

YEAR I

FY 2020 CIP REQUEST

Cultural and Recreational Facilities

Main Library – Inventory Management System – Phase II	\$34,000
Recreation – Wainwright Rec Complex and City Fields Master Plan	\$45,000
Recreation – Skate Park Planning	\$40,000
Recreation – Rehab Redbank Field for Rec improvements	\$85,653
Recreation – Pool ADA Doors for Locker Rooms	<u>\$9,570</u>
Total Cultural and Recreational Facilities	\$214,223

Environmental Protection

Water Resource Protection – Mechanic Street Pump Station Repairs	\$60,000
Water Resource Protection – Pleasantdale Flow Evaluation/Modeling	\$115,000
Water Resource Protection – Front Street Phase I & W High Phase II	\$1,654,610
Water Resource Protection – Treatment Plant Electrical Service Phase III	\$602,500
Water Resource Protection – Skid Steer	\$68,000
Water Resource Protection – E Street Pump Station Repairs	\$60,000
Water Resource Protection – Western Ave #1 Pump Station Repairs	\$25,000
Water Resource Protection – Belt Filter Press Repairs	<u>\$60,000</u>
Total Environmental Protection	\$2,645,110

General Government

Economic Development – Wayfinding Signs	\$100,000
Facilities – Scissors Lift	\$10,000
Facilities – Used pick-up truck	\$12,000
Finance – Assessing – Vision Appraisal Software Update	\$16,875
Information Systems – Computer Reserve	\$50,000
Land Bank Account	\$35,000
SPC-TV – HD Fiber Transmission Upgrade	\$10,000
SPC-TV – Digital Signage Installation	\$5,000
Parks - Portland Street Pier – Installment #1 – Reconstruction Reserve Phase II	\$550,000
Planning & Development – Hamlin Building Improvements	\$195,000

Planning & Development – Waterfront Master Plan	<u>\$100,000</u>
Total General Government	\$1,083,875

Parks and Open Space

Parks – Master Plan Development Willard Beach	\$50,000
Parks – Deake Street Project	\$572,500
Parks – ¾ Ton Superduty 4 x 4 wheel Drive Truck	\$45,300
Parks – Weed Steamer with Trailer	<u>\$25,782</u>
Total Parks and Open Space	\$693,582

Public Safety

Fire – Western Avenue Heating and HVAC	\$265,000
Fire – Command Vehicle CR-45	\$50,000
Fire – Service Truck – One Ton ST-413	\$45,000
Fire – Defibrillator	\$38,000
Fire and Police – CAD Upgrade (\$500,000 for FD and PD) ½ in FY19 and ½ in FY 20	\$250,000
Fire – Cash Corner Fire Station	\$7,500,000
Fire - Study and Rehab façade at Central Fire Station	\$500,000
Police Department – New Controls System	\$80,000
Police – Roof Maintenance (1967 Section, 1997 Section and Garage)	\$45,000
Police – Boiler Conversion to Gas and Boiler Combustion Ventilation	\$45,000
Police – Police – VRF Heat Pumps	\$130,000
Police – Regional Crime Lab	\$11,779
Police – Tactical Body Armor Replacement	\$33,000
Police – Mobile Radio Replacement (dual-band for patrol and command)	\$150,000
Total Public Safety	\$9,167,779

Public Works and Transportation

Bus Service – Transit Bus Reserve	\$50,000
Bus Service – Two-way Radios	\$42,812
Planning & Development – Pedestrian Warning Flashers	\$30,000
Planning & Development – WIN 18336 Vachon, Lincoln, Broadway Multi-Use Path	\$1,024,650
Planning & Development – High Speed Internet Expansion in Knightville	\$97,000
Public Works – Sidewalk Program	\$350,000
Public Works – Two (2) - One Ton Trucks with Plow	\$170,000
Public Works – Superintendent SUV	\$40,000
Public Works – Municipal Services Facility – Compressed Air Lines	\$15,000

Public Works – Traffic Signals Reserves	\$100,000
Public Works – Traffic Signals – Broadway & Sokokis	\$180,000
Total Public Works and Transportation	\$2,394,012
Total Year I Request	\$15,879,031

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Cultural and Recreational Facilities

Library

Upgrade Security/Inventory Management System (Phase Two)

Proposal:

This project will implement a new RFID based inventory management and security system to improve the efficiency and accuracy of checkouts and returns, provide library staff with more advanced tools to maintain the library's collections and to protect library materials against theft. Phase one of the project was funded in the FY 17/18. This FY 19/20 request allows for the final implementation and completion of the project.

Need:

The Main Library currently has an antiquated electromagnetic security system, installed in 1991. After 26 years of use, the current equipment is long obsolete and no longer supported for repair by the manufacturer, as parts are unavailable. The Branch Library has never had a security system.

As the fourth busiest public library in the state, traffic in our buildings and use of our collections continues to be strong and, with that traffic, comes loss of materials from theft. Our personnel presence throughout the building, which is the leading deterrent to theft, has decreased over the years due to staff reductions and overall streamlining of operations.

Rather than simply replace the equipment for this system with newer versions, I proposed that we replace the collection security system and take a step forward by integrating it with an RFID-based collection management system.

An RFID system will allow for not only a more accurate security system (for instance, the system will inform us when an item is leaving the library, and, specifically what the item is), as well as, offer several work flow efficiencies for staff.

An RFID system is able to track specific items in a way that is much more passive than the current barcode-based system. Checking out materials becomes as simple as placing a pile of library items on the counter – there's no need for staff to handle, open and scan each item. This saves time and repetitive movement for staff during both the check in, as well as, the returns process.

An RFID system also allows for better overall inventory management. Locating misfiled items becomes as simple as walking through the library's stacks with a handheld device and "wandering" over book spines – the device will alert us to mis-shelved (or missing) items. In addition, a similar process can help us locate books.

Going forward, an RFID system can be utilized for additional technical upgrades, such as book return systems that will automatically “check in” books as they are returned through the book return.

Project Cost:	\$34,000 (Phase II)
Funding Source:	\$18,781 Prior Years CIP \$15,219 Fund Balance
Source of Cost Estimate:	Bibliotecha
Projected Useful Life:	20+ years

Cultural and Recreational Facilities

Parks, Recreation, and Waterfront

Wainwright Recreation Complex and City Fields Master Plan

The Parks, Recreation, and Waterfront Department seeks \$45,000 in funds to develop a master plan and feasibility study for the Wainwright Farm Recreation Complex and other city fields as we move toward the future. The development of this master plan will help guide the city with a phased approach for field development, infrastructure, amenities, and future funding sources.

With the new middle school project in the planning stages, there will be a loss of city athletic field space during construction of this project. Once the project is completed, there will be a determination of what happens to the Mahoney Middle School complex, and what affect that has on the fields at that site. All of these current field spaces will need to be re-purposed at another location to accommodate the affected programs. The logical space for these fields is at the Wainwright Complex. There is also discussion of a synthetic turf field at South Portland High School. Questions as to is this a viable undertaking, costs, and funding sources, could be vetted out within this master plan.

There are current infrastructure needs at the Wainwright Complex, such as more parking, permanent restrooms, shade structures, Emergency Services Access, passive recreation areas, lighted fields, etc. Adding additional fields without considering these other needs will cause strain on the complex operations. Such a master plan will allow for proper placement of fields, infrastructure, and the costs associated for the complex.

There is an opportunity for the Wainwright Complex to become the top destination for Recreation and Athletic events in New England. We have good facilities right now that host our community teams and organizations, as well as some regional events. However, many event requests are turned away because we do not have the ability to meet the event's needs. These events could be a boost to the economy, as families travel for weekends and spend money in the community. The impact of such events entering the community would be vetted out in such a master plan.

If funded, the master plan estimated completion would be the fall of 2020.

Project Cost:	\$45,000
Funding Source:	\$45,000 Prior Years' CIP
Source of Cost Estimate:	ISG Engineering Service
Projected Useful Life:	50+ years

Kevin,

Thanks for the follow up and additional input on your complex. After hearing your scope and size of the complex I agree we are a little low. I had thrown out those numbers because you had referenced Johnson Muller. That project was about 20 Acres, and we did it for around \$10K and thus the range that I had provided assuming that the size/scope was similar.

We are also working on another one now that is 55 acres that we are currently into for about \$18K or so, that sounds somewhat similar with some existing and some new facilities along with and that one included a dome and some other buildings as well .

Thus given the scale of yours being 148 acres, I would say that your budget of \$45K is adequate. I would think that it could possibly be done for a bit less but would say definitely between \$40K-\$45K is a reasonable number depending on the graphics, visualization, etc. Community engagement is a big piece that we have seen take up more or less fee as well depending on strategy for that.

My apologies for the low number at first, hopefully the explanation on scale above makes sense as my assumption was we were talking smaller. That said we are working on several of these now from big to small and would definitely be interested in chatting with you more about this one and seeing if we can in fact help out. We have extensive experience with schools and their athletic facilities as well so definitely understand the complexities of their involvement as well, and are licensed in Maine.

If it is of any benefit to discuss further or any specifics on your proposed plan we would appreciate the opportunity to do so, even if we can help you to prepare for pushing this forward. If we can provide any other examples of work we have done we would be willing to do so as well.

Again please feel free to email or call to discuss.

Thanks

Andy

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Architecture | Engineering | Environmental | Planning

Cultural and Recreational Facilities

Recreation

South Portland Skate Park – Planning & Design

The Parks, Recreation, and Waterfront Department and ad hoc Skate Park Committee seek \$25,000 in funds for the planning and design costs for a skate park in South Portland. In addition, the department will be applying for a \$15,000 Planning & Development Grant through the Community Development Block Grant (CDBG) Program to cover the remaining costs of planning and design for this project.

With over 500 signatures collected in support of a skate park, and a well-established active skateboarding community, there is a prodigious need to have a place for this under-served group in South Portland, as well as, other wheel and skate sport enthusiasts of ALL ages. Other surrounding towns that have built skate parks have all seen them instantly become some of the most used parks in their communities. Any day there is no rain or snow, those parks are used no matter the temperature.

In addition, 2020 marks a turning point in skateboarding history, as it will be the first Olympics to include Skateboarding as an event. South Portland having a new skate park built around this time will fit nicely with a wave of excitement and increased visibility of skateboarding and will ignite a sense of excitement for young Mainers who, at that time, will be able to look up to Olympic Athletes doing the same activity they themselves love.

Lastly, skateboarding is a healthy, athletic activity for many who are not drawn to traditional team sports. It is an engaging outlet and opportunity to belong to an active community and has no upper or lower age limit to participate.

Funds for planning and design will allow the committee to reach the next level of this process by defining the scope of work, reviewing applicable studies/data, conduct site visits, prepare conceptual and schematic designs, help develop a project cost and budget and conduct public design workshops.

If funded, we would look to begin the planning and design process July 1, 2019.

Project Cost: \$40,000
Funding Source: \$25,000 from Fund Balance,
\$15,000 from CDBG Grant

Source of Cost Estimate: Pillar Designs

Projected Useful Life: 20 +

PROPOSED SCOPE OF WORK FOR SKATEPARK DESIGN AND DEVELOPMENT SERVICES

Pillar Design Studios, L.L.C. (Pillar) has prepared this scope of work to summarize our process and to aid in the clarification of project responsibilities. Accordingly Pillar is providing the (CLIENT) with this scope of work for the Skatepark project. Pillar will serve as the Skate Park Designer and Specialist.

Scope of work includes:

- Feasibility and Site Selection Services
- Professional Design Services for a Skatepark size and terrain tbd
- Construction Documentation, Technical Specification and Cost Estimate

PHASE I – Feasibility and Skatepark Programming

Objectives:

- Define scope of work, budget, schedule and overall project coordination.
- Review any existing studies, design concepts, existing data sources and any other applicable work done to date in regards to this project.
- Establish a working relationship with all team members.
- Design team introduction to the community and users.
- Site selection, feasibility and analysis.
- Social media outreach.

I.a – Project Management

- The goals of this phase will be to perform an analysis of the identified site. We will evaluate the potential locations and condition, as well as identify and evaluate existing design issues, program elements and create a design program for the overall phase that meets the intent of the project goals and objectives.

