward a more environmentally equitable and sustainable future.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 10,000.00 | $ 10,000.00 | $ 75,000.00 | | $ 65,000.00 | | $ 150,000.00 | $ 10,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $ 56,190.00 | | | | | $ - | $ 56,190.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 10,000.00** | **$ 66,190.00** | **$ 75,000.00** | **$ -** | **$ 65,000.00** | **$ -** | **$ 150,000.00** | **$ 66,190.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Cost comparison of similar updates in N. New England. See attached. | | | | |
| **Est. Annual Operating Costs** | $70,000 | **Projected Useful Life** | 12 | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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| Municipality | Population | Year Updated | Cost | Goal | Alignment with SoPo Scope |
|---|---|---|---|---|---|
| **South Portland** | **25,600** | **2012** | **$117,815** | **LAST COMP PLAN UPDATE** | |
| **South Portland** | **25,600** | **2024** | **$150,000** | **Equity, robust engagment, economic development, housing, de-indutrialization, Master Plans (e.g. Cash Corner, Waterfront), Climate Action, Infrastructure/Service Assessment** | |
| York | 13,150 | 2021 | $200,000 | Climate Change and Vulnerability, Affordable Housing, Natural Resource Protection, Business Development, Village(s) Revitalization, Transportation Congestion Managment- including multi-modal opportunities | High - but limited population and community complexity comprable to SoPo. |
| Biddeford | 21,500 | 2022 | $155,000 | Internal; requested contract staffing services in-house. | Moderate-limited - Internal approach means salary overhead, limited complexity. |
| Saco | 19,750 | 2022 | $125,000 | Robust engagement plan, detailed conditions analysis, includes certification with State | Moderate-high - lacks focus areas and targeted climate change policies integration |
| Wells | 10,500 | 2022 | $100,000 | Year-round pop. growth, natural resource protection, climate change/sea level rise, local fishing /lobstering industry, traffic, tourism, preservation and reduction of municipal energy use. | Moderate - Smaller population, Tourism focus, mostly GMA alignment |
| Kennebunkport | 3,700 | 2021 | $90,000 | Year-round pop. growth, natural resource protection, climate change/sea level rise, local fishing /lobstering industry, traffic, tourism, preservation and reduction of municipal energy use. | Moderate - Low population, Tourism focus, mostly GMA alignment |
| Lewiston | 37,000 | 2013 | $90,000 | | Limited - Old |
| Falmouth | 11,200 | 2020 | $65,000 | Vision and values statement only | Limited - Scope is solid but for only 20-25% of the comp plan process (visioning) |
| Kennebunk | 11,500 | 2021 | $50,000 | | Limited - Low population, GMA alignment |
| Brunswick | 20,500 | 2022 | Pending | Comprehensive | Moderate |
| Gray | 8,200 | 2021 | Pending | | Limited |
| Portland | 66,400 | 2022 | Pending | Comprehensive | High |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | Filing System | | |
| **Department** | Planning & Development | **Dept. Priority** | 3 of 4 |
| **Division** | Code Enforcement | **Div. Priority** | 1 of 1 |
| **CIP Category** | General Government | | |

## Purchase/Project Description

The Planning & Development Department continues to operate in the former Hamlin School building at 496 Ocean Street. The City has invested in various upgrades as we prepare to continue occupying the space during the next several years. This CIP request is to address the most pressing building improvement, the need for an improved filing system.

The cabinets used for our current filing system are at full capacity. This system holds all of the documentation and property files, including permits and development reviews. The plan is to replace twenty-one (21) of the existing four (4) drawer cabinets with seven (7) Rotary Action File Cabinets, resulting in a substantial increase in our file capacity. Addtionally, there are approximately twenty (20) old cabinets full or overflowing with Planning Board, Board of Appeals, and other department files. The plan is to purchase eight (8) Lateral File Cabinets in order to appropriately file and protect these documents.

The City is currently using approximately thirty (30) large plastic waste bins to store rolled blueprint drawings. These files had previously been stored in an area susceptible to moisture so this was done as a temporary measure to protect the documents. The plan is to purchase storage shelving to replace all of the bins. By State Law, the City must retain these plans for the life of the building plus one year. The new vertical storage units will create better organization and open up the floor space for other office uses.

## Financial Impact of this Purchase/Project

The estimated cost for a new filing system is approximately $48,000, which includes new cabinets, shelving system, and related modifications.

## Environmental Considerations

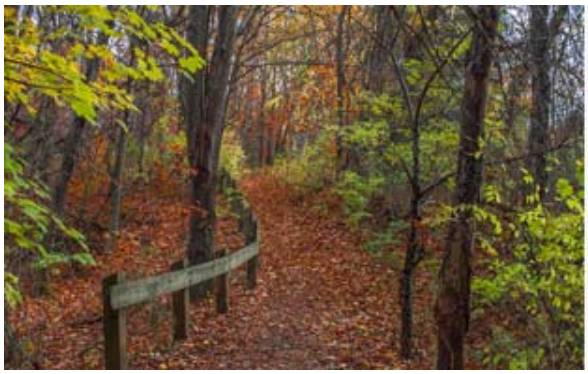
This CIP request involes interior upgrades. Old filing cabinets will be auctioned and reused, or scrapped and recycled.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 48,000.00 | $ 48,000.00 | | | | | $ 48,000.00 | $ 48,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 48,000.00** | **$ 48,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 48,000.00** | **$ 48,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Estimate based on advertised equipment prices reviewed online; have not solicited bids. | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 25 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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# PARKS
# AND
# OPEN SPACE




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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **School St Park Playground Replacement (CDBG Match)** | | |
| **Department** | Parks, Rec, Waterfront | **Dept. Priority** | 1 |
| **Division** | Parks | **Div. Priority** | 1 |
| **CIP Category** | Parks & Open Space | | |

## Purchase/Project Description

The Parks, Recreation and Waterfront Department is seeking $9,744 (as a 10% match to CDBG) for the replacement of the playground equipment at the School Street Park.

The current playground is approximately 25 years old and is at the end of its useful life. Many of the play elements are starting to deteriorate and the hardware is starting to rust. Replacing individual play elements can be very costly and, doing so, would hardly address the greater safety needs of the playground. Ferry Village is a densely populated area within the city with very little greenspace and very few playgrounds.

School Street Park and its playground are invaluable assets to the neighborhood. The proposed playground will have approximately the same footprint as the existing one, will be safer and, will have more engaging and challenging play elements. The proposed playground plan was developed by O'Brien and Sons, a playground equipment supplier that has installed or provided the Parks Department every playground it maintains. If not funded, either we'd have to spend an exorbitant amount of money to get it in a safe(r) condition, or consider removing the playground.

## Financial Impact of this Purchase/Project

Not funding this project could have significant financial ramifications for the Parks Department and the City. Buying individual parts to repair the existing playground can range from the mid-hundreds to a few thousand dollars. Purchasing a few of the elements could cost more than the amount of funding requested.

## Environmental Considerations

Due to the safety issues with the existing playground, it would most likely need to be shut down/removed if it can't be replaced. This is the only playground in Ferry Village that serves this age group, so families would need to drive to get to another one. Currently, most users of the playground walk or bike to it.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 9,744.00 | $ 9,744.00 | | | | | $ 9,744.00 | $ 9,744.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 87,694.00 | $ 87,694.00 | | | | | $ 87,694.00 | $ 87,694.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 97,438.00** | **$ 97,438.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 97,438.00** | **$ 97,438.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | ME O'Brien and Sons | | | | |
| **Est. Annual Operating Costs** | $1,000 | **Projected Useful Life** | 25+ Years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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## E. CONSTRUCTION SUMMARY, *limit 1 page*

| | | |
|---|---|---|
| **Application Type** | ☑Construction Project | |
| **Applicant** | City of South Portland - Parks, Recreation and Waterfront Department | |
| **Project Name** | Replacement of School St Park playground | |
| **Project Address/Location** | 66 School St., South Portland, ME 04106 | |
| **Funds Requested** | $87,694.20 | |
| **Project Summary** | | |
| The proposed project is to replace the aging, outdated and unsafe playground at School St. Park with an engaging and innovate one. | | |
| **HUD National Objective** *Refer to Section III.B.1* | ☐Prevention of Slum/ Blight<br>☐Low/Moderate Income Area | ☑Low/ Moderate Income Clientele<br>☐ Low/ Moderate Income Housing |

| | |
|---|---|
| **Location - For LMA projects** *Refer to Section II.B.4* | |
| Census Tracts | 35 |
| Service Area Neighborhoods (For LMA Projects) | Ferry Village residents and people that live within 1/2 of the park, which is located at the intersection of School St and Edmund S Muskie St |
| **Beneficiaries/ Clients Served** - *Refer to Section II.B.5* | |
| Client Description | Individuals within walking distance of the park that fall within the LMI category |
| Number of Clients Served | 3,200 - 3,500 |
| Number of LMI South Portlanders | 2,525 |
| LMI South Portland Percentage | 53% |

| |
|---|
| **Outcomes** - *Refer to Section II.B.6* |
| Promote physical activity. A much happier community, as green spaces/playgrounds are valuable for reducing stress and increasing happiness. Help strengthen developmental skills (sensory, motor, strength, cognitive) of children at a quick rate. |

| | |
|---|---|
| **Budget** - *Refer to Section II.D* | |
| $87,694.20 | CDBG Request (Must match CDBG Request on Cover Page and Budget Worksheet) |
| $97,438 | Total Program Budget (Must match Total Budget on Cover Page and Budget Worksheet) |
| 90 % | Percentage of CDBG Request of Total Budget [50% or less indicates at least a 1 to 1 match] |

| | | | |
|---|---|---|---|
| **Leveraged Funds** - *Refer to Section II.D* | | | |
| $ | Federal | $ | Other grants |
| $ | State | $ | Endowment |
| $ | County | $ | Private Funds |
| $9,743.80 | City *(not CDBG)* | $ | Gifts in kind |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **One Half Ton Truck Replacement** | | |
| **Department** | Parks, Rec, Waterfront | **Dept. Priority** | 2 |
| **Division** | Parks | **Div. Priority** | 2 |
| **CIP Category** | Parks & Open Space | | |

## Purchase/Project Description

The Parks, Recreation and Waterfront Department seeks funds to replace a 2005 half ton GMC Sierra pickup truck (#84) which has exceeded its useful life. Replacing this truck is mission critical as it is used for year round work which includes: hauling equipment and supplies for departmental events, picking up parts and supplies, hauling trash, etc. The replacement truck will be used for the aforementioned duties as well as transportation during snow removal operations.

If funding is not available for this replacement truck, the department will need to continue another year with a 15 year-old vehicle which could end its useful life during the season, which could greatly impact department operations.

## Financial Impact of this Purchase/Project

Truck #84 needs to be replaced. It is critical to our operation. The frame is severely rusted out and has many other issues that will cost thousands of dollars to fix. The cost to maintain #84 will only continue to rise year after year. Other than the cost for preventive maintenance (which is minimal), very little money will be spent on this next truck over the course of the next few years. Although the quote received for the truck is $25,178, I am requesting $28,000, due to the rising cost of trucks.

## Environmental Considerations

While technology for electric vehicles is on the rise, light duty trucks are still a few years away. Electric trucks currently available on the market wouldn't be suitable to meet our varying work needs and the cost is astronomical. GMC Hummer Evs, which will come out in 2022, have an estimated price tag of $100,000+ and the Telsa Cybertruck is expected to cost around $40,000+ once produced later this year. As a department, we are looking forward to the day we can upgrade our fleet to electric trucks.

| **Funding Source(s)** | **Year 1** | | **Year 2** | | **Year(s) 3+** | | **TOTALS** | |
|---|---|---|---|---|---|---|---|---|
| | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 21,443.00 | $ 21,443.00 | | | | | $ 21,443.00 | $ 21,443.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 6,557.00 | $ 6,557.00 | | | | | $ 6,557.00 | $ 6,557.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 28,000.00** | **$ 28,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 28,000.00** | **$ 28,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Yankee Ford | | | | | |
| **Est. Annual Operating Costs** | $1,000 | **Projected Useful Life** | 10+ Years | **Additional Documentation?** | Yes | |
| **City Manager Comments** | | | | | | |

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VIRTC1DP

CNGP530 VEHICLE ORDER CONFIRMATION 12/21/20 15:
==> Dealer: F
2021 F-150 Page: 1
Order No: 0001 Priority: B3 Ord FIN: QF391 Order Type: 5B Price Level
Ord PEP: 101A Cust/Flt Name: CTY. SO. PORT PO Number:

| | | RETAIL | DLR INV |
|---|---|---|---|
| F1C | F150 4X2 R/C | $29240 | $27925.00 |
| | 141" WHEELBASE | | |
| JS | ICONIC SILVER | | |
| C | CLOTH 40/20/40 | | |
| S | MED DARK SLATE | | |
| 101A | EQUIP GRP | 2080 | 1893.00 |
| | .XL SERIES | | |
| | .POWER EQUIP GRP | | |
| | .CRUISE CONTROL | | |
| | .REV SENSING SYS | | |
| | .17"SILVER STEEL | | |
| 99B | 3.3L V6 PFDI | | |
| 44G | ELEC 10-SPDAUTO | | |
| | .245/70R-17 A/S | | |
| X19 | 3.55 REG AXLE | NC | NC |

| | | RETAIL | DLR |
|---|---|---|---|
| | 6100# GVWR | | |
| | FRT LICENSE BKT | NC | |
| 425 | 50 STATE EMISS | NC | |
| 53B | CLASS IV HITCH | 205 | 18E |
| 794 | PRICE CONCESSN | | |
| | REMARKS TRAILER | | |
| | FLEX FUEL | | |
| | SP FLT ACCT CR | | (84E |
| | FUEL CHARGE | | 8 |
| | DEST AND DELIV | 1695 | 1695 |
| TOTAL BASE AND OPTIONS | | 33220 | 30861 |
| XL HIGH DISCOUNT | | (750) | (683 |
| TOTAL | | 32470 | 30178 |

*THIS IS NOT AN INVOICE*
*TOTAL PRICE EXCLUDES COMP PRICE AL

F1=Help F2=Return to Order F3/F12=Veh Ord M
F4=Submit F5=Add to Library F9=View Trailers
S099 - PRESS F4 TO SUBMIT QC0C

V1DP0550

Link,

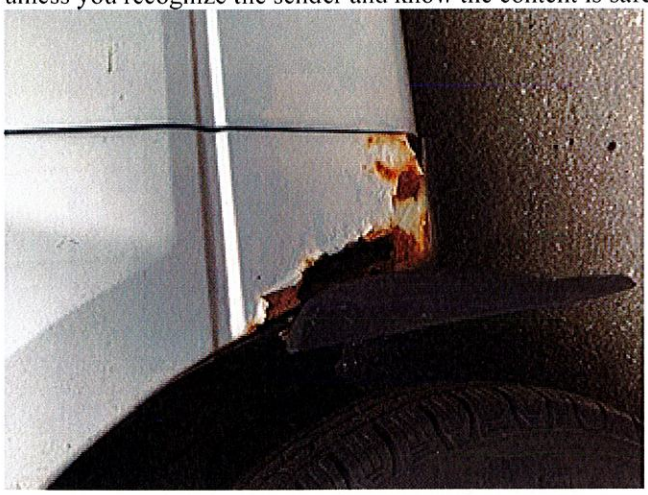
30178
-L50007 6PC

Bid: $25,178

## Erskine,John

**From:** John Erskine <linkyerskine@gmail.com>
**Sent:** Thursday, January 14, 2021 7:31 AM
**To:** Erskine,John
**Subject:** EXTERNAL:

CAUTION: This email originated from outside of the City of South Portland Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.





**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **4100D Outfront Mower Replacement** | | |
| **Department** | Parks, Rec, Waterfront | **Dept. Priority** | 3 |
| **Division** | Parks | **Div. Priority** | 3 |
| **CIP Category** | Parks & Open Space | | |

## Purchase/Project Description

The Parks, Recreation and Waterfront Department seeks funds to replace our John Deere 72" Outfront Mower (#3). Mower #3 is 12 years old and no longer providing us the quality of cut we need. All of the bushings that connect the deck and push arms to the mower are worn out and the deck is bent. The mower has over 3000 hours on it, which according to the USGA, is over 230,000 miles. Additionally, due to its age, mower #3 isn't Tier 4 emission compliant.

We want to replace mower #3 with a Groundsmaster 4100D with a 123" cut. This mower is Tier 4 compliant (please see environmental considerations for more information) and has a much wider cut, which will significantly cut down on mowing time (and labor) in our parks. This mower also has a leaf mulching kit which will allow us to spend less time raking leaves in the fall and focus our efforts on other projects.

If not funded, we run the risk of mower #3 dying mid-season, which would cripple our mowing operation.

## Financial Impact of this Purchase/Project

Mower #3 is well beyond its useful life. Not only would it cost thousands of dollar to get the machine in better operating condition, we'd be investing the money in a machine that doesn't meet emission standards. Other than the cost for preventive maintenance (which is minimal), very little money will be spent on this mower over the course of the next few years. Although the quote received for the mower is $71,107.09, I am requesting $75,000, due to the rising cost of mowers.

## Environmental Considerations

While not offered in electric (yet), this mower has Tier 4 emissions. Established by the EPA as part of the Clean Air Act, Tier 4 regulations were put in place to reduce emission of particulate matter (PM) and oxides of nitrogen (NOx), primarily in nonroad diesel engines. The end goal for Tier 4 is to decrease diesel engine emissions by more than 90 percent for health benefits—health benefits that could amount to $80 billion annually once all older engines are replaced, according to the "Clean Air Nondiesel Rule," published by the EPA Office of Transportation and Air Quality (OTAQ) in May 2004.

| **Funding Source(s)** | **Year 1** | | **Year 2** | | **Year(s) 3+** | | **TOTALS** | |
|---|---|---|---|---|---|---|---|---|
| | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 75,000.00 | $ 75,000.00 | | | | | $ 75,000.00 | $ 75,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 75,000.00** | **$ 75,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 75,000.00** | **$ 75,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Turf Products | | | | |
| **Est. Annual Operating Costs** | $1,000 | **Projected Useful Life** | 10+ Years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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tpc turf products
157 Moody Road • PO Box 1200 • Enfield, CT 06082
Main Office: (800) 243-4355 • FAX: (860) 763-5550

# QUOTE

Prepared For: Rick Perruzzi
**City of South Portland**
25 Cottage Road South Portland, Maine
United States

Ship To: city of south portland 4100 1-12-21
Quote Number: Q64547
Quoted Date: **01/12/2021**
Prepared By: Robert Hobbs
bhobbs@turfproductscorp.com
207-233-1777

| Qty | Model # | Description | MSRP | % Disc | Award | Extended |
|---|---|---|---|---|---|---|
| **1** | **30608** | **Groundsmaster 4100-D (T4)** | **$86,530.00** | **22 %** | **$67,666.46** | **$67,666.46** |
| 1 | 108-1451 | Atomic Blade Service Pack (7 Blades, 19 Inch) | $167.78 | 22 % | $131.20 | $131.20 |
| 1 | 30691 | Lights Adapter Kit | $219.00 | 22 % | $171.26 | $171.26 |
| 1 | 30414 | North American Road Light Kit | $1,034.00 | 22 % | $808.59 | $808.59 |
| 1 | 31526 | 4WD Flow Divider Kit | $1,256.00 | 22 % | $982.19 | $982.19 |

| | |
|---|---|
| Toro Total: | **$69,759.70** |
| *Non – Toro Total:* | *$0.00* |
| *Set Up:* | *$0.00* |
| *Freight:* | *$0.00* |
| *Trade Ins:* | *($0.00)* |
| *State Sales Tax:* | *$0.00* |
| **Total Price:** | **$69,759.70** |

ALL PRICING IS VALID FOR 30 DAYS 1

tpc turf products
157 Moody Road • PO Box 1200 • Enfield, CT 06082
Main Office: (800) 243-4355 • FAX: (860) 763-5550

# QUOTE

Prepared For: Rick Perruzzi
**City of South Portland**
25 Cottage Road South Portland, Maine
United States

**Sourcewell Contract**

Ship To: city of south portland leaf
Quote Number: mulching kit 4100 1-12-21
Quoted Date: Q64549
Prepared By: **01/12/2021**
Robert Hobbs
bhobbs@turfproductscorp.com
207-233-1777

| Qty | Model # | Description | MSRP | % Disc | Award | Extended |
|---|---|---|---|---|---|---|
| **1** | **30608_ACCY** | **Groundsmaster 4100-D (T4) Accessories** | **$0.00** | **22 %** | **$0.00** | **$0.00** |
| 1 | 30419 | Leaf Mulching Kit | $1,723.00 | 22 % | $1,347.39 | $1,347.39 |

| | |
|---|---|
| Toro Total: | **$1,347.39** |
| *Non – Toro Total:* | *$0.00* |
| *Set Up:* | *$0.00* |
| *Freight:* | *$0.00* |
| *Trade Ins:* | *($0.00)* |
| *State Sales Tax:* | *$0.00* |
| **Total Price:** | **$1,347.39** |

ALL PRICING IS VALID FOR 30 DAYS 1

# PUBLIC SAFETY






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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Quint** | | |
| **Department** | Fire | **Dept. Priority** | 1 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The Fire Department apparatus replacement schedule has been behind for years and, while we have made great strides over the past 5+ years, we are really only half-way through the process. We have a number of vehicles significantly overdue for replacement. Engine 49 (orig E-42) which is currently a foam tender (foam pump is defunct) was due for replacement in 2012 (FY2013) but was pushed back for other more important purchases. Ladder 41 was due up for replacement in 2016 (FY2017) but was also pushed back due to it being a reserve apparatus. With the original L-45 being forced out of service early and the 1st replacement being totaled due to an accident, L-41 has had to be a front line apparatus longer than it should have and, it is tired. L-42 is also old and should have been replaced in 2017 (FY2018).

The plan is to replace E-49 and L-41 with one Quint. The current L-42 would be reassigned as L-41 and be a reserve apparatus until it no longer runs. As it takes almost a full year to spec, bid and order a Quint, failure to fund this purchase would not only push it out a year into 2022 (FY2023) which already has a number of apparatus in it, realistically, it will require almost 2 1/2 more years of operating the current fragile apparatus. Delivery, if approved this budget year, would not be until October of 2022 at the earliest.









## Financial Impact of this Purchase/Project

Retired apparatus would be auctioned off for whatever fair market would offer. Best estimate is around $10,000 for both. Most Fire Apparatus vendors are offering many long-term pricing options due to the impact of COVID and the need for municipalites to continually replace apparatus.

## Environmental Considerations

Fire apparatus technology is not as far along in terms of environmental considerations. Some do have anti-idling (similar to smaller passenger cars) and APU units (such as on airplanes). We will look at these options and implement if/when possible.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | $1,300,000.00 | | | | | | $ 1,300,000.00 | $ - |
| Fund Balance (General Fund) | | $ 137,500.00 | | | | | $ - | $ 137,500.00 |
| General Fund (GF) Reserves | | $ 660,000.00 | | | | | $ - | $ 660,000.00 |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $ 502,500.00 | | | | | $ - | $ 502,500.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | $ (10,000.00) | $ (10,000.00) | | | | | $ (10,000.00) | $ (10,000.00) |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 1,290,000.00** | **$ 1,290,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 1,290,000.00** | **$ 1,290,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Pierce Fire Apparatus | | | | |
| **Est. Annual Operating Costs** | $ 8,000.00 | **Projected Useful Life** | 15 | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Defibrillators** | | |
| **Department** | Fire | **Dept. Priority** | 3 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The Fire Department operates six (6) external defibrillators as part of its Emergency Medical Program. All the current units are manufactured by Physio Control. It is very important all of these units remain a single source item as each defibrillator company's products operate very differently and when someone is in cardiac arrest we cannot afford any delays while trying to recall which unit the medics are operating. The company only covers these units for 10 years.

We replace one every two years, so the oldest is already/always 12 years old. The oldest unit is serviced and kept on the spare ambulance and not used frequently. By purchasing one every two years we keep five of them within coverage.



## Financial Impact of this Purchase/Project

We normally trade in the oldest for a modest reduction in price ($2000)

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | $ 21,000.00 | $ 21,000.00 | | | | | $ 21,000.00 | $ 21,000.00 |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 10,000.00 | $ 10,000.00 | | | | | $ 10,000.00 | $ 10,000.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 5,000.00 | $ 5,000.00 | | | | | $ 5,000.00 | $ 5,000.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | $ (2,000.00) | $ (2,000.00) | | | | | $ (2,000.00) | $ (2,000.00) |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 34,000.00** | **$ 34,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 34,000.00** | **$ 34,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Company | | | | |
| **Est. Annual Operating Costs** | $ 100.00 | **Projected Useful Life** | 12 | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Command Vehicle** | | |
| **Department** | Fire | **Dept. Priority** | 4 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The department is looking to replace a 2010 Chevrolet Tahoe, which is used as a department command vehicle. Based on a 12-year life span, this vehicle would normally be replaced in 2022 (FY2023). This vehicle has been the shift commander's vechicle for two years and has very high mileage, the transmission was replaced and, has a fair amount of body rust. This vehicle has 92,684 miles.

For this purchase, we are looking to purchase a replacement SUV. Not funding this vehicle in FY22, will delay this purchase until the FY23 CIP where there are already additional vehicles slated for replacement. We have flipped this vehicle with another still in very good shape and does not yet, need to be replaced.



## Financial Impact of this Purchase/Project

Would auction off the current vehicle and expect $2,000-$5,000 in return.

## Environmental Considerations

Understanding the city is looking to become as carbon natural as possible, the department will look at hybrid engine options as long as the vehicle can meet the department's size, space, and towing capacity requirements.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 49,500.00 | $ 49,500.00 | | | | | $ 49,500.00 | $ 49,500.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | $ (5,000.00) | $ (5,000.00) | | | | | $ (5,000.00) | $ (5,000.00) |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 44,500.00** | **$ 44,500.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 44,500.00** | **$ 44,500.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Similar purchase in 2020 | | | | |
| **Est. Annual Operating Costs** | $ 4,000.00 | **Projected Useful Life** | 12 | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Regional Crime Lab** | | |
| **Department** | Police | **Dept. Priority** | 1 |
| **Division** | | **Div. Priority** | 1 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

Since 2006, South Portland has been a member of the Metro Regional Coalition and has worked collaboratively with Portland, Scarborough, Westbrook, Falmouth, Cape Elizabeth, Yarmouth, and Cumberland County to create a regional crime lab. Each of the joining members will pay a proportionate share (based on population) of the cost of renovations to the City of Portland's Public Safety Building located at 109 Middle Street.

South Portland's share was estimated at $15,987 per year for 20 years, totaling $319,740. Additionally, each municipality will contribute yearly for equipment purchase and replacement. South Portland's share was estimated at $2,062 per year for 10 years, totaling $20,620. The Capital Improvement Plan request is for $12,000 per year through FY2026 to fund this project.

## Financial Impact of this Purchase/Project

The anticipated cost is estimated at $12,000 for FY2022 to meet the financial commitment from the inter-local agreement.

## Environmental Considerations

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 12,000.00 | $12,000.00 | $ 12,000.00 | | $ 36,000.00 | | $ 60,000.00 | $ 12,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 12,000.00** | **$ 12,000.00** | **$ 12,000.00** | **$ -** | **$ 36,000.00** | **$ -** | **$ 60,000.00** | **$ 12,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Inter-local Agreement | | | | | |
| **Est. Annual Operating Costs** | $ 2,500.00 | **Projected Useful Life** | 20 Years | **Additional Documentation?** | No | |
| **City Manager Comments** | | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Taser Replacement Purchase Agreement** | | |
| **Department** | Police | **Dept. Priority** | 2 |
| **Division** | | **Div. Priority** | 2 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The Taser X7 (generation 7) less-lethal Electronic Control Weapon (ECW) came on to the market in mid-2018 and is a vastly more effective and efficient product that significantly reduces the risk of injury to officers and offers many additional options that will assist our officers in making it home safely to their families at the end of each tour.

The X7 streamlines the training, record keeping, and inventory management process with modern internet-based functionality. The Taser X7 has functionality that allows for the de-escalation of critical incidents without the deployment of the probes which compliments the Mental Health First Aid and Crisis Intervention Team training all SPPD officers have received.

The Taser Certification Plan spreads the purchase price over 5 years (interest free) and includes the Taser, holster, training and duty cartridges, rechargeable batteries, on-line annual training and instructor certification, network connected docking station, and a 5 year immediate replacement warranty. FY2022 is the second year of the 5 year purchase agreement.

## Financial Impact of this Purchase/Project

The only financial impact, besides the 5 year purchase agreement, is the salary associated with the annual practical training and certification requirement but that was also in place with our previous Taser training program and is incorporated in our annual in-service training budget.

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 41,760.00 | $ 20,695.00 | $ 41,760.00 | | $ 83,520.00 | | $ 167,040.00 | $ 20,695.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $ 21,065.00 | | | | | $ - | $ 21,065.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 41,760.00** | **$ 41,760.00** | **$ 41,760.00** | **$ -** | **$ 83,520.00** | **$ -** | **$ 167,040.00** | **$ 41,760.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Axon Purchase Agreement | | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 5 Years | **Additional Documentation?** | No | |
| **City Manager Comments** | | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Bulletproof Vest Replacement** | | |
| **Department** | Police | **Dept. Priority** | 3 |
| **Division** | | **Div. Priority** | 3 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The South Portland Police Department currently employs 56 sworn full-time police officers and 3 part-time police officers who are mandated through policy and recognized best practice to wear Kevlar bulletproof vests while working. The manufacturers of bulletproof vests report the Kevlar material breaks down over time and can no longer guarantee the required ballistic protection after 5 years. That being the case, sworn officers receive a bulletproof vest when hired and then on every 5 year anniversary going forward to keep them safely returning home to their loved ones at the end of each tour.

The Patrick Leahy Bulletproof Vest Partnership (BVP) initiative created by the Bulletproof Vest Partnership Grant Act of 1998 is a unique U.S. Department of Justice initiative designed to provide a critical resource to state and local law enforcement. Since 1999, the BVP program has awarded more than 13,000 jurisdictions a total of $522 million in federal funds for the purchase of over one million vests (1,395,976) as of February 2020. This initiative reimburses municipalities 50% of the costs associated with the purchase of individually fitted bulletproof vests in agencies that adopt mandatory wear policies.

As both a nationally and state accredited agency, South Portland Police Department maintains a mandatory wear policy and applies for the reimbursement after purchased vests are delivered and paid for as required by the BVP program. During FY2022, 30 sworn officers will require new vests at approximately $825.00 each ($24,750).

## Financial Impact of this Purchase/Project

Besides the financial impact associated with 50% of the purchase price, there is no additional associated expenses for 5 years.

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | $ 12,375.00 | $ 12,375.00 | | | | | $ 12,375.00 | $ 12,375.00 |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 12,375.00 | $ 12,375.00 | | | | | $ 12,375.00 | $ 12,375.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 24,750.00** | **$ 24,750.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 24,750.00** | **$ 24,750.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Atlantic Tactical (State Bid Price) | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 5 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Portable Radio Replacement** | | |
| **Department** | Police | **Dept. Priority** | 4 |
| **Division** | | **Div. Priority** | 4 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

This Capital Improvement request is for the purchase of 32 replacement dual band portable radios (Motorola APX 8000 $7,100.00 each) for the police department. The new units will replace the remaining 32 Motorola APX 7000 portable radios as part of a two year plan (FY2021 & FY2022) to replace this life safety equipment. The equipment currently being used is ten years old and no longer supported by warranty/parts.

The Motorola APX 7000 portable radio is no longer in production and has reached the end of its useful life expectancy. The department replaced 24 portable radios in FY2021 using appropriated and available CIP, Homeland Security Grant, and encumbered FY2020 funds.

CIP funding will be the only available funding source in FY2022 for this equipment that could make the difference between life or death for our officers.

## Financial Impact of this Purchase/Project

Aside from the original expenses associated with the purchase of this equipment, there is no additional financial impact until the equipment comes out of warranty. After the equipment ages past the three (3 ) year manufacturer's warranty, repair and part replacement expenses would be covered by the Communications Equipment account in the police department budget.

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 227,200.00 | $ 227,000.00 | | | | | $ 227,200.00 | $ 227,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 227,200.00** | **$ 227,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 227,200.00** | **$ 227,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Motorola Solutions Incorporated | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 10 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **AED Replacement** | | |
| **Department** | Police | **Dept. Priority** | 5 |
| **Division** | | **Div. Priority** | 5 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

Currently five (5) remaining SPPD AED's are outside of the 10-year life cycle identified by the manufacturer specifications. A two-year CIP plan request was brought forward to replace five (5) AED's in FY2021 and five (5) in FY2022 which would bring us up-to-date and lower the risk of equipment malfunction and failure significantly.

This piece of equipment is critical in the preservation of life for the populations we serve. The quote from Common Cents EMS Supply includes the purchase of five (5) AED's ($1200 each), five (5) sets of pediatric pads ($100 each), and five (5) lithium batteries ($300 each).

## Financial Impact of this Purchase/Project

The financial impact of this purchase would be the costs associated with replacing pads after use and batteries when they wear out. The estimated financial impact would be aproximately $1,000.00 which is supported by the Medical Supplies line item in the FY2022 police department budget.

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | $ 8,000.00 | | | | | $ - | $ 8,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $8,000.00 | | | | | | $ 8,000.00 | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 8,000.00** | **$ 8,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 8,000.00** | **$ 8,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Common Cents EMS Supply Quote | | | | | |
| **Est. Annual Operating Costs** | $ 1,000.00 | **Projected Useful Life** | 10 Years | **Additional Documentation?** | No | |
| **City Manager Comments** | | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Mobile Video System Replacement** | | |
| **Department** | Police | **Dept. Priority** | 6 |
| **Division** | | **Div. Priority** | 6 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

This Capital Improvement request is for the purchase of replacement vehicle video equipment for the Police Department. This equipment allows the recording of incidents and events as required by policy and provides video documentation of enforcement actions that can be used as evidence in a prosecution.

The equipment currently being used is no longer supported by warranty and has reached the end of its useful life expectancy. The new equipment will integrate seemlessly with the system backbone, which allows recorded data from the mobile units to be downloaded wirelessly from the vehicles to a server located in the police department, as well as, with our individual body worn cameras.

With significant and on-going advances in technology, we expect even more improved audio and video quality in the recordings, as well as, more efficient storage capability.

## Financial Impact of this Purchase/Project

The estimated $75,000 cost in FY22 will replace all of the remaining outdated/out-of-warranty mobile units in this two year project (FY21 & FY22) and includes a three-year no fault warranty. The anticipated annual operating cost of $2,000 is primarily for repair of issues unrelated to warranty repairs.

## Environmental Considerations

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 75,000.00 | $ 75,000.00 | | | | | $ 75,000.00 | $ 75,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 75,000.00** | **$ 75,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 75,000.00** | **$ 75,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | WatchGuard Quote | | | | |
| **Est. Annual Operating Costs** | $ 2,000.00 | **Projected Useful Life** | 5 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Replacement Radar Equipment** | | |
| **Department** | Police | **Dept. Priority** | 8 |
| **Division** | | **Div. Priority** | 8 |
| **CIP Category** | Public Safety | | |

## Purchase/Project Description

The requested funds will allow SPPD to replace five (5) antiquated and outdated in-car mobile Stalker Radar units that are currently working intermittenly and are literally on their last legs. These new units ($2,213.00 each) would be installed in police patrol vehicles regularly assigned to proactive and targeted speed enforcement.

One of the most frequent quality of life issues reported to SPPD is speeding vehicles in neighborhoods. This equipment is part of a requested two-year CIP plan (FY2021 & FY2022) to replace all the unsupported/end of life equipment in the 10 patrol vehicles taxied with mitigating these important quality of life issues. The Patrol Division made 10,000 motor vehicle stops and wrote over 1400 citations to reduce motor vehicle accidents and the associated fatalities.

This equipment is an important element in the department's mission/strategy to ensure the safety of our pedestrians and motoring public.

## Financial Impact of this Purchase/Project

The only financial impact would likely be the return the city receives on the citations issued.

## Environmental Considerations

Not applicable

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | $11,065.00 | | | | | $ - | $ 11,065.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $11,065.00 | | | | | | $ 11,065.00 | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 11,065.00** | **$ 11,065.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 11,065.00** | **$ 11,065.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Stalker Radar Quote #2046748 | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 5-10 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Digital Storage (for body-worn and in-car video)** | | |
| **Department** | Police | **Dept. Priority** | 9 |
| **Division** | | **Div. Priority** | 9 |
| **CIP Category** | Public Safety | | |

**Purchase/Project Description**

The requested funds will support a two-year CIP plan (FY2021 & FY2022) request from the City of South Portland Information Technology Department to upgrade the equipment responsible for the digital storage of the South Portland Police Department body-worn and in-car camera sytems video. This footage is imperitive for criminal investigations, criminal prosecutions, public records requests, annual accreditation reviews, and citizen complaints and inquiries.

**Financial Impact of this Purchase/Project**

Aside from the purchase of this equipment there is, little to no finacial impact on the city.

**Environmental Considerations**

Not applicable

| **Funding Source(s)** | **Year 1** | | **Year 2** | | **Year(s) 3+** | | **TOTALS** | |
|---|---|---|---|---|---|---|---|---|
| | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 24,000.00 | $ 24,000.00 | | | | | $ 24,000.00 | $ 24,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 24,000.00** | **$ 24,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 24,000.00** | **$ 24,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Information Technology Department | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | 5-10 Years | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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# PUBLIC WORKS
# AND
# TRANSPORTATION



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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | Crosstown Connector Overpass Feasibility | | |
| **Department** | Planning & Development | **Dept. Priority** | 3 of 4 |
| **Division** | Planning | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The City has conducted three separate and progressive studies to assess options for a "crosstown connector" to link Main/Broadway to Highland from Cash Corner to the Wainwright Fields area.

Prior studies identified three potential paths of travel for the connector and provided high-level analysis of permitting and engineering next steps.

In the FY21 CIP, the Planning Division requested $150,000 to initiate environmental permitting through Maine DEP and engineering work to develop a draft plan for the connector. However, the funds were not appropriated as the project feasibility and optimal path of travel needed further refinement.

This FY22 CIP request covers an engineering assessment for feasibility and cost to construct bridge overpasses on the rail yards as this was a key barrier to completion of the connector. In the preliminary invoice for the cost of the connector, Sebago Technics allocated a contingency of $150,000 for issues related to "Unknowns at Railroad Crossing".

The cost estimate of $10,000 will cover further analysis as well as legal and engineering consultant fees to eliminate the unknowns at the railroad crossing and to develop a more refined concept plan for crossing the tracks.

## Financial Impact of this Purchase/Project

This feasibility study will not create collateral fiscal impacts, however if feasibility is demonstrated, subsequent funding for design and eventual development of the connector would be submitted for consideration.

## Environmental Considerations

A new connector would enhance the opportunity to support a node of infill development at Cash Corner, as well as improving our transit network interconnectivity.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 10,000.00 | $ 10,000.00 | | | | | $ 10,000.00 | $ 10,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 10,000.00** | **$ 10,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 10,000.00** | **$ 10,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Preliminary discussion with Sebago Engineering | | | | |
| **Est. Annual Operating Costs** | $ - | **Projected Useful Life** | N/A | **Additional Documentation?** | No |
| **City Manager Comments** | | | | | |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Transit Stop Access Project** | | |
| **Department** | Transportation | **Dept. Priority** | 1 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Portland Area Comprehensive Transportation System (PACTS) "Transit Stop Access Project" has been in process for several years. GPCOG staff have managed the project and GP Metro Bus is the lead FTA grant recipient on behalf of South Portland and Biddeford, Saco Old Orchard Beach Transit.

The project has gone through several phases aimed at prioritizing and designing bus stop improvements for the three fixed route transit services in the PACTS region. It is expected the final design phase (IIB) will be completed in the first half of CY21 and construction will begin soon after. South Portland will receive $252,000 in FTA grant funds to complete these projects.

The city must pay the 80% local match of $63,000. The construction can include sidewalk improvements, crosswalks, curb ramps, bus shelters, benches improved signage, real-time display and a mini hub at Redbank. The amount PACTS has dedicated for construction in Phase III is not enough to cover all the work outlined in Phases I and II. It is expected there will be additional grant funding dedicated by PACTS for ongoing improvements in the coming years.

We request additional CIP funding for future years so we can take advantage of future grant opportunities and ensure we have funds available to add transit improvement to other city projects aimed at pedestrian improvements. As a point of reference, installation of one shelter is $15,000/shelter. We request setting aside $25,000 to build-up our transit stop improvement fund.

The South Portland Transit Advisory Committee has requested these types of improvements as well. Project link: https://www.gpcog.org/175/Transit-Stop-Access-Project

## Financial Impact of this Purchase/Project

We do not have money in prior CIP balances to cover our local share. If we do not set aside our local match we would not be able to take advantage of the grant funds to improve access to transit stops in South Portland. The annual operating cost would include expenses for repair and graffiti removal for shelters and benches. We will also install and concrete pads as part of this project, which may also require maintenance over time.

## Environmental Considerations

Improving access to transit and installing transit amenities such as shelters and benches will make riding transit more appealing and increase ridership, which is good for the environment.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 48,500.00 | $ 48,500.00 | $ 25,000.00 | | $ 25,000.00 | | $ 98,500.00 | $ 48,500.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 252,000.00 | $ 252,000.00 | | | | | $ 252,000.00 | $ 252,000.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 14,500.00 | $ 14,500.00 | | | | | $ 14,500.00 | $ 14,500.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 315,000.00** | **$ 315,000.00** | **$ 25,000.00** | **$ -** | **$ 25,000.00** | **$ -** | **$ 365,000.00** | **$ 315,000.00** |
| **Source of Cost Estimate** | GPCOG based on splitting of funds with other agencies. | | | | | | | |
| **Est. Annual Operating Costs** | $ 5,000.00 | | **Projected Useful Life** | | 15 | **Additional Documentation?** | | Yes |
| **City Manager Comments** | | | | | | | | |

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| TSAP Project Budget | | | | | |
|---|---|---|---|---|---|
| | *2017* Phase I Initial Prioritization | *2019* Phase II PART A Conceptual Design Development | *2020* Phase II PART B Preliminary and Final Designs | *2022* Phase III Construction | Total |
| **Revenues** | | | | | |
| FTA 5303 | $18,000 | $32,000 | $24,000 | | $74,000 |
| GPCOG Match | $4,500 | $8,000 | $6,000 | | $18,500 |
| **Total Planning** | **$22,500** | **$40,000** | **$30,000** | | **$92,500** |
| FTA 5307 | $88,000 | $120,000 | $372,685 | $1,259,315 | $1,840,000 |
| Transit Agency Match | $22,000 | $30,000 | $93,171 | $314,829 | $460,000 |
| **Total Consultants/ Capital** | **$110,000** | **$150,000** | **$465,856** | **$1,574,144** | $2,300,000 |
| **Total Revenues*** | **$132,500** | **$190,000** | **$495,856** | **$1,574,144** | $2,392,500 |
| | | | | | |
| **Expenses** | | | | | |
| GPCOG Labor | $22,250 | $39,750 | $29,750 | | $91,750 |
| Direct Expenses | $250 | $250 | $250 | | $750 |
| **Total Planning** | **$22,500** | **$40,000** | **$30,000** | | **$92,500** |
| Consultant | $108,304 | $138,773 | $465,856 | TBD | $712,934 |
| Construction | n/a | n/a | n/a | $1,574,144 | $1,574,144 |
| **Total Consultants/ Capital** | **$108,304** | **$138,773** | **$465,856** | **$1,574,144** | $2,287,077 |
| **Total Expenses*** | **$130,804** | **$178,773** | **$495,856** | **$1,574,144** | $2,379,577 |

| Transit Agency Local Match | | | | |
|---|---|---|---|---|
| Agency | % Match | *2019* Phase IIA | *2020* Phase IIB | *2022* Phase III |
| METRO | 70% | $21,000 | $65,220 | $220,380 |
| SPBS | 20% | $6,000 | $18,634 | $62,966 |
| BSOOB | 10% | $3,000 | $9,317 | $31,483 |
| **Total** | **100%** | **$30,000** | **$93,171** | **$314,829** |

PACTS

GPCOG
GREATER PORTLAND
COUNCIL OF GOVERNMENTS

# Memorandum of Understanding (MOU) Regarding Agency Roles For Phase II of the PACTS Transit Stop Access Project

Between the
Greater Portland Council of Governments (GPCOG),
Biddeford Saco Old Orchard Beach Transit (ShuttleBus-ZOOM),
Greater Portland Transit District (METRO),
and City of South Portland.

WHEREAS the Transit Stop Access Project (TSAP) is focused on prioritizing, designing, and constructing ADA, pedestrian, and bicycle improvements at and near fixed route bus stops in the Portland Area Comprehensive Transportation System (PACTS) region, including the service areas of Biddeford Saco Old Orchard Beach Transit (ShuttleBus-ZOOM), the Greater Portland Transit District (METRO), and bus service provided by the City of South Portland; and

WHEREAS the parties to this MOU are the Greater Portland Council of Governments (GPCOG), Biddeford Saco Old Orchard Beach Transit (ShuttleBus-ZOOM), the Greater Portland Transit District (METRO), and the City of South Portland ("the Parties"); and

WHEREAS, Phase I of the TSAP resulted in a prioritized list of bus stops that most need ADA and pedestrian improvements, a listing of possible pedestrian/bicycle facilities, possible locations for construction of mini-hubs, and recommendations for a project management structure to be used in Phase III; and

WHEREAS Phase II of the TSAP will focus on further prioritization, design and engineering with cost estimates, and development of project bid and construction documents; and

WHEREAS Phase II will be divided into two parts: Part A, conceptual design development, and Part B, preliminary and final designs, including project bid and construction documents; and

WHEREAS the PACTS Transit Committee (PTC) on February 8, 2018 approved the local match shares for this project, the dollar amounts for which have since been updated (percentages remained the same) to accommodate the increase in the Phase II budget; authorized the creation of a TSAP Project Management Team which will source consultant assistance and make recommendations to PTC for the use of Phase III construction funding; and imposed on the TSAP Project Management Team obligations to seek PTC approval for any of the following actions: significant changes to local match allocation, changes to transit agencies participating in the project and significant funding amount changes for the overall project; and

WHEREAS GPCOG will provide project management for Phase II, Parts A and B, paid for through Federal Transit Administration (FTA) 5303 planning funds and at least $8,000 in match from GPCOG member dues; and

WHEREAS GPCOG's project management role will terminate at the end of Phase II and GPCOG will play an advisory role in Phase III; and

WHEREAS consultants will be hired for Phase II Parts A and B and paid with FTA 5307 funds with a 20% local match from participating transit agencies;

NOW THEREFORE the Parties agree as follows:

1. TSAP Project Management Team. The TSAP Project Management Team will be composed of representatives of the Parties with the GPCOG representative serving as Project Manager. The TSAP Project Management Team will steer the project and will have the following decision-making authority:

   a) Act on recommendations from the TSAP Advisory Group.
   b) Approve Phase II consultant RFPs.
   c) Appoint the consultant selection committee, if needed.
   d) Approve consultant selection.
   e) Recommend reallocation of Phase III capital funds within the project based on the Phase II prioritization, design and engineering work (i.e., using funds to build new bus stops in addition to repairing existing).
   f) Recommend a final set of Phase II recommendations to the PTC.

2. TSAP Advisory Group. The TSAP Project Management Team will seek technical assistance and input from the TSAP Advisory Group. The Advisory Group, which has no formal authority and may not issue directives, will meet as needed and provide technical assistance to the Project Management Team in the following areas:

   a) Advice on key decisions.
   b) Federal, state and local regulatory concerns.
   c) Municipal priorities, coordination with related projects, and operational impacts.
   d) Preliminary property owner coordination.

   The members of the Advisory Group will include one representative each from the participating transit agencies, one PACTS staff, one SMPDC staff, and three to five representatives from PACTS member municipalities who bring knowledge and skills in public works, engineering, planning and economic development.

3. Roles of GPCOG and the Transit Agencies.

   a) The Greater Portland Council of Governments will provide overall project management for Phase II including:

      - Convene the Project Management Team and the TSAP Advisory Group.
      - Develop the first draft RFP and work with the Advisory Group and the Project Management Team to finalize it.
      - Facilitate selection of the consultant, following FTA regulations.
      - Contract with the selected consultant.
      - Provide oversight of and pay the consultant.

- Ensure input on and awareness of the project by appropriate stakeholders including but not limited to the PACTS Committees and the planning departments in the involved communities.

b) The Greater Portland Transit District (METRO), which will also serve as the FTA grantee, will:

- Participate on the Project Management Team and the TSAP Advisory Group.
- Apply for FTA funds and complete necessary reporting.
- Pay 70% of the 20% local match, currently estimated at $21,000 for Phase II, Part A, with additional funds necessary for Phase II, Part B, for the work of the consultant.
- Collect the matching funds from ShuttleBus-ZOOM and the City of South Portland.
- Reimburse GPCOG for payment of the consultant.

c) The City of South Portland will:

- Participate on the Project Management Team and the TSAP Advisory Group.
- Pay 20% of the 20% local match, currently estimated at $6,000 for Phase II, Part A, with additional funds necessary for Phase II, Part B, for the work of the consultant, to the METRO.

d) Biddeford Saco Old Orchard Beach Transit (ShuttleBus-ZOOM) will:

- Participate on the Project Management Team and the TSAP Advisory Group.
- Pay 10% of the 20% local match, currently estimated at $3,000 for Phase II, Part A, with additional funds necessary for Phase II, Part B, for the work of the consultant, to the METRO.

IN WITNESS WHEREOF the parties have executed this memorandum of understanding by their duly authorized representatives:

Greater Portland Council of Governments (GPCOG)

By: Kristina Egan, Executive Director

Dated: 2/14/19

Biddeford Saco Old Orchard Beach Transit (ShuttleBus-ZOOM)

By: H. Rodney Carpenter, Interim Executive Director

Dated: 2-14-19

Greater Portland Transit District (METRO)

By: Greg Jordan, General Manager

Dated: 2/14/19

City of South Portland

By: Scott Morelli, City Manager

Dated: 2/7/19

**Memorandum of Understanding**
**Regarding Phase II-B of the Transit Stop Access Project**

Between:
Greater Portland Council of Governments
Biddeford Saco Old Orchard Beach Transit
Greater Portland Transit District
City of South Portland

WHEREAS, in February 2019 the parties listed above entered into a memorandum of understanding (MOU) that:

- Described the background and objectives of the Transit Stop Access Project (TSAP), especially those of Phase II of the project;
- Established the TSAP Project Management Team and outlined the authorities of that group, including its authority to recommend reallocation of Phase III capital funds within the project based on the Phase II prioritization, design, and engineering work;
- Established the TSAP Advisory Group and outlined the advisory role of that group; and,
- Outlined the roles and responsibilities of the parties, including the percentage of the required local match for the project each transit provider would contribute, an estimated contribution for Phase II-A, and an understanding that additional funds from each transit provider would be necessary for the work of the consultant in Phase II-B; and

WHEREAS, upon review of the selected consultant's price proposal, the TSAP Project Management Team recommended reallocating $215,856 from Phase III to Phase II-B to fully fund preliminary design work at all transit stops identified in Phase II-A for improvements, and to ensure improvements will be shovel-ready for future capital funding opportunities, as opposed to significantly reducing the project scope or the number of stops for which preliminary and final design would be completed; and

WHEREAS, the transit providers, collectively, contribute local match funding in support of the project, equal to 20 percent of the total consultant costs (in Phase II-B) and capital costs (in Phase III), according to the following percentages:

- Greater Portland Transit District: ..... 70 percent
- The City of South Portland:..... 20 percent
- Biddeford Saco Old Orchard Beach Transit:..... 10 percent

AND WHEREAS, reallocating this funding affected PACTS' 2020 Six-Year Capital and Operations Plan (SYCOP) and the FFY 2019–2020 FTA Funding Split Letter, which required and received the approval of the PACTS Transit Committee and will be revised accordingly.

NOW THEREFORE; the parties agree as follows:

- That this MOU is intended to supplement the aforementioned February 2019 MOU by providing updated local match figures required of each transit provider for TSAP Phase II-B, and is not intended to negate or invalidate any part of that agreement; and

- That for Phase II-B, each transit provider shall contribute total local match funding as follows:
  - Greater Portland Transit District: .....$65,220
  - The City of South Portland:.....$18,634
  - Biddeford Saco Old Orchard Beach Transit:..... $9,317

The parties hereby enter into this agreement:

**Greater Portland Council of Governments**

Signed: _____

Printed: _____

Date: _____

**Biddeford Saco Old Orchard Beach Transit**

Signed: _____

Printed: _____

Date: _____

**Greater Portland Transit District**

Signed: _____

Printed: _____

Date: _____

**City of South Portland**

Signed: _____

Printed: _____

Date: _____

LIST OF STOPS

| STOP LOCATION | STOP ID |
|---|---|
| BIDDEFORD | |
| YMCA BIDDEFORD | 0 |
| ALFRED STREET | 35 |
| BIDDEFORD CROSSING - TARGET | 28A |
| BIDDEFORD CROSSING - MARKET BASKET | 28B |
| SMHC BIDDEFORD CAMPUS | 30A |
| FALMOUTH | |
| CLEARWATER DRIVE & 202 ROUTE 1 | 704 |
| HAT TRICK DR & DEPOT ROAD | 743 |
| CLEARWATER DRIVE & WALMART | 900 |
| OLD ORCHARD BEACH | |
| CHAMBER OF COMMERCE | 85 |
| PORTLAND | |
| ALLEN AVE & 50 ALLEN AVE | 11 |
| AUBURN ST & 93 AUBURN ST | 14 |
| AUBURN ST & LYSETH MOORE ST | 24 |
| AUBURN ST & CROQUET LN | 25 |
| AUBURN ST & 246 AUBURN ST | 26 |
| AUBURN ST & RUSTIC ST | 29 |
| BRACKETT ST & GRAY ST | 43 |
| BRACKETT ST & SPRING ST | 44 |
| CONGRESS ST & 1189 CONGRESS ST | 158 |
| CONGRESS ST & BOODY ST | 176 |
| 2195 CONGRESS ST & UNUM WEST (EB) | 178 |
| CONGRESS ST & 1412 CONGRESS ST | 182 |
| DANFORTH ST & HIGH ST | 201 |
| DANFORTH ST & SCHOOL ST | 203 |
| EASTERN PROMENADE & WALNUT ST | 218 |
| FOREST AVE & 550 FOREST AVE | 240 |
| FOREST AVE & BAXTER BLVD/USM | 245 |
| FOREST AVE & BEDFORD ST/USM | 247 |
| FOREST AVE & BELMONT ST | 249 |
| FOREST AVE & 895 FOREST AVE | 254 |
| FOREST AVE & 880 FOREST AVE | 255 |
| FOREST AVE & FALMOUTH ST | 256 |
| FOREST AVE & NEWTON ST | 272 |
| FOREST AVE & PARK AVE | 274 |
| FOREST AVE & PREBLE ST EXT | 279 |
| FOREST AVE & WALTON ST (NB) | 289 |
| FOREST AVE & WALTON ST (SB) | 290 |
| PREBLE ST EXT & 295 FOREST AVE | 301 |
| INDIA ST & 65 INDIA ST | 308 |
| NORTH ST & QUEBEC ST | 394 |
| OXFORD ST & ALDER ST | 399 |
| PARK AVE & HIGH ST | 405 |
| PARK AVE & 189 PARK AVE | 410 |
| PORTLAND ST & FOREST AVE | 421 |
| SPRING ST & STATE ST | 490 |
| STATE ST & 100 STATE ST | 499 |

| STOP LOCATION | STOP ID |
|---|---|
| PORTLAND | |
| STEVENS AVE & 825 STEVENS AVE | 511 |
| STEVENS AVE & CONGRESS ST | 516 |
| STEVENS AVE & RACKLEFF ST | 523 |
| STEVENS AVE & TWIN KNOLLS LN | 529 |
| TEMPLE ST & FEDERAL ST | 535 |
| WASHINGTON AVE & E. PROMENANDE (SB) | 579 |
| WASHINGTON AVE & GALVIN ST | 591 |
| WASHINGTON AVE & MARION ST | 607 |
| WASHINGTON AVE & NORTHPORT DR | 612 |
| WASHINGTON AVE & PRESUMPSCOT ST | 619 |
| WASHINGTON AVE & W. PRESUMPSCOT ST | 620 |
| WASHINGTON AVE & E. PROMENANDE (NB) | 621 |
| CONGRESS ST & NORTH ST | 679 |
| CONGRESS ST & 181 CONGRESS ST | 680 |
| CUMBERLAND AVE & FRANKLIN ST | 682 |
| NORTH ST & 143 NORTH ST | 692 |
| WASHINGTON AVE & VERANDA ST | 700 |
| 2195 CONGRESS ST & UNUM WEST (WB) | 806 |
| CONGRESS ST & BLUEBERRY LN | 807 |
| YORK ST & PLEASANT ST | 1183 |
| SACO | |
| SACO TRAIN STATION | 52 |
| SOUTH PORTLAND | |
| BROADWAY & LINCOLN ST (WB) | 1020 |
| BROADWAY & STROUT ST (EB) | 1030 |
| BROADWAY & ANTHOINE | 1037 |
| BROADWAY & LINCOLN ST (EB) | 1042 |
| BROADWAY & STROUT ST (WB) | 1047 |
| MAINE MALL RD & 195 MAINE MALL RD | 1114 |
| MAINE MALL RD & GOODWILL | 1115 |
| PILLSBURY ST & COTTAGE RD | 1134 |
| PREBLE ST & FORT RD | 1137 |
| WESTBROOK ST & REDBANK (MINI-HUB) | 1142 |
| SAWYER & FERRY VILLAGE | 1147 |
| FORT RD & SMCC | 1158 |
| WESTBROOK ST & LANDRY VILLAGE | 1171 |
| WESTBROOK ST & TEMPLE BETH HAMM | 1172 |
| WESTERN AVE & 371 WESTERN AVE | 1178 |
| WESTBROOK | |
| BROWN ST & WALKER ST (WB) | 103 |
| BROWN ST & WALKER ST (EB) | 104 |
| MAIN ST & 380 MAIN ST | 327 |
| MAIN ST & LIZA HARMON DR | 330 |
| MAIN ST & 795 MAIN ST | 341 |
| MAIN ST & 389 MAIN ST | 344 |
| MAIN ST & 800 MAIN ST | 349 |
| MAIN ST & YORK ST | 353 |
| MAIN ST & RIVERSIDE ST | 486 |

INDEX OF SHEETS


| Description | Sheet No. |
|---|---|
| Title Sheet | 1 |
| Typical Sections | 2 |
| Biddeford Stops Plans & Cross Sections | 3-6 |
| Biddeford, Saco, Old Orchard Beach Stops Plans & Cross Sections | 7-9 |
| Falmouth Stops Plans & Cross Sections | 10-11 |
| Portland Stops Plans & Cross Sections | 12-55 |
| South Portland Stops Plans & Cross Sections | 56-68 |
| Westbrook Stops Plans & Cross Sections | 69-74 |


# GREATER PORTLAND COUNCIL OF GOVERNMENTS (GPCOG)
# TRANSIT STOP ACCESS PRIORITIZATION PROJECT PHASE IIB

**PRELIMINARY PLANS**
**FEB 3, 2021**

Stantec

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| PROJECT INFORMATION | | SIGNATURE | DATE |
|---|---|---|---|
| PROGRAM | TSAP | | |
| PROJECT MANAGER | ANDREW CLARK | | |
| DESIGNER | LAUREN WEEK, PE | P.E. NUMBER | |
| CONSULTANT | STANTEC CONSULTING INC. | | |
| PROJECT RESIDENT | | | |
| CONTRACTOR | | | |
| PROJECT COMPLETION DATE | | | |

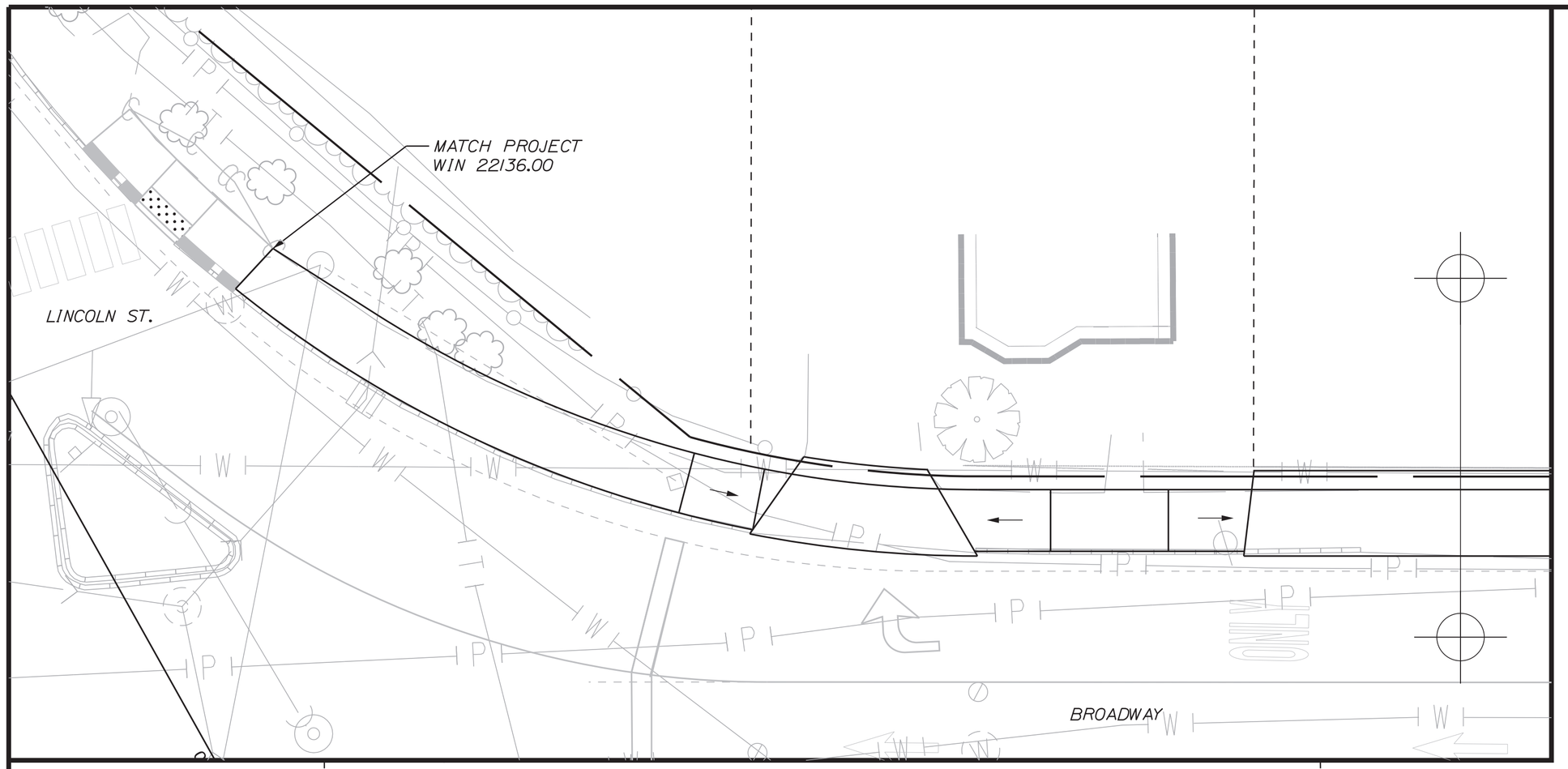
TRANIST STOP ACCESS PROJECT PHASE IIB

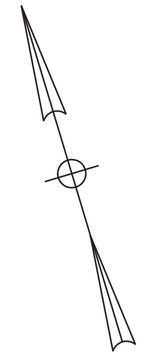
TITLE SHEET

SHEET NUMBER 1

OF 74


Filename: ...\00\HIGHWAY\MSTA_Title.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021
287



TRANSIT STOP #1020




TRANSIT STOP #1042

PLAN

10 0 10 20

Scale of Feet

Stantec

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER LAUREN WEEKS, PE | | |
| DESIGN-DETAILED | THG | JAN 2021 |
| CHECKED-REVIEWED | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
BROADWAY STREET

STOP ID NO. 1020 & NO. 1042

SHEET NUMBER

56

OF 74

Filename: ...\MSTA_Spcen_Stop1020&1042.dgn Username: TGLEESON Date:2/11/2021
Division: HIGHWAY
288

Filename: ...\MSTA_Spcen_Stop1030&1047.dgn Username: TGLEESON Date:2/11/2021

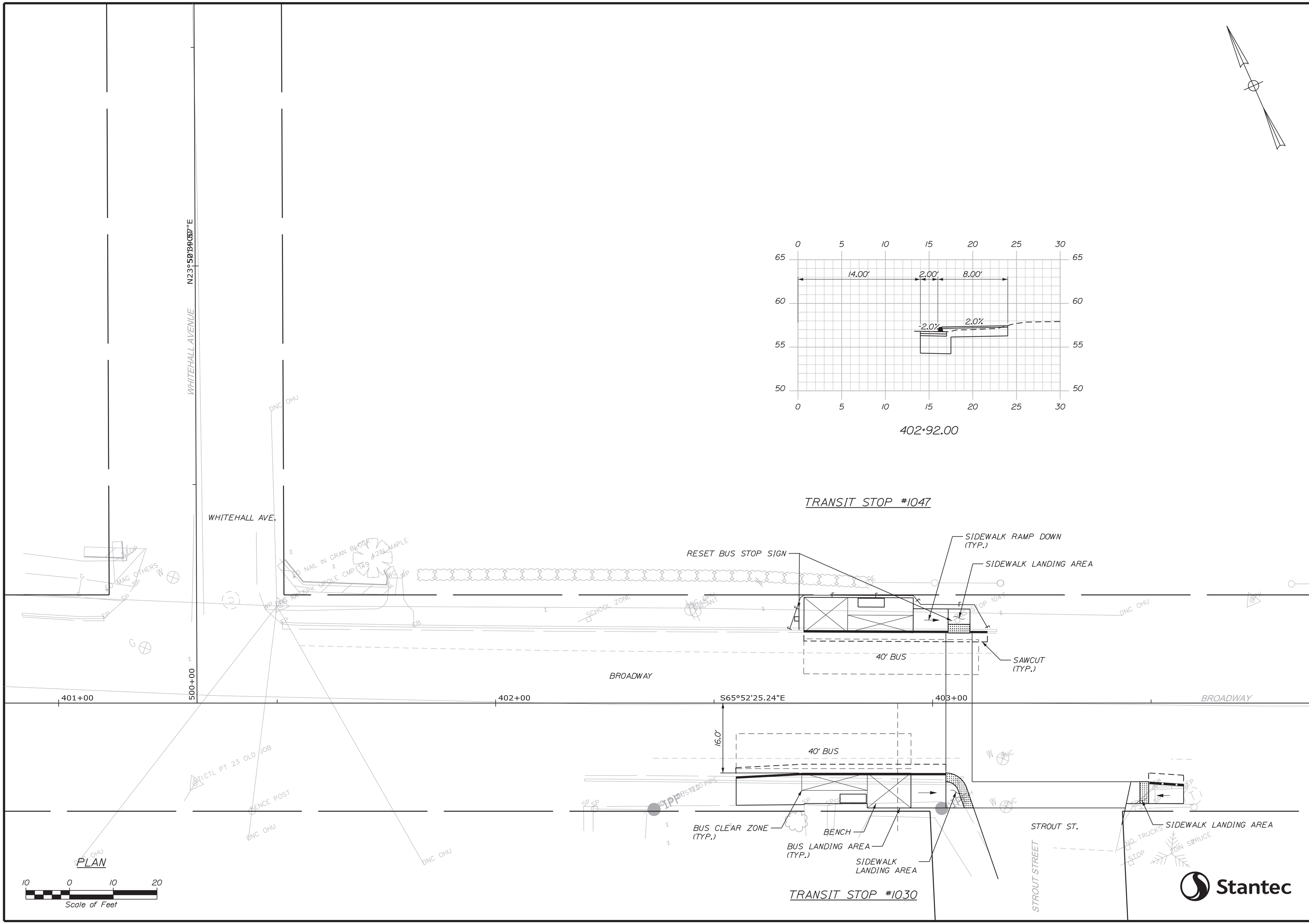
Division: HIGHWAY

2689




402+92.00






Stantec

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| PROJ. MANAGER: LAUREN MEEK, PE | | | |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
BROADWAY STREET

STOP ID NO. 1030 & NO. 1047

SHEET NUMBER

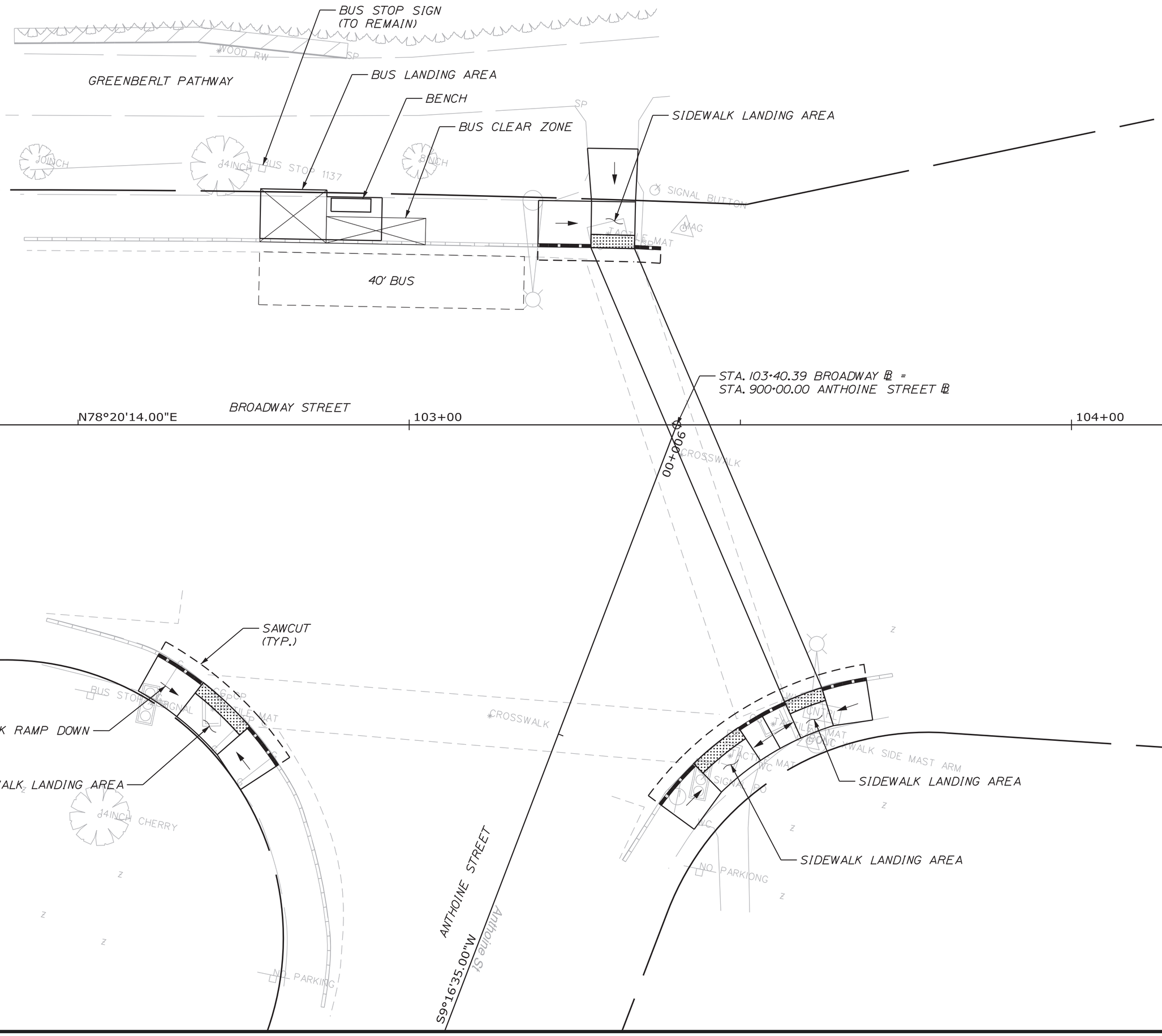
57

OF 74

Filename: ...\MSTA_Spocean_Stop1037.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

270

# TRANSIT STOP #1037




PLAN

10 0 10 20

Scale of Feet

Stantec

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| | | | |
|---|---|---|---|
| PROJ. MANAGER: LAUREN MEEK, PE | | | |
| DESIGN-DETAILED | PLP | BY | |
| CHECKED-REVIEWED | LEM | THG | JAN 2021 |
| DESIGN2-DETAILED2 | | WRM | JAN 2021 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
BROADWAY STREET

STOP ID NO. 1037

SHEET NUMBER

58

OF 74

Filename: ...\MSTA_Spmall_Stop1114.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

# TRANSIT STOP #1114

PLAN

Scale of Feet 10 0 10 20

MAINE MALL ROAD

293+00

294+00

295+00

SIDEWALK LANDING AREA

SAWCUT (TYP.)

MALLSIDE ENTRANCE

PC = STA. 293+73.50

PEDESTAL POLE & FOUNDATION

BUS CLEAR ZONE (TYP.)

RESET BUS STOP SIGN

BENCH

BUS LANDING AREA (TYP.)