I.b - Define Scope, Budget and Collection of Materials

- Pillar will provide the client with a project design program to help compile all necessary information pertinent to this project. This form will assist the design team with Skatepark Evaluation and Conceptual Design elements.
- The Client shall provide Pillar with a list of approved, required and/or prohibited construction products, materials, finishes and colors for this project.
- The Client shall provide Pillar with all available existing and proposed project information as it relates to the master plan improvements in CAD format, this shall include but not be limited to the following items:
 - a. Property lines and project boundaries
 - b. Survey benchmark and basis of bearing
 - c. Easements
 - d. Topography
 - e. Site improvements

f. Utility locations

g. Vegetation

- The Client shall provide Pillar with a geo-technical report containing the locations of all borings, an executive summary, detailed description of the findings and recommendations and a detailed report of the laboratory tests performed. Assisting the City with determining appropriate timing for any needed site survey and geo-technical information, as well as assisting the City to secure these services (if applicable) from an appropriate sub-consultant. The designer will be responsible for evaluating associated data and incorporating the data into the final site analysis and Skatepark design. The cost of the Geo-Technical Report is the responsibility of the client.
- The Client shall provide Pillar with the proposed construction budget and any known in-kind or local costs for materials to be included in the estimate of probable construction costs.
- The Client shall provide Pillar with a list of all agencies required to review and approve the construction document package.
- The Client shall provide Pillar with any specific details, title blocks, specifications and/or document formatting requirements.

I.c – Project Kick Off Meeting (Phone Conference)

- The Kick Off Meeting is where all team members are able to set the tone for the project, discuss goals, expectations, scheduling, budgeting.
- Establish the project working relationship with all members of the project design team.
- Review applicable studies, concepts, existing data sources, and any other work done to date in the interest of this project.
- Pillar will provide the client with a Flyer for promotional purposes no later than two weeks prior to the set public input meeting.

I.d - Site Selection and Feasibility

- Site Review and Location Analysis
The PM will review up to 5 potential sites and discuss site opportunities and constraints. The location of a Skatepark can directly affect the success of the park, there are a few key factors that should be taken into consideration before moving forward.
- After reviewing each site, Pillar will provide a written site review and location analysis report. A few key areas to consider:
 - Noise Impact
 - Amenities
 - Accessibility
 - Safety
 - Site Constraints and Impact
 - Current use of Site
 - Optimal Skatepark Size and Terrain
 - Final Recommendation

I.e – Public Input Meeting

- This meeting will serve as an introduction of sorts, it gives the community and users alike to meet our design team, ask questions about our experience and discuss their Skatepark project in-depth. The meeting will be structured to cover two main points.
- Design Team Intro and User Request
 - a. Design team introduction; It gives the community and users alike to meet our design team, ask questions about our experience and discuss their Skatepark project in-depth.
 - b. We will discuss the users needs/wants.
 - c. Surveys will be distributed that will provide us with feedback needed for our analysis.
- This section of the meeting is meant to cultivate and grow the user’s ideas, get them on paper and provide a starting point for our Design team.
 - a. We will provide three concept designs, that are similar in size and budget to begin discussions and aid in the flow of conversation. Please note these designs will not be site specific but merely a depiction of what can be done.
 - b. The lead design and project manager will walk the skaters/user groups through the designs discussing the reasoning behind the flow, style, etc.
 - c. We employ an open format that allows attendees to engage directly with our design staff. Using visual aids, small group sketch sessions and video tools to engage the local users.
 - d. Social media links as well as hashtags will be given out to provide an outlet for further discussion regarding design intent.

I.f – Site Analysis Review Meeting

- Discuss findings and questions, prior to beginning conceptual designs.
- Final Analysis - Pillar will provide a final written report that includes a site selection matrix, advantages and disadvantages of each site, our scoring criteria and final recommendation. Since it is always our intention to design site specific and use the natural topography within our design, this is why we it is of the utmost important to have at least one public input meeting before finalizing and submitting our findings.

I.g - Skate Park Flow and Skill Level Diagrams

- Develop up to three alternative bubble diagrams illustrating the layout and program relationships of the skate park to the adjacent site amenities.
- Diagram activity zones, approximate size of amenities and circulation throughout each transition zone.

I.h - Social Media

- Pillar will use our Facebook page (if one has not already been created specifically for this Skatepark project), to promote, facility and allow for open dialog during the Skatepark design phase. This page will be open to anyone with an Internet connection for public interaction during the design process.
- The Facebook page provides a discussion platform for users, City officials and design team to discuss design ideas throughout the design process. It also delivers a place for concepts to be displayed and users to give their feedback in real time.
- We will create a unique hashtag (#) to your Skatepark project, that will be used through the life of the project, which increases outreach, provides easy search capabilities as well as enhanced notifications.
- Pillar will use our social media connections and channels, ie Facebook, Instagram, Twitter and YouTube to full promote and advocate for your Skatepark project. We will post preliminary concepts for feedback, flyers for upcoming meetings and events throughout the life of the project.

PHASE II – Schematic Design and Preliminary Estimate

OBJECTIVES:

- 2 Private design review meetings
- 1 Public in-put meeting
- Provide final master plan concept
- Provide preliminary estimate of probable construction cost
- Final Skatepark design graphics in 3D format
- 3D fly through video of the final concept
- In-Kind donation allocation and funding assistance

II.a – Private Design Review Meeting

- Pillar and the Client will meet at the site, discussing limitations, exceptions and advantages prior to conceptual designs.
- Private Design Review Meeting: The Client and the design team, as well as anyone else the client deems necessary, will meet to discuss the Skate park conceptual designs.

II.b - Skate Park Conceptual Designs

- Based on the information obtained from the kick off meeting, design review meetings, public input and social media. Pillar will prepare a maximum of three conceptual Skate park designs that illustrating the overall layout and fit within the proposed site and budget.
 - Develop a maximum of three (3) conceptual Skatepark designs.
 - Incorporation of amenities
 - Preliminary cost estimates.
- The conceptual designs will be provided in both plan and 3 dimensional views.

II.c –Private Design Review Meeting and Public Input Meeting

- Pillar will discuss the conceptual designs with the City, as well as provide the online - social media feedback that has been received.
- Similar to the first public input meeting, Pillar will provide conceptual designs in 3D and plan view, discuss the design intent and use an open format to hear feedback from the local users.
- Users will be broken out into groups where the designer discusses the conceptual design in more depth, gaining the skaters perspectives and making changes to the design in real time.
- Users will have the opportunity to voice their opinions, sketch their desires and essentially shape the final design.
- Once a direction has been established and agreed upon, Pillar will incorporate all comments and begin to shape the final design.
- The conceptual design will show the final Skatepark design and its relationships to the existing sites in general detail.
- The conceptual design will be uploaded to social media channels to allow for users and community members to provide feedback.

II.d - Final Skate Park Plan

- Pillar will prepare one final conceptual design based on the comments from the Client Review Meeting and users input.
- The conceptual design shall show the final Skate park design, proposed master plan improvements and their relationships to the existing site in general detail.
- Preliminary and Final Concepts will be provided in plan and 3d perspective views.

II.e – Skate Park Fly-Through Video

- Once the final design has been approved, Pillar will provided a 3D fly through video of the overall Skatepark design and its surroundings.

II.f - Preliminary Estimate of Probable Construction Cost

- Using general square footage prices (based on national average) not specific to the proposed project location (unless the Client has provided information on in-kind and/or local unit prices), Pillar shall provide the Client with an estimate of probable construction cost for the proposed Skate park and master plan improvements.

II.g - In-Kind Donation Allocation

- Pillar is the leading name when it comes to incorporating in-kind donations. We will provide a detailed material list with specific quantities, labor, volunteers and donations that will aid in-kind donation solicitation.
- The Project Manager will also be available to speak with any potential donors and clarify needs in terms of quantities, labor, materials, etc.

II.h –Fundraising Assistance and Tools - If Applicable

- Pillar will provide forms, templates and information to help move their fundraising efforts forward.
- Pillar will use our social media channels to engage the community and spread the word.
- Pillar staff will be available to answer questions and offer tips and advice when it comes to securing Grant funding/submissions.
- Pillar staff will be available to both the City as well as the Skate Committee until the monetary goal has been reached.

PHASE III - Design Development

Objectives:

- Upon client approval of Skatepark design, Pillar shall prepare the design development drawings.
- Two internal staff/consultant meetings via phone conference.
- Expand upon the master plan design providing detailed direction as to the materials selection/location, Skatepark terrain layout/dimensions and site amenities.
- Refine the estimate of probable construction costs.

III.a - Skatepark Design Approval Meeting (Phone Conference)

- The Client and the design team will review the master plan to insure all design criteria has been met and confirm any revisions prior to beginning the construction documents.
- Upon conclusion of the phone conference, the client will provide Pillar with written notice to proceed.

III.b – Project Design Development Plans

- Various plans will be prepared to convey conceptual design intent and further refine quantities for cost estimation. A preliminary list of plans is described below. Plan information to be provided at 20 scale or greater and may be combined where possible, depending on graphic clarity.
 - Existing Conditions
 - Demolition Plan
 - Layout and materials plans with enlargements as necessary
 - Signage plan
 - Concept site grading plan
 - Skatepark Layout
 - Details as necessary for all improvements included in scope of work

III.c - Cost Estimate

- A detailed unit cost estimate will be prepared to include all elements of proposed development, demolition or upgrade. Soft costs such as final design, permitting fees and construction costs will also be including in the cost estimate.

III.d - Client Staff Coordination Meetings (Phone /Skype/GotoMeeting)

- It is assumed that two coordination meetings with Client staff will be held during this phase. Additional communication and phone conferences will occur as needed to resolve specific design and technical requirements.
- Please note design plans are now at a 30% level.

PHASE IV - Construction Documents

Objectives:

- Upon Client approval, Pillar shall finalize the construction documents in technical detail, setting forth the requirements for construction of the proposed master plan improvements.
- 75% and 100% Drawings
- 75% and 100% Cost Estimate
- 75% and 100% Technical Specifications/Project Manual
- Pillar will present the client with 100% sealed construction document package for bidding and construction purposes.
- Recommended signage

IV.a - Skatepark Design Development Meeting (phone conference)

- The Client and the design team will discuss the review comments for the 30% construction document package and the actions needed to address the comments.
- Upon conclusion of the phone conference, the client will provide Pillar with written notice to proceed.

IV.b - 75% Construction Documents

- Upon receipt of notice to proceed, Pillar will commence production of the construction document package.
- In general the construction document package includes the construction drawings, written specifications, cost estimate and any required reports necessary to build the proposed master plan improvements.

IV.c - Construction Drawings

- The construction drawings package typically includes the following sheets.
- Note additional plans/details may be added as necessary to further clarify design intent.
 - a. Cover Sheet: General project information and notes.
 - b. Site Plan: An overall plan showing the proposed master plan improvements plus any existing features requiring additional consideration.
 - c. Horizontal Control Plan: Reference points for all Skatepark features in standard Point/Northing/Easting format plus layout information for all plan view line-work.
 - d. Surface Grading & Drainage Plan: All necessary spot elevations, flow arrows, drain locations and swales needed to convey finish elevations and direction of flow within the Skatepark. Additionally, finish grade contours will be shown around the Skatepark depicting proposed grading need to tie the intended Skatepark into the existing grade.
 - e. Subsurface Drainage Plan: All necessary elevations, slopes, lengths, pumps, drains and outfall locations needed for the proposed drainage system.
 - f. Concrete Plan: Type, location, finish and color of all of the concrete.
 - g. Coping Plan: Type, location, finish and color of all coping and metal components.
 - h. Jointing Plan: Type and location of all concrete joints.
 - i. Cross Sections: Multiple dimensioned vertical sections cutting through all terrain elements within the Skatepark.
 - j. Details: Standard and custom construction detailing for all master plan improvements.

IV.d - Statement of Probable Construction Cost

- Pillar will provide a cost estimate for all master plan improvements as detailed in the scope of work.

IV.e - 75% Design Development Review Submittal

- Pillar will submit 75% construction documents, specifications and probable construction cost for review by the client.
- It shall be the responsibility of the client to review all materials submitted by Pillar and provide a written response with any questions or comments.

IV.f - 100% Construction Documents Meeting (phone conference)

- The Client and Pillar will discuss the review comments for the 95% construction document package and the actions needed to address the comment.
- Upon conclusion of the phone conference, the client will provide Pillar with written notice to proceed.

IV.g - 100% Sealed Construction Documents

- Upon receipt of notice to proceed, Pillar shall address the final review comments and prepare the final construction document package.
- Upon completion of the final construction document package the following shall be delivered to the client, in electronic format:
 1. Reproducible scans of the construction drawings in PDF format.
 2. Written specifications in PDF format.
 3. Statement of probable construction costs in PDF format.
 4. Comma-delimited text file (CSV) containing all reference points in Point/Northing/Easting format.

Project Assumptions

The following assumptions shall apply to the proposed scope of work and submitted fees:

- All written documents will be generated using Microsoft Word, Version 2003.
- All spreadsheet documents will be generated using Microsoft Excel, 2003
- All CAD files will be generated with AutoCAD 2007.
- Pillar has not retained a Surveyor, Geo-technical Engineer or Landscape Architect. Final drawings will be stamped by a Professional Engineer.
- The Client shall provide Division 1 Specifications, Bidding and Agreement Forms/Bonds, Conditions of the Contract, and any other non-technical specification.
- Additional meetings, if required and approved, will be billed at our normal hourly rates.
- Additional plan sets, if required and approved, will be billed at our normal in-house, or out-of-house duplication rates.