40' BUS

CURVE DATA #1
PI = 295+19.54
D = 5°43'46.5"
Δ = 16°37'01.6" Rt.
R = 1000.00'
L = 290.02'
T = 146.04'
E = 10.61'

Stantec

SHEET NUMBER 59 OF 74

SOUTH PORTLAND
MAINE MALL ROAD

STOP ID NO. 1114

| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

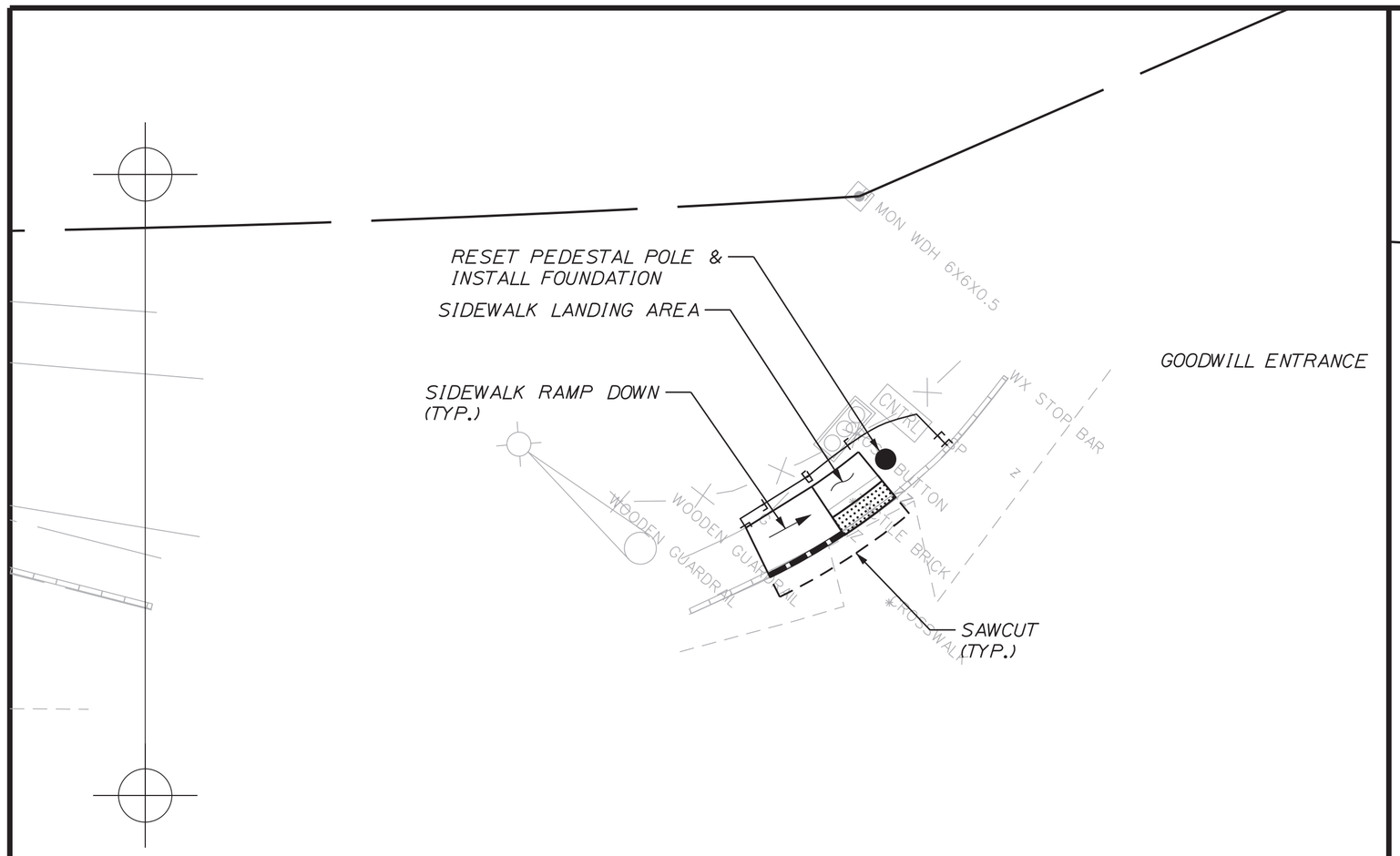
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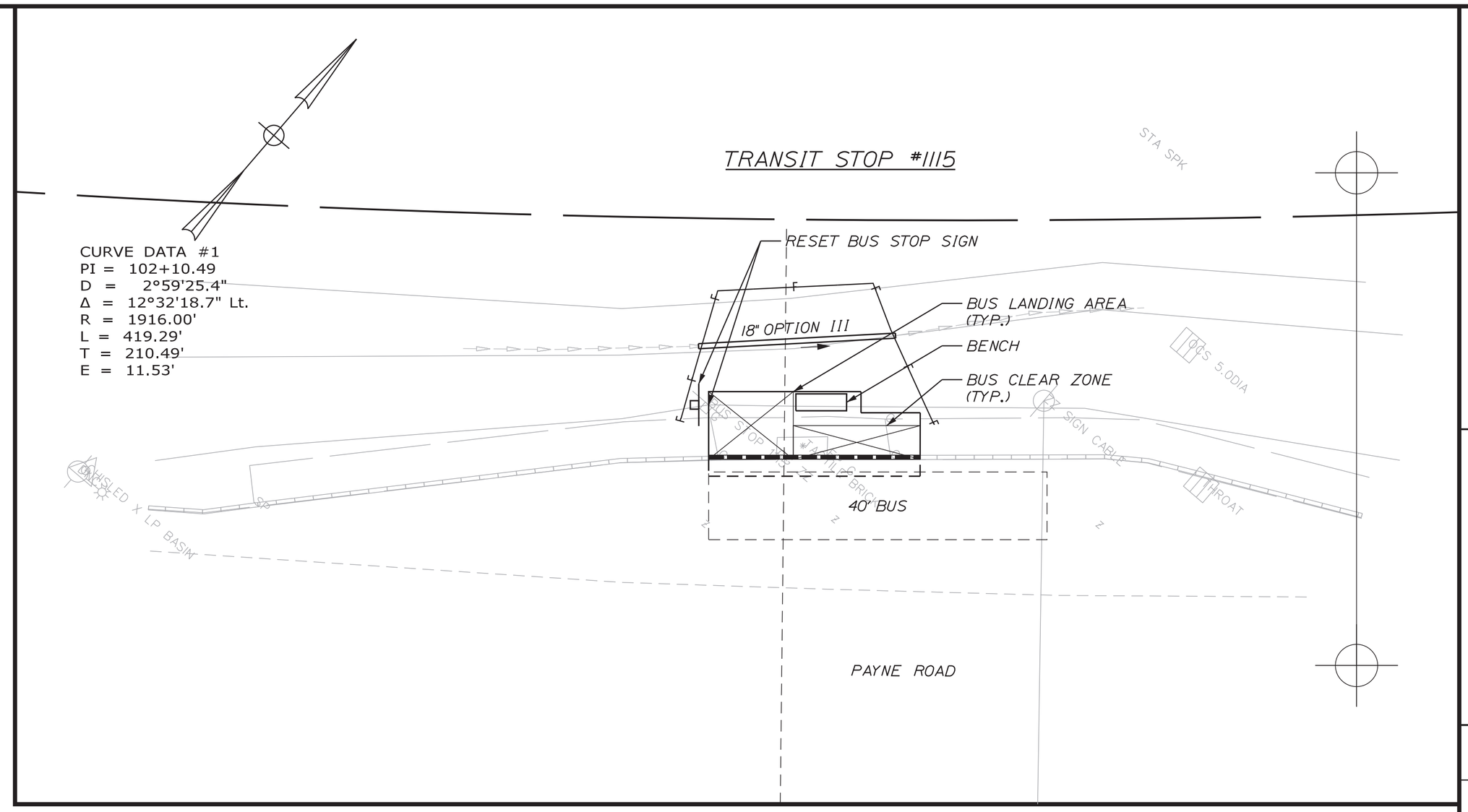
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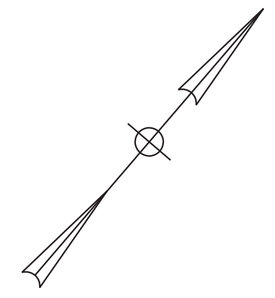
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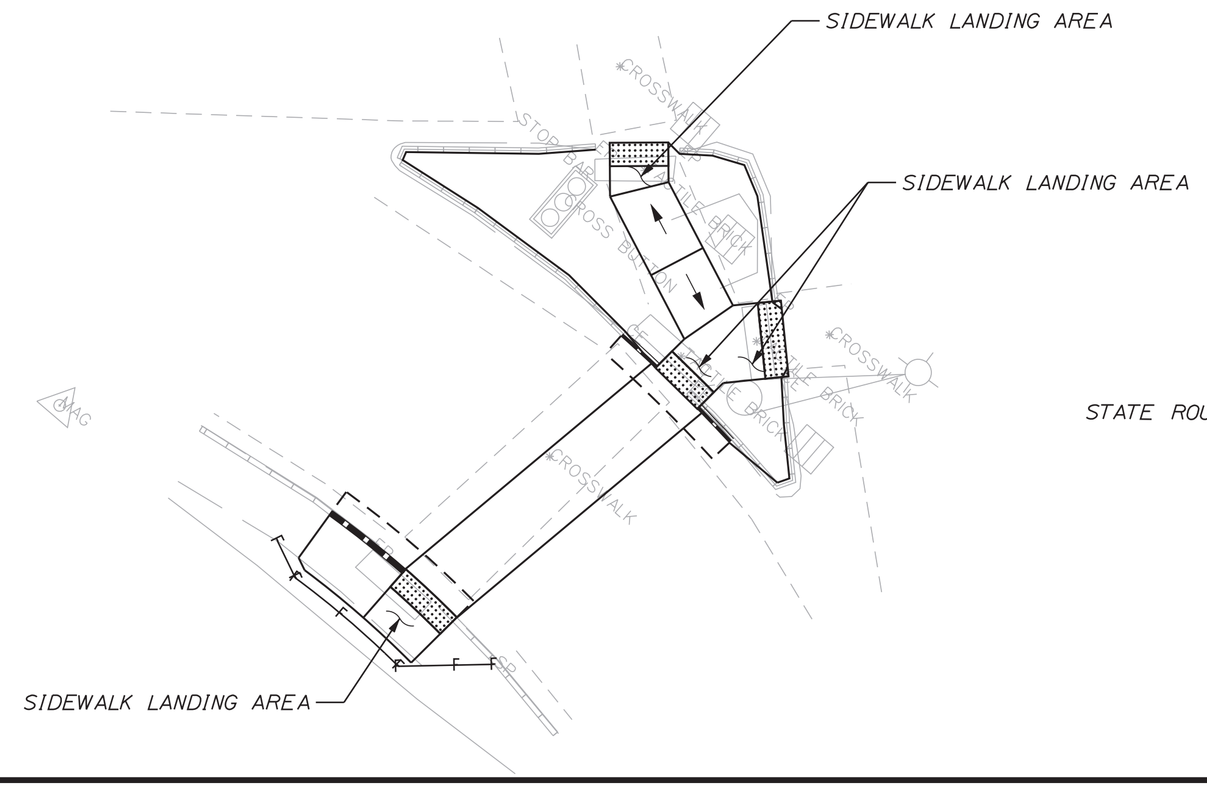
GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

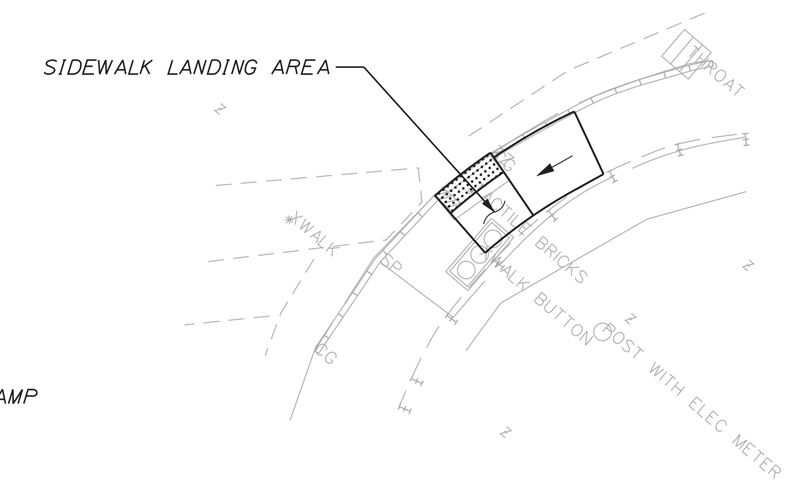
272
Username: TGLEESON
Division: HIGHWAY
Filename: ...\MSTA_Spmoll_Stop1115.dgn
Date:2/11/2021






PLAN

10 0 10 20

Scale of Feet

Stantec

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| PROJ. MANAGER LAUREN MEEK, PE | | | |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
MAINE MALL ROAD

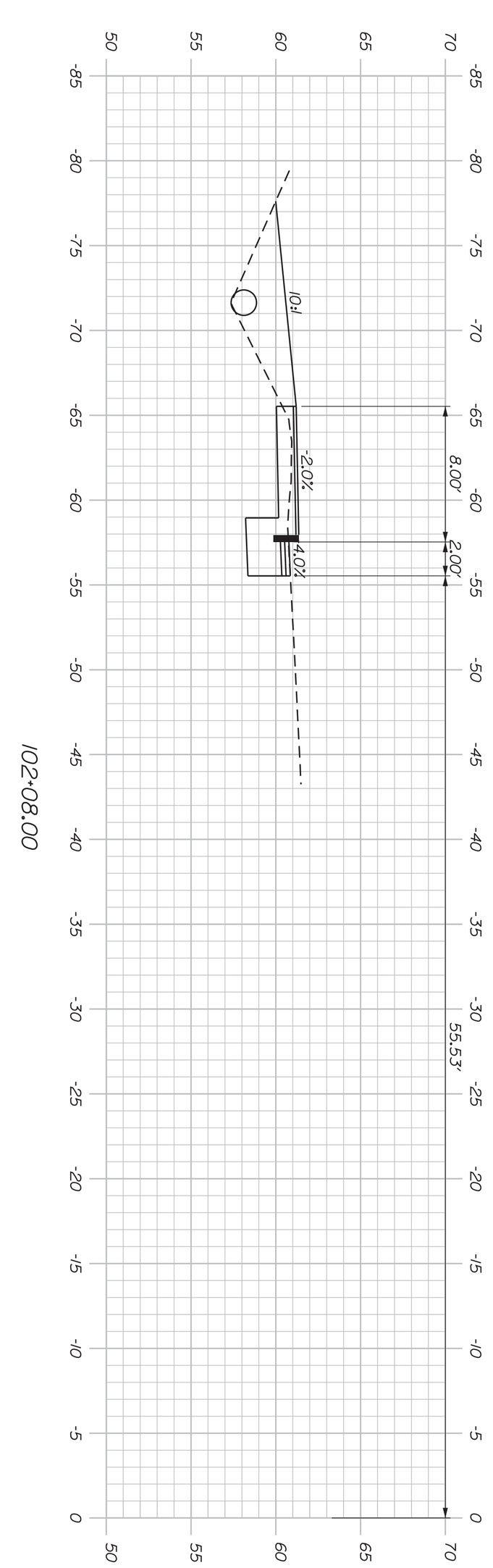
STOP ID NO. 1115

SHEET NUMBER

60

OF 74

Filename: ...\MSTA_Spmall_Stop1115.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021




Stantec

| | | | |
|---|---|---|---|
| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
| DESIGN-DETAILED | PLP | THC | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

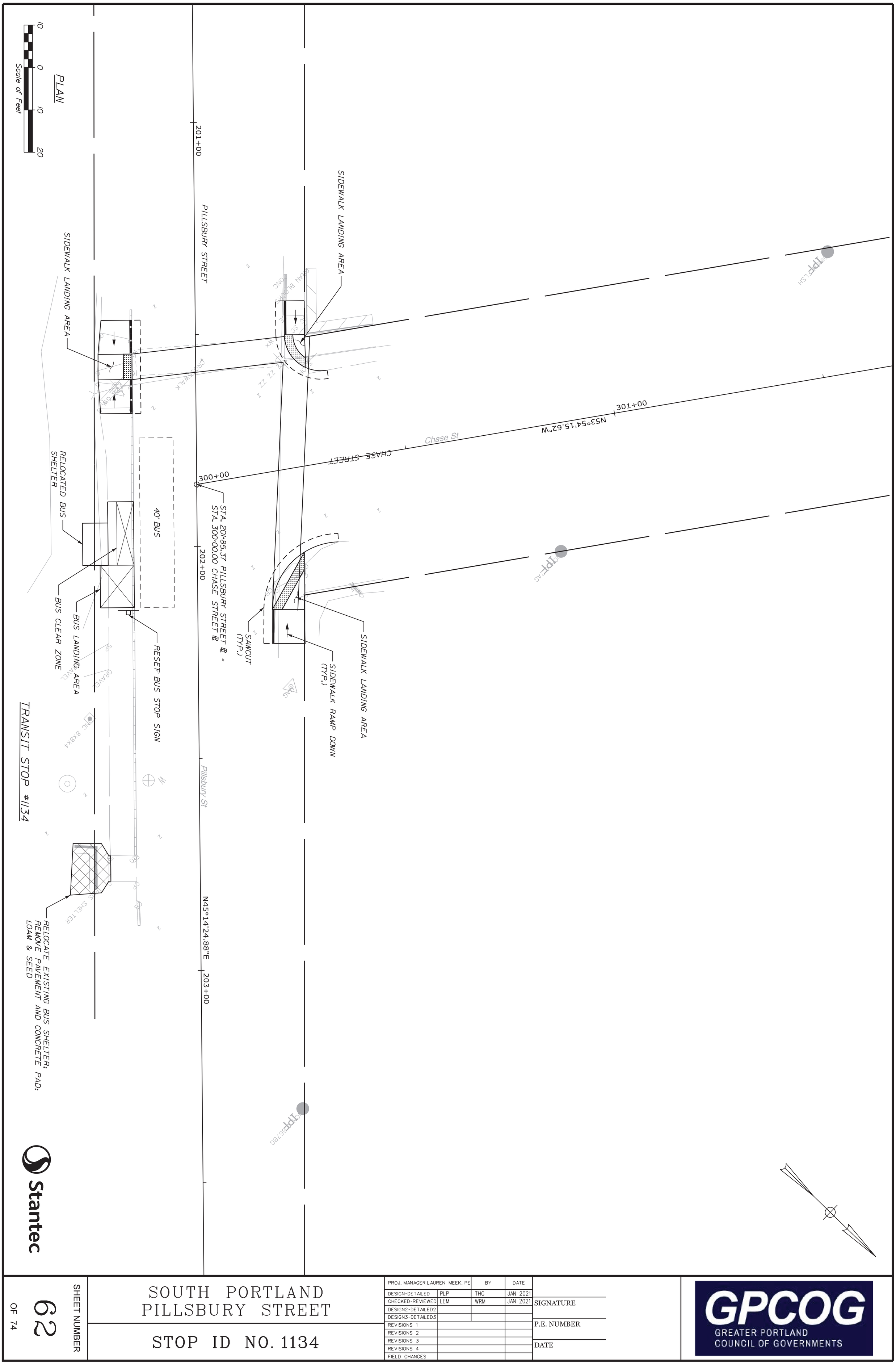
# SOUTH PORTLAND
# MAINE MALL ROAD

## STOP ID NO. 1115

SHEET NUMBER 61 OF 74

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

Filename: ...\MSTA_Spocean_Stop1134.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021




Stantec

SHEET NUMBER 62 OF 74

# SOUTH PORTLAND
# PILLSBURY STREET

## STOP ID NO. 1134

| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

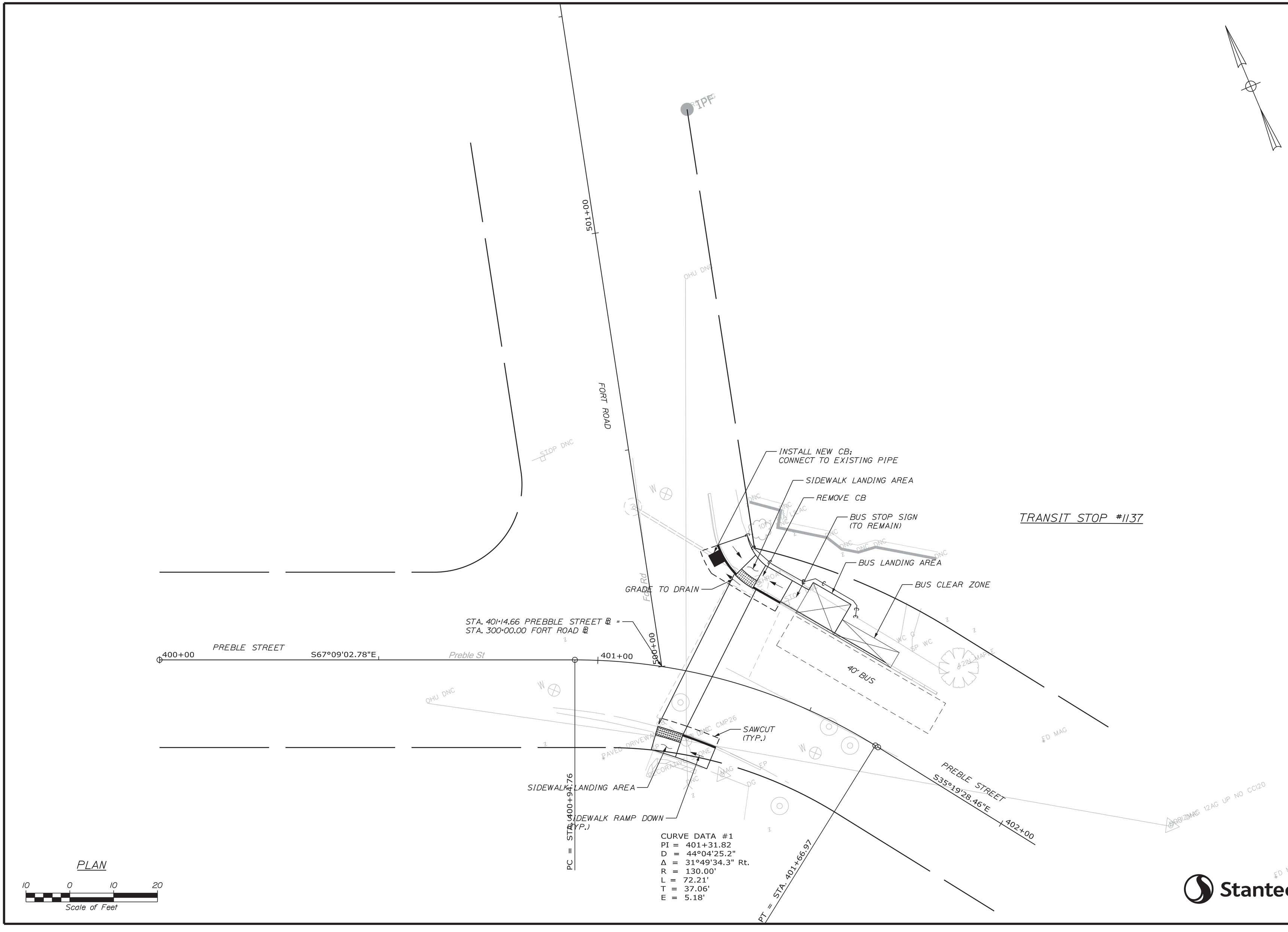
P.E. NUMBER

DATE

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

Filename: ...\MSTA_Spoceon_Stop1137.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

275




GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER LAUREN WEEKS, PE | | |
| DESIGN-DETAILED | THG | JAN 2021 |
| CHECKED-REVIEWED | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
PREBLE STREET

STOP ID NO. 1137

Stantec

SHEET NUMBER
63
OF 74

Filename: ...\MSTA_Spmall_Stop1142.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

PLAN

Scale of Feet 10 0 10 20

MCARTHUR STREET

701+00

S13°23'43.26"E

601+00

MCARTHUR STREET

S48°23'08.15"E

602+00

403+00

404+00

603+00

FUTURE BUILDING

EXISTING SHELTER (TO REMAIN)

BENCHES

BIKE RACKS

RESET BUS STOP SIGN

BUS CLEAR ZONE (TYP.)

BUS LANDING AREA (TYP.)

40' BUS

SAWCUT (TYP.)

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

SIDEWALK RAMP DOWN (TYP.)

CROSSWALK

CROSSWALK

CROSSWALK

TACTILE MAT

TACTILE MAT

TACTILE MAT

CURVE DATA #1
PI = 402+86.72
D = 8°57'08.9" LT.
D = 48°15'54.9" LT.
R = 640.00'
ARC = 539.13'
CHORD = 286.72'
TANGENT = 61.29'

STA. 404+13.78 WESTBROOK STREET ℄
STA. 603+04.62 MACARTHUR CIRCLE EAST ℄

TRANSIT STOP #1142
(MINI-HUB)

Stantec

SOUTH PORTLAND
WESTBROOK STREET

STOP ID NO. 1142

| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THC | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

SHEET NUMBER 64 OF 74

Filename: ...\MSTA_Spocean_Stop1147.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

PLAN

Scale of Feet 10 0 10 20

TRANSIT STOP #1147

BUS CLEAR ZONE

BUS LANDING AREA

EXISTING BUS SHELTER

CURVE DATA #1
PI = 801+59.28
Δ = 3°50'24.3" Lt.

PI STA. 801+59.28

40' BUS

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

SIDEWALK RAMP DOWN (TYP.)

SAWCUT (TYP.)

STA. 701+56.95 SAWYER STREET
STA. 801+95.87 HIGH STREET

S8°24'04.37"E

N81°28'50.45"E

N77°38'26.18"E

701+00 SAWYER STREET

702+00 SAWYER STREET

703+00

801+00 High St HIGH STREET

802+00 High St HIGH STREET

Sawyer St.

Sawyer St.

CROSSWALK

STOP BAR

DNC

SP

WX

METER X2

5INCH

28INCH

10X1.0X4.0GRAN POST

OHU

CC

Stantec

| | | | |
|---|---|---|---|
| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

# SOUTH PORTLAND
# SAWYER STREET

## STOP ID NO. 1147

SHEET NUMBER 65 OF 74

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

Filename: ...\MSTA_Spocean_Stop1158.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

# PLAN

Scale of Feet: 10 0 10 20

## TRANSIT STOP #1158

BUS CLEAR ZONE

BUS LANDING AREA

RESET BUS STOP SIGN

40' BUS

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

SAWCUT (TYP.)

STA. 511+00.44 FORT ROAD ℄ =
STA. 600+00.00 BENJAMIN W PICKETT STREET ℄

N27°16'20.99"E

CAMPUS CENTER DRIVE

REMOVE EXISTING RAMP

SIDEWALK RAMP DOWN (TYP.)

Fort Rd 510+00

FORT ROAD

600+00

BENJAMIN W PICKETT STREET

Benjamin W Pickett St

601+00

511+00

512+00

FORT ROAD

Stantec

| | | | |
|---|---|---|---|
| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

SHEET NUMBER 66 OF 74

SOUTH PORTLAND
FORT ROAD

STOP ID NO. 1158

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

Filename: ...\MSTA_Spmall_Stop1171&1172.dgn Division: HIGHWAY Username: TGLEESON Date:2/11/2021

PLAN

Scale of Feet 10 0 10 20

TRANSIT STOP #1171

EXISTING BUS SHELTER

SIDEWALK LANDING AREA

40' BUS

DANIEL P TUELL ST.

SAWCUT (TYP.)

SIDEWALK LANDING AREA

WESTBROOK STREET

BUS STOP ENCLOSURE

DNC OHU

BRAEBURN AVE.

SIDEWALK RAMP DOWN (TYP.)

SIDEWALK LANDING AREA

BENCH

BUS STOP SIGN

BUS LANDING AREA (TYP.)

BUS CLEAR ZONE (TYP.)

40' BUS

TRANSIT STOP #1172

900+00

901+00

902+00

1000+00

1001+00

N76°11'11.13"E

Stantec

SHEET NUMBER 67 OF 74

# SOUTH PORTLAND WESTBROOK STREET

## STOP ID NO. 1171 & NO. 1172

| PROJ. MANAGER LAUREN MEEK, PE | | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | PLP | THG | JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM | JAN 2021 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

Filename: ...\MSTA_Spmoll_Stop1178.dgn Username: TGLEESON Date:2/11/2021
Division: HIGHWAY
280

BURLINGTON COAT FACTORY ENTRANCE

SIDEWALK LANDING AREA

PT = STA. 305+21.77

WESTERN AVE.

CURVE DATA #1
PI = 302+68.81
D = 6°30'39.2"
Δ = 33°58'19.7" Lt.
R = 880.00'
L = 521.77'
T = 268.81'
E = 40.14'

305+00

## TRANSIT STOP #1178

RESET BUS STOP SIGN

RRFB

SIDEWALK LANDING AREA

BENCH

SIDEWALK RAMP DOWN (TYP.)

SAWCUT (TYP.)

40' BUS 4.0'

BUS LANDING AREA (TYP.)

BUS CLEAR ZONE (TYP.)

24.0'

2.0'

10.0'

2.0'

24.0'

4.0'

APPROXIMATE STRIPING (TYP.)

306+00 WESTERN AVENUE 307+00 308+00

RRFB

WESTERN AVE.

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

SIDEWALK LANDING AREA

APPROXIMATE CURBLINE

D'ANGELOS ENTRANCE

RRFB

BASICS FITNESS CENTER ENTRANCE

PROHIBIT LEFT TURN OUT WITH SIGNAGE

BASICS FITNESS CENTER ENTRANCE

PLAN

10 0 10 20
Scale of Feet

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER: LAUREN MEEK, PE | | |
| DESIGN-DETAILED | PLP | THG JAN 2021 |
| CHECKED-REVIEWED | LEM | WRM JAN 2021 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

SOUTH PORTLAND
WESTERN AVENUE

STOP ID NO. 1178

SHEET NUMBER
68
OF 74

Stantec

**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Bus Replacement** | | |
| **Department** | Transportation | **Dept. Priority** | 2 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The useful life of a public transit bus is 12-years. We rotate our fleet based on this useful life timeframe. We purchased three Gillig diesel buses in 2011, which were scheduled for replacement in 2023.

One of the three buses was totaled in a bus fire on May 21, 2020. That vehicle will be replaced ahead of schedule. The replacement buses for the remaining two, 2011 vehicles, will be ordered in FY22 to take delivery in 2023. The cost of these replacement buses are detailed in the Year-1 column below. We currently have enough in our bus reserve to cover the cost of these three new diesel vehicles. However, given the goals outlined in the One Climate Action Plan, we must increase the amount we place in bus reserve to meet the higher cost of battery electric buses and all the required charging infrastructure and service upgrades.

The next opportunity to purchase BEB will be in FY25 for delivery in 2026. In 2025 we will be replacing two 2014 Gillig Buses. Based on current battery technology and mileage range we would plan to purchase at least three BEBs for every two diesel buses in our fleet. Based on the current cost of BEB + charging infrastructure and warranties, the city will be required to put aside $150,000/per year for the next 6 years. These funds will be used as local match to purchase three BEBs in 2025 and three BEBs in 2027.

The Biden administration has committed to converting the federal fleet of cars, SUVs and light trucks. There is also some discussion of school bus conversion. However, I did not find any specific recommendations to increase funding for electric public transit buses. It is likely Biden's goals will have the effect of advancing battery technology and perhaps lowering the cost of electric vehicles, but that is not likely to happen in FY22. The Transportation Department strongly recommends delaying the purchase of BEB until FY25. This will allow us time to build up the required bus reserve and plan for a successful conversion that will not compromise our service.

Additional planning and analysis is needed in the following areas: 1) CMP service upgrades at Municipal Services Facility (MSF) that might be needed to meet charging demands for the BEB and other EVs. 2) Installation of charging infrastructure at MSF and in-road charging; 3) Additional indoor bus storage bays (BEBs don't like frigid temps); 4) The budget impact of CMP peak rates; 5) The unknown maintenance cost of BEBs. Note: Of the approximately 65,000 public transit buses in the US, there are approximately 650 BEBs in use. That is 1% of all transit buses. If South Portland purchases 2 BEBs, that would be 25% of our fleet, which we feel puts our operation at risk.

## Financial Impact of this Purchase/Project

We currently have money in our bus reserve to cover the cost of three diesel buses. Converting the transit bus fleet from diesel to electric will cost the city an additional $150,000/year to build up the bus reserve account ($50,000 was amount budgeted for diesel bus). Est. Annual Operating $286,000/year for all 7 buses in our fleet which includes older buses ranging in age from 2011 to 2016: Vehicle Maintenance & Supplies: $100k; Diesel Fuel: $167k; Tires: $17k; Cleaning Supplies: $2k. The new diesel buses will be under warranty for 5 years and will not uncur the same costs associated with maintenance and vehicle supplies.

## Environmental Considerations

Public Transportation reduces the number of single occupancy vehicles on the road and therefore reduces green house gas emissions.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | $ 150,000.00 | | $ 150,000.00 | | $ 300,000.00 | $ - |
| General Fund (GF) Reserves | $ 138,608.00 | $ 138,608.00 | | | | | $ 138,608.00 | $ 138,608.00 |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 1,209,554.00 | $ 1,209,554.00 | | | | | $ 1,209,554.00 | $ 1,209,554.00 |
| Non-GF Reserves/Surplus | $ 76,995.00 | $ 76,995.00 | | | | | #REF! | $ 76,995.00 |
| Prior Year CIP Balances | $ 74,843.00 | $ 74,843.00 | | | | | $ 74,843.00 | $ 74,843.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ 76,995.00 | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 1,500,000.00** | **$ 1,500,000.00** | **$ 150,000.00** | **$ -** | **$ 150,000.00** | **$ -** | **#REF!** | **$ 1,500,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Gillig Manufacturer quotes for diesel and electric buses, charging infrastructure and warranties. | | | | | |
| **Est. Annual Operating Costs** | $286,000 | **Projected Useful Life** | 12 | **Additional Documentation?** | Yes | |
| **City Manager Comments** | | | | | | |

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**To:** Scott Morelli, City Manager
**From:** Donna Tippett, Transportation Department Director
**CC**: Greg L'Heureux Finance Director, Julie Rosenbach, Sustainability Director
**Date:** March 8, 2021
**Subject:** FY22 Bus Replacement CIP Plan

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## BACKGROUND

At the December 15, 2020 Council Workshop, the Transportation Department Director presented information relating to a request for an emergency purchase to replace the 2011 Gillig bus that was deemed a total loss due to a bus fire in May of 2020. The Council approved the request to purchase a new diesel bus, as opposed to battery electric bus (BEB), for reasons detailed in the presentation (also included as part of this memo).

After Council approved the emergency purchase, the Transportation Department worked with Gillig to secure an option to purchase one diesel bus off a contract with Green Mountain Transit in accordance with Federal Transit Administration (FTA) rules for piggyback purchases. The department's Operations Supervisor and Lead Mechanic reviewed the list of optional specifications and Gillig provided a quote that was used to request FTA Section 5339 funds from the Maine Department of Transportation (MDOT) to cover 85% of the total cost of the replacement bus. MDOT approved the request and transferred the funds to the City of South Portland.

The bus lost to a fire was to be replaced in 2023 with two other buses of the same year, make and model. The funding requirements for all three buses are included in the FY22 "Bus Replacement" CIP request. The Transportation Department is requesting that the replacement of the other two 2011 buses also be diesel, since the limitations that we presented to the Council in December have not changed. These limitations are detailed in the sections below.

## OPERATIONAL CONSIDERATIONS

When considering BEB for the daily bus service operations we must take into account the maximum mileage range BEBs can achieve between charges. After conversations with BEB manufactures, the advertised mileage range and charge times for the latest generation 35' buses is as follows:

- Gillig 120 – 170 miles per charge. 3 hours to fully charge.*
- Proterra – 154 – 240 miles per charge. 2.8 hours to fully charge.*

**Operating range and efficiencies are approximate and will vary with route conditions, weather, vehicle configuration and driver behavior. To prolong the life of the batteries, the manufacturers advised keeping the charge at no less than 30%. (Source: Proterra Brochure)*

**Actual Functional Range :** Various factors will affect the actual mileage range that can be achieved. A conservative estimate is for a year-round functional range of about 140-150 miles on a single full charge (after subtracting a buffer of about 20% of the battery capacity for its health (and to ensure drivers don't get stranded)). Under more ideal operating conditions in the late spring through early fall, another 40-50 miles of range (180-200 miles) might be achieved. This estimate uses the following assumptions:

- Standard-sized batteries (currently around 350-400 (Gillig) 440kWh (Proterra));
- Buses equipped with auxiliary diesel-fired heaters to reduce draw on the propulsion batteries;
- Relatively moderate terrain (few hills) with no (or very limited) travel at highway speeds;
- Driver training to minimize battery draw

Also note that range will decrease with age as the batteries slowly degrade, so it's possible that initial functional 140 mile range could drop as low as 114 miles after 10-12 years of use."

Source: Ben Lake of VEIC, Sustainable Energy Consultant

The table below details the Bus Service's weekday mileage by route, bus block and driver job. To provide the best customer service, our goal is to keep the same bus on the road to complete each block. This reduces the need for riders to switch from one bus to another before they reach their final destination (unless of course they need a transfer to a different route). Based on conservative estimates, the current technology would not meet our mileage requirements for most of our weekday blocks.

**Weekday Mileage by Routes, Blocks and Jobs**

| Route | **Block | *Job 1 | Job 2 | Job 3 | Job 4 | Job 6 | Job 7 | Job 10 | Total Mileage by Block |
|---|---|---|---|---|---|---|---|---|---|
| 24A | Block 1 | 111 | | | 106 | | | | 217 |
| 24B | Block 2 | | 140 | | | | 138 | | 278 |
| 21 | Block 3 | | | 110 | | 122 | | | 232 |
| 21 | Block 4 | | | | | | | 106 | 106 |

*A "Job" is the work of 1 driver

** A "Block" is the work of the Bus. To minimize moving riders from bus to bus, at the end of a job the driver is relieved and the bus typically remains in service and on the road.

## BEB IN THE REGION

METRO and Biddeford, Saco Old Orchard Beach (BSOOB) Transit are jointly purchasing four Proterra Battery Electric Buses (two each) as part of a local pilot. They have been working together on this purchase since 2018 and delivery is expected in early 2022. Both agencies have contracts with CTE Environmental Engineering to provide operational modeling and peak rate charging estimates. The combined cost of CTE's services to deploy the 4-bus BEB pilot is approximately $500k. The cost of the BEBs and the charging infrastructure determined after the modeling work was completed is approximately 20% higher than anticipated in 2018. Follow-up discussions regarding future BEB purchases with both agencies are below.

- BSOOB Transit
  BSOOB will use the Proterra buses for a full year or two before planning for additional BEBs. However, they will be planning for an additional charging station at Saco Transportation Center and possibly a third site in downtown Biddeford.

- METRO
  Metro planned this BEB deployment to serve as a pilot. Their total fleet is over 40 buses and incorporating BEB will have minimal impact on operations if problems arise. Metro will only purchase the charging infrastructure required for charging at the bus garage. The charging infrastructure, installation and CMP upgrades for two BEBs is approximately $700k. This year METRO will also release a request for bids for the purchase of 11 diesel buses spread over 4 years. The contract will include an option to purchase additional buses for a total potential build of 20 new diesel buses. Metro does not have plans to purchase additional buses between 2025 and 2027 and therefore has a goal of purchasing only BEBs after 2025 to meet climate action goals of zero emission by 2040.

- Worcester Regional Transit Authority (WRTA)
  City staff met with Dennis Lipka, Administrator of WRTA, in October to learn about their experiences with BEB. WRTA purchased their first BEBs 7 years ago. They have not had a positive experience with these buses. Their main complaints were: limited range, charging station failures, difficulty obtaining parts and lack of durability of the fiberglass body.

- Other Agencies to Watch
  There are other agencies that have made recent BEB purchases in the northeast, such as Pioneer Valley Transit Authority in Springfield, MA and Marble Valley Regional Transit District in Rutland, VT. We have not been able to connect with either agency yet, but will continue to reach out to them and other agencies that have deployed BEB.

## NEXT STEPS TOWARD CONVERSION TO BEB

The Transportation Department will continue to research peer agencies and attend webinars relating to electrification of transit buses as it relates to impacts on transit operations and maintenance.

We will monitor the BEB deployments at BSOOB and Metro to learn from their pilot project. The BEB project manager for Metro is tentatively scheduled to share his experience working on the pilot with the Transit Advisory Committee at its meeting on March 22, 2021.

Portland Area Comprehensive Transportation System (PACTS) has designated CARES funding to complete the "Transit Together" plan. As part of this plan the Transportation Department will be working with all our regional transit partners and the Greater Portland Council of Governments (GPCOG) staff and consultants to assess the feasibility of complete conversion to BEB as well as the operational challenges and funding implications. This will be an assessment to assist all transit agencies to meet the goals of South Portland, Portland and the state of Maine's climate action plans.

In addition to the work above, the Transportation Department has asked the Sustainability Office, in coordination with other city departments, to work on the bulleted items below to ensure we are best prepared to charge our buses after delivery and to reduce unanticipated peak-rate charging costs.

- What is the total facility demand for charging once all Public Works, Parks and Transportation vehicles are converted?
- What CMP service upgrades are needed to accommodate that future demand?
- How does our solar farm factor into service costs?
- How much of the anticipated demand can the solar farm provide?
- How will we address the inevitable need for day-time charging during peak rates?
- Cost/benefit of using diesel powered generator during peak hours.
- Plan for universal chargers at MSF (locations, costs, etc). Assume 12 chargers for buses at full conversion. How many for DPW/PRL cars, trucks, plows etc.
- Does the MSF site plan allow for an expansion of the building footprint to store an additional 5 buses?
- Where across the city can universal chargers be installed? Should we install a satellite charger at a location that can accommodate a bus if needed for an emergency charge?

**Sources:**


1. "T -notes: Battery buses not ready for primetime yet"

   September 2020

   https://commonwealthmagazine.org/transportation/t-notes-battery-buses-not-ready-for-primetime-yet/

2. "Guidebook for Deploying Zero-Emission Transit Buses"
   June 2020
   https://www.nap.edu/catalog/25842/guidebook-for-deploying-zero-emission-transit-buses

3. "Electric Buses Overview", Fairfax County Department of Transportation

   November 10, 2020

   https://www.fairfaxcounty.gov/transportation/sites/transportation/files/assets/documents/pdf/btc/item-5-btc-electric-buses-11_2020.pdf

4. “Philly’s entire fleet of battery-powered buses has been MIA since February” September 17, 2020 https://whyy.org/articles/phillys-entire-fleet-of-battery-powered-buses-has-been-mia-since-february/

5. “To Get More Electric Buses, We Don’t Just Need a Better Battery; We Need a Better Grid” August 14, 2020

   https://usa.streetsblog.org/2020/08/14/to-get-more-electric-buses-we-dont-just-need-a-better-battery-we-need-a-better-grid/

6. Worth the wait: Local planners expect electric buses to be a boon. January 10, 2020 https://www.rutlandherald.com/news/worth-the-wait-local-planners-expect-electric-buses-to-be-a-boon/article_5c33daad-74b2-51d7-ab0e-29bcc07db02b.html

7. “Albuquerque’s Groundbreaking Bus Project Stalled”

   Nov 21, 2018

   https://usa.streetsblog.org/2018/11/21/albuquerques-groundbreaking-bus-project-stalled/

GILLIG

February 19, 2021

Ms. Donna Tippett
Director
City of South Portland
929 Highland Ave.
South Portland, ME 04106

Dear Ms. Tippett:

Thank you for your interest to purchase one (1) 35' Low Floor Diesel bus by using an option off the VPTA contract.

Attached you will find the variance list and price calculation sheet that would pertain to your order. The price calculation sheet also includes the escalation and formula as per the contract. Gillig is pleased to quote the following:

**ONE (1) 35' LOW FLOOR DIESEL BUS $508,688.00 EACH**

This price is valid 30 days and is FOB South Portland, ME. Prices exclude any taxes and license fees. The production of your buses can be scheduled within 14 months from receipt of purchase order. To maintain this production schedule we will require a firm purchase order within thirty days.

We thank you for this opportunity and appreciate your interest in Gillig and our products. Should you have any questions, please do not hesitate to contact us.

Sincerely,

Jerry Sheehan
Regional Sales Manager

cc: Javier Hernandez, JR/Director, National Sales

**PRICE VARIANCE**
**2/18/2021**
**SOUTH PORTLAND, ME OFF VPTA CONSORTIUM CONTRACT**
**(1) 35' LOW FLOOR DIESEL BUS, SN: TBD**

| ITEM | VPTA CONSORTIUM | SOUTH PORTLAND, ME | VARIANCE |
|---|---|---|---|
| STYLING | STD LOW FLOOR | STD LOW FLOOR | - |
| ENGINE | CUMMINS L9 280HP | CUMMINS L9 280HP | - |
| 2021 EPA MANDATED EMISSIONS CHANGES | NOT INCLUDED | REQUIRED (BUDGETARY) | 2,900.00 |
| AUXILIARY ENGINE OIL FILTER | SPINNER II | NOT REQUIRED | (545.00) |
| COOLANT FILTER | STANDARD FLEETGUARD | STANDARD FLEETGUARD | - |
| ENGINE FUEL FILTER | STANDARD FLEETGUARD | DAVCO, HEATED | 641.00 |
| ALTERNATOR | NIEHOFF C803 | NIEHOFF C803 | - |
| ENGINE BLOCK HEATER | NOT INCLUDED | PHILLIPS & TEMRO | 121.00 |
| AIR RESTRICTION INDICATOR | DONALDSON INFORMER | DONALDSON INFORMER | - |
| RADIATOR | MODINE E-FAN | MODINE E-FAN | - |
| E-COAT RAD/CAC | INCLUDED | REQUIRED | - |
| RADIATOR TANK GUARD | INCLUDED W/DEBRIS SHIELD | NOT REQUIRED | (250.00) |
| ENGINE OIL EXTRACTOR PORT | NOT INCLUDED | NOT REQUIRED | - |
| TRANSMISSION | ALLISION B400R | ALLISION B400R | - |
| FUEL SENSE SOFTWARE | NOT INCLUDED | 2.0 MAX | - |
| TRANS OIL EXTRACTOR PORT | NOT INCLUDED | NOT REQUIRED | - |
| AXLE HUB SEALS | C/R OIL | C/R OIL | - |
| BRAKES | DRUM | DRUM | - |
| REAR AXLE OIL | SAE 80W90 | SYNTHETIC | 203.00 |
| MAGNETIC AXLE DRAIN PLUGS | INCLUDED | REQUIRED | - |
| WHEEL MOUNTING | HUB PILOTED | HUB PILOTED | - |
| HUBODOMETER | DATA TRAC PRO 600-9999 | NOT REQUIRED | (50.00) |
| HUBODOMETER GUARD | INCLUDED | NOT REQUIRED | (60.00) |
| ELECTRIC STEERING ASSIST | NOT INCLUDED | NOT REQUIRED | - |
| AUTOMATIC TRACTION CONTROL | INCLUDED | REQUIRED | - |
| WHEELS | (10) MACHINED FINISHED | (7) CLEAN & BUFF | (720.00) |
| WHEELS W/DURABRIGHT | NOT INCLUDED | (7) REQUIRED | 569.00 |
| TIRES | (10) MICHELIN 12R22.5 XZE FRONT AND SPARES W/ XDN REAR | (7) FIRESTONE 315/80R22.5 CITY TRANSPORT | (806.00) |
| FUEL FILL | (1) EMCO WHEATON | (1) EMCO WHEATON | - |
| DIESEL FUEL GUAGE | INCLUDED | REQUIRED | - |
| REAR RUN BOX GAUGES | MECHANICAL - ENGINE OIL PRESSURE & COOLANT TEMP | ELECTRICAL - ENGINE OIL PRESSURE, COOLANT TEMP, VOLTMETER & HOURMETER | 108.00 |
| REAR HAND THROTTLE | NOT INCLUDED | REQUIRED | 156.00 |
| SKID PROTECTION W/ EXTENDED TOW EYES | INCLUDED, W/2X2 WEAR PLATES | REQUIRED, W/2X2 WEAR PLATES | - |
| ELECTRICAL TOW CONNECTION | NOT INCLUDED | NOT REQUIRED | - |
| BATTERIES | (2) DEKA 8D | (2) DEKA 8D | - |
| BATTERY JUMP START CONN | (2) ANDERSON 350 | (2) ANDERSON 350 | - |
| WHEELCHAIR RAMP | LIFT-U LU18 | LIFT-U LU18 | - |
| HVAC SYSTEM | TK T-14 W/ BRUSHLESS MOTORS | TK T-14 W/ BRUSHLESS MOTORS | - |
| HVAC COMPRESSOR (TK) | X426 | X430 | - |
| REFRIGERANT | R134A | R134A | - |
| REFRIGERANT PRESSURE GAUGE | NOT INCLUDED | NOT REQUIRED | - |
| FRESH AIR MAKEUP | NOT INCLUDED | NOT REQUIRED | - |
| DRIVERS HEATER MOTORS | BRUSHLESS | BRUSHED | (419.00) |
| AUXILIARY COOLANT HEATER | SPHEROS THERMO 300 | SPHEROS THERMO 300 | - |
| FRONT STEP HEATER | INCLUDED | REQUIRED | - |
| REAR FLOOR HEATER CURB SIDE | INCLUDED | REQUIRED | - |
| REAR FLOOR HEATER STREET SIDE | INCLUDED | REQUIRED | - |

**PRICE VARIANCE**
**2/18/2021**
**SOUTH PORTLAND, ME OFF VPTA CONSORTIUM CONTRACT**
**(1) 35' LOW FLOOR DIESEL BUS, SN: TBD**

| ITEM | VPTA CONSORTIUM | SOUTH PORTLAND, ME | VARIANCE |
|---|---|---|---|
| AUX DRIVERS FAN | (1) INCLUDED | (1) REQUIRED | - |
| REAR DOOR | 34" AIR OPEN/ SPRING CLOSE | 34" AIR OPEN/ SPRING CLOSE | - |
| EXTERIOR AD FRAME | STREET AND CURB SIDE (30'X108") | NOT REQUIRED | (280.00) |
| INTERIOR AD FRAME | 21"X22" | NOT REQUIRED | (70.00) |
| PASSENGER SEATS | AMSECO 6468 WITH A.R.M. & Q'STRAINT BELTS | AMSECO INSIGHT WITH A.R.M. & SURE-LOK BELT SYSTEM | 4,489.00 |
| DRIVERS SEAT | USSC 9100ALX3 W/HEADREST & 3-PT BLACK BELT | RECARO W/OUT HEADREST & 2-PT BLACK BELT | (122.00) |
| DRIVERS SEAT ARM REST | NOT INCLUDED | NOT REQUIRED | - |
| PASSENGER SIGNALS | PULL CORDS | PULL CORDS | - |
| STOP REQUEST AT REAR DOOR | NOT INCLUDED | NOT REQUIRED | - |
| DRIVERS BARRIER | WRAPAROUND W/OUT SCHEDULE HOLDER SLOTS | WRAPAROUND W/OUT SCHEDULE HOLDER SLOTS | - |
| MODESTY PANEL FWD OF REAR DOOR | INCLUDED | REQUIRED | - |
| NYLON GRAB STRAPS | NOT INCLUDED | (10) REQUIRED | 200.00 |
| PASSENGER STANCHIONS | STAINLESS STEEL | YELLOW POWDER COATED | - |
| SCHEDULE RACKS | NOT INCLUDED | NOT REQUIRED | - |
| PASSENGER INFO STATION | NOT INCLUDED | NOT REQUIRED | - |
| PASSENGER WINDOWS | STD FRAMED / FULL FIXED | STD FRAMED / UPPER TRANSOM W/ 6MM GRAY 50% LT POLYCARBONATE | 7,428.00 |
| HEADLAMPS | DUAL (4) HALOGEN | LED LOW BEAM / HALOGEN HIGH BEAM | 581.00 |
| PLEASURE RADIO & ANTENNA | NOT INCLUDED | AM/FM/CD/MP3-USB/SD | 320.00 |
| 2-WAY RADIO & ANTENNA | NOT INCLUDED | PRE-WIRE (POWER & ANTENNA ONLY) | 175.00 |
| 110 VOLT SHORE POWER WITH CONVERTER IN ELECTRICAL BOX | INCLUDED | NOT REQUIRED | (1,774.00) |
| PA SYSTEM | REI PA | REI PA | - |
| BOOM MIC | INCLUDED | REQUIRED | - |
| DRIVERS SPEAKER | NOT INCLUDED | NOT REQUIRED | - |
| HEATED DESTINATION SIGN GLAZING | INCLUDED | REQUIRED | - |
| DESTINATION SIGNS (FRONT & CURBSIDE) | TWIN VISION AMBER | TWIN VISION AMBER | - |
| DESTINATION SIGNS (REAR) | NOT INCLUDED | TWIN VISION AMBER | 875.00 |
| DASH MTD FRONT RUN SIGN | NOT INCLUDED | NOT REQUIRED | - |
| FAREBOX | GFI ODYSSEY | DIAMOND MODEL SV W/2 VAULTS | 1,500.00 |
| FAREBOX GUARD | INCLUDED | REQUIRED | - |
| CEILING MTD FAREBOX LAMP | NOT INCLUDED | NOT REQUIRED | - |
| TRANSFER CUTTER | NOT INCLUDED | GLOBE 600090 | 68.00 |
| MANUAL PASSENGER COUNTER | NOT INCLUDED | NOT REQUIRED | - |
| FULL COMPOSITE | NOT INCLUDED | REQUIRED | 2,500.00 |
| FLOORING MATERIAL | ALTRO | RCA | (400.00) |
| ROOF HATCHES | (1) STD MANUAL | (2) STD MANUAL | 344.00 |
| EXTERIOR MIRRORS | 8 x 15 2-PC, CONVEX, REMOTE & HEATED | 10 x 11 2-PC, CONVEX, REMOTE & HEATED | 91.00 |
| FIRE SUPPRESSION SYSTEM | AMEREX V-25 | NOT REQUIRED | (1,800.00) |
| TRAFFIC LIGHT PREEMPTION | NOT INCLUDED | NOT REQUIRED | - |
| VIDEO SURVEILLANCE SYSTEM | SEON (8) CAMERA EXPLORER DX W/ 2 TB HDD | NOT REQUIRED | (5,948.00) |

**PRICE VARIANCE**
**2/18/2021**
**SOUTH PORTLAND, ME OFF VPTA CONSORTIUM CONTRACT**
**(1) 35' LOW FLOOR DIESEL BUS, SN: TBD**

| ITEM | VPTA CONSORTIUM | SOUTH PORTLAND, ME | VARIANCE |
|---|---|---|---|
| BACK UP CAMERA | NOT INCLUDED | NOT REQUIRED | - |
| BIKE RACK | SPORTWORKS DL2 SSTL | SPORTWORKS DL2 SSTL | - |
| BIKE RACK MIRROR | NOT INCLUDED | NOT REQUIRED | - |
| BIKE RACK DEPLOYED LAMP | NOT INCLUDED | NOT REQUIRED | - |
| MEDICAL AID KIT | INCLUDED | NOT REQUIRED | (60.00) |
| BLOODBORN PATHOGEN KIT | NOT INCLUDED | REQUIRED | 35.00 |
| WHEEL CHOCKS | INCLUDED | REQUIRED | - |
| DRIVERS DASH GAUGES | AIR PRESSURE, SPEEDOMETER & (2) VOLTMETERS | AIR PRESSURE, SPEEDOMETER , (1) VOLTMETER & (1) HOURMETER | - |
| ADJUSTABLE PEDALS | NOT INCLUDED | NOT REQUIRED | - |
| EXTERIOR PAINT | (1) COLOR | (4) COLOR | 3,060.00 |
| CLEAR COAT | INCLUDED | NOT REQUIRED | (800.00) |
| GRAPHICS | NOT INCLUDED | S. PORTLAND, ME CUSTOM GRAPHICS (SAME AS 184117) | 907.00 |
| ROOF BUS NUMBERS | NOT INCLUDED | REQUIRED | 136.00 |
| STD WARRANTY (BASE BUS) | 1 YRS / 50,000 MILES | 1 YRS / 50,000 MILES | - |
| STD WARRANTY (BODY STRUCTURAL WARRANTY) | 3 YEARS/ 150,000 MILES | 3 YEARS/ 150,000 MILES | - |
| EXT WARRANTY (STRUCTURAL AND CORROSION) | 12 YEARS/ 500,000 MILES | 12 YEARS/ 500,000 MILES | - |
| EXT WARRANTY (L9 ENGINE) | 5 YEARS / 300,000 MILES | 5 YEARS / 300,000 MILES | - |
| EXT WARRANTY (ALLISON B400R TRANSMISSION) | 5 YEARS/ 300,000 MILES | 5 YEARS/ 300,000 MILES | - |
| EXT WARRANTY (HVAC) | 3 YEARS/ UNLIMITED MILES | 3 YEARS/ UNLIMITED MILES | - |
| EXT WARRANY (WHEELCHAIR RAMP) | 3 YEARS/ UNLIMITED MILES | 3 YEARS/ UNLIMITED MILES | - |
| EXT WARRANTY (ALTERNATOR) | 3 YEARS/ 150,000 MILES | 3 YEARS/ 150,000 MILES | - |
| EXT WARRANTY (AIR COMPRESSOR) | 3 YEARS/ UNLIMITED MILES | 3 YEARS/ UNLIMITED MILES | - |
| EXT WARRANTY (DOORS) | 3 YEARS/ 150,000 MILES | 3 YEARS/ 150,000 MILES | - |
| EXT WARRANTY (POWER STEERING) | 3 YEARS/ 150,000 MILES | 3 YEARS/ 150,000 MILES | - |
| TRAINING | NOT INCLUDED | NOT REQUIRED | - |

| | |
|---|---|
| TOTAL SOUTH PORTLAND, ME VARIANCES | 13,303.00 |
| VPTA CONSORTIUM 35' LOW FLOOR DIESEL BASE UNIT PRICE (NOV'16) | 441,699.00 |
| DELIVERY ADJ | 667.00 |
| SOUTH PORTLAND, ME 35' LOW FLOOR DIESEL BASE UNIT PRICE (NOV'16) | 455,669.00 |
| PPI 1413 ADJUSTMENT 263.4 (DEC '20) / 238.3 (NOV '16) = 10.53 % | 47,982.00 |
| SOUTH PORTLAND, ME 35' LOW FLOOR DIESEL BASE UNIT PRICE | 503,651.00 |
| SPARE / TOOLING BUDGET | 5,037.00 |
| **SOUTH PORTLAND, ME 35' LOW FLOOR DIESEL CURRENT PRICE (2/21/2021)** | **508,688.00** |

CONFIDENTIAL
This pricing information is intended only for the personal and confidential use of the recipient(s) to whom it was originally sent. If you are not an intended recipient of this information or an agent responsible for delivering it to an intended recipient, you are hereby notified that you have received this information in error, and that any review, dissemination, distribution, or copying of this message is strictly prohibited.

# CITY OF SOUTH PORTLAND

P.O. BOX 9422
SOUTH PORTLAND, MAINE 04116-9422
PURCHASING PHONE #207-767-7608
ACCOUNTS PAYABLE PHONE #207-767-7619
JOINT FAX LINE 207-767-7620

***UNDER MAINE STATE LAW THE CITY IS SALES TAX EXEMPT***
***Exempt No. E45982***

# Purchase Order

Fiscal Year 2021 Page: 1 of 1

THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES AND SHIPPING PAPERS.

Purchase Order # **20211253 - 00**

Delivery must be made within doors of specified destination.

VENDOR
ARKAY ACQUISITION LLC
25800 CLAWITER ROAD
HAYWARD, CA 94545

SHIP TO
CITY OF SOUTH PORTLAND
MUNICIPAL BUS SERVICE
929 HIGHLAND AVE
SOUTH PORTLAND, ME 04106

| Vendor Phone Number | Vendor Fax Number | Requisition Number | Delivery Reference |
|---|---|---|---|
| | | 10211512 | |

| Date Ordered | Vendor Number | Date Required | Freight Method/Terms | Department/Location |
|---|---|---|---|---|
| 02/19/2021 | 529 | | | MUNICIPAL BUS & WATERFRONT |

| Item# | Description/PartNo | Qty | UOM | Unit Price | Extended Price |
|---|---|---|---|---|---|
| 1 | PURCHASE OF A 2021 GILLIG LOW FLOOR DIESEL TRANSIT BUS<br>******** GL SUMMARY ********<br>***408065 - 651000 - 21803*** ***$508,688.00*** | 1.0 | EACH | $508,688.000 | $508,688.00 |

DELIVERIES ACCEPTED MONDAY - FRIDAY 8:00AM - 3:30PM

**PO Total** **$508,688**

PRICE CHANGES MUST BE APPROVED PRIOR TO SHIPMENT

ACCEPTANCE OF THIS PURCHASE ORDER CAN ONLY BE MADE SUBJECT TO THE TERMS AND CONDITIONS OF THIS PURCHASE ORDER

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

City Purchasing Agent

Finance Director

The non-discrimination clause contained in Section 202, Executive Order 11246, as amended by Executive Order 11375, relative to Equal Employment Opportunity for all persons without regard to race, color, religion, sex, age or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor, are in full force and effect at this institution and, if applicable, are hereby incorporated by reference.

**TERMS AND CONDITIONS**

1. All shipments of goods ordered must be made as specified in this purchase order (the “order”), in standard commercial containers capable of safe delivery to the City of South Portland (the “Buyer”) at the “ship to” address set forth on the face of this order. Unless explicitly stated otherwise on the face of this order all goods and tangible items ordered shall be F.O.B. the ship to address set forth on the face of this order. Unless otherwise agreed, no charges shall be shown on bills of lading. Packing slips must be included in all packages. Original bill of lading must be mailed to Buyer with invoice on date of shipment.

2. Time is of the essence of this order. If the Vendor fails to deliver goods or render services at the time required by this order for any reason, the Buyer may, in addition to any other rights it may have, at its option, and without being under any liability to the Vendor, cancel by notice in writing to Vendor the portion or portions of this order so affected or set a new delivery date. Buyer shall not be charged with any liability for failure or delay in performance hereunder due to any cause beyond its reasonable control.

3. The Buyer will not pay invoices at prices higher than those indicated on the face of this order. The Vendor represents that the prices charged for the goods covered by this order are not and will not be in excess of any maximum prices therefor established by law.

4. Cash discounts will be calculated from the date an acceptable invoice is received by the Buyer and the goods arrive at the Buyer's designated location.

5. Buyer reserves the right to inspect all merchandise covered by this order and to return for full credit (including both inbound and outbound freight charges if applicable) any items which are defective and do not meet Buyer's quality standards.

6. This order shall not be altered by verbal agreements or understandings or by any writing not signed by Buyer. Vendor may not accept a telephone or verbal order unless an order or requisition number is furnished, and a confirming order is thereafter provided to the Vendor by the Buyer bearing that number.

7. Vendor agrees to hold Buyer harmless from any loss or expense resulting from violation of copyright, trademark, servicemark, patent, or other intellectual property rights in connection with the Buyer’s purchase of any goods or services covered by this order, or in connection with the use of those goods and services for their normal purposes or for any other purpose for which the Vendor has made any representation they may be used.

8. Vendor agrees to defend, indemnify and save Buyer harmless from all loss or expense occasioned by accidents or injuries to property or to persons as a result of any malfunction or defect in the products or services purchased herewith.

9. When specific terms and conditions of this order are inconsistent with trade custom, then these terms and conditions shall prevail unless the buyer specifically agrees otherwise.

10. Vendor shall pay all costs incurred by Buyer, including, but not limited to, attorney’s fees and other legal expenses, in exercising its rights under the terms of this order.

11. This agreement is made and entered into under the laws of the State of Maine and shall be governed by its laws, exclusive of its choice of law rules.

12. Payment terms: The Buyer shall make payments on account of the Purchase Order as follows: Within 20 to 30 days upon satisfactory completion and acceptance by the City and receipt of bill for all work covered by the Purchase Order.

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Transit Signal Priority (TSP)** | | |
| **Department** | Transportation | **Dept. Priority** | 3 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Transportation Department submitted a proposal to PACTS to receive CARES funding to expand and upgrade our transit signal priority (TSP) system in various locations along our routes 21, 24A and 24B. Sebago Technics has completed the work on this project and provided a cost estimates for the proposed upgrades and expansion.

TSP gives 2nd preemption to our buses by holding green lights long enough for the bus to get through an intersection. This is a vulueable tool for keeping our buses on time. The TSP onboard system includes GPS tracking hardware and software. We will explore opportunities to work with Emtrac the TSP vendor to update our real time passenger information system and transit tracker, which must be replaced this fiscal year.

We were awarded $151,000 of CARES funding for this project. There is no local match contribution required.

## Financial Impact of this Purchase/Project

This project is funded 100% by CARES grant. Any time required by Sebago Technic's assisting with configuration or troubleshooting of the TSP system as related to the traffic signal annual operations and maintenance falls under Sebago Technic's existing contract with South Portland. If any of the Emtrac hardware on the buses, or at the facility, need replacement that would be done through Coastal Traffic Inc on a per unit cost. The cost of the Emtrac hardware is approximately $3,500/unit. The units currently onboard were installed in 2017. I am waiting for more information on the useful life of the system and existing warranties.

## Environmental Considerations

TSP is beneficial for moving buses through the intersection and reduces idling and fuel consumption for our buses.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 151,000.00 | $ 151,000.00 | | | | | $ 151,000.00 | $ 151,000.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 151,000.00** | **$ 151,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 151,000.00** | **$ 151,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Sebago Technics TSP Consultants | | | | |
| **Est. Annual Operating Costs** | see Pg 13 of attachment | **Projected Useful Life** | | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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August 6, 2020
15506-01

Mr. John Duncan, Interim Director
South Portland Bus
929 Highland Avenue
South Portland, ME 04106

**Proposal for Expanding South Portland's TSP System on Bus Routes 24A, 24B, and 21**

Dear John –

Per your request, we have prepared this proposal for expanding your existing TSP system to complete Bus Routes 24A and 24B and also to add this strategy where appropriate to Route 21. As you know we prepared a report summarizing our work in 2017-18, which led to the deployment of a gps-based system to 13 intersections on Routes 24A and 24B. The findings were significant and suggestions were made at that time for expanding this system to include other intersections along these two Routes where appropriate. This initial study did not address Route 21, but based on our prior work, we believe that there are several intersections where TSP could benefit this Route, as well. As such, we have prepared the following list of improvements that should be considered in your approach to PACTS for CARES ACT FTA funding. These are:

**Route 24A/B:**

1. Relocate the existing cabinet hardware for TSP at the intersections of Route 77 at Erskine Drive and Gorham Road at Foden Road to Broadway at Main Street (Cash Corner) and Main Street at Westbrook Street. In addition, replace these two controllers with modern controllers with TSP capabilities. Estimated cost **$25,000**. *NOTE: The Cash Corner controller proposed herein could be reused in the MaineDOT project that is slated for 2021.*
2. Purchase and install new controller with built in TSP capabilities at Western Avenue at Foden Road. Also, install new pre-emption card and TSP antenna. Estimated cost **$8,500**.
3. Purchase and install a cabinet antenna for the controller at Broadway and Elm Street. Estimated cost **$1,500**.
4. Engineering associated with procurement and oversight of above items, including updating and configuring the TSP server that is located at Public Works. Estimated cost **$12,000**.

5. Adjust the TSP zone configuration and optimize the Time of Service Desired values at the existing TSP enabled intersections to further improve performance and realize additional timing savings. Estimated cost **$5,000.**

**Route 21:**

1. Assess the following signalized intersections for TSP potential using historical data and the methodology developed in the 2018 Report:

   Ocean Street at Market Street
   Ocean Street at Highland Avenue
   Ocean Street at Sawyer Street
   Cottage Road at Sawyer Street
   Broadway at Mussey Street

   Estimated Cost **$4,000**

2. Purchase and install new controllers with built in TSP capabilities at the above 5 intersections. Also, install TSP card and antenna at each location. Estimated cost **$47,500**.

3. Engineering associated with procurement and oversight of above items and optimizing this new route once everything is installed and activated. Estimated cost for 5 locations **$15,000.**

   *NOTE: The costs for Route 21 assume all 5 five locations will benefit from TSP. Likely this will not be the case once we perform Task 1, which will lessen this request.*

**Assumptions**

It is assumed that the City will be able to direct procure the engineering and equipment needed to carry out this project without the need for competitive bidding. Sebago was competitively selected as the City's on-call engineer and Electric Light Company was competitively selected as the City's on-call signal maintenance contractor. These facts in combination with a recent decision by USDOT to do away with their regulations regarding sole source equipment purchases in the ITS field seems to validate this assumption.

**Summary**

The expansion of your existing EMTRAC TSP system across the rest of your transit route system is as follows in 2020 dollars:

| | |
|---|---|
| Routes 24A/B | $ 52,000 |
| Route 21 | $ 66,500 |
| **Total (Upset)** | **$118,500** |

Let us know if you have any questions or require any additional data regarding this information.

Sincerely,

SEBAGO TECHNICS, INC.



Stephen S. Sawyer, Jr. P.E.
Senior Vice President, Transportation Services

SSS:jg
Enc.

ACCEPTED and AUTHORIZED
(Sebago Technics Job # 15506-01)

By: _____

Representing: _____

Title: _____

Date: _____

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SEBAGO TECHNICS

# STANDARD TERMS AND CONDITIONS

**GENERAL:** These Standard Terms and Conditions, listed in alphabetical order, along with the: 1) Proposal, Letter Agreement, or Contract; 2) Standard Fee Schedule (if included); and 3) Sebago Technics' *Electronic File Confidentiality and Transfer Disclaimer* form, to which these Standard Terms and Conditions are attached and incorporated into, shall be the "Agreement" between Sebago Technics, Inc. ("Sebago Technics") and the entity or person to whom the Agreement is addressed ("Client"). The headings and titles of the paragraphs of these Terms and Conditions as well as the headings and titles of any other part of the Agreement are for convenience purposes only and are not intended to define, limit or construe the contents of the various paragraphs.

**1. ACCESS TO SITE.** Unless otherwise stated, Client grants Sebago Technics full access to the site for all activities necessary for the performance of the services set out in the Scope of Services. Sebago Technics will take reasonable precautions to minimize damage due to its activities. Unless otherwise stated, Sebago Technics has not included any costs in its Compensation for any restoration.

**2. ADDITIONAL SERVICES.** Additional Services are those services not specifically set forth in the Agreement setting forth the scope of work and/or services Sebago has agreed to perform ("Scope of Services"). Sebago Technics will notify the Client of any significant change in the Scope of Services which will be considered additional services and costs for which Client agrees to pay on an hourly basis or as incurred in accordance with Sebago Technics latest fee schedule and/or as reported to the Client.

**3. APPLICABLE LAW.** The Agreement shall be governed and interpreted by the laws of the State of Maine. All suits except for enforcement of liens must be brought in Cumberland County Superior Court in Maine.

**4. ASSIGNMENT.** Neither party shall assign its rights and/or obligations hereunder to any other party without the prior written consent of the other party. Sebago Technics, however, reserves the right to use consultants and or sub-consultants to complete the work described under the Scope of Services as it deems necessary.

**5. BILLING/PAYMENTS.** Invoices for services and expenses incurred will be submitted monthly and are due upon receipt. An invoice shall be considered PAST DUE if payment is not received within 30 (thirty) days after the invoice date. Should payment not be received, Sebago Technics may, at its sole discretion, without waiving any claim or right against the Client and without any liability to the Client, terminate its performance of services. Interest charges may be applied to ALL PAST DUE amounts. Sebago Technics also reserves the right to utilize any other methods, processes, or procedures available to it under law in order to collect charges and fees owed to it. Should Sebago Technics incur expenses to collect its outstanding fees, Client agrees to reimburse Sebago Technics for all such expenses including reasonable attorney and paralegal fees, court costs, and other related expenses.

**6. BURIED UTILITIES**. Sebago Technics will conduct research that it deems necessary and will prepare a plan indicating the location intended for subsurface penetrations and/or proposed underground infrastructures with respect to the assumed locations of all existing subsurface utilities. Although such services will be performed by Sebago Technics, or its subcontractor, using its industry's ordinary standard of care, the Client acknowledges that Sebago Technics' research may not identify all existing underground utilities and that the information upon which Sebago Technics relied may contain errors and omissions. The Client therefore agrees, to the fullest extent permitted by law, to indemnify and hold Sebago Technics harmless from any and all claims, liability, and costs of defense, including, but not limited to, its attorney and paralegal fees and costs, whether or not actual litigation is commenced for all liability, injury, or losses arising or allegedly arising from errors or omissions related to buried utilities.

**7. COMPENSATION/BUDGET.** Unless stated as a specific sum due, the total fee set forth shall be understood to be an estimate, based upon the stated Scope of Services, Sebago Technics' understanding of the work being requested by the Client, and Sebago Technics' best estimate and understanding of the work that is actually required. The Compensation/Budget shall not be exceeded by more than ten percent (10%) without further authorization from the Client. If the Compensation/Budget is based on an hourly basis, the rates shall be those that prevail at the time the services are rendered. Rates are subject to change without prior notification. Reimbursable expenses shall include, but are not limited to those for travel, survey supplies, equipment use, telephone, photocopies, plan copies including vellum originals, fax, postage, and should overnight travel be required, lodging and per diem for meals and other reasonable expenses.

**8. CONFIDENTIALITY.** Sebago Technics agrees to keep confidential and will not disclose to any person or entity other than its employees and sub-consultants any data and information furnished to Sebago Technics stated to be or that is marked "Confidential" by the Client. Sebago Technics will not disclose such information without Client's prior consent except to the extent required for: 1) performance of services under the Agreement; 2) compliance with professional standards of conduct for preservation of the public safety, health, and welfare; 3) compliance with any court order, statute, law, or governmental directive; and/or 4) protection of Sebago Technics from the performance of services under this Agreement. Sebago Technics' obligations hereunder shall not apply to information in the public domain or lawfully obtained on a non-confidential basis from others.

**9. CORPORATE PROTECTION.** Client agrees that Sebago Technics' services performed pursuant to the Scope of Services and any Additional Services rendered for Client's project shall not subject any of Sebago Technics' individual employees, officers, directors, or agents to any personal legal liability. Client agrees that its sole and exclusive remedy for any claim, demand, or suit related to the Scope of Services and any Additional Services shall be directed and asserted only against Sebago Technics, which is a Maine corporation. The Client further agrees to extend this limitation to Sebago Technics' corporate sub-consultants.

**10. COUNTERPARTS AND DUPLICATE ORIGINALS.** This Agreement may be executed in one or more counterparts which, when combined, shall constitute one complete original and may be executed in duplicate originals.

**11. DISPUTE RESOLUTION.** Sebago Technics and Client agree that prior to the initiation of legal proceedings, they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to the Agreement to mediation in accordance with the Construction Industry Mediation Rules of the American Arbitration Association, effective as of the date of the Agreement. This provision shall survive completion or termination of the Agreement; however, neither party shall seek mediation of any claim or dispute arising out of the Agreement beyond the period of time that would bar the initiation of legal proceedings to litigate such claim or dispute under the applicable law. Furthermore, Sebago Technics is not required to mediate claims and/or causes of action if it is prosecuting mechanics liens or seeking injunctive relief.

**12. ELECTRONIC MEDIA.** Client recognizes that data, plans, specifications, reports, documents, or other information recorded on or transmitted as electronic media are subject to undetectable alteration, either intentional or unintentional. Accordingly, documents provided to Client in electronic media form are for informational purposes only and are not an end product. Making electronic information available to the Client in no way implies that the recipient is required by Sebago Technics to use it. Use of electronic information supplied by Sebago Technics in this format is at the sole risk and liability of the user. Client agrees to defend, indemnify, and hold harmless Sebago Technics from any claims, liabilities, losses, or damages arising out of the use, reuse, or alteration of electronic media. Sebago Technics makes no warranties or representations, either expressed or implied, regarding the fitness or suitability of the electronic media. All clients shall be required to sign Sebago Technics' *Electronic File Confidentiality and Transfer Disclaimer* form. Any electronic files submitted by Sebago Technics to the Client have an acceptance deadline of forty-five (45) days. During this period, any defects reported by the Client to Sebago Technics will be corrected pursuant to its original Scope of Services. However, upon the expiration of this acceptance period, any defects claimed by the Client and reported to Sebago Technics shall be addressed by Sebago Technics, which shall be compensated therefore as Additional Services.

**13. ENTIRE AGREEMENT**. The Agreement constitutes the entire agreement between the Client and Sebago Technics with respect to the subject matters stated herein and the Agreement supersedes all previous negotiations, discussions, and agreements between the Client and Sebago Technics as to the subject matter of the Agreement. The conditions set forth in the Agreement shall survive the completion of Sebago Technics' services under the Agreement and the termination of any services for cause.

**14. ENVIRONMENTAL SITE ASSESSMENTS (ESAs).** Should Sebago Technics be hired to perform any ESA services, the Client agrees to the fullest extent permitted by law to indemnify and hold Sebago Technics harmless from any and all claims, liability, and costs of defense, including but not limited to its attorney and paralegal fees and costs, whether or not actual litigation is commenced, for all liability, injury, or losses arising, allegedly arising, or related in any way to the existence, release, or disposal of toxic or hazardous substances as they may now or in the future be determined under any and all local, state, or federal laws except and unless Sebago Technics is found to have engaged in any willful misconduct related thereto.

**15. FORCE MAJEURE.** Except for Client's obligation to pay for services rendered, no liability will attach to either party from delay in performance or nonperformance caused by circumstances beyond the reasonable control of the party affected, including, but not limited to, acts of God, fire, flood, unanticipated site or subsurface conditions, explosion, war, request or intervention of a governmental authority, court order, labor relations, accidents, delay or inability to obtain materials, equipment, fuel, or transportation.

**16. HIDDEN CONDITIONS.** A condition is hidden if concealed by existing conditions or is not capable of investigation by reasonable visual observation. If Sebago Technics has reason to believe that such a condition may exist, the Client agrees to authorize and pay for all costs associated with the reasonable investigation of such condition and, if necessary, all costs to correct the condition. If the Client either fails to authorize such investigation or correction after due notification or should Sebago Technics have reasonable belief no such condition exists, the Client agrees to be solely responsible for all risks associated with the condition and agrees that Sebago Technics shall not be responsible for the condition nor shall it have any liability with respect thereto as to the Client and all third parties.

**17. INDEMNIFICATION.** The Client agrees to indemnify and hold harmless Sebago Technics, its officers, directors, employees and agents from and against any and all claims, damages, losses, and expenses (including reasonable attorney and paralegal fees and costs whether or not formal litigation is commenced) arising out of or resulting from performance of Sebago Technics work provided that any such claims, damages, losses, and expenses are caused in whole or in part by the negligent act, omission, or strict liability of the Client, anyone directly or indirectly engaged by the Client (other than Sebago Technics), or anyone for whose acts any of them may be liable.

**18. INFORMATION PROVIDED BY OTHERS.** After Sebago Technics has advised the Client about the information required for Sebago Technics to adequately perform its Scope of Services and any Additional Services, Client shall provide Sebago Technics with all requested information available to the Client and its consultants, agents, and contractors and Sebago Technics shall be entitled to rely upon the accuracy and completeness of such information. Because it is impossible to assure the accuracy, completeness, and sufficiency of information

due to errors or omissions which may have occurred in assembling the information the Client and/or its agents are providing to Sebago Technics, the Client agrees, to the fullest extent permitted by law, to indemnify and hold Sebago Technics and its sub-consultants harmless from any and all claims, liability and costs of defense, including but not limited to its attorney and paralegal fees and costs, whether or not actual litigation is commenced, for all liability, injury or losses arising or allegedly arising from all errors, omissions or inaccuracies in all documents, specifications and information provided to Sebago Technics by the Client and/or its agents.

**19. INSOLVENCY/AVOIDANCE OF PAYMENTS.** In the event of a filing under the Federal Bankruptcy Code of a case by or against Client or in the event of the commencement by or against the Client of any state law proceeding for the liquidation of its assets or for the reorganization of its debts, Sebago Technics obligations under this Agreement are immediately relieved. To the extent that the Client makes a payment or payments to Sebago Technics which are in whole or in part subsequently invalidated or are declared to be a preference and are set aside and/or required to be repaid to any party under any bankruptcy or insolvency law, state or federal law, common law, or equitable cause, then to the extent such payments are set aside or are repaid, they shall be reinstated and included in what Client owes Sebago Technics.

**20. INSURANCE.** During the term of this Agreement, Sebago Technics agrees to provide insurance coverage for Professional Liability, Commercial General Liability, Worker's Compensation and Employer's Liability, and Automobile Liability for all of its employees. Evidence of this coverage can be provided upon request.

**21. LEGAL ACTION, FEES AND COSTS.** All legal actions by either party against the other for any cause or causes, including, but not limited to, breach of this Agreement, negligence, misrepresentations, breach of warranty, or failure to perform in accordance with the standard of care, however expressed, shall be barred two (2) years from the day after the completion of Sebago Technics' services. In the event the Client institutes a suit against Sebago Technics, and if such suit is not successfully prosecuted, or if it is dismissed, or if a verdict is rendered for Sebago Technics, Client agrees to pay Sebago Technics any and all costs of defense, including attorney fees, expert witness fees, and court costs and any and all other expenses of defense which may be reasonably necessary, immediately following dismissal of the case or immediately upon judgment being rendered in favor of Sebago Technics. In the event Sebago Technics utilizes an attorney to collect what it is owed under this Agreement with the Client, the Client agrees to pay all of Sebago Technics' reasonable attorney and paralegal fees, whether or not formal litigation is commenced, as well as all Court costs and other related expenses.

**22. LENDER'S OR OTHER PARTY'S REQUIREMENTS.** Sebago Technics shall not be required to execute any documents subsequent to the execution of this Agreement that in any way, in Sebago Technics' sole judgment, may increase Sebago Technics' contractual or legal obligations or risks or the availability or cost of Sebago Technics professional or general liability insurance.

**23. NO FIDUCIARY DUTY.** Client acknowledges that Sebago Technics does not owe it a fiduciary duty, that Client has had the opportunity to engage counsel prior to entering into the Agreement, and enters into the Agreement of its own free will and accord.

**24. NOTICE.** In the event that any notice is required to or may be given under the Agreement, then notwithstanding any other term or provision to the contrary, it shall be deemed given: (a) two (2) business days after deposit in the United States mail, first class, postage prepaid; (b) one (1) business day after placement with an overnight courier service which provides proof of delivery; or (c) if by any facsimile transmission or email of such notice the times in either (a) or (b) above, it being required that notice shall also be given by mail or overnight courier, addressed to the recipients as follows:

To Sebago Technics: Sebago Technics, Inc. 75 John Roberts Road, Suite 4A South Portland, ME 04106

To Client: Notice Sent to Same Address as Proposal, Letter Agreement, or Contract, unless otherwise noted.

**25. OWNERSHIP OF INSTRUMENTS OF PROFESSIONAL SERVICE.** All field data, notes, reports, plans, specifications, and all other related information and documents, including CADD documents, no matter in what form they may be fixed, that are prepared by Sebago Technics are considered to be "Instruments of Professional Service" which shall remain the sole property of Sebago Technics. Sebago Technics, however, acknowledges that the final plans and specifications generated on behalf of the Client shall become the property of the Client upon completion of the work and receipt of full payment therefore.

The Client agrees that it will not reuse or modify the plans and specifications in any way without first receiving written authorization from Sebago Technics. The Client agrees, to the fullest extent permitted by law, to defend, indemnify and hold Sebago Technics harmless from any and all claims, liability, and costs of defense including, but not limited to, its attorney and paralegal fees, whether or not actual litigation is commenced, arising or allegedly arising out of any unauthorized reuse or modification by the Client, its agents, or any person or entity that acquires or obtains the plans and specifications from or through the Client and reuses or modifies them. In no event shall Sebago Technics be liable for any damages, including, but not limited to any claim of lost profits by the Client or any third party.

**26. RECORD DOCUMENTS.** Upon completion of the Client's project and/or Sebago Technics' work, Sebago Technics may be asked to compile and deliver to the Client a reproducible set of Record Documents that conform to the marked-up prints, drawings and data provided to the Client and/or its agents. This set of Record Documents will show the reported locations of work performed and significant changes that were made while the project progressed. Because these Record Documents may be based in whole or in part on information provided by others, not independently verified by Sebago Technics, but assumed to be true and accurate, Sebago Technics does not warrant in any way that they are accurate.

**27. REPRESENTATIONS.** The Client hereby represents and warrants that all of its agreements, representations, recitals, and acknowledgements made in the Agreement are true and correct and that it is duly authorized to enter into and execute and deliver the Agreement and all related documents and to perform all acts contemplated hereby and that the Agreement and all related documents are its legally valid and binding obligations as well the legally valid and binding obligations of its respective successors and assigns and are enforceable in accordance with their terms.

**28. RISK ALLOCATIONS.** In recognition of the relative risks, rewards, and benefits of the Client's project both to itself and to Sebago Technics, the Client hereby agrees, to the fullest extent permitted by law, to limit Sebago Technics' total liability to the Client and all third parties for all claims, losses, injuries, expenses and damages due to Sebago Technics' performance of its work, including that of its sub-consultants, to the greater of Sebago Technics fees or $50,000.00.

**29. SCOPE OF SERVICES.** The Scope of Services Sebago has agreed to perform is set forth in greater detail in the Proposal, Letter Agreement, or Contract. These services are based upon the requests of Sebago Technics' client and Sebago Technics' professional opinion of what services are being recommended or required based upon those requests.

**30. SEVERABILITY OF PROVISIONS.** In the event any one or more provisions contained in the Agreement should be found to be invalid, illegal, or unenforceable in any respect by any Court having valid jurisdiction, the validity, legality, and enforceability of the remaining provisions of the Agreement shall not in any way be affected or impaired and to this end, the provisions of the Agreement shall be deemed severable.

**31. SITE AND SUBSURFACE INVESTIGATIONS.** Client agrees to furnish right of entry and permission for Sebago Technics, its employees, and/or subcontractors, to perform surveys, borings, and other investigations, including subsurface explorations, pursuant to the scope of services. Sebago Technics will take reasonable precautions to minimize damage to the property. If Sebago Technics is required to restore the property, or subsurface conditions, or structures to its former condition, the cost plus fifteen (15) percent will be added to the fee. Client shall indemnify, defend, and hold harmless Sebago Technics, its employees, and subcontractors from any and all claims, damages, losses, and expenses (including reasonable attorney fees), arising out of or resulting from any such damage, except to the extent caused by Sebago Technics' negligence.

**32. STANDARD OF CARE.** The Services provided by Sebago Technics will be performed in accordance with generally accepted practices of engineers, surveyors, landscape architects, and/or scientists (as applicable) providing similar services at the same time, in the same locale, and under like circumstances.

**33. SUCCESSORS AND ASSIGNS.** This Agreement shall be binding upon and inure to the benefit of the Client and Sebago Technics and their respective successors and assigns, including without limitation, any trustee in bankruptcy or any receiver or trustee or similar entity appointed on behalf of the Client or its respective properties or estates. However, nothing in this agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Client or Sebago Technics.

**34. SUSPENSION/TERMINATION OF SERVICES.** The Agreement between the Client and Sebago Technics may be terminated upon ten (10) days written notice received by either party from the other, should either party fail to perform its obligations under the Agreement. In the event of termination by either party, Client shall pay Sebago Technics for all services rendered and costs incurred up to and including the date of termination plus any post termination work that in Sebago Technics' sole discretion may be required.

If Client fails to make payment when due for services and reimbursable expenses, Sebago Technics may, upon seven (7) days written notice to Client, suspend and/or terminate performance of services under this Agreement. Unless payment in full is received by Sebago Technics within seven (7) days of the date of the notice, the suspension and/or termination shall take effect without further notice. In the event of a suspension and/or termination of services, Sebago Technics shall have no liability to Client for delay or damage to Client or others because of such suspension and/or termination of services.

**35. WAIVER.** No failure to exercise and no delay in exercising any right, power, or remedy hereunder shall impair any right, power, or remedy which Sebago Technics may have, nor shall any such delay be construed to be a waiver of any such rights, powers, or remedies or an acquiescence to any breach or default under this Agreement, nor shall any such act or failure to act by Sebago Technics constitute a waiver of any subsequently occurring default or breach by Client.

**36. WAIVER OF INCIDENTAL, INDIRECT, AND CONSEQUENTIAL DAMAGES.** Client and Sebago Technics waive incidental, indirect, and consequential damages for claims, disputes, or other matters in question arising out of or relating in any way to the Agreement. This mutual waiver includes, but is not limited to, damages related to loss of use, loss of profits, loss of income, loss of reputation, unrealized savings or diminution of property value, and shall apply to any cause of action including, but not limited to, negligence, strict liability, breach of contract, and breach of warranty. This mutual waiver is applicable, without limitation, to all claims for consequential damages due to either party's termination in accordance with the provisions set forth in the terms and conditions of the Agreement

**Effective Date: February 2019**

# Transit Signal Priority Implementation and Evaluation South Portland, Maine



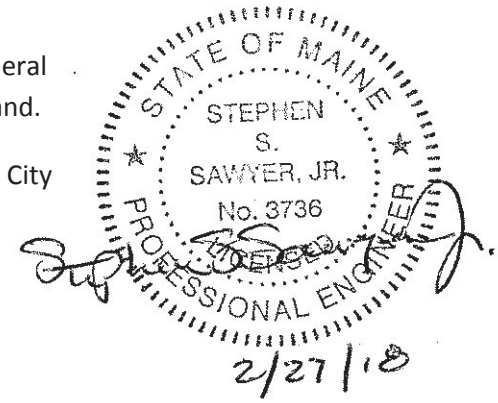
By
Sebago Technics, Inc.

February, 2018

SEBAGO TECHNICS
CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

# Acknowledgements

This Project was performed with the aid of a grant from the Federal Transit Administration administered by the Staff of South Portland.




The principal investigators were from Sebago Technics, Inc., the City of South Portland's Consulting Traffic Engineer, and included:

| | |
|---|---|
| Curtis Thompson, EI | Primary Investigator |
| Derek Caldwell, PE, PTOE | Technical Reviewer |
| Bradley Lyon, PE, PTOE | Technical Reviewer |
| Stephen Sawyer, PE | Report Editor |

Sebago Technics would like to acknowledge the assistance and cooperation it received from members of the South Portland Bus system, without which this Study could not have been performed as thoroughly as it was. Members included:

| | |
|---|---|
| Arthur Handman | Director |
| Richard Sargent | Operations Supervisor |

Sebago Technics would also like to acknowledge the council and feedback it received from two external academic colleagues:

| | |
|---|---|
| Per Garder, PhD, PE | Professor at the University of Maine |
| Peter Furth, PhD | Professor at Northeastern University |

Finally, Sebago Technics would like to acknowledge its vendor partners in this endeavor:

| | |
|---|---|
| Alan Deditch, P.E. | Highway Tech, supplier of the controller software upgrades and optical emitters |
| Jeffery Moulton | Coastal Electric, distributor of the EMTRAC Priority Management System |
| Kris Morgan<br>Andrew Morgan<br>Destry Diefenbach | EMTRAC, installer and technical support for the EMTRAC Priority Management System |

Project: 15506 February, 2018

# Executive Summary

The goal of this Project was to explore the benefits of Transit Signal Priority (TSP) for South Portland Bus. TSP is a traffic signal programming strategy for reducing the number of stops and delay at signalized intersections for transit vehicles. South Portland Bus currently has three long routes encompassing the major destinations across South Portland, as well as linkage to Portland and Scarborough. A bus can cross a signalized intersection in South Portland as many as 44 times on a round trip and minimizing stops and/or reducing delays at these locations by implementing TSP was thought to be significant in terms of shortening scheduled travel times and increasing on-time reliability – two key performance measures of a successful transit operation.