Project Fees

Fees for the Services detailed in the proposed scope of work are outlined below. The fees, though based on man hours per task, are presented as lump sum not to exceed amounts. However, these fees are negotiable, we are happy to discuss the municipalities needs and create a custom scope of work specific to your project. Reimbursable expenses are not included in the fee below.

SKATEPARK DESIGN, PLANNING AND CONSTRUCTION SERVICES

PHASE I	Feasibility and Skatepark Programming	\$11,000.00
PHASE II	Schematic Design	\$10,500.00
PHASE III	Design Development	\$9,375.00
PHASE IV	Construction Documents	\$5,125.00
Estimated Reimbursable Expenses		\$3,000.00

If our design/build team handles the construction of the project, we are happy to offer a \$10,000 discount during design and planning phases.

Pillar/Artisan is the leading name in the industry when it comes to integrating in-kind donations and discounted materials/labor. We have completed numerous parks with what we call "Community Support". This plan enables us to integrate in-kind donations, materials, labor, etc into the construction, which then reduces the overall construction fee to our clients. We have worked with numerous communities aiding them during the construction process and helping them get more skate-able square footage for their dollar.*

Contract Provisions

1. The compensation due Pillar Design Studios, LLC. for the work to be performed hereunder shall be set forth in Fees and Expenses above. The parties understand and agree that all work not specifically delineated within the scope of work described herein shall be billed on a time and materials basis, and shall be in addition to any budget, bid, or maximum price agreement for the above described scope of work. Wherever practical, changes, additions, or modifications to the scope of work shall be authorized by written change request; however, the absence of such a written change order shall not act as a bar to payment of fees due Pillar Design Studios, LLC. hereunder, provided the change was in fact approved and ordered by the Client. Client accepts that signing this form shall be construed as authorization by the Client for Pillar Design Studios, LLC. to proceed with the work.
2. All fees, commissions, product charges and expenses billed shall be due within fifteen (15) days of the date of billing. Interest on unpaid or late bills shall accrue at 1 3/4 percent interest per month (21.0% A.P.R.). Client agrees that all statements not objected to in writing within five (5) days of receipt are agreed to be final and binding upon the parties as to the amounts due, the adequacy of Pillar Design Studios, LLC's performance and the value of the services provided to Client.
3. Any cost estimates provided by Pillar Design Studios, LLC. will be on a basis of experience and judgment, but since it has no control over market conditions or bidding procedures Pillar Design Studios, LLC. cannot warrant that bids or ultimate construction costs will not vary from these cost estimates.
4. Should the project be published in a book, magazine, newspaper, or

publication for public circulation, or if a job sign is erected, Pillar Design Studios, LLC. should be listed as the Skatepark Designer and/or Landscape Architect (as applicable). In addition, this contract represents non-exclusive approval by the Client for publication of the project by Pillar Design Studios, LLC.

5. The client shall be permitted to retain physical copies of drawings and specifications for information and reference in connection with the Client's use and occupancy of the project. The client shall be permitted to retain an electronic copies of drawings and specification in the event the project must be completed by others as Pillar Design Studios, LLC is in default under this agreement. The drawings and specifications shall not be used by the Client on another project.
6. Notwithstanding any provision herein to the contrary which requires safekeeping of documents or obligates Pillar Design Studios, LLC. to safe keep or provide documents to Client, Pillar Design Studios, LLC. shall not be responsible or liable for any direct, actual or consequential damages which occur as the result of its inability to produce such documents by reason of the casualty, destruction or loss of documents held by Pillar Design Studios, LLC. unless such casualty, destruction or loss shall be the result of the intentional and wrongful act or the gross negligence of Pillar Design Studios, LLC..
7. If the project is suspended or abandoned, in whole or in part, for a period of sixty (60) days or more, or upon instruction by Client to Pillar Design Studios, LLC. to suspend activity on the project, Pillar Design Studios, LLC. shall be compensated for all services performed together with all reimbursable expenses due and the contract shall be deemed terminated. If the project is resumed after such suspension the Agreement between Client and Pillar Design Studios, LLC. shall be re-negotiated prior to resumption of work by Pillar Design Studios, LLC. For purposes of this Agreement, the term "suspension" or "abandonment" shall mean substantial discontinuance of labor, work, services, and furnishings for a sixty- (60) day period or written instruction by Client to suspend substantially all project activities.
8. If any provision of this Agreement is for any reason held invalid or unenforceable, such provision shall be deemed separate and shall not affect the validity of the remaining portions thereof.
9. In the event of a default of any provision of this Agreement, after ten (10) days notice to cure is delivered, this Contract shall be deemed terminated by the non-defaulting party by reason of default. For purpose hereof, any failure to pay sums due under Paragraph 2, above, for a period of ninety- (90) days shall be deemed justifiable grounds for declaration of default. Moreover, Pillar Design Studios, LLC. failure to substantially perform under this Agreement shall be deemed justifiable grounds for declaration of default. In addition, either party may terminate this agreement with or without cause upon thirty- (30) days written notice by either party.
10. Laws of the State of Arizona shall control any proceedings arising in the transaction described herein. All claims, disputes, and other matters in question arising out of, or relating to, this Authorization or the breach thereof may be decided by arbitration in accordance with the rules of the American Arbitration Association. Either the Client or Pillar Design Studios, LLC. may

initiate a request for such arbitration, but consent of the other party to such procedure shall be mandatory. No arbitration arising out of, or relating to this Authorization may include, by consolidation, joinder, or in any other manner, any additional party not a party to this Authorization.

11. In the event legal action is brought by the Client or Pillar Design Studios, LLC. against the other to enforce any of the obligations hereunder or arising out of the dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fee's, costs and expenses as may be set by the court.
12. Pillar Design Studios, LLC. shall carry a minimum errors and omissions liability insurance of \$1,000,000.00
13. Pillar Design Studios, LLC. liability to the Client for any cause or combination of causes is in the aggregate, limited to an amount no greater than the fee earned under this agreement.
14. This agreement shall be binding upon and inure to the benefit of the parties and their assigns and successors in interest.
15. This agreement supersedes all prior agreements of the parties and shall not be amended except by written agreement signed by each party.

Acceptance

If this proposal meets with your approval, please sign and return to our office. When accepted, this proposal will serve as a mutual commitment between Pillar Design Studios, LLC. and the Client for the above outlined services and fees. Work will be scheduled upon receipt of signed agreement.

By signing below you are accepting the terms and condition listed above.

Pillar Design Studios, L.L.C.

Date: _____

By: _____
Brad Siedlecki, Principal
Pillar Design Studios, L.L.C.

Date: _____

By: _____

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Cultural and Recreational Facilities

Recreation

Redbank Field Rehab Infrastructure Project

The Parks, Recreation, and Waterfront Department seeks funding for an infrastructure study for the field at the Redbank Community Center. The field is currently leased by the City from The Redbank Property Management Company that owns the properties surrounding the community center. The City would hire the contracted engineering firm Sebago Technics to perform this study. The plan will include the costs estimates associated with re-grading and leveling the field, site work, water line access, etc to allow for the future development of the space for recreational needs that were established in the West End Recreational Needs Assessment, developed by GPCOG.

In the West End Recreational Needs Assessment, the proposed improvements most desired by the neighborhood, for this field are: a **Community Garden** and a **Dog Park**. Also on the list is an **ice skating rink** and an **athletic field** (#4 and #5 on the same footprint). The development of this plan would inform the department of the feasibility of all of these facilities being located on this field, and logistical spacing for each. It will also provide an analysis of needs for each project (irrigation, water fountains and access, fencing etc), phases for the projects, and the costs associated with each.

The department will be applying for Community Development Block Grant Funding for \$85,653 to fund this infrastructure. The department is requesting \$8,565 in funds to match (10%) the grant funding for this project.

Project Cost:	\$85,653
Funding Source:	\$77,088 Through CDBG funding (Applying in January 2019) \$8,565 Fund Balance for 10% match
Source of Cost Estimate:	GPCOG West End Recreational Needs Assessment
Projected Useful Life:	50+ years

City of South Portland West End Recreational Needs Assessment





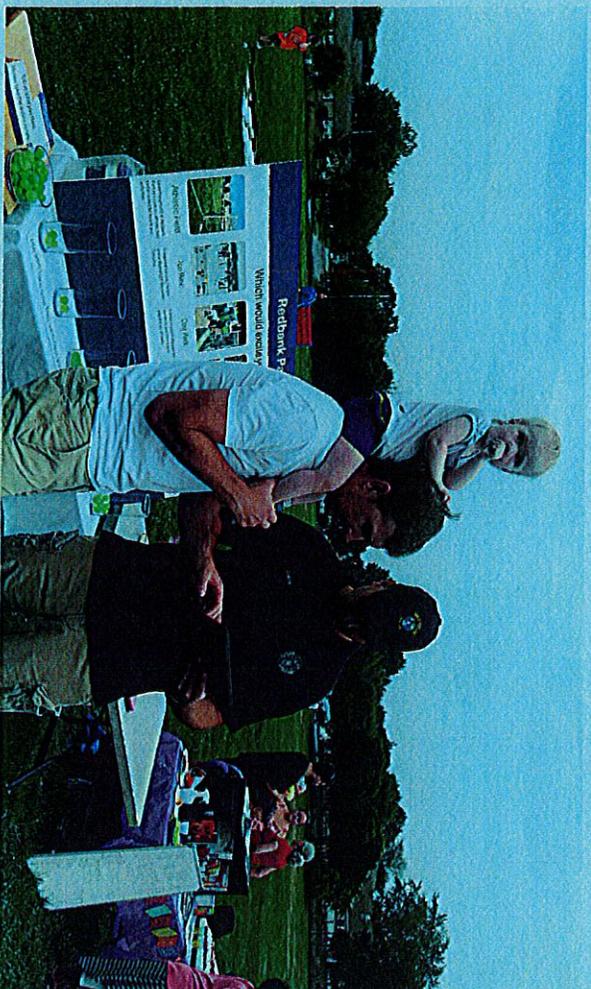
REDBANK PROPOSED IMPROVEMENTS

Which would excite you the most in Redbank Park?

118 out of 120 people answered this question

 A community garden	27 / 23%
 A dog park	26 / 23%
 More playground equipment	19 / 17%
 An ice rink (Seasonal)	18 / 16%
 An athletic field	17 / 15%
 A Skateboard park	7 / 6%
 Other	1 / 1%

Results from the online community survey.



Redbank Community Park was a popular topic of discussion during the West End Master Plan. The overall sentiment from residents is that it is underutilized, mainly because it is not level, and portions of the park are frequently wet and muddy. The most common suggestions were to level the ground to create a more usable athletic field, and to use portions of the park for a community garden, a dog park, a skate or bike park, a temporary ice rink in the winter, or a splash pad. (A swimming pool was originally mentioned, but not included in this report due to the size and scope of that type of project).

Neighborhood Events

During the course of this project, the team was able to learn more about the community's needs and desires for this central location. The project team attended National Night Out on August 11th, 2018 which was well attended by those living in Redbank Village. Approximately 51 people, mostly children, voted on their top priority using the interactive display. The most desired facilities were a skate park (14 votes) and an athletic field (11 votes). Playground equipment and a dog park followed (9 and 8 votes respectively). The display also spent several weeks at the HUB where it had mostly adult participants. At the HUB it received a total of 49 votes and an athletic field was the top choice (22 votes), followed by an ice rink (15 votes).

At the National Night Out event, several children told the project team about their frustrations with the field flooding for large parts of the year. They also mentioned they wanted more to do in general, whether in the form of an ice rink, a skate park, or something else. The splash pad was not included in our display or survey (this idea, as well as the bike park, came later in the project), but we heard from many children and parents alike it would be appreciated in the hot summer months. Parents also universally shared their desire for better shading at the playground. With respect to the community garden, several people mentioned it was not their top priority because most people who live in Redbank have a yard for their own gardens if desired.

Community Survey

Even though at neighborhood events we heard a community garden was not a priority, it was the top vote-getter in the online survey with 27 votes (23%). A dog park was the second most popular choice with 26 votes (23%). This prioritization in the survey held when only looking at West End residents, and when only looking at Redbank Village residents. Nearly half the people who took the survey were aged 31-50, which likely accounts for some of the different responses compared to the interactive display which attracted more children.