South Portland Bus operates 7 vehicles daily – seven days per week. Given the expanse of the city's limits, their three routes (21, 24A, and 24B) are in excess of 20 miles round trip when you include the connections to downtown Portland and Scarborough. These parameters have resulted in a schedule that is based on roughly 60-minute headways at stops – not uncommon for small, non-metropolitan systems. Unfortunately, to date there is a lack of published data on the use of TSP in these smaller, less dense systems.

The management of South Portland Bus went to the Transit Committee of the Portland Area Transportation System (PACTS) and partitioned for funding to perform a field test of TSP technology to see what the real benefits could be to their operations. Their case was strengthened by the fact that a number of traffic signals in South Portland were previously outfitted with TSP software, but never activated. PACTS granted the City $220,341 of Federal Transit Administration money under Grant ME-2016-005-01 to conduct this TSP Implementation and Evaluation Project. The Principal Investigators for this Project were traffic engineers from Sebago Technics, the City's consulting traffic engineers.

The initial Work Plan included the purchase and installation of two different TSP activation technologies - optical and radio-based GPS for the bus fleet, and the upgrading of TSP firmware in 13 existing traffic signal controllers along Broadway and around the Maine Mall. The objective was to determine the performance benefits of TSP in general and also to compare the two primary means of operating TSP to see if one performed better than the other under actual field conditions.

The Work Plan included three, 28-day field tests once all of the equipment was purchased, installed, and field tested for operability. These were:

- Existing conditions without TSP
- TSP with radio-based GPS activation
- TSP with optical activation.

The data points collected for each run were aggregated into three time periods throughout the day (AM, Midday, and PM) due to the large headways (60 minutes) between buses causing the number of data points per hour to be less than could be considered statistically significant. This provided more reasonable results, but still not fine-grained enough to support financial decision making and to determine if TSP was a sound investment for South Portland Bus and the PACTS Region as a whole.

Investigators concluded that the solution to this issue was the development of a theoretical equation based on the desired TSP phase at an intersection and the signal's ability to extend the desired phase or reduce the non-desired phases to minimize bus delays. Such an equation was developed as part of this Project. The results from this equation were then compared to the data from the actual field tests and it was found that the equation's results were in line with the field tests, with few exceptions. On this basis, the overall evaluation proceeded using the new equation to quantify the effects of TSP implementation at the initial 13 intersections that were TSP enabled for this test and also the remaining 15 that are located on bus routes 24A and 24B and not currently TSP enabled.

The methodology developed as part of this Project is significant because it was field tested and it has quantified the impacts TSP can have for South Portland Bus now and into the future should they elect to expand its use. It is also significant because it establishes an objective framework that can be used by other transit agencies in non-metropolitan areas to quantify the benefits of TSP prior to its implementation.

In closing, the authors have provided the specific findings of this Project and outlined some budgetary costs for South Portland Bus to consider should they elect to move forward with additional TSP enhancements to their route system.

**Key Findings and Recommendations:**

1. South Portland Bus Routes 24A and 24B are roughly 20 miles in round trip length and pass through approximately 60 signalized intersections in South Portland, Portland, and Scarborough.

2. The average running travel time for a round trip is 90 minutes, with 30 minutes for passenger stops. The estimated intersection delay at the 44 intersections in South Portland is 17 minutes out of the total 90 minute running travel time.

3. The implementation of TSP can only impact the delays experienced by buses at signalized intersections – currently 17 minutes on average per round trip. The results of both the field and calculated time savings was significant – 4.5 minutes total at the 13 TSP enabled intersections and 3.1 minutes at the other 15 intersections that are not currently TSP enabled for a total of 7.6 minutes. This time savings represents a 44% reduction in the time spent currently at signalized intersections within South Portland. This was validated by driver observations.

4. The Radio-based GPS system performed better than the optical system due to the increase in TSP activation distance. The average optical activation distance was 200' to 500' and the average GPS activation distance was 1500' to 2000'.

5. TSP does not result in noticeable benefits at every intersection. The specific movement the bus makes at an intersection is critical, as well as whether the traffic signal is running coordinated or uncoordinated. For these reasons, some intersections can justify TSP, while others cannot. The intersections on Route 24A and 24B have all been rated for their TSP benefit potential, and we found several cases where existing TSP equipment does not provide significant delay reductions and thus should be moved to another intersection where it can be more effective.

6. Chapter 6 provides three recommendations for future action by South Portland Bus to complete the implementation of TSP on Bus Route 24A and 24B. These three recommendations include relocating some equipment, purchasing additional equipment, and conducting a thorough optimization of the system based on the findings of this Study. The total budgetary cost of these actions is estimated to be $25,000.

**Transit Signal Priority Annual Operating & Maintenance Costs**

**TSP Server**

Sebago Technics provides operations and maintenance configuration and troubleshooting support as part of the Traffic Signal Operations contract with the City of South Portland. Currently the Central Monitoring Software is located on a laptop in the Western Ave Fire Station server room where the Portland Area Comprehensive Transportation System (PACTS) Traffic Signal Management Server is also located. As the majority of the equipment is installed at the traffic signals and utilize the PACTS network for communications.

Sebago Technics has the ability to access the Central Monitoring server remotely using Sebago's connection to the PACTS network. The software is not installed anywhere else and Sebago Technics has been the only entity to use the software since the TSP study, mostly to check the TSP logs compared to the occasional signal complaint.

**TSP Intersection**

The equipment located at the traffic signals is also part of the preemption system and would be covered under the Signal Maintenance contract. Electric Light Company is the City's on call signal contractor. Since the TSP system was installed, the only issues that have come up have been related to the configuration of the equipment within the traffic signal cabinet.

**TSP Hardware**

Estimates for hardware replacement costs:

- Troubleshooting, Repairing, and/or replacing EMTRAC Vehicle Computer Units installed on 7 transit buses. (VCU = $3,829/ea. = $26,803 for 7 vehicles)
- Troubleshooting, Repairing, and/or replacing EMTRAC Vehicle Interrogator Kit installed at Public Works (Interrogator Kit = $5,070/ea.)

All warranties on the 7 VCUs and the 1 Interrogator Kit have expired. Any labor including any database set up not included.

**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **MSF IRRIGATION** | | |
| **Department** | Public Works | **Dept. Priority** | 7 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Public Works Department is requesting funds to install irrigation around the front and side of the Municipal Services Facility. The lawn area around the facility is burning-up by the middle of summer. Watering the areas every few days with a watering truck has not been enough to keep the area green and healthy.

Regular watering through an irrigation system is instrumental in keeping our green spaces green

## Financial Impact of this Purchase/Project

Annual Operating Costs for the irrigation system would be approximately $2,340 for the water usage

## Environmental Considerations

A good watering program will keep our green space green without the use of herbicides or pesticides

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 14,980.00 | $ 14,980.00 | | | | | $ 14,980.00 | $ 14,980.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 14,980.00** | **$ 14,980.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 14,980.00** | **$ 14,980.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Environmental Solutions | | | | | |
| **Est. Annual Operating Costs** | $ 2,340.00 | **Projected Useful Life** | 50 years | **Additional Documentation?** | yes | |
| **City Manager Comments** | | | | | | |

Environmental Solutions

March 4, 2021

Doug Howard, Director
South Portland Public Works
929 Highland Avenue
South Portland, Maine 04106

Dear Doug,

Thank you for the opportunity to provide you with a budget number for the installation of a new irrigation system for the Public Works lawn area close to the building and in the parking lot, as indicated on the enclosed sketch.

The irrigation system design is based on available pressure and flow of 8 gpm at 45 psi. The irrigation system will consist of 4 zones to water the lawn in the parking lot islands as indicated on the sketch and 4 zones for the lawn close to the building.

The point of connection (POC) and controller will be installed on the outside of the building, due to site conditions and available water supply on-site (per site meeting). An isolation valve, backflow preventer, and drain valve for blow out of the system will be installed on the right side of the building, utilizing an existing spigot. The backflow preventer will be installed on unions for the ability to remove at the end of the season for storage over the winter.

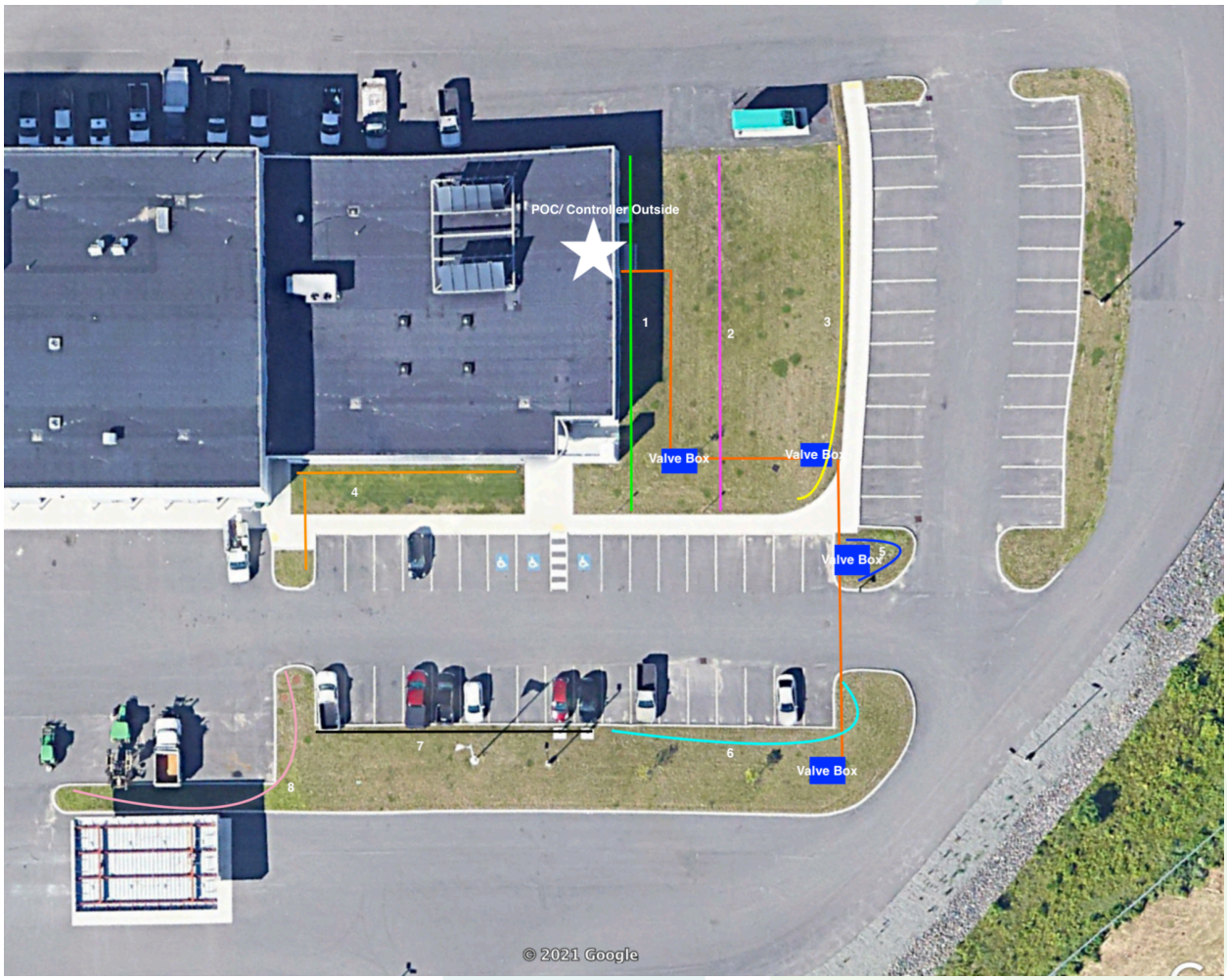
During the site visit, it was determined that there is no outside power source. Therefore, a solar-powered controller with battery back-up will be installed.

The irrigation lines will need to run under the pavement to reach the parking lot islands, requiring directional boring. We have included an estimated price, based on our past work with ETTI. We will adjust that price, based on a formal quote from ETTI if Public Works decides to move forward with the project.

| | |
|---|---|
| **Installation and Materials** | **$8,980.00** ***budget*** |
| **Directional Boring** | **$6,000.00** ***estimated*** |

Five (5) year manufacturer's warranty on Hunter I-20 rotor heads, Hunter PROS40 spray heads, and Hunter WR-CLIK rain sensor.
Two (2) year manufacturer's warranty on Hunter XC Hybrid Controller and Hunter PGV101 valves.
One (1) year manufacturer's warranty on Febco backflow preventer.

Environmental Solutions



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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **New Venting System for Capped Landfill** | | |
| **Department** | Public Works | **Dept. Priority** | 1 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Environmental Protection | | |

## Purchase/Project Description

The capped MSW landfill venting system has failed. I requested $30,000 in last year's CIP to address adding additional vents to the capped landfill. After further investigation by Ransom Consulting and Maine Department of Environmental Protection (MDEP), it was determined that none of the current vents are working. It appears these vents were not properly installed when the landfill was originally capped.

The MDEP is now requiring removing the old system as well as installing approximately twelve to fourteen new vents. The installation of the new vents is eligible for 90% reimbursement through MDPE Landfill Cost Sharing Program. As part of this project we are working with the Sustainability Department with the installation of the new solar array going on the same capped landfill. Revision Energy would prefer all the work associated with the venting project be done prior to the installation of the new solar array.

MDPE is requiring this work be completed. If the project is not completed this year, there is the potential for additional costs associated with working around the newly installed solar array.

## Financial Impact of this Purchase/Project

The estimate for total cost of this project is $213,000. The amount eligible for reimbursement is approximately $170,000. The annul costs are $10,000 for the required inspection and testing of the closed landfill. This is budgeted each year in the operation budget.

## Environmental Considerations

The landfill is producing methane gas, however it is not being detected with the current vents. This means the methane is possible migrating out through the base of the landfill. The result of this migration could be contaminated ground water around the landfill. The new and properly installed vents will mitigate any migration of the methane gas to ground water. There is also the potential to harness the methane gas in the future for energy. This will be determined by the amount of methane detected during future inspections

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 13,000.00 | $ 13,000.00 | | | | | $ 13,000.00 | $ 13,000.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 170,000.00 | $ 170,000.00 | | | | | $ 170,000.00 | $ 170,000.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $ 30,000.00 | $ 30,000.00 | | | | | $ 30,000.00 | $ 30,000.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 213,000.00** | **$ 213,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 213,000.00** | **$ 213,000.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Ransom Environmental Engineering | | | | | |
| **Est. Annual Operating Costs** | $ 10,000.00 | **Projected Useful Life** | 50 years | **Additional Documentation?** | yes | |
| **City Manager Comments** | | | | | | |

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RANSOM Consulting, LLC

Consulting Engineers and Scientists

December 7, 2020 Project 151.06159.011

Mr. Matthew Young, Project Manager
Maine Department of Environmental Protection
Division of Remediation- Landfill Closure and Remediation Program
17 State House Station
Augusta, Maine 04333

RE: City of South Portland
Abandonment of Existing (Non-Functional) Landfill Vents & Installation of New Landfill Vents
Closed Municipal Solid Waste Landfill
929 Highland Avenue
South Portland, Maine

Dear Mr. Young:

On behalf of the City of South Portland (the City) and the Maine Department of Environmental Protection (MEDEP), Ransom Consulting, LLC (Ransom) has prepared this letter summarizing our engineering design and specifications for installation of the proposed, new landfill venting system and decommissioning of the existing, non-functional landfill venting system at the City's closed, municipal solid waste (MSW) landfill in accordance with Maine's Chapter 401 Solid Waste Management Rules.

**BACKGROUND**

In April 2020, Ransom completed a landfill gas investigation at City's closed, municipal solid waste (MSW) landfill. The purpose of the investigation was to collect sufficient data [i.e., depth to waste layer and landfill gas (LFG) readings] at 20 Geoprobe® boring locations (10 locations at both MSW landfill cells) in order to site at least 10 to 12 new landfill vents. The results of our investigation would also provide justification for the abandonment or removal of the existing venting system, which is manifolded together via subgrade piping and is not effectively venting landfill gases, as designed. Results of Ransom's investigation were summarized in a report, dated May 5, 2020, which was reviewed and accepted by Matthew Young of the MEDEP's Landfill Closure and Remediation Program per email correspondence on May 5, 2020.

Based on correspondence with the City, ReVision Energy (ReVision) proposes to construct ground-mounted solar array systems on the MSW landfill cells in Summer 2021. Therefore, the existing, venting system is proposed to be decommissioned and the new venting system installed before the solar arrays have been constructed.

**DECOMMISSIONING OF EXISTING (NON-FUNCTIONAL) VENT PIPES**

The City will select a Contractor to decommission the existing, non-functional landfill vent pipes. Decommissioning activities will include removal/cutting of the existing PVC vent pipes (above grade only) and injecting and capping the remaining vent pipe riser with bentonite, then loam and grass seed to

**400 Commercial Street, Suite 404, Portland, Maine 04101, Tel (207) 772-2891, Fax (207) 772-3248**
Pease International Tradeport, 112 Corporate Drive, Portsmouth, New Hampshire 03801, Tel (603) 436-1490
12 Kent Way, Suite 100, Byfield, Massachusetts 01922, Tel (978) 465-1822
2127 Hamilton Avenue, Hamilton, New Jersey 08619, Tel (609) 584-0090
60 Valley Street, Building F, Suite 106, Providence, Rhode Island 02909, Tel (401) 433-2160

**www.ransomenv.com**

restore the integrity of the landfill cap. Similar decommissioning activities will be completed for broken/missing vent pipes if evidence of the broken/missing vent pipe is distinguishable at the ground surface.

The locations and design specifications for the existing landfill venting system were prepared by Sevee & Maher Engineers, Inc. (Sevee & Maher) in 1997 and have been filed with the City and MEDEP. The existing landfill vent system, design specifications and pertinent Site features are shown on **Plan C1.0**, which is based on Sevee & Maher's plans/specifications and Ransom's recent observations.

**INSTALLATION OF NEW VENTING SYSTEM**

The selected Contractor will also install the new, direct vents on behalf of the City. Based on the results of the April 2020 investigation, the following borings were determined to be suitable locations for direct vents for the two MSW landfill cells.

Northern MSW Landfill Cell

- B101
- B102
- B103
- B104
- B106
- B107
- B110

Southern MSW Landfill Cell

- B112
- B113
- B114
- B115
- B116
- B117
- B119

The boring locations and pertinent Site features are shown on **Plan C1.1**. Design specifications for the new vents are based on MEDEP's "Passive Vertical Gas Collection Vent" schematic, which was provided in an email from Matthew Young to the City and Ransom on May 5, 2020. Based on Ransom's correspondence with Stephen Farrar of the MEDEP's Landfill Closure and Remediation Program, the new direct vents do not need to be installed to the bottom of the waste layer as shown on MEDEP's schematic, but should be installed to an adequate depth (i.e., approximately 5 feet) into the waste layer. Cross sections of the landfill showing the proposed vent locations are shown on **Figure C1.2** and design specifications for the new vents are shown on **Plan C1.3 (Northern MSW Landfill Cell) and Plan C1.4 (Southern MSW Landfill Cell).**

The Contractor will be responsible for properly disposing MSW displaced from the landfill during vent installation activities. Based on our correspondence with the City, the displaced MSW will be properly disposed off-site at a facility licensed to accept MSW.

The new vents will also need to be installed at least 10 feet away from future solar array infrastructure, which is proposed to be constructed on top of both MSW landfill cells. Based on information provided by ReVision, the locations of the proposed solar arrays were in a preliminary design phase at the time of Ransom's 2020 Geoprobe® investigation. Therefore, ReVision has indicated that their final plans will ensure that solar array infrastructure will be at least 10 feet away from the new vent locations.

Mr. Matthew Young
Maine Department of Environmental Protection

**FIELD ENGINEERING SUPPORT FOR LANDFILL VENTING SYSTEMS & REPORTING**

The City has contracted Ransom to provide field engineering support during the decommissioning of the existing, non-functional venting system and installation of the new venting system. Ransom will utilize a Landtec GEM2000 meter to collect landfill gas (LFG) parameters (methane, carbon dioxide and oxygen), as well as the percentage of lower explosive limit (%LEL) during vent decommissioning and installation activities. Ransom will provide record drawings and construction documentation to the City and MEDEP at the completion of the project. Additionally, after installation of the new venting system, Ransom will conduct up to 2 additional site visits, to collect LFG readings in order to evaluate the operation of the new landfill venting system. Observations and LFG readings collected during the follow-up visits will be provided to the City and MEDEP in summary letter(s).

Please feel free to call us if you have any questions or need clarification regarding our engineering designs and supporting documentation, as detailed in this letter to install the new landfill venting system and decommission the existing, non-functional landfill venting system at the City of South Portland's closed, MSW landfill.

Sincerely,

RANSOM CONSULTING, LLC

Aaron R. Martin, C.G.
Project Manager / Geologist

Stephen J. Dyer, P.E.
Principal / Senior Engineer

ARM/SJD:mes
Attachments

cc: Mr. Doug Howard, City of South Portland, Department of Public Works
Mr. Stephen Farrar, Maine Department of Environmental Protection

**PLANS**

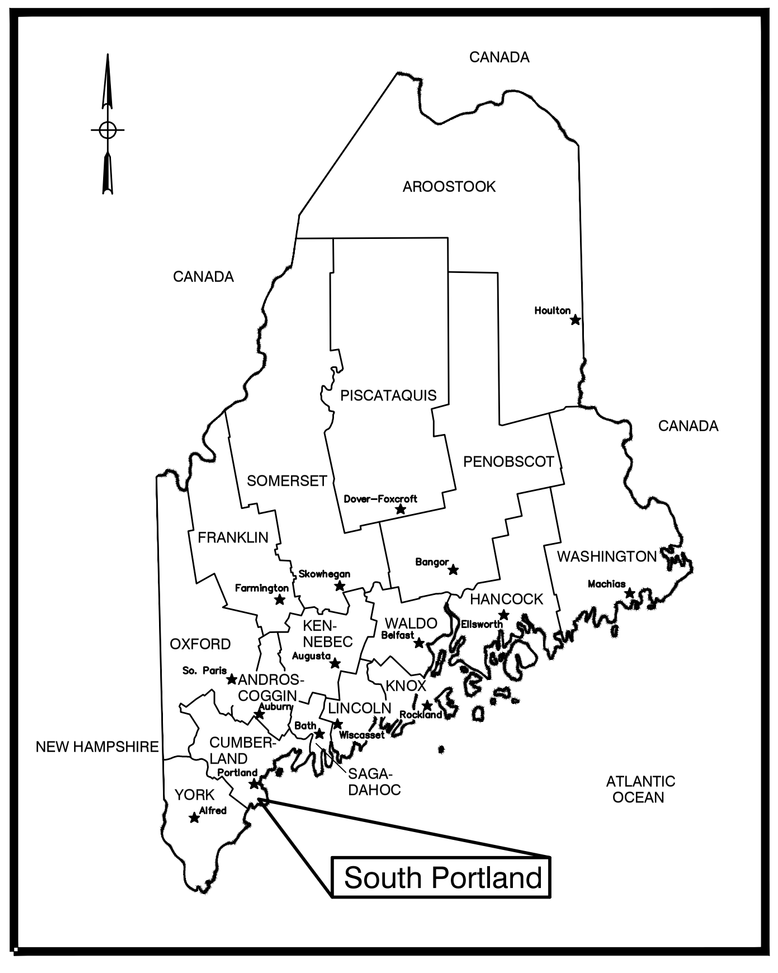
City of South Portland
Abandonment of Existing (Non-Functional) Landfill Vents & Installation of New Landfill Vents
Closed Municipal Solid Waste Landfill
929 Highland Avenue
South Portland, Maine

**Ransom Consulting, LLC**
Project 151.06159.011

# CITY OF SOUTH PORTLAND
# ABANDONMENT OF EXISTING (NON-FUNCTIONAL) LANDFILL VENTS & INSTALLATION OF NEW LANDFILL VENTS
# CLOSED MUNICIPAL SOLID WASTE LANDFILL

## 929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE

DECEMBER 2020




VICINITY MAP
NOT TO SCALE

### Description

| SHT. NO. | TITLE | |
|---|---|---|
| 1 | COVER | |
| 2 | EXISTING CONDITIONS | C1.0 |
| 3 | PROPOSED LAYOUT | C1.1 |
| 4 | PROPOSED NEW LANDFILL GAS VENT PROFILES | C1.2 |
| 5 | VENT DETAILS (NORTH MSW LANDFILL CELL) | C1.3 |
| 6 | VENT DETAILS (SOUTH MSW LANDFILL CELL) | C1.4 |
| 7 | NOTES & DETAILS | C1.5 |

OWNER:

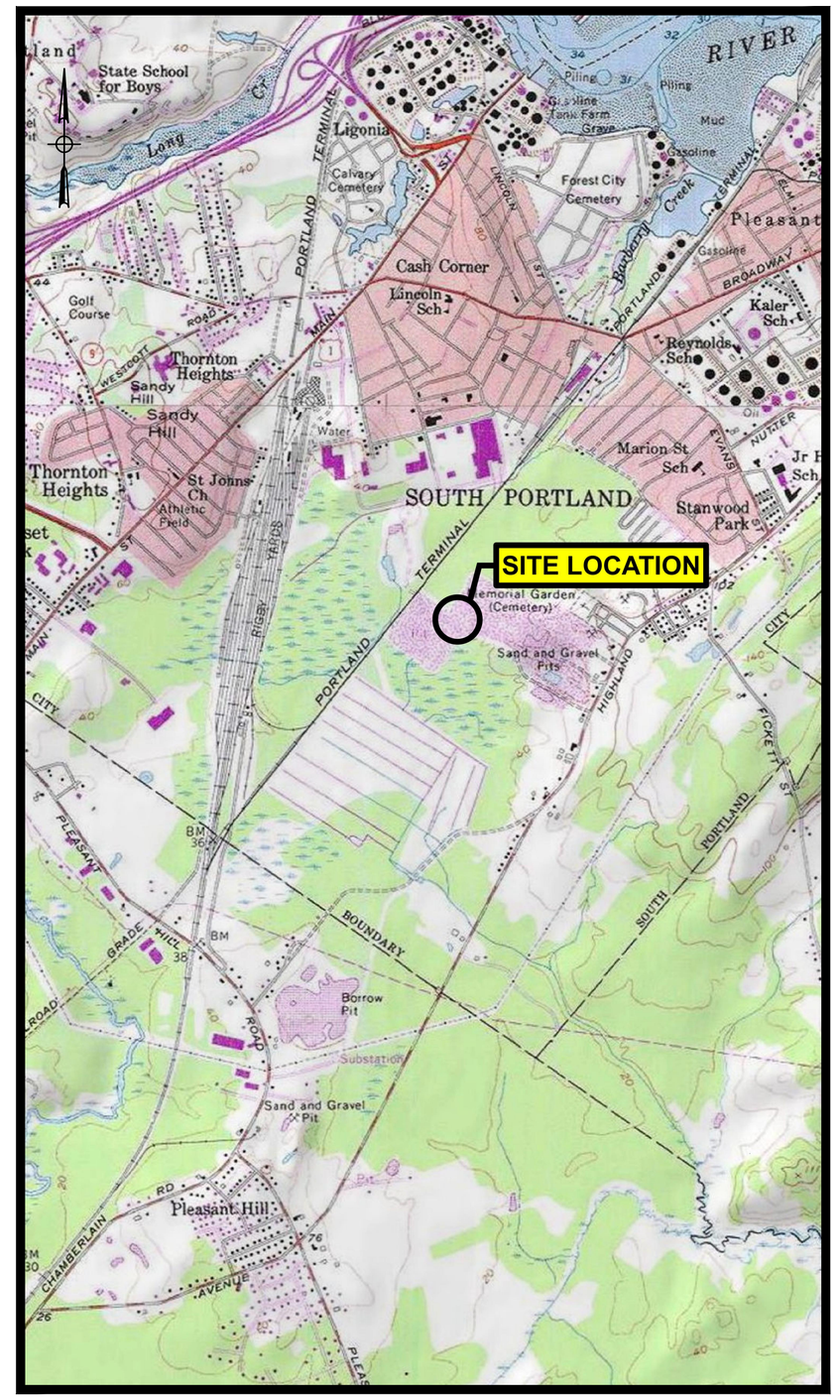
City of South Portland

929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE

DESIGN BY:

RANSOM Consulting, LLC.

400 Commercial Street, Suite 404
Portland, ME 04101
Tel. (207) 772-2891
Fax (207) 772-3248
www.ransomenv.com




LOCATION MAP
NOT TO SCALE

Site:

SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE · STEPHEN J. DYER · #7934 · LICENSED PROFESSIONAL ENGINEER

Stephen Dyer, PE # 7409
400 COMMERCIAL STREET, SUITE 404
PORTLAND, ME 04101
207-772-2891

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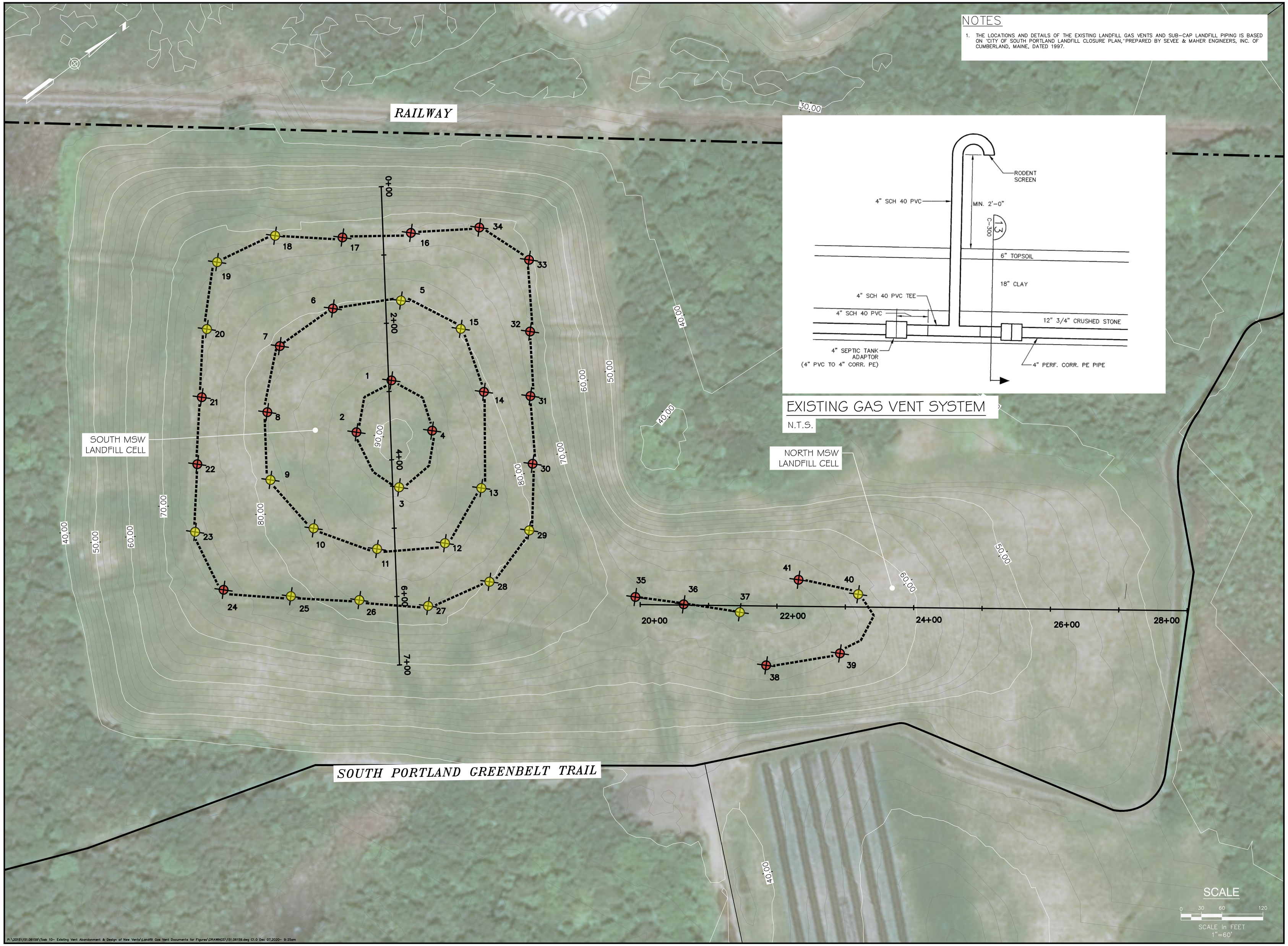
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| Design by: | Checked by: |
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| ARM | SJD |
| Drawn by: | Approved by: |
| BGC | SJD |
| Project: | Date: |
| 151.06159 | DEC 2020 |

Sheet No:

3119

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## NOTES

1. THE LOCATIONS AND DETAILS OF THE EXISTING LANDFILL GAS VENTS AND SUB-CAP LANDFILL PIPING IS BASED ON "CITY OF SOUTH PORTLAND LANDFILL CLOSURE PLAN," PREPARED BY SEVEE & MAHER ENGINEERS, INC. OF CUMBERLAND, MAINE, DATED 1997.




## EXISTING GAS VENT SYSTEM

N.T.S.

Site:

# SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE · STEPHEN J. DYER #7934 · LICENSED PROFESSIONAL ENGINEER


Stephen Dyer, PE # 7409
400 COMMERCIAL STREET, SUITE 404
PORTLAND, ME 04101
207-772-2891


LEGEND

- PROPERTY LINE
- GAS VENT
- MISSING OR BROKEN VENT
- SUB-CAP LANDFILL VENT PIPING


RANSOM Consulting, LLC.
400 Commercial Street, Suite 404
Portland, ME 04101
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Fax (207) 772-3248
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## EXISTING CONDITIONS

| No. | Revision/Issue | Date |
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| Design by: ARM | Checked by: SJD |
| Drawn by: BGC | Approved by: SJD |
| Project: 151.06159 | Date: DEC 2020 |

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## NOTES

1. THE LOCATIONS OF THE PROPOSED NEW LANDFILL GAS VENTS IS BASED ON INFORMATION PROVIDED ON "GEOPROBE® INVESTIGATION FOR NEW LANDFILL VENT LOCATIONS, SOUTH PORTLAND LANDFILL, 929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE," PREPARED BY RANSOM CONSULTING, LLC, DATED MAY 5, 2020.

RAILWAY

PROPOSED GROUND MOUNT SOLAR ARRAY LIMITS (TYP.)

NEW LANDFILL VENT (TYP.)

SOUTH MSW LANDFILL CELL

NORTH MSW LANDFILL CELL

SOUTH PORTLAND GREENBELT TRAIL

B101 B102 B103 B104 B106 B107 B110 B112 B113 B114 B115 B116 B117 B119

0+00 2+00 4+00 6+00 7+00

20+00 22+00 24+00 26+00 28+00

30.00 40.00 50.00 60.00 70.00 80.00 90.00

SCALE

0 30 60 120

SCALE in FEET
1"=60'

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321

Site:

# SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE
STEPHEN J. DYER
#7934
LICENSED PROFESSIONAL ENGINEER

Stephen Dyer, PE # 7409
400 COMMERCIAL STREET, SUITE 404
PORTLAND, ME 04101
207-772-2891

LEGEND

- PROPOSED GROUND MOUNT SOLAR ARRAY
- PROPERTY LINE
- NEW GAS VENT LOCATION

RANSOM Consulting, LLC.
400 Commercial Street, Suite 404
Portland, ME 04101
Tel. (207) 772-2891
Fax (207) 772-3248
www.ransomenv.com

PROPOSED LAYOUT

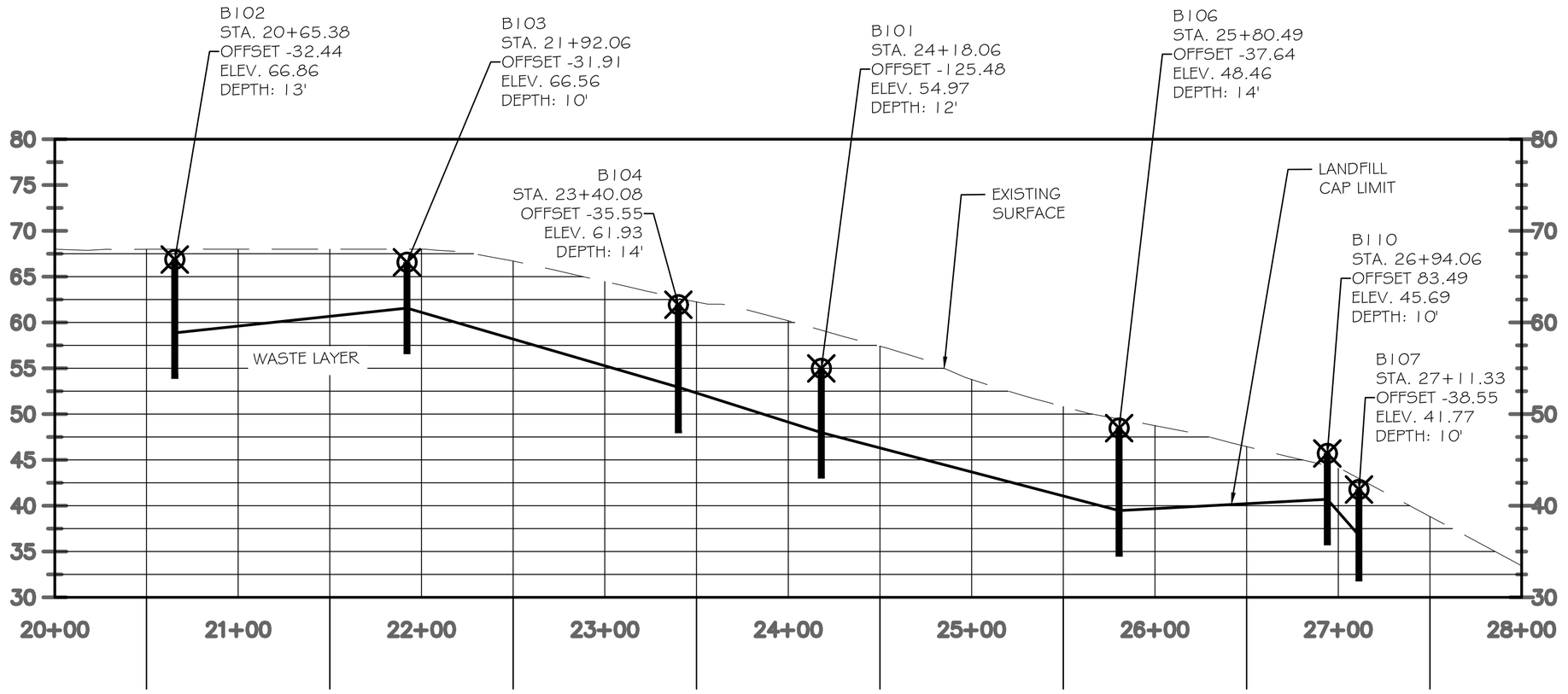
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| Project: 151.06159 | Date: DEC 2020 |

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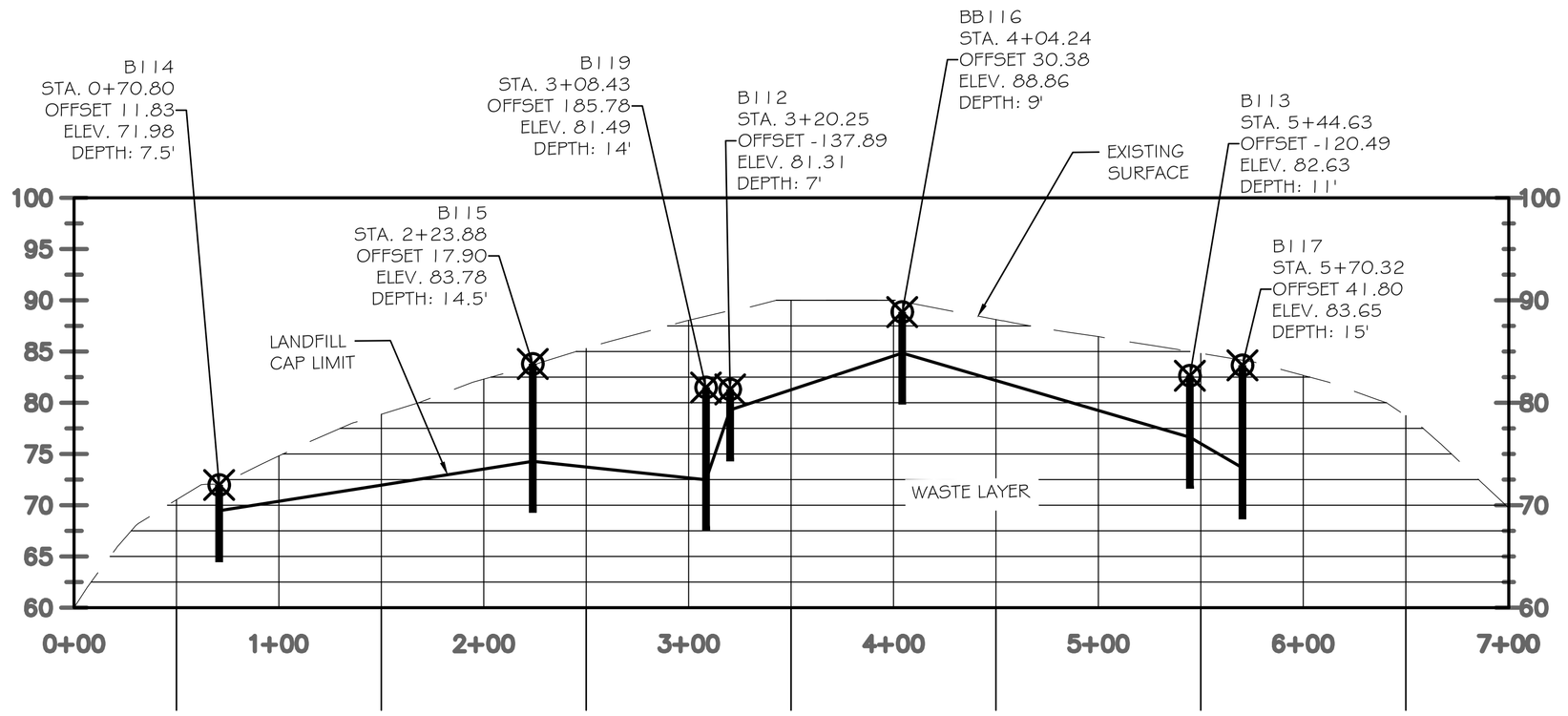
# NORTH MUNICIPAL SOLID WASTE LANDFILL CELL

STATION 20+00-28+00




# SOUTH MUNICIPAL SOLID WASTE LANDFILL CELL

STATION 0+00-7+00




## NOTES

1. THE LOCATIONS OF THE PROPOSED NEW LANDFILL GAS VENTS AND APPROXIMATE DEPTHS OF THE EXISTING LANDFILL CAP LAYER AND WASTE LAYER IS BASED ON INFORMATION PROVIDED ON "GEOPROBE® INVESTIGATION FOR NEW LANDFILL VENT LOCATIONS, SOUTH PORTLAND LANDFILL, 929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE," PREPARED BY RANSOM CONSULTING, LLC, DATED MAY 5, 2020.

## SCALE

VERTICAL SCALE: 0 5 10 20 — SCALE in FEET 1"=10'

HORIZONTAL SCALE: 0 25 50 100 — SCALE in FEET 1"=50'

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322

Site:

SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE
STEPHEN J. DYER
#7934
LICENSED PROFESSIONAL ENGINEER

Stephen Dyer, PE # 7409
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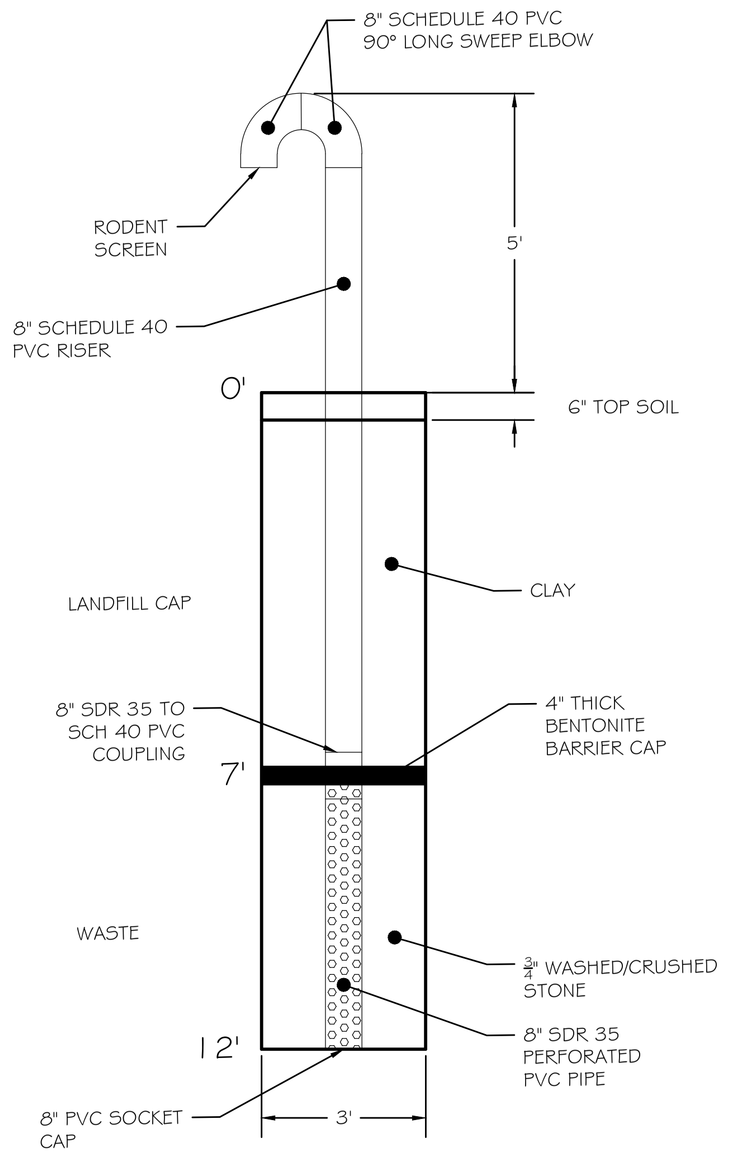

PROPOSED NEW LANDFILL GAS VENT PROFILES

| No. | Revision/Issue | Date |
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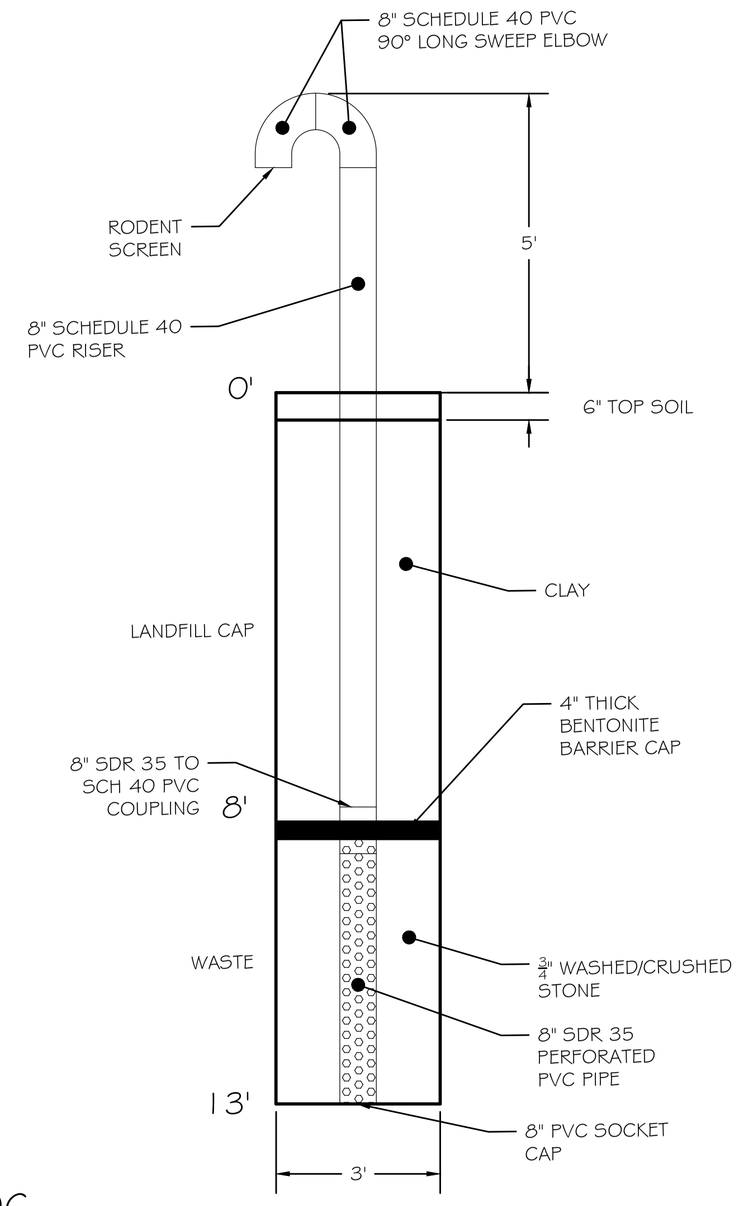
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| Project: 151.06159 | Date: DEC 2020 |

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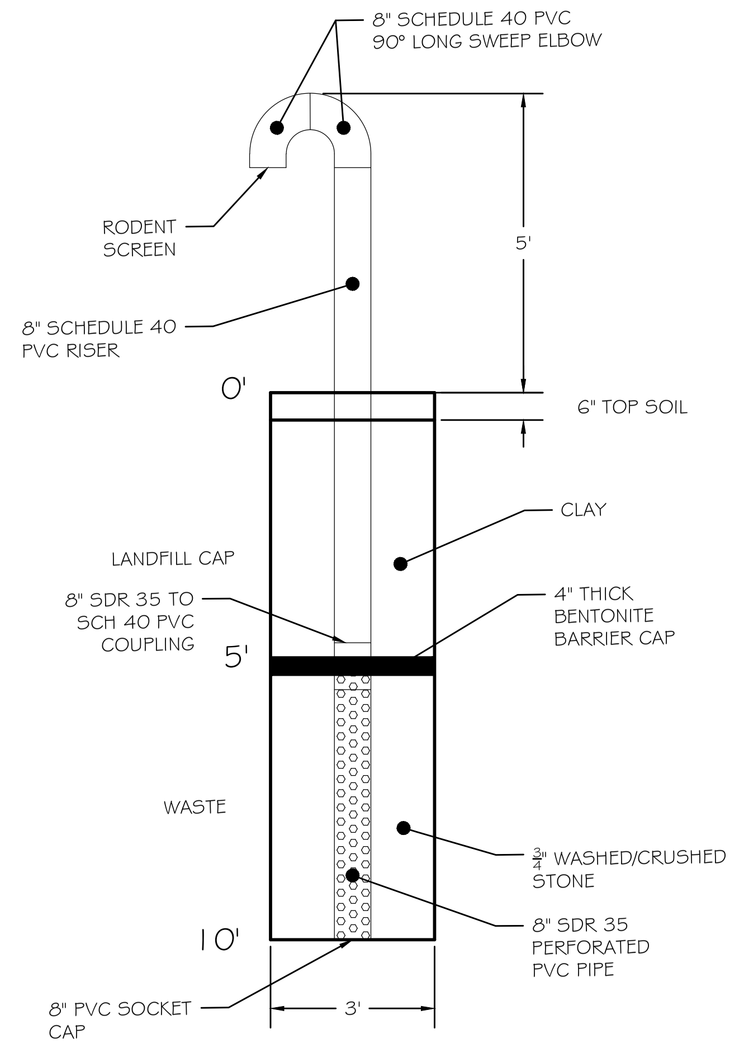
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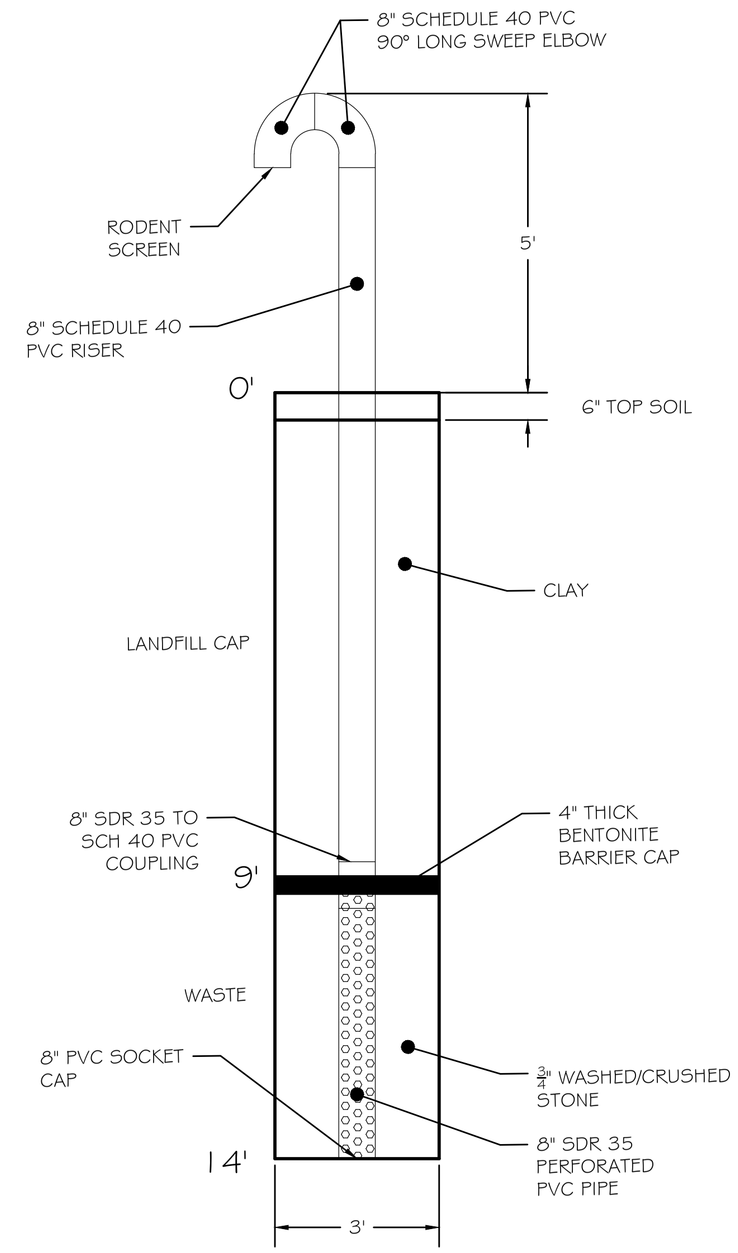

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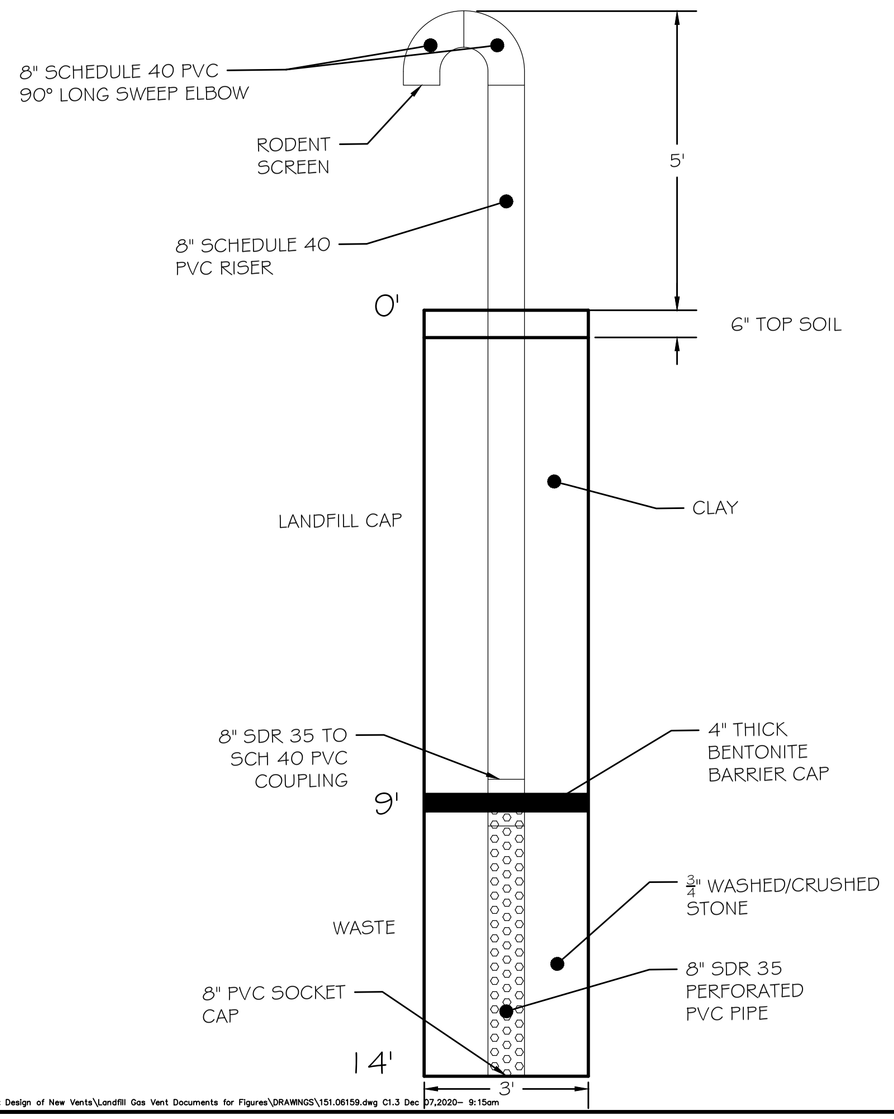

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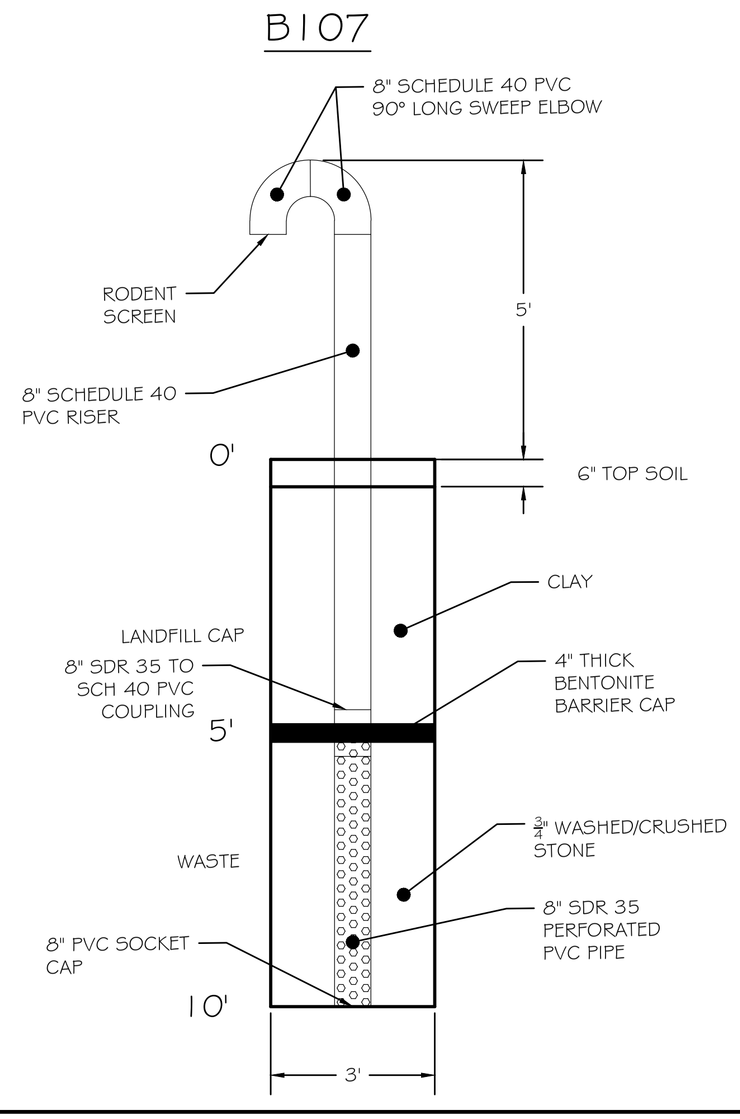

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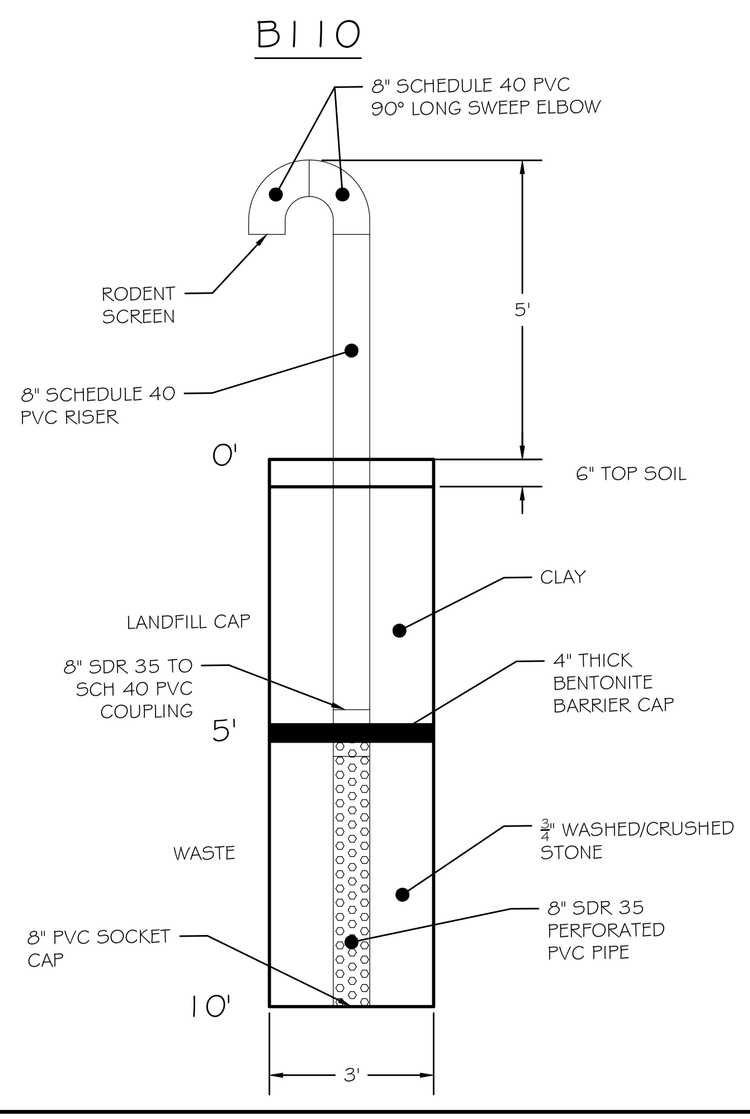

## B106




## B107




## B110




## NOTES

1. THE PROPOSED NEW LANDFILL GAS VENT DETAILS ARE BASED ON THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S PASSIVE VERTICAL GAS COLLECTION AND VENT SCHEMATIC.
2. THE APPROXIMATE DEPTHS OF THE EXISTING LANDFILL CAP LAYER AND WASTE LAYER IS BASED ON INFORMATION PROVIDED ON 'GEOPROBE® INVESTIGATION FOR NEW LANDFILL VENT LOCATIONS, SOUTH PORTLAND LANDFILL, 929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE,"PREPARED BY RANSOM CONSULTING, LLC, DATED MAY 5, 2020.
4. PERFORATED PIPE SHALL BE 0.5" PERFORATIONS LOCATED ON 5" CENTERS IN SIX ROWS 60 DEGREES APART

SCALE

N.T.S



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Site:

SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE
STEPHEN J. DYER
#7934
LICENSED PROFESSIONAL ENGINEER

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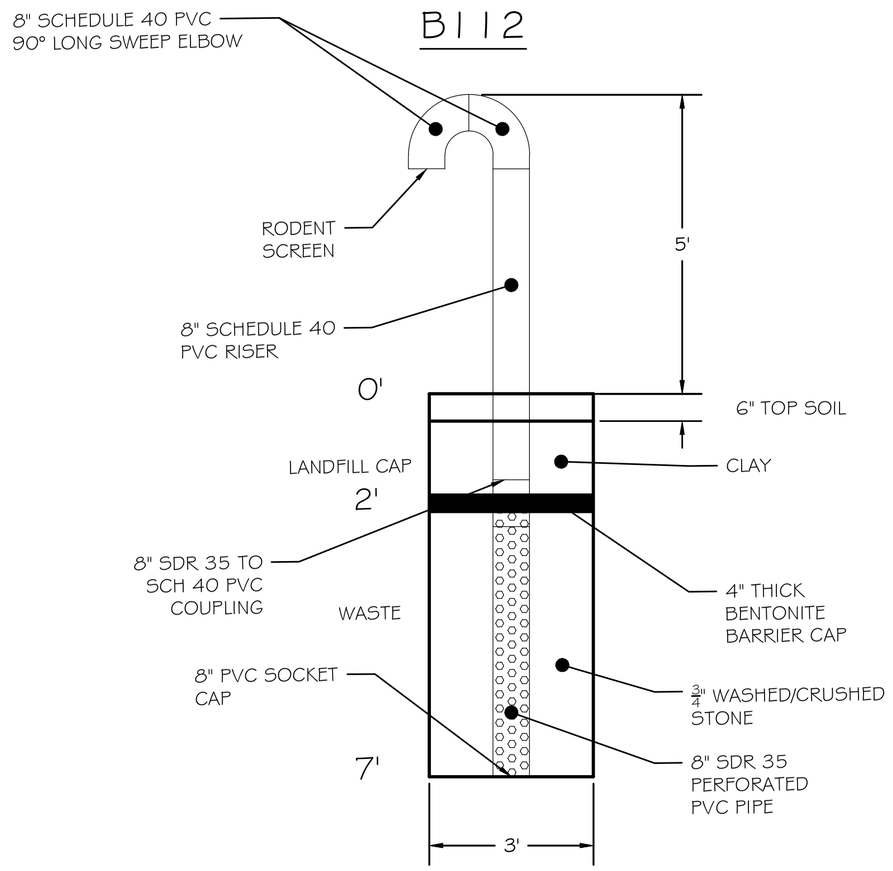
# VENT DETAILS (NORTH MSW LANDFILL CELL)

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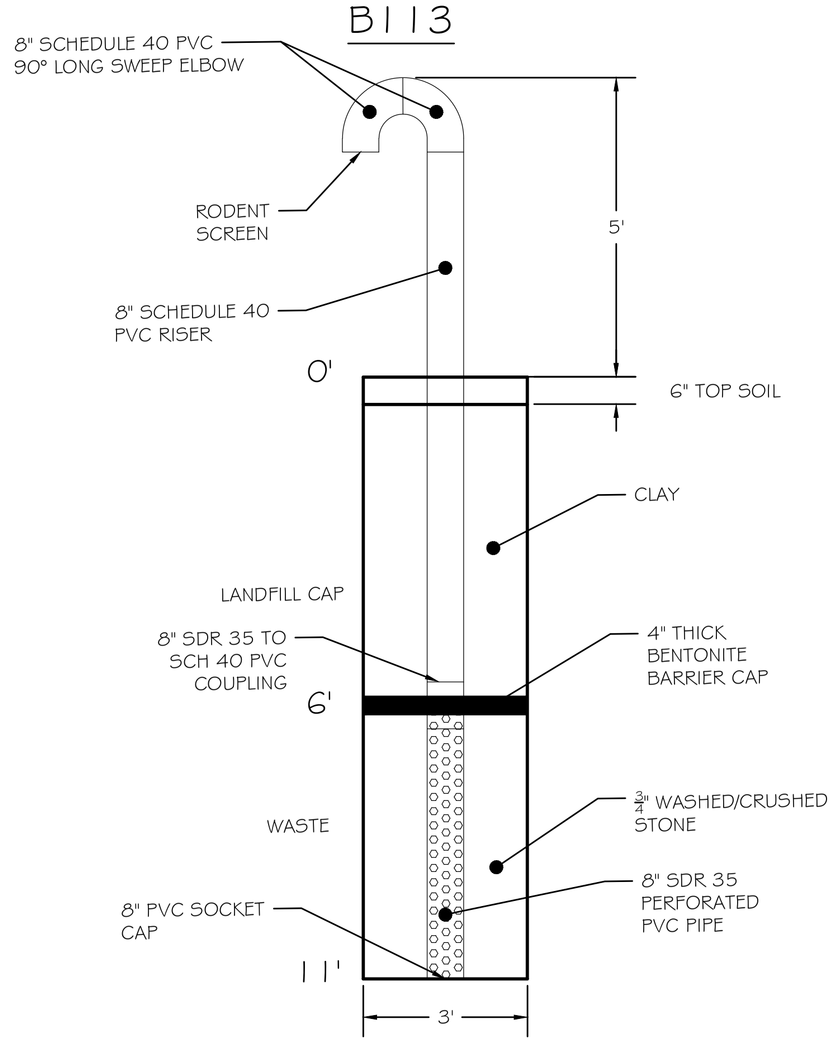
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| Drawn by: BGC | Approved by: SJD |
| Project: 151.06159 | Date: DEC 2020 |

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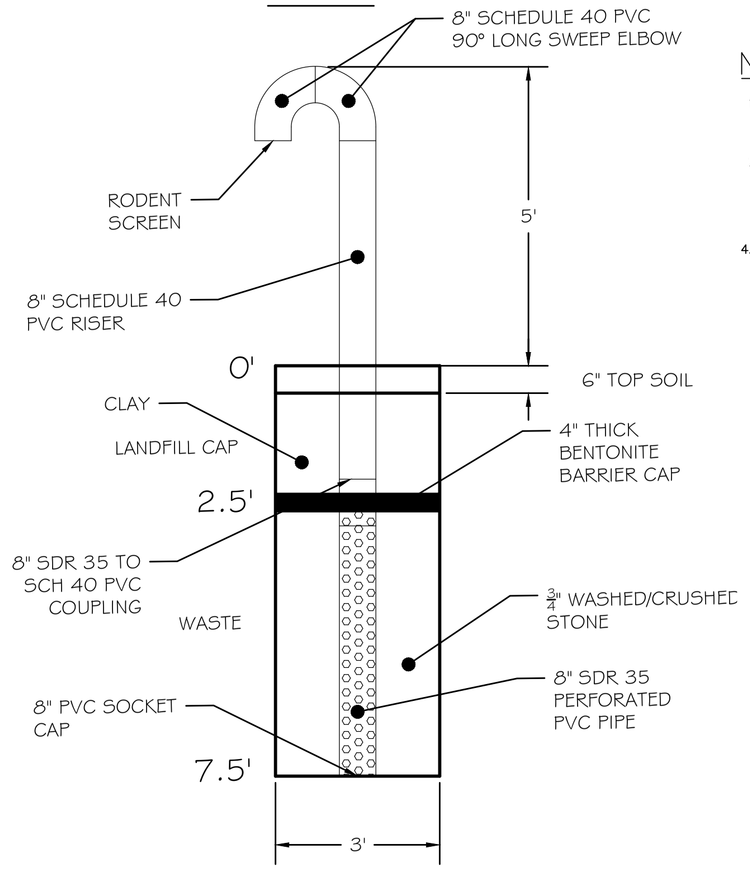
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## B113



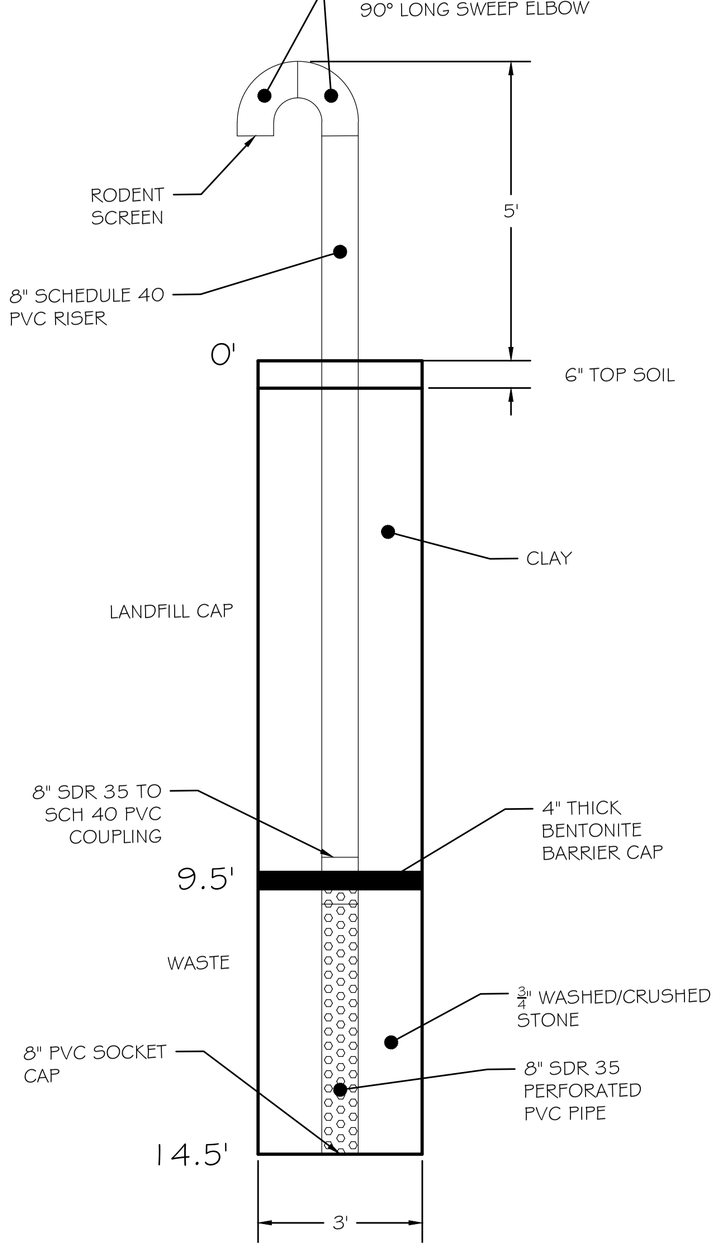

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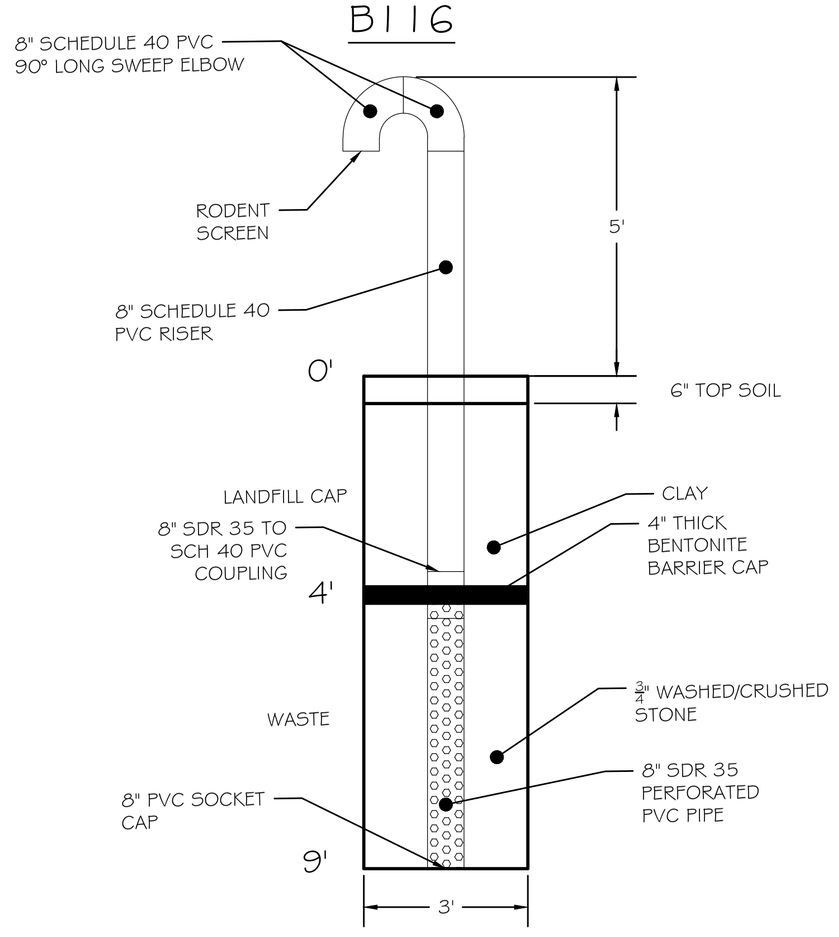

## NOTES

1. THE PROPOSED NEW LANDFILL GAS VENT DETAILS ARE BASED ON THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S PASSIVE VERTICAL GAS COLLECTION AND VENT SCHEMATIC.
2. THE APPROXIMATE DEPTHS OF THE EXISTING LANDFILL CAP LAYER AND WASTE LAYER IS BASED ON INFORMATION PROVIDED ON "GEOPROBE® INVESTIGATION FOR NEW LANDFILL VENT LOCATIONS, SOUTH PORTLAND LANDFILL, 929 HIGHLAND AVENUE, SOUTH PORTLAND, MAINE," PREPARED BY RANSOM CONSULTING, LLC, DATED MAY 5, 2020.
4. PERFORATED PIPE SHALL BE 0.5" PERFORATIONS LOCATED ON 5" CENTERS IN SIX ROWS 60 DEGREES APART

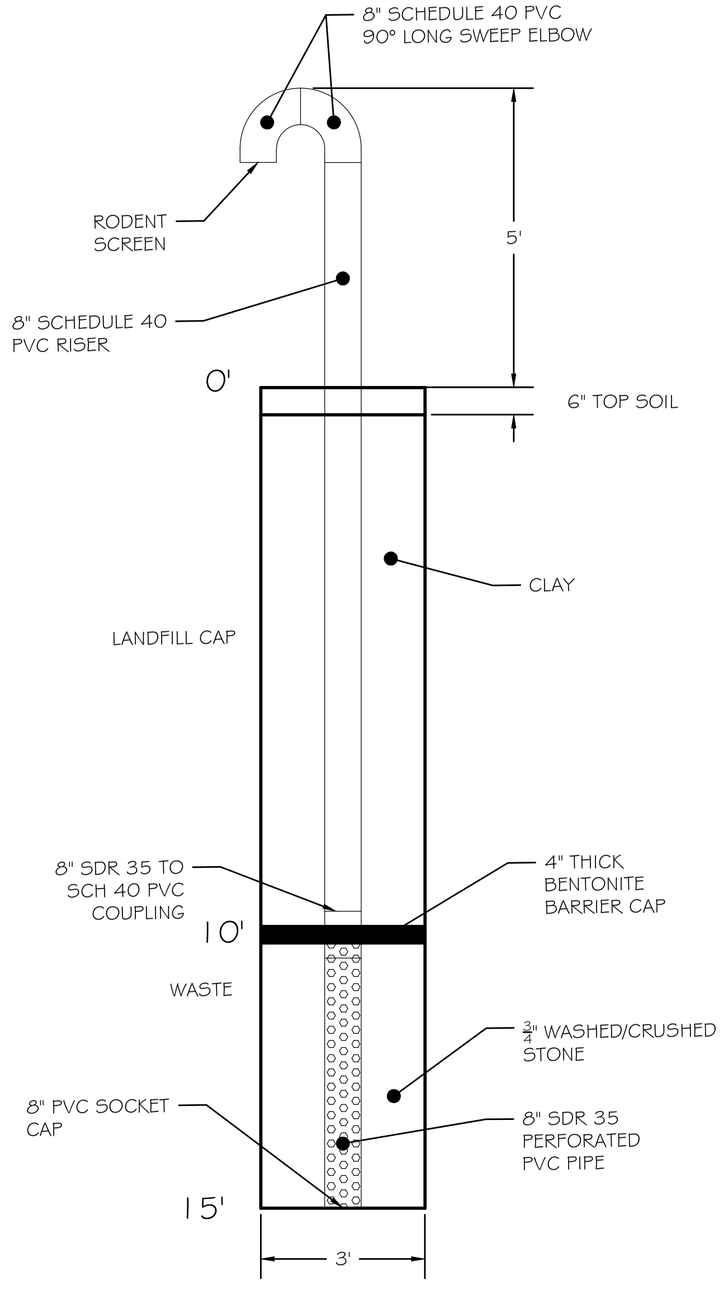
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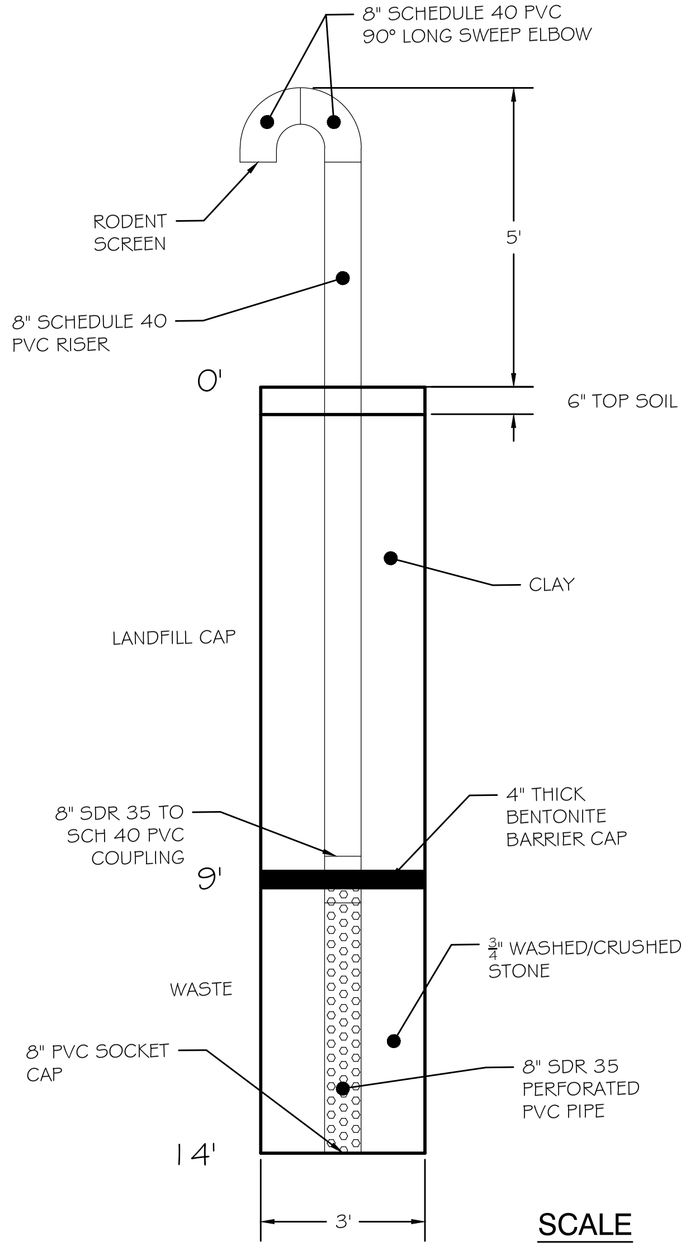

## B116




## B117




## B119




SCALE

N.T.S



Site:

# SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE
STEPHEN J. DYER
#7934
LICENSED PROFESSIONAL ENGINEER

Stephen Dyer, PE # 7409
400 COMMERCIAL STREET, SUITE 404
PORTLAND, ME 04101
207-772-2891

RANSOM Consulting, LLC.
400 Commercial Street, Suite 404
Portland, ME 04101
Tel. (207) 772-2891
Fax (207) 772-3248
www.ransomenv.com

# VENT DETAILS (SOUTH MSW LANDFILL CELL)

| No. | Revision/Issue | Date |
|---|---|---|
| x | xxxxxxxx | x-x-xx |

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| Design by: ARM | Checked by: SJD |
| Drawn by: BGC | Approved by: SJD |
| Project: 151.06159 | Date: DEC 2020 |

Sheet No:

# C1.4

# GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS.

2. ALL WORK SHALL BE DONE IN AN ORDERLY AND PROFESSIONAL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK TO BE DONE BY SUBCONTRACTORS, LOCAL AUTHORITIES, STATE AGENCIES AND/OR UTILITY COMPANIES.

3. ALL WORK SHALL BE PERFORMED BY PERSONS QUALIFIED IN THEIR TRADE AND LICENSED TO PRACTICE SUCH TRADE IN THE STATE OF MAINE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS AND ALL PRECAUTIONS DURING THE CONSTRUCTION, PROTECTION OF PUBLIC AND WORKERS AND SANITARY PROVISIONS FOR EMPLOYEES AND SUBCONTRACTORS REQUIRED FOR THE DURATION OF THE PROJECT.

5. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS, DIMENSIONS, ELEVATIONS AND SITE CONDITIONS OF EXISTING STRUCTURES, EQUIPMENT, PIPING, ETC. PRIOR TO THE COMMENCEMENT OF ANY WORK. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER OF ANY CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO CONDITIONS SHOWN ON THE DRAWING.

6. THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS THAT PREVENT THE CONTRACTOR'S COMPLETION OF THE WORK AS SHOWN ON THE PLAN.

7. THE CONTRACTOR SHALL GUARANTEE THAT THE MATERIALS AND WORKMANSHIP ARE FREE OF DEFECTS FOR A PERIOD OF ONE FULL YEAR FROM THE CONSTRUCTION COMPLETION DATE. SHOULD DEFECTS OCCUR WITHIN THIS PERIOD OF TIME, THE CONTRACTOR SHALL REPAIR OR REPLACE THE DEFECTIVE WORK AT NO COST TO THE OWNER.

8. ALL WORK UNDER THIS CONTRACT SHALL OCCUR WITHIN THE SITE PROPERTY BOUNDARY.

9. THESE PLANS, PREPARED BY RANSOM CONSULTING, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.

10. FIELD CHANGES. DURING CONSTRUCTION, THE CONTRACTOR MAY PROPOSE FIELD CHANGES TO THE ENGINEER FOR MINOR CONSTRUCTION-RELATED CHANGES TO THE DESIGN PLANS OR TO ACCOUNT FOR UNEXPECTED SITE CONDITIONS. FIELD CHANGES SHALL BE LIMITED TO CHANGES THAT DO NOT MATERIALLY ALTER THE VISUAL APPEARANCE OF THE PROJECT (SUCH AS BUT NOT LIMITED TO LANDSCAPE DESIGN, OUTDOOR LIGHTING, ETC.) AND THAT DO NOT MATERIALLY ALTER THE APPROVED DESIGN OF THE PROJECT (SUCH AS BUT NOT LIMITED TO LAYOUT, STORM WATER DRAINAGE, ETC.).

11. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS AND STANDARDS.

12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL EXISTING CONDITIONS SURROUNDING IT AND THEREON. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF HIS INTENTIONS AT LEAST 48 HOURS IN ADVANCE.

13. ALL WORK IS TO CONFORM TO THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS AND MAINE D.O.T. STANDARD HIGHWAY SPECIFICATIONS.

14. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.

15. PROPERTY LINE AND R.O.W. MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE, BY A MAINE REGISTERED LAND SURVEYOR.

16. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS. NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING ALL SIGNS AND SIGN POSTS AS REQUIRED. THE CONTRACTOR SHALL REPLACE ALL DAMAGED SIGNS AND SIGN POSTS THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE TOWN.

18. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.

# SOILS/WASTE MANAGEMENT NOTES:

1. SOILS/WASTE MAY BE TEMPORARILY STOCKPILED AT THE SITE PRIOR TO OFF-SITE DISPOSAL. STOCKPILES MUST BE LOCATED ON PAVEMENT; OR ON 6 MIL (MINIMUM) POLY SHEETING. ALL STOCKPILES MUST BE COVERED WITH MINIMUM 6 MIL POLY SHEETING AND SECURED AT NIGHT AND AT ALL TIMES THAT THE CONTRACTOR IS OFFSITE. IF ROLL-OFF CONTAINERS ARE USED FOR STOCKPILING, THEY SHALL BE SECURELY COVERED AT NIGHT, AND DURING ALL TIMES WHEN THE CONTRACTOR IS OFFSITE. STORMWATER RUNOFF SHALL BE DIVERTED AWAY FROM ANY STOCKPILES.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DISPOSAL WITH RECEIVING FACILITY.

# EROSION CONTROL NOTES:

## EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PRIMARY EMPHASIS OF THE EROSION AND SEDIMENT

- RAPID VEGETATION OF EXPOSED AREAS TO MINIMIZE THE
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES, STONE CHECK DAMS, SILT FENCE, SILT SAC,
- DEVELOPMENT OF CAREFUL CONSTRUCTION SEQUENCE

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE MAINE EROSION AND SEDIMENT CONTROL BMPs, (MOST RECENT EDITION).

## TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION & SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION. THESE TEMPORARY EROSION CONTROL MEASURES SHOULD BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT SITE ENTRANCES AS NECESSARY.

2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS (EROSION CONTROL BERM) SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE TRIBUTARY AREAS ARE VEGETATED. THE SILT FENCE AND/OR THE EROSION CONTROL BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED AND INSPECTED REGULARLY, INCLUDING BEFORE AND AFTER A STORM EVENT OF 0.5 INCHES OR GREATER. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

3. STRAW, HAY MULCH AND HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR BARE OR SEEDED AREAS UNTIL VEGETATION IS ESTABLISHED AND SHOULD BE APPLIED WITHIN 7 DAYS AT A RATE OF 90 POUNDS PER 1,000 SQUARE FEET. MULCH PLACED BETWEEN APRIL 15TH AND SEPEMBER 30TH (ON SLOPES OF LESS THEN 15%) SHALL BE ANCHORED BY APPLYING WATER. MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15% SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. SLOPES STEEPER THAN 3:1 SHALL RECEIVE EROSION

4. STOCKPILES SHALL BE STABILIZED WITHIN SEVEN DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS SHREDDED HAY, STRAW, OR EROSION CONTROL MIX. STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER AT THE TIME OF FORMATION.

5. ROADS SHALL BE SWEPT TO CONTROL MUD AND DUST AS NECESSARY. ADDITIONAL STONE SHALL BE ADDED TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

6. DURING GRUBBING OPERATIONS STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION

7. SILT FENCE HAS A MINIMUM STAKE SPACING OF 6 FEET, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT (MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES), IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE MUST BE ANCHORED. SEE DETAIL

8. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR APPROVED SEDIMENT BAGS (SUCH AS SILT SACK). INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHALL BE REMOVED AND THE BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF THE DESIGN DEPTH OF THE BARRIER. THE BARRIER SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA

9. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS-

10. LOAM AND SEED IS INTENDED TO SERVE AS THE PRIMARY PERMANENT VEGETATIVE MEASURE FOR ALL BARE AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES,

11. WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (e.g. HAYBALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE.

## PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION

1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED AND SEEDED AS SPECIFIED IN MAINE DOT SECTION 619

2. FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXEROISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE BY LIMITING THE DISTURBED AREA. THE CONSTRUCTION OF BMPs SHOULD EITHER BE PERFORMED AFTER THE DISTURBED AREA IS STABILIZED OR TEMPORARY EROSION CONTROL MEASURES NEED TO BE IMPLEMENTED TO PROTECT THE BMPs FROM BEING CLOGGED WITH CONSTRUCTION SEDIMENT.

3. ALL BARE AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP OR GRAVEL; SHALL BE VEGETATED.

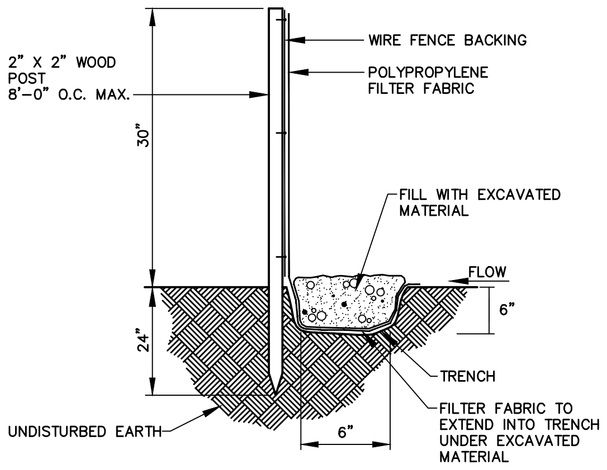
4. PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK. WORK MUST BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SPECIFIED BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE STRIPPED.

## MAINTENANCE OF FACILITIES

1. THE STORM WATER FACILITIES WILL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL COMPLETION IS ISSUED, OR UNTIL THE SITE IS STABILIZED (>90% CATCH OF VEGETATION), WHICHEVER IS LATER. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON RESPONSIBLE FOR MAINTENANCE OF THE SEDIMENTATION CONTROL FEATURES DURING CONSTRUCTION AS REQUIRED BY THE EROSION CONTROL REPORT AND/OR CONSTRUCTION PLANS.

2. DITCHES, SWALES AND OTHER OPEN STORM WATER CHANNELS: INSPECT TO ENSURE THEY ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF SEDIMENT AND DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, INCLUDING ACCUMULATED SEDIMENTS, DEBRIS AND VEGETATED GROWTH. REPAIR ANY EROSION OF THE DITCH LINING.

3. VEGETATED DITCHES WILL BE MOWED TO CONTROL THE GROWTH OF WOODY VEGETATION AND MAINTAIN FLOW CAPACITY. ANY WOODY VEGETATION GROWING THROUGH RIPRAP LININGS MUST ALSO BE REMOVED. REPAIR ANY SLUMPING SIDE SLOPES AS SOON AS PRACTICABLE. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FILTER FABRIC OR UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLODGED. CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDESLOPES. THE FACILITIES SHOULD BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.




## EROSION CONTROL FENCE DETAIL

NOT TO SCALE



Site:

SOUTH PORTLAND LANDFILL

SOUTH PORTLAND, ME 04106

Prepared for:

CITY OF SOUTH PORTLAND
929 HIGHLAND AVE
SOUTH PORTLAND, MAINE 04106

Civil Engineer:

STATE OF MAINE
STEPHEN J. DYER #7934
LICENSED PROFESSIONAL ENGINEER

Stephen Dyer, PE # 7409
400 COMMERCIAL STREET, SUITE 404
PORTLAND, ME 04101
207-772-2891

RANSOM Consulting, LLC.
400 Commercial Street, Suite 404
Portland, ME 04101
Tel. (207) 772-2891
Fax (207) 772-3248
www.ransomenv.com

NOTES & DETAILS

| No. | Revision/Issue | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| X | XXXXXXXX | X-X-XX |

| | |
|---|---|
| Design by: ARM | Checked by: SJD |
| Drawn by: BGC | Approved by: SJD |
| Project: 151.06159 | Date: DEC 2020 |

Sheet No:

C1.5

**Table: Estimated Costs - Abandonment of Existing (Non-Functional) Landfill Vents & Installation of New Landfill Vents**

South Portland- Closed Municipal Solid Waste Landfill

929 Highland Avenue, South Portland, Maine

| Estimated Costs [1] | Number | Units | Unit Cost | Total |
|---|---|---|---|---|
| Mobilization & Bonding (5% of Total Costs) | 1 | LS | $9,000 | $9,000 |
| Abandonment of Existing Landfill Vents | 2 | Day | $5,000 | $10,000 |
| Installation of New Landfill Vents | | | | |
| Drilling | 14 | Ea | $5,000 | $70,000 |
| Vent Materials | 14 | Ea | $5,000 | $70,000 |
| Erosion Control | 1 | LS | $14,000 | $14,000 |
| Municipal Solid Waste (MSW) Transportation & Disposal [2] | 30 | Ton | $150 | $4,500 |
| *Subtotal* | | | | *$177,500* |
| Contingency 20% | | | | $35,500 |
| **TOTAL** | | | | **$213,000** |

NOTES:

1 - The estimates shown above are considered budgetary-level cost estimates for use in project evaluation and planning. Actual costs are expected to vary from these estimates due to site conditions, market conditions, actual cost of purchased materials, quantity variations, regulatory requirements, and other factors existing at the time the work is contracted.

2 - Estimated MSW Disposal= ~35 cubic feet (cf) per new vent location x 14 vent locations = ~490 cf = ~20 cy = ~30 tons; assuming a density of 1.5 tons per cy for MSW.

**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Front End Loader** | | |
| **Department** | Public Works | **Dept. Priority** | 2 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Public Works Department is requesting the purchase of a new Front End Loader equipped for winter operations. This loader will be replacing a 1997 John Deere loader that has exceeded its useful life and is need of a new transmission.

This loader will be a front line piece of equipment during winter operations as well as being used all year long for various Public Works projects. The loader would be equipped with the Craig plow gear as well as Tink claw.

The Tink claw is used for brush pick-up when needed after storms that cause trees to come down, Christmas tree pick-up and operations at the Transfer Station as needed.

The impact of not purchasing this piece of equipment would be installing a new transmission at a cost of approximately $25,000. If we were to install a new trasmission we would still have a 23 year old loader. This loader is used for winter time operations and Transfer Station operations currently.

## Financial Impact of this Purchase/Project

The purchase price for this loader is approximately $260,000. The annual operating costs would be approximately $3,400. The operating costs would include a maximum of twelve services at $120 per service and approximately 1000 gallons of diesel fuel per year. However Beuregard offers a service agreement that includes services for the first five years if they were to be low bid reducing the operating costs by $1,440.

## Environmental Considerations

The new loader would meet the new Tier 4 emissions standard for cleaner emmissions and would have some improvements in fuel mileage. Electric is not an option for this piece of equipment.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 260,000.00 | $ 260,000.00 | | | | | $ 260,000.00 | $ 260,000.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | | | | | | $ - | $ - |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 260,000.00** | **$ 260,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 260,000.00** | **$ 260,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Beauregard Equipment | | | | |
| **Est. Annual Operating Costs** | $ 3,400.00 | **Projected Useful Life** | 20 years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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| Maine | | | | NH | VT |
|---|---|---|---|---|---|
| **Presque Isle** | **BANGOR** | **SCARBOROUGH** | **KNOX** | **CONCORD** | **COLCHESTER** |
| 260 Missile St | 59 Contractor Dr | 14 Gibson Rd | 3 Knox Ridge Rd S | 231 Sheep Davis | 28 Jasper Mine Rd |
| **207-498-3196** | **207-848-2050** | **207-885-0600** | **207-568-3245** | **(603) 225-6621** | **(802)893-1555** |


# Quotation

**Date:** **1/19/2021**

To: **City of South Portland**
1142 HIGHLAND AVE
P O BOX 9422
SOUTH PORTLAND, ME 04116

Phone **207-653-0475**
Cell Phone **207-767-7635**
E-Mail dhoward@southportland.org

Attn: **Doug Howard**
County Cumberland

Equip: **NEW CASE 721G XR**

Spec: CAB/AC, AM-FM/BLUETOOTH RADIO, HEATED AIR SEAT, W/HEADREST/3" BELT, ENHANCED CAB COMFORT PKG, ENHANCED, VISIBILITY BUNDLE LIMITED SLIP DIFFERENTIALS,, MICHELIN 20.5X25 SNOPLUS TIRES RIDE CONTROL, ACS, COUPLER/3.0 CY BUCKET WITH BOLT ON EDGE JOYSTICK WITH 2, AUXILIARY HYDRAULIC FUNCTIONS, REVERSING FAN, FENDERS, COLD WEATHER PACKAGE, REAR-VIEW CAMERA, LED WORK LIGHTS, ENGINE AIR PRE-CLEANER.

**Options Incl** **TINK 720 CLAW, CRAIG REVERSIBLE PLOW, CRAIG WING WITH HYDRAULIC QUICK PICK.**

| | |
|---|---|
| Purchase Price | $258,033.74 |
| | |
| | |
| | |
| | |
| | |
| | |
| Sub Total | $258,033.74 |
| ME Tax & Fees | |
| Misc | |
| Total | $258,033.74 |

| Finance | | Lease | |
|---|---|---|---|
| Term | | Lease Term | |
| Int Rate* | | Annual Hours | |
| Payoff | | Advance Payt | |
| Down Pay't | | ☐ RV | |
| **Payment** | | **Payment** | |

* Interest Rates quoted are subject to change without notice.

Beauregard Equipment

Customer

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# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | | TITLE > | A/C, HEAT, VENTILATI | | | | | | | | | | |
| 001-040-000 | 12022019 | 0005724 | 15260 | 15257 | NO HEAT | | 0.00 | 19.41 | 19.41 | 1.00 9644 | XX | 4 | 31 |
| 001 | | TOTAL > | A/C, HEAT, VENTILATI | | | | 0.00 | 19.41 | 19.41 | | | | |
| 002 | | TITLE > | CAB/SHEET METALS | | | | | | | | | | |
| 002-008-000 | 05282019 | 0005049 | 15210 | 15209 | CAB | | 33.98 | 198.00 | 231.98 | 10.00 DALE | 11 | 8 | 31 |
| 002-015-000 | 01312020 | 0005942 | 15330 | 15327 | DOOR CAB | | 75.06 | 38.82 | 113.88 | 2.00 9644 | 11 | 4 | 31 |
| 002-022-000 | 09182019 | 0005505 | 15220 | 15218 | DOOR LATCH OR SLAM | | 0.00 | 11.38 | 11.38 | 0.50 MIKE W. | 11 | 8 | 31 |
| 002-025-000 | 08132015 | 0002173 | 13180 | 13184 | DOOR LATCH ASSY | | 92.25 | 40.42 | 132.67 | 2.00 9590 | 01 | 1 | XX |
| 002-041-000 | 05172016 | 0002796 | 13660 | 13660 | SEAT CUSHION | | 492.69 | 20.21 | 512.90 | 1.00 9590 | 01 | 1 | XX |
| 002-054-001 | 01202015 | 0001776 | 12730 | 12733 | SIDE MIRROR | | 0.00 | 9.95 | 9.95 | 0.50 SGOBEIL | 01 | 1 | XX |
| 002-056-000 | 06242014 | 0001313 | 12430 | 12425 | MIRROR ARM OR BRAC | | 207.19 | 20.50 | 227.69 | 1.00 BILL | 01 | 1 | XX |
| 002 | | TOTAL > | CAB/SHEET METALS | | | | 901.17 | 339.28 | 1240.45 | | | | |
| 013 | | TITLE > | BRAKES | | | | | | | | | | |
| 013-081-000 | 05282019 | 0005049 | 15210 | 15209 | BRAKE PEDAL | | 271.33 | 78.30 | 349.63 | 3.00 STEVE | 11 | 8 | 31 |
| 013-130-000 | 09022016 | 0003006 | 13670 | 13673 | PARKING BRAKE | | 277.44 | 59.15 | 336.59 | 2.50 OLLIE | 01 | 1 | XX |
| 013 | | TOTAL > | BRAKES | | | | 548.77 | 137.45 | 686.22 | | | | |
| 014 | | TITLE > | FRAME | | | | | | | | | | |
| 014-000-000 | 05292013 | 0000410 | 11200 | 11195 | FRAME | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 014 | | TOTAL > | FRAME | | | | 0.00 | 41.00 | 41.00 | | | | |
| 015 | | TITLE > | STEERING | | | | | | | | | | |
| 015-011-000 | 09022016 | 0003006 | 13670 | 13673 | CYLINDER, POWER ST | | 783.73 | 189.28 | 973.01 | 8.00 OLLIE | 01 | 1 | XX |
| 015-011-000 | 06262015 | 0002129 | 13180 | 13184 | CYLINDER, POWER ST | | 225.74 | 80.84 | 306.58 | 4.00 9590 | 01 | 1 | XX |
| 015 | | TOTAL > | STEERING | | | | 1009.47 | 270.12 | 1279.59 | | | | |
| 017 | | TITLE > | TIRES,TUBES,LINERS | | | | | | | | | | |
| 017-013-000 | 11022020 | 0006263 | 15530 | 15530 | TIRE REPAIR | OUT | 420.85 | 0.00 | 420.85 | 0.00 | 11 | 6 | 31 |
| 017-014-000 | 09212020 | 0006394 | 15520 | 15519 | TIRE REPLACEMENT | OUT | 187.50 | 0.00 | 187.50 | 0.00 | XX | 1 | 31 |
| 017-014-000 | 02062018 | 0004052 | 14520 | 14523 | TIRE REPLACEMENT | OUT | 350.00 | 0.00 | 350.00 | 0.00 | 11 | 1 | 31 |
| 017 | | TOTAL > | TIRES,TUBES,LINERS | | | | 958.35 | 0.00 | 958.35 | | | | |
| 022 | | TITLE > | AXLE DRVN REAR | | | | | | | | | | |
| 022-001-000 | 09022016 | 0003006 | 13670 | 13673 | AXLE HOUSING REAR | | 484.18 | 59.15 | 543.33 | 2.50 OLLIE | 01 | 1 | XX |
| 022 | | TOTAL > | AXLE DRVN REAR | | | | 484.18 | 59.15 | 543.33 | | | | |
| 024 | | TITLE > | DRIVE SHAFT(S) | | | | | | | | | | |
| 024-001-000 | 03222019 | 0005164 | 15140 | 15136 | DRIVESHAFT CENTER | | 244.03 | 22.76 | 266.79 | 1.00 AARON | 11 | 1 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 024-001-000 | 03032017 | 0003462 | 14030 | 14033 | DRIVESHAFT CENTER | | 112.16 | 87.48 | 199.64 | 4.00 9590 | 11 | 1 | 31 |
| 024-001-000 | 09022016 | 0003006 | 13670 | 13673 | DRIVESHAFT CENTER | | 218.25 | 70.98 | 289.23 | 3.00 OLLIE | 01 | 1 | XX |
| 024 | | TOTAL > | DRIVE SHAFT(S) | | | | 574.44 | 181.22 | 755.66 | | | | |
| 027 | | TITLE > | TRANSMISSION AUTOMAT | | | | | | | | | | |
| 027-000-000 | 11032020 | 0006197 | 15510 | 15505 | TRANSMISSION AUTOM | OUT | 339.02 | 0.00 | 339.02 | 0.00 | XX | 1 | 31 |
| 027-000-000 | 01202017 | 0003203 | 13680 | 13683 | TRANSMISSION AUTOM | | 0.00 | 0.00 | 0.00 | 0.00 9590 | 01 | 1 | 31 |
| 027-180-000 | 05282019 | 0005049 | 15210 | 15209 | HARD SHIFTING / NO | | 366.19 | 26.10 | 392.29 | 1.00 STEVE | 11 | 8 | 31 |
| 027-180-000 | 02282019 | 0004830 | 15010 | 15012 | HARD SHIFTING / NO | | 0.00 | 13.05 | 13.05 | 0.50 STEVE | XX | 1 | 31 |
| 027 | | TOTAL > | TRANSMISSION AUTOMAT | | | | 705.21 | 39.15 | 744.36 | | | | |
| 031 | | TITLE > | CHARGING SYSTEM | | | | | | | | | | |
| 031-001-000 | 01202015 | 0001776 | 12730 | 12733 | ALTERNATOR BELT AD | | 0.00 | 9.95 | 9.95 | 0.50 SGOBEIL | 01 | 1 | XX |
| 031-003-000 | 08062019 | 0005417 | 15210 | 15209 | ALTERNATOR | | 0.00 | 97.05 | 97.05 | 5.00 9644 | 11 | 1 | 31 |
| 031-003-000 | 02192014 | 0000992 | 12070 | 12074 | ALTERNATOR | | 438.86 | 30.75 | 469.61 | 1.50 OLLIE | 01 | 1 | XX |
| 031-003-000 | 01142014 | 0000871 | 11690 | 11689 | ALTERNATOR | | 478.01 | 29.85 | 507.86 | 1.50 SGOBEIL | 01 | 1 | XX |
| 031 | | TOTAL > | CHARGING SYSTEM | | | | 916.87 | 167.60 | 1084.47 | | | | |
| 032 | | TITLE > | CRANKING SYSTEM | | | | | | | | | | |
| 032-002-000 | 03072014 | 0001089 | 12180 | 12184 | BATTERY | | 296.95 | 82.00 | 378.95 | 4.00 BILL | 01 | 1 | XX |
| 032-002-000 | 06192013 | 0000515 | 11590 | 11589 | BATTERY | | 206.28 | 11.15 | 217.43 | 0.50 STEVE | 01 | 1 | XX |
| 032-007-000 | 09062016 | 0003006 | 13670 | 13673 | STARTER REBUILD LA | | 0.00 | 59.15 | 59.15 | 2.50 OLLIE | 01 | 1 | XX |
| 032-007-000 | 09022016 | 0003006 | 13670 | 13673 | STARTER REBUILD LA | OUT | 350.00 | 0.00 | 350.00 | 0.00 | 01 | 1 | XX |
| 032-009-000 | 04032018 | 0004166 | 14520 | 14523 | SOLENOID STARTER | | 69.15 | 22.31 | 91.46 | 1.00 10375 | 11 | 1 | 31 |
| 032-016-000 | 11052018 | 0004773 | 14750 | 14751 | NO START ISSUE | | 177.98 | 52.20 | 230.18 | 2.00 STEVE | XX | 1 | 31 |
| 032-016-000 | 12292016 | 0003310 | 13680 | 13683 | NO START ISSUE | | 167.58 | 70.98 | 238.56 | 3.00 OLLIE | 11 | 1 | 31 |
| 032-016-000 | 01202015 | 0001774 | 12730 | 12733 | NO START ISSUE | | 0.00 | 20.50 | 20.50 | 1.00 BILL | 01 | 1 | XX |
| 032 | | TOTAL > | CRANKING SYSTEM | | | | 1267.94 | 318.29 | 1586.23 | | | | |
| 034 | | TITLE > | LIGHTING & ELECTRICA | | | | | | | | | | |
| 034-001-001 | 01202015 | 0001776 | 12730 | 12733 | LEFT HEADLIGHT | | 7.99 | 9.95 | 17.94 | 0.50 SGOBEIL | 01 | 1 | XX |
| 034-001-003 | 04032018 | 0004166 | 14520 | 14523 | HEADLIGHT LEFT AND | | 6.74 | 22.31 | 29.05 | 1.00 10375 | 11 | 1 | 31 |
| 034-004-000 | 09182019 | 0005544 | 15220 | 15218 | BACK UP LIGHT / AL | | 29.96 | 11.38 | 41.34 | 0.50 MIKE W. | 11 | 4 | 31 |
| 034-013-000 | 05292013 | 0000410 | 11200 | 11195 | FLASHER | | 0.00 | 4.10 | 4.10 | 0.20 BILL | 01 | 1 | XX |
| 034-025-000 | 01312020 | 0005942 | 15410 | 15413 | MARKER LIGHT(S) | | 0.00 | 19.41 | 19.41 | 1.00 9644 | 11 | 4 | 1 |
| 034-034-000 | 09182019 | 0005505 | 15220 | 15218 | TURN SIGNAL ASSEMB | | 10.01 | 22.76 | 32.77 | 1.00 MIKE W. | 11 | 8 | 31 |
| 034-036-000 | 11022020 | 0006263 | 15530 | 15530 | TURN SIGNAL LAMP | | 0.00 | 6.83 | 6.83 | 0.30 MIKE W. | XX | 6 | 31 |
| 034-036-000 | 05292013 | 0000410 | 11200 | 11195 | TURN SIGNAL LAMP | | 0.00 | 4.10 | 4.10 | 0.20 BILL | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 034-402-000 | 01242018 | 0004129 | 14520 | 14523 | STROBE LIGHT(S) | | 94.00 | 32.81 | 126.81 | 1.50 AARON | 11 | 1 | 31 |
| 034-402-000 | 06242014 | 0001313 | 12430 | 12425 | STROBE LIGHT(S) | | 91.00 | 20.50 | 111.50 | 1.00 BILL | 01 | 1 | XX |
| 034-407-000 | 09022016 | 0003006 | 13670 | 13673 | MULTIPLE LIGHT REP | | 201.85 | 47.32 | 249.17 | 2.00 OLLIE | 01 | 1 | XX |
| 034 | | TOTAL > | LIGHTING & ELECTRICA | | | | 441.55 | 201.47 | 643.02 | | | | |
| 042 | | TITLE > | COOLING SYSTEM | | | | | | | | | | |
| 042-013-000 | 01072020 | 0005878 | 15330 | 15327 | HEATER CORE/HOSES | | 74.30 | 45.52 | 119.82 | 2.00 AARON | 11 | 1 | 31 |
| 042-045-000 | 02242014 | 0000992 | 12070 | 12074 | WATER PUMP | | 504.46 | 164.00 | 668.46 | 8.00 OLLIE | 01 | 1 | XX |
| 042-047-000 | 04242017 | 0003550 | 14180 | 14179 | COOLANT LEAK | | 236.76 | 59.15 | 295.91 | 2.50 OLLIE | 11 | 1 | 31 |
| 042 | | TOTAL > | COOLING SYSTEM | | | | 815.52 | 268.67 | 1084.19 | | | | |
| 043 | | TITLE > | EXHAUST SYSTEM | | | | | | | | | | |
| 043-050-000 | 06262015 | 0002129 | 13180 | 13184 | EXHAUST MANIFOLD | | 20.68 | 40.42 | 61.10 | 2.00 9590 | 01 | 1 | XX |
| 043-125-000 | 04032018 | 0004166 | 14520 | 14523 | EXHAUST LEAK | | 43.42 | 133.86 | 177.28 | 6.00 10375 | 11 | 1 | 31 |
| 043-125-000 | 01242018 | 0004129 | 14520 | 14523 | EXHAUST LEAK | | 12.60 | 131.22 | 143.82 | 6.00 AARON | 11 | 1 | 31 |
| 043 | | TOTAL > | EXHAUST SYSTEM | | | | 76.70 | 305.50 | 382.20 | | | | |
| 044 | | TITLE > | FUEL SYSTEM | | | | | | | | | | |
| 044-038-000 | 10262016 | 0003130 | 13680 | 13683 | FUEL PUMP | | 81.66 | 32.81 | 114.46 | 1.50 9590 | 01 | 1 | XX |
| 044-038-000 | 05182016 | 0002866 | 13670 | 13670 | FUEL PUMP | | 117.33 | 20.50 | 137.83 | 1.00 OLLIE | 01 | 1 | XX |
| 044-056-000 | 01202015 | 0001776 | 12730 | 12733 | FUEL LEAK | | 46.06 | 99.50 | 145.56 | 5.00 SGOBEIL | 01 | 1 | XX |
| 044-100-000 | 09262018 | 0004718 | 14750 | 14751 | FUEL GAUGE/SENDING | | 112.08 | 91.04 | 203.12 | 4.00 AARON | 11 | 1 | 31 |
| 044 | | TOTAL > | FUEL SYSTEM | | | | 357.13 | 243.85 | 600.98 | | | | |
| 045 | | TITLE > | POWER PLANT/ENGINE | | | | | | | | | | |
| 045-001-001 | 05172018 | 0004434 | 14730 | 14732 | ENGINE LEAKING OIL | | 34.34 | 66.93 | 101.27 | 3.00 MIKEC | XX | 1 | 31 |
| 045-003-000 | 12062017 | 0004034 | 14350 | 14352 | INJECTOR(S), ENG | | 0.00 | 22.31 | 22.31 | 1.00 10375 | 11 | 1 | 31 |
| 045-019-000 | 06242014 | 0001313 | 12430 | 12425 | HARMONIC BALANCER, | | 520.99 | 20.50 | 541.49 | 1.00 BILL | 01 | 1 | XX |
| 045-041-000 | 06262015 | 0002129 | 13180 | 13184 | OIL PAN, ENG | | 72.25 | 30.32 | 102.57 | 1.50 9590 | 01 | 1 | XX |
| 045-081-005 | 05102019 | 0005049 | 15140 | 15136 | OIL SAMPLE | | 28.00 | 13.05 | 41.05 | 0.50 STEVE | 11 | 8 | 31 |
| 045-081-005 | 05172018 | 0004434 | 14730 | 14732 | OIL SAMPLE | | 28.00 | 6.69 | 34.69 | 0.30 MIKEC | 11 | 1 | 31 |
| 045-081-005 | 04212017 | 0003473 | 14150 | 14154 | OIL SAMPLE | | 28.00 | 10.94 | 38.94 | 0.50 AARON | 11 | 1 | 31 |
| 045-082-000 | 03072014 | 0001089 | 12180 | 12184 | FULL SERVICE | | 110.26 | 123.00 | 233.26 | 6.00 BILL | 01 | 1 | XX |
| 045-082-000 | 06202013 | 0000538 | 11650 | 11645 | FULL SERVICE | | 302.62 | 111.45 | 414.07 | 5.00 STEVE | 01 | 1 | XX |
| 045-082-000 | 03132013 | 0000340 | 11290 | 11293 | FULL SERVICE | | 72.54 | 0.00 | 72.54 | 6.00 RICH | 01 | 1 | XX |
| 045-082-001 | 12122019 | 0005774 | 15300 | 15302 | MAIN ENGINE | | 124.09 | 113.80 | 237.89 | 5.00 AARON | 11 | 7 | 31 |
| 045-082-001 | 05102019 | 0005049 | 15140 | 15136 | MAIN ENGINE | | 123.99 | 156.60 | 280.59 | 6.00 STEVE | XX | 8 | 31 |
| 045-082-001 | 05172018 | 0004434 | 14730 | 14732 | MAIN ENGINE | | 122.61 | 66.93 | 189.54 | 3.00 MIKEC | 11 | 1 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 045-082-001 | 01242018 | 0004129 | 14520 | 14523 | MAIN ENGINE | | 122.31 | 98.42 | 220.73 | 4.50 AARON | 11 | 1 | 31 |
| 045-082-001 | 04212017 | 0003473 | 14150 | 14154 | MAIN ENGINE | | 123.32 | 131.22 | 254.54 | 6.00 AARON | 11 | 1 | 31 |
| 045-082-001 | 05162016 | 0002796 | 13660 | 13660 | MAIN ENGINE | | 119.19 | 80.84 | 200.03 | 4.00 9590 | 01 | 1 | XX |
| 045-082-001 | 06262015 | 0002129 | 13180 | 13184 | MAIN ENGINE | | 113.60 | 40.42 | 154.02 | 2.00 9590 | 01 | 1 | XX |
| 045-082-001 | 01202015 | 0001776 | 12730 | 12733 | MAIN ENGINE | | 110.26 | 39.80 | 150.06 | 2.00 SGOBEIL | 01 | 1 | XX |
| 045-082-001 | 06142016 | 0001313 | 13670 | 13670 | MAIN ENGINE | | 170.97 | 164.00 | 334.97 | 8.00 BILL | 01 | 1 | XX |
| 045-084-000 | 05282019 | 0005196 | 15210 | 15209 | ENGINE SHUTTING DO | OUT | 0.00 | 0.00 | 0.00 | 0.00 | 11 | 1 | 31 |
| 045-095-000 | 09042019 | 0005449 | 15210 | 15212 | ENGINE STALL ISSUE | OUT | 3601.99 | 0.00 | 3601.99 | 0.00 | 11 | 1 | 31 |
| 045-095-000 | 05172018 | 0004434 | 14730 | 14732 | ENGINE STALL ISSUE | | 0.00 | 11.16 | 11.16 | 0.50 MIKEC | XX | 1 | 31 |
| 045-095-000 | 01202017 | 0003203 | 13680 | 13683 | ENGINE STALL ISSUE | | 26.64 | 0.00 | 26.64 | 0.00 9590 | 01 | 1 | 31 |
| 045 | | TOTAL > | POWER PLANT/ENGINE | | | | 5955.97 | 1308.38 | 7264.35 | | | | |
| 051 | | TITLE > | GENERAL ACCESSORIES | | | | | | | | | | |
| 051-000-000 | 09182019 | 0005505 | 15220 | 15218 | GENERAL ACCESSORIE | | 6.84 | 5.69 | 12.53 | 0.25 MIKE W. | 11 | 8 | 31 |
| 051-002-000 | 02242014 | 0000992 | 12070 | 12074 | WIPER ARM | | 240.87 | 45.49 | 286.36 | 1.50 SGOBEIL | 01 | 1 | XX |
| 051-044-000 | 03182016 | 0002730 | 13610 | 13614 | WIPER LINKAGE | | 126.28 | 40.42 | 166.70 | 2.00 9590 | 01 | 1 | XX |
| 051 | | TOTAL > | GENERAL ACCESSORIES | | | | 373.99 | 91.60 | 465.59 | | | | |
| 052 | | TITLE > | ELECTRICAL ACCESSORI | | | | | | | | | | |
| 052-003-001 | 09062016 | 0003006 | 13670 | 13673 | TWO-WAY RADIO | | 52.00 | 59.15 | 111.15 | 2.50 OLLIE | 01 | 1 | 1 |
| 052-003-001 | 02242015 | 0001844 | 13000 | 12995 | TWO-WAY RADIO | | 0.00 | 20.50 | 20.50 | 1.00 BILL | 01 | 1 | XX |
| 052 | | TOTAL > | ELECTRICAL ACCESSORI | | | | 52.00 | 79.65 | 131.65 | | | | |
| 065 | | TITLE > | HYDRAULIC SYSTEMS | | | | | | | | | | |
| 065-004-000 | 09182019 | 0005544 | 15220 | 15218 | HYDRAULIC CYLINDER | | 14.55 | 11.38 | 25.93 | 0.50 MIKE W. | XX | 4 | 31 |
| 065-004-000 | 02202014 | 0000511 | 12070 | 12074 | HYDRAULIC CYLINDER | | 0.00 | 66.87 | 66.87 | 3.00 STEVE | 01 | 1 | XX |
| 065-004-000 | 07292013 | 0000511 | 11650 | 11646 | HYDRAULIC CYLINDER | OUT | 0.00 | 725.00 | 725.00 | 0.00 | 01 | 1 | XX |
| 065-006-000 | 09022016 | 0003006 | 13670 | 13673 | HYD HOSE/FITTINGS | | 0.00 | 35.49 | 35.49 | 1.50 OLLIE | 01 | 1 | XX |
| 065-006-000 | 08182015 | 0002153 | 13180 | 13184 | HYD HOSE/FITTINGS | | 290.58 | 121.26 | 411.84 | 6.00 9590 | 01 | 1 | XX |
| 065-006-000 | 02252015 | 0001877 | 13000 | 12995 | HYD HOSE/FITTINGS | | 254.35 | 705.83 | 960.18 | 6.00 BILL | 01 | 1 | XX |
| 065-006-000 | 03242014 | 0001114 | 12200 | 12200 | HYD HOSE/FITTINGS | | 68.11 | 34.83 | 102.94 | 1.75 SGOBEIL | 01 | 1 | XX |
| 065-006-000 | 03072014 | 0001089 | 12180 | 12184 | HYD HOSE/FITTINGS | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 065-006-000 | 03072014 | 0001089 | 12180 | 12184 | HYD HOSE/FITTINGS | OUT | 0.00 | 301.59 | 301.59 | 0.00 | 01 | 1 | XX |
| 065-006-000 | 02202014 | 0000938 | 12070 | 12074 | HYD HOSE/FITTINGS | | 15.01 | 10.25 | 25.26 | 0.50 OLLIE | 01 | 1 | XX |
| 065-006-000 | 09042013 | 0000660 | 11690 | 11689 | HYD HOSE/FITTINGS | | 122.40 | 133.74 | 256.14 | 6.00 STEVE | 01 | 1 | XX |
| 065-006-000 | 06192013 | 0000515 | 11590 | 11589 | HYD HOSE/FITTINGS | OUT | 0.00 | 0.00 | 0.00 | 0.00 | 01 | 1 | XX |
| 065-006-000 | 06192013 | 0000515 | 11590 | 11589 | HYD HOSE/FITTINGS | | 405.90 | 178.32 | 584.22 | 8.00 STEVE | 01 | 1 | XX |
| 065-006-000 | 05292013 | 0000475 | 11590 | 11589 | HYD HOSE/FITTINGS | | 41.95 | 41.00 | 82.95 | 2.00 BILL | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 065-018-000 | 02232015 | 0001823 | 13000 | 12995 | HYDRAULIC VALVE | | 7142.29 | 20.50 | 7162.79 | 1.00 BILL | 01 | 1 | XX |
| 065-032-000 | 05182016 | 0002866 | 13670 | 13670 | SOLENOID, HYDRAULI | | 0.00 | 10.25 | 10.25 | 0.50 OLLIE | 01 | 1 | XX |
| 065-035-000 | 01142019 | 0005000 | 14970 | 14966 | HYDRAULIC LEAK | | 216.39 | 45.52 | 261.91 | 2.00 MIKE W. | 11 | 1 | 31 |
| 065-040-000 | 12082014 | 0001658 | 12610 | 12610 | HYDRAULIC PRESSURE | | 0.00 | 61.50 | 61.50 | 3.00 BILL | 01 | 1 | XX |
| 065 | | TOTAL > | HYDRAULIC SYSTEMS | | | | 8571.53 | 2544.33 | 11115.86 | | | | |
| 106 | | TITLE > | TOW (VEHICLE) | | | | | | | | | | |
| 106-000-000 | 08182015 | 0002153 | 13180 | 13184 | TOW (VEHICLE) | OUT | 675.00 | 0.00 | 675.00 | 0.00 | 01 | 1 | XX |
| 106-001-000 | 09042019 | 0005449 | 15210 | 15212 | TOW TO GARAGE | OUT | 240.00 | 0.00 | 240.00 | 0.00 | 11 | 1 | 31 |
| 106-001-000 | 12022016 | 0003203 | 13680 | 13683 | TOW TO GARAGE | OUT | 270.00 | 0.00 | 270.00 | 0.00 | 01 | 1 | 31 |
| 106-005-000 | 08292019 | 0005449 | 15210 | 15212 | TOW FOR OUTSIDE RE | OUT | 240.00 | 0.00 | 240.00 | 0.00 | 11 | 1 | 31 |
| 106-005-000 | 09262018 | 0004508 | 14750 | 14751 | TOW FOR OUTSIDE RE | OUT | 200.00 | 0.00 | 200.00 | 0.00 | 11 | 1 | 31 |
| 106 | | TOTAL > | TOW (VEHICLE) | | | | 1625.00 | 0.00 | 1625.00 | | | | |
| 400 | | TITLE > | ATTACHMENTS, EQUIPME | | | | | | | | | | |
| 400-002-001 | 01312020 | 0005942 | 15330 | 15327 | PLOW: MECHANICAL | | 0.00 | 77.64 | 77.64 | 4.00 9644 | 11 | 4 | 1 |
| 400-002-001 | 12232017 | 0004086 | 14350 | 14352 | PLOW: MECHANICAL | | 0.00 | 217.96 | 217.96 | 9.00 10375 | 11 | 1 | 31 |
| 400-002-001 | 03222017 | 0003434 | 14030 | 14033 | PLOW: MECHANICAL | | 800.47 | 43.74 | 844.21 | 2.00 9590 | 11 | 1 | 31 |
| 400-002-001 | 02242015 | 0001849 | 13000 | 12995 | PLOW: MECHANICAL | | 0.00 | 164.00 | 164.00 | 8.00 BILL | 01 | 1 | XX |
| 400-002-001 | 02242014 | 0001051 | 12130 | 12128 | PLOW: MECHANICAL | | 182.67 | 20.50 | 203.17 | 1.00 BILL | 01 | 1 | XX |
| 400-002-001 | 02242014 | 0001052 | 12130 | 12128 | PLOW: MECHANICAL | | 69.05 | 41.00 | 110.05 | 2.00 BILL | 01 | 1 | XX |
| 400-002-002 | 01072020 | 0005882 | 15330 | 15327 | PLOW: HYDRAULIC | | 42.92 | 52.20 | 95.12 | 2.00 STEVE | XX | 4 | 31 |
| 400-002-003 | 01312020 | 0005942 | 15330 | 15327 | PLOW: CUTTING EDGE | | 393.00 | 19.41 | 412.41 | 1.00 9644 | XX | 4 | 31 |
| 400-002-003 | 03032017 | 0003434 | 14030 | 14033 | PLOW: CUTTING EDGE | | 289.48 | 43.74 | 333.22 | 2.00 9590 | 11 | 1 | 31 |
| 400-011-001 | 05272014 | 0001265 | 12200 | 12200 | MECHANICAL/ STRUCT | | 0.00 | 524.90 | 524.90 | 16.00 SGOBEIL | 01 | 1 | XX |
| 400 | | TOTAL > | ATTACHMENTS, EQUIPME | | | | 1777.59 | 1205.09 | 2982.68 | | | | |
| 403 | | TITLE > | ********** | | | | | | | | | | |
| 403-000-000 | 05302013 | 0000341 | 11590 | 11589 | ********** | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 403 | | TOTAL > | ********** | | | | 0.00 | 41.00 | 41.00 | | | | |
| 407 | | TITLE > | MAINE STATE INSPECTI | | | | | | | | | | |
| 407-000-000 | 08132015 | 0002153 | 13180 | 13184 | MAINE STATE INSPEC | | 2.50 | 40.42 | 42.92 | 2.00 9590 | 01 | 1 | XX |
| 407-000-000 | 06242014 | 0001313 | 12400 | 12400 | MAINE STATE INSPEC | | 2.50 | 41.00 | 43.50 | 2.00 BILL | 01 | 1 | XX |
| 407-000-000 | 06202013 | 0000538 | 11650 | 11645 | MAINE STATE INSPEC | | 0.00 | 33.44 | 33.44 | 1.50 STEVE | 01 | 1 | XX |
| 407-001-000 | 11022020 | 0006263 | 15530 | 15530 | (MSI) COMMERCIAL T | | 2.50 | 22.76 | 25.26 | 1.00 MIKE W. | 11 | 6 | 1 |
| 407-001-000 | 09182019 | 0005505 | 15220 | 15218 | (MSI) COMMERCIAL T | | 2.50 | 11.38 | 13.88 | 0.50 MIKE W. | 11 | 8 | 31 |
| 407-001-000 | 09262018 | 0004484 | 14750 | 14751 | (MSI) COMMERCIAL T | | 2.50 | 22.76 | 25.26 | 1.00 AARON | 11 | 8 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**UNIT: 023 LF MTR: 15563.0 CUR MTR: 15563.0 YR: 97 MAKE: JOHN DEERE DEPT: DPW SIZE: H CLASS: LOADER FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 407-001-000 | 06132017 | 0003649 | 14190 | 14187 | (MSI) COMMERCIAL T | | 2.50 | 21.87 | 24.37 | 1.00 AARON | 11 | 1 | 31 |
| 407-001-000 | 09022016 | 0003006 | 13670 | 13673 | (MSI) COMMERCIAL T | | 2.50 | 35.49 | 37.99 | 1.50 OLLIE | 01 | 1 | XX |
| 407-001-000 | 06262015 | 0002129 | 13180 | 13184 | (MSI) COMMERCIAL T | | 0.00 | 20.21 | 20.21 | 1.00 9590 | 01 | 1 | XX |
| 407 | | TOTAL > | MAINE STATE INSPECTI | | | | 17.50 | 249.33 | 266.83 | | | | |
| | | | | | | | | | | | | | |
| 410 | | TITLE > | EQUIPMENT SPECIFIC R | | | | | | | | | | |
| 410-001-000 | 11042020 | 0006263 | 15530 | 15530 | EQUPMENT SPECIFIC: | | 813.71 | 79.66 | 893.37 | 3.50 MIKE W. | XX | 6 | 31 |
| 410-002-000 | 12122019 | 0005750 | 15300 | 15302 | EQUIPMENT SPECIFIC | | 4142.72 | 204.84 | 4347.56 | 9.00 AARON | XX | 1 | 31 |
| 410-002-000 | 12022019 | 0005724 | 15260 | 15257 | EQUIPMENT SPECIFIC | | 0.00 | 9.71 | 9.71 | 0.50 9644 | 11 | 4 | 31 |
| 410-002-000 | 09262018 | 0004508 | 14750 | 14751 | EQUIPMENT SPECIFIC | OUT | 13058.73 | 0.00 | 13058.73 | 0.00 | XX | 1 | 31 |
| 410-002-000 | 06192017 | 0003649 | 14190 | 14187 | EQUIPMENT SPECIFIC | | 1184.70 | 109.35 | 1294.05 | 5.00 AARON | 11 | 1 | 31 |
| 410-002-000 | 07212014 | 0001394 | 12430 | 12430 | EQUIPMENT SPECIFIC | | 0.00 | 20.50 | 20.50 | 1.00 BILL | 01 | 1 | XX |
| 410-002-005 | 08132015 | 0002153 | 13180 | 13184 | EQUIPMENT SPECIFIC | OUT | 5688.17 | 0.00 | 5688.17 | 0.00 | 01 | 1 | XX |
| 410-002-005 | 06262015 | 0002129 | 13180 | 13184 | EQUIPMENT SPECIFIC | | 0.00 | 60.63 | 60.63 | 3.00 9590 | 01 | 1 | XX |
| 410-004-000 | 05282019 | 0005049 | 15210 | 15209 | EQUIPMENT SPECIFIC | | 0.00 | 198.00 | 198.00 | 10.00 DALE | 11 | 8 | 31 |
| 410 | | TOTAL > | EQUIPMENT SPECIFIC R | | | | 24888.03 | 682.69 | 25570.72 | | | | |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 023
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 023

**METER: STANDARD** **SUBTOTALS OF VMRS CODES FOR DIVISION > AL** **PERIOD: YEAR**

| VMRS CODE | | QUANTITY | LABOR HRS | LABOR COST | PARTS COST | | TOTAL COST | PERCENT | TOT COST /METER |
|---|---|---|---|---|---|---|---|---|---|
| 001 | A/C, HEAT, VENTILATION | 1 | 1.00 | 19.41 | 0.00 | | 19.41 | 0.03% | 0.00125 |
| 002 | CAB/SHEET METALS | 7 | 17.00 | 339.28 | 901.17 | | 1240.45 | 2.03% | 0.07971 |
| 013 | BRAKES | 2 | 5.50 | 137.45 | 548.77 | | 686.22 | 1.12% | 0.04409 |
| 014 | FRAME | 1 | 2.00 | 41.00 | 0.00 | | 41.00 | 0.07% | 0.00263 |
| 015 | STEERING | 2 | 12.00 | 270.12 | 1009.47 | | 1279.59 | 2.09% | 0.08222 |
| 017 | TIRES,TUBES,LINERS | 3 | 0.00 | 0.00 | 958.35 | | 958.35 | 1.57% | 0.06158 |
| 022 | AXLE DRVN REAR | 1 | 2.50 | 59.15 | 484.18 | | 543.33 | 0.89% | 0.03491 |
| 024 | DRIVE SHAFT(S) | 3 | 8.00 | 181.22 | 574.44 | | 755.66 | 1.24% | 0.04855 |
| 027 | TRANSMISSION AUTOMATIC | 4 | 1.50 | 39.15 | 705.21 | | 744.36 | 1.22% | 0.04783 |
| 031 | CHARGING SYSTEM | 4 | 8.50 | 167.60 | 916.87 | | 1084.47 | 1.77% | 0.06968 |
| 032 | CRANKING SYSTEM | 8 | 14.00 | 318.29 | 1267.94 | | 1586.23 | 2.60% | 0.10192 |
| 034 | LIGHTING & ELECTRICAL | 11 | 9.20 | 201.47 | 441.55 | | 643.02 | 1.05% | 0.04132 |
| 042 | COOLING SYSTEM | 3 | 12.50 | 268.67 | 815.52 | | 1084.19 | 1.77% | 0.06966 |
| 043 | EXHAUST SYSTEM | 3 | 14.00 | 305.50 | 76.70 | | 382.20 | 0.63% | 0.02456 |
| 044 | FUEL SYSTEM | 4 | 11.50 | 243.85 | 357.13 | | 600.98 | 0.98% | 0.03862 |
| 045 | POWER PLANT/ENGINE | 23 | 65.80 | 1308.38 | 5955.97 | | 7264.35 | 11.89% | 0.46677 |
| 051 | GENERAL ACCESSORIES | 3 | 3.75 | 91.60 | 373.99 | | 465.59 | 0.76% | 0.02992 |
| 052 | ELECTRICAL ACCESSORIES | 2 | 3.50 | 79.65 | 52.00 | | 131.65 | 0.22% | 0.00846 |
| 065 | HYDRAULIC SYSTEMS | 18 | 43.75 | 2544.33 | 8571.53 | | 11115.86 | 18.19% | 0.71425 |
| 106 | TOW (VEHICLE) | 5 | 0.00 | 0.00 | 1625.00 | | 1625.00 | 2.66% | 0.10441 |
| 400 | ATTACHMENTS, EQUIPMENT | 10 | 47.00 | 1205.09 | 1777.59 | | 2982.68 | 4.88% | 0.19165 |
| 403 | ********** | 1 | 2.00 | 41.00 | 0.00 | | 41.00 | 0.07% | 0.00263 |
| 407 | MAINE STATE INSPECTION | 9 | 11.50 | 249.33 | 17.50 | | 266.83 | 0.44% | 0.01715 |
| 410 | EQUIPMENT SPECIFIC REP | 9 | 32.00 | 682.69 | 24888.03 | | 25570.72 | 41.84% | 1.64305 |
| | **TOTALS:** | 137 | 328.50 | 8794.23 | 52318.91 | **TOT:** | 61113.14 | 100.00% | 3.92682 |

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Single Axle Plow Trucks** | | |
| **Department** | Public Works | **Dept. Priority** | 3 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Public Works Department is requesting the purchase of two (2) new 2022 Single-axle plow trucks. This purchase would replace two (2) 2003 Sterlings currently beyond their useful life.

The new vehicles would be front-line plow trucks during winter operations and used all year long for various Public Works projects.

The 2003 Sterlings would be auctioned off as surplus. The impacts of not purchasing these trucks would be increased maintenance costs and very unreliable plow trucks.

## Financial Impact of this Purchase/Project

The purchase price for the requested vehicles is approximately $355,510. The annual operating costs for this purchase $3,500 per truck. These costs include a maximun of twelve services at $120 per service and 1000 gallons of fuel in a year. The 2003 Sterling would be auctioned off. It is very difficult to determine what the trucks would go for at auction, however we would estimate approximately $5,000 per truck.

## Environmental Considerations

The new trucks would meet the new Tier 4 emissions standard for cleaner emissions and have better fuel mileage. The 2003 Sterlings these trucks will be replacing were targeted for replacement using VW settment funds to improve emissions and reduce greenhouse gasses, however we were unsuccessful obtaining the grant funding. Electric is not an option for this equipment.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | | | | | | | $ - | $ - |
| General Fund (GF) Reserves | $28,500.00 | $ 28,500.00 | | | | | $ 28,500.00 | $ 28,500.00 |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | $ 355,500.00 | $ 355,500.00 | | | | | $ 355,500.00 | $ 355,500.00 |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | $20,000.00 | $ 20,000.00 | | | | | $ 20,000.00 | $ 20,000.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 404,000.00** | **$ 404,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 404,000.00** | **$ 404,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | Daigle and Houghton, HP Fairfield and Portland North | | | | |
| **Est. Annual Operating Costs** | $ 3,500.00 | **Projected Useful Life** | 12 years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | | TITLE > | A/C, HEAT, VENTILATI | | | | | | | | | | |
| 001-022-000 | 02242015 | 0001863 | 7040 | 7042 | DEFROSTER MOTOR, H | | 133.96 | 20.50 | 154.46 | 1.00 OLLIE | 01 | 1 | XX |
| 001-025-001 | 01292019 | 0005058 | 8330 | 8333 | HEATER CORE LEFT | | 0.00 | 7.83 | 7.83 | 0.30 STEVE | XX | 4 | 31 |
| 001-033-000 | 10172013 | 0000692 | 6250 | 6252 | CABIN AIR FILTER | | 35.00 | 10.25 | 45.25 | 0.50 OLLIE | 01 | 1 | XX |
| 001-040-000 | 12132018 | 0004886 | 8230 | 8230 | NO HEAT | | 653.46 | 91.04 | 744.50 | 4.00 MIKE W. | XX | 4 | 31 |
| 001 | | TOTAL > | A/C, HEAT, VENTILATI | | | | 822.42 | 129.62 | 952.04 | | | | |
| 002 | | TITLE > | CAB/SHEET METALS | | | | | | | | | | |
| 002-005-000 | 07302013 | 0000374 | 6200 | 6196 | HOOD HINGE | | 650.00 | 328.00 | 978.00 | 16.00 OLLIE | 01 | 1 | XX |
| 002-031-000 | 09222015 | 0002211 | 7200 | 7195 | FENDER | | 0.00 | 61.50 | 61.50 | 3.00 OLLIE | 01 | 1 | XX |
| 002-054-002 | 04172019 | 0005238 | 8480 | 8480 | SPOT MIRROR | | 12.78 | 9.00 | 21.78 | 0.50 HELPER | 11 | 1 | 31 |
| 002-056-000 | 04122019 | 0005171 | 8480 | 8480 | MIRROR ARM OR BRAC | | 0.00 | 4.55 | 4.55 | 0.20 MIKE W. | 11 | 4 | 31 |
| 002-056-000 | 03062014 | 0001075 | 6590 | 6594 | MIRROR ARM OR BRAC | | 178.08 | 61.50 | 239.58 | 3.00 OLLIE | 01 | 1 | XX |
| 002-060-001 | 07202020 | 0006252 | 8790 | 8788 | DRIVERS WINDOW | | 367.04 | 38.82 | 405.86 | 2.00 9644 | 11 | 6 | 31 |
| 002-060-001 | 09222015 | 0002211 | 7200 | 7195 | DRIVERS WINDOW | | 0.00 | 41.00 | 41.00 | 2.00 OLLIE | 01 | 1 | XX |
| 002 | | TOTAL > | CAB/SHEET METALS | | | | 1207.90 | 544.37 | 1752.27 | | | | |
| 012 | | TITLE > | AXLES, DIFFERENTIAL, | | | | | | | | | | |
| 012-000-000 | 04122019 | 0005171 | 8480 | 8480 | AXLES, DIFFERENTIA | | 207.40 | 136.56 | 343.96 | 6.00 MIKE W. | 11 | 4 | 31 |
| 012-030-000 | 09222015 | 0002211 | 7200 | 7195 | AXLE VENT | | 0.00 | 10.25 | 10.25 | 0.50 OLLIE | 01 | 1 | XX |
| 012 | | TOTAL > | AXLES, DIFFERENTIAL, | | | | 207.40 | 146.81 | 354.21 | | | | |
| 013 | | TITLE > | BRAKES | | | | | | | | | | |
| 013-001-000 | 09092019 | 0005467 | 8530 | 8525 | FRONT BRAKE | | 83.96 | 79.66 | 163.62 | 3.50 AARON | 11 | 4 | 31 |
| 013-002-000 | 09122019 | 0005467 | 8530 | 8525 | REAR BRAKE | | 606.88 | 227.60 | 834.48 | 10.00 AARON | 11 | 4 | 31 |
| 013-003-000 | 04172015 | 0001955 | 7140 | 7137 | BRAKE JOB (COMPLE | | 314.41 | 101.05 | 415.46 | 5.00 9590 | 01 | 1 | XX |
| 013-003-000 | 03242014 | 0001093 | 6600 | 6597 | BRAKE JOB (COMPLE | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 013-005-000 | 09222015 | 0002211 | 7200 | 7195 | CK/ADJUST BRAKES | | 0.00 | 20.50 | 20.50 | 1.00 OLLIE | 01 | 1 | XX |
| 013-005-000 | 07302013 | 0000374 | 6200 | 6196 | CK/ADJUST BRAKES | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |
| 013-005-000 | 01302013 | 0000316 | 5970 | 5972 | CK/ADJUST BRAKES | | 174.98 | 123.00 | 297.98 | 6.00 OLLIE | 01 | 1 | XX |
| 013-007-000 | 05312017 | 0003480 | 7950 | 7953 | AIR TANK(S) | | 0.00 | 21.87 | 21.87 | 1.00 AARON | 11 | 1 | 31 |
| 013-007-000 | 10062016 | 0003103 | 7570 | 7572 | AIR TANK(S) | | 103.29 | 269.94 | 373.23 | 12.00 9590 | 01 | 1 | XX |
| 013-009-000 | 02102020 | 0005797 | 8740 | 8740 | AIR DRYER | | 90.23 | 22.76 | 112.99 | 1.00 MIKE W. | XX | 7 | 31 |
| 013-009-000 | 10222018 | 0004461 | 8230 | 8230 | AIR DRYER | | 87.14 | 45.52 | 132.66 | 2.00 MIKE W. | XX | 8 | 1 |
| 013-009-000 | 05312017 | 0003480 | 7950 | 7953 | AIR DRYER | | 88.09 | 43.74 | 131.83 | 2.00 AARON | 11 | 1 | 31 |
| 013-009-000 | 05172016 | 0002757 | 7500 | 7501 | AIR DRYER | | 88.49 | 20.21 | 108.70 | 1.00 9590 | 01 | 1 | XX |
| 013-009-000 | 04172015 | 0001955 | 7140 | 7137 | AIR DRYER | | 86.33 | 30.32 | 116.65 | 1.50 9590 | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 013-012-000 | 12032019 | 0005551 | 8530 | 8531 | AIR LINE | | 0.00 | 7.83 | 7.83 | 0.30 STEVE | XX | 4 | 31 |
| 013-023-000 | 07302013 | 0000374 | 6200 | 6196 | BACKING PLATE FRNT | | 147.98 | 41.00 | 188.98 | 2.00 OLLIE | 01 | 1 | XX |
| 013-035-000 | 06142017 | 0003688 | 7950 | 7953 | CHAMBER REAR | | 0.00 | 32.81 | 32.81 | 1.50 AARON | 11 | 1 | 31 |
| 013-035-000 | 07212014 | 0001373 | 6670 | 6666 | CHAMBER REAR | | 39.68 | 82.00 | 121.68 | 4.00 BILL | 01 | 1 | XX |
| 013-048-000 | 03032017 | 0003452 | 7850 | 7853 | EMERG BRAKE RELEAS | | 144.59 | 32.81 | 177.40 | 1.50 AARON | 11 | 1 | 31 |
| 013-081-000 | 10222018 | 0004794 | 8230 | 8230 | BRAKE PEDAL | | 375.00 | 56.90 | 431.90 | 2.50 AARON | 11 | 1 | 31 |
| 013-096-000 | 07302013 | 0000374 | 6200 | 6196 | BRAKE RELAY VLV SP | | 171.53 | 41.00 | 212.53 | 2.00 OLLIE | 01 | 1 | XX |
| 013-115-000 | 11302016 | 0003210 | 7590 | 7585 | AIR TANK | | 594.20 | 131.22 | 725.42 | 6.00 9590 | 01 | 1 | 31 |
| 013-116-000 | 11062018 | 0004783 | 8230 | 8230 | SLACK ADJUSTER | | 303.94 | 318.64 | 622.58 | 14.00 AARON | 11 | 1 | 31 |
| 013-121-000 | 03042014 | 0001019 | 6580 | 6575 | AIR LEAK | | 0.00 | 1.99 | 1.99 | 0.10 SGOBEIL | 01 | 1 | XX |
| 013 | | TOTAL > | BRAKES | | | | 3500.72 | 1824.12 | 5324.84 | | | | |
| 015 | | TITLE > | STEERING | | | | | | | | | | |
| 015-005-000 | 10172013 | 0000692 | 6250 | 6252 | ALIGNMENT | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |
| 015-038-000 | 03112015 | 0001937 | 7110 | 7106 | RERSERVOIR | | 223.65 | 44.58 | 268.23 | 2.00 STEVE | 01 | 1 | XX |
| 015 | | TOTAL > | STEERING | | | | 223.65 | 75.33 | 298.98 | | | | |
| 016 | | TITLE > | SUSPENSION | | | | | | | | | | |
| 016-002-000 | 04172015 | 0001955 | 7140 | 7137 | SHOCK ABSORBER | | 64.22 | 10.11 | 74.33 | 0.50 9590 | 01 | 1 | XX |
| 016-004-000 | 09222015 | 0002211 | 7200 | 7195 | LEAF SPRING ASSEMB | | 619.68 | 328.00 | 947.68 | 16.00 OLLIE | 01 | 1 | XX |
| 016-004-002 | 05312017 | 0003480 | 7950 | 7953 | REAR LEAF SPRING | | 1170.74 | 131.22 | 1301.96 | 6.00 AARON | 11 | 1 | 31 |
| 016 | | TOTAL > | SUSPENSION | | | | 1854.64 | 469.33 | 2323.97 | | | | |
| 017 | | TITLE > | TIRES,TUBES,LINERS | | | | | | | | | | |
| 017-013-000 | 05312017 | 0003480 | 7950 | 7953 | TIRE REPAIR | | 0.00 | 21.87 | 21.87 | 1.00 AARON | 11 | 1 | 31 |
| 017-013-000 | 01052017 | 0003201 | 7590 | 7585 | TIRE REPAIR | | 0.00 | 43.74 | 43.74 | 2.00 9590 | 01 | 1 | 31 |
| 017-014-000 | 07202020 | 0006252 | 8790 | 8788 | TIRE REPLACEMENT | | 1015.19 | 38.82 | 1054.01 | 2.00 9644 | 11 | 6 | 31 |
| 017-014-000 | 01292019 | 0005057 | 8330 | 8333 | TIRE REPLACEMENT | | 0.00 | 24.62 | 24.62 | 1.00 OLLIE | 11 | 4 | 31 |
| 017-014-000 | 09222015 | 0002211 | 7200 | 7195 | TIRE REPLACEMENT | | 0.00 | 41.00 | 41.00 | 2.00 OLLIE | 01 | 1 | XX |
| 017-014-000 | 09232013 | 0000673 | 6200 | 6196 | TIRE REPLACEMENT | | 0.00 | 41.00 | 41.00 | 2.00 OLLIE | 01 | 1 | XX |
| 017 | | TOTAL > | TIRES,TUBES,LINERS | | | | 1015.19 | 211.05 | 1226.24 | | | | |
| 018 | | TITLE > | WHEELS,RIMS,HUBS,BEA | | | | | | | | | | |
| 018-012-000 | 01202015 | 0001772 | 6800 | 6800 | SEAL WHEEL FRONT | | 341.37 | 123.00 | 464.37 | 6.00 OLLIE | 01 | 1 | XX |
| 018 | | TOTAL > | WHEELS,RIMS,HUBS,BEA | | | | 341.37 | 123.00 | 464.37 | | | | |
| 024 | | TITLE > | DRIVE SHAFT(S) | | | | | | | | | | |
| 024-005-000 | 09222015 | 0002211 | 7200 | 7195 | DRIVESHAFT YOKE | | 75.22 | 61.50 | 136.72 | 3.00 OLLIE | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 024 | | TOTAL > | DRIVE SHAFT(S) | | | | 75.22 | 61.50 | 136.72 | | | | |
| 027 | | TITLE > | TRANSMISSION AUTOMAT | | | | | | | | | | |
| 027-000-000 | 05312017 | 0003480 | 7950 | 7953 | TRANSMISSION AUTOM | | 0.00 | 21.87 | 21.87 | 1.00 AARON | 11 | 1 | 31 |
| 027-065-000 | 01032018 | 0004073 | 8000 | 8004 | RANGE SELECTOR | | 0.00 | 218.70 | 218.70 | 10.00 AARON | 11 | 1 | 31 |
| 027-097-000 | 10172013 | 0000692 | 6250 | 6252 | DIPSTICK TUBE/ FIL | | 240.67 | 61.50 | 302.17 | 3.00 OLLIE | 01 | 1 | XX |
| 027-099-000 | 04172015 | 0001955 | 7140 | 7137 | TRANS. COOLER LINE | | 159.40 | 60.63 | 220.03 | 3.00 9590 | 01 | 1 | XX |
| 027-100-000 | 10222018 | 0004783 | 8230 | 8230 | COVER PLATES | | 32.25 | 22.76 | 55.01 | 1.00 AARON | 11 | 1 | 31 |
| 027-101-000 | 04172015 | 0001955 | 7140 | 7137 | TRANSMISSION SERVI | | 295.12 | 40.42 | 335.54 | 2.00 9590 | 01 | 1 | XX |
| 027 | | TOTAL > | TRANSMISSION AUTOMAT | | | | 727.44 | 425.88 | 1153.32 | | | | |
| 032 | | TITLE > | CRANKING SYSTEM | | | | | | | | | | |
| 032-002-000 | 11172015 | 0002447 | 7280 | 7282 | BATTERY | | 239.09 | 30.75 | 269.84 | 1.50 OLLIE | 01 | 1 | XX |
| 032-002-001 | 11302016 | 0003210 | 7590 | 7585 | BATTERY DISCONNECT | | 164.90 | 32.81 | 197.71 | 1.50 9590 | 01 | 1 | 31 |
| 032-016-000 | 01122021 | 0006693 | 8880 | 8877 | NO START ISSUE | | 267.00 | 49.24 | 316.24 | 2.00 OLLIE | XX | 1 | 1 |
| 032-016-000 | 06302017 | 0003738 | 7960 | 7956 | NO START ISSUE | | 0.00 | 35.49 | 35.49 | 1.50 OLLIE | 11 | 1 | 31 |
| 032-020-000 | 01262016 | 0002452 | 7350 | 7353 | HARD START | | 62.42 | 41.00 | 103.42 | 2.00 OLLIE | 01 | 1 | XX |
| 032 | | TOTAL > | CRANKING SYSTEM | | | | 733.41 | 189.29 | 922.70 | | | | |
| 034 | | TITLE > | LIGHTING & ELECTRICA | | | | | | | | | | |
| 034-001-002 | 01312020 | 0005885 | 8740 | 8740 | RIGHT HEADLIGHT | | 0.00 | 6.83 | 6.83 | 0.30 MIKE W. | XX | 1 | 31 |
| 034-001-002 | 10222018 | 0004783 | 8230 | 8230 | RIGHT HEADLIGHT | | 45.77 | 79.66 | 125.43 | 3.50 AARON | 11 | 1 | 31 |
| 034-002-000 | 01312020 | 0005885 | 8740 | 8740 | PLOW LIGHT(S) | | 0.00 | 6.83 | 6.83 | 0.30 MIKE W. | XX | 1 | 31 |
| 034-002-000 | 12172018 | 0004950 | 8230 | 8230 | PLOW LIGHT(S) | | 128.64 | 12.31 | 140.95 | 0.50 OLLIE | 11 | 1 | 31 |
| 034-004-000 | 02222019 | 0005078 | 8370 | 8365 | BACK UP LIGHT / AL | | 0.00 | 11.38 | 11.38 | 0.50 MIKE W. | 11 | 1 | 31 |
| 034-025-000 | 05312017 | 0003480 | 7950 | 7953 | MARKER LIGHT(S) | | 0.00 | 21.87 | 21.87 | 1.00 AARON | 11 | 1 | 31 |
| 034-025-000 | 01302014 | 0000955 | 6480 | 6480 | MARKER LIGHT(S) | | 0.00 | 4.98 | 4.98 | 0.25 SGOBEIL | 01 | 1 | XX |
| 034-040-000 | 03122013 | 0000363 | 6100 | 6096 | WIRING HARNESS ALL | | 66.16 | 51.25 | 117.41 | 2.50 OLLIE | 01 | 1 | XX |
| 034-105-000 | 09062019 | 0005467 | 8530 | 8525 | MULTI-FUNCTION SWI | | 144.31 | 34.14 | 178.45 | 1.50 AARON | 11 | 4 | 31 |
| 034-402-000 | 02222019 | 0005078 | 8370 | 8365 | STROBE LIGHT(S) | | 50.69 | 91.04 | 141.73 | 4.00 MIKE W. | 11 | 1 | 31 |
| 034-402-000 | 09222015 | 0002211 | 7200 | 7195 | STROBE LIGHT(S) | | 56.25 | 41.00 | 97.25 | 2.00 OLLIE | 01 | 1 | XX |
| 034-403-000 | 06142017 | 0003688 | 7950 | 7953 | LIGHTING & ELECTRI | | 0.00 | 43.74 | 43.74 | 2.00 AARON | 11 | 1 | 31 |
| 034-405-000 | 03052019 | 0005155 | 8390 | 8389 | WING LIGHT | | 62.28 | 52.20 | 114.48 | 2.00 STEVE | 11 | 1 | 31 |
| 034-407-000 | 05312017 | 0003480 | 7950 | 7953 | MULTIPLE LIGHT REP | | 245.32 | 87.48 | 332.80 | 4.00 AARON | 11 | 1 | 31 |
| 034 | | TOTAL > | LIGHTING & ELECTRICA | | | | 799.42 | 544.71 | 1344.13 | | | | |
| 042 | | TITLE > | COOLING SYSTEM | | | | | | | | | | |
| 042-019-000 | 05312017 | 0003480 | 7950 | 7953 | RADIATOR CAP | | 10.00 | 2.19 | 12.19 | 0.10 AARON | 11 | 1 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 042-053-000 | 03032017 | 0003452 | 7850 | 7853 | OVERHEAT (RUNNING | | 289.97 | 54.68 | 344.64 | 2.50 AARON | 11 | 1 | 31 |
| 042 | | TOTAL > | COOLING SYSTEM | | | | 299.97 | 56.87 | 356.84 | | | | |
| 043 | | TITLE > | EXHAUST SYSTEM | | | | | | | | | | |
| 043-005-000 | 01292014 | 0000941 | 6470 | 6474 | EXHAUST FLEX PIPE | | 21.14 | 24.88 | 46.02 | 1.25 SGOBEIL | 01 | 1 | XX |
| 043-007-000 | 05312017 | 0003480 | 7950 | 7953 | MUFFLER | | 200.26 | 65.61 | 265.87 | 3.00 AARON | 11 | 1 | 31 |
| 043-009-000 | 10062016 | 0003103 | 7570 | 7572 | EXHAUST PIPE OR FL | | 219.08 | 54.68 | 273.76 | 2.50 9590 | 01 | 1 | XX |
| 043-011-000 | 12182015 | 0002452 | 7320 | 7319 | TAILPIPE, STACK | | 10.02 | 10.25 | 20.27 | 0.50 OLLIE | 01 | 1 | XX |
| 043-011-000 | 03042014 | 0001019 | 6580 | 6575 | TAILPIPE, STACK | | 398.16 | 49.75 | 447.91 | 2.50 SGOBEIL | 01 | 1 | XX |
| 043-125-000 | 01262016 | 0002554 | 7350 | 7353 | EXHAUST LEAK | | 48.53 | 0.00 | 48.53 | 0.00 OLLIE | 01 | 1 | XX |
| 043 | | TOTAL > | EXHAUST SYSTEM | | | | 897.19 | 205.17 | 1102.36 | | | | |
| 044 | | TITLE > | FUEL SYSTEM | | | | | | | | | | |
| 044-024-000 | 04172019 | 0005236 | 8480 | 8480 | FILTER FUEL | | 11.17 | 6.83 | 17.99 | 0.30 MIKE W. | 11 | 1 | 31 |
| 044-044-000 | 04092014 | 0001180 | 6600 | 6603 | FUEL TANK | | 1475.90 | 164.00 | 1639.90 | 8.00 OLLIE | 01 | 1 | XX |
| 044-056-000 | 02192014 | 0001032 | 6560 | 6559 | FUEL LEAK | | 0.00 | 156.44 | 156.44 | 7.50 STEVE | 01 | 1 | XX |
| 044 | | TOTAL > | FUEL SYSTEM | | | | 1487.07 | 327.27 | 1814.34 | | | | |
| 045 | | TITLE > | POWER PLANT/ENGINE | | | | | | | | | | |
| 045-013-000 | 05182020 | 0006147 | 8740 | 8740 | DIPSTICK TUBE, ENG | | 43.94 | 9.10 | 53.04 | 0.40 MIKE W. | 11 | 1 | 31 |
| 045-013-000 | 03182013 | 0000366 | 6130 | 6132 | DIPSTICK TUBE, ENG | | 380.90 | 0.00 | 380.90 | 1.00 RICH | 01 | 1 | XX |
| 045-041-000 | 09122019 | 0005467 | 8530 | 8525 | OIL PAN, ENG | | 875.09 | 91.04 | 966.13 | 4.00 AARON | 11 | 4 | 31 |
| 045-080-000 | 01262016 | 0002452 | 7350 | 7353 | VALVE ADJUSTMENT | | 23.84 | 123.00 | 146.84 | 6.00 OLLIE | 01 | 1 | XX |
| 045-081-005 | 04122019 | 0005171 | 8480 | 8480 | OIL SAMPLE | | 0.00 | 11.38 | 11.38 | 0.50 MIKE W. | 11 | 4 | 31 |
| 045-081-005 | 03032017 | 0003452 | 7850 | 7853 | OIL SAMPLE | | 28.00 | 2.19 | 30.19 | 0.10 AARON | 11 | 1 | 31 |
| 045-082-000 | 01302014 | 0000955 | 6480 | 6480 | FULL SERVICE | | 147.60 | 59.70 | 207.30 | 3.00 SGOBEIL | 01 | 1 | XX |
| 045-082-000 | 07302013 | 0000374 | 6200 | 6196 | FULL SERVICE | | 0.00 | 0.00 | 0.00 | 0.00 OLLIE | 01 | 1 | XX |
| 045-082-000 | 03182013 | 0000366 | 6130 | 6132 | FULL SERVICE | | 345.75 | 0.00 | 345.75 | 6.50 RICH | 01 | 1 | XX |
| 045-082-001 | 02102020 | 0005797 | 8740 | 8740 | MAIN ENGINE | | 239.12 | 113.80 | 352.92 | 5.00 MIKE W. | 11 | 7 | 31 |
| 045-082-001 | 04122019 | 0005171 | 8480 | 8480 | MAIN ENGINE | | 144.53 | 91.04 | 235.57 | 4.00 MIKE W. | 11 | 4 | 31 |
| 045-082-001 | 03052018 | 0004181 | 8130 | 8129 | MAIN ENGINE | | 161.32 | 153.09 | 314.41 | 7.00 AARON | 01 | 1 | 31 |
| 045-082-001 | 03032017 | 0003452 | 7850 | 7853 | MAIN ENGINE | | 161.23 | 54.68 | 215.91 | 2.50 AARON | 11 | 1 | 31 |
| 045-082-001 | 10062016 | 0003103 | 7570 | 7572 | MAIN ENGINE | | 92.60 | 43.74 | 136.34 | 2.00 9590 | 01 | 1 | XX |
| 045-082-001 | 01262016 | 0002599 | 7320 | 7319 | MAIN ENGINE | | 158.29 | 123.00 | 281.29 | 6.00 OLLIE | 01 | 1 | XX |
| 045-082-001 | 04172015 | 0001955 | 7140 | 7137 | MAIN ENGINE | | 147.60 | 101.05 | 248.65 | 5.00 9590 | 01 | 1 | XX |
| 045-082-001 | 01202015 | 0001772 | 6800 | 6800 | MAIN ENGINE | | 147.60 | 123.00 | 270.60 | 6.00 OLLIE | 01 | 1 | XX |
| 045 | | TOTAL > | POWER PLANT/ENGINE | | | | 3097.41 | 1099.81 | 4197.22 | | | | |
| 051 | | TITLE > | GENERAL ACCESSORIES | | | | | | | | | | |
| 051-001-000 | 01302014 | 0000955 | 6480 | 6480 | WASHER NOZZLE, W/S | | 16.83 | 19.90 | 36.73 | 1.00 SGOBEIL | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 051-002-000 | 02232015 | 0001840 | 7040 | 7042 | WIPER ARM | | 78.54 | 20.50 | 99.04 | 1.00 BILL | 01 | 1 | XX |
| 051-014-000 | 01222013 | 0000277 | 0 | 0 | TIRE CHAINS INSTAL | | 220.00 | 18.99 | 238.99 | 0.90 BILL | 01 | 1 | XX |
| 051-025-000 | 01262016 | 0002452 | 7350 | 7353 | MUD FLAP | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |
| 051-028-000 | 01152019 | 0005033 | 8310 | 8313 | TIRE CHAINS | | 231.63 | 36.00 | 267.63 | 2.00 HELPER | 11 | 4 | 31 |
| 051-037-000 | 07212014 | 0001373 | 6670 | 6666 | WIPER ARM | | 94.52 | 41.00 | 135.52 | 2.00 BILL | 01 | 1 | XX |
| 051-038-000 | 02222019 | 0005078 | 8370 | 8365 | WIPER BLADE | | 35.98 | 11.38 | 47.36 | 0.50 MIKE W. | 11 | 1 | 31 |
| 051-038-000 | 10222018 | 0004783 | 8230 | 8230 | WIPER BLADE | | 29.05 | 11.38 | 40.43 | 0.50 AARON | 11 | 1 | 31 |
| 051-044-000 | 03042014 | 0001019 | 6580 | 6575 | WIPER LINKAGE | | 191.33 | 24.88 | 216.21 | 1.25 SGOBEIL | 01 | 1 | XX |
| 051-155-000 | 07202020 | 0006252 | 8790 | 8788 | DOCUMENT HOLDER | | 5.61 | 38.82 | 44.43 | 2.00 9644 | 11 | 6 | 31 |
| 051 | | TOTAL > | GENERAL ACCESSORIES | | | | 903.49 | 253.60 | 1157.09 | | | | |
| 052 | | TITLE > | ELECTRICAL ACCESSORI | | | | | | | | | | |
| 052-003-000 | 07302013 | 0000374 | 6200 | 6196 | RADIO EQUIPMENT | | 0.00 | 10.25 | 10.25 | 0.50 OLLIE | 01 | 1 | XX |
| 052-003-001 | 12102019 | 0005745 | 8570 | 8570 | TWO-WAY RADIO | | 14.25 | 22.76 | 37.01 | 1.00 MIKE W. | 11 | 1 | 31 |
| 052-003-001 | 12182015 | 0002452 | 7320 | 7319 | TWO-WAY RADIO | | 45.00 | 51.25 | 96.25 | 2.50 OLLIE | 01 | 1 | XX |
| 052-003-001 | 01232015 | 0001767 | 6800 | 6800 | TWO-WAY RADIO | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |
| 052 | | TOTAL > | ELECTRICAL ACCESSORI | | | | 59.25 | 115.01 | 174.26 | | | | |
| 053 | | TITLE > | EXPENDABLE ITEMS | | | | | | | | | | |
| 053-001-000 | 01242018 | 0004159 | 8000 | 8004 | TIRE CHAINS | | 163.39 | 0.00 | 163.39 | 0.00 | 11 | 1 | 31 |
| 053-001-000 | 03212017 | 0003507 | 7850 | 7853 | TIRE CHAINS | | 273.00 | 0.00 | 273.00 | 0.00 | 11 | 1 | 31 |
| 053-001-000 | 01192016 | 0002578 | 7320 | 7319 | TIRE CHAINS | | 249.00 | 0.00 | 249.00 | 0.00 | 01 | 1 | XX |
| 053-001-000 | 01302015 | 0001839 | 6800 | 6800 | TIRE CHAINS | | 249.00 | 0.00 | 249.00 | 0.00 | 01 | 1 | XX |
| 053 | | TOTAL > | EXPENDABLE ITEMS | | | | 934.39 | 0.00 | 934.39 | | | | |
| 054 | | TITLE > | HORN AND MOUNTING | | | | | | | | | | |
| 054-005-000 | 09062019 | 0005467 | 8530 | 8525 | HORN AIR LINE | | 0.00 | 11.38 | 11.38 | 0.50 AARON | 11 | 4 | 31 |
| 054 | | TOTAL > | HORN AND MOUNTING | | | | 0.00 | 11.38 | 11.38 | | | | |
| 057 | | TITLE > | SPARE WHEEL MOUNTING | | | | | | | | | | |
| 057-001-000 | 01182013 | 0000270 | 0 | 0 | TIRE CHANGE | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 057 | | TOTAL > | SPARE WHEEL MOUNTING | | | | 0.00 | 41.00 | 41.00 | | | | |
| 065 | | TITLE > | HYDRAULIC SYSTEMS | | | | | | | | | | |
| 065-004-000 | 09272019 | 0005561 | 8530 | 8531 | HYDRAULIC CYLINDER | | 0.00 | 79.66 | 79.66 | 3.50 MIKE W. | 11 | 1 | 31 |
| 065-004-000 | 10172013 | 0000692 | 6250 | 6252 | HYDRAULIC CYLINDER | | 0.00 | 20.50 | 20.50 | 1.00 OLLIE | 01 | 1 | XX |
| 065 | | TOTAL > | HYDRAULIC SYSTEMS | | | | 0.00 | 100.16 | 100.16 | | | | |
| 071 | | TITLE > | BODY | | | | | | | | | | |
| 071-000-000 | 01082013 | 0000241 | 0 | 0 | BODY | | 13.60 | 30.75 | 44.35 | 1.50 OLLIE | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 071 | | TOTAL > | BODY | | | | 13.60 | 30.75 | 44.35 | | | | |
| 400 | | TITLE > | ATTACHMENTS, EQUIPME | | | | | | | | | | |
| 400-002-001 | 01132021 | 0006678 | 8880 | 8877 | PLOW: MECHANICAL | | 0.00 | 11.84 | 11.84 | 0.50 9644 | XX | 1 | 31 |
| 400-002-001 | 03132020 | 0006036 | 8740 | 8740 | PLOW: MECHANICAL | | 33.26 | 18.00 | 51.26 | 1.00 HELPER | XX | 1 | 1 |
| 400-002-001 | 01232015 | 0001767 | 6800 | 6800 | PLOW: MECHANICAL | | 0.00 | 20.50 | 20.50 | 1.00 OLLIE | 01 | 1 | XX |
| 400-002-001 | 01302014 | 0000955 | 6480 | 6480 | PLOW: MECHANICAL | | 0.00 | 19.90 | 19.90 | 1.00 SGOBEIL | 01 | 1 | XX |
| 400-002-002 | 01202015 | 0001772 | 6800 | 6800 | PLOW: HYDRAULIC | | 22.29 | 82.00 | 104.29 | 4.00 OLLIE | 01 | 1 | XX |
| 400-002-003 | 01292019 | 0005058 | 8330 | 8333 | PLOW: CUTTING EDGE | | 265.14 | 45.52 | 310.66 | 2.00 MIKE W. | 11 | 4 | 31 |
| 400-002-003 | 01242018 | 0004131 | 8090 | 8086 | PLOW: CUTTING EDGE | | 265.14 | 22.31 | 287.45 | 1.00 10375 | 11 | 1 | 31 |
| 400-002-003 | 12262013 | 0000866 | 6360 | 6358 | PLOW: CUTTING EDGE | | 207.90 | 19.90 | 227.80 | 1.00 SGOBEIL | 01 | 1 | XX |
| 400-002-003 | 03122013 | 0000363 | 6100 | 6096 | PLOW: CUTTING EDGE | | 3.33 | 10.25 | 13.58 | 0.50 OLLIE | 01 | 1 | XX |
| 400-002-003 | 03082013 | 0000377 | 6130 | 6132 | PLOW: CUTTING EDGE | | 333.33 | 12.84 | 346.17 | 0.60 OLLIE | 01 | 1 | XX |
| 400-002-004 | 11302016 | 0003164 | 7570 | 7572 | PLOW: INSTALL PLOW | | 0.00 | 76.55 | 76.55 | 3.50 9590 | XX | 1 | 31 |
| 400-002-004 | 12232013 | 0000779 | 6320 | 6323 | PLOW: INSTALL PLOW | | 0.00 | 60.60 | 60.60 | 3.00 SGOBEIL | 01 | 1 | XX |
| 400-003-002 | 01132021 | 0006692 | 8880 | 8877 | WING: CUTTING EDGE | | 0.00 | 0.00 | 0.00 | 0.00 | XX | 1 | 31 |
| 400-003-002 | 01092019 | 0004996 | 8310 | 8313 | WING: CUTTING EDGE | | 240.80 | 22.76 | 263.56 | 1.00 MIKE W. | 11 | 4 | 31 |
| 400-003-002 | 01032018 | 0004073 | 8000 | 8004 | WING: CUTTING EDGE | | 244.13 | 43.74 | 287.87 | 2.00 AARON | 11 | 1 | 31 |
| 400-003-002 | 12172015 | 0002475 | 7280 | 7282 | WING: CUTTING EDGE | | 280.76 | 20.21 | 300.97 | 1.00 9590 | 01 | 1 | XX |
| 400-003-003 | 03052019 | 0005155 | 8390 | 8389 | WING: WING ARM | | 0.00 | 22.76 | 22.76 | 1.00 MIKE W. | 11 | 1 | 31 |
| 400-003-003 | 01292014 | 0000941 | 6470 | 6474 | WING: WING ARM | | 778.60 | 24.88 | 803.48 | 1.25 SGOBEIL | 01 | 1 | XX |
| 400-003-003 | 01182013 | 0000260 | 0 | 0 | WING: WING ARM | | 144.80 | 30.75 | 175.55 | 1.50 OLLIE | 01 | 1 | XX |
| 400-003-006 | 02192015 | 0001881 | 6800 | 6800 | WING: HEEL CABLE | | 51.36 | 102.50 | 153.86 | 5.00 BILL | 01 | 1 | XX |
| 400-003-007 | 11302016 | 0003164 | 7570 | 7572 | WING: INSTALL WING | | 0.00 | 21.87 | 21.87 | 1.00 9590 | XX | 1 | 31 |
| 400-003-007 | 12232013 | 0000779 | 6320 | 6323 | WING: INSTALL WING | | 0.00 | 60.60 | 60.60 | 3.00 SGOBEIL | 01 | 1 | XX |
| 400-009-000 | 02172016 | 0002657 | 7350 | 7353 | CONTROL BOX, JOYST | | 32.64 | 44.58 | 77.22 | 2.00 STEVE | 01 | 1 | XX |
| 400-009-000 | 01202015 | 0001772 | 6800 | 6800 | CONTROL BOX, JOYST | | 38.31 | 30.75 | 69.06 | 1.50 OLLIE | 01 | 1 | XX |
| 400 | | TOTAL > | ATTACHMENTS, EQUIPME | | | | 2941.79 | 825.61 | 3767.40 | | | | |
| 404 | | TITLE > | DUMP BODY REPAIR | | | | | | | | | | |
| 404-001-000 | 06302017 | 0003738 | 7960 | 7956 | DUMP BODY: MECHANI | | 0.00 | 23.66 | 23.66 | 1.00 OLLIE | 11 | 1 | 31 |
| 404-001-000 | 03112015 | 0001937 | 7110 | 7106 | DUMP BODY: MECHANI | | 0.00 | 44.58 | 44.58 | 2.00 STEVE | 01 | 1 | XX |
| 404-003-000 | 09172019 | 0005468 | 8530 | 8525 | DUMP BODY: WELDING | | 0.00 | 372.52 | 372.52 | 12.00 DALE | 11 | 8 | 31 |
| 404-003-000 | 04172015 | 0001955 | 7140 | 7137 | DUMP BODY: WELDING | | 174.50 | 411.68 | 586.18 | 8.00 9590 | 01 | 1 | XX |
| 404 | | TOTAL > | DUMP BODY REPAIR | | | | 174.50 | 852.44 | 1026.94 | | | | |
| 405 | | TITLE > | AIR TAILGATE REPAIR | | | | | | | | | | |
| 405-000-000 | 03062017 | 0003452 | 7850 | 7853 | AIR TAILGATE REPAI | | 73.15 | 32.81 | 105.95 | 1.50 AARON | 11 | 1 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**UNIT: 006 LF MTR: 8877.0 CUR MTR: 8877.0 YR: 03 MAKE: STERLING DEPT: DPW SIZE: H CLASS: DUMP FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 405-005-000 | 01312020 | 0005885 | 8740 | 8740 | GATE RELEASE VALVE | | 48.03 | 0.00 | 48.03 | 0.00 | 11 | 1 | 31 |
| 405 | | TOTAL > | AIR TAILGATE REPAIR | | | | 121.18 | 32.81 | 153.99 | | | | |
| | | | | | | | | | | | | | |
| 407 | | TITLE > | MAINE STATE INSPECTI | | | | | | | | | | |
| 407-000-000 | 09222015 | 0002211 | 7200 | 7195 | MAINE STATE INSPEC | | 0.00 | 0.00 | 0.00 | 0.00 OLLIE | 01 | 1 | XX |
| 407-000-000 | 07212014 | 0001373 | 6670 | 6666 | MAINE STATE INSPEC | | 2.50 | 41.00 | 43.50 | 2.00 BILL | 01 | 1 | XX |
| 407-000-000 | 07302013 | 0000374 | 6200 | 6196 | MAINE STATE INSPEC | | 15.64 | 51.25 | 66.89 | 2.50 OLLIE | 01 | 1 | XX |
| 407-001-000 | 07202020 | 0006252 | 8790 | 8788 | (MSI) COMMERCIAL T | | 2.50 | 9.71 | 12.21 | 0.50 9644 | 11 | 6 | 31 |
| 407-001-000 | 09172019 | 0005459 | 8530 | 8525 | (MSI) COMMERCIAL T | | 2.50 | 22.76 | 25.26 | 1.00 AARON | 11 | 1 | 31 |
| 407-001-000 | 10222018 | 0004477 | 8230 | 8230 | (MSI) COMMERCIAL T | | 2.50 | 0.00 | 2.50 | 0.00 AARON | 01 | 8 | 31 |
| 407-001-000 | 06132017 | 0003688 | 7950 | 7953 | (MSI) COMMERCIAL T | | 10.40 | 32.81 | 43.21 | 1.50 AARON | 11 | 1 | XX |
| 407-001-000 | 10062016 | 0003103 | 7570 | 7572 | (MSI) COMMERCIAL T | | 2.50 | 21.87 | 24.37 | 1.00 9590 | 01 | 1 | XX |
| 407-001-000 | 09222015 | 0002211 | 7200 | 7195 | (MSI) COMMERCIAL T | | 2.50 | 30.75 | 33.25 | 1.50 OLLIE | 01 | 1 | XX |
| 407 | | TOTAL > | MAINE STATE INSPECTI | | | | 41.04 | 210.15 | 251.19 | | | | |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 006
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 006