COST ESTIMATES OF PROPOSED IMPROVEMENTS

Redbank

Proposed Improvement	Estimated Cost
A1 Athletic field	\$35,000
A2 Temporary ice rink at Redbank Park	\$12,000-\$15,000
A3 Community garden	\$50,000
A4 Dog park	\$51,000
A5 Bike park for kids	\$10,000-\$30,000
A6 Splash pad	\$15,000-\$30,000
B1 Permanent shade structure/ seating area	\$21,000-\$23,000
B2 Temporary shade structure for playground	\$2,000-\$15,000
B3 Playground features for 2-3 y/o	\$25,000
B4 Swingset	\$13,000

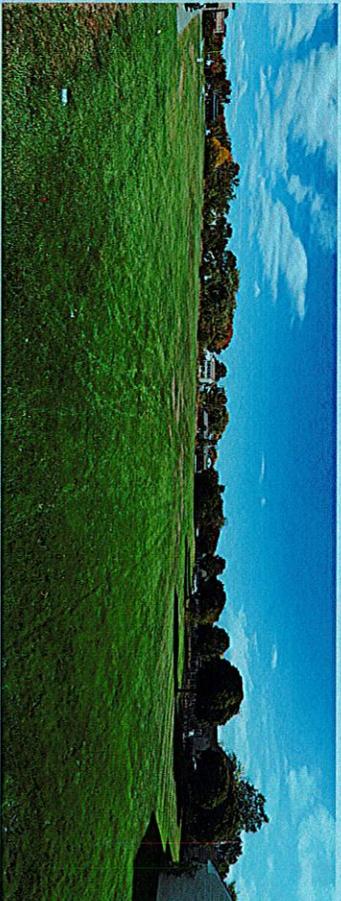
Brick Hill

Proposed Improvement	Estimated Cost
D1 Bandstand at Jordan Park	\$75,000-\$100,000
D2 StoryWalk Trail at Jordan Park	\$250-\$6,000
D3 Brick Hill Half-Basketball Court	\$25,000-\$35,000
E1 ADA accessible panels at playground	\$4,000-\$7,000
E2 Playground structure for 2-3 y/o	\$25,000
E3 Shaded seating area near playground	\$13,000-16,000
F1 Additional raised beds at garden	\$250-\$2,000
F2 Shed for tools at garden	\$500-\$5,500
F3 Water hook-up at garden	\$7,000

Trails and Water Access

Proposed Improvement	Estimated Cost
L1 Long Creek Trail improvements	\$6,000
L2 Long Creek Trail southern extension	\$27,000
L3 Long Creek Trail northern extension	\$50,000
M1 Long Creek Dock improvements	\$15,000-\$150,000
N1 Long Creek Boat Launch improvements	\$2,650
O1 Clarks Pond Trail improvements	\$2,500
O2 Clarks Pond Loop Trail extension	\$30,000-\$58,000
P1 South Branch Trail extension	\$3,000-\$5,000

A1 Athletic Fields



Benefit

Leveling the ground at Redbank Park to create a dedicated athletic field would have several benefits. It would provide a flat surface for sports activities, reduce injuries, improve drainage, allow the field to be accessible for longer periods of the year, and provide a flat surface for other recreational facilities, such as a temporary ice rink in the winter, a dog park, or community garden.

Constraints

The City does not own the field, so any major changes would require an amendment to the lease agreement, and, negotiating what would happen if the lease runs out and the property owners want to retain ownership of it. Depending on how much of the field is leveled, it could trigger environmental permitting. The City could also explore the possibility of purchasing the property outright.

Cost Estimate

- \$35,000

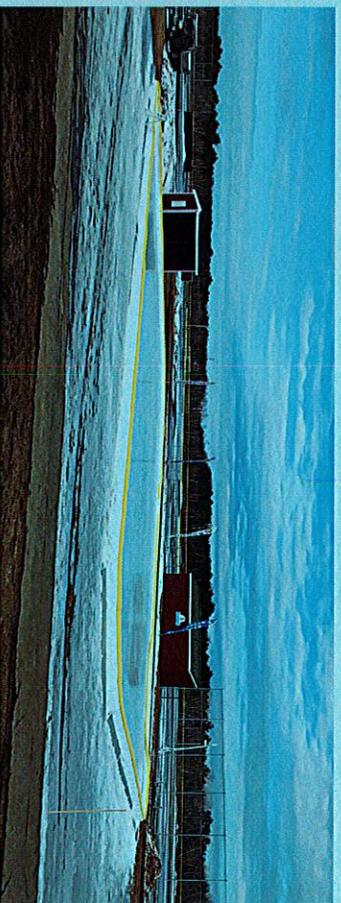
Source of Estimate

South Portland Parks, Recreation, and Waterfront. (Based on a similar project at Wainwright Recreation Complex).

Status

Leveling the field was brought up frequently during outreach for the West End Master Plan, but also discussed prior to that effort.

A2 Ice Rink (Temporary)



Benefit

Ice rinks bring people together and provide a central gathering place for a fun outdoor activity in the winter. The City has experience with this already, with the rink at Wainwright Recreation Complex. A temporary rink at Redbank Community Park would have the advantage of being located within walking distance of 2000+ residents.

Constraints

The City does not own the field so any major changes would require an amendment to the lease agreement. Ice rinks require level ground, so the field would need to be leveled prior to any installation. An outdoor rink requires daily maintenance (clearing snow, watering, etc.). City staff clears the Wainwright rink last, after all other snow operations are complete, so a community group would likely need to take the lead to ensure a rink would be maintained. If it is not feasible to install a rink on the field, it may be possible to install a smaller rink either in the Community Center parking lot, or on the basketball court.

Cost Estimate

- \$12,000-\$15,000 (annually)

Source of Estimate

South Portland Parks, Recreation, and Waterfront. (Based on the rink at Wainwright Recreation Complex).

Status

Brought up in the West End Master Plan.

Redbank Community Park

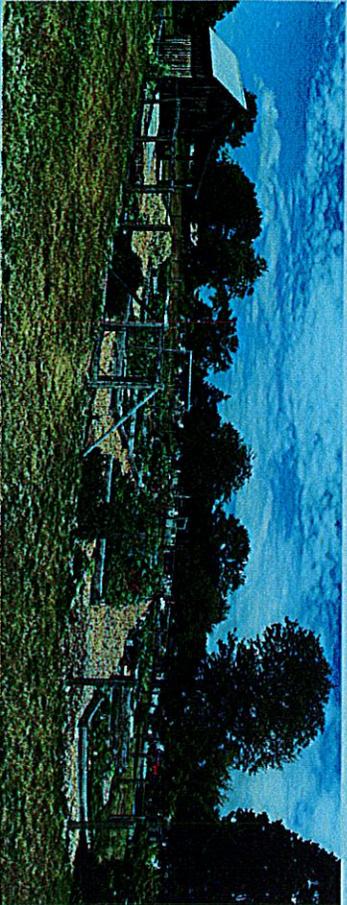


A Redbank Community Park

The biggest constraint to any of the proposed recreational facilities at Redbank Community Park is land ownership and space. As the map to the left shows, the City owns a small portion of the park around the Community Center, but the rest is property of Redbank Village. The City currently has an easement with the owners of Redbank Village, but an amendment would be needed prior to any major changes. Additionally, even if the City were to purchase the land there is likely not enough space to fit all of the proposed improvements.

The map to the left shows a few options for where various improvements could be located. The large rectangle in the center is where the field could be leveled. The rectangular area to the right of the field is where a community garden was initially proposed in 2015 and studied in a Sebago Technics report. It may be possible to locate a small, temporary ice rink on the basketball court if the field is not level enough. A small bike park or splash pad could also potentially be located adjacent to the parking lot.

A3 Community Garden



Benefit

Community gardens, like the one above on Sawyer St., provide a shared space for residents to grow their own food, save money, and meet fellow gardeners and neighbors. The initial expense of a garden is fairly low. Many places use community gardens to teach classes, empower disabled residents, and train residents for employment. In addition to the previously identified location in 2015, it may be possible to fit a small community garden in a portion of the field owned by the City directly adjacent to the Community Center.

Constraints

Community gardens require frequent maintenance and organization. A specific person, or community group, would need to manage activities at the garden as well as budget for materials. Depending on where it is located, the garden may require significant earthwork, utility hook up for electric and water, an amendment to the lease agreement, or environmental permitting and review.

Cost Estimate

- \$50,000 (full build out with electricity and water, earthwork, stormwater plan, etc.)

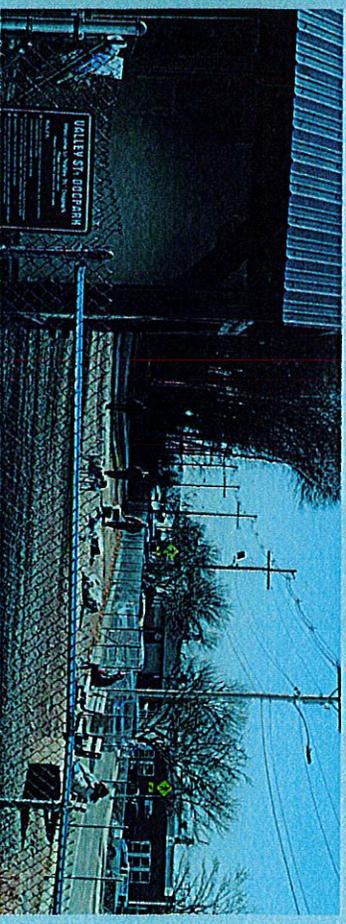
Source of Estimate

Sebago Technics Redbank Community Gardens 2015 Report.

Status

Brought up in outreach for the West End Master Plan. The City allocated CDBG funding for this project in 2015 and commissioned a feasibility study by Sebago Technics in 2015.

A4 Dog Park



Benefit

Many people in the West End own dogs, but there are few places for dogs to run off-leash in the neighborhood. A properly fenced in dog park, such as the one on Valley St. in Portland shown above, provides a safe space where owners can exercise their dogs without getting into trouble. Dog parks can also act as a gathering place for owners to meet and establish relationships with their neighbors.

Constraints

The City does not own the field, so any major changes would require an amendment to the existing easement. Dog parks require frequent maintenance and supervision to ensure safety for everyone.

Cost Estimate

- \$51,000 (\$28,000 for engineered "Wool" fiber surfacing, \$23,000 for chain link fence and installation).

Source of Estimate

South Portland Park and Recreation staff are currently researching dog park pricing for other parks in the City. Above estimates from Dog-On-It Parks, and Gorham Fence Company, Inc. for a 1-acre parcel.

Status

Brought up in the West End Master Plan, but also discussed prior.

Cultural and Recreational Facilities

Recreation

ADA Doors for Municipal Pool Locker Rooms

The Parks, Recreation and Waterfront Department seeks \$9,570 in funds to upgrade the entrances to the Municipal Pool deck from the Men's and Women's Locker Rooms.

The current entrances are original to the Municipal Pool facility built in 1978 and have not been updated since that time. The Community Center was built around the existing pool structure in 2000 without doing any improvements to the interior structure of the existing pool. The need for ADA door openings is apparent, especially during Therapeutic Recreational Swim times, and any time a patron with ADA needs is entering the pool deck from one of the locker rooms.

The update to the entrances will include installation of two openings with power operator, power supply, exit device, and electric strike. The quote was obtained from MLD Installations of South Portland, Maine.