**METER: STANDARD** **SUBTOTALS OF VMRS CODES FOR DIVISION > AL** **PERIOD: YEAR**

| VMRS CODE | | QUANTITY | LABOR HRS | LABOR COST | PARTS COST | | TOTAL COST | PERCENT | TOT COST /METER |
|---|---|---|---|---|---|---|---|---|---|
| 001 | A/C, HEAT, VENTILATION | 4 | 5.80 | 129.62 | 822.42 | | 952.04 | 3.03% | 0.10725 |
| 002 | CAB/SHEET METALS | 7 | 26.70 | 544.37 | 1207.90 | | 1752.27 | 5.58% | 0.19739 |
| 012 | AXLES, DIFFERENTIAL, R | 2 | 6.50 | 146.81 | 207.40 | | 354.21 | 1.13% | 0.03990 |
| 013 | BRAKES | 24 | 83.40 | 1824.12 | 3500.72 | | 5324.84 | 16.97% | 0.59985 |
| 015 | STEERING | 2 | 3.50 | 75.33 | 223.65 | | 298.98 | 0.95% | 0.03368 |
| 016 | SUSPENSION | 3 | 22.50 | 469.33 | 1854.64 | | 2323.97 | 7.40% | 0.26180 |
| 017 | TIRES,TUBES,LINERS | 6 | 10.00 | 211.05 | 1015.19 | | 1226.24 | 3.91% | 0.13814 |
| 018 | WHEELS,RIMS,HUBS,BEARI | 1 | 6.00 | 123.00 | 341.37 | | 464.37 | 1.48% | 0.05231 |
| 024 | DRIVE SHAFT(S) | 1 | 3.00 | 61.50 | 75.22 | | 136.72 | 0.44% | 0.01540 |
| 027 | TRANSMISSION AUTOMATIC | 6 | 20.00 | 425.88 | 727.44 | | 1153.32 | 3.67% | 0.12992 |
| 032 | CRANKING SYSTEM | 5 | 8.50 | 189.29 | 733.41 | | 922.70 | 2.94% | 0.10394 |
| 034 | LIGHTING & ELECTRICAL | 14 | 24.35 | 544.71 | 799.42 | | 1344.13 | 4.28% | 0.15142 |
| 042 | COOLING SYSTEM | 2 | 2.60 | 56.87 | 299.97 | | 356.84 | 1.14% | 0.04020 |
| 043 | EXHAUST SYSTEM | 6 | 9.75 | 205.17 | 897.19 | | 1102.36 | 3.51% | 0.12418 |
| 044 | FUEL SYSTEM | 3 | 15.80 | 327.27 | 1487.07 | | 1814.34 | 5.78% | 0.20439 |
| 045 | POWER PLANT/ENGINE | 17 | 59.00 | 1099.81 | 3097.41 | | 4197.22 | 13.37% | 0.47282 |
| 051 | GENERAL ACCESSORIES | 10 | 12.65 | 253.60 | 903.49 | | 1157.09 | 3.69% | 0.13035 |
| 052 | ELECTRICAL ACCESSORIES | 4 | 5.50 | 115.01 | 59.25 | | 174.26 | 0.56% | 0.01963 |
| 053 | EXPENDABLE ITEMS | 4 | 0.00 | 0.00 | 934.39 | | 934.39 | 2.98% | 0.10526 |
| 054 | HORN AND MOUNTING | 1 | 0.50 | 11.38 | 0.00 | | 11.38 | 0.04% | 0.00128 |
| 057 | SPARE WHEEL MOUNTING | 1 | 2.00 | 41.00 | 0.00 | | 41.00 | 0.13% | 0.00462 |
| 065 | HYDRAULIC SYSTEMS | 2 | 4.50 | 100.16 | 0.00 | | 100.16 | 0.32% | 0.01128 |
| 071 | BODY | 1 | 1.50 | 30.75 | 13.60 | | 44.35 | 0.14% | 0.00500 |
| 400 | ATTACHMENTS, EQUIPMENT | 24 | 39.35 | 825.61 | 2941.79 | | 3767.40 | 12.00% | 0.42440 |
| 404 | DUMP BODY REPAIR | 4 | 23.00 | 852.44 | 174.50 | | 1026.94 | 3.27% | 0.11569 |
| 405 | AIR TAILGATE REPAIR | 2 | 1.50 | 32.81 | 121.18 | | 153.99 | 0.49% | 0.01735 |
| 407 | MAINE STATE INSPECTION | 9 | 10.00 | 210.15 | 41.04 | | 251.19 | 0.80% | 0.02830 |
| | **TOTALS:** | 165 | 407.90 | 8907.04 | 22479.66 | **TOT:** | 31386.70 | 100.00% | 3.53573 |

BUDGET FIGURE

**INTERNATIONAL®**

**March 04, 2021**

**Prepared For:**
CITY OF SOUTH PORTLAND
DOUG HOWARD
25 COTTAGE ROAD
SOUTH PORTLAND, ME 04106-
(207)767 - 3201

**Presented By:**
ALLEGIANCE TRUCKS
Steven E Gray
110 GRAYRD.
FALMOUTH ME 041052018
207-797-8080

Thank you for the opportunity to provide you with the following quotation on a new International truck. I am sure the following detailed specification will meet your operational requirements, and I look forward to serving your business needs.

**Model Profile**
**2022 HV507 SFA (HV507)**

| | |
|---|---|
| **AXLE CONFIG:** | 4X2 |
| **APPLICATION:** | Front Plow and Wing with Spreader |
| **MISSION:** | Requested GVWR: 36370. Calc. GVWR: 36370<br>Calc. Start / Grade Ability: 48.98% / 3.72% @ 55 MPH |
| **DIMENSION:** | Wheelbase: 181.00, CA: 106.00, Axle to Frame: 63.00 |
| **ENGINE, DIESEL:** | {Cummins L9 330} EPA 2021, 330HP @ 2200 RPM, 1000 lb-ft Torque @ 1200 RPM, 2200 RPM Governed Speed, 330 Peak HP (Max) |
| **TRANSMISSION, AUTOMATIC:** | {Allison 3500 RDS} 5th Generation Controls, Wide Ratio, 6-Speed with Double Overdrive, with PTO Provision, Less Retarder, Includes Oil Level Sensor, with 80,000-lb GVW and GCW Max, On/Off Highway |
| **CLUTCH:** | Omit Item (Clutch & Control) |
| **AXLE, FRONT NON-DRIVING:** | {Meritor MFS-18-133A} Wide Track, I-Beam Type, 18,000-lb Capacity |
| **AXLE, REAR, SINGLE:** | {Meritor RS-26-185} Single Reduction, 26,000-lb Capacity, Driver Controlled Locking Differential, R Wheel Ends Gear Ratio: 6.14 |
| **CAB:** | Conventional, Day Cab |
| **TIRE, FRONT:** | (3) 11R22.5 Load Range G HSR2 (CONTINENTAL), 498 rev/mile, 75 MPH, All-Position |
| **TIRE, REAR:** | (4) 11R22.5 Load Range H HDR2+ (CONTINENTAL), 491 rev/mile, 75 MPH, Drive |
| **SUSPENSION, REAR, SINGLE:** | 31,000-lb Capacity, Vari-Rate Springs, with 4500-lb Capacity Auxiliary Multileaf Springs |
| **PAINT:** | Cab schematic 100WK<br>Location 1: 9219, Winter White (Std)<br>Chassis schematic N/A |

**Description**
Base Chassis, Model HV507 SFA with 181.00 Wheelbase, 106.00 CA, and 63.00 Axle to Frame.

AXLE CONFIGURATION {Navistar} 4x2

Notes
: Pricing may change if axle configuration is changed.

FRAME RAILS Heat Treated Alloy Steel (125,000 PSI Yield); 11.25" x 4.00" x 0.500" (285.75mm x 101.6mm x 12.7mm); 480.8" (12212mm) Maximum OAL

BUMPER, FRONT Swept Back, Steel, Heavy Duty

FRAME, SPECIAL EFFECTS Dimple on Left and Right Top Flange of Frame Rail to Reference Rear Axle Centerline

FRAME EXTENSION, FRONT Integral; 20" In Front of Grille

WHEELBASE RANGE 146" (370cm) Through and Including 195" (495cm)

AXLE, FRONT NON-DRIVING {Meritor MFS-18-133A} Wide Track, I-Beam Type, 18,000-lb Capacity

SHOCK ABSORBERS, FRONT

SUSPENSION, FRONT, SPRING Multileaf, Shackle Type, 18,000-lb Capacity, Less Shock Absorbers

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes
: BRAKE LINES Color and Size Coded Nylon
: DRAIN VALVE Twist-Type
: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster
: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel
: PARKING BRAKE VALVE For Truck
: QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4
: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4/8x6

TRAILER CONNECTIONS Four-Wheel, with Hand Control Valve and Tractor Protection Valve, for Straight Truck

Notes
: When electronic stability control is ordered with trailer connections on a 4x2 truck, please check the operator manual for trailer weight restrictions.

DRAIN VALVE {Berg} with Pull Chain, for Air Tank

AIR BRAKE ABS {Bendix AntiLock Brake System} 4-Channel (4 Sensor/4 Modulator) Full Vehicle Wheel Control System

AIR DRYER {Bendix AD-9} with Heater

BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 SqIn Spring Brake

BRAKE CHAMBERS, FRONT AXLE {Bendix} 24 SqIn

SLACK ADJUSTERS, FRONT {Gunite} Automatic

SLACK ADJUSTERS, REAR {Gunite} Automatic

AIR COMPRESSOR {Cummins} 18.7 CFM

AIR DRYER LOCATION Mounted Inside Left Rail, Back of Cab

AIR TANK LOCATION (2) Mounted Under Battery Box, Outside Right Rail, Back of Cab, Perpendicular to Rail

DUST SHIELDS, FRONT BRAKE for Air Cam Brakes

**Description**

DUST SHIELDS, REAR BRAKE for Air Cam Brakes

BRAKES, REAR {Bendix Spicer ES-165-7H} Air S-Cam Type, Heavy Duty Cast Spider, Cast Shoe, Double Anchor Pin, Size 16.5" X 7", 45,000-lb Capacity per Axle

BRAKES, FRONT {Bendix Spicer ES-165-6X} Air S-Cam Type, Heavy Duty Fabricated Spider, Fabricated Shoe, Single Anchor Pin, Size 16.5" X 6", 23,000-lb Capacity

STEERING COLUMN Tilting

STEERING WHEEL 4-Spoke; 18" Dia., Black

STEERING GEAR (2) {Sheppard M100/M80} Dual Power

DRIVELINE SYSTEM {Dana Spicer} 1710, for 4x2/6x2

AFTERTREATMENT COVER Steel, Black

EXHAUST SYSTEM Horizontal Aftertreatment System, Frame Mounted Right Side Under Cab, for Single Vertical Tail Pipe, Frame Mounted Right Side Back of Cab

ENGINE EXHAUST BRAKE for Cummins ISB/B6.7/ISL/L9 Engine with Variable Vane Turbo Charger

TAIL PIPE (1) Turnback Type

EXHAUST HEIGHT 10'

MUFFLER/TAIL PIPE GUARD (1) Aluminum

ELECTRICAL SYSTEM 12-Volt, Standard Equipment

Includes
: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab
: HAZARD SWITCH Push On/Push Off, Located on Instrument Panel to Right of Steering Wheel
: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever
: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light
: STARTER SWITCH Electric, Key Operated
: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector
: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature
: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever
: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted
: WIRING, CHASSIS Color Coded and Continuously Numbered

ALTERNATOR {Leece-Neville AVI160P2013} Brush Type, 12 Volt, 160 Amp Capacity, Pad Mount, with Remote Sense

BODY BUILDER WIRING Back of Day Cab at Left Frame or Under Sleeper, Extended or Crew Cab at Left Frame; Includes Sealed Connectors for Tail/Amber Turn/Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn

BATTERY SYSTEM {Fleetrite} Maintenance-Free, (3) 12-Volt 2850CCA Total, Top Threaded Stud

2-WAY RADIO Wiring Effects; Wiring with 20 Amp Fuse Protection, Includes Ignition Wire with 5 Amp Fuse, Wire Ends Heat Shrink and Routed to Center of Header Console in Cab

BATTERY DISCONNECT SWITCH {Cole-Hersee 75920-06} 300 Amp, Disconnects Charging Circuits, Locks with Padlock, Battery Box Mounted

SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars

RADIO AM/FM/WB/Clock/Bluetooth/USB Input/Auxiliary Input

**Description**

BACK-UP ALARM Electric, 102 dBA

AUXILIARY HARNESS 3.0' for Auxiliary Front Head Lights and Turn Signals for Front Plow Applications

TRAILER CONNECTION SOCKET {Phillips} 7-Way, Mounted at Rear of Frame, Wired for Turn Signals Combined with Stop, Compatible with Trailers with Combined Stop, Tail, Turn Lamps

SWITCH, AUXILIARY Accessory Control; for Wiring in Roof, with Maximum of 20 amp Load with Switches In Instrument Panel

HORN, ELECTRIC Disc Style

SWITCH, BODY CIRCUITS, MID with Remote Power Module Mounted in Cab Behind Driver Seat, Up to 6 Outputs & 6 Inputs, Max 20 amp per Channel, Max 80 amp Total, Includes 1 Switch Pack with Momentary Switches

BATTERY BOX Steel, with Fiberglass Cover, 2-4 Battery Capacity, Mounted Right Side Perpendicular to Frame Rail, 35" Back of Cab

WINDSHIELD WIPER SPD CONTROL Force Wipers to Slowest Intermittent Speed When Park Brake Set and Wipers Left on for a Predetermined Time

CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade

TEST EXTERIOR LIGHTS Pre-Trip Inspection will Cycle all Exterior Lamps Except Back-up Lights

HEADLIGHTS ON W/WIPERS Headlights Will Automatically Turn on if Windshield Wipers are turned on

STARTING MOTOR {Delco Remy 38MT Type 300} 12 Volt, Less Thermal Over-Crank Protection

INDICATOR, LOW COOLANT LEVEL with Audible Alarm

CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses

TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender

HORN, AIR Single Trumpet, Black, with Lanyard Pull Cord

POWER SOURCE, ADDITIONAL Auxiliary Power Outlet (APO) & USB Port, Located in the Instrument Panel

LOGOS EXTERIOR Model Badges

LOGOS EXTERIOR, ENGINE Badges

HOOD, HATCH (01) for Servicing

INSULATION, UNDER HOOD for Sound Abatement

GRILLE Stationary, Chrome

INSULATION, SPLASH PANELS for Sound Abatement

BUG SCREEN Mounted Behind Grille

FRONT END Tilting, Fiberglass, with Three Piece Construction, for WorkStar/HV

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes
: PAINT SCHEMATIC ID LETTERS "WK"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

CLUTCH Omit Item (Clutch & Control)

**Description**

ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection

PTO EFFECTS, ENGINE FRONT Less PTO Unit, Includes Adapter Plate on Engine Front Mounted

ENGINE, DIESEL {Cummins L9 330} EPA 2021, 330HP @ 2200 RPM, 1000 lb-ft Torque @ 1200 RPM, 2200 RPM Governed Speed, 330 Peak HP (Max)

FAN DRIVE {Horton Drivemaster} Two-Speed Type, Direct Drive, with Residual Torque Device for Disengaged Fan Speed

Includes
: FAN Nylon

RADIATOR Aluminum, Cross Flow, Front to Back System, 1228 SqIn, with 1167 SqIn Charge Air Cooler, Includes In-Tank Oil Cooler

Includes
: DEAERATION SYSTEM with Surge Tank
: HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps
: RADIATOR HOSES Premium, Rubber

AIR CLEANER Single Element, with Integral Snow Valve and In-Cab Control

FEDERAL EMISSIONS {Cummins L9} EPA, OBD and GHG Certified for Calendar Year 2021

THROTTLE, HAND CONTROL Engine Speed Control; Electronic, Stationary, Variable Speed; Mounted on Steering Wheel

ACCESSORY WIRING, SPECIAL for Road Speed Wire Coiled Under Instrument Panel for Customer Use

ENGINE CONTROL, REMOTE MOUNTED No Provision for Remote Mounted Engine Control

BLOCK HEATER, ENGINE {Phillips} 120V/1000W, with "Y" Cord for Dealer Installed 120V/300W Oil Pan Heater

Includes
: BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door

EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations; Includes "Certified Clean Idle" Decal located on Driver Door

TRANSMISSION, AUTOMATIC {Allison 3500 RDS} 5th Generation Controls, Wide Ratio, 6-Speed with Double Overdrive, with PTO Provision, Less Retarder, Includes Oil Level Sensor, with 80,000-lb GVW and GCW Max, On/Off Highway

SHIFT CONTROL PARAMETERS {Allison} 3000 or 4000 Series Transmissions, 3 Speed S1 Secondary Shift Schedule for 5 or 6 Speed

TRANSMISSION SHIFT CONTROL Column Mounted Stalk Shifter, Not for Use with Allison 1000 & 2000 Series Transmission

TRANSMISSION OIL Synthetic; 29 thru 42 Pints

ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS) and Regional Haul Series (RHS), General Purpose Trucks, Construction, Package Number 223

NEUTRAL AT STOP OMIT

TRANSMISSION TCM LOCATION Located Inside Cab

PTO LOCATION Customer Intends to Install PTO at Left Side of Transmission

AXLE, REAR, SINGLE {Meritor RS-26-185} Single Reduction, 26,000-lb Capacity, Driver Controlled Locking Differential, R Wheel Ends . Gear Ratio: 6.14

Notes

**Description**
: Axle Lead Time is 60 Days

SUSPENSION, REAR, SINGLE 31,000-lb Capacity, Vari-Rate Springs, with 4500-lb Capacity Auxiliary Multileaf Springs

AXLE, REAR, LUBE {EmGard FE-75W-90} Synthetic Oil; 40 thru 49.99 Pints

FUEL TANK STRAPS Bright Finish Stainless Steel

FUEL/WATER SEPARATOR {Racor 400 Series} 12 VDC Electric Heater, Includes Pre-Heater, with Primer Pump, Includes Water-in-Fuel Sensor, Mounted on Engine

FUEL TANK Top Draw, Non-Polished Aluminum, D-Style, 19" Tank Depth, 70 US Gal (265L), Mounted Left Side, Under Cab

DEF TANK 7 US Gal (26L) Capacity, Frame Mounted Outside Left Rail, Under Cab

CAB Conventional, Day Cab

AIR CONDITIONER with Integral Heater and Defroster

GAUGE CLUSTER Base Level; English with English Speedometer and Tachometer, for Air Brake Chassis, Includes Engine Coolant Temperature, Primary and Secondary Air Pressure, Fuel and DEF Gauges, Oil Pressure Gauge, Includes 3 Inch Monochromatic Text Display

GAUGE, OIL TEMP, AUTO TRANS for Allison Transmission

GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} with Black Bezel, Mounted in Instrument Panel

IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster

SEAT, DRIVER {National 2000} Air Suspension, Hi Back, Cloth Facing/Vinyl Boxing, 1 Inboard Arm Rest, Isolator, Adjuster, 3 Chamber Lumbar, 6 Way Front Adj, 3 Way Rear Cushion Adj, -3 to 14 Degree Back Angle Adjustment, Adjust Side Bolster, Vinyl Suspension Cover, Heat

MIRROR, CONVEX, HOOD MOUNTED {Lang Mekra} (2) Right and Left Sides, Black, Heated, 7.5" Sq.

SEAT, PASSENGER {National} Non Suspension, High Back, Fixed Back, Integral Headrest, Cloth

MIRRORS (2) C-Loop, Heated, Black Heads and Arms, 7.5" x 14" Flat Glass, Includes 7.5" x 7" Convex Mirrors, for 102" Load Width

Notes
: Mirror Dimensions are Rounded to the Nearest 0.5"

MIRROR, CONVEX, LOOK DOWN Right Side, Black, 6" x 10.5"

CAB INTERIOR TRIM Diamond, for Day Cab

Includes
: CONSOLE, OVERHEAD Molded Plastic with Dual Storage Pockets, Retainer Nets and CB Radio Pocket; Located Above Driver and Passenger
: DOME LIGHT, CAB Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Reading Lights; Integral to Overhead Console, Center Mounted
: SUN VISOR (3) Padded Vinyl; 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Vanity Mirror and Toll Ticket Strap, plus 1 Auxiliary Visor (Front Only), Driver Side

WINDSHIELD Heated, Single Piece

WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature

CAB REAR SUSPENSION Air Bag Type

**Description**

INSTRUMENT PANEL Flat Panel

SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color, with Integral Clearance/Marker Lights

WINDSHIELD WASHER RESERVOIR Mounted Under Cab with Remote Fill Mounted Behind Cab Drivers Side

ACCESS, CAB Steel, Driver & Passenger Sides, Two Steps per Door, for use with Day Cab and Extended Cab

WHEEL, SPARE, DISC {Accuride 29169} 22.5x8.25 Rims, Powder Coat Steel, 5-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, with .472" Thick Increased Capacity Disc

WHEELS, FRONT {Accuride 29169} DISC; 22.5x8.25 Rims, Powder Coat Steel, 5-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with .472" Thick Increased Capacity Disc and Steel Hubs

WHEELS, REAR {Accuride 29169} DUAL DISC; 22.5x8.25 Rims, Powder Coat Steel, 5-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with .472" Thick Increased Capacity Disc and Steel Hubs

TIRE, SPARE Equal to Model Standard

(3) TIRE, FRONT 11R22.5 Load Range G HSR2 (CONTINENTAL), 498 rev/mile, 75 MPH, All-Position

(4) TIRE, REAR 11R22.5 Load Range H HDR2+ (CONTINENTAL), 491 rev/mile, 75 MPH, Drive

Cab schematic 100WK

Location 1: 9219, Winter White (Std)

Chassis schematic N/A

**Services Section:**

WARRANTY Standard for HV507, HV50B, HV607 Models, Effective with Vehicles Built July 1, 2017 or Later, CTS-2025A

TRIANGLE REFLECTORS & FIRE EXTINGUISHER

SPARE REAR TIRE & WHEEL;

SERVICE MANUAL USB

PARTS MANUAL USB

EXTRA WING SIDE SPRING

MOTOROLA MOBILE RADIO W/ANTENNA

**Financial Summary**
**2022 HV507 SFA (HV507)**

**(US DOLLAR)**



| Description | Price |
|---|---|
| Net Sales Price: | $92,080.00 |

Please feel free to contact me regarding these specifications should your interests or needs change. I am confident you will be pleased with the quality and service of an International vehicle.

OPTION:
1) STAINLESS STEEL OIL PAN $1362.00

**Approved by Seller:**

**Official Title and Date**

**Authorized Signature**

ALLEGIANCE TRUCKS
110 GRAYRD.
FALMOUTH ME 041052018
207-797-8080

**Accepted by Purchaser:**

**Firm or Business Name**

**Authorized Signature and Date**

**This proposal is not binding upon the seller without Seller's Authorized Signature**

**Official Title and Date**

**The TOPS FET calculation is an estimate for reference purposes only. The seller or retailer is responsible for calculating and reporting/paying appropriate FET to the IRS.**

**The limited warranties applicable to the vehicles described herein are Navistar, Inc.'s standard printed warranties which are incorporated herein by reference and to which you have been provided a copy and hereby agree to their terms and conditions.**

**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Sidewalk Plow** | | |
| **Department** | Public Works | **Dept. Priority** | 5 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

## Purchase/Project Description

The Public Works Department is requesting the purchase of a new 2022 Trackless sidewalk plow. The new sidewalk plow would be replacing a 1999 Trackless MT5.

This piece of equipment is mainly used for sidewalk plowing in the winter, however, it has uses in the spring and summer for sidewalk sweeping, roadside mowing, and landfill cap mowing.

The 1999 Trackless has reached the end of its useful life and is a very unreliable piece of equipment. The impacts of not purchasing this piece of equipment will be high maintenance costs and it will be very unreliable during snow events.

## Financial Impact of this Purchase/Project

The annual costs to operate this piece of equipment is approximately $1,500 per year. These costs include four services of approximately $75 per service and fuel. Revenues from auction would be minimal ($1,000) based on the age and condition of the piece of equipment.

## Environmental Considerations

The new sidewalk plow would meet the Tier 4 standards for emissions creating less greenhouse gasses. Electric is not an option currently for this piece of equipment.

| Funding Source(s) | Year 1 | | Year 2 | | Year(s) 3+ | | TOTALS | |
|---|---|---|---|---|---|---|---|---|
| | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. | Dept. Request | Manager Rec. |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 157,000.00 | $ 128,500.00 | | | | | $ 157,000.00 | $ 128,500.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $ 28,500.00 | | | | | $ - | $ 28,500.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 157,000.00** | **$ 157,000.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 157,000.00** | **$ 157,000.00** |

| | | | | | |
|---|---|---|---|---|---|
| **Source of Cost Estimate** | HP Fairfield | | | | |
| **Est. Annual Operating Costs** | $ 1,500.00 | **Projected Useful Life** | 8 years | **Additional Documentation?** | Yes |
| **City Manager Comments** | | | | | |

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# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE: 040
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 040

**UNIT: 040 LF MTR: 2623.0 CUR MTR: 2623.0 YR: 99 MAKE: TRACKLESS DEPT: DPW SIZE: M CLASS: SW MACHI FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS | MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 002 | | TITLE > | CAB/SHEET METALS | | | | | | | | | | | |
| 002-006-000 | 11062015 | 0002293 | 2200 | 2195 | HOOD LATCH | | 392.03 | 30.75 | 422.78 | 1.50 | OLLIE | 01 | 1 | XX |
| 002-008-000 | 11062015 | 0002293 | 2200 | 2195 | CAB | | 0.00 | 30.75 | 30.75 | 1.50 | OLLIE | 01 | 1 | XX |
| 002-022-000 | 11172020 | 0006568 | 2620 | 2623 | DOOR LATCH OR SLAM | | 0.00 | 5.69 | 5.69 | 0.25 | MIKE W. | 11 | 10 | 31 |
| 002-062-000 | 03222013 | 0000401 | 1890 | 1890 | WINDSHIELD | OUT | 0.00 | 100.00 | 100.00 | 0.00 | | 01 | 1 | XX |
| 002 | | TOTAL > | CAB/SHEET METALS | | | | 392.03 | 167.19 | 559.22 | | | | | |
| 003 | | TITLE > | INSTRUMENTS,GAUGES | | | | | | | | | | | |
| 003-004-000 | 04212017 | 0003478 | 2540 | 2544 | SENDING UNIT FUEL | | 0.00 | 32.81 | 32.81 | 1.50 | 9590 | 11 | 1 | 31 |
| 003 | | TOTAL > | INSTRUMENTS,GAUGES | | | | 0.00 | 32.81 | 32.81 | | | | | |
| 013 | | TITLE > | BRAKES | | | | | | | | | | | |
| 013-003-000 | 12112014 | 0001618 | 2010 | 2011 | BRAKE JOB (COMPLE | | 640.47 | 328.00 | 968.47 | 16.00 | OLLIE | 01 | 1 | XX |
| 013-005-000 | 03252014 | 0001068 | 2000 | 2001 | CK/ADJUST BRAKES | | 66.10 | 278.60 | 344.70 | 14.00 | SGOBEIL | 01 | 1 | XX |
| 013-053-000 | 11172020 | 0006568 | 2620 | 2623 | HANDBRAKE ASSEMBLY | | 0.00 | 22.76 | 22.76 | 1.00 | MIKE W. | 11 | 10 | 31 |
| 013-098-000 | 02262016 | 0002679 | 2200 | 2195 | BRAKE LIGHT SWITCH | | 25.23 | 18.00 | 43.23 | 1.00 | HELPER | 01 | 1 | XX |
| 013-130-000 | 03122018 | 0004187 | 2550 | 2546 | PARKING BRAKE | | 12.06 | 43.74 | 55.80 | 2.00 | AARON | 11 | 1 | 31 |
| 013-130-000 | 11062015 | 0002293 | 2200 | 2195 | PARKING BRAKE | | 25.68 | 20.50 | 46.18 | 1.00 | OLLIE | 01 | 1 | XX |
| 013 | | TOTAL > | BRAKES | | | | 769.54 | 711.60 | 1481.14 | | | | | |
| 015 | | TITLE > | STEERING | | | | | | | | | | | |
| 015-040-000 | 11292016 | 0003219 | 2310 | 2308 | HYDRAULIC STEERING | | 495.59 | 87.48 | 583.07 | 4.00 | 9590 | 01 | 1 | 31 |
| 015 | | TOTAL > | STEERING | | | | 495.59 | 87.48 | 583.07 | | | | | |
| 017 | | TITLE > | TIRES,TUBES,LINERS | | | | | | | | | | | |
| 017-014-000 | 02252016 | 0002455 | 2200 | 2195 | TIRE REPLACEMENT | | 240.10 | 22.29 | 262.39 | 1.00 | STEVE | 01 | 1 | XX |
| 017 | | TOTAL > | TIRES,TUBES,LINERS | | | | 240.10 | 22.29 | 262.39 | | | | | |
| 024 | | TITLE > | DRIVE SHAFT(S) | | | | | | | | | | | |
| 024-003-000 | 11172020 | 0006568 | 2620 | 2623 | DRIVESHAFT COMPLET | | 115.85 | 68.28 | 184.13 | 3.00 | MIKE W. | 11 | 10 | 31 |
| 024-005-000 | 12112014 | 0001618 | 2010 | 2011 | DRIVESHAFT YOKE | | 506.08 | 61.50 | 567.58 | 3.00 | OLLIE | 01 | 1 | XX |
| 024 | | TOTAL > | DRIVE SHAFT(S) | | | | 621.93 | 129.78 | 751.71 | | | | | |
| 027 | | TITLE > | TRANSMISSION AUTOMAT | | | | | | | | | | | |
| 027-000-000 | 11292016 | 0003219 | 2310 | 2308 | TRANSMISSION AUTOM | | 1120.64 | 437.40 | 1558.04 | 20.00 | 9590 | 01 | 1 | 31 |
| 027-150-000 | 11172020 | 0006568 | 2620 | 2623 | SHIFT CABLE | | 0.00 | 22.76 | 22.76 | 1.00 | MIKE W. | 11 | 10 | 31 |
| 027-190-000 | 01282016 | 0002545 | 2200 | 2195 | HYDROSTATIC TRANS. | | 476.12 | 133.74 | 609.86 | 6.00 | STEVE | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

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| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS | MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 027 | | TOTAL > | TRANSMISSION AUTOMAT | | | | 1596.76 | 593.90 | 2190.66 | | | | | |
| 031 | | TITLE > | CHARGING SYSTEM | | | | | | | | | | | |
| 031-003-000 | 12122019 | 0005770 | 2590 | 2592 | ALTERNATOR | | 526.54 | 455.20 | 981.74 | 20.00 | MIKE W. | 11 | 2 | 31 |
| 031 | | TOTAL > | CHARGING SYSTEM | | | | 526.54 | 455.20 | 981.74 | | | | | |
| 032 | | TITLE > | CRANKING SYSTEM | | | | | | | | | | | |
| 032-002-000 | 10232015 | 0002293 | 2200 | 2195 | BATTERY | | 79.70 | 20.50 | 100.20 | 1.00 | OLLIE | 01 | 1 | XX |
| 032-002-000 | 01232015 | 0001803 | 2030 | 2032 | BATTERY | | 121.79 | 61.50 | 183.29 | 3.00 | OLLIE | 01 | 1 | XX |
| 032-002-001 | 10282016 | 0003114 | 2310 | 2308 | BATTERY DISCONNECT | | 188.60 | 87.48 | 276.08 | 4.00 | 9590 | 01 | 1 | XX |
| 032-010-000 | 03252014 | 0001068 | 2000 | 2001 | STARTER | | 0.00 | 44.58 | 44.58 | 2.00 | | 01 | 1 | XX |
| 032-016-000 | 03232017 | 0003499 | 2530 | 2534 | NO START ISSUE | | 0.00 | 70.98 | 70.98 | 3.00 | OLLIE | 11 | 1 | 31 |
| 032 | | TOTAL > | CRANKING SYSTEM | | | | 390.09 | 285.04 | 675.13 | | | | | |
| 033 | | TITLE > | IGNITION SYSTEM | | | | | | | | | | | |
| 033-008-000 | 10232015 | 0002293 | 2200 | 2195 | IGNITION SWITCH | | 221.91 | 61.50 | 283.41 | 3.00 | OLLIE | 01 | 1 | XX |
| 033 | | TOTAL > | IGNITION SYSTEM | | | | 221.91 | 61.50 | 283.41 | | | | | |
| 034 | | TITLE > | LIGHTING & ELECTRICA | | | | | | | | | | | |
| 034-001-003 | 03052019 | 0005054 | 2570 | 2571 | HEADLIGHT LEFT AND | | 23.07 | 13.05 | 36.12 | 0.50 | STEVE | 11 | 4 | 31 |
| 034-001-004 | 03282018 | 0004303 | 2550 | 2546 | HEADLIGHT SWITCH | | 30.37 | 22.31 | 52.68 | 1.00 | 10375 | 11 | 1 | 1 |
| 034-003-003 | 01232015 | 0001803 | 2030 | 2032 | LEFT AND RIGHT BRA | | 0.00 | 41.00 | 41.00 | 2.00 | OLLIE | 01 | 1 | XX |
| 034-003-010 | 11062015 | 0002293 | 2200 | 2195 | BRAKE LIGHT SWITCH | | 38.33 | 20.50 | 58.83 | 1.00 | OLLIE | 01 | 1 | XX |
| 034-020-000 | 03122018 | 0004187 | 2550 | 2546 | TURN SIGNAL ARM | | 243.34 | 87.48 | 330.82 | 4.00 | AARON | 11 | 1 | 31 |
| 034-025-000 | 11062015 | 0002293 | 2200 | 2195 | MARKER LIGHT(S) | | 4.32 | 20.50 | 24.82 | 1.00 | OLLIE | 01 | 1 | XX |
| 034-407-000 | 11172020 | 0006568 | 2620 | 2623 | MULTIPLE LIGHT REP | | 0.00 | 26.76 | 26.76 | 1.00 | MIKE W. | 11 | 10 | 31 |
| 034 | | TOTAL > | LIGHTING & ELECTRICA | | | | 339.43 | 231.60 | 571.03 | | | | | |
| 042 | | TITLE > | COOLING SYSTEM | | | | | | | | | | | |
| 042-013-000 | 03052019 | 0005054 | 2570 | 2571 | HEATER CORE/HOSES | | 0.00 | 52.20 | 52.20 | 2.00 | STEVE | 11 | 4 | 31 |
| 042-047-000 | 01202017 | 0003345 | 2390 | 2390 | COOLANT LEAK | | 4.00 | 87.48 | 91.48 | 4.00 | AARON | 11 | 1 | 31 |
| 042 | | TOTAL > | COOLING SYSTEM | | | | 4.00 | 139.68 | 143.68 | | | | | |
| 044 | | TITLE > | FUEL SYSTEM | | | | | | | | | | | |
| 044-043-000 | 03252014 | 0001138 | 2000 | 2001 | FUEL SOLENOID | | 312.85 | 49.75 | 362.60 | 2.50 | SGOBEIL | 01 | 1 | XX |
| 044-100-000 | 09062019 | 0005524 | 2590 | 2592 | FUEL GAUGE/SENDING | | 178.52 | 34.14 | 212.66 | 1.50 | AARON | 11 | 1 | 31 |
| 044 | | TOTAL > | FUEL SYSTEM | | | | 491.37 | 83.89 | 575.26 | | | | | |
| 045 | | TITLE > | POWER PLANT/ENGINE | | | | | | | | | | | |
| 045-000-000 | 08292019 | 0005090 | 2570 | 2571 | POWER PLANT/ENGINE | | 12366.37 | 910.40 | 13276.77 | 40.00 | AARON | 11 | 1 | 31 |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 040
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 040

**UNIT: 040 LF MTR: 2623.0 CUR MTR: 2623.0 YR: 99 MAKE: TRACKLESS DEPT: DPW SIZE: M CLASS: SW MACHI FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 045-000-000 | 01302013 | 0000332 | 1890 | 1890 | POWER PLANT/ENGINE | | 0.00 | 10.03 | 10.03 | 0.45 STEVE | 01 | 1 | XX |
| 045-081-005 | 04212017 | 0003508 | 2540 | 2544 | OIL SAMPLE | | 28.00 | 10.94 | 38.94 | 0.50 9590 | 11 | 1 | 31 |
| 045-082-000 | 12202013 | 0000728 | 1910 | 1906 | POWER PLANT/ENGINE | | 48.87 | 123.00 | 171.87 | 6.00 BILL | 01 | 1 | XX |
| 045-082-001 | 04212017 | 0003508 | 2540 | 2544 | MAIN ENGINE | | 54.25 | 32.81 | 87.05 | 1.50 9590 | 11 | 1 | 31 |
| 045-082-001 | 03312015 | 0001947 | 2190 | 2194 | MAIN ENGINE | | 48.87 | 123.00 | 171.87 | 6.00 OLLIE | 01 | 1 | XX |
| 045-125-000 | 01092020 | 0005873 | 2600 | 2600 | THROTTLE PEDAL / C | | 221.66 | 116.46 | 338.12 | 6.00 9644 | 11 | 1 | 31 |
| 045-125-000 | 11292016 | 0003219 | 2310 | 2308 | THROTTLE PEDAL / C | | 135.28 | 43.74 | 179.02 | 2.00 9590 | 01 | 1 | 31 |
| 045-125-000 | 02102016 | 0002455 | 2200 | 2195 | THROTTLE PEDAL / C | | 0.00 | 11.15 | 11.15 | 0.50 STEVE | 01 | 1 | XX |
| 045 | | TOTAL > | POWER PLANT/ENGINE | | | | 12903.30 | 1381.53 | 14284.83 | | | | |
| 051 | | TITLE > | GENERAL ACCESSORIES | | | | | | | | | | |
| 051-032-000 | 11172020 | 0006568 | 2620 | 2623 | WASHER RESERVOIR | | 0.00 | 11.38 | 11.38 | 0.50 MIKE W. | 11 | 10 | 31 |
| 051 | | TOTAL > | GENERAL ACCESSORIES | | | | 0.00 | 11.38 | 11.38 | | | | |
| 054 | | TITLE > | HORN AND MOUNTING | | | | | | | | | | |
| 054-001-001 | 11172020 | 0006568 | 2620 | 2623 | HORN: ELECTRIC | | 21.99 | 11.38 | 33.37 | 0.50 MIKE W. | 11 | 10 | 31 |
| 054 | | TOTAL > | HORN AND MOUNTING | | | | 21.99 | 11.38 | 33.37 | | | | |
| 056 | | TITLE > | POWER TAKE OFF | | | | | | | | | | |
| 056-000-000 | 01182013 | 0000243 | 1890 | 1890 | POWER TAKE OFF | | 522.90 | 61.50 | 584.40 | 3.00 OLLIE | 01 | 1 | XX |
| 056-004-000 | 11172020 | 0006568 | 2620 | 2623 | PTO CYLINDER | | 401.40 | 45.52 | 446.92 | 2.00 MIKE W. | 11 | 10 | 31 |
| 056-004-000 | 11062015 | 0002293 | 2200 | 2195 | PTO CYLINDER | | 420.21 | 30.75 | 450.96 | 1.50 OLLIE | 01 | 1 | XX |
| 056 | | TOTAL > | POWER TAKE OFF | | | | 1344.51 | 137.77 | 1482.28 | | | | |
| 057 | | TITLE > | SPARE WHEEL MOUNTING | | | | | | | | | | |
| 057-000-000 | 01182013 | 0000264 | 1890 | 1890 | SPARE WHEEL MOUNTI | | 0.00 | 41.00 | 41.00 | 2.00 OLLIE | 01 | 10 | XX |
| 057 | | TOTAL > | SPARE WHEEL MOUNTING | | | | 0.00 | 41.00 | 41.00 | | | | |
| 065 | | TITLE > | HYDRAULIC SYSTEMS | | | | | | | | | | |
| 065-006-000 | 11172020 | 0006568 | 2620 | 2623 | HYD HOSE/FITTINGS | | 443.14 | 68.28 | 511.42 | 3.00 MIKE W. | 11 | 10 | 31 |
| 065-006-000 | 01232020 | 0005908 | 2600 | 2600 | HYD HOSE/FITTINGS | | 20.43 | 38.82 | 59.25 | 2.00 9644 | 11 | 1 | 31 |
| 065-006-000 | 01202017 | 0003367 | 2390 | 2390 | HYD HOSE/FITTINGS | | 17.44 | 21.87 | 39.31 | 1.00 9590 | 11 | 1 | 31 |
| 065-006-000 | 12112014 | 0001618 | 2010 | 2011 | HYD HOSE/FITTINGS | | 0.00 | 10.25 | 10.25 | 0.50 OLLIE | 01 | 1 | XX |
| 065-020-000 | 03252014 | 0001068 | 2000 | 2001 | HYDRAULIC TANK (RE | | 243.56 | 111.45 | 355.01 | 5.00 STEVE | 01 | 1 | XX |
| 065-030-000 | 02242015 | 0001852 | 2950 | 2950 | BLOWN LINE | | 31.99 | 123.00 | 154.99 | 6.00 BILL | 01 | 1 | XX |
| 065-035-000 | 03122018 | 0004187 | 2550 | 2546 | HYDRAULIC LEAK | | 5.75 | 10.94 | 16.68 | 0.50 AARON | 11 | 1 | 31 |
| 065 | | TOTAL > | HYDRAULIC SYSTEMS | | | | 762.31 | 384.61 | 1146.92 | | | | |
| 071 | | TITLE > | BODY | | | | | | | | | | |
| 071-012-000 | 11062015 | 0002293 | 2200 | 2195 | ROOF BOX 1, BODY | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000 DATE: FIRST VEHICLE:: 040
ENDING VMRS CODE: 999-999-999 DATE: LAST VEHICLE: 040

**UNIT: 040 LF MTR: 2623.0 CUR MTR: 2623.0 YR: 99 MAKE: TRACKLESS DEPT: DPW SIZE: M CLASS: SW MACHI FUEL: D**

| VMRS Code | DATE | WO NUM | LF-UNTS | ODOM | WORK DESCRIPTION | OUT | PARTS | LABOR | TOTAL | HOURS MECHANIC | CC | RC | WA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 071 | | TOTAL > | BODY | | | | 0.00 | 30.75 | 30.75 | | | | |
| 106 | | TITLE > | TOW (VEHICLE) | | | | | | | | | | |
| 106-001-000 | 01232020 | 0005908 | 2600 | 2600 | TOW TO GARAGE | OUT | 210.00 | 0.00 | 210.00 | 0.00 | 11 | 1 | 31 |
| 106-001-000 | 03202019 | 0005090 | 2570 | 2571 | TOW TO GARAGE | OUT | 200.00 | 0.00 | 200.00 | 0.00 | 11 | 1 | 31 |
| 106 | | TOTAL > | TOW (VEHICLE) | | | | 410.00 | 0.00 | 410.00 | | | | |
| 325 | | TITLE > | ROUTINE MAINTENANCE | | | | | | | | | | |
| 325-001-000 | 10282016 | 0003114 | 2310 | 2308 | GREASE ALL POINTS | | 0.00 | 10.94 | 10.94 | 0.50 9590 | 01 | 1 | XX |
| 325 | | TOTAL > | ROUTINE MAINTENANCE | | | | 0.00 | 10.94 | 10.94 | | | | |
| 400 | | TITLE > | ATTACHMENTS, EQUIPME | | | | | | | | | | |
| 400-004-000 | 01182013 | 0000258 | 1890 | 1890 | SNOWBLOWER | | 15.53 | 61.50 | 77.03 | 3.00 OLLIE | 01 | 1 | XX |
| 400-004-001 | 12112014 | 0001618 | 2010 | 2011 | SNOWBLOWER: DRAG S | | 0.00 | 30.75 | 30.75 | 1.50 OLLIE | 01 | 1 | XX |
| 400-004-001 | 12202013 | 0000728 | 1910 | 1906 | SNOWBLOWER: DRAG S | | 191.82 | 61.50 | 253.32 | 3.00 BILL | 01 | 1 | XX |
| 400-004-004 | 01162014 | 0000915 | 1970 | 1974 | SNOWBLOWER: MECHAN | | 1659.30 | 340.32 | 1999.62 | 16.00 OLLIE | 01 | 1 | XX |
| 400-006-000 | 11182015 | 0002451 | 2200 | 2195 | V-BLADE | | 110.59 | 19.59 | 130.18 | 1.00 RICH | 01 | 1 | XX |
| 400-006-000 | 12112014 | 0001618 | 2010 | 2011 | V-BLADE | | 250.36 | 30.75 | 281.11 | 1.50 OLLIE | 01 | 1 | XX |
| 400-050-000 | 01202017 | 0003269 | 2390 | 2390 | SANDER | | 0.00 | 7.68 | 7.68 | 0.30 STEVE | 01 | 1 | 31 |
| 400 | | TOTAL > | ATTACHMENTS, EQUIPME | | | | 2227.60 | 552.09 | 2779.69 | | | | |
| 407 | | TITLE > | ********** | | | | | | | | | | |
| 407-000-000 | 12112014 | 0001618 | 2010 | 2011 | ********** | | 2.50 | 20.50 | 23.00 | 1.00 OLLIE | 01 | 1 | XX |
| 407-000-000 | 12202013 | 0000728 | 1910 | 1906 | ********** | | 0.00 | 41.00 | 41.00 | 2.00 BILL | 01 | 1 | XX |
| 407-001-000 | 11122020 | 0006275 | 2600 | 2600 | (MSI) COMMERCIAL T | | 2.50 | 22.76 | 25.26 | 1.00 MIKE W. | 11 | 6 | 31 |
| 407-001-000 | 09062019 | 0005222 | 2590 | 2592 | (MSI) COMMERCIAL T | | 1321.06 | 22.76 | 1343.82 | 1.00 AARON | 11 | 8 | 31 |
| 407-001-000 | 03052018 | 0004176 | 2550 | 2546 | (MSI) COMMERCIAL T | | 2.50 | 21.87 | 24.37 | 1.00 AARON | 11 | 1 | 31 |
| 407-001-000 | 10282016 | 0003114 | 2310 | 2308 | (MSI) COMMERCIAL T | | 6.16 | 21.87 | 28.03 | 1.00 9590 | 01 | 1 | XX |
| 407-001-000 | 11042015 | 0002376 | 2200 | 2195 | (MSI) COMMERCIAL T | | 2.50 | 20.50 | 23.00 | 1.00 OLLIE | 01 | 1 | XX |
| 407 | | TOTAL > | ********** | | | | 1337.22 | 171.26 | 1508.48 | | | | |

# SOUTH PORTLAND PUBLIC WORKS VEHICLES AND EQUIPMENT

## VEHICLE REPAIR HISTORY REPORT

FACILITY: 00004

STARTING VMRS CODE: 000-000-000
ENDING VMRS CODE: 999-999-999

DATE: FIRST
DATE: LAST

VEHICLE:: 040
VEHICLE: 040

**METER: STANDARD** **SUBTOTALS OF VMRS CODES FOR DIVISION > AL** **PERIOD: CURRENT**

| VMRS CODE | | QUANTITY | LABOR HRS | LABOR COST | PARTS COST | | TOTAL COST | PERCENT | TOT COST /METER |
|---|---|---|---|---|---|---|---|---|---|
| 002 | CAB/SHEET METALS | 4 | 3.25 | 167.19 | 392.03 | | 559.22 | 1.81% | 1.30354 |
| 003 | INSTRUMENTS,GAUGES | 1 | 1.50 | 32.81 | 0.00 | | 32.81 | 0.11% | 0.07648 |
| 013 | BRAKES | 6 | 35.00 | 711.60 | 769.54 | | 1481.14 | 4.80% | 3.45254 |
| 015 | STEERING | 1 | 4.00 | 87.48 | 495.59 | | 583.07 | 1.89% | 1.35914 |
| 017 | TIRES,TUBES,LINERS | 1 | 1.00 | 22.29 | 240.10 | | 262.39 | 0.85% | 0.61163 |
| 024 | DRIVE SHAFT(S) | 2 | 6.00 | 129.78 | 621.93 | | 751.71 | 2.44% | 1.75224 |
| 027 | TRANSMISSION AUTOMATIC | 3 | 27.00 | 593.90 | 1596.76 | | 2190.66 | 7.11% | 5.10643 |
| 031 | CHARGING SYSTEM | 1 | 20.00 | 455.20 | 526.54 | | 981.74 | 3.18% | 2.28844 |
| 032 | CRANKING SYSTEM | 5 | 13.00 | 285.04 | 390.09 | | 675.13 | 2.19% | 1.57373 |
| 033 | IGNITION SYSTEM | 1 | 3.00 | 61.50 | 221.91 | | 283.41 | 0.92% | 0.66063 |
| 034 | LIGHTING & ELECTRICAL | 7 | 10.50 | 231.60 | 339.43 | | 571.03 | 1.85% | 1.33107 |
| 042 | COOLING SYSTEM | 2 | 6.00 | 139.68 | 4.00 | | 143.68 | 0.47% | 0.33492 |
| 044 | FUEL SYSTEM | 2 | 4.00 | 83.89 | 491.37 | | 575.26 | 1.87% | 1.34093 |
| 045 | POWER PLANT/ENGINE | 9 | 62.95 | 1381.53 | 12903.30 | | 14284.83 | 46.33% | 33.29797 |
| 051 | GENERAL ACCESSORIES | 1 | 0.50 | 11.38 | 0.00 | | 11.38 | 0.04% | 0.02653 |
| 054 | HORN AND MOUNTING | 1 | 0.50 | 11.38 | 21.99 | | 33.37 | 0.11% | 0.07779 |
| 056 | POWER TAKE OFF | 3 | 6.50 | 137.77 | 1344.51 | | 1482.28 | 4.81% | 3.45520 |
| 057 | SPARE WHEEL MOUNTING | 1 | 2.00 | 41.00 | 0.00 | | 41.00 | 0.13% | 0.09557 |
| 065 | HYDRAULIC SYSTEMS | 7 | 18.00 | 384.61 | 762.31 | | 1146.92 | 3.72% | 2.67347 |
| 071 | BODY | 1 | 1.50 | 30.75 | 0.00 | | 30.75 | 0.10% | 0.07168 |
| 106 | TOW (VEHICLE) | 2 | 0.00 | 0.00 | 410.00 | | 410.00 | 1.33% | 0.95571 |
| 325 | ROUTINE MAINTENANCE | 1 | 0.50 | 10.94 | 0.00 | | 10.94 | 0.04% | 0.02550 |
| 400 | ATTACHMENTS, EQUIPMENT | 7 | 26.30 | 552.09 | 2227.60 | | 2779.69 | 9.02% | 6.47946 |
| 407 | ********** | 7 | 8.00 | 171.26 | 1337.22 | | 1508.48 | 4.89% | 3.51627 |
| | **TOTALS:** | 76 | 261.00 | 5734.67 | 25096.22 | **TOT:** | 30830.89 | 100.00% | 71.86688 |

**CENTRAL MAINE**
9 Green St/P.O. Box 188
Skowhegan, ME 04976
P: (207) 474-9836
F: (207) 474-6526
Toll Free (800) 356-2813

# Sales Quote

IMPORTANT: All invoices are due and payable in U.S. Dollars in Guadalupe County, Texas, or where indicated below. No goods to be returned without our written permission. Goods must be returned transportation charges pre-paid. A handling charge will be made on all returned goods. LATE CHARGE: A late charge of 1.5% of any past due balance of the dealers account as of the last day of the month will be billed as of the 15th day of the following month if payment has not been received by that date.

| | | | | |
|---|---|---|---|---|
| **CUSTOMER NO** | 828333 | **TERRITORY** | 391 | **PAGE 1** of **1** |
| **ORDER DATE** | 01/14/2021 | **CUSTOMER PO** | 79304BAKER | |
| **QUOTE DATE** | 01/14/2021 | **SHIPPED VIA** | | |
| **SALES ORDER** | 5963545 - SQ | **FREIGHT TERMS** | EXW- CUSTOMER FRT ACCOUNT | |
| | | EX2 | DIRECT BILL TRANSER AT ORIGIN | |
| **PAYMENT TERMS** | Net 30 Days from Invoice Date | **CODE** | 002 | |
| **DELIVERY INSTRUCTIONS:** | | | | |
| | | **REQUESTED SHIP DATE** | 01/14/2021 | |

**SOLD TO:**
CITY OF SOUTH PORTLAND-PWD CHP
929 HIGHLAND AVE
SOUTH PORTLAND ME 04106-6869

**SHIP TO:**
CITY OF SOUTH PORTLAND-PWD CHP
929 HIGHLAND AVE
SOUTH PORTLAND ME 04106-6869

**DESCRIPTION/REMARKS**

BUDGET QUOTE

TRACKLESS MT7 MUNICIPAL SIDEWALK TRACTOR W/ STANDARD OPTIONS
2 year / 2000 hour warranty on JD engine
1 year / 600 hour warranty on MT7

TRACKLESS 51" RIBBON SNOWBLOWER WITH SIDEWALK CHUTE

TRACKLESS REAR HYD SANDER SINGLE AGITATOR

TRACKLESS FIXED V PLOW COMPLETE

PREPPED & DELIVERED

TRAVIS BAKER
207-399-4501
TravisBaker@HPFairfield.com

| ITEM NUMBER | BRANCH | DESCRIPTION | PICK SLIP#/ LOT/SERIAL | QUANTITY SHIPPED | LIST PRICE | DISC% | EXTENDED AMOUNT |
|---|---|---|---|---|---|---|---|
| SIDEWALKHPF | 9335 | TRACKLESS MT7 SIDEWALK TRACTOR | | 1 | 156,605.95 | 0 | 156,605.95 |

**REMARKS**

| NET DUE | CASH DISC. | IF PAID BY |
|---|---|---|
| **156,605.95** | **0.00** | **02/13/2021** |

| | |
|---|---|
| **SUB-TOTAL** | **156,605.95** |
| **FREIGHT & HANDLING** | **0.00** |
| **SALES TAX** | **0.00** |
| **TOTAL(USD)** | **156,605.95** |
| **PREPAID AMOUNT** | |

IMPORTANT: Alamo Group or affiliates (Alamo Group) shall not be liable to any person for any claim for injuries or damages which claim for injuries or damages arises out of or which results from the repair of this product by a person or firm other than Alamo Group. Repair parts are intended for use only on equipment manufactured or sold by Alamo Group.

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**City of South Portland**
**Capital Project Request Form**
***Fiscal Year 2022 Capital Improvement Plan***

| | | | |
|---|---|---|---|
| **Project Title** | **Sidewalk and Broadway Pedestrian Safety** | | |
| **Department** | Public Works | **Dept. Priority** | 6 |
| **Division** | | **Div. Priority** | |
| **CIP Category** | Public Works & Transportation | | |

**Purchase/Project Description**

The Public Works Department is requesting $250,000 to support sidewalk projects and repair throughout the City and help close some of the funding gaps associated with the Broadway Pedestrian Safety project.

**Financial Impact of this Purchase/Project**

Annual Costs associated with this request would include maintenance of additional RRFBs and pedestrian signals.

**Environmental Considerations**

Environmental Considerations will be taken into consideration with all new construction or repairs.

| **Funding Source(s)** | **Year 1** | | **Year 2** | | **Year(s) 3+** | | **TOTALS** | |
|---|---|---|---|---|---|---|---|---|
| | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** | **Dept. Request** | **Manager Rec.** |
| Borrow/Lease Purchase | | | | | | | $ - | $ - |
| Fund Balance (General Fund) | $ 250,000.00 | $210,053.00 | | | | | $ 210,053.00 | $210,053.00 |
| General Fund (GF) Reserves | | | | | | | $ - | $ - |
| General Obligation Bonds | | | | | | | $ - | $ - |
| Grants | | | | | | | $ - | $ - |
| Non-GF Reserves/Surplus | | | | | | | $ - | $ - |
| Prior Year CIP Balances | | $5,259.00 | | | | | $ 5,259.00 | $5,259.00 |
| TIF | | | | | | | $ - | $ - |
| Trade-In | | | | | | | $ - | $ - |
| Other (explain above) | | | | | | | $ - | $ - |
| **TOTALS** | **$ 250,000.00** | **$ 215,312.00** | **$ -** | **$ -** | **$ -** | **$ -** | **$ 215,312.00** | **$ 215,312.00** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Cost Estimate** | Sebago Technics | | | | | |
| **Est. Annual Operating Costs** | $ 1,000.00 | **Projected Useful Life** | 50 | **Additional Documentation?** | Yes | |
| **City Manager Comments** | | | | | | |

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April 30, 2020
20035

Mr. Doug Howard, Director of Public Works
City of South Portland
929 Highland Avenue
P.O. Box 9422
South Portland, ME 04116-9422

**Proposal for Design and Bidding Services**
**Broadway Corridor Pedestrian Improvements and Broadway and Westbrook Street Multi-Use Path.**

Dear Doug:

This letter presents Sebago Technics' Scope of Services and Fee estimate for Engineering and Bidding Services to complete the design of the proposed improvements included in the recently approved municipal bond package for the Broadway Corridor Pedestrian Improvements, the Hill Street Relocation at Broadway, and Westbrook Street Multi-Use Path.

Our Scope of Services includes the following, as outlined in the support materials for the bond package:

- the field survey of improvement locations
- the final design of pedestrian ramps, sidewalks, and intersection pavement marking improvements (50 +/- curb ramps)
- the final design for the reconfiguration of the Broadway at Hill Street intersection
- the final design for a multi-use path along Westbrook Street between Western Avenue and Wescott Road.

Our services will also include the preparation of a single bid package for all of the above, including bid phase support. Construction phase services are not included herein, but could be added when the time comes should you desire.

We have assumed that this work will be constructed in the summer of 2021, which suggests that the design occur during the summer of 2020 so bidding can take place in early 2021 to obtain the best contractor pricing for next year. As such, we anticipate completing the design generally as follows:

| | |
|---|---|
| Field Survey (required areas) | By June 15, 2020 |
| Draft Plans and Cost Estimate (60% Complete) | By September 1, 2020 |
| City Review | By September 15, 2020 |
| Finalize Plans and Bid Documents for Bidding | By December 1, 2020 |
| Receive Bids | By January 30, 2021 |
| City Council Award Project | In February 2021 |

Based on our understanding of your current needs, we have prepared the following detailed Scope of Services for this design effort:

**Scope of Services**

**1. Survey Services**

Topographic survey will be required at most of the project locations.

1.1. Survey will be required at pedestrian ramps that are being constructed or improved due to current ADA design requirements. Based on the improvements included in the Broadway Corridor Pedestrian Improvements Plan that we prepared last year there will be survey collected at 50 ramp locations along Broadway and the Greenbelt Pathway. Additionally, survey will be collected along Broadway between the intersections of Lombard Street and Lemont Avenue for the design of a proposed sidewalk.

1.2. The area around the intersection of Broadway at Hill Street will be surveyed so that the proposed realignment of the intersection can be designed. This will also include the area around the intersection of Broadway at South Kelsey Street and the segment of Broadway between Hill Street and the entrance to T.A. Napolitano, just south of the intersection of Broadway at Cole Street.

1.3. For the proposed multi-use path, we already have survey on hand for the section of Westbrook Street between Wescott Road and Broadway. Additional survey will be required for the segment of Westbrook Street between Broadway and Western Avenue including the bridge abutment for the I-295 overpass.

1.4. Base plans will be created at a scale of 1”=25’ that will show not only the required topographic information, but also the presence of underground utilities in these areas that may potentially impacted by the proposed construction.

## 2. Preliminary and Final Design

2.1. The concept plans prepared in support of the bond vote will be further developed to create preliminary engineering drawings (roughly 60% complete) for all three focus areas. In addition to the preparation of these initial plans, we will prepare an updated cost estimate to confirm the scope of construction against the forecasted unit pricing that will prevail in 2021. Also, at this time, we will assess in conjunction with you if there are any merits to splitting the work into multiple construction packages. Our current thinking is that one construction package is the preferable route, but this worth revisiting after we have better handle on the specific quantities involved.

2.2. As part of the design process we will coordinate with utilities that could potentially be affected by the proposed construction at all locations and work out any conflicts that may become evident during these discussions. These discussions will also include the MaineDOT relative to the modifications to I-295 bridge drainage downspouts.

2.3. Once we have agreed on the scope and packaging for this work, we will proceed with the preparation of final design plans and specifications ready for bidding. These documents will be submitted to you at the 90% stage of completion for your final review prior to advertisement.

2.4. We anticipate that the details will be based on the plans prepared to date and other recent City projects supplemented as required.

2.5. We also anticipate preparing technical specifications and contract documents following the EJCDC format used by the City of South Portland for recent roadway projects (e.g. Westbrook Street) and MaineDOT's new 2020 Technical Specifications.

## 3. Structural Services

3.1. Structural Engineering services will be required to assist us with the modification of the drainage downspouts from the I-295 overpass. In addition, we will seek assistance in the design of the new retaining wall in front of the existing I-295 abutment. This input will be sought from the firm of Hardesty & Hanover in Yarmouth after we have concurrence on the preliminary design plans, i.e. during the final design process.

## 4. Right-of-Way

4.1. The realignment of Hill Street will likely involve some acquisition of Right-of-Way with the abutter. Should this indeed be necessary, we will prepare appropriate documentation outlining the scope of these rights for action by the City and their attorney.

**5. Bid Phase**

5.1. Reproduce bid packages and plan sets, and administer the bidding phase of the project.

5.2. Conduct a mandatory Pre-Bid Meeting for the project. We will prepare meeting minutes and issue any bid addendum necessary to address contractor's requests for information.

5.3. Upon receipt of contractor bids, we will review the bids, check references of the contractor and make a recommendation for award to the City. We will attend one (1) City Council Meeting, if required, relating to the award of the contract.

**Design Deliverables**

As indicated, we will prepare 60% and 90% design plans for review by the City. Based on our conceptual efforts to date we anticipate a package consisting of the following:

| | |
|---|---|
| Title Sheet | 1 |
| General Notes | 2 |
| Typical Sections | 3-5 |
| Details | 6-8 |
| General Plans | 9-17 |
| Curb Ramp Layout Plans | 18-29 |
| Traffic Signal Plans | 30-33 |
| Pavement Marking Plans | 34-54 |
| Cross Sections | 55-72 |

**Estimated Budget**

| | | | |
|---|---|---|---|
| 1. | Topographic Survey | $ | 32,000 |
| 2. | Boundary Surveys | $ | 8,000 |
| 3. | Preliminary and Final Design | $ | 126,000 |
| 4. | Structural Engineering | $ | 13,500 |
| 5. | Right-of-Way Assistance | $ | 1,500 |
| 6. | Bid Phase | $ | 3,500 |
| **Subtotal Fee for Basic Services** | | **$** | **184,500** |
| Reimbursable Expenses | | $ | 1,500 |
| **Total Basic Services** | | **$** | **186,000** |

We propose to perform the proposed scope of services on a time and materials basis with a not-to-exceed limit as outlined above. Our services will be invoiced monthly at the hourly rates specified in our engineering services contract with the City. Our fee estimate does not include application or permit fees for street openings, newspaper advertising, traffic flagging or police details, if they are required.

We will monitor our progress and budget status on a monthly basis and notify you when our fee charges have reached approximately 75% of our budget and at major milestones. If it appears that our project scope or budget will be exceeded due to unforeseen variables encountered, we will notify you as they become apparent and not proceed without your prior authorization. Additional work, as required and authorized by you, will be estimated separately and will be performed at the rates specified in our current engineering service contract with the City.

**Conclusion**

We are pleased to have the opportunity to present this scope of services and budget proposal. If the terms of this proposal are acceptable, please sign in the space provided below and return one copy to us for our records.

Please call me if you have any questions or require additional information. We look forward to bringing this project to a successful completion.

Sincerely,

SEBAGO TECHNICS, INC.



Stephen S. Sawyer, Jr., P.E.
Senior Vice President Transportation Services

SSS:jg

Enclosures: Plan of Hill Street Relocation at Broadway
Broadway Corridor Pedestrian Improvements Plan
Westbrook Street MUP

**ACCEPTED and AUTHORIZED**
**(Sebago Technics' Project No. 20035)**

By: _____

Representing: _____

Title: _____

Date: _____

# BROADWAY CORRIDOR PEDESTRIAN IMPROVEMENTS LOCATION PLAN 3/18/2019

DRAFT

PORTLAND

SCARBOROUGH

CAPE ELIZABETH

INTERSTATE 295

BROADWAY

WESTBROOK ST.

WESCOTT ST.

MAIN ST.

MTA APPROACH

BUS STOP

LINTON ST.

ORLANDO ST.

DAYTONA ST.

KENNETH RD.

JAMESTOWN CT.

PEARY TERRACE

STROUT ST.

LINCOLN ST.

BURNHAM ST.

PLEASANT AVE.

SOUTH PORTLAND GREENBELT PATHWAY

BUTTONWOOD ST.

COLE ST.

ELM ST.

HILL ST.

S. KELSEY ST.

EVANS ST.

HIGHLAND AVE.

WATERMAN DR.

WALNUT ST.

MUSSEY ST.

HARRIET ST.

SAWYER ST.

STANFORD ST.

BREAKWATER DR.

PINE ST.

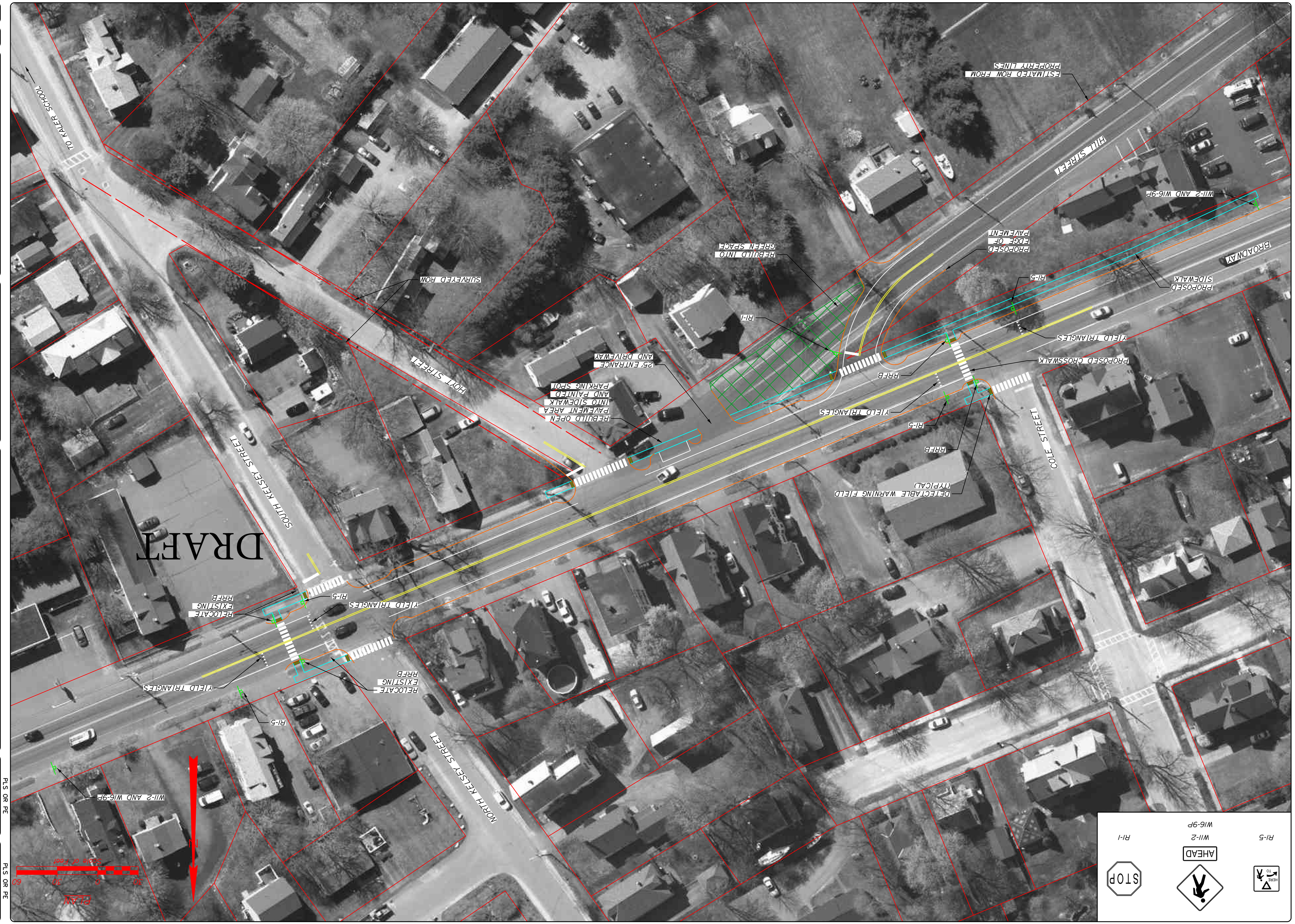
COTTAGE RD.

OCEAN AVE.

SAWYER ST.