Project Cost:	\$9,570
Funding Source:	\$9,570 Fund Balance
Source of Cost Estimate:	MLD Installations
Projected Useful Life:	20+ years

MLD Installations
 50 Market Street
 South Portland, ME 04106

Estimate

Date 11/30/2018
 Estimate # 111

Name / Address

City of South Portland
 South Portland Me

P.O. #
 Terms

Due Date 11/30/2018
 Other

Description	Qty	Rate	Total
Community center pool locker rooms mens and womens		0.00	0.00
lcn 4642 commercial power operator	2		0.00
Hes 9600 electric strike	2	0.00	0.00
Sargent 88 series exit device	2		0.00
Power supply		0.00	0.00
labor to wire and install complete 2 opemings for handicap access with power operator		0.00	0.00
		9,570.00	9,570.00
		Subtotal	\$9,570.00
		Sales Tax (0.0%)	\$0.00
		Total	\$9,570.00

MLD Installations
 toddthur@yahoo.com

207-415-7627
 207-885-0462

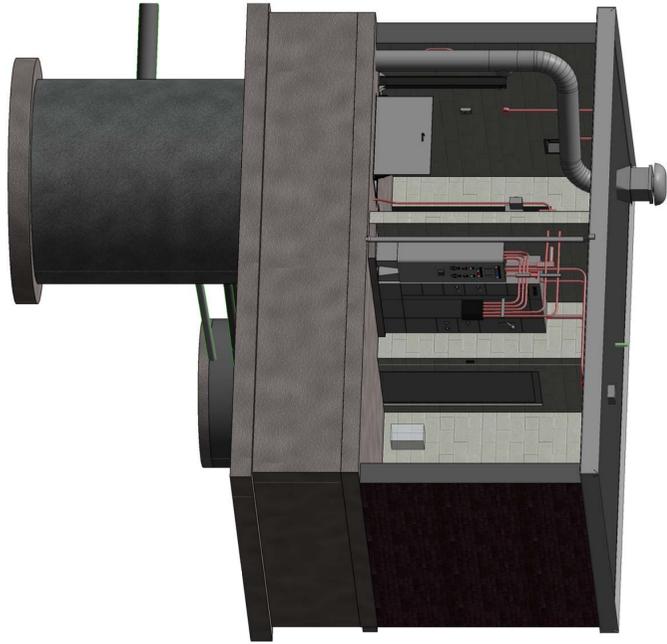
Environmental Protection
Water Resource Protection

Mechanic Street Pump Station Update

This 2020 capital improvement is for the an update to the pumps and piping systems of the Mechanic Street wastewater pumping station located at the end of Mechanic Street. The Mechanic Street pump station was originally designed and installed in the mid 70's as part of the City's efforts to improve water quality in the Fore River and Casco Bay. The updates will replace aging station infrastructure including replacing the existing 40 year old submersible pumps, relocate failing valving out of the sewage wetwell, and re-piping to allow for safer ease of access by operations and maintenance personnel. Updates to the pumps will include updating to energy efficient VFDs. Work to be done primarily by WRP maintenance personnel with outside specialist contract assistance.

Costs include estimates for excavation, structures, equipment, pumps, bypass pumping, VFD programming, and electrical/mechanical support.

Project Cost:	\$60,000
Funding Source:	Sewer User Fund Reserve
Source of Cost Estimate:	WRP Engineering
Projected Useful Life:	20 years



① MECHANIC STREET PUMP STATION
EAST VIEW



② MECHANIC STREET PUMP STATION
SOUTH VIEW

DWG D-1	CITY OF SOUTH PORTLAND MECHANIC STREET PUMP STATION RECORD DRAWINGS	 <small>Water Resource Protection 111 Waterman Drive PO Box 9422 South Portland, ME 04116-9422 Ph # 207-767-7675 Fax # 207-767-5697</small>			DRAWN BY Author APPROVED BY Designer DATE CHECKED BY Checker DATE 12/21/18 PROJECT NO. 12345 SCALE						
	MECHANIC STREET PUMP STATION										

Cloutier,Patrick

From: Gove,Justin
Sent: Monday, November 5, 2018 12:07 PM
To: Collins,Paul
Cc: Moulton,Frank
Subject: Mechanic

Paul,
Here is the summary of costs for the Mechanic Street Pump Station upgrade:

Item Description	Quote	Quoted By
New Pumps	\$17,500	Xylem
Mechanical Support Labor	\$7,500	J&J
Electrical Support Labor	\$1,000	Stultz (8hrs @ \$125)
Earthwork Support	\$9,500	GS&G (50hrs @ \$190)
Pig Launcher Piping	\$1,845	Ferguson
PS Piping, Valves, etc.	\$6,785	Ferguson
Pump Rails	\$854	American Steel
VFD	\$910	Stultz
Manhole Structure	\$1,900	George Roberts
Bypass Pump	\$8,075	Ted Berry
Misc. Parts (PVC, gaskets, etc.)	\$2,500	
TOTAL	\$58,369	

Justin Gove, P.E.
Civil Engineer
Water Resource Protection
City of South Portland
jgove@southportland.org
(p): 207-347-4126

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Environmental Protection
Water Resource Protection

Flow Monitoring Evaluation and SWMM Model Update
Cash Corner, Broadway/Evans, and Elm Street CSOs

This 2020 capital improvement project is to evaluate the flow monitoring data from each of the CSO structures to determine the impact of sewer separation and collection system capacity upgrades we have been doing over the last several years (i.e. Phase I, II, III Thornton Heights and the Pleasantdale Separation Project). This project is part of our continued CSO Facility Plan developed by Wright-Pierce Engineers in 2008 to comply with our Maine Pollutant Discharge Elimination System (MEPDES) Permit and Discharge License. The Plan proposes to eliminate CSOs from a 2-year, 24-hour design storm. We will also update the existing SWMM model as part of this project. The results will be analyzed and the CSO Facility Plan for the future projects will be re-evaluated to determine if we stay the course with the recommended projects planned or consider altering the course based on our new findings.

Project Cost:	\$115,000
Funding Source:	Sewer User Fund Reserves
Source of Cost Estimate:	Wright-Pierce Engineers
Projected Useful Life:	Not Applicable

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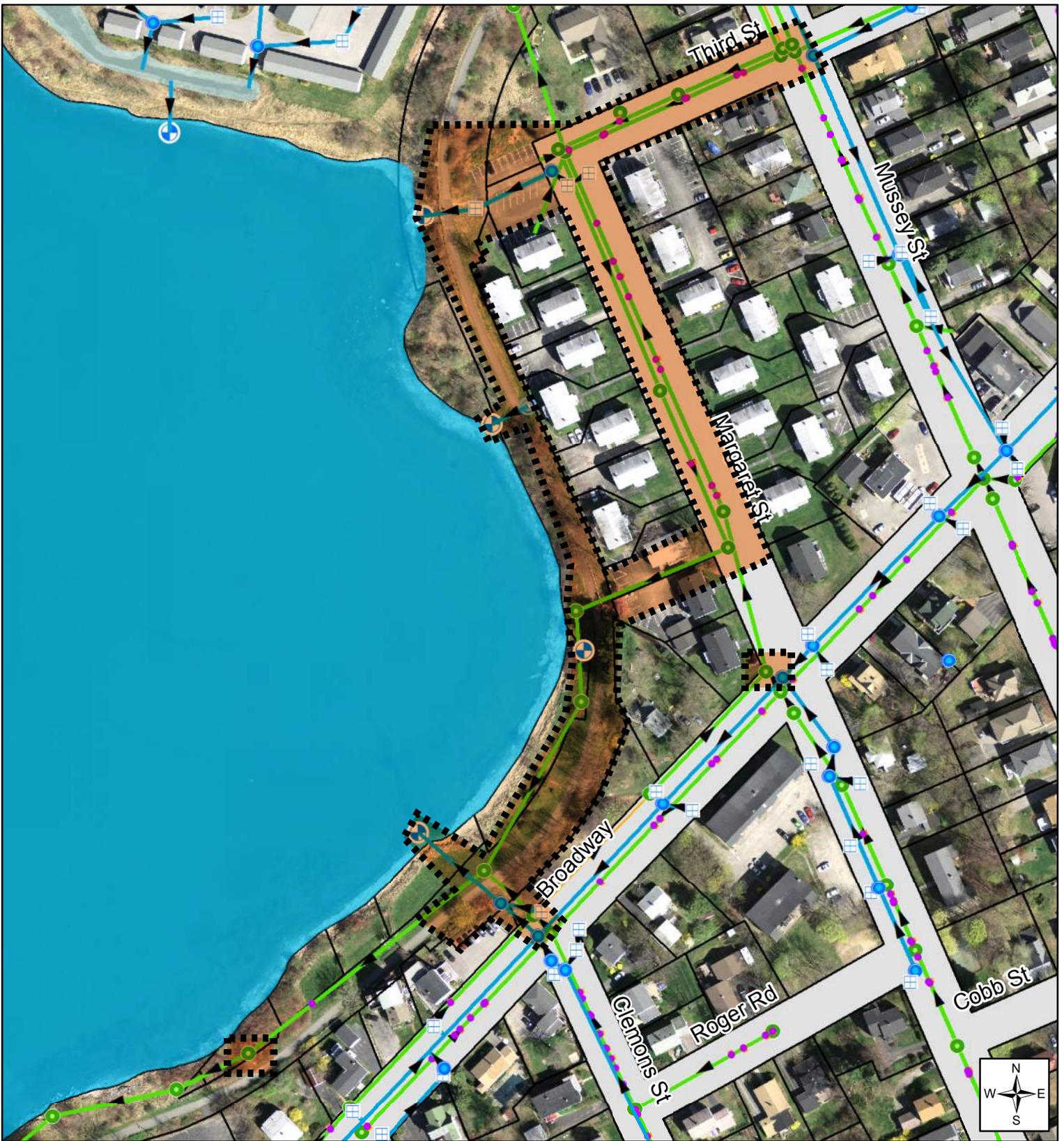
Environmental Protection
Water Resource Protection

Front Street West High Phase 2

This 2020 capital improvement is for the replacement of the 21” sewer interceptor at the intersection of Mussey Street and Third Street down to the interceptor near the end of Clemons Street (see attached map). This project is part of our continued CSO Facility Plan developed by Wright-Pierce Engineers in 2008 to comply with our Maine Pollutant Discharge Elimination System (MEPDES) Permit and Discharge License. The Plan proposes to eliminate CSOs from a 2-year, 24-hour design storm. In addition, this line segment is undersized restricting flow to the treatment plant. To avoid SSOs (sanitary sewer overflows) we have installed bolt down covers on the manholes along the green belt. More importantly we have turned down the capacity of the Front Street Pump Station to avoid any SSOs from occurring. The result of this causes more CSOs on Front Street.

The goal is to increase the interceptor pipe size from a 21” pipe to a 30” or 36” pipe to reduce the hydraulic bottleneck that it is creating. In turn, we will be able to increase the flow from the Front Street Pump Station to its maximum capacity. We feel comfortable by running the Front Street Pump Station at its maximum capacity we will be able to achieve our goal of not having a CSO from a 2-year, 24-hour storm. There will be site improvements to the green belt and portions of Margaret Street, Third Street, and Mussey Street disturbed by construction.

Project Cost:	\$1,654,610
Funding Source:	\$1,154,610 - Sewer User Fund Balance \$500,000 – TIF
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	75 years



Sewer Structures

- Catch Basin in Sewer
- Sewer Manhole with CSO
- Vault or Chamber
- Interceptor Sewer Manhole
- Pump Station
- Treatment Plant
- Sewer Manhole
- Wet Well
- Service Tie
- Private Pump Stations
- Dead End

Sewer Pipes

- Force Main
- Gravity
- Service
- Siphon
- Storm

Water System

- Service Valves
- Water Valve
- Public Hydrants
- Private Hydrant
- Water Mains

Stormwater Structures

- Culvert Inlet
- Culvert Outlet
- Outfall
- Catchbasin
- Drain Manhole
- Outlet Control Structure

Stormwater Pipes

- CSO
- Culvert
- Gravity
- Roof Drain

Terrain

- Waterbody
- Wet Area
- 2 Foot Contours
- Hydrography

Municipal

- Political Boundary
- Parcels, 12/2008
- Buildings

Sewer Districts

- | | |
|-----|-----|
| 1H | 112 |
| 111 | 113 |



Water Resource Protection



**Greenbelt Sewer Replacement
Preliminary Engineers Estimate
Greenbelt**

Item No.	Item	Unit	Unit Price	Quantity For Estimate	Total Cost
201.24	Remove Street Tree and Stump	EA	\$ 1,000.00	14	\$ 14,000.00
202.111	Remove Concrete/Bituminous Sidewalk and Curb	SY	\$ 12.00	33	\$ 400.00
202.15	Remove Exist Manhole or Catch Basin	EA	\$ 1,200.00	3	\$ 3,600.00
202.151	Abandon Manhole	EA	\$ 800.00	8	\$ 6,400.00
202.161	Infill and Abandon Existing Pipe	LF	\$ 25.00	1300	\$ 32,500.00
202.2	Remove Bituminous Concrete Pavement (Plan Quantity)	SY	\$ 5.00	2030	\$ 10,150.00
203.25	Granular Borrow	CY	\$ 30.00	1530	\$ 45,900.00
203.351	Underdrain Sand (Overdepth)	CY	\$ 35.00	390	\$ 13,650.00
206.061	Structural Earth Excavation (Overdepth)	CY	\$ 25.00	390	\$ 9,750.00
304.10	Agg Subbase Course Type D	CY	\$ 35.00	520	\$ 18,200.00
304.14	Agg Base Course Type A	CY	\$ 40.00	200	\$ 8,000.00
312.10	Bituminous Driveway Apron	SY	\$ 50.00	190	\$ 9,500.00
403.207	Hot Mix Asphalt 19.0mm	T	\$ 90.00	150	\$ 13,500.00
403.210	Hot Mix Asphalt 9.5mm	T	\$ 110.00	200	\$ 22,000.00
501.2	Helical Pile Mobilization and Design	LS	\$ 60,000.00	1	\$ 60,000.00
501.222	Helical Piles	LF	\$ 12.00	600	\$ 7,200.00
501.223	Pile Test Program	LS	\$ 20,000.00	1	\$ 20,000.00
603.159	12-inch Diameter PVC or HDPE Storm Drain Pipe	LF	\$ 85.00	120	\$ 10,200.00
603.179	18-inch Diameter PVC or HDPE Storm Drain Pipe	LF	\$ 120.00	60	\$ 7,200.00
603.199	24-inch Diameter PVC or HDPE Storm Drain Pipe	LF	\$ 150.00	60	\$ 9,000.00
604.131	4-foot Diameter Catch Basin	EA	\$ 3,700.00	2	\$ 7,400.00
604.15	4-foot Diameter Manhole	EA	\$ 4,000.00	1	\$ 4,000.00
604.1563	Special Manhole 8-foot Pile Supported	EA	\$ 50,000.00	3	\$ 150,000.00

**Greenbelt Sewer Replacement
Preliminary Engineers Estimate
Greenbelt**

Item No.	Item	Unit	Unit Price	Quantity For Estimate	Total Cost
604.1560	8-foot Diameter Manhole	EA	\$ 9,000.00	6	\$ 54,000.00
604.161	Modify Structure	EA	\$ 1,500.00	1	\$ 1,500.00
604.18	Adjusting Manhole or Structure to Grade	EA	\$ 750.00	9	\$ 6,750.00
608.50	Bituminous Sidewalk	SY	\$ 50.00	33	\$ 1,666.67
609.21	Slip Form Concrete Curb	LF	\$ 18.00	250	\$ 4,500.00
609.38	Remove and Reset Type 1 Curb	LF	\$ 35.00	50	\$ 1,750.00
610.08	Plain Riprap	CY	\$ 50.00	700	\$ 35,000.00
615.072	Loam, Seed and Mulch	SY	\$ 10.00	3300	\$ 33,000.00
621.201	Medium Deciduous Tree (2.5" Cal.) Group A	EA	\$ 1,000.00	14	\$ 14,000.00
627.70	Pavement Markings	LS	\$ 2,000.00	1	\$ 2,000.00
629.05	Hand Labor, Straight Time	HR	\$ 45.00	40	\$ 1,800.00
629.06	Mason, Straight Time	HR	\$ 45.00	40	\$ 1,800.00
631.105	Air Tool and Compressor (inc operator)	HR	\$ 65.00	40	\$ 2,600.00
631.12	All Purpose Excavator (inc operator)	HR	\$ 160.00	40	\$ 6,400.00
631.121	Heavy Duty Excavator (inc operator)	HR	\$ 190.00	40	\$ 7,600.00
631.13	Bulldozer (inc operator)	HR	\$ 130.00	40	\$ 5,200.00
631.172	Truck - Large or Small (inc operator)	HR	\$ 90.00	40	\$ 3,600.00
631.22	Front End Loader (inc operator)	HR	\$ 130.00	40	\$ 5,200.00
631.36	Foreman, Straight Time	HR	\$ 70.00	40	\$ 2,800.00
645.106	Demount and Reinstall Sign	LS	\$ 500.00	2	\$ 1,000.00
652.38	Flagger	LS	\$ 20.00	1500	\$ 30,000.00
652.39	Work Zone Traffic Control	LS	\$ 25,000.00	1	\$ 25,000.00
656.75	Temp. Soil and Water Pollution Control	LS	\$ 20,000.00	1	\$ 20,000.00
801.03	Test Pits	VF	\$ 75.00	75	\$ 5,625.00
803.137	36-inch Diameter PVC SDR35 Sewer Pipe	LF	\$ 250.00	1240	\$ 310,000.00

**Greenbelt Sewer Replacement
Preliminary Engineers Estimate
Greenbelt**

Item No.	Item	Unit	Unit Price	Quantity For Estimate	Total Cost
803.1381	Inserta-Tee-Connection, All Sizes	EA	\$ 1,000.00	1	\$ 1,000.00
803.139	Sewer Lateral Adjustment	LF	\$ 100.00	100	\$ 10,000.00
825.58	Water Service Relocation	LF	\$ 100.00	75	\$ 7,500.00
659.1	Mobilization and General Conditions	LS	\$ 250,000.00	1	\$ 250,000.00
900.01	Bypass Pumping	LS	\$ 45,000.00	1	\$ 45,000.00
Total					\$ 1,378,841.67

SUBTOTAL		\$1,378,841.67
CONTINGENCY	20.0%	\$275,768.33
TOTAL		\$1,654,610.00

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Environmental Protection

Water Resource Protection

Electrical Upgrade Phase 3

This 2020 capital improvement is for the execution of phase 3 of the treatment plant electrical service upgrades. This is the phase 3 work of the electrical service upgrade (phase 1 was funded last year) that includes the installation of a new motor control center (MCC) in the main pump station (the onsite plant influent pump station that handles flow from the east side of the city) with updates to the electrical service and controls in both the grit and screenings buildings at the headworks of the treatment plant. While we would have normally followed the planned sequence of funding phase 2 work for this year, the electrical systems condition at the headworks of the treatment plant, which are made up of the grit and screenings buildings, are in dire need of replacement. Therefore, for this year, WRP will be requesting the phase 3 work to include the grit/screenings buildings and will be constructing the phase 1 and phase 3 treatment plant electrical service upgrade in 2019. Next year's CIP request will include the phase 2 work.

Attached are the Woodard & Curran sections from the Preliminary Design Report (PDR) that describes the phase 3 work and recommendations of the Electrical Service upgrade and the estimated costs.

Project Cost:	\$602,500.00
Funding Source:	Sewer User Fund Balance
Source of Cost Estimate:	Woodard & Curran
Projected Useful Life:	20 years

The Solids Handling Room, under current NFPA 820 guidelines, is considered a classified location. The current distribution equipment is not compliant with current NEC classification guidelines. Modifications or replacement of MCC-5 is not part of the scope of this project.

2.2.5 Switchboard 1 (SWBD-1), MCC-6 (Main Influent Pump Station)

The Influent Pump Station is fed by a single section 1200A service rated disconnect located exterior directly adjacent to the door entrance and feeds the ATS and SWBD-1. The majority of the distribution equipment, apart from the MCC, was installed as part of the 1995 facility wide upgrades.

SWBD-1 is a 1200A 65kAIC rated, 480V, 3-phase, 4-wire, QED-2 Square D switchboard. SWBD-1 is in good condition and distributes power to the Influent Pumps and MCC-6. SWBD-1 contains a large fused distribution section which is mostly unused and likely not required for any foreseeable future upgrades.

MCC-6 is a 600A 25kAIC rated, 480V, 3-phase, 4-wire, Model 4 Square D MCC. The MCC is in moderate condition with minimal rust build up. The majority of the MCC components are obsolete and likely are do not have factory ready products available.

MCC-6 distributes power and controls mostly to the Grit and Screenings Building motors. Staff have stated a concern with the control and power wiring due to lack of labeling and clear identification as to what the wiring serves. Tracing the wiring in this area has been troublesome in the past.

As part of the most recent SCADA and controls upgrades, new Influent Pump VFDs were installed in the blower room adjacent to SWBD-1.



Figure 6: SWBD-1

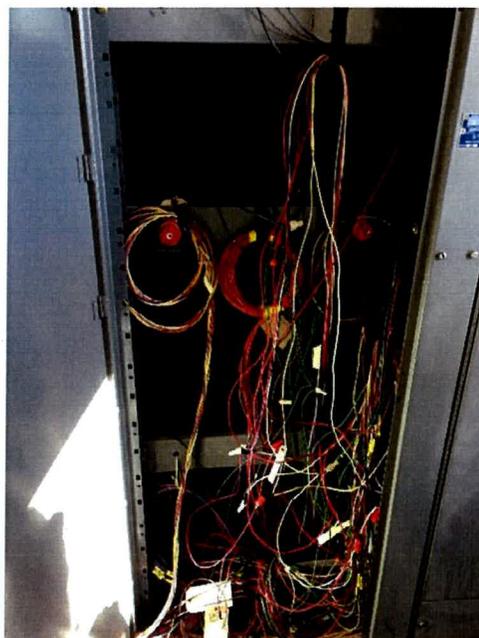


Figure 5: MCC-6 Control Wiring

The RAS pumps are controlled by a local VFD control panel with Allen Bradley model Powerflex 70 drives. The Plant Water pumps are controlled by a local VFD control panel with Allen Bradley model 1336 drives. The WAS pumps are controlled by local VFD control panels with Allen Bradley model 1336 drives. The Belt Filter Press Feed pumps are controlled by a local VFD control panel with Allen Bradley model 1336 drives. The Effluent Filtrate pumps are controlled by motor starters which reside in the MCC. The motor controllers for all pumps in the pump room are past their useful life or very near to it. There are no replacement parts for Allen Bradley 1336 drives apart from third party products.

The Plant Water pumps VFD control panel is located in the back corner of the pump room and is not readily accessible. The panel is located with limited working clearances in front and on the sides of the panel. The installation does not appear to comply with current NEC working clearance requirements based on the distance between the front of the VFD cabinet and the Unistrut supports.



Figure 8: Plant Water VFD Panel 1



Figure 9: Plant Water VFD Panel 2

2.2.8 Grit & Screenings Building

The electrical distribution equipment within the Grit & Screenings building includes Grit Pump and Grit Screw motors, disconnects, conduits and general building systems components such as hazardous rated fixtures, receptacles, and switches. The raceways, boxes and fixtures are showing signs of corrosion and paint delamination. Further investigation would be necessary to determine how advanced the corrosion is at each piece of equipment.

Control panels located just exterior of the classified spaces are subject to weather and are showing signs of water ingress with water stains at the base of the cabinets.

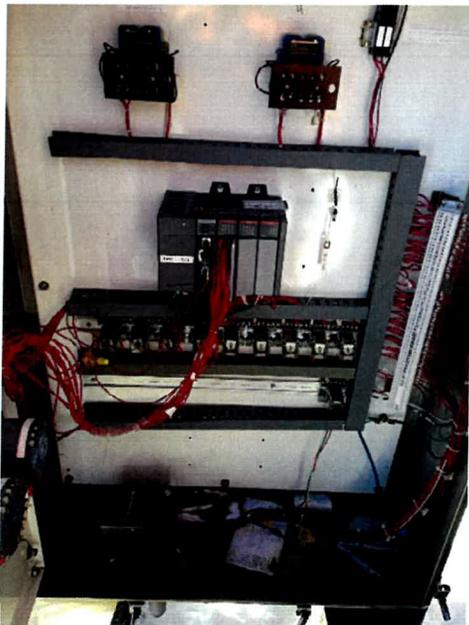


Figure 10: Grit Pump CP

Conduits mounted to the exterior of the building that are not either PVC or PVC coated rigid are showing signs of rust and deterioration.

As stated in section 2.2.5, control and power wiring are sourced from the Main Influent Pump Station MCC-6. Staff have stated concerns regarding the routing and condition of the wiring. Staff have had to troubleshoot wire failures within junction boxes and conduits feeding the Grit and Screenings Buildings. Further investigation will take place during the design phase of the project.

2.2.9 Facility Lighting and Controls

The majority of the interior OPS Building Interior fixtures are fluorescent 1'x4' fixtures with T-8 or T-12 tubes. Fixtures are controlled mostly by manual switches. Fixtures are in moderate to good condition.

The Main Influent Pump station ground level fixtures are fluorescent 1'x4' with T-8 or T-12 tubes and are controlled by manual switches. The pump room fixtures are hazardous location fixtures likely with incandescent bulbs. All fixtures are manually controlled with switches. The ground level fixtures are in moderate to good condition. The pump room fixtures are obsolete fixtures however are not used very often.

The Grit Screenings Buildings fixtures are all hazardous location listed fluorescent fixtures with T-8 or T-12 tubes with manual switches. The fixtures appear in moderate to good condition.

The exterior roadway fixtures are likely metal halide. Roadway fixtures are controlled by photocells. Staff stated concerns with some fixtures not operating properly. The metal halide fixtures are considered out dated.

Most fixtures appeared in moderate to good condition. The new office spaces were not considered as part of this evaluation.

4. RECOMMENDATIONS

4.1 SUMMARY

Through the workshop and alternatives collaborative meetings with South Portland staff, Woodard & Curran recommends the Alternative #1 approach. This includes the creation of a new, separated electrical room within the existing electrical room in the OPS Building. The new room will house the switchboard, the ATS, and the MCC. The generator configuration will be a parallel setup consisting of two 350kW (437kVA) or 400kW (500kVA) generators all located outside. An exterior NEMA3R rated switchboard will be installed local to the generators to consolidate the feeds for transition to the ATS in the building. Further evaluation during the design phase will take place to determine if both generators and emergency switchboard components can be housed within one enclosure.