LEGEND

- CROSSWALK AND RAMP IMPROVEMENTS
- RRFB
- SIDEWALK IMPROVEMENTS
- SIGNAL IMPROVEMENTS
- PROJECTS IN PROGRESS BY OTHERS
- SMART CORRIDOR RECOMMENDATION
- SEBAGO RECOMMENDATION
- RECOMMENDATION FROM THIS STUDY




CONCEPT IMPROVEMENTS
OF:
BROADWAY AT HILL ST., HOYT ST., AND S KELSEY ST.
SOUTH PORTLAND, MAINE
FOR:
CITY OF SOUTH PORTLAND
SOUTH PORTLAND, MAINE

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

| PROJECT NO. | SCALE |
|---|---|
| 11337-02 | 1" = 30' |

SHEET 1 OF 3

| REV'I: | BY: | DATE: | STATUS: |
|---|---|---|---|
| A | CMT | 11-12-18 | DRAFT FOR COMMENTS |

| DESIGNED | CHECKED |
|---|---|
| CMT | SSS |

PROGRESS PRINT

NOT FOR CONSTRUCTION

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PLS OR PE

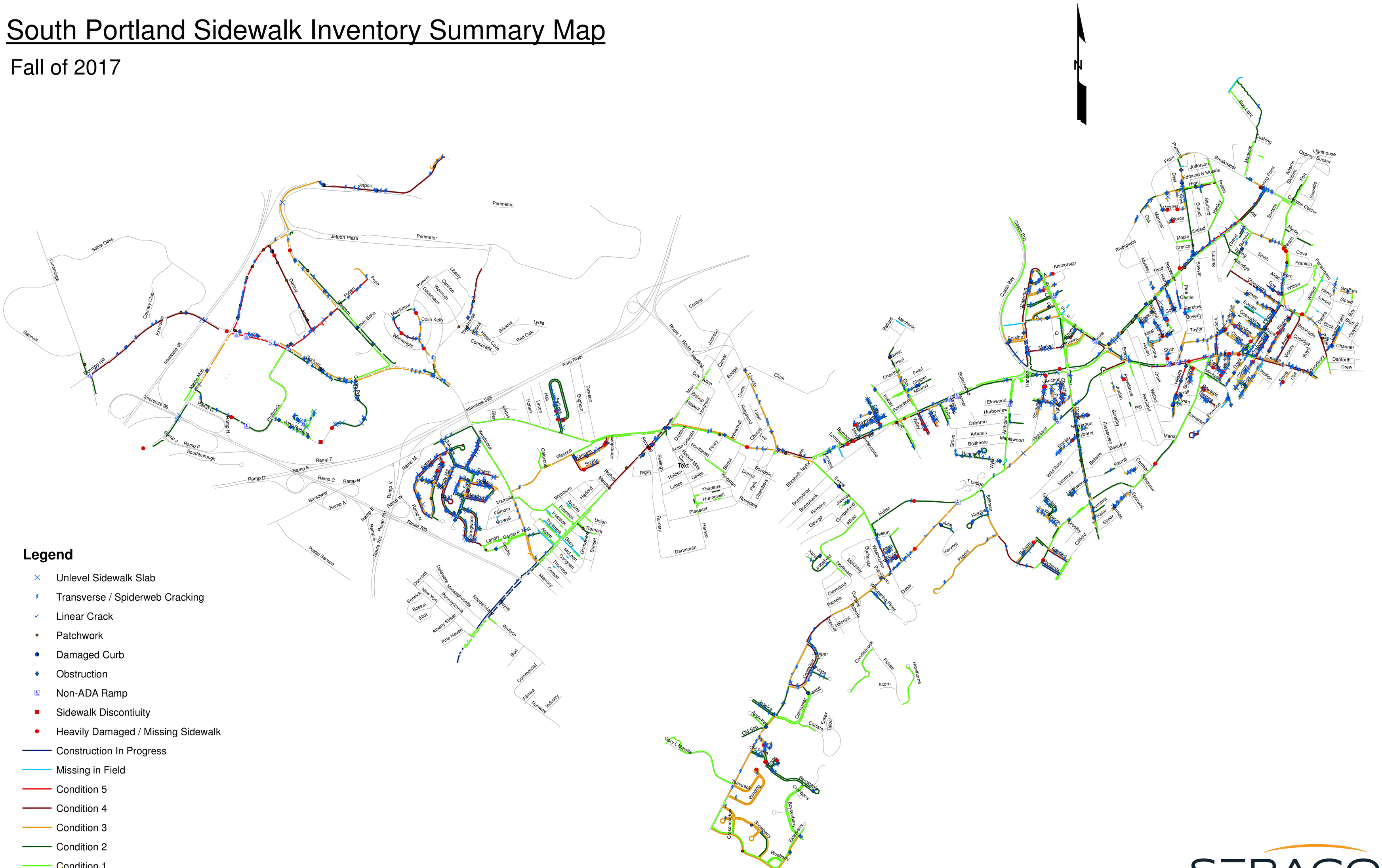
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...\Traffic\DGN\Concept.dgn


Wesbrook Street MUP
Section 3
Section 2
Section 1
Clark Pond
Legend
Broadway Gardens
Calvary Cemetery
Feature 1
Feature 2
Feature 3
Feature 4
Feature 5
Jiffy Lube
Karen's
Money Management International (MMI)
Pape Chevrolet, Inc.
Rite Aid Pharmacy
School
South Portland Municipal Golf Course
South Portland Public Library: Memorial Branch
South Portland Westbrook Circle-K Irving
Sun Dental Arts
Google Earth
© 2018 Google
1000 ft
N

# South Portland Sidewalk Inventory Summary Map

Fall of 2017


N
Jetport
Perimeter
Jetport Plaza
Sable Oaks
Cummings
Gannett
Country Club
Evergreen
Running Hill
Interstate 95
Maine Mall
Ramp G
Ramp H
Ramp I
Ramp J
Ramp P
Southborough
Ramp F
Ramp E
Ramp D
Ramp C
Ramp B
Broadway
Ramp A
Postal Service
Dunlap
Pope
Jordan
Thomas Blake
Gracie Theta
Chamberlain
Jetport Plaza
Mary Arthur
Colin Kelly
Wainwright
Powers
Cannon
Wentworth
Osmond Plaza
Liberty
Trevor Knight
Bicknell
Lydia
Red Oak
Union Cove
Cormorant
Fore River
Interstate 295
Central
Route 1
Route 1 Alternate
Jackson
Carver
Bodge
Lincoln
Clark
Cox
Allan
Bishop
Haskell
Hunstman
Hall
Hibbert
Linton
Brigham
Dawson
Cash Wholesale
Oakwood
Westcott
Kenneth L
Scott
Jamestown
Rigby
Robert Mills
Skillings
Holden
Lubec
Calais
Dayton
Acton
Orlando
Southeast
Pearl
Grout
Kingston
Dracut
Park
Chambers
Rosedale
Bowdoin
Thadeus
Hunnewell
Pleasant
Rumery
Dartmouth
Hemco
Elizabeth Taylor
Evans
Bonnybriar
Romano
George
Cumberland
Alfred
Jerimah
Nutter
Nelson
Julia
Higgins
Karynai
Phyllis
Sawtelle
Scottwood
Ashleigh
Stonecrest
Gardenside
Mill Pond
Rosehill
Clifford
Summer
Kaitel
Spear
Shannon
Stonewick
Shoshoner
Cornish
Bellaire
Parrott
Wild Rose
Simmons
Laurelwood
Stanley
Maplewood
Harborview
Elmwood
Osborne
Arbutus
Baltimore
Hampshire
Wyllie
Grove
Anthony
Highland
Buttonwood
Mariner
Mechanic
Bristol
Atlantic
Forest
Chestnut
Pearl
Crystal
Walnut
Keller
Robinson
Valley
Cedar
Hobart
Lombard
Burnham
Meadowcroft
Rockhouse
Casco Bay
Anchorage
Westerman
Bracket
Market
Hanover
Ocean
Broadway
Preble
Surrey
Sawyer
Smith
Kincaid
Maple
Crescent
Stanford
Mosher
Pierce
Oak
Manner
Riverplace
Massey
Third
Rosemont
Pine
Castle
Barstow
Beverly
Taylor
Sixth
Ocean
Ocean House
Ocean Park
Ocean View
Ocean Terrace
Ocean Crest
Ocean Vista
Ocean Ridge
Ocean Cove
Ocean Rock
Ocean Mist
Ocean Breeze
Ocean Shore
Ocean Wave
Ocean Spray
Ocean Foam
Ocean Tide
Ocean Current
Ocean Depth
Ocean Floor
Ocean Bottom
Ocean Surface
Ocean Water
Ocean Air
Ocean Land
Ocean Sea
Ocean Lake
Ocean River
Ocean Stream
Ocean Creek
Ocean Pond
Ocean Bay
Ocean Harbor
Ocean Port
Ocean Dock
Ocean Pier
Ocean Wharf
Ocean Quay
Ocean Jetty
Ocean Breakwater
Ocean Lighthouse
Ocean Beacon
Ocean Buoy
Ocean Marker
Ocean Sign
Ocean Signal
Ocean Light
Ocean Flare
Ocean Rocket
Ocean Firework
Ocean Explosion
Ocean Fire
Ocean Smoke
Ocean Ash
Ocean Dust
Ocean Sand
Ocean Soil
Ocean Earth
Ocean Rock
Ocean Stone
Ocean Mountain
Ocean Hill
Ocean Valley
Ocean Canyon
Ocean Cave
Ocean Tunnel
Ocean Bridge
Ocean Road
Ocean Street
Ocean Avenue
Ocean Boulevard
Ocean Drive
Ocean Lane
Ocean Court
Ocean Place
Ocean Square
Ocean Circle
Ocean Triangle
Ocean Rectangle
Ocean Pentagon
Ocean Hexagon
Ocean Heptagon
Ocean Octagon
Ocean Nonagon
Ocean Decagon
Ocean Dodecagon
Ocean Polygon
Ocean Shape
Ocean Form
Ocean Structure
Ocean Building
Ocean House
Ocean Home
Ocean Apartment
Ocean Condo
Ocean Townhouse
Ocean Duplex
Ocean Triplex
Ocean Quadplex
Ocean Multiplex
Ocean Complex
Ocean Development
Ocean Community
Ocean Neighborhood
Ocean Subdivision
Ocean Plat
Ocean Lot
Ocean Parcel
Ocean Property
Ocean Land
Ocean Real Estate
Ocean Mortgage
Ocean Loan
Ocean Bank
Ocean Credit
Ocean Debt
Ocean Finance
Ocean Investment
Ocean Stock
Ocean Bond
Ocean Share
Ocean Dividend
Ocean Profit
Ocean Loss
Ocean Gain
Ocean Revenue
Ocean Expense
Ocean Budget
Ocean Tax
Ocean Insurance
Ocean Warranty
Ocean Guarantee
Ocean Contract
Ocean Agreement
Ocean Deal
Ocean Negotiation
Ocean Bargain
Ocean Sale
Ocean Purchase
Ocean Buy
Ocean Sell
Ocean Trade
Ocean Exchange
Ocean Barter
Ocean Auction
Ocean Bid
Ocean Offer
Ocean Price
Ocean Cost
Ocean Value
Ocean Worth
Ocean Money
Ocean Currency
Ocean Dollar
Ocean Cent
Ocean Penny
Ocean Nickel
Ocean Dime
Ocean Quarter
Ocean Half Dollar
Ocean Silver Dollar
Ocean Gold
Ocean Silver
Ocean Platinum
Ocean Diamond
Ocean Ruby
Ocean Sapphire
Ocean Emerald
Ocean Topaz
Ocean Amethyst
Ocean Opal
Ocean Pearl
Ocean Jade
Ocean Turquoise
Ocean Coral
Ocean Ivory
Ocean Bone
Ocean Horn
Ocean Hoof
Ocean Claw
Ocean Fang
Ocean Tooth
Ocean Tusk
Ocean Antler
Ocean Feather
Ocean Wing
Ocean Beak
Ocean Talon
Ocean Scale
Ocean Fin
Ocean Gill
Ocean Tail
Ocean Flipper
Ocean Shell
Ocean Coral
Ocean Seaweed
Ocean Kelp
Ocean Algae
Ocean Plankton
Ocean Krill
Ocean Shrimp
Ocean Crab
Ocean Lobster
Ocean Clam
Ocean Oyster
Ocean Mussel
Ocean Scallop
Ocean Squid
Ocean Octopus
Ocean Jellyfish
Ocean Starfish
Ocean Urchin
Ocean Cucumber
Ocean Anemone
Ocean Sponge
Ocean Worm
Ocean Eel
Ocean Shark
Ocean Whale
Ocean Dolphin
Ocean Porpoise
Ocean Seal
Ocean Sea Lion
Ocean Walrus
Ocean Polar Bear
Ocean Penguin
Ocean Albatross
Ocean Seagull
Ocean Pelican
Ocean Cormorant
Ocean Gannet
Ocean Puffin
Ocean Auk
Ocean Loon
Ocean Duck
Ocean Goose
Ocean Swan
Ocean Heron
Ocean Crane
Ocean Stork
Ocean Ibis
Ocean Flamingo
Ocean Peacock
Ocean Pheasant
Ocean Quail
Ocean Partridge
Ocean Grouse
Ocean Turkey
Ocean Chicken
Ocean Rooster
Ocean Hen
Ocean Chick
Ocean Egg
Ocean Nest
Ocean Roost
Ocean Perch
Ocean Branch
Ocean Tree
Ocean Forest
Ocean Jungle
Ocean Rainforest
Ocean Desert
Ocean Tundra
Ocean Arctic
Ocean Antarctic
Ocean Polar
Ocean Equator
Ocean Tropic
Ocean Subtropic
Ocean Temperate
Ocean Continental
Ocean Maritime
Ocean Coastal
Ocean Inland
Ocean Island
Ocean Peninsula
Ocean Isthmus
Ocean Strait
Ocean Channel
Ocean Gulf

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# SECTION III

## Appendix

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# Appendix


*A. The Capital Improvement Budget Process for the City of South Portland*

*B. Capital Improvement Plan Project Evaluation Guidelines*

*C. Other Demographic, Economic, and Governmental Statistical Information*

*D. Fund Balance Policy*

*E. Analysis of Bonded Indebtedness*

*F. Building, Equipment, Vehicle and Technology Inventory of the City*

*G. Glossary*

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## *The Capital Improvement Budget Process for the City of South Portland*

As used in this charter, "capital project" or "project" mean[s] (a) any physical public betterment or improvement and any preliminary studies and surveys relative thereto; (b) the acquisition of property of a permanent nature; (c) the purchase of equipment for any public betterment or improvement when first erected or acquired; (d) the purchase of equipment and vehicles, either the first acquisition or replacement thereof, for use by the various departments of the city.

The City Manager annually presents a seven-year Capital Improvement Plan to the City Council. As part of the Capital Improvement Plan, the City Manager identifies capital projects and proposed new capital projects, the respective appropriations and sources of revenues to fund the projects and the respective amounts, if any, proposed to be raised therefore by the issuance of bonds during the budget year. The City Manager shall also include in the message, or attach thereto, a capital program of proposed capital projects for the six fiscal years next succeeding the first year, together with his comments thereon and any estimates of costs.

The City may incur indebtedness by issuing its negotiable bonds, and notes in anticipation of bonds, pursuant to this charter, to finance any capital project which it may lawfully construct or acquire. The city may issue term notes to provide funds for preliminary studies and surveys, including engineering designs and plans, in respect of any proposed capital project, whether or not construction of such capital project shall be fully authorized at the time, and such notes, and any term notes issued as extensions or renewals thereof, shall be issued pursuant to resolution adopted by the affirmative vote of five members of the council. Any term notes issued pursuant to the preceding sentence may be paid from the proceeds of negotiable bonds, or notes in anticipation of bonds, issued pursuant to this charter or from other funds of, or available to, the city.

The City Council may authorize the issuance of bonds by a "bond ordinance" passed by the affirmative vote of at least four of the members of its council. Each bond ordinance shall be subject to referendum unless the bonds are authorized solely for a capital purpose made necessary as the result of fire, flood or other disaster. Each bond ordinance shall take effect on the 21st day after its first valid publication after final passage, unless it be submitted to referendum, in which event it shall not take effect unless it be approved by the favorable vote of at least a majority of those voting thereon.

Bonds issued after the adoption of this charter shall be made payable in annual, serial and approximately equal installments as pertains to principal, and interest shall be made payable semiannually. Every issue of bonds shall be payable within a fixed term of years which shall in no case exceed 30 years.

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## *Capital Improvement Plan Project Evaluation Guidelines*

The following guidelines determine what a CIP project is:

Relatively high monetary value (at least $10,000)
Long life (at least five years)
Results in creation of a fixed asset, or the revitalization of a fixed asset

Included within the above definition of a Capital project are the following items:

- Construction of new City facilities
- Remodeling or expansion of existing facilities
- Purchase, improvement and development of land
- Operating equipment and machinery for new or expanded facilities
- Planning and engineering costs related to specific capital improvements
- Vehicles and other large equipment
- Street construction, reconstruction, resurfacing or renovation

Department Heads prepared and submitted capital improvement requests along with detailed project descriptions for first year projects, asset inventory and replacement schedules, supporting studies and strategic planning documents, and seven-year CIP requests.

The Capital Improvement program is based on an extensive prioritization process. Projects are prioritized based on City critical objectives and strategies, the Comprehensive Plan, Project PLAN, special studies and reports, City Council and department priorities, and anticipated funding sources. Projects are then evaluated on the following project prioritization matrix as recommended by the International City Management Association.

1. **Capital Costs –** These represent the annual total costs, including future year capital costs. Also to be considered is whether the proposed project will reduce future capital costs, for example, a rehabilitation project that averts a more expensive, subsequent replacement, and the extent of such savings.

    a) Lower future capital costs
    b) High future capital costs
    c) No impact

2. **Annual Costs -** The expected change in operation and maintenance costs. Operating departments provide year-by-year estimates of the additional costs or reductions likely in the operating budget because of the new project. Also to be considered is changes in revenues, which may be affected by a project, for example, the loss of property taxes incurred when private land is used for a capital project.

    a) Lower operating costs
    b) Higher source of revenues

c) Increases in productivity or opportunity
d) Higher operating costs
e) Lower source of revenues
f) No impact

3. **Health and Safety Effects –** This criterion includes health-related environmental impacts like reductions/increases in traffic accidents, injuries, deaths, sickness due to poor water quality, health hazards due to sewer problems, etc.

    a) Increase public health
    b) Increase public safety
    c) No impact

4. **Community and Citizen Benefits** – Economic impacts such as property values, the future tax base, added jobs, income to citizens, changes in business income, and the stabilization (or revitalization) of neighborhoods. Such impacts may apply more to capital projects related to growth and expansion than to infrastructure maintenance though deteriorating structures can adversely affect business.

    a) Add to tax base
    b) Promote economic development
    c) Create employment
    d) Stabilize or revitalize neighborhood(s)

5. **Environmental, Aesthetic, and Social Effects** - A catch-all criterion for other significant quality-of-life related impacts, this includes community appearance, noise, air and water pollution effects, households displaced, damage to home, effect on commuters, changes in recreational opportunities, etc.

    a) Improve environmental protection effort (clean air, land and water)
    b) Improve quality of life for residents (i.e. noise, light pollution)
    c) Improves community appearance
    d) Improves recreational/cultural opportunities

6. **Distributional Effects** - Estimates of the number and type of persons likely to be affected by the project and nature of the impact – for instance, explicit examination of project impact on various geographical areas; on low-moderate income areas; and on specific target groups. Equity issues are central here – who pays, who benefits.

    a) Significant regional benefit
    b) City wide improvement
    c) Benefits large portion of City
    d) Benefits one neighborhood
    e) Assists in elimination of slum and blight
    f) No impact

7. **Public Perception of Need** - This criterion refers to project assessment of (a) the extent of public support; (b) interest group advocacy and/or opposition.

    a) Identified in Comprehensive Plan, Project PLAN or other study
    b) Specific request of the City Council
    c) Project requested by South Portland neighborhood organization or other group
    d) Knowledge of public perception of need unknown
    e) Public opposition

8. **Feasibility of Implementation –** This element is a measure of (a) special implementation problems (e.g., physical or engineering restraints) and (b) compatibility with the general direction of the City.

    a) Feasibility of implementation is manageable
    b) Feasibility of implementation presents special implementation challenges
    c) Project is dependent on the actions of another agency or organization

9. **Implication of Deferring the Project** - Deferring capital projects is tempting for hard-pressed governments, but an estimate of the possible effects, such as higher future costs and inconvenience to the public, provides valuable guidance in proposal assessment

    a) Deferral of the capital project will significantly increase the cost of the project
    b) Deferral of the capital project will significantly increase the inconvenience to the public of not completing the project
    c) Deferral of the capital project will increase operating costs
    d) Deferral of the capital project will prevent operating cost savings or productivity improvements.

10. **Certainty of Information Supplied** – Amount of uncertainty and risk – For each proposal, each of the above criteria will have associated with it some degree of uncertainty as to cost estimates, effect on service quality, or impact of new procedures. When substantial uncertainties exist regarding any of the evaluation criteria for any proposal, the City should consider estimating, at least in broad terms, the amount of uncertainty – probability of occurrence – and the magnitude of the likely negative consequences. Few cities generate such information, but even "educated guesses" are useful here.

    a) Certainty of the cost estimate is high based on recent bid document or publicly advertised price
    b) Certainty of the cost estimate is high based on engineering estimate
    c) Certainty of the cost estimate is moderately high based on best professional judgement

11. **Effect on Interjurisdictional Relationships –** Possible beneficial/adverse effects on relationships with other jurisdictions or quasi-governmental agencies in the area

constitute this criterion. Such effects, e.g., waste disposal via landfills in other jurisdictions, are likely to require special regional coordination and could impair the proposal's attractiveness.

a) Interjurisdictional benefit will be achieved
b) Interjurisdictional project that has the support of another community or agency
c) Interjurisdictional project that will need to obtain approval from another community or agency

12. **City Critical Objective** – If a capital project directly addresses a City critical objective, the relative attractiveness of that project increases.

a) Identified in comprehensive Plan, Project PLAN or other study
b) Specific request of the City Council
c) Consistent with vision statement "to become the premier service provider in northern New England"
d) Consistent with annual work plan described in operating budget
e) Important; but not critical

13. **Nature of the Investment –** Does the capital improvement request replace or maintain an existing asset or provide for a new capital asset?

a) Maintenance of an existing asset
b) Replacement of an existing asset
c) Expansion of an existing asset
d) New capital asset

14. **Significant Investment in Previous Years.** Has the City made a significant investment in this programmatic area within the last five years?

a) Significant investment made by the City in the last five years
b) Significant investment made by the City to meet legal obligation
c) Moderate investment
d) No investment

After all proposed projects are prioritized using these fourteen criteria, the list will be reviewed from two more viewpoints: 1) does the list stand an "intuitive check"? Do projects fall in the priority order that was "anticipated"?, and (2) are there any linkages between projects? Are any projects related to each other geographically, or otherwise, such that having them accomplished concurrently would be advantageous? What about sequencing or timing? Are any projects dependent on the completion of other projects? Adjustments to the priority list may be necessary dependent on this final review.

# CITY OF SOUTH PORTLAND, MAINE

## CITY OF SOUTH PORTLAND, MAINE

**General**

The City of South Portland is located on the southern coast of the State of Maine in the southeastern section of the County of Cumberland, the State's most populous county. The land area of the City consists of residential, local business, industrial and coastal land areas with a total area embracing 12.93 square miles, supporting a population of 25,608 residents. A city charter was granted on March 22, 1898 and adopted on December 5, 1898 as the City of South Portland. South Portland is the fourth largest city in Maine and the second largest in its region. Once principally a residential community, the City now enjoys a diversified commercial, industrial and advanced technology aspect to its economy. The City comprises several villages, all being contiguous to another, the major neighborhoods being: Cash Corner, Country Gardens, Ferry Village, Knightville/Millcreek, Ligonia, Loveitt's Field, Meadowbrook, Meetinghouse Hill, Ocean Street, Pleasantdale, Redbank, Stanwood Park, Sunset Park, Thornton Heights and Willard.

The Fore River separates South Portland from the City of Portland for a major portion of its northern border. The remaining portion of the City's northern border is formed by the land portion of the Portland/South Portland line and a portion of the City of Westbrook. South Portland is bordered by the towns of Scarborough at its southwest and Cape Elizabeth at its southeast. The Atlantic Ocean forms South Portland's eastern border as Portland Harbor and Casco Bay. Convenient access to South Portland is provided by Exits 44 and 45 of U.S. Interstate Route 95 (the Maine Turnpike), which diagonally intersects the City's northwestern plain; the U.S. Interstate Route 295 spur, which bisects the City through its western region; U.S. Route 1, which flows through the center of South Portland; State Route 9, which enters the southern section of the City as part of U.S. Route 1 and then departs to the City's northwest; and State Route 77, which intersects the City's eastern plain in a north-south direction, to cross on the Casco Bay Bridge, connecting South Portland and Portland.

The area of which the City is comprised was originally the northern part of the Town of Cape Elizabeth. This area was first settled with a trading station being established in 1627 on Richmond Island. A grant of land on the mainland near the Spurwink River was conveyed in 1631 and in 1632 development of the Spurwink settlements began. The Colonial and native population conflicts forced

abandonment of the area for several lengthy periods from 1675 to 1713. Old Falmouth was incorporated in 1718, forming the area now encompassing the Cities of Portland, South Portland and Westbrook and the Towns of Cape Elizabeth and Falmouth. Due to the inconvenience of crossing the Fore River, Cape Elizabeth (then including the City) became established as the Second Parish of Falmouth in 1733, and on November 1, 1765 separated from Falmouth, being incorporated as the Town of Cape Elizabeth. On March 15, 1895 South Portland divided and set off the northern portion of Cape Elizabeth to become a town.

The City's port area serves as major distribution facility for foreign oil shipments for transmission to Canada as well as refined products for domestic consumption. The Maine Mall in South Portland forms the hub of the largest shopping district in the State. The City is the location for Willard Beach, Bug Light, Spring Point Light, the Southern Maine Community College campus and numerous marinas. Fairchild Semiconductor and Texas Instruments manufacture sophisticated electronic circuits used in personal computers, laptops computers, cellular phones and other devices.

**Government**

The City operates under a charter initially adopted December 5, 1898, as amended, most recently in November 2009 (the "Charter") providing for a Council-Manager form of government with a seven-member City Council. The Council is composed of seven members, one elected from each of the City's five voting districts, and two members who are elected at-large. The Council members are elected for three-year staggered terms. The Charter grants to the City Council all powers to enact, amend, or repeal rules, ordinances and resolutions relating to the City's property, affairs and government, to preserve the public peace, health and safety, to establish personnel policies and giving effect to any vote of the City and to authorize the issuance of debt subject to referendum approval by the voters of the City. Through its Charter, the Council adopts an annual budget and provides for an annual audit.

The City Manager is the chief executive officer and the head of the administrative branch of the City government.

**Municipal Services**

The City provides general governmental services for the territory within its boundaries, including police and fire protection, maintenance of highways, streets and sidewalks, parks, recreation, library and coastal areas, sewer service and wastewater treatment. The City also operates a public bus service. Public education is provided under the City's supervision for grades Kindergarten ("K") through 12.

Water service is provided by the Portland Water District, a quasi-municipal entity whose operations and direct obligations are not part of the City.

**Planning and Development**

The Department of Planning and Development plans for the growth and re-development of the City. Its mission is:

- to maintain the quality of life of a flourishing community in which each resident is reasonably able to achieve his or her highest potential

- to facilitate increased economic activity

- to protect the tax base of the City—upon which depend needed municipal services—by promoting standards attractive to investment

- to protect the natural environment and promote excellence in the design of the built environment

- to provide City decision-makers with quality information and analysis of alternatives

- to promote effective public participation.

Some of the activities of planning staff include:

- Implementing the 2012 Comprehensive Plan Update
- Assisting with implementing the Climate Action Plan
- Fostering economic development
- Writing land use protection ordinances
- Grant writing and community development
- Providing staff services to the Planning Board
- Preparing community-wide plans like the Comprehensive Plan
- Area planning, such as the Mill Creek Master Plan.
- Transportation network and facilities planning
- Review of applications for development projects.

The Department of Planning and Development also includes Engineering Inspection and Code Enforcement. The Engineering section of Planning and Development includes staff and contracted services, providing inspection and limited design and services for the City and its departments. Inspection projects include:

- New developments
- Street openings
- Renovations
- Sewer construction and reconstruction
- Drainage reviews
- Monitoring and enforcing erosion and sediment control activities

The Code Enforcement section of Planning and Development handles zoning, building, plumbing, electrical and street opening permits. The office provides information and services related to:

- Building codes

- Setback requirements
- Permit requirements
- Home occupations
- Accessory Dwelling Units
- Permitted and Special Exception uses
- Zoning districts
- Zoning, wetlands, and shoreland zoning maps
- Variances and other appeals
- Assessor's parcel maps
- Grandfathered buildable lots of record
- City Excavator Licensing requirements
- Property records

The Code Enforcement Office also has information provided by other agencies regarding:

- Radon, Asbestos, and Lead hazards
- Tenant rights
- Adaptive equipment loan programs
- Making homes wheelchair accessible
- Flood Insurance Rate Maps (FIRM)
- Dig Safe

**Permits**

Most construction projects or installations must have a permit before being started. Before you begin any type of construction project, please call the Code Enforcement Office at 207-767-7603 for information on requirements. Permits are issued from this office for:

- New construction, including buildings, additions, porches, decks, sheds, garages, swimming pools, signs, and more.
- Demolitions
- Changes to existing exterior or interior walls, roofs, window or door openings of buildings, including sign panel changes.
- Temporary structures such as storage and office trailers, and temporary signs and banners.
- Electrical- any service or meter changes and any new wiring, including sign wiring- requires application by a Maine Licensed Master Electrician (even for a single family home)
- Plumbing- any new or relocated fixtures, but not for replacement of old fixtures in the same location. Single family homeowners may take out their own permit. Any other plumbing job requires application by a Maine Licensed Master Plumber
- Heating- any new or replacement heating systems, including furnaces, boilers, woodstoves, pellet stoves, gas heating stoves, and gas heaters of any kind. Gas-fired and oil-burning equipment installations require application by a Maine Licensed Oil Burnerman or Maine Licensed Propane/Natural Gas Technician.
- Fuel tank installations

- Sewer installation or connection/reconnection
- Septic tank installation or replacement
- Sewer impact fees
- Sprinkler systems or other fire or burglar protection systems
- HVAC or installed air conditioning systems (not window units)
- Large tents for special events (proof of treatment for fire retardancy required)

## Fences

Fences do not require permits and may be up to six feet in height, placed right against your property line, facing in either direction. Your fence must be behind or against the front property line, not in front of it on what is actually City property between the pavement of the street and the actual front property line.

### Building Activity

The following shows the trend of the City's building activity.

| FY End June 30, | New Construction | Alterations | Total |
|---|---|---|---|
| 2000 | $17,323,039 | $15,056,958 | $32,379,977 |
| 2001 | $23,784,876 | $19,976,480 | $43,752,356 |
| 2002 | $10,355,145 | $19,416,341 | $29,771,486 |
| 2003 | $48,031,348 | $15,035,127 | $63,066,475 |
| 2004 | $22,844,810 | $19,821,229 | $42,666,039 |
| 2005 | $21,573,491 | $29,977,433 | $51,550,924 |
| 2006 | $19,970,163 | $26,685,576 | $46,655,739 |
| 2007 | $30,875,553 | $11,974,855 | $42,850,408 |
| 2008 | $10,759,460 | $22,129,167 | $32,889,427 |
| 2009 | $7,360,574 | $8,554,657 | $15,915,231 |
| 2010 | $7,010,044 | $9,407,736 | $16,417,780 |
| 2011 | $6,999,202 | $13,068,484 | $20,067,686 |
| 2012 | $3,142,022 | $52,431,167 | $55,573,189 |
| 2013 | $12,080,787 | $19,830,611 | $31,911,398 |
| 2014 | $15,327,221 | $13,712,132 | $29,039,353 |
| 2015 | $26,542,177 | $27,237,849 | $53,780,026 |
| 2016 | $36,916,595 | $20,135,032 | $57,051,627 |
| 2017 | $27,761,099 | $30,696,715 | $58,457,814 |
| 2018 | $8,219,754 | $27,359,065 | $35,578,819 |
| 2019 | $5,743,225 | $74,173,049 | $79,916,274 |

Source: City of South Portland

## South Portland Fire Department

The South Portland Fire Department provides emergency response services to the community utilizing full-time and part-time on-call firefighter /paramedics. The delivery of Emergency Medical Services is the largest part of our business. We staff two ambulances at the paramedic level as well as three full-time fire trucks staffed with EMS personnel 24 hours a day. The Department serves as a State of Maine sponsored WMD / hazardous materials response team. Administrative offices for Fire, Emergency Medical Services and Emergency Management are located at the South Portland Public Safety building located at 20 Anthoine Street.

The Department currently operates out of three fully staffed stations, Central Station located at 684 Broadway, Cash Corner at 360 Main Street, and Western Ave Station located at 34 James Baka Drive. The three call companies operate out of Willard Square, Cash Corner and Union Street.

The South Portland Fire Department on a daily basis takes an active role in our community to educate the public and prevent emergencies. Prevention is often difficult to measure; however we have seen a remarkable decrease in major fires over the past twenty years. We have moved to automate our inspection program and visit every commercial occupancy and three unit apartment building annually. The Deputy Fire Chief in charge of fire prevention also reviews and approves all new construction plans in the city and makes recommendations on all aspects of the development process.

We focus on several areas in an attempt to prevent injuries and accidents in our community. The first is training of our employees, to be prepared to handle all types of emergencies. The second is through public education within the community. We participate in a regional juvenile fire setter program. Every October as part of fire prevention week the department hosts an open house and safety day at our Central Fire Station.

The South Portland Fire Department has evolved into an Emergency Response Team ready to handle any hazard. Our department has some of the best trained firefighters and paramedics in the state. The outstanding support provided by our community and the dedication of our staff have allowed the South Portland Fire Department to be ranked by ISO (Insurance Services Office) as one of the top departments in New England.

## South Portland Police Department

### Mission Statement

The mission of the South Portland Police Department is to work cooperatively with and within the community to protect life and property, preserve peace, enforce laws and maintain civil rights through proper and responsive community based service.

**School Resource Officer:**

A School Resource Officer is a sworn law enforcement officer assigned to a school on a long-term basis. The SRO is specifically trained in and performs three main functions: law enforcement officer, law related counselor and law related educator. The SRO program is a community policing approach in a school environment. The SRO's also participate in school activities and extracurricular events, serve as a classroom resource to teachers in the area of their expertise, are members of the school community and are facilitators of safe and secure school settings.

The South Portland Police Department has two SROs; one is solely dedicated to the South Portland High School and the other splits his time between Mahoney and Memorial Middle Schools.

**Triad:**

The South Portland Police Department has partnered with the senior members of the community to form the South Portland/Cape Elizabeth TRIAD, an organized program to reduce the criminal victimization of senior citizens. The South Portland/Cape Elizabeth TRIAD meets the first Wednesday of every month (Alternating in South Portland and Cape Elizabeth locations). A Senior Advisory Council also referred to as S.A.L.T. Council (seniors and Law Enforcement Together) act as an advisory group for the police department on crime and security issues involving the elderly. Activities of the S.A.L.T. Council include:

- Educating senior citizens on crime prevention and other social issues that impact senior citizens
- Assist senior citizens with getting resources so they can continue to live independently in their own homes

**Citizen Oriented Policing School:**

The South Portland Police Department offers an 8-week program that is intended to be an overview of the functions and operations of law enforcement. Citizens from South Portland and surrounding communities are welcome to attend the 8-week, 2 hour, sessions to learn about the following topics:

• The Role of the Police Officer • The Hiring Process • Police Ethics • Juvenile Justice • Community Policing • Dealing with the Mentally Ill • Domestic Violence • Diverse Ethnic Groups • Patrol Procedures • Criminal Investigations • Use of Force

Additionally, participants also have the opportunity to "ride along" with an officer on patrol and participate in scenario-based training. Interested individuals must be 18 years of age and agree to submit to a background check prior to acceptance.

**Smokeless Saturday:**

The Smokeless Saturday Program is an innovative program designed to provide an educational alternative to the Criminal Justice System for first-time teen offenders of Public Law 470. The Smokeless Saturday Program is the community working together to offer youth an opportunity to rethink their decision to smoke The program is a coordinated effort of the South Portland Police, the Court System, and the Office of the District Attorney.

If a person under the age of eighteen is found in possession of a tobacco product he/she will be issued a summons to go to court. A letter addressed to the parents of this juvenile will be sent to their home informing them of the summons and of the Smokeless Saturday Program. Parents then may sign up their child for the program, which is held one Saturday per month at the South Portland Police Department. Upon completion of Smokeless Saturday, all participants receive a certificate of attendance. They are also required to complete an evaluation form to help us in assessing the curriculum. Those youth who receive their summons in South Portland, and successfully complete the program, have their summonses dismissed and there is no further court action on that offense. **This program is for first time offenders only; and is a one-time opportunity. Any subsequent summons requires court attendance.** Offenders who have been caught at South Portland schools find their suspension time from school reduced because of their attendance at Smokeless Saturday.

This five-hour class is comprehensive in nature. The program focuses on providing educational material regarding the consequences of tobacco use. Attendees participate in activities that help them understand why they smoke, what their "trigger" situations are and how to avoid them. Participants develop an understanding of what role the media, peer pressure and family tobacco use have in their smoking. Students develop refusal and cessation awareness skills. Finally, goal setting is discussed and emphasized as a way to work toward kicking the habit.

Smokeless Saturday is co-facilitated by Officer Linda Barker and retired Memorial Middle School Health teacher, Madeline Akeley. Linda and Maddie brought the Smokeless Saturday Program to South Portland, and the State of Maine, in 1997. They both have extensive education and training in tobacco cessation specifically and in Addiction Counseling. Additionally, the program relies on volunteers from the health care profession to provide their perspective on the dangers of tobacco use. The Smokeless Saturday Program is not exclusively for those who have been issued summonses. It accepts teens that are referred from other agencies, self or parental referral, along with those referred by community-based organizations such as Opportunity Farm.

Through the efforts of the Smokeless Saturday Program we hope to accomplish several goals. Primarily we want to educate teens about the dangers of tobacco use. In addition, through consistent and strict enforcement of tobacco laws, our goal is to reduce peer pressure on younger children to smoke by older teens, and to reduce teen smoking in local known hangouts. Additionally, strengthened relationships between the police, schools and other community groups will result in consistent, clear messages being delivered to our youth about smoking. Smoking is unhealthy and illegal. Think about it!

To register your child for the Smokeless Saturday or time find out when the next session will be held please call: Officer Linda Barker at 799-5511 x7424. Registration fee: $30.00.

**Community Partnership for Protecting Children (CPPC):**

Community Partnerships for Protecting Children (CPPC) is a partnership of parents, neighborhoods, schools, churches, social service providers, children welfare services, law enforcement, neighborhood associations, and businesses working together to support and strengthen families and communities. CPPC is a method of interaction with families that is dependent on parent leadership, agency collaboration, neighborhood presence and adherence to four key elements of best practice, including shared decision making.

The neighborhoods surrounding Brickhill and Redbank were identified early on as a possible site for CPPC. In addition, Youth Alternatives Ingraham was interested in becoming more active with its neighbors. At the same time, there was interest within the City of South Portland to address some of the ongoing needs of the neighborhood including juvenile behavior and school truancy. In November 2008, the City of South Portland organized a neighborhood meeting and a list of issues was discussed, including juvenile behavior, drugs, and the need for greater police presence. In addition, the City formally committed itself to establishing the "Hub" in the Redbank/Brickhill community and secured a location along Westbrook Street to be shared by South Portland Police, DHHS staff and other CPPC partners.

The South Portland Police Department is key partner of CPPC. Their unique role is based on the fact that law enforcement personnel are present in the neighborhood on a regular basis and are often times the first to respond in cases of domestic violence and child abuse. Collaboration and communication between law enforcement and other CPPC partners is essential. On many occasions, responding officers recognize that the family needs help that police are not equipped to provide. Reaching out to the CPPC partners will provide the resources families need and assist law enforcement in effectively addressing the situation.

**Parks, Recreation and Waterfront**

The mission of the South Portland Parks, Recreation, & Waterfront Department is to provide, maintain and develop recreational facilities, open space and leisure opportunities which will enhance the well being of the citizens of the community. Critical to the success of this mission is our commitment to teamwork that drives excellence at every level of our operation. Our community has a longstanding tradition of supporting thriving programs, diverse green spaces, and publicly accessible trails for all ages to live an active healthy lifestyle. The Department of Parks & Recreation facilitates this tradition through providing the programs citizen's desire in locations that are second to none in Maine. Any person who rides the Greenbelt on a spring morning, attends a soccer outing at Wainwright Recreation Complex on a fall day, relaxes on a bench in the Mill Creek Park watching children skating on the pond, or plays a leisurely round of golf at our municipal course during a lazy summer evening can tell you that our parks system offers something for everyone. Housed in the South Portland Community Centers on Nelson Road and Redbank participants find a wide variety of activities for all ages year round ranging from water aerobics to the arts on a daily basis.

**Public Parks Division**

The Parks Division is responsible for maintenance for all City parks, the Municipal Golf Course, City athletic complexes, public school athletic fields, Willard Beach and a variety of other public facilities. During the winter, staff prepares the skating areas as well as cross country ski trails at the Golf Course, Mill Creek Park and Wainwright Recreation Complex, maintains access to the Greenbelt, and assists the Public Works Department in snow operations. Parks Division horticulturist, arborists, and landscaping staff grow many plants including all the annual flowers for the beds throughout the City. The City is also a Tree City USA community so our parks team performs the pruning, planting and removal of City-owned trees. Several annual events to include Art in the Park, Holiday Tree Lighting Festival, Summer Concerts, and Arbor Day festivities.

**Recreation Division**

Living an active and healthy lifestyle is accessible to everyone through our Greenbelt Tail, Municipal Pool, and variety of programming throughout the City. We offer active recreational opportunities through youth, adult, and senior programming such as pickle ball, soccer, basketball, water aerobics and arts classes at both the South Portland Community Center and Redbank Community Center. You can find our programs listed through the City website where it is also convenient to register on line for programs or classes. We also post many items on our Facebook page so that you can keep up with the latest information. A full listing of all our programs, events, and classes is also published three times a year in our brochure. Our programs are a great way to meet people in the community or to become a volunteer.

***Waterfront***

The City staff plans, manages, and coordinates maintenance of municipal waterfront facilities, including the Portland Street Pier, Fore River Municipal Boat Ramp as part of Bug Light Park, and Knightville landing in Thomas Knight Park. Spring Point Marina is leased which is operated by Port Harbor Marina but remains under the Department's overall supervision.

In addition, the Cities of Portland and South Portland have worked closely to develop new economic activity in the Port of Portland. At least one general marine cargo terminal with heavy lift capability is located within South Portland. Currently, there are no passenger transportation terminals in South Portland. There are several marinas, a small shipyard, beaches, restaurants, Southern Maine Community College, private homes, condominiums, public park, trails and access points along the South Portland waterfront. Several additional properties along the waterfront are available for commercial development or public use. The diversity of the waterfront's use provides both a great asset and a challenge.

***Fore River Municipal Boat Ramp***

The Fore River Municipal Boat Ramp is a part Bug Light Park. It is intended primarily for the launching of recreational boats. Commercial boats may use the ramp if such use does not unreasonably interfere with the launching of recreational boats. The public float and landing is generally restricted to the boarding and landing of small craft only. The ramp parking lot and other

adjacent areas are available for overnight or long-term use, as space is available. Advance permission is required by calling 767-7650.

Upon request, the department will provide copies of the current rules and regulations governing the Fore River Municipal Boat Launching Facility.

### *Portland Street Pier*

The City maintains the Portland Street Pier in Ferry Village. The facility has 16 boat slips available on an annual basis to small commercial fishing vessels, typically lobster boats. The pier provides public access for fishing and other family activities. A wood frame building on the pier is leased to Waterworks Diving Services. Commercial fisherman from South Portland interested in obtaining a boat slip may call 767-7650 or write to the Director of Parks, Recreation, & Waterfront, 21 Nelson Road, South Portland, 04106.

### Municipal Pier and Public Boat Landing at Thomas Knight Park

Knightville Landing is located in the shadow of the Casco Bay Bridge in Thomas Knight Park. The park is located at the intersection of Waterman Drive and Ocean Street in the Knightville neighborhood. The facility provides a waterborne gateway to the City for recreational boaters. The 300 foot pier and floating docks allow unrestricted access to the water. It is an ideal place to fish, kayak, canoe, or simply sit and enjoy the magnificent view of Portland Harbor's working waterfront.

Fee structure: Fees are paid by visiting boaters. All fees collected are used to operate and maintain this boat landing. **We use the honor system.**

### South Portland Public Library

The South Portland Library was constructed at its present location in 1966, and a branch was built in 1976.

As the state of Maine's fourth largest public library, and a leader within Minerva, a statewide cooperative library network, the South Portland Public Library offers extensive collections of materials of all kinds to its users. Beyond items to borrow, the library is also a cornerstone of the community, serving as a gathering place for many cultural, artistic and educational events. We provide access to library services seven days a week, year round, through our two locations, each with its own unique personality.

Highlights of Services:

- Current/Popular Fiction and Non-fiction
- Extensive Collection of Films on DVD
- Audio Books
- Music CDs
- Large Print Books

- Public Use Computers and Printers for Internet, Email and Word Processing
- Photocopiers
- An Amazing Collection of Materials for Children and Young Adults
- Graphic Novels
- Outreach Services – Delivery to the Home Bound
- Story Times, Activities and Groups for Children of All Ages
- Passes to Local Museums and Attractions
- Frequent Concerts, Guest Speakers and Other Special Events
- Adult Book Discussion Groups
- Socrates Café: A Philosophical Discussion Group
- Convenient and Family-Friendly Weekend Hours Search Our Catalog, Check Your Library Account and Request Items 24 Hours A Day At: www.southportlandlibrary.com

**Water Resource Protection**

The City of South Portland has actively pursued improving water quality in Casco Bay since 1978. The Water Resource Protection Department manages all operations, maintenance, and administrative activities for the wastewater treatment plant, pumping stations, and sewer/storm collection systems to ultimately meet all the water quality requirements set forth by the 1972 Federal Clean Water Act (CWA) through its Maine Pollutant Discharge Elimination System (MEPDES) discharge permit.

The ***Treatment Systems Division*** is responsible to ensure the treatment plant consistently meets the requirements set forth in the city's discharge permit. A highly successful compliance record is due to the dedication of the staff who work diligently to ensure the plant runs effectively and efficiently at a minimum cost to the residential, commercial, and industrial sewer users. Through a sequence of carefully controlled physical, biological, and chemical processes, the treatment plant staff produces over 2.5 billion gallons of clean water per year. Continuous monitoring and control with the operators' knowledge of biology, chemistry, equipment, maintenance, treatment systems, and processes are critical to peak operating efficiency. The treatment plant can pump and treat an instantaneous peak flow of up to 56 million gallons per day. The treatment plant operators are also responsible for the operations of 30 pumping stations throughout the City. The staff responds to pump station emergencies on a 24 hour, 7 day a week basis. There have been a number of upgrades to the 32 year old treatment facility which have consisted of system replacements to plant process components. This ongoing modernization process insures the City stays in compliance with changing regulations and maintains an efficient low cost system.

The ***Collection Systems Division*** comprises staff that provides services in the area of sewer/stormwater pipeline inspections, cleaning, maintenance, line repair, and manhole/catchbasin repair and maintenance. They also respond to sewer and stormwater related emergencies 24 hours a day, 7 days a week. The scope of coverage is extensive where the City has over 105 miles of sanitary sewers, 70 miles of storm sewers, and 6,396 structures within the system. These systems require continual service and repair to maintain the collection system in peak operating condition to move the wastewater flows for treatment and minimize the overflows from hydraulically overloaded combined sewer/stormwater collection systems. These combined sewer overflows (CSO's) are regulated discharges that must eventually be eliminated. The City has been actively pursuing this goal

since 1994 and has a master plan to move it to reducing or eliminating the six remaining CSO's over the next several years.

Sewer Maintenance provides preventative maintenance and repairs which is critical to keeping the treatment plant, the pump stations, and the department equipment and vehicles running at peak performance. Effective maintenance is a crucial part of operations, not only during the normal flows received on a daily basis, but, most importantly, when the collection and treatment system is tested during storm events, high flows, and natural weather disasters.

The ***Industrial Pretreatment Program*** was established to allow the Publicly Owned Treatment Works (POTW) direct control of industrial user discharges. This program was approved by the EPA in 1983 to insure that the objectives of the federal program were fully implemented on a local level. The program prevents the introduction of pollutants into the POTW, which could cause pass-through or interfere with the operation of the POTW, including interference with its use or disposal of municipal biosolids. The Compliance Administrator regulates the industries through a permitting mechanism to be sure they are in compliance with the program.

The ***Stormwater Management Program*** is the result of recent stormwater regulations and is administrated by the Stormwater Program Coordinator. The duties of this position are far reaching and consist of planning, managing, and coordinating the activities of the City's stormwater program. The program is made up of multiple stormwater minimum control strategies that are required by the federal and state stormwater regulations such as the federal Stormwater Phase II and the Maine Department of Environmental Protections MS4 General Permit for the discharges of stormwater from municipalities. The coordinator will develop and manage watershed plans and pollution reduction programs while working with the City's strategy for bringing urban impaired streams back into their water classification.

The staff can provide guided tours of the treatment plant to groups or individuals to see what treatment plants do for water quality and how the use of technology can improve efficiency and lower cost. The Collection Systems Division can set up demonstrations with local schools to view the latest in equipment and technology utilized in a modern collection system.

The ***Engineering Division*** provides engineering support services that encompass a wide range of needs from construction project management to facility planning and advancing the technological needs of the city. For buildings, roads, sewer construction, stormwater separation, treatment plant, pump station, and other hard construction projects, Engineering can provide the preliminary design work, design management, construction administration, and inspection service to insure the cost effective and product success of construction projects undertaken by the city. Engineering also advances much of the technological and planning improvements the city undertakes such as 3D CAD, CAD standards, sewer/storm systems computer modeling, development and maintenance of GIS data layers, pump station and sewer standards, treatment plant - pump station - collection system facility planning, and accurate efficient compilation and storage of record drawings for city infrastructure that will bring the city into the next generation of cost effective engineering service.

***Public Education***

The City operates its educational program for grades K through 12 under its own supervision. Article IX of the City's Charter, as amended, provides that the Department of Education for the City be administered by a Board of Education comprised of seven members, one elected from each of the City's five voting districts, and two members who are elected at-large. The Board of Education members are elected for three-year staggered terms. The Board performs all duties and functions in regard to the care and management of the public schools of the City including preparation and submission of its budget to the City Manager, who includes it in the budget process.

**Public Works**

The Public Works Department provides a full range of services including:

- Automated rubbish collection and disposal
- Snow plowing, sanding and salting
- Street and sidewalk maintenance
- Street paving and reconstruction
- Sign installation and maintenance

Public Works also operates a heavy equipment maintenance facility and the Transfer Station.

**Rubbish Removal**

One of the Department's primary functions is automated curbside rubbish removal and we collect from approximately 8500 stops weekly. We advertise any postponements of rubbish collection, due to holidays in the Sentry, on SPC-TV (Channel 2 in South Portland), via citywide email and via a maintained community e-mail list. If you would like to be placed on our "community" email list, please email us at publicworks@southportland.org. Any cancellation and/or postponement of rubbish collection due to weather is announced on television Channels 6, 8 & 13, as well as all of the local radio stations.

The Department is also responsible for all road maintenance, which includes, but is not limited to, pothole repairs; rating and coordination of paving and/or overlaying of roads; plow damage repairs (esplanades, lawns, drive aprons, curbing, etc.); signage repair and/or replacement; street sweeping; operation of the City's Transfer Facility; sidewalk repairs (bituminous or concrete); and assist other Departments as necessary.

Other services offered annually include:

- Fall curbside leaf collection, for leaves in biodegradable bags only
- Christmas tree curbside collection for 2 weeks after New Year's Day, weather permitting
- Household Hazardous Waste Drop-off day (City sponsored) - usually the 3rd Saturday in October
- Facility opened four (4) Sundays in the spring and four (4) Sundays in the late fall.

All of these are advertised the same as rubbish is for the holidays. The Department reviews and approves or denies any curb cut applications within the City limits.

## South Portland Transportation

### Transit Bus Service

The South Portland Bus Service provides a fixed route public transit service to the residents of South Portland. All City buses are lift equipped and wheelchair accessible. The Bus Service has a fleet of buses that operate three routes.

The Mill Creek Transit Hub, located on Thomas & Ocean St, offers riders an indoor facility to sit while waiting to transfer between routes.

The Bus Service also connects with the Portland METRO (774-0351) with a free transfer system to increase service area coverage throughout the Cities of Portland and Westbrook and the Town of Falmouth.

### Labor Relations

The City employs full, part-time, permanent part-time (set hours or no set hours), seasonal and temporary employees. The following represents those employees included in a union:

| Union | Unit | Effective | Expire |
|---|---|---|---|
| AFSCME (AFL/CIO) | Parks, Public Works | 7/1/2018 | 6/30/2021 |
| SPFCO | Fire Command Officers | 7/1/2018 | 6/30/2021 |
| SPPCSU(MAP) | Police Command Officers | 7/1/2018 | 6/30/2021 |
| IAFF 1476 | Dispatch | 7/1/2018 | 6/30/2020 |
| IAFF (AFL/CIO) | Firefighters | 7/1/2018 | 6/30/2021 |
| SPPPA (MAP) | Police Patrolmen | 7/1/2018 | 6/30/2021 |

The School Department unions consist of the following:

| | | | |
|---|---|---|---|
| SPAA | School Administrators | 7/1/2017 | 6/30/2020 |
| SPTA (MEA) | School Teachers | 9/1/2018 | 8/31/2021 |
| SPESPA (MEA) | Education Techs, & Clerks | 9/1/2016 | 8/31/2022 |
| SPSEA(MEA) | Maintenance, Transportation & Food Service | 7/1/2018 | 6/30/2021 |

### Economic Development

The City of South Portland has a diverse economic base, including substantial retail development, manufacturing and industrial businesses, as well as hundreds of small businesses throughout the City. It is home to the Maine Mall, one of the largest retail centers in northern New England. Each year, the Maine Mall and nearby shopping centers draw millions of visitors to South

Portland. During the day the City's population swells between 60,000 and 80,000 primarily as a result of the mall, nearby shopping centers and restaurants, Class A offices, and other prominent businesses.

The City is home to two world-class computer chip manufacturers, Texas Instruments and Fairchild Semiconductor, as well as the Maine headquarters of Anthem Blue Cross Blue Shield and world headquarters of WEX. Hannaford Brothers, a regional grocery store chain has a significant presence with its distribution center and freezer plant, distributing groceries to stores throughout New England. Portland Harbor is a significant asset of the City of South Portland, and it is one of the largest ports on the U.S. East Coast by volume and contributes to the regional economy.

The economic diversity of South Portland has been the key to its success, maintaining a strong economy over the years even during periods when the national economy has receded. South Portland's close-knit and friendly neighborhoods, its amenities, and open green spaces and waterfront are true assets that highlight the community's quality of life. Our City is a treasure and we welcome those who wish to come and visit and see the jewel that we call South Portland.

# City of South Portland, Maine
# General Fund - Fund Balance Policy
# June 20, 2011

## Policy Purpose

The purpose of this policy is to establish a target level of fund balance for the general fund and to establish a process and criteria for the continued evaluation of that target level as conditions warrant. This policy shall also establish a process for reaching and/or maintaining the targeted level of fund balance and the priority for the use of resources in excess of the target. Finally, this policy shall provide a mechanism for monitoring and reporting the City's general fund balance. This policy applies only to the general fund.

## Definitions and Classifications

*Fund Balance* is a term used to describe the net assets of governmental funds. It is calculated as the difference between the assets and liabilities reported in a governmental fund.

Governmental fund balance is reported in five classifications that comprise a hierarchy based primarily on the extent to which the City is bound to honor constraints on the specific purposes for which amounts in those funds can be spent. The five classifications of fund balance applicable to the General fund are defined as follows.

***Restricted Fund Balance Components:***

- *Non-spendable* – resources which cannot be spent because they are either, a) not in spendable form or; b) legally or contractually required to be maintained intact.

- *Restricted* – resources with constraints placed on the use of resources which are either a) externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments; or b) imposed by law through constitutional provisions or enabling legislation.

***Unrestricted Fund Balance Components:***

- *Committed* – resources which are subject to limitations the government imposes upon itself at its highest level of design making (City Council), and that remain binding unless removed in the same manner.

- *Assigned* – resources neither restricted nor committed for which a government has a stated intended use as established by the City Council, or a body or official (management) to which the City Council has delegated the authority to assign amounts for specific purposes.

- *Unassigned* – resources which cannot be properly classified in one of the other four categories. The General Fund should be the only fund that reports a positive unassigned fund balance amount.

## Background and Considerations

Fund balance is intended to serve as a measure of financial resources in a governmental fund. The City's management, credit rating agencies, and others monitor the levels of fund balance in the general fund as an important indicator of the City's economic condition. While credit agencies have always analyzed fund balance as part of their evaluation of credit-worthiness, increased attention has been focused on determining sufficient levels because of recent events in the credit markets.

In establishing an appropriate level of fund balance the City has considered the following factors:

- Property Tax Base
- Non-property Tax Revenues
- Debt Profile
- Liquidity
- Budget Management
- Future Uses
- Employment Base

## Fund Balance Policy

It is the policy of the City of South Portland to maintain a minimum unassigned fund balance in the general fund of 9% of general fund budgeted expenditures measured on a General Accepted Accounting Principles (GAAP) basis. In the event that the unassigned fund balance drops below this minimum level, the City will develop a plan, implemented through the annual budgetary process, to bring the balance back to the target level over a period of no more than three (3) fiscal years. A super majority vote of five (5) affirmative votes will be required for the City Council to take action on an item that temporarily reduces the fund balance below this minimum target level. In no instance shall the unassigned fund balance in the general fund fall below 6% of general fund revenues for greater than a continuous two (2) fiscal year period.

Amounts in excess of the targeted maximum of 12% of general fund measured on a GAAP basis shall be used for capital improvements or other one-time expenditures as identified by the City Council. By utilizing excess fund balances for capital improvements, the City will reduce the need to incur long-term debt and will avoid creating an operating funding gap for subsequent fiscal years.

This policy has been adopted by the City to recognize the financial importance of a stable and sufficient level of the unassigned fund balance. However, the City Council reserves the right to appropriate funds from the unassigned fund balance for emergencies and other requirements the City Council believes to be in the best interest of the City of South Portland.

## Tax Rate Stabilization Reserve

In periods of economic decline where valuation assessments are flat or decreasing, and/or periods of significant estimated revenue loss or periods of high increases in budgeted expenditures, the City Council may set aside funds in the tax rate stabilization reserve to be used to reduce the needs from taxation for the coming year(s). Funds set aside in the tax rate stabilization reserve should have a planned exit strategy to reduce the use of such reserves in subsequent budgets and should be fully funded to the extent necessary to properly provide a declining (tiered) use of this reserve for a period no

greater than 5 years. The objective of this tiered approach is to lessen the impact in subsequent years for the lower estimated revenues from the tax rate stabilization reserve. Upon determining the need to use fund balance to offset the needs from taxation the City Finance Director will provide a recommendation for the funding of the reserve and the City Council will commit the necessary balance to fully fund the reserve in the best interest of the taxpayers.

**Committed Balances**

The City Council has established various reserves sub funds which are to be treated as committed and are listed in Exhibit A with a brief description of the sub funds intended use.

**Assigned Balances**

Unless already classified as restricted or committed, the following balances shall be classified as assigned, as per GAAP or as a matter of policy. Additional amounts may be assigned by the City Council and Administration as deemed necessary.

Encumbrances – Amounts encumbered at year-end by contract, including purchase order, or encumbered by some other means shall be classified as assigned.

Budget Appropriation – Amounts appropriated in the annual budget resolve, or in any supplemental budget resolves, for expenditures in ensuing fiscal year shall be classified as assigned.

Additionally the City will have various sub funds which are will be treated as assigned and are listed in Exhibit B with a brief description of the sub funds intended use. City Council action must be taken to establish the types of assignments prior to the fiscal year end but, delegates the Finance Director to determine the proper amounts that are required.

**Policy Administration**

The Finance Director shall report fund balance in the appropriate classifications and make the appropriate disclosures in the City's financial statements.

Annually, during the Comprehensive Annual Financial Report (CAFR) presentation, the Finance Director shall report the City's fund balance and the classification of the various components in accordance with GAAP and this policy.

Should the City fall below the minimum target level, the Finance Director shall prepare a plan to restore the unassigned fund balance to the target level prior to the ensuing fiscal year's budget adoption.

Should the City exceed the maximum target level, the City Manager shall prepare a recommendation to utilize excess funds for capital improvements or other one-time expenditures.

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**CITY OF SOUTH PORTLAND**
**ANALYSIS ON BONDED INDEBTEDNESS**
**PROJECTED AS OF JUNE 30, 2020 ***

| YEAR ISSUED | MUNICIPAL PRINCIPAL | SCHOOL PRINCIPAL | TREATMENT/ SEWER PRINCIPAL | TIF PRINCIPAL | TOTAL PRINCIPAL |
|---|---|---|---|---|---|
| 2002/2003 | | 2,380,000 | | | 2,380,000 |
| 2009 | - | - | 257,471 | - | 257,471 |
| 2012 | | 6,000,000 | | | 6,000,000 |
| 2013 | | 186,046 | | | 186,046 |
| 2014 | | 6,180,000 | | | 6,180,000 |
| 2015 | 1,311,720 | | 971,040 | 437,240 | 2,720,000 |
| 2016 | 10,795,000 | - | | | 10,795,000 |
| 2017 | | 15,555,000 | | | 15,555,000 |
| Total | 12,106,720 | 30,301,046 | 1,228,511 | 437,240 | 44,073,517 |

* City Anticipates issueing $9,192,000 of bonds authorized but unissed in the Spring of 2020, which are not reflected in these totals.

**CITY OF SOUTH PORTLAND**
**SCHEDULE OF PRINCIPAL & INTEREST PAYMENTS**
**FISCAL YEAR 2021 TO FISCAL YEAR 2037**

| | MUNICIPAL | SCHOOL | SEWER | TIF | TOTAL |
|---|---|---|---|---|---|
| 2021 | 973,931 | 4,090,981 | 95,639 | 121,002 | 5,281,553 |
| 2022 | 942,181 | 3,986,055 | 95,416 | 120,600 | 5,144,252 |
| 2023 | 910,431 | 3,298,743 | 95,193 | 120,199 | 4,424,566 |
| 2024 | 878,681 | 3,166,880 | 94,970 | 119,797 | 4,260,328 |
| 2025 | 959,416 | 2,728,056 | 94,747 | - | 3,782,219 |
| 2026 | 943,700 | 2,649,656 | 94,524 | - | 3,687,879 |
| 2027 | 917,898 | 2,571,256 | 94,301 | - | 3,583,455 |
| 2028 | 895,271 | 2,485,756 | 94,078 | - | 3,475,105 |
| 2029 | 875,819 | 2,408,831 | 93,855 | - | 3,378,505 |
| 2030 | 859,543 | 2,385,453 | 78,725 | - | 3,323,721 |
| 2031 | 846,441 | 2,109,700 | 64,951 | - | 3,021,092 |
| 2032 | 832,942 | 2,050,400 | 64,728 | - | 2,948,070 |
| 2033 | 818,651 | 1,991,100 | 64,505 | - | 2,874,256 |
| 2034 | 803,961 | 454,300 | 64,282 | - | 1,322,543 |
| 2035 | 788,875 | | 64,059 | - | 852,934 |
| 2036 | 773,392 | | 63,836 | | 837,228 |
| 2037 | 642,938 | | | - | 642,938 |
| | 14,664,070 | 36,377,167 | 1,317,808 | 481,598 | 52,840,643 |

## SOUTH PORTLAND OUTSTANDING GENERAL FUND DEBT

| | MUNICIPAL PRINCIPAL | MUNICIPAL INTEREST | MUNICIPAL TOTAL P & I | SCHOOL PRINCIPAL | SCHOOL INTEREST | SCHOOL TOTAL P & I |
|---|---|---|---|---|---|---|
| 2021 | 635,000 | 338,931 | 973,931 | 3,141,512 | 949,469 | 4,090,981 |
| 2022 | 635,000 | 307,181 | 942,181 | 3,131,511 | 854,544 | 3,986,055 |
| 2023 | 635,000 | 275,431 | 910,431 | 2,526,512 | 772,231 | 3,298,743 |
| 2024 | 635,000 | 243,681 | 878,681 | 2,476,511 | 690,369 | 3,166,880 |
| 2025 | 744,310 | 215,106 | 959,416 | 2,125,000 | 603,056 | 2,728,056 |
| 2026 | 744,310 | 199,390 | 943,700 | 2,125,000 | 524,656 | 2,649,656 |
| 2027 | 744,310 | 173,588 | 917,898 | 2,125,000 | 446,256 | 2,571,256 |
| 2028 | 744,310 | 150,961 | 895,271 | 2,120,000 | 365,756 | 2,485,756 |
| 2029 | 744,310 | 131,509 | 875,819 | 2,115,000 | 293,831 | 2,408,831 |
| 2030 | 744,310 | 115,233 | 859,543 | 2,155,000 | 230,453 | 2,385,453 |
| 2031 | 744,310 | 102,131 | 846,441 | 1,940,000 | 169,700 | 2,109,700 |
| 2032 | 744,310 | 88,632 | 832,942 | 1,940,000 | 110,400 | 2,050,400 |
| 2033 | 744,310 | 74,341 | 818,651 | 1,940,000 | 51,100 | 1,991,100 |
| 2034 | 744,310 | 59,651 | 803,961 | 440,000 | 14,300 | 454,300 |
| 2035 | 744,310 | 44,565 | 788,875 | | | - |
| 2036 | 744,310 | 29,082 | 773,392 | | | - |
| 2037 | 635,000 | 7,938 | 642,938 | | | - |
| | 12,106,720 | 2,557,350 | 14,664,070 | 30,301,046 | 6,076,121 | 36,377,167 |

## SOUTH PORTLAND SEWER USER FUND

## SOUTH PORTLAND TIF FUNDS

| | TREATMENT/ SEWER PRINCIPAL | TREATMENT/ SEWER INT & FEES | TREATMENT/ SEWER TOTAL P & I | TIF PRINCIPAL | TIF INT & FEES | TIF TOTAL P & I |
|---|---|---|---|---|---|---|
| 2021 | 87,792 | 7,847 | 95,639 | 109,310 | 11,692 | 121,002 |
| 2022 | 87,792 | 7,624 | 95,416 | 109,310 | 11,290 | 120,600 |
| 2023 | 87,792 | 7,401 | 95,193 | 109,310 | 10,889 | 120,199 |
| 2024 | 87,792 | 7,178 | 94,970 | 109,310 | 10,487 | 119,797 |
| 2025 | 87,792 | 6,955 | 94,747 | | | |
| 2026 | 87,792 | 6,732 | 94,524 | | | |
| 2027 | 87,792 | 6,508 | 94,301 | | | |
| 2028 | 87,792 | 6,285 | 94,078 | | | |
| 2029 | 87,792 | 6,062 | 93,855 | | | |
| 2030 | 74,241 | 4,484 | 78,725 | | | |
| 2031 | 60,690 | 4,261 | 64,951 | | | |
| 2032 | 60,690 | 4,038 | 64,728 | | | |
| 2033 | 60,690 | 3,815 | 64,505 | | | |
| 3034 | 60,690 | 3,592 | 64,282 | | | |
| 2035 | 60,690 | 3,369 | 64,059 | | | |
| 3036 | 60,690 | 3,146 | 63,836 | | | |
| | 1,228,511 | 89,297 | 1,317,808 | 437,240 | 44,358 | 481,598 |

* It is anticipated that the TIF debt will be funded by the general fund budget starting in FY2025.

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| | 586 WESTBROOK STREET-PORTABLE BLDG | $26,503.85 | | 3/11/09 | | |
| | 1336 BROADWAY, LINCOLN SCHOOL | | | | 8/29/2002 | CITY |
| | 81 WESTBROOK ST, THORNTON HGTS | $1,300,000.00 | | | 11/10/2005 | CITY |
| | BRAEBURN RD., THORNTON HGTS | $800,000.00 | | | 11/10/2005 | CITY |
| | E ST., FIRE ENGINE STATION 8 | | | | 11/1/1997 | CITY |
| | 1 PORTLAND STREET | $34,500.00 | | | | |
| | | | | | | |
| | 21 NELSON RD., RECREATION | | | | 6/30/2004 | CITY |
| | RUMMERY & RIGBY RD. OFFICE | | | | 4/24/1998 | |
| | RIDGELAND AVE, PLAYSCAPE EQUIPMENT | $15,000.00 | | | | |
| | 160 OCEAN STREET | $0.00 | | | 2/13/2002 | CITY |
| | 46 ARBUTUS AVENUE | $0.00 | | | 9/9/2002 | CITY |
| | RUMMERY & RIGBY RD. OFFICE | | | | 4/24/1998 | |
| | 46 DAWSON | $0.00 | | | 9/9/2002 | CITY |
| | 17 WATERMAN DRIVE, SEASONAL FLOATS | $60,000.00 | | | | |
| | 1396 BROADWAY, FIRE STATION 5 | $70,000.00 | $10,000.00 | | 9/2/2005 | CITY |
| 54 | TAX ACQUIRED PROPERTY | $88,500.00 | | 03/04/14 | 6/14/2014 | CITY |
| 54 | TAX ACQUIRED PROPERTY | $95,100.00 | | 01/16/14 | 10/15/2014 | CITY |
| 54 | TAX ACQUIRED PROPERTY | $179,800.00 | | 6/9/11 | 12/6/2012 | CITY |
| 56 | 496 OCEAN ST., SIMON HAMLIN ELEMENTARY | $5,287,667.00 | $120,000.00 | | | SCHOOL |
| 59 | TAX ACQUIRED PROPERTY | $70,500.00 | | | 10/13/2011 | CITY |
| 59 | 24 MOSHER STREET, HUTCHINS SCHOOL | $675,000.00 | $60,000.00 | | | CITY |
| 59 | 25 COTTAGE RD, MUNICIPAL BLDG | $1,160,000.00 | $235,000.00 | | | CITY |
| 59 | 317 PINE ST., ROOSEVELT SCHOOL | $2,531,590.00 | | | 7/23/2014 | CITY |
| 59 | TAX ACQUIRED PROPERTY | $79,000.00 | | | 7/1/2016 | CITY |
| 59 | 680 BROADWAY, NATIONAL GUARD ARMORY | $214,100.00 | $0.00 | 4/14/2006 | 5/19/2016 | CITY |
| 59 | 29 MACARTHUR CIR., REDBANK ELEMENTARY | $3,100,000.00 | $0.00 | | | CITY |
| 59 | CITY HALL ENTRANCE SIGN | $7,800.00 | | 7/19/12 | | |
| 59 | TAX ACQUIRED CONDO, 150 SAWYER STREET | $57,300.00 | | 01/03/2017 | 12/15/2018 | |
| 59 | TAX ACQUIRED PROPERTY | $37,500.00 | | | 7/1/2017 | CITY |
| 63 | REAR ANTHOINE ST, POLICE | $75,000.00 | $40,000.00 | | | CITY |
| 63 | 30 ANTHOINE ST, POLICE STATION | $800,000.00 | $145,000.00 | | | CITY |
| 63 | 30 ANTHOINE STREET, POLICE TOWER | $45,000.00 | | | | CITY |
| 63 | 30 ANTHOINE ST. DISPATCH FACILITY | $1,600,000.00 | $125,000.00 | | | CITY |
| 64 | 34 CROSSING DR FIRE STATION (WEST END) | $1,916,065.00 | $40,000.00 | 12/05/2003 | | FIRE |
| 64 | 20 PILLSBURY STREET. BUILDING | $179,300.00 | | 9/26/12 | | CITY |

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| 64 | 360 MAIN STREET | $58,672.00 | | | | |
| 64 | 360 MAIN STREET,TOWER FIRE | $18,000.00 | | | | CITY |
| 64 | TELECOMMUNICATIONS TOWER:34 JAMES A BAKA DRIVE | $27,950.00 | | 12/13/12 | | |
| 64 | WEST END TELECOMMUNICATIONS TOWER | $72,788.48 | | 12/13/12 | | FIRE |
| 64 | 684 REAR BROADWAY, FIRE HOSE TOWER | $75,000.00 | | | | CITY |
| 64 | WILLARD STATION, 20 PILLSBURY ST - FA#98030101852 | $475,000.00 | | 01/01/1920 | | FIRE |
| 64 | COMMUNICATIONS TOWER,34 JAMES A BAKA DRIVE WESTERN AVE WEST END FIRE | $39,800.00 | | 12/13/12 | | FIRE |
| 64 | 360 MAIN ST., FIRE STATION | $792,965.00 | $90,000.00 | | | CITY |
| 64 | 684 BROADWAY CENTRAL FIRE STATION | $1,350,000.00 | $220,000.00 | | | CITY |
| 64 | 15 UNION ST., FIRE STATION #6 | $105,000.00 | $20,000.00 | | | CITY |
| 66 | 62 E STREET, CODE/ENGINEERING/PLANNING | $0.00 | $175,000.00 | | 8/1/2011 | CITY |
| 66 | 41 THOMAS ST., ASSESSING BUILDING | $130,651.00 | $38,000.00 | | | CITY |
| 66 | 513 BROADWAY, ELECT BLDG | $65,000.00 | $43,900.00 | | | CITY |
| 71 | 42 O'NEILL STREET, STORAGE | $110,000.00 | $60,000.00 | | | CITY |
| 72 | 929 HIGHLAND AVE, LAND PREPARATION | $567,700.00 | | 08/18/2017 | | CITY |
| 72 | 929 HIGHLAND AVE, TRNSFR ST SECURITY SYSTEM | $22,697.58 | | 08/30/2017 | | CITY |
| 72 | TRANSFER STATION LAND | $1,070,552.75 | | 12302015 | | CITY |
| 72 | 929 HIGHLAND AVE, SALT SHED | $728,000.00 | | | | |
| 72 | 929 HIGHLAND AVE, TRANSFER STATION | $53,000.00 | | 12/30/15 | | CITY |
| 72 | 42 O'NEILL STREET, OFFICE & GARAGE | $925,000.00 | $640,000.00 | | | CITY |
| 72 | TRANSFER STATION SWAP SHOP, 929 HIGHLAND AVENUE | $129,625.74 | $1,500.00 | 12/30/2015 | | |
| 72 | 42 O'NEILL STREET, PW TOWER | $30,000.00 | | | | CITY |
| 72 | 929 HIGHLAND AVENUE, CRANE | $124,785.49 | | | | |
| 72 | 929 HIGHLAND AVE, FUEL ISLAND | $50,000.00 | | | | |
| 72 | 929 HIGHLAND AVENUE, TRANSFER STATION SWAP SHOP | $100,000.00 | | 12/30/15 | 1/28/2016 | |
| 72 | 933 HIGHLAND AVENUE, LAND | $76,800.00 | | 01/04/2013 | | |
| 72 | 42 O'NEIL STREET, GARAGE | $48,000.00 | $2,500.00 | | | CITY |
| 72 | 42 O'NEIL STREET, EMPLOYEE BLDG 11 | $90,000.00 | $95,000.00 | | | CITY |
| 72 | 929 HIGHLAND AVE, COLD STORAGE BLDG | $292,500.00 | | | | |
| 72 | 42 O'NEIL STREET, OLD SALT SHED/STORAGE | $53,500.00 | | | | CITY |
| 72 | 929 HIGHLAND AVE, GREENHOUSE | $120,000.00 | | | | |
| 72 | 42 O'NEIL STREET, SALT SHED | $98,000.00 | $1,800.00 | | | CITY |

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| 72 | 929 HIGHLAND AVE, MUNICIPAL SERVICE BLDG | $11,481,179.26 | | | | |
| 72 | 42 O'NEIL STREET, PLOW GARAGE | $30,000.00 | $5,000.00 | | | CITY |
| 72 | 42 O'NEIL STREET, 5 BAY GARAGE | $100,000.00 | $85,000.00 | | | CITY |
| 72 | 42 O'NEIL STREET, 4 BAY GARAGE | $115,466.00 | $255,000.00 | | | CITY |
| 75 | 165 SOUTH KELSEY ST., JAMES OTIS KALER ELEMENTARY | $4,409,850.00 | $300,000.00 | | | SCHOOL |
| 75 | 25 NELSON RD., TRANSPORTATION OFFICE | $150,066.00 | $17,000.00 | | | SCHOOL |
| 75 | 1142 HIGHLAND AVE BUS MAINTENANCE BUILDING | $2,100,000.00 | $45,000.00 | | | CITY |
| 75 | 637 HIGHLAND AVE., ATHLETIC STORAGE | $25,000.00 | $12,500.00 | | | SCHOOL |
| 75 | 87 THOMPSON ST., DORA SMALL ELEMENTARY | $4,357,933.50 | $450,373.00 | | | SCHOOL |
| 75 | 485 BROADWAY, GARAGE STORAGE | $25,000.00 | $2,000.00 | | 2/17/2015 | SCHOOL |
| 75 | 120 WESCOTT RD., MEMORIAL JR HIGH | $10,200,000.00 | $450,000.00 | | | SCHOOL |
| 75 | 25 NELSON RD., GROUND EQUIP. STORAGE | $30,000.00 | $24,000.00 | | 2/17/2015 | SCHOOL |
| 75 | 637 HIGHLAND AVE., HIGH SCHOOL | $19,500,000.00 | $1,100,000.00 | | | SCHOOL |
| 75 | 16X20 SHED W STEEL DOOR, SPHS | $6,990.00 | | 06/07/10 | | SCHOOL |
| 75 | 240 OCEAN ST., MAHONEY JR HIGH | $8,897,454.00 | $400,000.00 | | | SCHOOL |
| 75 | SKILLIN SCHOOL-SKYLIGHT ABOVE LIBRARY | $14,925.00 | | | | SCHOOL |
| 75 | 52 ALFRED ST., HELENA DYER ELEMENTARY | $3,540,000.00 | $190,000.00 | | | SCHOOL |
| 75 | PLAYSHAPER WITH SANDBOX AT KALER PRESCHOOL | $10,710.00 | | 5/14/13 | | |
| 75 | 37 HIGHLAND AVE., FRANK BROWN ELEMENTARY | $3,200,000.00 | $150,000.00 | | | SCHOOL |
| 75 | SOUTH PORTLAND HIGH SCHOOL, 637 HIGHLAND AVENUE | | $15,176.00 | 01/30/2018 | | |
| 75 | 87 THOMPSON ST, SMALL ELEM PORTABLE CLASSROOM | $65,000.00 | | 08/19/11 | | SCHOOL |
| 75 | 180 WESTCOTT RD., SKILLIN SCHOOL | $5,008,088.00 | $224,000.00 | | | SCHOOL |
| 75 | HIGH SCHOOL GYMNASIUM-BLEACHERS | $128,502.00 | | | | SCHOOL |
| 75 | 637 HIGHLAND AVE., HS HEATING PL | $380,000.00 | $275,000.00 | | | SCHOOL |
| 76 | 482 BROADWAY, PUBLIC LIBRARY | $2,059,512.00 | $2,450,000.00 | | | CITY |
| 77 | 125 GARY L MAIETTA PKWY-WAINWRIGHT BLDG | $350,763.00 | $5,000.00 | 01/01/02 | | CITY |
| 77 | DEAKE STREET - FISHING SHACK | $900.00 | | | | CITY |
| 77 | 155 WESTCOTT ROAD, LIBRARY & PRO SHOP | $350,000.00 | $360,000.00 | | | CITY |
| 77 | 2 BUG LIGHT PARK, LIGHTHOUSE | $75,000.00 | | | | CITY |
| 77 | 26 WESTBROOK ST, PLAYSCAPE | $55,886.00 | | 08/22/2017 | | PARKS |
| 77 | MILL CREEK PARK GAZEBO | $65,000.00 | | 08/11/10 | | CITY |

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| 77 | ALUMINUM ARCH STYLE WALKWAY BRIDGE W/CEDAR DECKING | $8,124.90 | | 07/01/2012 | | CITY |
| 77 | PORTABLE SKATE SHELTER BUILDING | $50,000.00 | | 10/30/12 | | CITY |
| 77 | MILL CREEK PARK:IRON GATE ENTRANCE WITH STONE PILLARS | $59,379.00 | | 10/26/12 | | |
| 77 | MILL CREEK PARK:FOUNTAIN | $7,684.68 | | 7/11/12 | | PARKS |
| 77 | WILKINSON PARK SWING SET | $9,208.00 | | 5/14/13 | | PARKS |
| 77 | REDBANK BLDG 586 WESTBROOK STREET, | $32,670.00 | | | | |
| 77 | DUGOUTS (2) AT WAINWRIGHT | $20,531.75 | | 5/28/14 | | CITY |
| 77 | 2 BUG LIGHT PARK | $300,000.00 | | | | |
| 77 | 33 PITT ST., GREEN HOUSE | $50,000.00 | $12,500.00 | | | CITY |
| 77 | DEAKE STREET - FISHING SHACK | $700.00 | | | | CITY |
| 77 | 21 NELSON ROAD, COMM REC FACILITY | $5,200,000.00 | $440,000.00 | | | CITY |
| 77 | CHAIN LINK FENCE & GATES | $122,937.00 | | | | |
| 77 | NE CORNER E ST / WATERMAN, PLAYSCAPE | $35,705.00 | | | | CITY |
| 77 | WILKINSON PARK, PORTABLE SHELTER PARKS | $52,812.00 | | | | |
| 77 | 29 MACARTHUR CIR. REDBANK REC CTR | $1,400,000.00 | $30,000.00 | | | CITY |
| 77 | OIL FURNACE COX MODEL SO400, PARKS | $12,450.00 | | 08/27/2007 | | PARKS |
| 77 | PLAYSCAPE, WILLARD SCHOOL PARK | $39,539.00 | | 11/01/08 | | |
| 77 | CONCESSION STAND/STORAGE BLDG-WILKINSON PARK | $75,000.00 | | 12/16/08 | | |
| 77 | 61 COTTAGE RD BANDSTAND | $45,000.00 | | | 8/11/2010 | CITY |
| 77 | 1 BUG LIGHT PARK, FLOATS ON RAMP | $45,000.00 | | | | CITY |
| 77 | 21 NELSON RD., SWIMMING BLDG | $2,200,000.00 | $185,000.00 | | | CITY |
| 77 | 1 SPRING POINT MARINA | $917,617.00 | | | | CITY |
| 77 | 1 FISHERMAN LANE, WILLARD BATH HSE | $110,000.00 | $8,000.00 | | | CITY |
| 77 | PLAYSCAPE, WILLARD BEACH | $24,322.00 | | 09/25/02 | | |
| 77 | 61 COTTAGE ROAD, FOOTBRIDGE | $20,000.00 | | | 8/11/2010 | CITY |
| 77 | 225 WESTBROOK ST., GOLF COURSE | $55,000.00 | $60,000.00 | | | CITY |
| 77 | PUMP HOUSE, 50 HINKLEY MILLCREEK PARK | $4,080.00 | | | 8/15/2012 | CITY |
| 77 | 33 PITT ST., PARKS & REC | $375,000.00 | $120,000.00 | | | CITY |
| 77 | 172 NEW YORK AVE COMMUNITY CENTER | $120,000.00 | $15,000.00 | | 4/5/2013 | CITY |