The existing utility-owned transformer will remain in place. The secondary service will be intercepted and routed to the new distribution gear. The routing will either rise up the exterior of the building and penetrate above grade or will utilize the existing manholes in front of the electrical room exit. Further investigation will be needed during the design phase to ensure duct banks are designed such that there is no interference with existing sub grade utilities.

New switchboards and MCCs will be installed at the Main Influent Pump Station. The equipment will be installed as part of phase 3. Refer to Appendix G for proposed drawings. Modifications to the Disinfection Building and Solids Handling distribution equipment will occur as part of separate future contract.

4.2 PROPOSED LOAD CALCULATIONS

In reviewing the power monitoring data, CMP peak demand data, as well as the discussions regarding potential future process loading and equipment upgrades, it appears the existing utility-owned 1000kVA transformer has capacity to serve the facility for the foreseeable future. Therefore, the design approach will be to maintain the existing transformer and install gear rated for a 2000A secondary distribution service. The proposed load calculations assume the consolidation of MCC-1/3 and MCC-2/4 into a single MCC. Refer to Appendix F for complete load calculations.

The derated values are still slightly conservative and will be further modified through discussions with South Portland staff to be in line with power monitoring and peak loading data. During the design phase additional monitoring of motor run status can be logged to revise motor operational data in the load calculations.

Table 2: Proposed Load Calculations

Equipment	Location	Connected Load	Derated Load	Comments
SWBD-01	OPS Building Electrical Room	3041kVA 3660A	1661kVA 2000A	
SWBD-02	Influent Pump Station	941kVA 1133A	414kVA 498A	
SWBD-03	Disinfection Building	1110kVA 1336A	532kVA 641A	
MCC-01	OPS Building Electrical Room	599kVA 721A	514kVA 618A	
MCC-02	Influent Pump Station	593kVA 741A	237kVA 285A	
MCC-03	Disinfection Building	283kVA 341A	119kVA 143A	
MCC-04	OPS Building Second Floor	81kVA 97A	45kVA 54A	

4.3 ELECTRICAL DISTRIBUTION

The distribution system will start with new secondary feeders from the existing utility transformer to the new equipment in the electrical room. The new duct bank will be trenched as close to the transformer as possible and the existing secondary service will be cut and connected to the new duct bank. New secondary conductors will be installed. The existing duct bank will be abandoned in place up to the building. The old riser conduits, junction box and bus duct will be demolished. The building penetrations will be infilled to a finished appearance.

The new electrical room will be built in phases as described in the following section. The new room will consist of a new 2000A switchboard, 2000A ATS and 800A MCC. Some existing panels and conduits will need to be relocated to accommodate the new equipment.

Equipment:

- Main Switchboard – MSB
 - 2000A front access Type 1 enclosure 100kA bracing.
 - Molded case circuit breakers with adjustable electronic trip settings and ground fault as needed.
 - Integral 2000A ATS, open transition, fixed mounting
 - Power monitoring
 - Surge Protection
- Panelboard – PP-01
 - 480V, 3-phase, 4-wire, 400A
 - Molded case breakers
 - Surge Protection
- Generator Switchboard – GSWBD-01
 - 2000A front access Type 3R enclosure 100kA bracing. Type 1 construction if integral to generator enclosure
 - Molded case circuit breakers with adjustable electronic trip settings
 - Surge Protection
- MCCs (MCC-01 OPS Building, MCC-02 Influent PS)
 - 480V, 3-phase, 4-wire, 800A
 - MCC with integral network communication to each motor controller
 - Power monitoring
 - Motor starters with electronic overloads
 - VFDs

4.4 SMART (NETWORKED) MCC

In an effort to present an alternative to the traditional hardwired MCC and wall mounted individual VFDs design and installation, the following outlines the benefits of a Networked MCC with integral motor controllers (VFDs, Starters).

Woodard & Curran have designed and integrated many smart MCC installations and have found the benefits to outweigh the upfront cost and in many cases, save money. The operational feedback obtained from these devices easily allows monitoring of amperage, drive information, and bucket disconnect switch status. There is significant time savings during start-up of smart MCC systems, which eliminates hardwiring of motor controls to PLC terminals and

working with electricians to check these terminations, therefore increasing efficiency. Less IO Points for hardwired control and feedback of the MCC will lead to lower panel modification costs.

The elimination of hardwired Input/output points will reduce the amount of labor associated with engineering and integration tasks. These design efficiencies include the generation of PLC panel drawing IO sheets and Instrumentation loop sheets. Integration and start-up time is saved with elimination of FAT and SAT hardwired input testing relying on the quality of work on Electricians ensuring polarity and accurate terminations are completed.

Integration of a smart MCC is streamlined by standardizing MCC parameters, wiring, and data mapping. Woodard & Curran have developed thorough standards for these MCC configurations with documentation to outline the transfer of data between the PLC and MCC.

For construction the smart MCC greatly reduces Electrician labor time with the elimination of hundreds of wires from the MCC to the PLC. Two electricians and foreman onsite installing conduit and wire following control panel and vfd/starter wiring details can be time consuming and challenging.

Eliminating these points from the contractor requirements reduces labor and reduces the chance for wiring errors leading to longer point to point checkout and start-up testing. In addition to labor during start-up the elimination of conduit and copper wire for this IO is greatly reduced with simply an Ethernet cable between the PLC panel and the MCC. The smart MCC offers streamlined start-ups with less contractor interaction.

By installing VFDs and motor starters within MCCs, there is a significant savings in conduit and wire between MCC breakers and control panels. For the most part, the only wiring entering or leaving the MCC is the main feeder, motor loads, and the communication cables.

Provided the smart MCC is installed in a temperature/humidity/dust-controlled environment the equipment is expected to last as long as standard MCCs.

4.5 GENERATORS

The final design approach will incorporate two (2) 350kW (437kVA) or two (2) 400kW (500kVA) generators. This option is consistent with the power monitoring data and peak demand data and offers significant cost savings vs the 1500kVA gas generator. The two generators will operate in an alternating lead-lag configuration the majority of the time, with one generator operating for most process operating scenarios. The second generator could be brought online during times of heavier process operations and will allow operation of the loads identified in the sequence of operations provided by South Portland staff.

Generators

- 350-400kW (437-500kVA), 480V, 3-phase, 4-wire
- Sound Attenuated weatherproof enclosures
- Diesel, 24hr fuel storage for two (2) units. Final quantity of fuel storage will be finalized during the design phase.
- Paralleling controls
- Standard 2yr warranty with 10yr extended warranties available

A new 2000A NEMA 3R switchboard will be installed local to the generators to consolidate the generator feeds together for a single feed to the ATS. Further evaluation will take place during the design phase to potentially house the

generators and emergency switchboard together within one enclosure. Additionally, if access to a single enclosure is perceived to be difficult for staff and maintenance personnel, a separate above ground diesel storage tank will be investigated. This option may reduce the height of entry to the generator enclosure.

4.6 STRUCTURAL

The recommended approach includes building a new room within the OPS Building. The electrical room addition will be installed within the current electrical room and will allow for the protection and segregation of the electrical gear from common spaces. The room will be constructed of galvanized light gauge metal joists and galvanized form decking for the roof. The walls will be insulated with fiberglass insulation batt. The walls and ceiling will be standard painted gypsum wallboard. The roof will be sloped towards away from the exterior wall to shed any potential water on the roof.

Alternatively, the electrical room heating and drain piping, as described in section 2.2.2, could be re-routed to avoid installing a roof for the new interior electrical room. Further investigation will take place during the design phase of the project to determine the optimal solution to mitigate the potential water hazards.

The new distribution equipment as well generators will require new equipment pads. The interior distribution equipment will be installed on 4" housekeeping pads. The generators will be installed on 12" concrete slabs with rebar reinforcement.

4.7 CIVIL

The recommended approach includes site work to support the installation of new electrical duct banks and generators. The extent of the work is expected to be minimal. Civil work will include evaluating and designing potential grading and drainage components, erosion control plans as well as trenching and resurfacing for new duct banks. Further investigation will be required during the design phase to investigate all utility crossings, including any yard process piping, yard electrical ducts, manholes and handholes. The area surrounding the OPS Building is very busy with process piping. Special attention will be needed to locate electrical duct banks to serve the new distribution equipment. Final routing of duct banks will be finalized during phase 1 design. Soil contamination issues were noted as part of the workshop process. Further information will need to be collected regarding existing soil containments to determine if there will be special handling requirements for soils excavated on site.

4.8 HVAC

Additional investigation will occur during the design phase of the project to identify necessary HVAC upgrades to each new modified space. Additional cooling and heating will be provided to maintain a controlled environment in each space. Either separate AC units will be provided or potentially extending the existing building cooling systems to the new electrical room.

4.9 CONSTRUCTION PHASING APPROACH

The construction phasing for this project will be as described below. The purpose of the phased approach is to spread the cost of the electrical upgrades to better match South Portland's CIP budgeted outline goal of roughly \$1M per year for 3 years.

4.9.1 Phase 1 (2018) – Generators and Distribution Equipment

Phase 1 will include the backbone of the distribution system, which consists of the transformer secondary service entrance, 2000A main switchboard, the 2000A ATS, the generators, associated conduits and cabling, structural infill of windows and old bus duct building entrance, and a new main breaker at the Main Influent Pump Station.

1. Electrical - Demolish/Relocate electrical panels, conduit, and cables on north wall of electrical room.

2. Structural - infill of windows on north wall of electrical room
3. Structural - housekeeping pads
4. Civil/Electrical - Install secondary service entrance, generator, Main Influent Pump Station duct banks
5. Structural/Civil - Install generator equipment pads
6. Electrical – Install Distribution equipment within existing electrical room against north wall
 - o 2000A Switchboard, ATS, Panelboard PP-01
7. Electrical – Install Generators and cables
8. Electrical – Install new main breaker and cables at Influent Pump Station
 - o A new main breaker is required to be installed in parallel at the Influent Pump Station in order to transition the feed from the existing service to the new service while maintaining active use.
9. Electrical – 1st service cut over (the following events occur simultaneously)
 - o Secondary service from transformer (new cables to the new switchboard)
 - The service will be cut over from the existing bus duct connection to the new cables
 - o Re-feed MCC-1/3, MCC-2/4 (new cables)
 - New cables will be installed from the new switchboard to the existing MCCs at the same time as the service cut over to ensure seamless operation
 - o Cutover Main Influent Pump Station main breaker (re-use cables)
 - The Main Influent Pump Station will be cut over to the new main breaker at the same time to ensure seamless operation.
10. Electrical – 2nd service cut over (simultaneously)
 - o Re-feed MCC-5 Solids Handling (re-use cables)
 - o Re-feed MCC-7 Disinfection (re-use cables)
 - o Re-feed SWBD-2 Disinfection (re-use cables)

4.9.2 Phase 2 (2019) – New Interior Room and MCC-1

Phase 2 will include demolishing the existing MCC-1/3 and MCC-2/4, installing a new MCC-1 and building an interior room. All motor cables capable of being re-used will be migrated, some will need to be refeed entirely.

1. Structural – Install new housekeeping pads
2. Electrical – Install new MCC-1, feed from new switchboard
3. Electrical – cut over motors (time frame to be determined)
4. Electrical – Demolish existing MCC-1/3, MCC-2/4 and old switchboard
5. Structural – Refinish floors
6. Structural – Install new interior room
7. HVAC – provide modifications to existing HVAC system as needed to cool room

4.9.3 Phase 3 (2020) – Influent Pump Station MCC and Grit/Screening Building Feeders

The 3rd phase will include the replacement of the remaining MCC at the Main Influent Pump Station and new feeders to equipment at the Grit and Screenings Buildings. Further investigation will be needed closer to the design phase of this project to identify specific locations of MCC.

1. Main Influent Pump Station
 - a. Electrical - Migrate motor loads in the existing MCC
 - b. Electrical – Install new MCC (location to be determined)
 - c. Electrical – Re-feed motor loads which includes all loads at the Grit and Screenings Buildings
 - d. Electrical – Demolish existing MCC

5. OPINION OF PROBABLE COST

5.1 OPINION OF PROBABLE COST SUMMARY

Based on the information in this report, the Engineer's estimate of probable construction cost is \$3,397,500. This includes a contingency of 20% percent. Preliminary quantity take-offs were made with costing data from RSMEANS. Equipment bid quotes were gathered from local vendors. Refer to Appendix J for Equipment bid quotes. The project final design and construction administration costs will be provided at a later date.