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| 80 | MAIN ST/WILSON:MAIN ST/FROSWICK:EVANS/NELSON RD:GALLERY BLVD SCARBOROUGH- BOB'S DISCOUNT FURNITURE | $24,447.80 | | 08/16/2017 | | CITY |
| 80 | 929 HIGHLAND AVENUE, VEHICLE BAY WASH | $289,612.61 | | | | |
| 80 | BRICK HILL ROAD, BUS SHELTER | $5,200.00 | | 09/22/16 | | |
| 80 | 3 DEAK STREET, FISHING SHACKS (2) | $15,000.00 | | | | CITY |
| 80 | TRANSIT HUB BLDG, 49 THOMAS ST | $350,000.00 | | 02/19/14 | | CITY |
| 80 | 20'X30' BUS STOP SHELTER | $9,970.00 | | 12/22/10 | | CITY |
| 80 | 42 O'NEIL ST., BUS OFFICE #12 | $45,500.00 | $24,000.00 | | | CITY |
| 80 | 42 O'NEIL ST, BUS GARAGE/TRANS B | $375,000.00 | $40,000.00 | | | CITY |
| 80 | GALLERY BLVD. WALMART BUS SHELTER | $5,200.00 | | 3/08/09 | | |
| 80 | BUS STOP SHELTERS (6) | $31,200.00 | | | | CITY |
| 81 | MADISON ST PIER & FLOATS | $3,000.00 | | | | |
| 81 | THOMAS KNIGHT PARK PIER | $60,000.00 | | | | |
| 81 | 1 PORTLAND ST., PIER | $290,000.00 | | | | CITY |
| 81 | 1 PORTLAND ST., FLOATS AT PIER | $56,000.00 | | | | CITY |
| 81 | 513 BROADWAY, -CONTROL BLDG | $83,880.00 | | | | CITY |
| 81 | 1 OCEAN AVENUE-Wharf-TKP | $500,000.00 | | | | CITY |
| 86 | PUMP STATION, 46 APPLE TREE DRIVE | $65,000.00 | | | | CITY |
| 86 | PUMP STATION, 44 WINDING WAY | $80,000.00 | | | | TP |
| 86 | PUMP STATION, 100 JOHN ROBERTS RD | $80,000.00 | | | | TP |
| 86 | PUMP STATION, 0 HIGHLAND AVE SMITH & LOVELESS | $145,000.00 | $30,000.00 | 12/17/2007 | | TP |
| 86 | PUMP STATION, 1 MAIN STREET | $250,000.00 | | | | TP |
| 86 | PUMP STATION, 7 CUSHING CT | $80,000.00 | | | | TP |
| 86 | PUMP STATION, 301 HIGH ST | $340,000.00 | | | | TP |
| 86 | PUMP STATION, 310 GANNET DRIVE | $175,000.00 | | | | TP |
| 86 | PUMP STATION, 155 WESCOTT RD | $45,000.00 | | | | CITY |
| 86 | PUMP STATION, 110 CRESTVIEW DR | $24,000.00 | | | | TP |
| 86 | PUMP STATION, 22 F STREET | $35,000.00 | | | 7/22/2006 | CITY |
| 86 | WTR RSRC PROT COMPLEX, 1142C HIGHLAND AVE | $167,640.00 | $10,000.00 | 09/26/2007 | | SM |
| 86 | 1144 HIGHLAND AVE SEWER MAINT GARAGE | $145,000.00 | $25,000.00 | | | TP |
| 86 | PUMP STATION, 4 LOVIETT'S FIELD RD | $50,000.00 | | | | |
| 86 | PUMP STATION, 117 SNOWBERRY DR | $100,000.00 | | | | |
| 86 | PUMP STATION, 29 CHECKERBERRY CIR | $100,000.00 | | | | |
| 86 | PUMP STATION, 1 FORT ROAD SMCC | $210,000.00 | | | | |

# BUILDINGS

| Dept | Location | Bldg Value | Contents Value | Date Acquired | Sold | Group |
|---|---|---|---|---|---|---|
| 86 | PUMP STATION, 149 FRONT STREET | $20,000.00 | | | | TP |
| 86 | | | | | | |
| 86 | PUMP STATION, 445 WESTERN AVENUE | $50,000.00 | | | | TP |
| 86 | PUMP STATION, 11 FISHERMAN LANE | $1,650,000.00 | | | | TP |
| 86 | PUMP STATION, 6 E ST | $75,000.00 | | | | TP |
| 86 | PUMP STATION, 0 BENJAMIN W PICKETT ST | $210,000.00 | | | | TP |
| 86 | PUMP STATION, 121 STILLMAN ST | $75,000.00 | | | | TP |
| 86 | 111 WATERMAN DR., TREATMENT PLNT | $38,500,000.00 | $8,660,785.00 | | | TP |
| 86 | PUMP STATION, 23 ELM ST | $35,000.00 | | | | TP |
| 86 | PUMP STATION, 257 WESTERN AVE | $75,000.00 | | | | TP |
| 86 | PUMP STATION, 1 PEARL ST | $1,675,000.00 | | | | TP |
| 86 | PUMP STATION, 3 BAY RD | $122,000.00 | | | | TP |
| 86 | PUMP STATION, 350 SOUTHBOROUGH | $170,000.00 | | | | TP |
| 86 | PUMP STATION, 1 FORT ROAD | $290,000.00 | | | | TP |
| 86 | PUMP STATION, 16 MECHANIC ST | $290,000.00 | | | | TP |
| 86 | PUMP STATION, 35 BUG LIGHT PARK | $110,000.00 | | | | TP |
| 86 | PUMP STATION, 463 WESTBROOK ST | $420,783.00 | | | | TP |
| 86 | PUMP STATION, 152 FRONT ST | $1,300,000.00 | | | | TP |
| 86 | PUMP STATION, 2 B STREET | $90,000.00 | | | | TP |
| 86 | PUMP STATION II, 463 WESTBROOK ST | $518,882.00 | | | | TP |
| 86 | PUMP STATION, 1 PEARL ST #6 | $45,000.00 | | | | TP |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 1515 | 1988 | COASTER | OFFICE TRAILER | 9/19/2011 | 12000 | |
| 73 | 1990 | SCARAB | TURNING MACHINE | | 118000 | 7/25/1997 |
| 73 | 1983 | YANMAR | DIESEL TRACTOR | | 11000 | 8/7/2001 |
| 73 | 1990 | GEHL | SKID LOADER | | 12000 | 5/20/2008 |
| 8684 | 1979 | ONAN | GENERATOR/MO TRAILER | | 9000 | 6/6/2000 |
| 73 | 1986 | CASE | 580SE LOADER/BACKHOE | | 19900 | 7/1/2008 |
| 8684 | 1996 | R01 | AIR COMPRESSOR | 1/1/1996 | 10780 | 1/31/2012 |
| 72 | 1975 | BOMBARDIER | SIDEWALK PLOW-NOT IN USE | | 6000 | 5/20/1998 |
| 72 | 1989 | HOLDER | SIDEWALK PLOW | 1/1/1989 | 45000 | 10/1/2015 |
| 72 | 1993 | BOMBADIER | SIDEWALK TRACTOR | | 40213 | 9/14/2001 |
| 72 | 1978 | KOMATSU | BULLDOZER MODEL D65E-6 | | 100000 | 5/14/2004 |
| 72 | 1986 | FMC | WAYNE SWEEPER | | 88000 | 8/7/2001 |
| 72 | 1969 | MICHIGAN | LOADER | | 13000 | 8/7/2001 |
| 72 | 1970 | ROOT | SNOWBLOWER | | | 8/7/2001 |
| 72 | 1982 | BOMAG | PAVING RECYCLER | | 9000 | 8/7/2001 |
| 72 | 1983 | FORD | LOADER | | 126000 | 9/14/2001 |
| 72 | 1981 | BOMBADIER | SIDEWALK PLOW-NOT IN USE | | | 5/20/1998 |
| 72 | 1977 | STOW | ROLLPAC ROLLER MODEL# 190452 | | 20000 | 11/1/2002 |
| 72 | 1984 | ATLAS | COMPRESSOR | | 10000 | 11/1/2002 |
| 72 | 1984 | OWENS | TILT-TRAILER | | 16000 | |
| 64 | 2003 | | CARDIAC MONITOR | 7/17/2003 | 17875 | 8/25/2011 |
| 72 | 2001 | NICHOLS | TRAILER #00011 | | 2750 | |
| 63 | 2001 | | NIGHT VISION GOGGLES | | 22000 | 7/31/2004 |
| 64 | 2001 | HAULMARK | P716BTE 16FT HAZMAT TRAILER | 1/1/2001 | 5000 | |
| 72 | 1987 | GEHL | SKID STEER LOADER MODEL 4615 | | 16000 | 5/14/2004 |
| 72 | 1981 | BOMBADIER | SIDEWALK PLOW-NOT IN USE | | | 5/20/1998 |
| 77 | 1996 | TORO | HYDRAULIC MOWER 455E | | 35000 | 4/26/2004 |
| 77 | 1994 | JOHN DEERE | OUTFRONT ROTARY MOWER | | 14000 | 6/30/2003 |
| 77 | 1992 | HOMEMADE | UTILITY TRAILER | | 4000 | 1/24/2018 |
| 77 | 1969 | HOMEMADE | WATERTANK TRAILER | | 1500 | 6/30/2003 |
| 77 | 1995 | JOHN DEERE | OUTFRONT ROTARY MOWER | | 14000 | 6/30/2003 |
| 77 | 1993 | JACOBSEN | TURF TRUCKSTER | | 6000 | 7/1/2017 |
| 77 | 1990 | JOHN DEERE | OUTFRONT ROTARY MOWER | | 14000 | 6/30/2003 |
| 77 | 1987 | KUBOTA | TRACTOR/FRONT END LDR | | 18000 | |
| 77 | 1989 | OLATHE | TOPDRESSER | | 4500 | 4/9/2019 |
| 77 | 1994 | CUSHMAN | TURF TRUCKSTER | 1/1/1994 | 22000 | 7/25/2011 |
| 77 | 1988 | FORD | 2120 TRACTOR W/FRONT END LOADE | | 20000 | |
| 77 | 1987 | JOHN DEERE | MOWER | | 14000 | 10/24/1997 |
| 77 | 1975 | TORO | DIESEL TRACTOR W/GANG MOWER MODEL22691RR | | 60000 | 7/11/2008 |
| 72 | 1978 | GMC | HOULS TRAILER MODEL# HI9630 | | 90000 | 8/27/2001 |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 77 | 1997 | JOHN DEERE | OUTFRONT MOWER F935 | 10/24/1997 | 16000 | 11/4/2003 |
| 86 | 1998 | STOW | HOT TOP ROLLER R2000H:SOLD PER DAVID THOMES ON 12/26/17 SURPLUS BID | 10/1/1998 | 6678 | 8/1/2016 |
| 86 | 1998 | STOW | UTILITY TRAILER FOR ROLLER | 10/1/1998 | | |
| 77 | 2002 | CHEVY | CC3140 BUCKET LOADER | 9/3/2002 | 56992 | 2/12/2020 |
| 77 | 2004 | HOLDER | C 978 SIDEWALK TRACTOR | 2/24/2004 | 50538 | 11/24/2014 |
| 86 | 1998 | INTL | BLACK TRAILER GVW=1500 lbs.:PER DAVID THOMES 12/26/17, SCRAPPED 10 YRS AGO | | 700 | 7/1/2007 |
| 8684 | 1998 | TAKEUCHI | TB070 EXCAVATOR W/ATTACHMENTS | 12/31/1998 | 79500 | 4/16/2010 |
| 8684 | 2000 | INGERSOLL RAND | PORTABLE GENSET | 6/6/2000 | 17973 | |
| 72 | 2000 | HOLDER | MTC9700 SIDEWALK TRACTOR | 10/27/2000 | 66858 | 10/12/2007 |
| 72 | 2000 | HOLDER | MTC9700 SIDEWALK TRACTOR | 10/27/2000 | 66858 | 11/24/2014 |
| 72 | 1999 | LERO | AIR COMPRESSOR | 1/28/1999 | 9985 | |
| 72 | 1999 | STOW | T2000H ROLLER 1 TON | 3/1/1999 | 6350 | 4/5/2019 |
| 72 | 2001 | BOBCAT | 773T B/C LOADER | 1/10/2001 | 19993 | |
| 72 | 1999 | STOW | T3000 TRAILER | 2/11/1999 | 2480 | |
| 72 | 1988 | | PAVER | | | 7/1/2017 |
| 77 | 2004 | TORO | GROUNDSMASTER 4100D # 30411 | 4/26/2004 | 38600 | 7/29/2011 |
| 77 | 2000 | TORO | THREE WHEELED TRIPLES REEL MOWER | 6/28/2000 | 16615 | |
| 77 | 2000 | TORO | 4356 GREENSMASTER | 10/18/2000 | 15711 | |
| 77 | 2003 | JOHN DEERE | 1445 FRONT MOUNT MOWER | 11/4/2003 | 15182 | 1/24/2018 |
| 77 | 2004 | TORO | GROUNDSMASTER 4700D # 30868 | 4/20/2004 | 51125 | |
| 77 | 2004 | TORO | WORKMAN 3300D # 07362 | 4/30/2004 | 14900 | |
| 77 | 2002 | AERAVATOR | AE-60T SOLID TINE MOUNT | 8/10/2004 | 4300 | |
| 72 | 1997 | TENCO | SNOWBLOWER FOR 624G LOADER | 2/28/1997 | 48500 | 2/7/2011 |
| 72 | 1997 | TENCO | SNOWBLOWER FOR 624G LOADER | 2/24/1977 | 48500 | |
| 72 | 1997 | | POWER CURBER | 6/23/1997 | 8000 | |
| 72 | 1996 | HENDERSON | FSH10SS SANDER | 12/3/1998 | 6900 | 4/5/2019 |
| 72 | 1996 | HENDERSON | SANDER 8' | 12/23/1996 | 3565 | 7/1/2008 |
| 72 | 2001 | | 60" GRAPPLE BUCKET | 1/10/2001 | 1858 | |
| 64 | 2006 | HOLMATRO | TWIN-LINE HYDRAULIC CUTTER | 10/31/2006 | 4700 | |
| 72 | 2006 | | 5000gal HIGH DENSITY POLY TANK | 10/20/2006 | 4000 | |
| 72 | 2006 | | 5000gal VERTICAL STORAGE TANK | 11/3/2006 | 4000 | 7/1/2017 |
| 63 | 2006 | ATN | NIGHT VISION MONOCULAR | 12/19/2006 | 1595 | |
| 63 | 2006 | ATN | NIGHT VISION MONOCULAR | 12/19/2006 | 1595 | |
| 63 | 2006 | ATN | NIGHT VISION MONOCULAR | 12/19/2006 | 1595 | |
| 63 | 2006 | ATN | NIGHT VISION MONOCULAR | 12/19/2006 | 1595 | |
| 63 | 2006 | TACTICAL ELECTRONICS | PCSS1-POLE CAMERA & SEARCH SYSTEM | 12/19/2006 | 14400 | |
| 64 | 2006 | SCOTT EAGLE IMAGER | THERMAL IMAGING CAMERA | 12/1/2006 | 9999 | |
| 64 | 2006 | AREAREA MONITOR | GAS DETECTOR | 11/7/2006 | 6795 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 64 | 2006 | SCOTT AP-50-4.5 LESS | SCBA: AIR CYLINDER, FACE PIECE, AND PAK ALERT | 8/8/2006 | 2210 | |
| 64 | 2006 | SCOTT AP-50-4.5 LESS | SCBA: AIR CYLINDER, FACE PIECE, AND PAK ALERT | 8/8/2006 | 2210 | |
| 66 | | | STREET LIGHTS & SIGNS | | 500000 | |
| 8684 | 2000 | INGERSOLL-RAND | PORTABLE GENERATOR - PCF | 1/1/2000 | 18206 | |
| 63 | | | REPEATERS (3) | | 45000 | 7/1/2005 |
| 75 | 2002 | BIG TEX | 12FT SINGLE AXLE | 3/29/2002 | 1099 | |
| 77 | 2001 | JOHN DEERE | 1435 | 4/18/2002 | 9449 | 9/4/2008 |
| 63 | 2001 | Z-TRON | POLICE ROBOT | 11/7/2001 | 29250 | |
| 63 | 2002 | HAMILTON | SPORT TRAILER` | 5/1/2002 | 2550 | |
| 77 | 2002 | JOHN DEERE | 1435 FRONT MOUNT RIDING MOWER | 12/11/2002 | 13156 | 10/7/2005 |
| 72 | 1999 | | EMERGENCY GENERATOR | 1/1/1999 | 41663 | 4/30/2018 |
| 77 | 2002 | ROTADARION | SOIL RENOVATIONG MACHINE | 1/1/2002 | 18050 | 1/11/2018 |
| 77 | 2000 | JOHN DEERE | 5410 TRACTOR | 6/30/2000 | 29753 | 6/20/2007 |
| 64 | 2003 | ALM CORP | (2)WHEEL ENGAGING 18 VEHICLE LIFT SYSTEM | 7/2/2003 | 19695 | |
| 73 | 2003 | INTERSTATE | 20DT CONSTRUCTION TRAILER | 9/30/2003 | 6550 | 11/12/2008 |
| 77 | 2000 | LANDPRIDE | TRI-DECK ROTARY MOWER | 5/30/2000 | 12757 | |
| 72 | 1997 | SWENSON | SANDER | 11/17/1997 | 6975 | 4/15/2019 |
| 72 | 1999 | TRACKLESS | SNOWBLOWER | 1/1/1999 | 2504 | |
| 72 | 2001 | | 72" SNOWBLADE | 1/10/2001 | 1384 | 4/5/2019 |
| 72 | 1997 | HENDERSON | FSH13-409 SANDER | 12/22/1997 | 6900 | 8/23/2017 |
| 72 | 2000 | SWENSON | SANDER | 10/2/2000 | 7381 | |
| 77 | 1998 | JOHN DEERE | F935 MOWER | 10/14/1998 | 10544 | 10/21/2009 |
| 77 | 2002 | JOHN DEERE | TC1435D MOWER | 8/20/2002 | 13156 | 5/30/2012 |
| 77 | 1992 | MOREBARK | CHIPPER - TRAILER | 7/1/1992 | 18000 | |
| 77 | 1987 | | MODERN SKATE TRAILER | 3/1/2005 | 2500 | |
| 77 | 1997 | HARVEY | WATER TRAILER | 3/1/2005 | 3000 | |
| 77 | 2000 | FRYEBURG | EQUIPMENT/HD TRAILER | 3/1/2005 | 4000 | |
| 77 | 1986 | MULLER | MIXER TRAILER | 3/1/2005 | 1500 | |
| 64 | 2004 | | SIMPLE AIR COMPRESSOR W/BASE/CYLINDERS/PANEL | 7/21/2004 | 26765 | |
| 51 | | LUMENS | HD PTZ CAMERAS (5) - SECURITY CAMERA SYSTEM UPGRADE@COUNCIL CHAMBERS | 11/30/2018 | 13149.39 | |
| 72 | 2005 | WACKER | RD11A | 8/16/2005 | 11279 | |
| 77 | 2005 | JOHN DEERE | 1445 FRONT MOUNT RIDING MOWER | 10/7/2005 | 15663 | 1/24/2018 |
| 80 | 2005 | MULTIEQUIP | MC64S-HS CONCRETE MIXER | 1/18/2005 | 1849 | |
| 64 | 2006 | PEQUEA | TRAILOR | 12/20/2005 | 1300 | |
| 8681 | 2005 | GENERATOR | WINDING WAY PS | 8/27/2004 | 32081.22 | |
| 64 | 1991 | ACHILLES | 14' INFLATABLE WITH 25hp MOTOR | 1/1/1991 | 5000 | |
| 8681 | 2006 | ONAN | GEN-SET -- NT-270-GS/GC | 3/31/2006 | 39536.58 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 77 | 2006 | TORO | 22167-PUSH MOWER | 9/11/2006 | 1169 | 7/1/2017 |
| 72 | 2006 | | 18' TILT TRAILER | 10/3/2006 | 5500 | |
| 64 | 2006 | LIFE PAK | LP12 CARDIAC MONITOR/DEFIB | 9/7/2006 | 18745 | 12/25/2012 |
| 64 | 2006 | LIFE PAK | LP12 CARDIAC MONITOR/DEFIB | 9/7/2006 | 18745 | |
| 77 | 2007 | GEN 05 DELUXE SCANNER | BK 7004108-NAPA AUTO PARTS | 10/2/2006 | 2476.77 | 7/1/2017 |
| 64 | 2006 | SCOTT AP-50-4.5 LESS | SCBA: AIR CYLINDER, FACE PIECE, AND PAK ALERT | 8/8/2006 | 2210 | |
| 64 | 2007 | MINE SAFETY APPLIANCE | EVOLUTION 5200HD2 THERMAL IMAGING CAMERA | 12/11/2006 | 8500 | |
| 64 | 2007 | nukeALERT II | 1703GN GAMMA NEUTRON PAGER | 4/10/2007 | 2495 | |
| 64 | 2007 | nukeALERT II | 1703GN GAMMA NEUTRON PAGER | 4/10/2007 | 2495 | |
| 64 | 2007 | nukeALERT II | 1703GN GAMMA NEUTRON PAGER | 4/10/2007 | 2495 | |
| 64 | 2007 | nukeALERT II | 1703GN GAMMA NEUTRON PAGER | 4/10/2007 | 2495 | |
| 75 | 2003 | ALM CORP | LIFT | 12/27/2002 | 19125 | |
| 75 | 1990 | WILLIAM THON | PAINTING | | 5000 | |
| 7765 | 2007 | JOHN DEERE | 5525 UTILITY TRACTOR 4WD | 6/20/2007 | 41965 | |
| 75 | 1992 | PROLINE | LAWNMOWER | 1/1/1992 | 11000 | |
| 7765 | 2007 | JOHN DEERE | 4120 UTILITY TRACTOR WITH LOADER | 6/28/2007 | 22058 | 8/8/2016 |
| 7765 | | JOHN DEERE | BACKHOE 18" BUCKET FOR 4120 UTILITY TRACTOR | 6/28/2007 | 6663 | 11/1/2011 |
| | | | | | | |
| 77 | | JOHN DEERE | MECHANICAL SELF LEVELING LOADER WITH 85"BUCKET PO#20073491 | 8/31/2007 | 6142 | 7/1/2017 |
| | | | | | | |
| 7514 | | STEINWAY B | GRAND PIANO | 12/28/2007 | 64584 | |
| 63 | | HS PRECISION PRO SERIES | 2000 HTR .308-CA TACTICAL RIFLE | 9/18/2007 | 2481 | |
| 64 | | AREARAE MONITOR | GAS DETECTOR MONITOR | 9/28/2007 | 6515.39 | |
| 64 | | T5766A MTR2000 | TWO-WAY RADIO BASE SET:T5766A MTR2000 STATION | 8/31/2007 | 5950 | |
| 64 | | AD ULTRA 8 EXT PTZ | COLOR DAY/NIGHT CAMERA W/35X ZOOM FOR CASH CORNER | 1/30/2008 | 4728.52 | |
| 64 | | PTZ | ETHERNET VIDEO/RECEIVER TRANSMITTER FOR PTZ CAMERA-CASH CORNER | 1/29/2008 | 2190 | |
| 64 | | ALCO-LITE | TEL-3-40P TRUSS 3 SECTION LADDER FOR #2 FIRE TRUCK | 1/4/2008 | 2045 | |
| 77 | 2006 | E-Z GO ST | SPORT 2+2 GOLF CART | 8/2/2006 | 6400 | |
| 86 | 2007 | DOWNEASTER | TL610-LANDSCAPING TRAILER | 2/23/2007 | 1545 | |
| | | | | | | |
| 77 | 2017 | TORO | VERSA VAC | 8/16/2017 | 23349.6 | |
| 72 | | SWENSON EV100 | SALT/SAND SPREADER HOPPER | 4/18/2008 | 26895 | |
| 80 | | WE18 | HEAVY DUTY MOBILE HYDRAULIC LIFT | 3/12/2008 | 24740 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 77 | 2008 | JOHN DEERE | MODEL#1445 FRONT MOUNT MOWER W/SIDE DISCHARGE DECK | 9/4/2008 | 14931 | |
| 77 | | KOEHLER | EMERGENCY GENERATOR FOR COMMUNITY CENTER | 9/9/2008 | 54840 | |
| 75 | | | WHEELCHAIR LIFT, HANDICAP AT MAHONEY MIDDLE | 8/12/2008 | 29863 | |
| 77 | | TORO | WORKMAN 1110 GOLF CART WITH ELECTRIC BOX LIFT | 10/14/2008 | 7370.85 | 8/16/2013 |
| | | | | | | |
| 75 | | | DUGOUTS/BLEACHERS @ MAHONEY/WAINWRIGHT-7 SETS @ $1500 EA (4 ROWS) | | 10500 | |
| 77 | 2008 | TORO | GREENSMASTER FLEX 21 MOWER | 11/25/2008 | 8215 | |
| 77 | 2008 | TORO | GREENSMASTER FLEX 21 MOWER | 11/25/2008 | 8215 | |
| 77 | | TORO | TRANS PRO 100 TRAILER FOR 2008 GREENSMASTER MOWERS | 11/25/2008 | 1755 | |
| 75 | | | FOOTBALL SCOREBOARD-MARTIN FIELD-SPHS | 2/13/2009 | 17600 | |
| 64 | | | CASH CORNER RADIO TOWER | 7/1/2008 | 20000 | |
| 77 | 2010 | TORO | PROCORE 648 AERATOR | 12/29/2009 | 21610.65 | |
| 8684 | 2010 | KOBELCO | SK140SR EXCAVATOR | 4/16/2010 | 136900 | |
| 64 | | | EMERGENCY GENERATOR CASH CORNER FIRE DEPT | 2/26/2010 | 34380 | |
| 80 | 2011 | GILLIG | BUS CAMERA SYSTEMS & COMPONENTS (3) | 4/14/2011 | 5739 | |
| 64 | | POWER PRO | POWER LIFT AMBULANCE STRETCHER | 8/30/2010 | 13242.84 | |
| 64 | | POWER PRO | POWER LIFT AMBULANCE STRETCHER | 8/30/2010 | 13242.84 | |
| 72 | 2010 | EAGLE | SIDEWALK STREET PAVER | 8/25/2010 | 48300 | |
| 72 | 2011 | TENCO TCS-172LMM | SNOW BLOWER | 2/7/2011 | 104325 | |
| 64 | | MOTOROLA | RADIOS COMMUNICATION EQUIPMENT | 1/26/2011 | 297388.92 | 1/26/2013 |
| 63 | | MOTOROLA | RADIOS COMMUNICATION EQUIPMENT | 2/28/2011 | 324548.58 | |
| 63 | | | AUTOMATED LICENSE PLATE READER | 1/22/2010 | 18495 | |
| 63 | | | AUTOMATED LICENSE PLATE READERS (2) | 6/16/2011 | 16898 | |
| 72 | 2008 | MILLER | MC550 CURB MACHINE WITH KOHLER 15 HP | 10/20/2008 | 7000 | |
| 77 | 2009 | EZ-GO RXV GAS SHUTTLE | GOLF CART 2+2 REAR SEAT & CANOPY | 7/19/2010 | 4830 | |
| 75 | | | SMALL SCHOOL PAINTING CK#301459 | 8/21/2009 | 4900 | |
| 72 | | | 20' 6 TON FLAT TILT EQUIPMENT TRAILER | 7/28/2010 | 5495 | 7/28/2010 |
| 77 | 2011 | TORO | GROUNDSMASTER 4100 WIDE AREA MOWER | 7/29/2011 | 55464 | |
| 77 | 2011 | JOHN DEERE | LOADER, HOOD GUARD, & 73" HD BUCKET | 11/1/2011 | 6450 | |
| 77 | 2011 | JOHN DEERE | BACKHOE WITH 18" HD BUCKET | 11/1/2011 | 9774 | |
| 8684 | 2012 | WACKER | 36" DOUBLE DRUM RIDE-ON ROLLER MODEL RD12A | 3/19/2012 | 13117 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 8684 | 2012 | FELLING | 6' WIDE SINGLE AXLE EQUIPMENT TRAILER MODEL FT6T TO HAUL 2012 ROLLER | 3/19/2012 | 3673 | |
| 64 | | STAIR PRO | 6252 STAIR CHAIR | 9/29/2011 | 2765.85 | |
| 51 | 2012 | SONY | PTZ SECURITY CAMERA SYSTEM COUNCIL CHAMBERS | 12/14/2011 | 17543.96 | |
| 72 | 2012 | | HVAC GAS FIRED BOILER FURNACE | 11/29/2011 | 56350 | |
| 64 | 2012 | LIFEPAK 15 | LIFEPAK 15 CARDIAC MONITOR/DEFIBRILLATOR | 8/25/2011 | 38266.5 | |
| 64 | 2012 | LIFEPAK 15 | LIFEPAK 15 CARDIAC MONITOR/DEFIBRILLATOR | 8/25/2011 | 38266.5 | |
| 51 | | | PORTABLE SOUND SYSTEM | 4/6/2012 | 6208.1 | |
| 77 | | PARAGON | PORTABLE LIFE GUARD CHAIRS | | 3319 | |
| 77 | | JOHN DEERE | 60" FRONT BLADE FOR JD MOWERS | | 1275 | |
| 77 | | | BEDKNIFE GRINDER | | 9200 | |
| 51 | | SONY | PTZ CAMERA SPCTV | 12/30/2011 | 4157.03 | |
| 8684 | | MULTIEQUIP | PLATE COMPACTOR MODEL#MVC88VGHW | 12/27/2011 | 1715 | |
| 8684 | | SALALIFT II | WINCH W/SELF RETRACTING LIFELINE | 12/6/2011 | 2122 | |
| 8684 | | SALALIFT II | WINCH W/SELF RETRACTING LIFELINE | 12/6/2011 | 2122 | |
| 56 | | ADDED TO BLDG VALUE | NATURAL GAS BURNER-HAMLIN | 12/20/2011 | 9856 | |
| 64 | | | SECURITY CAMERA SYSTEM FOR BUFFER ZONE | 2/28/2012 | 128752.69 | |
| 77 | 2012 | TORO | 03171 RM 3100 D SIDEWINDER MOWER | 6/26/2012 | 34609 | |
| 51 | | | SERVICE MONUMENT @ MILL CREEK PARK | 8/26/2011 | 32712.19 | |
| 77 | | ON BUILDING INS POLICY | PLAYSCAPE WITH RUBBER BASE SURFACING MATERIAL | 9/27/2012 | 86062 | |
| 72 | 2012 | TOP HAT | 5X10 UTILTIY TRAILER | 5/10/2012 | 1395 | |
| 72 | 2011 | CAM SUPERLINE | TAG-A-LONG 18" TRAILER | 5/10/2012 | 5895 | |
| 64 | 2012 | ROLLNRACK POWER ROLL | ROLL N RACK PWER ROLLER W 5" COUPLING JAWS | 9/4/2012 | 6248 | |
| 64 | | | EMERGENCY RESPONSE MARINE VESSEL BOAT | 11/1/2012 | 73943 | |
| 63 | | GERMAN SHEPHERD K-9 | K-9 TYSON BORN 9/9/11 GERMAN SHEPHERD | 2/4/2013 | 5000 | 3/22/2013 |
| 63 | | | ELECTRONIC MESSAGE SIGN 48X144 | 2/11/2013 | 21291 | |
| 77 | 2011 | TORO | WORKMAN MID-DUTY 4 WHEEL UTILITY VEHICLE | 7/25/2011 | 9740 | |
| 72 | 2010 | SURE | ST7918 20' 6 TON FLAT TILT TRAILER (PO#20110483) | 7/28/2010 | 5495 | |
| 8684 | | 4" STEEL TRENCH BOX | MODEL#4SDW-816 | 8/3/2011 | 11225 | |
| 63 | | | AUTOMATED PARKING TICKET CITATION SOFTWARE SYSTEM | 6/15/2011 | 26386 | |
| 77 | 2011 | TURF | VERTICUTTER WITH CARBIDE TIP BLADES | 6/23/2011 | 9685 | |
| 75 | | | MEMORIAL SCHOOL SECURITY CAMERA SYSTEM | 3/18/2011 | 256316.59 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 75 | | | GAS FIRED DOMESTIC HOT WATER HEATER-SPHS KITCHEN | 1/4/2011 | 16952 | |
| 64 | | CHEMRAE | PORTABLE CHEMICAL WARFARE AGENT DETECTOR | 4/18/2011 | 14364 | |
| 64 | | GAMMARAE | WIRELESS GAMMARAE II RADIATION DETECTOR | 4/20/2011 | 3794 | |
| 75 | | | BOILER REPLACEMENT AT MEMORIAL MIDDLE SCHOOL | 3/31/2011 | 280000 | |
| | | | | | | |
| 63 | | BLACK LAB K-9 | K-9 JERRY BORN MAY 2008 BLACK LAB | | 5000 | 9/27/2012 |
| 63 | | BLACK GERMAN SHEPHEI | K-9 HARLEY BORN 9/24/04 BLACK GERMAN SHEPHERD | | 5000 | 6/30/2013 |
| 63 | | GERMAN SHEPHERD K-9 | K-9 SABER BORN 9/19/09 GERMAN SHEPHERD | | 5000 | 7/1/2018 |
| 63 | | BELGIAN MALINOIS K-9 | K-9 RALPH BORN 8/15/10 BROWN BELGIAN MALINOIS | 8/15/2011 | 5500 | 4/11/2013 |
| 63 | | GERMAN SHEPHERD K-9 | TRIGGER BORN 9/26/11 GERMAN SHEPHERD | 4/11/2013 | 5000 | |
| 77 | | | FOUNTAIN AT MILL CREEK PARK | 7/11/2012 | 7684.68 | |
| 77 | 2013 | JOHN DEERE | WHP36A MOWER | 5/29/2013 | 4660 | |
| 77 | 2013 | CLUB CAR | PR1317-363151 GOLF CART GREEN | 5/23/2013 | 6445 | |
| 75 | | | TELEPHONE SYSTEM UPGRADE - SCHOOL | 11/28/2012 | 207214.15 | |
| 64 | | | THERMAL IMAGING CAMERA MODEL MSA EVOLUTION 5800 | 5/24/2013 | 9926.97 | |
| 8684 | 2000 | JOHN DEERE | LAWN TRACTOR MOWER LX 277 | 4/27/2000 | 3275 | |
| 63 | | FLIR | 27 IN-LINE NIGHT OBSERVATION SCOPE - 2 GUNS SWAT TEAM | 5/3/2013 | 19276 | |
| 63 | | HD DVR | POLICE VEHICLE CAMERAS-DVR (8) | 4/22/2013 | 54940 | |
| 64 | | POWER PRO | AMBULANCE STRETCHER | 5/2/2013 | 14756.55 | |
| | | | | | | |
| 51 | 2013 | ELEMENTAL L152 | FANCY ENCODER & WEB STREAMING DEVICE | 1/23/2013 | 25470 | |
| 51 | | JVC | JVC FIELD CAMERA/CAMCORDER | 11/27/2012 | 2617.8 | |
| 51 | | JVC | JVC FIELD CAMERA/CAMCORDER | 5/27/2013 | 2355.8 | |
| 51 | | JVC | JVC FIELD CAMERA/CAMCORDER | 8/16/2013 | 2317.3 | |
| 63 | | AVATAR II | ROBOT | 11/9/2012 | 12939.55 | |
| 77 | 2013 | JOHN DEERE | UTILITY TRACTOR WITH SPRAYER | 8/16/2013 | 35044.67 | |
| 77 | 2013 | POLARIS | RANGER 800 FS EPS MODEL#R14TH7EAS | 12/6/2013 | 14996.99 | |
| 63 | | SABLE GERMAN SHEPHER | K-9 "ZAK" BORN 9/21/12 MALE | 1/17/2014 | 5500 | |
| 77 | | BRITE STRIPER | 300 SELF PROPELLED AIRLESS STRIPER MACHINE | 8/6/2013 | 4200 | |
| 77 | | BRITE SRIPER | 300 SELF PROPELLED AIRLESS STRIPER MACHINE | 8/6/2013 | 3000 | 4/9/2019 |
| 64 | | SIMPLEAIR | COMPRESSOR 6000 PSI | 12/2/2013 | 21883 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 64 | | | VEHICLE REPEATER FOR INTEROPERABILITY | 3/5/2014 | 11996.63 | |
| 63 | | | DIGITAL VEHICLE REPEATER SYSTEM | 7/18/2013 | 16185.69 | |
| 64 | | CARBOX HEMOGLOBIN M | 2 CARBOX HEMOGLOBIN METERS FOR HAZMAT | 1/29/2014 | 10007.49 | |
| 63 | | AVATAR | PAN-TILT ZOOM CAMERA | 2/14/2014 | 4530 | |
| 63 | | | WESTERN AVENUE TOWER ANTENNAL SYSTEMS-POLICE | 8/31/2013 | 5079.09 | |
| 64 | | | WESTERN AVENUE TOWER ANTENNA SYSTEMS-FIRE | 8/31/2013 | 8767.89 | |
| 64 | | | SNOW PLOW BLADE | 9/27/2013 | 5124.24 | |
| 64 | | | RADIO FOR NEW AMBULANCE | 11/22/2013 | 6060.96 | |
| 64 | | | MEDVAULT & KEY SECURE FOR NEW AMBULANCE | 3/13/2014 | 1776 | |
| 63 | | | LIFT FOR PD GARAGE | 8/16/2011 | 5265 | |
| 8684 | | | COLD PLANER ATTACHMENT | 7/1/2014 | 10565.64 | |
| | | | | | | |
| 8684 | | | BUCK SWITCHER & TRANSPORTER ASSEMBLY | 8/22/2014 | 18788.5 | |
| 64 | | AREARAE | PORTABLE AREARAE MULTIGAS WIRELESS MONITOR | 10/20/2014 | 5206 | |
| 77 | | | PORTABLE ASPEN AQUATIC LIFT | 11/3/2014 | 6330.22 | |
| 64 | | | AMBULANCE STRETCHER | 12/29/2014 | 15734.98 | |
| 77 | | FOLEY ACCU-MASTER | 652 SPIN RELIEF GRINDER | 1/31/2015 | 36955 | |
| 77 | 2015 | TORO | WORKMAN MDX TRACTOR | 6/23/2015 | 12721.99 | |
| 77 | 2015 | TORO | SAND PRO INFIELD PRO 5040 GROOMER TRACTOR | 6/30/2015 | 26403.64 | |
| 8684 | 2015 | POLARIS | GEM EM1400 L15U2NAEFA ELECTRIC UTILITY VEHICLE | 9/24/2015 | 11498.98 | |
| 52 | | | VOTING TABULATION EQUIPMENT RENTAL (10) | 12/15/2015 | 69700 | |
| 72 | 2015 | BOBCAT | 6707837 72" SWEEPER | 10/19/2015 | 4235 | |
| 8690 | 2015 | WACKER | BPU4045A TRENCH TAMPER/COMPACTOR | 11/17/2015 | 8318.25 | |
| 64 | | KUBOTA | GENERATOR AT FIRE STATION ON BROADWAY | 12/18/2015 | 7395 | |
| 80 | | | MOBILE COLUMN LIFTS FOR BUSES | 8/21/2015 | 9895.75 | |
| 80 | | | MOBILE COLUMN LIFTS FOR BUSES | 8/21/2015 | 9895.75 | |
| 80 | | | MOBILE COLUMN LIFTS FOR BUSES | 8/21/2015 | 9895.75 | |
| 80 | | | MOBILE COLUMN LIFTS FOR BUSES | 8/21/2015 | 9895.75 | |
| 8684 | | | DUMP TRUCK BODY & LIFTGATE REPLACEMENT | 1/21/2016 | 12290 | |
| 64 | | | TERMINATOR II WITH 2000 GPM | 5/9/2014 | 35975 | |
| 63 | | | 2 UNDERWATER CAMERAS | 7/31/2014 | 3600 | |
| 63 | | | 4 PROTECTIVE DRY SUITS | 7/31/2014 | 12940 | |
| 63 | | | 8 IN CAR CAMERAS | 7/31/2014 | 48748 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 8684 | | | 60" PICK UP SWEEPER FOR JOHN DEERE 317 SKID STEER LOADER | 1/14/2016 | 4950 | |
| 76 | | ECOMASTER | DISC REPAIR MACHINE WITH BLU-RAY | 1/26/2016 | 12940 | |
| 72 | 2016 | AVATAX | 2 TON DIESEL ASPHALT HOT BOX | 3/31/2016 | 14900 | |
| 8684 | | GALION | 9' GALION DROPSIDE DUMP BODY TUB MODEL 100UDS9TUB | 3/14/2016 | 5700 | |
| 8680 | | | OFFICE FURNITURE FOR WWTP NEW ADDITION BUILDING | 6/30/2016 | 19570 | |
| 64 | | LIFE PAK 15 | DEFIBRILLATOR CARDIAC MONITOR | 6/24/2019 | 32130.62 | |
| 52 | | | (4) EXPRESSVOTE VOTING EQUIPMENT | 5/12/2016 | 14000 | |
| 8680 | | | HIGH EFFICIENCY A/C UNIT WITH SEACOAST COATED COILS | 10/31/2016 | 14100 | |
| 80 | | PRO-VISION | DIGITAL SECURITY CAMERA SYSTEM FOR CITY BUSES | 11/1/2016 | 15538.76 | |
| 77 | 2017 | TORO GROUNDSMASTER | POLARTEC 7210 WITH ATTACHMENTS | 8/25/2016 | 62969.6 | |
| 80 | | PELICAN | 305S+ COIN SORTER MACHINE | 9/9/2016 | 3644 | |
| 64 | 2017 | SPREADER | WITH BATTERY CHARGER | 8/25/2016 | 11414 | |
| 64 | 2017 | CUTTER | WITH BATTERY CHARGER | 9/20/2016 | 11127 | |
| 80 | | | AVL WIRE HARNESSES FOR TWO CITY BUSES VIN#84117 & 84118 | 2/23/2017 | 12200 | |
| 75 | | | INTERCOM SYSTEM AT BROWN SCHOOL | 4/25/2017 | 18216.05 | |
| 64 | | DEFIBRILLATOR | DEFIBRILLATOR | 5/30/2017 | 34861.72 | |
| 77 | 2017 | TORO | PROCORE 1298 AERATOR FOR GOLF COURSE | 7/27/2016 | 30895.38 | |
| 56 | | | GRIDSMART VIDEO DETECTION SYSTEM | 12/29/2016 | 26340 | |
| 75 | | UNKNOWN | SNOW UTILITY TRAILER | | 0 | |
| 75 | 2009 | GENIE | LIFT AWP225 | 7/1/2009 | 5500 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 5971 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 2985 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 5895 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 5195 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 2895 | |
| 75 | | AUTOSCRUBBER | AUTOSCRUBBER | 7/1/2014 | 3507 | |
| 75 | | SQUARE SCRUB (18") | 8 @ $1800 - SQUARE SCRUB | 7/1/2014 | 14400 | |
| 75 | | TAILGATE SPREADER | TAILGATE SPREADER | 7/1/2014 | 2315 | |
| 75 | | FOCUS II BOOST AUTOSCI | FOCUS II BOOST - AUTOSCRUBBER | 7/1/2014 | 3776 | |
| 75 | | PANTHER | AUTOSCRUBBER | 7/1/2014 | 4666 | |
| 75 | | PANTHER | AUTOSCRUBBER | 7/1/2014 | 6996 | |
| 75 | | TORO | 1020OXE | 7/1/2014 | 1350 | |
| 75 | | TORO | 1020OXE | 7/1/2014 | 1350 | |
| 75 | | XMARK | 48" DECK RODER MOWER | 7/1/2014 | 6899 | |
| 75 | 2011 | GILLIG | (3) BUS CAMERA SYSTEMS | 7/1/2017 | 5739 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 75 | | STERTIL KONI | (4) HEAVY DUTY MOBILE COLUMN LIFT WIRELESS ($7,747.75 EA) | 7/1/2017 | 30991 | |
| 75 | | STERTIL KONI | (4) HEAVY DUTY MOBILE COLUMN LIFT WIRELESS ($7,747.75 EA) | 7/1/2017 | 30991 | |
| 8684 | | | TSS PORTABLE COMPLETE INCASE | 8/18/2017 | 2959.27 | |
| 8684 | | | 1" WARTHOG MAGNUM ROOT SAW | 8/25/2017 | 2914 | |
| 77 | | | PLAYSCAPE LOCATED AT SAWYER STREET | 8/22/2017 | 55886 | |
| 64 | | | OHD QUANTIFIT FIT TEST MACHINE | 12/29/2017 | 9693.5 | |
| 63 | | | K-9 CREED BORN 1/26/17 BELGIAN MALINOIS | 1/11/2018 | 5500 | |
| 64 | | | PORTABLE ANALYZER | 10/17/2017 | 60730.73 | |
| 8684 | | | SMARTBOARD | 12/21/2017 | 4795.59 | |
| 8684 | | DATA TRANSFER SOLUTI( | VUEWORKS SOFTWARE LICENSE | 6/16/2018 | 25000 | |
| 72 | | DATA TRANSFER SOLUTI( | VUEWORKS SOFTWARE LICENSE | 6/16/2018 | 25000 | |
| 80 | | | DISPLAY SCREEN AT MILL CREEK TRANSIT HUB-MSG & COMMUNICATION | 5/25/2018 | 10704.17 | |
| 63 | | | OFFICE FURNITURE FOR POLICE ADMIN OFFICES | 4/23/2018 | 14225 | |
| 80 | | | BUS TRANSIT TRAFFIC SIGNAL PRIORITY SYSTEM AT INTERSECTIONS | 3/20/2018 | 219555.48 | |
| 66 | | | STREET LIGHTS & LED PILOT PROGRAM FIXTURES | 3/20/2018 | 224470.18 | |
| 80 | | | COMM EQUIP-RADIO TOWER & SMART BOARD AT NEW PWF | 2/12/2018 | 19713.71 | |
| 77 | | STERTIL KONI | GARAGE BAY LIFTS FOR PARKS GARAGE@PW COMPLEX FACILITY | 2/23/2018 | 37911 | |
| 7511 | | | DIRECT DIGITAL CONTROLS (DDC) HVAC MAHNY | 2/5/2018 | 30225 | |
| 7514 | | | SECURITY CAMERS FOR S.P.H.S. | 4/10/2018 | 15176 | |
| 72 | | STERTIL KONI | GARAGE BAY VEHICLE LIFTS (2) FOR PW GARAGE @ PW FACILITY-EARTHLIFTS ST1085 | 1/10/2018 | 37911 | |
| 8684 | | | SMARTBOARD FOR WRP | 3/6/2018 | 4795.59 | |
| 77 | | | THERAPY HOT TUB SPA@COMMUNITY CENTER | 12/7/2017 | 153673.61 | |
| 80 | | | SHELVING @ PW COMPLEX FACILITY - BUS | 11/1/2017 | 21537.32 | |
| 80 | | | OFFICE FURNITURE @ PW COMPLEX FACILITY - BUS | 11/13/2017 | 19913.23 | |
| 77 | | | SHELVING @ PW COMPLEX FACILITY - PARKS | 11/1/2017 | 17947.78 | |
| 77 | | | OFFICE FURNITURE @ PW COMPLEX FACILITY - PARKS | 11/13/2017 | 27007.13 | |
| 72 | | | SHELVING @ PW COMPLEX FACILITY - PUBLIC WORKS | 11/1/2017 | 32306 | |

# EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 72 | | | OFFICE FURNITURE @ PW COMPLEX FACILITY - PUBLIC WORKS | 11/13/2017 | 27007.13 | |
| 80 | | | PHOTO COPIER, COIN SORTER, & AVAYA PHONES - BUS | 9/25/2017 | 10380.99 | |
| 80 | | | ACCESS CONTROL SECURITY SYSTEM @ NEW PWF - BUS | 9/25/2017 | 26784.22 | |
| 80 | | | SECURITY CAMERAS @ NEW PWF - BUS | 9/25/2017 | 23639.87 | |
| 77 | | | ACCESS CONTROL SECURITY SYSTEM @ NEW PWF - PARKS | 9/25/2017 | 13392.12 | |
| 77 | | | SECURITY CAMERAS @ NEW PWF - PARKS | 9/25/2017 | 11819.93 | |
| 72 | | | ACCESS CONTROL SECURITY SYSTEM @ NEW PWF - PUBLIC WORKS | 9/25/2017 | 26784.22 | |
| 72 | | | SECURITY CAMERAS @ NEW PWF - PUBLIC WORKS | 9/25/2017 | 30984.58 | |
| 72 | | | NETWORK, COMPUTER WIRING AT PW COMPLEX | 9/15/2017 | 25680 | |
| 8684 | | WARTHOG MAGNUM | 1" WARTHOG MAGNUM ROOT SAW | 8/25/2017 | 2914 | |
| 8684 | | TSS | TSS PORTABLE COMPLETE IN CASE | 8/18/2017 | 2959.27 | |
| 8680 | | | SCADA CONTROL SYSTEM UPGRADE | 8/25/2017 | 1116422.3 | |
| 77 | 2017 | TORO | TORO VERSA VAC | 8/16/2017 | 23349.6 | |
| 72 | | | NETWORK & PHONES PUBLIC WORKS COMPLEX | 8/30/2018 | 21619.97 | |
| 72 | | | CRANE | 8/28/2017 | 124785.49 | |
| | | | | | | |
| 8684 | | POINT SENSE SUITE | POINT SENSE SUITE SOFTWARE LICENSE | 7/27/2017 | 12808.5 | |
| 80 | | ALKOTA | HOT HIGH PRESSURE WASHER MODEL#216AXH | 7/8/2018 | 3495 | |
| 77 | | | TC700 TOW BEHIND & COLLECTIONS MINI WITH TAIL LIFT | 7/26/2018 | 5662.5 | |
| 77 | | TORO | MODEL#08766 SPORTS FIELD EDGER (INFIELD GROOMER) | 8/13/2018 | 3879 | |
| 63 | | | EQUIPMENT FOR 2018 CHEVY TAHOE VIN#327373 | 7/3/2018 | 11559.3 | |
| 72 | | STERTIL KONI | GARAGE BAY VEHICLE LIFTS AT PWF FOR PW - EARTHLIFTS ST1085 | 1/10/2018 | 37911 | |
| 77 | | | GARAGE BAY VEHICLE LIFTS AT PWF FOR PKS | 2/23/2018 | 44783.65 | |
| 77 | 2018 | JOHN DEERE | OVERSEEDER MODEL#LPOS1572 | 8/15/2018 | 11527.25 | |
| 8684 | | BIG JOE | MODEL D4O 27X48 ELECTRIC PALLET JACK TRUCK | 8/30/2018 | 4294.75 | |
| 8680 | | | GENERATOR FUEL STORAGE TANK | 8/21/2018 | 12158 | |
| 72 | 2003 | WACKER | ONE TON ROLLER | 8/8/2003 | 10400 | |
| 72 | 2005 | BOBCAT | 18' SMOOTH CUT PLANER | 4/12/2005 | 10082.35 | |

EQUIPMENT

| Dept | Yr | Make | Model | Acquired | Replace Value | Sold/Traded |
|---|---|---|---|---|---|---|
| 77 | | BILLY GOAT | BRUSH CUTTER | 6/19/2019 | 2490 | |
| 63 | 2000 | HOMEMADE | BLACK MOTORCYCLE TRAILER | | | |
| 63 | | TRU-NARC | NARCOTIC ANALYZER | 9/10/2019 | 29916 | |
| 72 | | CRAIG | PLOW FOR 2019 WHEEL LOADER VIN#47264 | 10/2/2019 | 49814 | |
| 77 | 2017 | FERRI | TA26 BOOM MOWER | 7/24/2019 | 9800 | |
| 77 | | SNOWRATOR | ZX4 PLOW & DEICER RIDE-ON HONDA WITH ATTACHMENTS | 10/31/2019 | 14877.08 | |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| School | 2021 | BLUE BIRD | BBCV3310 SCHOOL BUS | 10/4/2019 | | $99,700.00 | New |
| School | 2021 | BLUE BIRD | BBCV3310 SCHOOL BUS | 10/4/2019 | | $94,900.00 | New |
| School | 2021 | BLUEBIRD | BBCV3310 SCHOOL BUS | 10/4/2019 | | $94,900.00 | New |
| Fire Dept | 2020 | FORD | F150 4x4 Pickup Truck | 1/27/2020 | | $39,567.00 | New |
| Public Works | 2020 | FORD | EXPLORER | 10/16/2019 | | $40,964.75 | NEW |
| Public Works | 2020 | INTERNATIONAL | 500X SWEEPER | 10/14/2019 | | $281,500.00 | NEW |
| School | 2020 | BLUE BIRD | BBCV3310 SCHOOL BUS | 4/11/2019 | | $100,000.00 | New |
| School | 2020 | BLUEBIRD | BBCV3507 SCHOOL BUS | 11/1/2018 | | $101,250.00 | NEW |
| School | 2020 | BLUEBIRD | TYPE C-BBCV3310 | 12/19/2018 | | $90,000.00 | NEW |
| School | 2020 | BLUEBIRD | TYPE C-BBCV3310 | 12/19/2018 | | $90,000.00 | NEW |
| Fire | 2019 | FORD | F350 PICKUP TRUCK | 10/28/2019 | | $44,468.00 | New |
| Fire | 2019 | FORD | E-450 ROAD RESCUE AMBULANCE | 6/13/2019 | | $257,276.00 | New |
| Fire Dept | 2019 | PIERCE | ARROW XT | 9/27/2019 | | $1,069,486.00 | New |
| Parks | 2019 | FORD | F-350 | 4/22/2019 | | $41,051.00 | New |
| Parks | 2019 | NISSAN | LEAF | 1/17/2019 | | $35,170.00 | |
| Planning | 2019 | NISSAN | LEAF | 1/17/2019 | | $36,630.00 | |
| Police | 2019 | FORD | Explorer Police Cruiser | 1/10/2019 | | $31,916.00 | New |
| Police | 2019 | FIRD | Explorer Police Cruiser | 1/10/2019 | | $31,916.00 | New |
| Public Works | 2019 | CASE | 71GXR WHEEL LOADER | 7/19/2019 | | $189,986.00 | New |
| Public Works | 2019 | CRAIG PLOW | | 10/2/2019 | | $49,814.00 | New |
| Public Works | 2019 | TRACKLESS | MT7 SIDEWALK TRACTOR | 6/14/2019 | | $140,997.00 | New |
| School | 2019 | BLUE BIRD | T3RE4006 | 12/11/2017 | | $110,823.90 | NEW |
| School | 2019 | FORD | TRANSIT VAN | 8/26/2019 | | $28,594.00 | New |
| School | 2019 | BLUEBIRD | T3RE4006 | 5/18/2018 | | $111,300.00 | NEW |
| School | 2019 | BLUE BIRD | BBCV77 | 12/11/2017 | | $95,362.40 | NEW |
| Water Resrc | 2019 | BOBCAT | S770 T4 SKID-STEER LOADER | 8/27/2019 | | $51,707.22 | NEW |
| Fire Dept | 2018 | PIERCE | ARROW XT FIRE TRUCK | 9/21/2018 | 10/30/2018 | $1,063,882.00 | |
| Parks | 2018 | GMC | SIERRA | 3/6/2018 | | $23,789.00 | |
| Police | 2018 | FORD | EXPLORER POLICE CRUISER | 5/16/2018 | | $31,916.00 | NEW |
| Police | 2018 | FORD | EXPLORER POLICE CRUISER | 5/16/2018 | | $31,916.00 | NEW |
| Police | 2018 | FORD | EXPLORER POLICE CRUISER | 5/16/2018 | | $32,347.00 | NEW |
| Police | 2018 | CHEVROLET | TAHOE | 5/22/2018 | | $39,296.00 | NEW |
| Public Works | 2018 | INTERNATIONAL | 7400 TRUCK WITH PLOW | 8/9/2017 | | $164,196.33 | NEW |
| Public Works | 2018 | INTERNATIONAL | 7400 TRUCK WITH PLOW | 8/9/2017 | | $164,196.33 | NEW |
| Public Works | 2018 | INTERNATIONAL | 7400 TRUCK WITH PLOW | 8/9/2017 | | $164,196.33 | NEW |
| School | 2018 | BLUE BIRD | BBCV3507 PASSENGER SCHOOL BUS | 12/27/2016 | | $86,925.00 | NEW |
| School | 2018 | RAM | PROMASTER 2500PR VAN | 10/30/2018 | | $25,541.00 | NEW |
| School | 2018 | DODGE | PROMASTER 1500 VAN | 9/30/2018 | | $22,841.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| School | 2018 | BLUE BIRD | BBCV3507 PASSENGER SCHOOL BUS | 12/27/2016 | | $86,925.00 | NEW |
| Fire Dept | 2017 | PIERCE | ARROW XT PUMPER | 9/12/2017 | | $579,691.00 | NEW |
| Fire Dept | 2017 | FORD | F350 TRUCK | 11/3/2017 | | $39,263.00 | NEW |
| Parks | 2017 | LOADRITE | TRAILER MODEL UT6514-7000E2 | 8/22/2016 | | $3,595.00 | NEW |
| Parks | 2017 | FORD | TRANSIT CONNECT CARGO VAN | 11/23/2016 | | $28,410.00 | NEW |
| Parks | 2017 | FORD | F250 TRUCK | 10/25/2017 | | $41,590.00 | NEW |
| Parks | 2017 | JOHN DEERE | 1570 TERRAINCUT COMM FRONT MOWER | 7/6/2017 | | $25,338.76 | NEW |
| Police | 2017 | FORD | EXPLORER | 5/15/2017 | | $30,510.00 | NEW |
| Police | 2017 | FORD | EXPLORER | 5/15/2017 | | $30,236.00 | NEW |
| Police | 2017 | FORD | EXPLORER | 5/15/2017 | 5/25/2019 | $30,236.00 | NEW |
| Police | 2017 | FORD | EXPLORER | 5/15/2017 | | $30,236.00 | NEW |
| Public Works | 2017 | FREIGHTLINER | 114SD TRUCK | 9/26/2016 | | $174,078.44 | NEW |
| School | 2017 | THOMAS SCHOOL BUS | SAFTLINER 341TS | 1/26/2016 | | $85,803.85 | NEW |
| School | 2017 | KARAVAN | KHD-2990-60-10 UTILITY TRAILER | 8/16/2016 | | $847.00 | NEW |
| School | 2017 | THOMAS SCHOOL BUS | SAFTLINER 341TS | 1/26/2016 | | $85,803.85 | NEW |
| School | 2017 | CHEVROLET | SILVERADO | 12/8/2017 | | $30,931.00 | NEW |
| School | 2017 | DODGE | CARAVAN | 8/25/2017 | | $22,565.00 | NEW |
| School | 2017 | DODGE | CARAVAN | 8/25/2017 | | $22,565.00 | NEW |
| Water Resrc | 2017 | CHEVROLET | SILVERADO | 12/8/2016 | | $20,000.00 | NEW |
| Water Resrc | 2017 | INTERSTATE | 50DLA TRAILER | 11/22/2017 | | $22,300.00 | NEW |
| Bus | 2016 | GILLIG | G27B10 TRANSIT BUS | 11/18/2016 | | $407,696.00 | NEW |
| Bus | 2016 | FORD | F350 SERVICE TRUCK | 5/19/2016 | | $78,489.00 | NEW |
| Bus | 2016 | GILLIG | G27B10 TRANSIT BUS | 11/18/2016 | | $407,696.00 | NEW |
| Fire Dept | 2016 | CHEVROLET | G4500 AMBULANCE | 7/22/2016 | | $221,787.00 | |
| Parks | 2016 | JOHN DEERE | 4066R UTILITY TRACTOR & LOADER | 8/8/2016 | | $39,062.50 | NEW |
| Parks | 2016 | FORD | F350 TRUCK | 11/5/2015 | | $51,802.00 | NEW |
| Parks | 2016 | BWISE | TH824-15 TRAILER | 4/6/2016 | | $11,415.45 | NEW |
| Parks | 2016 | TORO | TOP DRESSER TRACTOR | 8/18/2016 | | $26,435.77 | NEW |
| Parks | 2016 | CHEVROLET | SILVERADO | 8/23/2016 | | $42,353.00 | NEW |
| Police | 2016 | CHEVROLET | TAHOE COMMAND VEHICLE | 10/15/2015 | | $34,447.00 | NEW |
| Police | 2016 | FORD | EXPLORER POLICE CRUISER | 4/25/2016 | | $29,952.00 | NEW |
| Police | 2016 | FORD | EXPLORER POLICE CRUISER | 4/25/2016 | | $29,952.00 | NEW |
| Police | 2016 | FORD | EXPLORER POLICE CRUISER | 5/10/2016 | | $30,161.00 | NEW |
| Police | 2016 | FORD | EXPLORER POLICE CRUISER | 5/10/2016 | | $29,953.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2016 | MERCEDES-BENZ | SPRINTER VAN | 12/27/2016 | | $36,491.00 | USED |
| School | 2016 | FREIGHTLINER THOMAS | 78 PASSENGER SCHOOL BUS | 8/31/2015 | | $87,706.00 | NEW |
| Assessing | 2015 | NISSAN | LEAF | 11/25/2014 | | $33,381.86 | |
| Bus | 2015 | NISSAN | LEAF | 12/11/2015 | | $31,150.00 | NEW |
| Fire Dept. | 2015 | FORD F450 | LIGHT COMMAND/RESCUE VEHICLE | 1/28/2016 | | $101,950.00 | NEW |
| Parks | 2015 | FORD | F250 TRUCK | 8/15/2014 | | $45,106.00 | NEW |
| Parks | 2015 | NISSAN | LEAF | 11/25/2014 | | $33,381.86 | NEW |
| Planning | 2015 | NISSAN | LEAF | 12/9/2015 | 1/17/2019 | $33,820.00 | NEW |
| Police | 2015 | FORD | EXPLORER POLICE CRUISER | 5/20/2015 | | $28,620.00 | NEW |
| Police | 2015 | FORD | EXPLORER POLICE CRUISER | 5/20/2015 | | $28,620.00 | NEW |
| Police | 2015 | FORD | EXPLORER POLICE CRUISER | 5/20/2015 | | $28,620.00 | NEW |
| Public Works | 2015 | ASPHALT RECYCLER | PAVER | 5/29/2015 | | $76,598.00 | |
| Public Works | 2015 | BOBCAT | BC S770 IT4 SKID-STEER LOADER WITH BUCKE | 9/25/2015 | | $51,643.29 | NEW |
| Public Works | 2015 | INTERNATIONAL 7400 | DUMP TRUCK WITH PLOW | 7/1/2014 | | $167,203.00 | NEW |
| Bus | 2014 | GILLIG | LOW FLOW CITY BUS UNIT# 902 MODG27B102N4 | 3/27/2014 | | $395,195.00 | |
| Bus | 2014 | GILLIG | LOWQ FLOW CITY BUS UNIT#901 MODG27B102N4 | 3/26/2014 | | $395,195.00 | |
| Code Enforce | 2014 | FORD | ESCAPE | 11/22/2013 | | $22,700.00 | NEW |
| Fire Dept | 2014 | CHEVROLET | G4500 AMBULANCE | 6/12/2014 | | $192,024.00 | |
| Parks | 2014 | GMC | SIERRA TRUCK | 8/23/2013 | | $39,125.00 | NEW |
| Parks | 2014 | TORO | GROUNDSMASTER MOWER | 8/11/2015 | | $74,363.86 | NEW |
| Police | 2014 | FORD | FOCUS | 8/4/2016 | | $9,688.00 | NEW |
| Police | 2014 | FORD | EXPLORER POLICE CRUISERS | 4/1/2014 | | $27,676.67 | |
| Police | 2014 | FORD | EXPLORER POLICE CRUISER | 4/1/2014 | | $27,676.67 | |
| Police | 2014 | FORD | EXPLORERE PLLICE CRUSIER | 4/1/2014 | | $27,676.67 | |
| Police | 2014 | HARLEY DAVIDSON | FLHTP MOTORCYCLE | 7/13/2018 | | $7,000.00 | NEW |
| School | 2014 | FREIGHTLINER | 77 PASSENGER BUS | 4/16/2013 | | $84,856.00 | NEW |
| School | 2014 | CHEVROLET CG3350 | 14 PASSENGER SCHOOL BUS | 8/15/2014 | | $45,106.00 | NEW |
| School | 2014 | FREIGHTLINER | 66 PASSENGER BUS | 4/16/2013 | | $89,834.00 | NEW |
| Fire | 2013 | LOADRITE | TRAILER | 10/25/2012 | | $3,759.00 | NEW |
| Fire Dept | 2013 | CHEVROLET | TAHOE | 10/1/2012 | | $37,304.00 | NEW |
| Fire Dept | 2013 | ONE PIERCE PUMPER | FIRE TRUCK | 6/21/2013 | | $480,000.00 | NEW |
| Parks | 2013 | GMC | SIERRA | 10/15/2012 | | $40,442.00 | NEW |
| Parks | 2013 | TORO | 44539 PRO FORCE BLOWER WITH TRAILER | 6/12/2013 | | $7,684.85 | |
| Police | 2013 | FORD | EXPLORER POLICE CRUISER | 4/12/2013 | | $27,089.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2013 | DODGE | CHARGER POLICE CRUISER | 6/17/2013 | 6/21/2017 | $25,884.50 | NEW |
| Police | 2013 | FORD | EXPLORER POLICE CRUISER | 4/12/2013 | | $27,089.00 | NEW |
| Police | 2013 | DODGE | CHARGER POLICE CRUISER | 6/17/2013 | | $25,884.50 | NEW |
| Police | 2013 | FORD | EXPLORER CRUISER | 9/7/2012 | | $29,004.00 | NEW |
| Police | 2013 | FORD | EXPLORER CRUISER | 9/7/2012 | 7/1/2017 | $29,004.00 | NEW |
| Public Works | 2013 | GMC | SIERRA TRUCK | 8/23/2013 | | $35,409.00 | NEW |
| Public Works | 2013 | TRACKLESS | MT6 SIDEWALK TRACTOR | 10/23/2012 | | $113,650.00 | NEW |
| Water Resrc | 2013 | LUGGER HOIST | DUMPSTER GRIT TRUCK BODY | 3/1/2013 | | $32,825.00 | |
| Code | 2012 | CHEVROLET | SONIC | 7/27/2012 | | $15,875.19 | NEW |
| Fire | 2012 | GMC | SIERRA 2500 TRUCK W/PLOW | 12/8/2011 | | $31,626.00 | NEW |
| Parks | 2012 | JOHN DEERE | FRONT MOWER W/SIDE DISCHARGE | 5/30/2012 | | $25,672.32 | NEW |
| Police | 2012 | DODGE | CHARGER CRUISER | 7/24/2012 | 9/28/2018 | $38,034.14 | NEW |
| Police | 2012 | DODGE | CHARGER CRUISER | 7/24/2012 | 9/27/2017 | $38,034.14 | NEW |
| Police | 2012 | FORD | FOCUS | 5/27/2015 | 6/27/2016 | $13,499.00 | USED |
| Public Works | 2012 | GMC | SIERRA 2500 TRUCK | 12/8/2011 | | $35,138.00 | NEW |
| Public Works | 2012 | INTERNATIONAL | CHASSIS TRUCK SWEEPER | 8/10/2011 | | $205,000.00 | NEW |
| Public Works | 2012 | INTERNATIONAL | 7500 DUMP TRUCK | 11/30/2011 | | $127,453.00 | NEW |
| Public Works | 2012 | FORD | F350 SIGN TRUCK | 2/21/2012 | | $68,867.00 | NEW |
| Public Works | 2012 | TOP HAT | UTILITY TRAILER DSA10X5-S.9N-C | 5/10/2012 | | $1,395.00 | NEW |
| Water Resrc | 2012 | DOOSAN | PORTABLE AIR COMPRESSOR | 1/31/2012 | | $14,395.00 | NEW |
| Bus | 2011 | GILLIG G27B102N4 | Bus | 4/15/2011 | | $371,406.00 | NEW |
| Bus | 2011 | GILLIG G27B102N4 | Bus | 4/15/2011 | | $371,406.00 | NEW |
| Bus | 2011 | GILLIG G27B102N4 | Bus | 4/15/2011 | | $371,406.00 | NEW |
| Parks | 2011 | LANDPRIDE | TOW-BEHIND FLEXMOWER | 10/31/2010 | | $18,798.00 | NEW |
| Parks | 2011 | CHEVROLET | SILVERADO PICKUP | 12/22/2010 | | $36,300.00 | NEW |
| Parks | 2011 | FORD | F150 | 7/13/2011 | | $18,985.00 | NEW |
| Parks | 2011 | JOHN DEERE | COMPACT UTILITY TRACTOR | 11/1/2011 | | $40,062.00 | NEW |
| Parks | 2011 | OTR | 8X14 FRAME TRAILER | 11/5/2011 | | $3,635.00 | NEW |
| Planning | 2011 | FORD | CROWN VICTORIA CRUISER | 11/7/2012 | | $11,534.00 | USED |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2011 | FORD | CROWN VICTORIA POLICE CRUISER | 4/6/2011 | 9/28/2018 | $25,609.00 | NEW |
| Police | 2011 | DODGE | CALIBER UNMARKED POLICE CRUISER | 5/27/2015 | | $7,000.00 | USED |
| Police | 2011 | NISSAN | ALTIMA UNMARKED POLICE CRUISER | 5/27/2015 | | $13,000.00 | USED |
| Police | 2011 | FORD | CROWN VICTORIA POLICE CRUISER | 4/6/2011 | 9/28/2018 | $25,609.00 | NEW |
| Police | 2011 | FORD | CROWN VICTORIA POLICE CRUISER | 4/6/2011 | 6/27/2017 | $25,609.00 | NEW |
| Police | 2011 | FORD | CROWN VICTORIA POLICE CRUISER | 4/6/2011 | 6/27/2017 | $25,609.00 | NEW |
| Public Works | 2011 | CAM SUPERLINE | TAG ALONG UTILITY TRAILER 6CAM18FTT | 5/10/2012 | | $5,895.00 | NEW |
| Public Works | 2011 | TRACKLESS | MT6 SIDEWALK TRACTOR | 10/27/2010 | | $133,380.00 | NEW |
| Public Works | 2011 | CAM | SUPERLINE | | 12/31/2014 | $5,862.00 | |
| Public Works | 2011 | INTERNATIONAL 7500 | DUMP TRUCK | 4/30/2010 | | $190,312.00 | NEW |
| School | 2011 | CHEVROLET | SILVERADO PICKUP | 1/7/2011 | | $30,603.00 | NEW |
| Water Resrc | 2011 | GMC | #TK20903 TRUCK | 12/1/2010 | | $30,508.00 | NEW |
| Water Resrc | 2011 | FREIGHTLINER | & B10 AQUATECH VACUUM SEWER CLEANERTRUCK | 12/8/2010 | | $272,450.00 | NEW |
| Fire Dept | 2010 | FORD E-450 | AMBULANCE | 3/2/2011 | | $165,652.00 | NEW |
| Fire Dept | 2010 | HAULMARK | TS6X10DS2 TRAILER | 12/14/2009 | | $2,619.90 | NEW |
| Fire Dept | 2010 | CHEVROLET | TAHOE 4WD | 12/8/2009 | | $36,716.00 | NEW |
| Parks | 2010 | FORD | S-DUTY F350 TRUCK | 10/13/2009 | | $30,202.00 | NEW |
| Police | 2010 | CHEVROLET | TAHOE 4WD | 7/8/2010 | | $40,264.00 | NEW |
| Police | 2010 | FORD | CROWN VICTORIA | 5/18/2010 | 6/30/2015 | $24,793.25 | NEW |
| Police | 2010 | FORD | CROWN VICTORIA | 5/18/2010 | 6/30/2015 | $24,793.25 | NEW |
| Police | 2010 | FORD | CROWN VICTORIA | 5/18/2010 | 6/30/2015 | $24,793.25 | NEW |
| Police | 2010 | FORD | CROWN VICTORIA | 5/18/2010 | 2/26/2014 | $24,793.25 | NEW |
| Public Works | 2010 | SURE TRAC | TRAILER | 7/28/2010 | | $5,495.00 | NEW |
| Public Works | 2010 | FORD | S-DUTY F350 TRUCK | 10/13/2009 | | $30,202.00 | NEW |
| School | 2010 | GMC | TG33503 14 PASSENGER BUS | 7/8/2010 | | $39,400.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Water Resrc | 2010 | FORD | S-DTY F-350 TRUCK | 2/1/2010 | | $33,569.00 | NEW |
| Water Resrc | 2010 | FORD | F150 TRUCK | 9/14/2010 | | $23,582.00 | NEW |
| Water Resrc | 2010 | MULTIEQUIP | CONCRETE MIXER MODEL#MC64SH5 | 9/10/2010 | | $1,957.11 | NEW |
| Water Resrc | 2010 | FORD | F150 TRUCK | 9/14/2010 | | $24,715.00 | NEW |
| Fire Dept | 2009 | CARRY ON | 5X8 SP UTILITY TRAILER | 7/14/2009 | | $699.99 | NEW |
| Parks | 2009 | FORD | F250 PICKUP TRUCK | 3/30/2009 | 10/25/2017 | $21,983.00 | NEW |
| Parks | 2009 | JOHN DEERE | RIDING/ROTARY MOWER | 10/21/2009 | | $16,170.67 | NEW |
| Police | 2009 | FORD | CROWN VICTORIA POLICE CRUISER | 4/15/2009 | | $24,967.98 | NEW |
| Police | 2009 | FORD | CROWN VICTORIA POLICE CRUISER | 4/15/2009 | 9/13/2013 | $24,967.98 | NEW |
| Police | 2009 | FORD | CROWN VICTORIA POLICE CRUISER | 4/15/2009 | 1/7/2011 | $24,967.98 | NEW |
| Police | 2009 | FORD | CROWN VICTORIA | 12/23/2009 | 2/25/2015 | $21,040.00 | NEW |
| Police | 2009 | HARLEY | MOTORCYCLE | 9/15/2008 | | $0.00 | NEW |
| Public Works | 2009 | VOLVO | DUMPTRUCK #VHD64B | 8/22/2008 | | $201,154.00 | NEW |
| Public Works | 2009 | INTERNATIONAL | 7500 DUMP TRUCK | 5/14/2009 | | $176,105.59 | NEW |
| School | 2009 | FREIGHTLINER | B2-106 SCHOOL BUS # 18 | 10/3/2008 | | $78,137.00 | NEW |
| School | 2009 | FORD | F250 SUPER DUTY TRUCK | 7/30/2009 | | $26,320.00 | NEW |
| School | 2009 | CHEVROLET | C5500 DIESEL UTILITY TRUCK | 11/19/2008 | | $46,908.00 | NEW |
| Water Resrc | 2009 | CHEVROLET | K1500 PICKUP TRUCK | 3/17/2009 | 12/8/2016 | $21,287.00 | NEW |
| Water Resrc | 2009 | INTERSTATE | 40 DLA 20 TON TRAILER, UTILITY | 11/7/2008 | 11/21/2017 | $16,470.00 | NEW |
| Bus | 2008 | CHEVROLET | GOSHEN GC11-5500 BUS UNIT 916 | 9/19/2008 | 6/18/2012 | $104,000.00 | NEW |
| Bus | 2008 | CHEVROLET | GOSHEN GC11-5500 BUS UNIT 915 | 9/19/2008 | 6/18/2012 | $104,000.00 | NEW |
| Fire Dept | 2008 | CHEVROLET | 1500 4WD EXT CAB PICKUP | 8/22/2008 | | $23,000.00 | NEW |
| Parks | 2008 | FORD | F150 PICKUP | 1/24/2008 | | $24,060.00 | NEW |
| Parks | 2008 | GMC | TC5C042 | 12/27/2007 | | $61,159.00 | NEW |
| Police | 2008 | JEEP | PATRIOT 4X4 | 10/22/2008 | | $21,869.00 | NEW |
| Police | 2008 | HARLEY | ROADKING MOTORCYCLE | 3/25/2008 | 12/31/2008 | $23,000.00 | |
| Police | 2008 | FORD | ESCAPE | 5/27/2015 | 12/18/2015 | $7,034.00 | USED |
| Police | 2008 | HARLEY | ROADKING MOTORCYCLE | 3/25/2008 | 7/13/2018 | $23,000.00 | |
| Police | 2008 | FORD | CROWN VICTORIA SEDAN | 6/26/2008 | 3/16/2011 | $24,149.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2008 | FORD | CROWN VICTORIA SEDAN | 6/26/2008 | 6/30/2015 | $24,149.00 | NEW |
| Police | 2008 | FORD | CROWN VICTORIA SEDAN | 6/26/2008 | 6/30/2015 | $24,149.00 | NEW |
| Police | 2008 | INTERNATIONAL | MRAP MVP MILITARY VEHICLE | 7/1/2014 | | $75,000.00 | USED |
| Police | 2008 | FORD | CROWN VICTORIA SEDAN | 6/26/2008 | 9/13/2013 | $24,149.00 | NEW |
| Police | 2008 | FORD | CROWN VICTORIA SEDAN | 6/26/2008 | 6/30/2015 | $24,149.00 | |
| Public Works | 2008 | INTERNATIONAL | DUMP TRUCK 7500 MODEL | 9/28/2007 | | $132,197.00 | NEW |
| Public Works | 2008 | INTERNATIONAL | DUMP TRUCK 7500 MODEL | 9/28/2007 | | $132,197.00 | NEW |
| Public Works | 2008 | Ford | F550 SERVICE BUCKET | 2/14/2008 | | $98,978.00 | NEW |
| Public Works | 2008 | INTERNATIONAL | DUMP TRUCK 7500 MODEL | 9/28/2007 | | $147,412.00 | NEW |
| Public Works | 2008 | INTERNATIONAL | DUMP TRUCK 7500 MODEL | 9/28/2007 | | $132,197.00 | NEW |
| School | 2008 | FREIGHTLINER | B2-106 School Bus # 4 | 8/31/2007 | | $71,755.00 | NEW |
| School | 2008 | FREIGHTLINER | B2-106 School Bus # 14 | 8/31/2007 | | $71,755.00 | NEW |
| Water Resrc | 2008 | FREIGHTLINER | 3500 SPRINTER 1 TON VAN | 10/9/2008 | | $128,000.00 | NEW |
| Water Resrc | 2008 | JOHN DEERE | 317 SKID STEER LOADER | 5/20/2008 | 8/27/2019 | $22,500.00 | NEW |
| Code Enforce | 2007 | FORD | FOCUS | 1/8/2008 | 6/23/2017 | $16,290.00 | NEW |
| Code Enforce | 2007 | FORD | FOCUS | 11/6/2006 | | $12,335.00 | NEW |
| Fire Dept | 2007 | CHEV | TAHOE | 11/7/2006 | | $30,946.00 | NEW |
| Fire Dept | 2007 | GMC | Sierra 3500 | 9/22/2006 | | $31,728.00 | NEW |
| Parks | 2007 | FORD | F-150 | 6/15/2007 | 3/6/2018 | $21,920.00 | NEW |
| Parks | 2007 | GMC | SIERRA PICKUP | 6/6/2007 | 2/18/2011 | $24,845.00 | NEW |
| Police | 2007 | HARLEY | FLHP MOTORCYCLE | 3/13/2007 | 12/31/2007 | $18,500.00 | LEASE |
| Police | 2007 | CHEVROLET | MALIBU UNMARKED POLICE CAR | 12/3/2008 | 6/30/2015 | $9,943.00 | USED |
| Police | 2007 | CHEVROLET | MALIBU UNMARKED POLICE CAR | 12/3/2008 | 2/25/2015 | $9,942.00 | USED |
| Police | 2007 | HARLEY | LHP MOTORCYCLE | 3/13/2007 | 12/31/2007 | $18,500.00 | LEASE |
| Police | 2007 | HARLEY | FLHP MOTORCYCLE | 3/13/2007 | 12/31/2007 | $18,500.00 | LEASE |
| Police | 2007 | HARLEY | FLHP MOTORCYCLE | 3/13/2007 | 12/31/2007 | $18,500.00 | LEASE |
| Public Works | 2007 | GMC | Sierra 150 | 7/18/2006 | | $13,701.00 | New |
| Public Works | 2007 | DODG | RAM CA | 5/22/2007 | | $28,611.00 | NEW |
| Public Works | 2007 | INTL | 7500 DUMP | 3/7/2007 | | $138,036.09 | NEW |
| Public Works | 2007 | TRACKLESS | SIDEWALK PLOW MT5 | 10/12/2007 | | $116,571.00 | NEW |
| Water Resrc | 2007 | INTERNATIONAL | 7500 DUMP | 5/25/2007 | | $85,086.02 | NEW |
| Water Resrc | 2007 | GMC | SAVANA VAN | 9/7/2007 | | $20,913.00 | NEW |
| Water Resrc | 2007 | FORD | F 350 ONE TON DUMP | 4/27/2007 | | $23,026.00 | NEW |
| Water Resrc | 2007 | GMC | ENVOY TT15506 | 6/15/2007 | | $27,566.00 | NEW |
| Water Resrc | 2007 | GMC | SIERRA 3500 1-TON DUMP | 11/9/2006 | | $16,865.00 | NEW |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Water Resrc | 2007 | CHEVROLET | UPLANDER MINI-VAN | 6/15/2007 | | $17,298.00 | NEW |
| Water Resrc | 2007 | FORD | F150 PICK UP | 4/11/2007 | | $14,858.00 | NEW |
| Code Enforc | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 9/19/2017 | $23,171.00 | NEW |
| Fire Dept | 2006 | JOHN DEERE | GATOR UTILITY | 12/20/2005 | | $14,208.00 | NEW |
| Fire Dept | 2006 | HAULMARK | RT85X20WT3 | 5/30/2006 | | $17,901.00 | NEW |
| Fire Dept | 2006 | FORD | E450 Road Rescue R5207 | 8/11/2006 | | $129,907.00 | NEW |
| Parks | 2006 | GMC | SIERRA C1500 PU | 5/15/2006 | 4/22/2019 | $13,049.00 | NEW |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 3/11/2011 | $23,171.00 | NEW |
| Police | 2006 | HARLEY | RoadKing Motorcycle | 3/15/2006 | 12/31/2006 | | lease |
| Police | 2006 | HARLEY | RoadKing Motorcycle | 5/8/2006 | 12/31/2006 | | |
| Police | 2006 | HARLEY | RoadKing Motorcycle | 5/8/2006 | 12/31/2006 | | |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 3/11/2011 | $23,171.00 | NEW |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 10/2/2017 | $23,171.00 | NEW |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 10/17/2012 | $23,171.00 | NEW |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 11/16/2009 | $23,171.00 | NEW |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 2/16/2012 | $23,171.00 | NEW |
| Police | 2006 | HARLEY | RoadKing Motorcycle | 3/15/2006 | 12/31/2006 | | LEASE |
| Police | 2006 | FORD | CROWN VICTORIA | 6/8/2006 | 2/16/2012 | $23,171.00 | NEW |
| Public Works | 2006 | JOHN DEERE | 624J | 1/13/2006 | | $158,400.00 | NEW |
| Public Works | 2006 | TRACKLESS | MT5 | 12/12/2005 | | $72,810.00 | NEW |
| School | 2006 | BLUE BIRD | BBCV3310 Bus #2 | 8/12/2005 | | $62,815.00 | PURCHASED NEW |
| School | 2006 | GMC | TG2340 SAVANNA VAN | 1/24/2006 | | $15,448.70 | PURCHASED NEW |
| Water Resrc | 2006 | CENTURION | SWEEPER CENT-3111 | 12/21/2005 | 8/10/2011 | $183,615.00 | |
| Water Resrc | 2006 | FORD | E250 ECONOLINE VAN | 8/2/2006 | | $18,333.00 | NEW |
| Water Resrc | 2006 | FRIEGHTLINER | M2106 DUMPTRUCK | 12/12/2005 | | $67,021.00 | NEW |
| Water Resrc | 2006 | GMC | TG23405-SAVANA VAN | 1/3/2006 | | $18,491.00 | NEW |
| Fire Dept | 2005 | HAULMARK | ET8SX24WT3 HAZMAT TRAILER | 10/21/2004 | | $17,700.00 | |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Parks | 2005 | ELDORADO | AEROTECH | 9/14/2005 | | $45,697.00 | NEW |
| Parks | 2005 | SUPERIOR | Equip Trailer - 26.516.5 | 7/7/2005 | | $2,274.00 | new |
| Parks | 2005 | CHEV | Trailblazer | 6/29/2005 | | $18,345.00 | USED |
| Police | 2005 | DODGE | CARAVAN-RSKL53 | 12/5/2005 | 6/30/2015 | $14,913.50 | USED |
| Police | 2005 | FORD | F450 UTILITY TRUCK | 11/23/2009 | | $18,000.00 | USED |
| Police | 2005 | HARLEY | SLHPI Motorcycle | 3/21/2005 | 12/31/2005 | | |
| Police | 2005 | HARLEY | SLHPI Motorcycle | 3/21/2005 | 12/31/2005 | | |
| Public Works | 2005 | BOBCAT | 5185 | 4/12/2005 | | $23,039.33 | Excellent |
| Public Works | 2005 | GMC | TCZE042 | 4/26/2005 | | $106,108.00 | Excellent |
| Public Works | 2005 | STERLING | Condor | 5/18/2005 | 11/24/2014 | $182,999.00 | New |
| Public Works | 2005 | STERLING | Condor | 5/18/2005 | 4/11/2007 | $182,999.00 | New |
| School | 2005 | CHEV | Silverado 1500 Regular Cab Truck | 9/1/2004 | 12/8/2017 | $14,668.00 | New |
| Water Resrc | 2005 | JOHN DEERE | 544J | 8/2/2005 | | $78,500.00 | NEW |
| Water Resrc | 2005 | FREIGHTLINER | M2106 Catch Basin Truck | 12/2/2004 | | $105,389.00 | New |
| Fire dept | 2004 | E-1 | Typhoon pumper | 4/13/2005 | | $259,498.00 | excellent |
| Fire Dept | 2004 | FORD | E450 - AMBULANCE | 2/5/2005 | 7/22/2016 | $109,514.00 | excellent |
| Fire Dept | 2004 | GMC | TK25903 | 12/12/2003 | | $23,227.00 | New |
| Fire Dept | 2004 | GMC | Yukon | 12/5/2003 | | $28,424.00 | New |
| Parks | 2004 | FORD | F-250 Truck | 2/11/2004 | 11/5/2015 | $24,635.00 | New |
| Police | 2004 | FORD | CROWN VICTORIA POLICE INTERCEPTOR | 3/31/2004 | 11/16/2009 | $21,863.00 | New |
| Police | 2004 | FORD | CROWN VICTORIA POLICE INTERCEPTOR | 3/31/2004 | 3/19/2009 | $21,863.00 | New |
| Police | 2004 | FORD | CROWN VICTOR POLICE INTERCEPTOR | 3/30/2004 | 10/6/2008 | $21,863.00 | New |
| Police | 2004 | VER-MAC MESSA | PCMS 548 TRAILER | 9/9/2004 | | $15,595.00 | |
| Police | 2004 | FORD | CROWN VICTORIA POLICE INTERCEPTOR | 3/31/2004 | 2/25/2015 | $21,863.00 | New |
| Police | 2004 | FORD | CROWN VICTOR POLICE INTERCEPTOR | 3/31/2004 | 11/5/2015 | $22,779.95 | New |
| Police | 2004 | FORD | CROWN VICTOR POLICE INTERCEPTOR | 3/31/2004 | 10/15/2015 | $21,863.00 | New |
| Police | 2004 | FORD | CROWN VICTORIA POLICE INTERCEPTOR | 3/31/2004 | 10/17/2012 | $21,863.00 | New |
| Police | 2004 | HARLEY | SLHPI Motorcycle | 4/15/2004 | 12/31/2004 | | New |
| Police | 2004 | HARLEY | SLHPI Motorcycle M-2 | 3/24/2004 | 12/31/2004 | | |
| Police | 2004 | VOLKSWAGEN | PASSAT | 12/18/2015 | | $26,520.00 | USED |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2004 | HARLEY | SLHPI Motorcycle M-3 | 3/24/2004 | 12/31/2004 | | |
| Police | 2004 | VER-MAC MESSA | PCMS 548 TRAILER | 9/9/2004 | | $15,595.00 | |
| Police | 2004 | FORD | CROWN VICTORIA POLICE INTERCEPTOR | 3/31/2004 | 10/17/2012 | $21,863.00 | New |
| Public Works | 2004 | FORD | TRUCK F-250 | 2/3/2004 | 8/9/2017 | $17,438.00 | New |
| Public Works | 2004 | FREIGHTLINER | FC80 TRUCK/STREET SWEEPER | 10/3/2003 | | $151,500.00 | New |
| Public Works | 2004 | FORD | F3500 HD TRUCK | 2/11/2004 | | $21,675.00 | New |
| Public Works | 2004 | GMC | TK15753 1500 | 3/11/2004 | 8/23/2016 | $20,381.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #13 | 2/9/2004 | | $53,548.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus # 7 | 2/17/2004 | 6/26/2019 | $53,548.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #16 | 2/9/2004 | | $53,548.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus # 8 | 1/24/2004 | 6/26/2019 | $53,548.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #17 | 2/11/2004 | | $53,548.00 | New |
| School | 2004 | FORD | E250 School Bus Lunch Van | 10/23/2003 | | $13,549.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #9 | 1/24/2004 | 6/26/2019 | $53,548.00 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #11 | 2/11/2004 | | $53,548.00 | New |
| School | 2004 | INTL | NAVI 3000 SE School Bus Bus #6 | 10/8/2003 | | $56,217.99 | New |
| School | 2004 | FREIGHTLINER | FS-65 Bus #12 | 2/17/2004 | 6/26/2019 | $53,548.00 | New |
| Bus | 2003 | THOMAS | 232SN | 10/7/2002 | 8/24/2015 | $239,355.40 | New |
| Facilities | 2003 | FORD | F-250 SERVICE TRUCK | 7/5/2016 | | $6,813.00 | USED |
| Fire Dept | 2003 | E-1 | CYCLONE II 75' LADDER E5 | 1/7/2004 | 1/16/2018 | $559,125.00 | New |
| Fire Dept | 2003 | SPARTAN | Rescue - VA41M-2142 SQ4 | 5/5/2003 | | $292,462.50 | New |
| Fire Dept | 2003 | GMC | TK25903 Pickup | 11/14/2002 | 9/15/2017 | $20,300.00 | |
| Parks | 2003 | FORD | F150 | 2/26/2003 | 8/28/2014 | $20,745.00 | New |
| Police | 2003 | HARLEY | SLHPI | | 12/31/2003 | | |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 11/16/2009 | $23,650.00 | New |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 9/12/2006 | $23,650.00 | New |
| Police | 2003 | HARLEY | SLHPI | | 12/31/2003 | | |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 10/6/2008 | $23,650.00 | New |
| Police | 2003 | FORD | Crown Victoria | 9/30/2002 | 9/17/2012 | $23,990.00 | New |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 9/12/2006 | $23,650.00 | New |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 3/31/2009 | $23,650.00 | New |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 10/6/2008 | $23,650.00 | New |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 10/6/2008 | $23,650.00 | New |
| Police | 2003 | FORD | Crown Victoria | 7/11/2002 | 11/16/2009 | $23,650.00 | New |
| Public Works | 2003 | STERLING | Dump Truck | 8/13/2002 | | $92,756.00 | New |
| Public Works | 2003 | STERLING | Dump Truck | 8/13/2002 | | $95,483.00 | New |
| Public Works | 2003 | STERLING | Dump Truck | 8/13/2002 | | $92,756.00 | New |
| Public Works | 2003 | GMC | TK25753 3 QUAR TON | 4/18/2003 | 12/8/2011 | $25,660.10 | New |
| School | 2003 | INTL | School Bus Bus #10 | 8/26/2002 | | $56,142.99 | New |
| School | 2003 | INTL | School Bus Bus #5 | 8/26/2002 | | $61,602.00 | New |
| Bus | 2002 | ORION | V-30 | 1/25/2012 | 6/23/2017 | $200,000.00 | USED |
| Bus | 2002 | THOMAS | SLF COMMERCIAL | 6/30/2002 | 8/24/2015 | $239,355.40 | New |
| Bus | 2002 | ORION | V-30 | 1/25/2012 | 6/23/2017 | $200,000.00 | USED |
| Fire Dept | 2002 | FERRARA | IGNITER E6 | 12/18/2002 | | $386,462.00 | New |
| Parks | 2002 | GMC | PK25903 3 Quarter | 6/28/2002 | 8/23/2013 | $26,920.00 | New |
| Police | 2002 | HARLEY | Motorcycle | | 11/1/2002 | | |
| Police | 2002 | GMC | Savana - White | 2/7/2002 | 6/21/2017 | $23,498.21 | New |
| Police | 2002 | HARLEY | Motorcycle | | 11/2/2002 | | |
| Public Works | 2002 | INTL | SANDER | 5/9/2000 | 8/17/2017 | $95,418.00 | New |
| Public Works | 2002 | STERLING | L7500 Sander | 4/19/2002 | | $98,995.00 | New |
| Public Works | 2002 | INTL | SANDER | 5/9/2000 | | $95,418.00 | New |
| Public Works | 2002 | KOMATSU | Grader | 8/30/2002 | | $136,156.00 | New |
| School | 2002 | BLUE BIRD | All Amer School Bus #20 | 8/2/2001 | 6/26/2019 | $73,800.00 | New |
| School | 2002 | GMC | T631503 Bus #22 | 4/30/2002 | | $32,500.00 | New |
| School | 2002 | CHEV | Van CG21405 | 6/18/2002 | | $15,293.35 | New |
| Fire Dept | 2001 | CHEV | Tahoe | 1/4/2001 | | $28,600.00 | New |
| Fire Dept | 2001 | GMC | TC15703 | 11/3/2000 | 11/22/2013 | $14,171.00 | New |
| Parks | 2001 | GMC | TC36403 | 7/25/2001 | 10/15/2012 | $26,513.00 | New |
| Public Works | 2001 | FORD | F350 | 12/19/2000 | 5/30/2019 | $34,651.00 | New |
| Public Works | 2001 | FREIGHTLINER | TK | 7/7/2000 | | $111,209.00 | New |
| School | 2001 | INTL | School Bus Bus #21 | 11/6/2000 | | $56,023.60 | New |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| School | 2001 | INTL | School Bus  Bus #19 | 11/6/2000 | 6/26/2019 | $48,939.47 | New |
| Water Resrc | 2001 | GMC | TC15903 | 1/1/2001 | 3/17/2009 | $15,396.00 | New |
| Code Enforce | 2000 | FORD | Taurus | 2/2/2000 | 7/27/2012 | $20,000.00 | New |
| Fire Dept | 2000 | FORD | E-450 | 5/3/2000 | 6/12/2014 | $109,321.50 | New |
| Fire Dept | 2000 | FORD | E-450 | 5/3/2000 | 8/11/2006 | $109,321.50 | New |
| Parks | 2000 | GMC | Sierra | 4/19/2000 | 8/28/2014 | $28,539.00 | |
| Police | 2000 | HARLEY | MC-31 | | 11/1/2002 | | |
| Police | 2000 | FORD | Crown Victoria | 5/11/2000 | 9/12/2006 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/11/2000 | 6/22/2004 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/10/2000 | 2/16/2012 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/11/2000 | 9/12/2006 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/11/2000 | 9/12/2006 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/10/2000 | 11/16/2009 | $23,000.00 | New |
| Police | 2000 | HARLEY | MC-51 | | 11/1/2002 | | |
| Police | 2000 | FORD | Crown Victoria | 5/8/2000 | 7/12/2002 | $23,000.00 | New |
| Police | 2000 | FORD | Crown Victoria | 5/11/2000 | 6/22/2004 | $23,000.00 | New |
| Public Works | 2000 | FREIGHTLINER | Medcon | 7/21/2000 | 8/15/2017 | $107,517.00 | New |
| Public Works | 2000 | CAT | 938G LOADER | 11/14/2000 | | $123,110.00 | |
| Public Works | 2000 | FREIGHTLINER | Medcon | 5/26/2000 | 8/9/2017 | $84,386.00 | New |
| Public Works | 2000 | FREIGHTLINER | Medcon | 7/21/2000 | 11/24/2014 | $107,517.00 | New |
| Public Works | 2000 | GMC | Sierra - TC15703 | 3/29/2000 | 8/9/2017 | $21,000.00 | New |
| Public Works | 2000 | FREIGHTLINER | Medcon | 5/26/2000 | 8/15/2017 | $84,386.00 | New |
| School | 2000 | INTL | School Bus Bus #1 | 2/26/2000 | 6/26/2019 | $50,000.00 | New |
| Water Resrc | 2000 | FREIGHTLINER | FL80 | 12/23/1999 | 12/8/2010 | $183,394.00 | New |
| Water Resrc | 2000 | GMC | Sierra | 12/23/1999 | 2/1/2010 | $23,366.00 | New |
| Bus | 1999 | GMC | Sierra | 11/25/1998 | 12/8/2011 | $25,322.00 | New |
| Bus | 1999 | GILLIG PHANTOM | Bus | 12/18/1998 | 6/15/2013 | $50,000.00 | |
| Bus | 1999 | GILLIG PHANTOM | Bus | 12/18/1998 | 6/15/2013 | $50,000.00 | |
| Parks | 1999 | CHEV | K2500 | 4/26/1999 | 2/16/2012 | $23,642.00 | New |
| Parks | 1999 | GMC | TC6H042 | 4/12/1999 | | $48,643.00 | New |
| Police | 1999 | OLDS | ALEROG 4 DOOR | 12/5/2007 | 3/13/2009 | $0.00 | USED |
| Police | 1999 | MERCURY | MOUNTAINEER SUV | 10/6/2008 | 8/29/2012 | $0.00 | USED |
| Police | 1999 | FORD | E-150 Van | 10/29/1998 | 10/22/2008 | $18,000.00 | New |
| Public Works | 1999 | INTL | Dump/Plow | 8/3/1998 | 9/21/2017 | $66,602.66 | New |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Public Works | 1999 | JOHNSTON | J3000 SWEEPER | 6/29/1999 | 7/11/2008 | $114,526.00 | New |
| Public Works | 1999 | TRACKLESS | MT-5 MULTIPURPOSE TRACTOR | 11/23/1998 | | $48,160.00 | New |
| Public Works | 1999 | INTL | Dump/Plow | 8/3/1998 | 7/1/2017 | $66,602.66 | New |
| Public Works | 1999 | INTL | Dump/Plow | 8/3/1998 | 8/23/2017 | $66,602.66 | New |
| Public Works | 1999 | GMC | Sierra | 5/28/1999 | 3/30/2009 | $23,778.99 | New |
| School | 1999 | CHEV | C3500 | 10/27/1998 | 3/13/2009 | $24,934.00 | New |
| School | 1999 | INTL | School Bus Bus #3 | 3/5/1999 | 6/30/2010 | $56,961.56 | New |
| School | 1999 | CHEV | K1500 Silverado | 1/6/1999 | 1/7/2011 | $18,786.00 | New |
| School | 1999 | THOMAS | STYLE 27 | | 12/31/1999 | | |
| Water Resrc | 1999 | INTL | TK 4900 | 7/14/1998 | | $120,000.00 | New |
| Water Resrc | 1999 | CHEV | TAHOE | 12/22/1998 | 9/14/2010 | $30,000.00 | New |
| Water Resrc | 1999 | CHEV | Silverado | 2/3/1999 | 9/14/2010 | $20,000.00 | New |
| Water Resrc | 1999 | CHEV | 1-Ton Dump | 10/26/1998 | 4/27/2007 | $25,000.00 | New |
| Fire Dept | 1998 | GMC | TC20903 S4 | 3/10/1998 | 7/5/2016 | $18,809.00 | Excellent |
| Planning | 1998 | FORD | Escort SW | 4/22/1998 | 3/19/2011 | $15,259.20 | Excellent |
| Police | 1998 | HARLEY | FLHPI | | 8/7/2001 | $10,000.00 | |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 5/23/2000 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 9/26/2002 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 5/23/2000 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 9/12/2006 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 9/26/2002 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 5/23/2000 | $21,500.00 | Excellent |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 5/23/2000 | $21,500.00 | Excellent |
| Police | 1998 | CHEVROLET | K2500 PICKUP TRUCK | 2/8/2010 | | $0.00 | USED |
| Police | 1998 | FORD | Crown Victoria | 2/5/1998 | 9/26/2002 | $21,500.00 | Excellent |
| School | 1998 | CHEV | K2500 Pickup Truck | 10/14/1997 | 1/7/2011 | $22,521.00 | Excellent |
| School | 1998 | CHEV | K2500 Pickup Truck | 10/8/1997 | 3/23/2010 | $22,521.00 | Excellent |
| School | 1998 | INTL | School Bus Bus #18 | 4/7/1998 | 3/31/2009 | $54,991.00 | Excellent |
| Bus | 1997 | GMC | GMT 400 3500 HD | 3/1/1997 | 10/19/2017 | $35,000.00 | Excellent |
| Fire Dept | 1997 | GMC | TK30903 1 ton | 5/2/1997 | 6/13/2013 | $24,237.00 | Excellent |
| Parks | 1997 | GMC | TC10903 | 11/27/1996 | 12/22/2010 | $18,000.00 | New |
| Police | 1997 | FORD | Crown Victoria | 11/20/1996 | 9/12/2006 | $21,000.00 | Excellent |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Police | 1997 | FORD | EXPLORER SUV | 12/1/2006 | 3/13/2009 | $0.00 | USED |
| Public Works | 1997 | GMC | TC31403 Dump C/K3500 | 9/5/1996 | 2/11/2004 | $40,000.00 | Good |
| Public Works | 1997 | INTL | 2554 Dump | 5/12/1997 | 11/21/2014 | $87,096.26 | Excellent |
| Public Works | 1997 | JOHN DEERE | 624G LOADER | 2/24/1997 | | $126,389.00 | New |
| Public Works | 1997 | CHAMPION | 710A Grader | 2/13/1997 | | $108,000.00 | Excellent |
| Public Works | 1997 | JOHN DEERE | 624G LOADER | 2/28/1997 | | $126,389.00 | New |
| School | 1997 | GMC | Safari | | 5/14/2002 | $18,000.00 | |
| Water Resrc | 1997 | GMC | Van | 12/30/1996 | 9/7/2007 | $20,000.00 | Very Good |
| Bus | 1996 | ORION | Bus | 6/1/1996 | 10/23/2017 | $194,000.00 | Excellent |
| Bus | 1996 | ORION | Bus | 6/1/1996 | 6/15/2013 | $194,000.00 | Excellent |
| Bus | 1996 | ORION | Bus | 6/1/1996 | 6/15/2013 | $194,000.00 | Excellent |
| Code Enforce | 1996 | BUICK | Century | 7/11/1996 | 11/6/2006 | $15,000.00 | |
| Finance | 1996 | BUICK | Century | 10/8/1996 | 1/8/2008 | $15,000.00 | |
| Fire Dept | 1996 | PIERCE AROW | Aerial Platform T-1 | 9/1/1995 | | $120,000.00 | Excellent |
| Fire Dept | 1996 | FORD | Crown Victoria | 1/22/1996 | 12/5/2003 | $20,000.00 | Excellent |
| Parks | 1996 | GMC | C-1500 1/2 Ton Pickup | 11/1/1996 | 1/24/2008 | $18,000.00 | Excellent |
| Police | 1996 | FORD | Crown Victoria | 2/9/1996 | 2/27/1998 | | Good |
| Police | 1996 | FORD | Crown Victoria | 2/8/1996 | 2/19/1998 | | Good |
| Police | 1996 | FORD | Crown Victoria | 1/23/1996 | 6/22/2004 | $20,000.00 | Good |
| Police | 1996 | FORD | Crown Victoria | 1/23/1996 | 6/22/2004 | $20,000.00 | Good |
| Police | 1996 | FORD | Crown Victoria | 2/9/1996 | 2/19/1998 | | Good |
| Police | 1996 | FORD | Crown Victoria | 12/6/1995 | 5/26/2006 | $20,000.00 | Excellent |
| Police | 1996 | BUICK | Century | 12/4/1995 | 9/30/2002 | $13,437.00 | |
| Police | 1996 | FORD | Crown Victoria | 1/23/1996 | 6/22/2004 | $20,000.00 | Good |
| Police | 1996 | FORD | Crown Victoria | 2/7/1996 | 2/19/1998 | | Good |
| Police | 1996 | FORD | Crown Victoria | 1/23/1996 | 6/22/2004 | $20,000.00 | Good |
| Public Works | 1996 | TRACKLESS | SIDEWALK TRACKLESS TRACTOR WITH V PLOW | 1/1/1996 | 5/14/2004 | $54,449.00 | New |
| Fire Dept | 1995 | CHEV | Blazer C3 | 6/1/1995 | 11/6/2006 | $14,100.00 | TRADED IN |
| Parks | 1995 | FORD | F450 | 2/21/1995 | 10/13/2009 | $22,386.00 | Like New |
| Public Works | 1995 | FORD | F350 | 1/1/1995 | 7/1/2008 | $21,204.00 | Good |
| Public Works | 1995 | FORD | LTS8000 Packer | 1/1/1995 | 6/7/2006 | $81,735.00 | Good |
| Public Works | 1995 | FORD | L8000 Dump | 1/1/1995 | 7/4/2017 | $64,972.00 | Good |
| Public Works | 1995 | CHEV | S.B. PU GMC Truck | 1/1/1995 | 2/3/2004 | $18,000.00 | Good |
| Public Works | 1995 | ELGIN | Street Sweeper | 1/1/1995 | 3/31/2004 | $72,000.00 | Good |
| Public Works | 1995 | FORD | L8000 Dump | 1/1/1995 | 7/11/2008 | $65,000.00 | Good |
| Public Works | 1995 | FORD | L8000 Dump | 1/1/1995 | 2/16/2012 | $65,000.00 | Good |
| Public Works | 1995 | FORD | LTS8000 Packer | 1/1/1995 | 6/7/2006 | $81,735.00 | Good |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| School | 1995 | NAVI | School Bus Bus #17 TK | 6/15/1995 | 5/18/2004 | $49,062.00 | |
| School | 1995 | NAVI | School Bus Bus #12 TK | 6/15/1995 | 5/18/2004 | $49,062.00 | |
| School | 1995 | NAVI | School Bus Bus #13 TK | 6/15/1995 | 5/18/2004 | $49,062.00 | |
| School | 1995 | NAVI | School Bus Bus #16 TK | 6/15/1995 | 5/18/2004 | $49,062.00 | |
| School | 1995 | GMC | Carpenter Bus Bus #11 | 2/7/1995 | 5/18/2004 | $29,000.00 | |
| School | 1995 | INTL | School Bus Bus #15 | | 7/1/2008 | $47,915.00 | |
| School | 1995 | INTL | School Bus Bus #14 | | 7/1/2008 | $47,915.00 | |
| Water Resrc | 1995 | GMC | Van | 1/1/1995 | 8/2/2006 | $18,000.00 | Very Good |
| Water Resrc | 1995 | CHEV | S10 Blazer | 1/1/1995 | 6/15/2007 | $16,869.00 | Excellent |
| Parks | 1994 | GMC | TC10903 | 2/22/1994 | 5/15/2006 | $20,000.00 | Like New |
| Police | 1994 | HUMMER | H-1 MILITARY VEHICLE | 12/1/2009 | 7/1/2014 | $46,000.00 | USED |
| Police | 1994 | CHEV | 1 Ton Pickup | 1/1/1994 | 3/11/2011 | $20,000.00 | Good |
| Police | 1994 | CHEV | Caprice | 3/10/1994 | 2/19/1998 | | Good |
| Police | 1994 | CHEV | Caprice | 3/14/1994 | 2/19/1998 | | Good |
| Water Resrc | 1994 | GMC | 1 Ton | 1/1/1994 | 11/9/2006 | $18,000.00 | Very Good |
| Engineering | 1993 | GMC | TC10903 | 1/1/1993 | 3/11/2004 | $14,123.00 | Fair |
| Fire Dept | 1993 | FERRERA | Pumper E8 | 6/27/1997 | 4/13/2005 | $187,000.00 | Excellent |
| Fire Dept | 1993 | INTL | Rescue | 3/1/1993 | 9/28/2011 | | Good |
| Fire Dept | 1993 | INTL | Ambulance | 3/26/1993 | 2/4/2005 | $82,500.00 | |
| Parks | 1993 | GMC | TK20903 | 11/1/1993 | 6/27/2002 | $17,232.00 | Good |
| Parks | 1993 | GMC | TC10903 | 11/1/1993 | 6/6/2007 | $14,124.00 | Good |
| Police | 1993 | DODGE | STEALTH | 5/8/2012 | 9/13/2013 | $20,753.00 | USED |
| Police | 1993 | BMW | K75R Motorcycle | 6/3/1997 | 5/31/2006 | $2,800.00 | |
| Police | 1993 | CHEV | Caprice | 4/28/1993 | 9/26/2002 | $15,824.00 | Good |
| Police | 1993 | GMC | K2500S Chevy Suburban Wagon | 12/12/2003 | 3/11/2011 | $0.00 | Used |
| Police | 1993 | INTL | Comm/SRT | 7/27/2000 | 9/28/2011 | $10,000.00 | |
| School | 1993 | INTL | 3800 Bus Bus #7 TK | 10/14/1993 | 5/18/2004 | $49,000.00 | |
| School | 1993 | GMC | TM10906 | 12/22/1992 | 5/18/2004 | $15,824.00 | |
| School | 1993 | FORD | SU Cargo Van | | 10/23/2003 | $14,000.00 | |
| Water Resrc | 1993 | GMC | T.V. Unit Van | 1/1/1993 | 10/23/2008 | $65,000.00 | Very Good |
| Water Resrc | 1993 | GMC | TC10903 | 1/1/1993 | 4/11/2007 | $14,123.00 | Very Good |
| Water Resrc | 1993 | GMC | 4x4 Pickup | 1/1/1993 | 11/14/2002 | $17,876.00 | Very Good |
| Fire Dept | 1992 | FERRARA | Engine E2 | 1/1/1993 | | $187,000.00 | Excellent |
| Fire Dept | 1992 | INTL | Emerg-One 1000 G.P.M | 1/1/1992 | 5/22/2007 | $185,000.00 | Very Good |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Fire Dept | 1992 | INTL | EMERG-ONE Engine E3 | | 7/3/2013 | $104,675.00 | |
| Police | 1992 | FORD | Club Wagon | 6/7/2000 | 5/26/2006 | $10,000.00 | |
| School | 1992 | NAVI | School Bus Bus #9 TK | 10/31/1991 | 5/18/2004 | $49,288.00 | |
| School | 1992 | FORD | F350 | | 10/27/1998 | | Poor |
| School | 1992 | INTL | School Bus Bus #2 | | 6/7/2006 | $49,288.00 | |
| Water Resrc | 1992 | GMC | TG31305 Van | 1/1/1992 | 1/3/2006 | $15,824.00 | Good |
| Fire Dept | 1991 | E-1 | Engine E1 | 1/1/1991 | 11/1/2017 | $104,675.00 | Very Good |
| Parks | 1991 | GMC | 1/2 Ton | 11/1/1991 | 2/29/2004 | $11,235.00 | Good |
| Police | 1991 | DODGE | Caravan | 4/25/1995 | 9/26/2002 | $12,000.00 | Fair |
| School | 1991 | INTL | School Bus | | 2/11/2002 | | |
| Water Resrc | 1991 | GMC | Pickup | 10/5/1990 | 6/15/2007 | $15,000.00 | Good |
| Code Enforce | 1990 | GMC | S-15 Pickup | 11/1/1989 | 11/3/2000 | | Poor |
| Fire Dept | 1990 | CHEV | Caprice | 1/1/1990 | 9/14/2001 | $13,000.00 | Fair |
| Fire Dept | 1990 | E-1 | Ladder tk with 10 Ma | 2/14/1991 | | $104,675.00 | Excellent |
| Parks | 1990 | CHEV | Caprice | | 6/30/2001 | $10,000.00 | Sold 5/6/97 |
| Police | 1990 | FORD | Crown Victoria | 7/13/1990 | 9/26/2002 | $13,800.00 | Good |
| Police | 1990 | CHEV | Van | 6/6/1990 | 10/6/2004 | $13,600.00 | Excellent |
| Public Works | 1990 | CHEV | 1/2 Ton | 1/1/1989 | 3/29/2000 | $11,290.00 | Fair |
| School | 1990 | INTL | School Bus Bus #8 | | 5/18/2004 | $49,288.00 | |
| Engineering | 1989 | CHEV | S-10 Blazer | | 8/7/2001 | $14,100.00 | |
| Fire Dept | 1989 | CHEV | 3/4 Ton 4x4 | 1/1/1989 | 5/2/1997 | | |
| Parks | 1989 | GMC | F350 | 10/2/1989 | 8/8/2001 | | Good |
| Police | 1989 | CHEV | Caprice | 3/5/1989 | 9/26/2002 | $12,800.00 | Good |
| Public Works | 1989 | FORD | Dump/plow | 1/1/1989 | 9/30/2002 | $61,000.00 | Fair |
| Public Works | 1989 | FORD | Dump/plow | 1/1/1989 | 6/13/2006 | $61,000.00 | Fair |
| Public Works | 1989 | CHEV | 3/4 Ton K2500 CAB PICKUP | 11/20/1988 | 5/14/2004 | $14,300.00 | getting tired |
| Public Works | 1989 | FORD | Dump/plow | 1/1/1989 | 9/30/2002 | $61,000.00 | Fair |
| School | 1989 | INTL | School Bus Bus #4 | | 5/18/2004 | $46,744.00 | |
| Water Resrc | 1989 | INTL | F1954/Ram Eject | 1/1/1989 | 5/25/2007 | $80,000.00 | Fair |
| Water Resrc | 1989 | CHEV | Catchbasin Cleaner | 1/1/1989 | 12/2/2004 | $30,000.00 | Good |
| Water Resrc | 1989 | FORD | F350/Dump Body & Hoi | 1/1/1989 | 8/7/2001 | $16,400.00 | Poor |
| Water Resrc | 1989 | FIAT/ALLIS | LOADER FR11 | 1/1/1989 | 8/2/2002 | $86,000.00 | |
| Code Enforce | 1988 | CHEV | Celebrity | 12/31/1987 | 2/2/2000 | | Fair |
| Engineering | 1988 | CHEV | Astro Van | 2/20/1997 | 9/14/2001 | $12,900.00 | |
| Parks | 1988 | FORD | F350 | 11/23/1987 | 4/19/2000 | | Good |
| Police | 1988 | CHEV | Caprice | 4/23/1988 | 11/8/2004 | $11,700.00 | Good |
| Police | 1988 | GMC | S-15 Pickup | 8/3/1988 | 10/29/1998 | | Fair |
| Public Works | 1988 | GMC | Utility | 1/1/1987 | 12/19/2000 | $13,779.00 | Poor |
| Public Works | 1988 | BLANCHET | SNOWBLOWER | | 9/14/2001 | $50,000.00 | |
| School | 1988 | CHEV | 4X4 Pickup | | 10/14/1997 | | |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Water Resrc | 1988 | INTL | Sewer Cleaner | 1/1/1988 | 12/23/1999 | | Poor |
| Water Resrc | 1988 | GMC | Pickup | 1/1/1988 | 5/7/1999 | $9,300.00 | Poor |
| Bus | 1987 | ORION | Bus | 11/1/1987 | 6/13/2006 | $120,000.00 | Good |
| Fire Dept | 1987 | E-1 | Pumper CYCLONE | 1/1/1980 | 1/7/2004 | $150,000.00 | Good |
| Parks | 1987 | FORD | F150 | 1/27/1987 | 2/26/2003 | $10,635.00 | Fair |
| Police | 1987 | PONTIAC | Grand Prix | 8/1/1990 | 5/23/2000 | $10,000.00 | Good |
| Public Works | 1987 | FIAT | LOADER | 1/1/1987 | 6/13/2006 | $126,000.00 | New |
| Public Works | 1987 | GMC | Utility | 1/1/1987 | 5/28/1999 | $13,900.00 | Poor |
| School | 1987 | FORD | F150 Pickup | | 1/6/1999 | | |
| School | 1987 | CHEV | School Bus | | 11/6/2000 | | |
| School | 1987 | THOMAS | School Bus | | 9/10/2001 | | |
| School | 1987 | DODGE | D10 Pickup | | 10/8/1997 | | |
| School | 1987 | FORD | Pickup | 12/31/1986 | 12/31/1999 | $11,200.00 | Poor |
| Water Resrc | 1987 | FORD | Utility | 1/1/1987 | 12/23/1999 | | Fair |
| Water Resrc | 1987 | INTL | Dumpster | 1/1/1987 | 12/12/2005 | $51,849.00 | Fair |
| Bus | 1986 | FORD | F250 4X4 Pickup | 11/1/1996 | 8/7/2001 | $11,000.00 | Fair |
| Bus | 1986 | FORD | F150 Pickup | 3/1/1993 | 8/7/2001 | $11,000.00 | Fair |
| Engineering | 1986 | FORD | LTD | | 8/7/2001 | $11,000.00 | |
| Fire Dept | 1986 | FORD | Type III Rescue | 6/1/1986 | 5/3/2000 | | Poor |
| Police | 1986 | CHEV | Camaro | 3/24/1992 | 5/23/2000 | $11,700.00 | Good |
| Police | 1986 | FORD | Crown Victoria | 3/10/1986 | 5/23/2000 | $11,000.00 | Fair |
| Public Works | 1986 | INTL | Dump | 1/1/1992 | 5/14/2004 | $30,000.00 | Fair |
| School | 1986 | CHEV | School Bus | | 3/5/1999 | | |
| Fire Dept | 1985 | HAHN | Engine E9 | | 8/12/2011 | $110,000.00 | Good |
| Police | 1985 | FORD | Type III Rescue | 6/1/1993 | 2/7/2002 | $20,000.00 | Good |
| Police | 1985 | CHEV | Pickup | | 6/22/2004 | $10,000.00 | |
| Police | 1985 | FORD | Econoline | 6/24/1996 | 6/13/2000 | $10,000.00 | Good |
| Police | 1985 | FORD | Mustang | 7/22/1993 | 5/23/2000 | $10,000.00 | Good |
| Police | 1985 | MERCURY | Cougar | 7/23/1993 | 4/14/1998 | $10,000.00 | Fair |
| Public Works | 1985 | INTL | Sander | 1/1/1992 | 8/31/2001 | $30,000.00 | Fair |
| Public Works | 1985 | CHAMPION | Grader | 1/1/1995 | 9/30/2002 | $45,000.00 | Good |
| Public Works | 1985 | INTL | Sander | 1/1/1992 | 9/30/2002 | $30,000.00 | Fair |
| Public Works | 1985 | INTL | Packer | 1/1/1991 | 7/21/2000 | $17,500.00 | Fair |
| School | 1985 | CHEV | School Bus | | 3/5/1999 | | |
| School | 1985 | CHEV | School Bus | 3/4/1985 | 2/18/2000 | | |
| Water Resrc | 1985 | CHEV | S10 Pickup | | 8/7/2001 | $7,850.00 | Extremely Poor |
| Bus | 1984 | BLUE BIRD | Bus | 1/1/1983 | 12/18/1998 | | Fair |

# VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Bus | 1984 | FORD | Ranger | 7/1/1984 | 4/30/1997 | | Very Poor |
| Engineering | 1984 | CHEV | Celebrity | | 8/7/2001 | $7,800.00 | |
| Fire Dept | 1984 | CHEV | 1 1/2 Ton Squad tk | 1/1/1984 | 2/23/2006 | $8,000.00 | Good |
| Parks | 1984 | FORD | Bucket Truck | 12/31/1983 | 12/27/2007 | $14,000.00 | Good |
| Public Works | 1984 | GMC | Dump | 1/1/1991 | 5/26/2000 | $15,000.00 | Fair |
| Public Works | 1984 | GMC | Dump Truck | 1/1/1991 | 8/3/1998 | $30,000.00 | Poor |
| Public Works | 1984 | GMC | Dump Truck | 1/1/1991 | 9/14/2001 | $30,000.00 | Poor |
| Public Works | 1984 | INTL | Dump Truck | 1/1/1991 | 9/14/2001 | $30,000.00 | Good |
| Police | 1983 | FORD | Crown Victoria | 3/10/1994 | 11/10/1997 | $10,000.00 | Fair |
| Bus | 1982 | BLUE BIRD | Bus | 12/1/1982 | 11/19/2002 | $118,500.00 | Good |
| Bus | 1982 | BLUE BIRD | Bus | 12/1/1982 | 12/18/1998 | | Poor |
| Bus | 1982 | BLUE BIRD | Bus | 12/1/1982 | 9/14/2001 | $118,500.00 | Good |
| Bus | 1982 | BLUE BIRD | Bus | 12/1/1982 | 4/30/1997 | | Junk |
| Bus | 1982 | BLUE BIRD | Bus | 12/1/1982 | 4/30/1997 | | Poor |
| Police | 1982 | INTL | Bus | 3/1/1995 | 5/23/2000 | $17,995.00 | Fair to Poor |
| Public Works | 1982 | INTL | Dump Truck | 1/1/1990 | 9/14/2001 | $30,000.00 | Fair |
| Public Works | 1982 | INTL | Sander | 1/1/1990 | 8/3/1998 | | Poor |
| Public Works | 1982 | INTL | Sander | 1/1/1990 | 8/3/1998 | | Poor |
| Public Works | 1982 | INTL | Dump Truck | 1/1/1990 | 9/14/2001 | $30,000.00 | Fair |
| Public Works | 1982 | INTL | Sander | 1/1/1990 | 5/26/2000 | | Poor |
| Fire Dept | 1981 | MACK | Engine | | 7/1/2005 | $70,000.00 | Good |
| Parks | 1981 | FORD | | 10/31/1994 | 10/3/2002 | $22,500.00 | Fair |
| Public Works | 1981 | CHEV | 1 Ton | | 5/20/1998 | | Poor |
| Public Works | 1981 | CCC | | 1/1/1992 | 7/21/2000 | $4,000.00 | Poor |
| Water Resrc | 1981 | FIAT-ALLIS | LOADER | 1/1/1981 | 8/2/2005 | $82,000.00 | New |
| Police | 1980 | FORD | Pickup | 1/4/1984 | 5/11/1998 | | Good |
| Police | 1980 | DODGE | Van | 6/2/1992 | 4/30/1998 | $15,000.00 | Fair to Poor |
| Fire Dept | 1978 | AMERICAN | Engine | 1/1/1978 | 4/15/2003 | $103,000.00 | Poor |
| Police | 1977 | GMC | Pickup/plow | 9/9/1991 | 9/3/1997 | | Very Poor |
| Water Resrc | 1977 | INTL | Dump Truck | 1/1/1977 | 8/7/2001 | $50,000.00 | Poor |
| Police | 1973 | CHEV | Van | | 5/23/2000 | $10,000.00 | |
| Fire Dept | 1966 | AMERICAN | Engine | 1/1/1967 | 12/31/1997 | $10,000.00 | Very Poor |
| Fire Dept | 1924 | AHRENS-FOX | Engine | | | $10,000.00 | Very Good |
| Fire Dept | | | | 12/31/2008 | | $129,096.00 | |

VEHICLES

| Dept | Yr | Make | Model | Acquired | Sold | Purchase Amt | Condition |
|---|---|---|---|---|---|---|---|
| Water Rescr | | | 7 YD DUMP TRUCK BODY | 7/26/2017 | | $14,550.00 | |
| Water Resrc | | GALION | DUMP TRUCK BODY | 5/15/2014 | | $17,950.00 | |

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# Capital Improvement Plan

## Glossary

**Annual Budget** – a budget applicable to a single fiscal year.

**Appropriation** – an authorization granted by City Council to a specified unit of City government to incur obligations and make expenditures of resources.

**Assessment** - the official valuation of property for purposes of taxation.

**Bond** – a written promise to pay a specified sum of money (called principal) at a specified date in the future, plus periodic interest at a specified rate. In the budget document these payments are identified as debt service. General Obligation Bonds are debt approved by voter referendum to which the full faith and credit of the City is pledged.

**Budget** – a plan for the acquisition and allocation of resources to accomplish specified purposes. The term may be used to describe special purpose fiscal plans or parts of a fiscal plan, such as "the budget of the Fire Department," the Capital Budget" or it may relate to a fiscal plan for an entire jurisdiction, such as "the budget of the City of South Portland."

**Capital** – a category of account codes which identify major expenditures of public funds, beyond maintenance and operating costs, for procurement of items such as vehicles, computer equipment, office furniture, and the acquisition or construction of a needed physical facility.

**Capital Equipment** – fixed assets such as automobiles, typewriters, furniture, technical instruments, etc., which have a life expectancy of more than one year and a value over five hundred dollars.

**Capital Improvement Program (CIP)** – a document which provides a prioritization and orderly implementation of short and long-range plans for land acquisition and construction of capital projects. It further provides for the scheduling of the associated expenditures over a period of seven years in order to maximize the use of public funds. The first year of the program represents the proposed capital budget for that fiscal year. The schedule is based on a series of priorities which take into consideration the respective projects' function and urgency. In addition, special consideration is given to the projects' relation to other improvements and plans, and the City's current and anticipated financial capacity. The Capital Improvement Program is updated annually, at which time the schedule and the projects are reevaluated, new or deferred projects are added, and the time frame is extended by one additional fiscal year.

**Capital Outlays** – expenditures which result in the acquisition of or an addition to fixed assets.

**Debt** – an obligation resulting from the borrowing of money.

**Debt Service** – the accounting for payments of principal and interest on long-term debt.

**Deficit** – (1) the excess of the liabilities of a fund over its assets. (2) the excess of expenditures over revenues during an accounting period.

**Designated Fund Equity** – funds approved and set-aside for a specific defined purpose, by the City Council.

**Fiscal Year** – in the City of South Portland, the twelve months beginning July 1 and ending the following June 30th.

**Fund** – a fiscal and accounting entity with a self-balancing set of accounts that are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions or limitations.

**Fund Balance** – the excess of a fund's assets over its liabilities and reserves.

**Generally Accepted Accounting Principles** – government accounting and financial reporting is guided by what are referred to as "generally accepted accounting principles" (GAAP) applicable to governmental units. These standards were formulated through the voluntary action of several professional groups and are evaluated and updated by the Government Accounting Standards Board (GASB).

**General Fund** – accounts for the general operations of the City. This fund accounts for all financial transactions and resources not required to be accounted for in an enterprise fund.

**Operating Expenditures** – a category of recurring expenses other than salaries and capital equipment costs, which covers expenditures necessary to maintain facilities, collect revenues, provide services and otherwise carry out the City's goals. Typical line items are supplies, printing, postage, transportation and utilities.

**Reserve** – an account, which records a portion of the fund, balance which must be segregated for some future use and which is not available for future appropriation or expenditures.

**Revenues** – funds which the government receives as income. It includes such items as fees from specific services, boarding of prisoners, grants, and interest income.

**Surplus** – See Fund Balance.

**Unappropriated or Undesignated Fund Balance** – fund balance at close of fiscal year is not included in the annual budget.

# SECTION IV

# 20-year CIP History

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**CITY OF SOUTH PORTLAND**
**CAPITAL IMPROVEMENT PROGRAM**
**APPROVED GENERAL OBLIGATION BONDS**
**20-YEAR HISTORY**

**2021**

There were no general obligation bonds

**2020**

| | |
|---|---|
| Cash Corner Fire Station and Improvements to the Police Station & other Fire Stations | **$7,000,000** |
| Traffic and Pedestrian Improvements | **$2,275,000** |
| New Middle School | **$69,269,073** |
| | **$78,544,073** |

**2019**

There were no general obligation bonds

**2018**

There were no general obligation bonds

**2017**

There were no general obligation bonds

**2016**

There were no general obligation bonds

**2015**

| | |
|---|---|
| Thornton Heights Separation Phases II, III and IV | **$3,500,000** |

**2014**

| | |
|---|---|
| Community Services Facility | **$14,000,000** |

**2013**

There were no general obligation bonds

**2012**

There were no general obligation bonds

**2011**

| | |
|---|---|
| South Portland High School Renovations | **$41,500,000** |

**2010**

There were no general obligation bonds

**2009**

There were no general obligation bonds

**2008**

There were no general obligation bonds

**2007**

There were no general obligation bonds

**2006**

| | |
|---|---|
| Street Paving Program | **$500,000** |

**2005**

There were no general obligation bonds.

**2004**

There were no general obligation bonds.

**2003**

There were no general obligation bonds.

**2002**

| | |
|---|---|
| Elementary Schools | $28,000,000 |
| Dump Trucks with Plows (3) | 300,000 |
| Sidewalks | 300,000 |
| | **$28,600,000** |

| Functional Area | CIP Project | Department's Requested Project Cost | Manager's Recommended Project Cost | G.O. Bonds | Prior Year's CIP Balance | TIF Reserves | General Fund Reserves/ Operating | Other Fund Reserves/ Fund Balance | Grants | General Fund Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **FY 2021 CIP REQUEST** | | | | | | | | | | |
| Cultural and Recreational Facilities | Recreation - Renovate Community Center Space for Senior Drop-in Center (CDBG match) | $ 52,250 | **$ 52,250** | | | | $ 12,750 | | $ 39,500 | |
| Cultural and Recreational Facilities | Recreation - SPCC - Pool Wall Repair | $ 57,782 | **$ 57,782** | | | | | | | $ 57,782 |
| Cultural and Recreational Facilities | Recreation - SPCC - Pool Boiler Replacement | $ 47,610 | **$ 47,610** | | | | | | | $ 47,610 |
| Cultural and Recreational Facilities | Recreation - SPCC - Skatepark Construction | $ 450,000 | **$ 450,000** | | | | $ 115,948 | | $ 112,500 | $ 221,552 |
| Environmental Protection | Water Resource Protection - CSO Facilities Plan Update | $ 300,000 | **$ 300,000** | | | $ 300,000 | | | | |
| Environmental Protection | Water Resource Protection - Treatment Plant Electrical Service Phase 2 | $ 775,000 | **$ 775,000** | | | | | $ 775,000 | | |
| Environmental Protection | Water Resource Protection - Unit #9 7-Yard Dump Truck Replacement | $ 173,000 | **$ 173,000** | | | | | $ 173,000 | | $ - |
| Environmental Protection | Water Resource Protection - Unit #5 Pick-up Truck Replacement | $ 29,000 | **$ 29,000** | | | | | $ 29,000 | | $ - |
| Environmental Protection | Water Resource Protection - 12,000 lb Construction Trailer | $ 11,000 | **$ 11,000** | | | | | $ 11,000 | | |
| Environmental Protection | Water Resource Protection - Paper Street/Sewer Easements | $ 15,000 | **$ 15,000** | | | | | | | $ 15,000 |
| General Government | Economic Development - Branding | $ 50,000 | **$ 50,000** | | | $ 50,000 | | | | |
| General Government | Facilities - Study - Long Term Facilities Plan for Mahoney/ City Buildings | $ 190,770 | **$ 120,000** | | | $ 65,000 | | | | $ 55,000 |
| General Government | Facilities - Miscellaneous Tools, Equipment, and Utility Trailer | $ 11,900 | **$ 11,900** | | | | | | | $ 11,900 |
| General Government | Facilities - Operations Software | $ 16,300 | **$ 16,300** | | | | | | | $ 16,300 |
| General Government | Facilities - MSF Security Upgrades | $ 50,000 | **$ 50,000** | | $ 50,000 | | | | | |
| General Government | Finance - Tax Office Counters and Furniture | $ 30,000 | **$ 30,000** | | | | $ 15,000 | | | $ 15,000 |
| General Government | Information Systems - Virtual Network Controllers | $ 85,000 | **$ 85,000** | | | | $ 85,000 | | | |
| General Government | Information Systems - Back and Recovery Data System | $ 75,000 | **$ 75,000** | | | | | | | $ 75,000 |
| General Government | Information Systems - Enterprise Data Server License | $ 35,000 | **$ 35,000** | | | | $ 35,000 | | | |
| General Government | Information Systems - Computer Reserve | $ 50,000 | **$ 30,000** | | | | | | | $ 30,000 |
| General Government | Parks, Recreation & Waterfront - Portland Harbor Dredge | $ 675,000 | **$ 675,000** | | | $ 675,000 | | | | |
| General Government | Planning & Development - Comprehensive Plan Update (includes added focus on Maine Mall area and | $ 150,000 | **$ 120,000** | | | $ 50,000 | | | | $ 70,000 |
| Parks and Open Space | Parks - Veterans Monument at Mill Creek Park Rehab | $ 20,000 | **$ 20,000** | | | | | | | $ 20,000 |
| Parks and Open Space | Waterfront - Thomas Knight Park Boat Launch Repair | $ 65,000 | **$ 65,000** | | | | | | | $ 65,000 |
| Parks and Open Space | Parks/Planning & Development - Pleasantdale Greenbelt Walkway - Year One | $ 50,000 | **$ 50,000** | | | | | $ 50,000 | | |
| Public Safety | Fire - Vehicle Lifts for Mechanic | $ 70,000 | **$ 70,000** | | $ 70,000 | | | | | |
| Public Safety | Fire - Command Vehicle Car 44 | $ 55,000 | **$ 55,000** | | | | $ 55,000 | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Public Safety | Police - Regional Crime Lab | $ 12,000 | **$ 12,000** | | | | | | | $ 12,000 |
| Public Safety | Police - Mobile Video System Replacement | $ 75,000 | **$ 75,000** | | $ 1,560 | | | | | $ 73,440 |
| Public Safety | Police - Portable Radio Replacement (20) | $ 165,000 | **$ 110,000** | | $ 40,882 | | | | | $ 69,118 |
| Public Safety | Police - Taser Replacement (58 - 7 Tasers) | $ 41,760 | **$ 41,760** | | $ 14,781 | | $ 10,440 | | | $ 16,539 |
| Public Safety | Police - AED Equipment Replacement | $ 8,817 | **$ 8,817** | | $ 5,000 | | | | | $ 3,817 |
| Public Safety | Police - Radar Equipment Replacement | $ 32,570 | **$ 32,570** | | | | | $ 8,570 | | $ 24,000 |
| Public Works and Transportation | Bus Service - Transit Bus Local Match Escrow (toward 2022 purchase of 3) | $ 50,000 | **$ 25,000** | | | | | | | $ 25,000 |
| Public Works and Transportation | Bus Service - Transit Bus Reserve | $ 50,000 | **$ 25,000** | | | | | | | $ 25,000 |
| Public Works and Transportation | Bus Service - Procurement and Installation of AVL/CAD System | $ 100,000 | **$ 100,000** | | | | | | $ 80,000 | $ 20,000 |
| Public Works and Transportation | Planning & Development /Code Enforcement - Large Format Printer | $ 120,000 | **$ 12,000** | | | | | | | $ 12,000 |
| Public Works and Transportation | Planning & Development - Broadway Signals at Evans and Lincoln | $ 24,000 | **$ 24,000** | | | $ 4,800 | | | $ 19,200 | |
| Public Works and Transportation | Planning & Development - Pedestrian Safety and Traffic Improvements | $ 2,275,000 | **$ 2,275,000** | $ 2,275,000 | | | | | | |
| Public Works and Transportation | Planning & Development - I-295 Exit 4 New Southbound Ramp | $ 2,393,000 | **$ 2,393,000** | | | $ 103,150 | $ 35,000 | | $ 2,254,850 | $ - |
| Public Works and Transportation | Public Works - Tandem Axle Plow Truck | $ 250,000 | **$ 250,000** | | $ 150,000 | | | | $ 100,000 | |
| Public Works and Transportation | Public Works - Forklift | $ 35,000 | **$ 35,000** | | $ 35,000 | | | | | |
| Public Works and Transportation | Public Works - Pedestrian and School Zone Safety | $ 60,000 | **$ 30,000** | | $ 23,063 | | | | | $ 6,937 |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 500,000 | **$ 250,000** | | $ 45,000 | | | | | $ 205,000 |
| Public Works and Transportation | Public Works - PACTS Match for Waterman Dr | $ 84,576 | **$ 84,576** | | | $ 84,576 | | | | |
| Public Works and Transportation | Public Works - Skidsteer | $ 45,000 | **$ 45,000** | | $ 45,000 | | | | | |
| Public Works and Transportation | Public Works - Traffic Signal Upgrades | | **$ 90,000** | | | $ 25,000 | | | | $ 65,000 |
| Public Works and Transportation | Public Works - Additional Venting for Capped MSW Landfill | $ 30,000 | **$ 30,000** | | | | | | | $ 30,000 |
| Public Works and Transportation | Public Works - Sealing of Floors and Columns | $ 60,000 | **$ 60,000** | | $ 60,000 | | | | | |
| Public Works and Transportation | Public Works - PACTS Match for Highland Ave | $ 186,705 | **$ 186,705** | | | | | | | $ 186,705 |
| General Government | Sustainability - Energy Management Software | $ 25,300 | **$ 25,300** | | | | | | | $ 25,300 |
| General Government | Sustainability - One Climate Future Plan Implementation | $ 75,000 | **$ 75,000** | | | $ 75,000 | | | | |
| Parks and Open Space | Parks - Golf - 5010-H Hybrid Fairway Mower (Tier 4 Emissions) - Replacement | $ 62,879 | **$ 62,879** | | | | | $ 62,879 | | |
| | **FY21 TOTAL** | **$ 10,351,219** | **$ 9,827,449** | **$ 2,275,000** | **$ 540,286** | **$ 1,432,526** | **$ 364,138** | **$ 1,109,449** | **$ 2,606,050** | **$ 1,500,000** |
| **Passed by City Council June 23, 2020 - RESOLVE #39-19/20** | | | **$10,319,649 amended | | | | | | | |

Amended by Order #30-20/21 reappropriate funds for a Public Safety Project - All Traffic Solution StatTrak Data Collector), Amended by Order #43-20/21 - Planning & Development - PACTS funding for Cushing's Point Priority Corridor Project and Amended by Order #150-20/21 reallocating three Sustainability items into a fourth. Amended by Council Order #197-20/21 and Council Order#198-20/21 - 4/20/21

| Functional Area | CIP Project | Project Cost | G.O. Bonds | Prior Yrs' CIP Bal. Accrued Int. | TIF Reserves | General Fund Reserves /Operating | Franchise Capital Reserve | Fund Res/Fund Balance | Grants | Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| FY 2020 CIP REQUEST | | | | | | | | | | |
| Cultural and Recreational Facilities | Main Library - Inventory Management System - Phase II | $ 34,000 | | $ 18,781 | | | | | | $ 15,219 |
| Cultural and Recreational Facilities | Recreation - Wainwright Rec. Complex and City Fields Master Plan | $ 45,000 | | $ 45,000 | | | | | | |
| Cultural and Recreational Facilities | Recreation - Skatepark Planning (Applying for CDBG Grant ) | $ 40,000 | | | | | | | $ 15,000 | $ 25,000 |
| Cultural and Recreational Facilities | Recreation - Rehab Redbank field for Rec improvements, Community Garden, Dog Park, small playing field (Applying for CDBG Grant) | $ 85,653 | | | | | | | $ 77,088 | $ 8,565 |
| Cultural and Recreational Facilities | Recreation - Pool ADA Doors for Locker Rooms | $ 9,570 | | | | | | | | $ 9,570 |
| Environmental Protection | Water Resource Protection - Mechanic Street Pump Station Repairs | $ 60,000 | | | | | | $ 60,000 | | $ - |
| Environmental Protection | Water Resource Protection - Pleasantdale Flow Evaluation/Modeling | $ 115,000 | | | | | | $ 115,000 | | $ - |
| Environmental Protection | Water Resource Protection - Front Street & W High Phase II | $ 1,654,610 | | | $ 500,000 | | | $ 1,154,610 | | $ - |
| Environmental Protection | Water Resource Protection - Treatment Plant Electrical Service Phase III | $ 602,500 | | | | | | $ 602,500 | | $ - |
| Environmental Protection | Water Resource Protection - Skid Steer | $ 68,000 | | | | | | $ 68,000 | | $ - |
| Environmental Protection | Water Resource Protection - E Street Pump Station Repairs | $ 60,000 | | | | | | $ 60,000 | | $ - |
| Environmental Protection | Water Resource Protection - Western Ave #1 Pump Station Repairs | $ 25,000 | | | | | | $ 25,000 | | $ - |
| Environmental Protection | Water Resource Protection - Belt Filter Press Repairs | $ 60,000 | | | | | | $ 60,000 | | $ - |
| General Government | Economic Development - Wayfinding Signs | $ 100,000 | | | $ 100,000 | | | | | $ - |
| General Government | Facilities - Scissor lift | $ 10,000 | | | | | | | | $ 10,000 |
| General Government | Facilities - Used pick-up truck | $ 12,000 | | | | | | | | $ 12,000 |
| General Government | Finance - Assessing - Vision Appraisal Software Update | $ 16,875 | | $ 1,800 | | | | | | $ 15,075 |
| General Government | Information Systems - Computer Reserve | $ 50,000 | | | | | | | | $ 50,000 |
| General Government | Land Bank Account | $ 35,000 | | | | | | | | $ 35,000 |
| General Government | SPC-TV - HD Fiber Transmission Upgrade | $ 10,000 | | | | | $ 10,000 | | | |
| General Government | SPC-TV - Infrastructure and Production Equipment Outlay | $ 5,000 | | | | | $ 5,000 | | | |
| General Government | Parks - Portland Street Pier - Installment #1 - Reconstruction Reserve ( PHASE I) | $ 550,000 | | $ 12,990 | $ 287,010 | | | | $ 250,000 | |
| General Government | Planning & Development - Hamlin Building Improvements | $ 195,000 | | | $ 57,500 | | | | | $ 137,500 |
| General Government | Planning & Development - Waterfront Master Plan | $ 100,000 | | $ 17,050 | $ 50,000 | | | | | $ 32,950 |
| Parks and Open Space | Parks - Master Plan Development Willard Beach | $ 50,000 | | | | $ 40,000 | | | | $ 10,000 |
| Parks and Open Space | Parks - Deake Street Project | $ 572,500 | | | | $ 40,000 | | | $ 429,375 | $ 103,125 |
| Parks and Open Space | Parks - 3/4 Ton Superduty 4 x 4 Drive Truck | $ 45,300 | | | | | | | | $ 45,300 |
| Public Safety | Fire Department - Western Avenue Heating and HVAC | $ 265,000 | $ 200,000 | | | | | | | $ 65,000 |
| Public Safety | Fire Department - Command Vehicle CR-45 | $ 50,000 | | $ 13,461 | | $ 36,539 | | | | $ - |
| Public Safety | Fire Department - Service Truck - One Ton ST-413 | $ 45,000 | | | | $ 45,000 | | | | $ - |
| Public Safety | Fire Department - Defibrillator | $ 38,000 | | $ 20,000 | | | | | $ 18,000 | $ - |
| Public Safety | FD and PD) 1/2 in FY 19 and 1/2 in FY 20 | $ 250,000 | | | | | | | | $ 250,000 |
| Public Safety | Fire Department - Cash Corner Fire Station | $ 7,500,000 | $ 6,000,000 | $ 1,500,000 | | | | | | |
| Public Safety | Fire Department - Study and Rehab façade at Central Fire Station | $ 500,000 | $ 500,000 | | | | | | | |
| Public Safety | Police Department - New Controls System | $ 80,000 | $ 80,000 | | | | | | | |

| Functional Area | CIP Project | Project Cost | G.O. Bonds | Prior Yrs' CIP Bal. Accrued Int. | TIF Reserves | General Fund Reserves /Operating | Franchise Capital Reserve | Fund Res/Fund Balance | Grants | Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| Public Safety | Police Department - Roof Maintenance (1967 Section, 1997 Section and Garage | $ 45,000 | $ 45,000 | | | | | | | |
| Public Safety | Police Department - Boiler Conversion to Gas and Boiler Combustion Ventilation | $ 45,000 | $ 45,000 | | | | | | | |
| Public Safety | Police Department - VRF Heat Pumps | $ 130,000 | $ 130,000 | | | | | | | |
| Public Safety | Police Department - Regional Crime Lab | $ 11,779 | | | | | | | | $ 11,779 |
| Public Safety | Police Department - Tactical Body Armor Replacement | $ 33,000 | | | | $ 16,500 | | | $ 16,500 | |
| Public Safety | Police Department - Dual Band Mobile Radios (dual-band for patrol and command) | $ 150,000 | | | | $ 75,000 | | | | $ 75,000 |
| Transportation | Bus Service - Transit Bus Reserve | $ 50,000 | | | | | | | | $ 50,000 |
| Transportation | Bus Service - Two-way Radios | $ 42,812 | | $ 26,812 | | | | | $ 16,000 | |
| Public Works and Transportation | Planning & Development - Pedestrian Warning Flashers | $ 30,000 | | | | | | | | $ 30,000 |
| Public Works and Transportation | Planning & Development - WIN 18636 Vachon, Lincoln, Broadway Multi Use Path | $ 1,024,650 | | | $ 250,000 | $ 23,240 | | | $ 751,410 | |
| Public Works and Transportation | Planning & Development - High Speed Internet Expansion in Knightville | $ 97,000 | | | | | | | $ 97,000 | $ - |
| Transportation | Public Works - Sidewalk Program | $ 350,000 | | $ 50,000 | | | | | | $ 300,000 |
| Public Works and Transportation | Public Works - Two (2) - One Ton Trucks with Plow | $ 170,000 | | $ 10,000 | | | | | $ 160,000 | |
| Transportation | Public Works-Superintendent-SUV | $ 40,000 | | | | | | | $ 40,000 | |
| Public Works and Transportation | Public Works - Municipal Services Facility - Compressed air lines | $ 15,000 | | | | $ 15,000 | | | | $ - |
| Transportation | Public Works - Traffic Signals Reserves | $ 100,000 | | | $ 25,000 | | | | | $ 75,000 |
| Public Works and Transportation | Public Works - Traffic Signals - Broadway & Sokokis | $ 180,000 | | | | $ 40,000 | | | | $ 140,000 |
| Parks and Open Space | Parks - Weed Steamer with Trailer | $ 25,782 | | $ 5,800 | | | | | | $ 19,982 |
| | Total | $ 15,879,031 | $ 7,000,000 | $ 1,721,694 | $ 1,269,510 | $ 331,279 | $ 15,000 | $ 2,145,110 | $ 1,870,373 | $ 1,526,065 |

Passed by City Council June 18, 2019 - RESOLVE 27-18/19

| Functional Area | CIP Project | Project Cost | G.O. Bond | Prior Yrs' CIP Bal. Accrued Int. | TIF Reserves | General Fund Reserves /Operating | Franchise Capital Reserve | Fund Res/Fund Balance | Grants | Fund Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| FY 2019 CIP REQUEST | | | | | | | | | | |
| Cultural and Recreational Facilities | Recreation - Community Center Security Phase II | $ 15,000 | | | | | | | | $ 15,000 |
| Cultural and Recreational Facilities | Recreation - Community Center Parking Lot Re-surfacing Nu | $ 18,870 | | | | | | | | $ 18,870 |
| Environmental Protection | Water Resource Protection - Elm St Phase 1 - Pleasantdale/Ar | $ 4,802,000 | | $ 1,160,000 | $ 3,242,000 | $ 150,000 | | $ 250,000 | | $ - |
| Environmental Protection | Water Resource Protection - Treatment Plant Electrical Servi | $ 1,216,000 | | | | | | $ 1,216,000 | | $ - |
| Environmental Protection | Water Resource Protection - Computerized Maintenance Mar | $ 173,500 | | | | $ 86,750 | | $ 86,750 | | |
| Environmental Protection | Water Resource Protection - Marsh Road Sewer Replacemen | $ 70,625 | | | | | | $ 70,625 | | $ - |
| General Government | Information Systems - Computer Reserve | $ 25,000 | | | | | | | | $ 25,000 |
| General Government | Land Bank Account | $ 35,000 | | | | | | | | $ 35,000 |
| General Government | SPC-TV - Council Chamber HD Camera Upgrade | $ 23,750 | | | | | $ 23,750 | | | $ - |
| General Government | SPC-TV - Console HD Upgrade | $ 22,755 | | | | | $ 22,755 | | | $ - |
| General Government | SPC-TV Workflow HD Upgrade | $ 17,105 | | | | | $ 17,105 | | | $ - |
| General Government | SPC-TV Equipment Repair Reserve | $ 2,000 | | | | | $ 2,000 | | | $ - |
| Parks and Open Space | Parks/Wainwright - Rehab Soccer Field | $ 20,000 | | | | | | | | $ 20,000 |
| Parks and Open Space | Parks - #81-1/2 Ton Dump Truck w/plow replacement | $ 40,710 | | $ 28,402 | | $ 9,232 | | | | $ 3,076 |
| Public Safety | Fire Department - Cash Corner Renovation | $ 1,500,000 | | $ 1,000,000 | | | | | | $ 500,000 |
| Public Safety | Fire and Police Department - Dispatch - CAD Upgrade | $ 250,000 | | | | | | | | $ 250,000 |
| Public Safety | Fire Department - Ambulance 44 and Power Stretcher | $ 290,000 | | $ 301 | | $ 272,699 | | | | $ 17,000 |
| Public Safety | Police Department - Mobile Computer Replacement | $ 20,000 | | | | | | | $ 20,000 | $ - |
| Public Safety | Regional Crime Lab | $ 13,955 | | $ 4,767 | | | | | | $ 9,188 |
| Public Safety | Police Department - Patrol Rifle Replacement | $ 24,000 | | $ 8,788 | | | | | | $ 15,212 |
| Public Safety | Police Department - Digital Storage (for body-worn and in-car | $ 24,000 | | | | | | | | $ 24,000 |
| Public Works and Transportation | Bus Service - Transit Bus Local Match Escrow toward 2022 P | $ 25,000 | | | | | | | | $ 25,000 |
| Public Works and Transportation | Planning & Development - Hamlin Building Improvements | $ 100,000 | | | | $ 100,000 | | | | $ - |
| Public Works and Transportation | Planning & Development - Cottage Rd Traffic & Safety Impr | $ 450,000 | | | | | | | | $ 450,000 |
| Public Works and Transportation | Planning & Development - WIN 18665 Broadway Corridor In | $ 102,950 | | | $ 42,642 | | | | $ 60,308 | $ - |
| Public Works and Transportation | Planning & Development - WIN 22138 Cash Corner Multi-Us | $ 728,322 | | | $ 167,823 | | | | $ 560,499 | $ - |
| Public Works and Transportation | Planning & Development - Mill Creek Gateway Improvement | $ 135,200 | | | $ 135,200 | | | | | $ - |
| Public Works and Transportation | Planning & Development - Annual Traffic Signals Improveme | $ 77,500 | | | $ 77,500 | | | | | $ - |
| Public Works and Transportation | Planning & Development - WIN 22136 Broadway Traffic Sign | $ 331,988 | | | $ 82,997 | | | | $ 248,991 | |
| Public Works and Transportation | Public Works - Westbrook Street Project | $ 1,400,000 | | | $ 350,000 | $ 450,000 | | | $ 600,000 | $ - |
| Public Works and Transportation | Public Works - Sidewalk Plow | $ 145,000 | | $ 80,000 | | $ 65,000 | | | | $ - |
| Public Works and Transportation | Public Works - Sidewalk Program | $ 125,000 | | $ 125,000 | | | | | | $ - |
| Public Works and Transportation | Public Works - Plow Truck | $ 195,000 | | | | | | | $ 195,000 | $ - |
| | 2019 Green CIP Projects | | | | | | | | | |
| General Government | Sustainability - Recycling Food Waste 13 gallon containers | $ 30,000 | | | | $ 30,000 | | | | $ - |
| General Government | Sustainability - Pesticide Education and Outreach | $ 10,000 | | | | | | | | $ 10,000 |
| General Government | Sustainability - Climate Action & Adaptation | $ 110,000 | | $ 14,000 | | $ 30,000 | | | | $ 66,000 |
| General Government | Sustainability - Building Energy Grant Program | $ 15,000 | | $ 15,000 | | | | | | |
| Parks and Open Space | Parks - Organic Program - John Deere 15 series Overseeder | $ 9,689 | | $ 9,689 | | | | | | $ - |
| Public Works and Transportation | Planning & Development - Hamlin Solar Buy-out | $ 20,000 | | | | | | | | $ 20,000 |
| | Total | $ 12,614,919 | $ - | $ 2,445,947 | $ 4,098,162 | $ 1,193,681 | $ 65,610 | $ 1,623,375 | $ 1,684,798 | $ 1,503,346 |

| Functional Area | CIP Project | Project Cost | G.O. Bond or Lease | Prior Yrs' CIP Bal. Accrued Int. | TIF Reserves | General Fund Reserves /Operating | Sewer User Fund Res/Fund Balance | Grants | Fund Balance |
|---|---|---|---|---|---|---|---|---|---|
| **FY 2018 CIP REQUEST** | | | | | | | | | |
| Cultural and Recreational Facilities | Main Library - Inventory Security System (RFID) - Phase I | 40,000 | | | | | | | 40,000 |
| Cultural and Recreational Facilities | Main Library Parking Lot Reconstruction (Design) | 30,000 | | | | | | | 30,000 |
| Cultural and Recreational Facilities | Recreation - West End Community Center/Infrastructure | 270,000 | | | | | | 270,000 | - |
| Cultural and Recreational Facilities | Recreation - SPCC - Security Upgrades | 65,000 | | 20,000 | | | | | 45,000 |
| Cultural and Recreational Facilities | Recreation - SPCC - Therapy Spa and Pool Improvements 2 | 55,000 | | 10,000 | | 20,000 | | | 25,000 |
| Environmental Protection | Water Resource Protection - Highland Avenue Stormwater Upgrade (Design) | 30,000 | | | | | 30,000 | | |
| Environmental Protection | Water Resource Protection - 25 Ton Trailer | 25,000 | | | | | 25,000 | | |
| Environmental Protection | Water Resource Protection - Sodium Hypochlorite Tanks | 80,000 | | | | | 80,000 | | |
| Environmental Protection | Water Resource Protection - Aeration Flow Splitter Gate Valves | 170,000 | | | | | 170,000 | | |
| Environmental Protection | Water Resource Protection - Secondary Clarifier Repairs | 350,000 | | | | | 350,000 | | |
| Environmental Protection | Water Resource Protection - Treatment Plant Electrical Service Phase 1 | 804,000 | | | | | 804,000 | | |
| General Government | Information Technology - Sans Replacement | 190,000 | | | | 119,000 | | | 71,000 |
| General Government | Land Bank Account | 35,000 | | | | | | | 35,000 |
| General Government | City Clerk - MUNIS/Tyler Technologies Business License Module | 17,250 | | 2,250 | | | | | 15,000 |
| Parks and Open Space | Parks - #87-1/2 ton Pick up truck w/ plow replacement | 40,000 | | | | | | | 40,000 |
| Parks and Open Space | Parks - #80-1/2 Ton 2x4 Pick up Truck Replacement | 30,000 | | | | | | | 30,000 |
| Public Safety | Fire Department - Fire Truck -Quint Replacement | 1,100,000 | | | | 450,000 | | | 650,000 |
| Public Safety | Fire Department - Defibrilator | 35,000 | | | | 25,000 | | | 10,000 |
| Public Safety | Fire Department - Cash Corner Repairs/Upgrades | 30,000 | | | | | | | 30,000 |
| Public Safety | Fire Department - Shared Detection and Identification Meter with PD | 60,000 | | | | | | 20,000 | 40,000 |
| Public Safety | Fire Department - Service Truck and Plow ST-411 | 40,000 | | 4,500 | | | | | 35,500 |
| Public Safety | Police Department - Computer Replacement - Mobile | 25,000 | | | | | | 12,500 | 12,500 |
| Public Safety | Police Department - Interior Re-modeling and Furniture - Public Safety Secretary Office | 25,000 | | | | | | | 25,000 |
| Public Safety | Police Department - Regional Crime Lab | 13,955 | | 13,955 | | | | | |
| Public Safety | Police Department - Mechanical Controls Conversion | 59,000 | | | | | | | 59,000 |
| Public Works and Transportation | Bus Service - Transit Bus Reserve | 50,000 | | | | | | | 50,000 |
| Public Works and Transportation | Planning & Development - Portland/SoPortland Multi-Modal Study (PACTS) | 225,064 | | 10,006 | 10,000 | | | 205,058 | |
| Public Works and Transportation | Planning & Development - Broadway Traffic Signals at Evans and Lincoln (PDR -PACTS) | 46,250 | | 11,563 | | | | 34,687 | |
| Public Works and Transportation | Planning & Development - Cash Corner Multi-Use Path Intersection (PDR - PACTS) | 57,031 | | 14,258 | | | | 42,773 | |
| Public Works and Transportation | Planning & Development - Lincoln/Vachon/Broadway Multi-Use Path (PDR -PACTS) | 341,550 | | 39,264 | 29,046 | | | 273,240 | |
| Public Works and Transportation | Planning & Development - Streelight Purchase from CMP and Retrofit | 1,200,000 | 1,000,000 | | | | | | 200,000 |
| Public Works and Transportation | Public Works - One (1) Truck with PlowFront End Loader Equipped with wing and plow | 250,000 | | | | | | 250,000 | |
| Public Works and Transportation | Public Works - Sidewalk Program | 200,000 | | | | | | 100,000 | 100,000 |
| Public Works and Transportation | Public Works - Street Sweeper | 285,000 | | | | 35,000 | 250,000 | | |
| **Total** | | **6,274,100** | **1,000,000** | **125,796** | **39,046** | **649,000** | **1,709,000** | **1,208,258** | **1,543,000** |
| | **2018 Green CIP Projects** | | | | | | | | |
| General Government | Sustainability - Energy Management Software | 7,500 | | | | 7,500 | | | - |
| General Government | Sustainability - Climate Action Plan Update | 14,000 | | | | | | | 14,000 |
| Parks and Open Space | Wainwright - Versa Vac | 25,000 | | | | | | | 25,000 |
| Parks and Open Space | Parks - 1570 Outfront Mower (Tier 4 Emissions) - Replacement | 28,000 | | | | | | | 28,000 |
| Public Works and Transportation | Planning & Development - Mill Creek Benchmarking Assistance | 18,000 | | 18,000 | | | | | - |
| | **Council Order #186-16/17 - 5/1/17 Total** | **6,366,600** | **1,000,000** | **143,796** | **39,046** | **656,500** | **1,709,000** | **1,208,258** | **1,610,000** |

| Functional Area | CIP Project | Project Cost | G.O. Bond | Prior Yrs' CIP Bal. Accrued Int. | TIF Reserves | General Fund Reserve /Operating | Sewer User Fund Res/Fund Balance | Grants | Fund Balance |
|---|---|---|---|---|---|---|---|---|---|
| **FY 2017 CIP REQUEST** | | | | | | | | | |
| Cultural and Recreational Facilities | Recreation - SPCC - Municipal Therapy Spa | $70,000 | | | | $39,674 | | | $30,326 |
| Cultural and Recreational Facilities | Recreation - SPCC - Roof Repairs | $12,000 | | | | | | | $12,000 |
| Cultural and Recreational Facilities | Recreation - SPCC - Transit Connect Van | $31,000 | | | | | | | $31,000 |
| Environmental Protection | Water Resource Protection - Catchbasin Debris Body | $17,999 | | | | | $17,999 | | |
| Environmental Protection | Water Resource Protection - Collection Div 4 x 4 Pickup Unit #8 | $30,433 | | | | | $30,433 | | |
| Environmental Protection | Water Resource Protection - Control System Upgrade | $1,082,000 | | | | | $1,082,000 | | |
| Environmental Protection | Water Resource Protection - Ottawa Road CSO | $230,000 | | $230,000 | | | | | |
| Environmental Protection | Water Resource Protection - Thornton Heights Separation Phase III ($1,700,000 bond approved by voters on November 4, 2014) | $4,342,640 | $1,700,000 | $950,000 | $1,173,622 | | $519,018 | | |
| General Government | City Clerk - Voting Booths | $14,175 | | | | | | | $14,175 |
| General Government | Information Systems - Avaya Phone System Upgrade | $40,000 | | | | $40,000 | | | |
| General Government | Information Systems - Computer Reserve | $30,000 | | | | | | | $30,000 |
| General Government | Information Systems - Fiber Optic Infrastructure - Phase II | $60,000 | | | $60,000 | | | | |
| General Government | Information Systems - Microsoft Office and Exchange Upgrade | $110,000 | | $32,196 | | | | | $77,804 |
| General Government | Land Bank Account | $35,000 | | | | | | | $35,000 |
| Parks and Open Space | Parks - #76-3/4 Ton Plow Truck Replacement | $48,000 | | $32,178 | | | | | $15,822 |
| Parks and Open Space | Parks - Agricultural Tractor Upgrade | $26,000 | | | | | | | $26,000 |
| Parks and Open Space | Parks - Greenbelt Update Year 1 | $25,000 | | | | $5,000 | | $20,000 | |
| Parks and Open Space | Parks - Groundsmaster 7200 Multipurpose Mower/Polar Trac 7210 | $63,000 | | | | | | | $63,000 |
| Public Safety | Fire Department - Central Station Kitchen Reno /Fire Suppression Syst. | $20,000 | | $10,050 | | | | | $9,950 |
| Public Safety | Fire Department - Squad 4 Replacement | $580,000 | | | | $290,000 | | | $290,000 |
| Public Safety | Police Department - Body Armor Replacement | $29,070 | | | | | | $14,535 | $14,535 |
| Public Safety | Police Department - Body Worn Cameras | $68,328 | | | | | | $18,426 | $49,902 |
| Public Safety | Police Department - Conductor Electrical Weapons | $39,855 | | | | | | | $39,855 |
| Public Safety | Police Department - Regional Crime Lab | $18,000 | | | | | | | $18,000 |
| Public Works and Transportation | Bus Service - Transit Bus Reserve | $50,000 | | | | | | | $50,000 |
| Public Works and Transportation | Planning & Development - City Bicycle Plan | $12,000 | | | | | | $5,000 | $7,000 |
| Public Works and Transportation | Planning & Development - Greenbelt Pedestrian Bridge Preliminary Eng. | $60,000 | | | $6,000 | | | $54,000 | |
| Public Works and Transportation | Planning & Development - Mill Creek Improvements Design | $36,000 | | | $36,000 | | | | |
| Public Works and Transportation | Planning & Development - Mill Creek/PACTS Improvements | $402,050 | | $33,392 | | | | $301,537 | $67,121 |
| Public Works and Transportation | Planning & Development - West End Master Plan | $30,000 | | | | | | $15,000 | $15,000 |
| Public Works and Transportation | Public Works - Pedestrian Crossing Flashers (3) | $48,000 | | $21,397 | | | | $24,000 | $2,603 |
| Public Works and Transportation | Public Works - Sidewalk Program | $166,250 | | | | | | $116,250 | $50,000 |
| Public Works and Transportation | Public Works - Two (2) Trucks with Plows | $360,000 | | | | $94,000 | | $266,000 | |
| | **2017 Green CIP Projects** | | | | | | | | |
| Cultural and Recreational Facilities | Recreation - LED Pool Lighting | $22,000 | | | | | | | $22,000 |
| Parks and Open Space | Parks - ProCore 1298 Aerator | $32,000 | | | | | | | $32,000 |
| Parks and Open Space | Parks - TopDresser | $28,000 | | | | | | | $28,000 |
| | **Council Order #143-15/16 - 5/2/16** | **Total $8,268,800** | **$1,700,000** | **$1,309,213** | **$1,275,622** | **$468,674** | **$1,649,450** | **$834,748** | **$1,031,093** |

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# SECTION V

# School Facilities

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**OFFICE OF THE SUPERINTENDENT**
**130 Wescott Road**
**South Portland, Maine 04106-3442**

**Kenneth Kunin, Superintendent of Schools**
**Jodi Mezzanotte, Assistant Superintendent**
**Rolfe Forland, Director of Finance, HR, and Operations**

**Megan Welter, Director, Curriculum/Instruction/Assessment**
**Kathleen Cox, Director of Instructional Support**
**Andrew Wallace, Director of Technology**

To: South Portland Board of Education and South Portland City Council

From: Ken Kunin, Superintendent

Re: FY 22 Capital Improvement Project (CIP) Plan Summary

Date: March 22, 2021

Cc: Scott Morelli, City Manager

This memo provides a summary of the proposed FY22 Capital Improvement Project (CIP). We have a reasonable list of anticipated projects throughout the district. We aim to provide a quality environment for learning today and be good stewards of our schools for the future. This summary includes the location, cost by location and brief description of projects. For further project details, funding source and summary of use of Reserve, CIP Funds and Federally available funding, we will provide a FY22 CIP Expenditure Summary which will be submitted with our FY22 School Department Budget and will also be on our website: https://www.spsd.org/board/budget at that time. As the School Board knows more about federal funding availability, we anticipate that this summary will change. Please don't hesitate to contact me if you have further questions or need additional information.

| ***School/Department*** | ***Proposed FY22**** | ***Notes*** |
|---|---|---|
| Technology | $580,972 | Purchase of iPads/Apple Laptops to support remote instruction and for classroom use once students return to the classroom - Purchase is with Federal ESSER 2 funds. Also includes third of five lease payments towards elementary school interactive panels funded by Local Budget |
| Brown | $8,750 | Replacement of signage & wayfinding funded from Fund 0401 |
| Dyer | $0 | |
| Kaler | $0 | |
| Skillin | $0 | |

| | | |
|---|---|---|
| Small | $0 | |
| SPHS | $42,000 | Boiler stack pipe replacement funded from Fund 0401 |
| District-Wide | $156,000 | Replacement of doors and installation of badge readers at the five elementary schools to increase security and to accommodate egress/ingress needs to due COVID-19 - Funded through Federal ESSER 2 funds |
| Transportation | $0 | |
| ***Total CIP*** | ***$787,722*** | |

*Numbers may change once School Board knows more about Federal funding availability