Table 3: Overall Construction Costs

Phase 1: Generator, ATS, Switchboard	
Construction Costs	\$1,300,000
Contingency: (20%)	\$260,000
General Conditions (15%)	\$200,000
Contractor OH & Profit (20%)	\$260,000
Phase 1 SubTotal:	\$2,020,000
Phase 2: MCC-1 and Room Addition	
Construction Costs	\$500,000
Contingency: (20%)	\$100,000
General Conditions (15%)	\$75,000
Contractor OH & Profit (20%)	\$100,000
Phase 2 SubTotal:	\$775,000
Phase 3: Remaining MCC Replacement	
Construction Costs	\$350,000
Contingency: (20%)	\$100,000
General Conditions (15%)	\$52,500
Contractor OH & Profit (20%)	\$100,000
Phase 3 SubTotal:	\$602,500
Project Total:	\$3,397,500

Environmental Protection
Water Resource Protection

Skid Steer Loader

This 2020 capital improvement request is for the replacement of a Skid Steer Loader used in the department's construction activities. This item loads materials such as sand, loam, stone, and gravel into dump trucks and transports material in and around sewer and stormwater piping projects. The Department also has sweeping and asphalt milling attachments that will be reused with the new machine. This item will replace a 2008 John Deere Skid Loader that is underpowered and at the end of its expected useful life. The replacement of this item will ensure projects will be completed in a timely and efficient manner. The project cost of \$68,000 was obtained from a local equipment sales company.

Project Cost:	\$68,000
Funding Source	Sewer User Fund Reserve
Source of Cost Estimate:	Beauregard Equipment Co., Inc.
Projected Useful Life:	10 years



ENGINE

Model	FPT F5B FL413 E*B002
Emissions Certification	Tier 4 Final
Type	Diesel, Turbo – Direct Injection
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in ³ (3.4 L)
Fuel injection	Direct
Fuel	#2 Diesel
Fuel filter:	
Pre-filter	Beta (30) = 200/spin-on
Main filter	Beta (4) = 20/spin-on
Air intake	Turbocharged w/ waste gate and external cooled EGR
Exhaust aftertreatment	Selective Catalytic Reduction – SCR
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2500 +/- 25
Rated – full load	2500
Low idle	1150 +/- 25
Horsepower @ 2500 RPM – SAE J1349:	
Gross	90 hp (67 kW)
Net	84 hp (63 kW)
Peak torque @ 1400 RPM	282 lb-ft (383 N-m)
Radiator:	
Core type	Aluminum bar and plate
Core size area	2.21 ft ² (0.206 m ²)
Rows of tubes	21
Cap pressure	16 +/- 2 psi (1.10 +/- 0.14 bar)
Fan:	
Diameter	22 in (560 mm)
Ratio	1.1:1
Water pump:	
Style	Centrifugal
Flow	47.8 gpm (181 L/min)
Engine lubrication pump	Rotor pump w/ deep sump pan, plate cooler and pressurized under-piston nozzles
Pump operating angle ratings:	
Side to side	45°
Bucket up	35°
Bucket Down	45°

LIFT GEOMETRY

Vertical Lift

DRIVETRAIN

Drive pump controls	Servo-assist mechanical
Pump to engine ratio	1:1
Displacement	2.81 in ³ (46 cm ³)
Flow @ rated engine RPM:	
@ 97% efficiency	29.4 gpm (111 L/min)
Charge pressure	360 psi (24.5 bar)
System relief pressure	5,220 psi (360 bar)
Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.75 in ³ (45 cm ³)
Flow @ rated engine RPM:	
@ 97% efficiency	28.8 gpm (109 L/min)
Charge pressure	362 psi (25 bar)
System relief pressure	5,220 psi (360 bar)
Drive motors:	
Max. displacement	28.7 in ³ (470 cm ³)
Displacement – optional:	
High speed	17.2 in ³ (282 cm ³)
Motor RPM @ high idle and 97% efficiency:	
Standard 1-speed	237
Optional 2-speed	355
Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar):	1,987 lb-ft (2 694 N-m)
Travel speed:	
Low range	7.7 mph (12.4 kph)
High range – optional	11.5 mph (18.5 kph)
Final drive	Single-reduction chain drive
Drive chain:	
Size	ASA #100
Tensile strength	30,000 lb (133.4 kN)
Axles:	
Torque @ max. displacement and relief pressure	5,957 lb-ft (8 077 N-m)
Diameter	2.44 in (62 mm)
Length	15.6 in (396 mm)
Parking brake:	
Type	Spring-applied, hydraulic release multiple disc.
Engagement	Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine.

ELECTRICAL

Alternator	160 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 1,000 cold-cranking amps @ 0° F (-18° C)

OPERATOR ENVIRONMENT

Enclosed Cab w/ Heater and AC; Fully sealed and pressurized – FSP; Glass door w/ wiper and washer; Sliding side windows – removable; Heater and air conditioner; AM/FM radio w/ 2 speakers; Keyless start ignition; Tilt ROPS/FOPS;

Rear window w/ emergency escape; Deluxe cloth, air suspension seat, w/ 2 in (51 mm) retractable 3 point lap seat belt, w/ heater and lumbar support; Hand and foot throttle; Alarm package – back-up and horn; Headliner; Dome Light; Top window; Cup holder; 12V Power plug socket; Foot rest; Seat Pocket; Padded seat bar w/ integral armrests; Loader control lockout system; Electric parking brake control; Operator's compartment floor cleanout; Proportional auxiliary hydraulic control – on joystick; Advanced Instrument Cluster w/ digital hour meter, tachometer, fuel level LCD bar graph w/ alarm, DEF Level, diagnostic features and security lockout.

Warning lights with alarms:

Engine coolant temperature; Engine oil pressure; Engine malfunction; Hydraulic charge pressure; Hydraulic filter restriction; Hydraulic oil temperature; Critical system stop, Engine system, Hydraulic system, Electrical and diagnostic system.

Warning alarms:

Battery voltage – plus display; Diesel Exhaust Fluid (DEF); Oil service.

Indicator light:

Engine preheat; Parking brake; Seat bar reminder.

OPERATING WEIGHT

Unit equipped w/ open cab; 165 lb operator; 78 in Heavy-Duty bucket; full of fuel; 14 x 17.5 tires:	9,100 lb (4 136 kg)
Shipping weight	8,557 lb (3 890 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	75 lb (34.0 kg)
Glass cab door w/ wiper	75 lb (34.0 kg)
Suspension seat	22 lb (10.0 kg)
Additional counterweight	300 lb (136.0 kg)

HYDRAULICS

Implement pump type	Gear
Displacement:	
Standard aux.	2.23 in ³ (36.6 cm ³)
High-flow aux.	1.42 in ³ (23.3 cm ³)
Standard flow @ rated engine RPM:	
@ 100% efficiency	24.2 gpm (91.5 L/min)
Optional high-flow @ rated engine RPM:	
@ 100% efficiency	38.7 gpm (146.5 L/min)
Enhanced high-flow @ rated engine RPM:	
@ 100% efficiency	35.0 gpm (132.5 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,450 psi (238 bar)
Port relief pressures:	
Loader raise	3,625 psi (250 bar)
Bucket curl	3,916 psi (270 bar)
Bucket dump	3,625 psi (250 bar)
Hydraulic lines:	
Tubing	ORFS + 37° JIC Flare
Loop hoses	SAE 100 R19

HYDRAULICS CONT.

Hydraulic oil cooler:	
Number of fins	10 per inch (3.94 per cm)
Number of tube rows x columns	9 bar/plate
Area	138.7 in ² (890 cm ²)
Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	2.75 in (69.85 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	34.9 in (886.5 mm)
Closed length	47.4 in (1 205 mm)

Bucket cylinders:	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	15.7 in (398 mm)
Closed length	24.0 in (610 mm)

SERVICE CAPACITIES

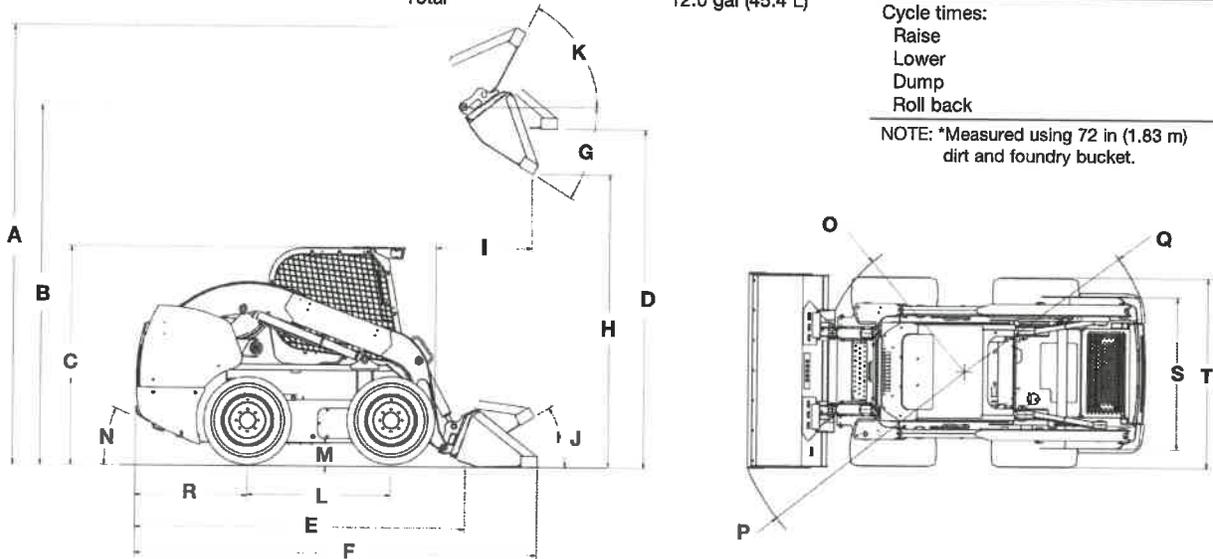
Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	8.9 qt (8.5 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	12.0 gal (45.4 L)

Chain tanks – per side	5.9 gal (22.2 L)
Diesel Exhaust Fluid (DEF) Tank	2.8 gal (10.7 L)

PERFORMANCE SPECS

Rated operating capacity – ROC*:	
50% of tipping load	3,400 lb (1 545 kg)
w/ additional counterweight	3,650 lb (1 656 kg)
Tipping load*	6,800 lb (3 090 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket cylinders	9,531 lb (42.4 kN)
Lift cylinders – tip limit	6,816 lb (30.3 kN)
Cycle times:	
Raise	4.6 sec
Lower	3.5 sec
Dump	2.6 sec
Roll back	2.0 sec

NOTE: *Measured using 72 in (1.83 m) dirt and foundry bucket.



Line drawings are for illustrative purpose only and may not be exact representation of unit.

DIMENSIONS

A. Overall operating height:	
with foundry/excavating bucket	160.4 in (4.07 m)
with low profile bucket	164.4 in (4.18 m)
with low profile extended bucket	169.5 in (4.30 m)
Height to:	
B. Bucket hinge pin	130.0 in (3.30 m)
C. Top of ROPS	78.8 in (2.00 m)
D. Bottom of level bucket, fully raised	124.8 in (3.17 m)
Overall length:	
E. without attachment with coupler	119.1 in (3.02 m)
F. with foundry/excavating bucket on ground	144.0 in (3.66 m)
with low profile bucket	148.0 in (3.76 m)
with low profile extended bucket	153.1 in (3.89 m)
G. Maximum dump angle	46.7°
H. Dump height:	
with foundry/excavating bucket	103.5 in (2.63 m) @ 45°
with low profile bucket	100.6 in (2.56 m) @ 45°
I. Dump reach at maximum height with low profile bucket	29.3 in (0.74 m) @ 45°
Maximum attachment rollback:	
J. Bucket on ground	35.0°
K. Bucket at full height	86.0°
L. Wheelbase	52.0 in (1.32 m)
M. Ground clearance – bottom of belly pan	8.0 in (0.20 m)
N. Angle of departure	23.5°
Clearance circle:	
O. without bucket	56.2 in (1.43 m)
P. with 72 in (1.83 m) foundry/excavating bucket in carry position	84.1 in (2.14 m)
with 72 in (1.83 m) low profile bucket on ground	87.8 in (2.23 m)
with 72 in (1.83 m) extended low profile on ground	71.2 in (2.35 m)
Q. Clearance circle rear	70.4 in (1.81 m)
R. Rear axle to bumper	42.4 in (1.08 m)
S. Tread over gauge with spec tires	56.9 in (1.45 m)
T. Over the tire width spec tires	69.6 in (1.77 m)

TIRE SELECTION

Type	Size	Tread Gauge	Over Tires Width	Each Tire Weight*
Heavy-Duty	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	110 lb (50 kg)
Premium	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	119 lb (54 kg)
Premium-Lined	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	119 lb (54 kg)
Severe-Duty	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	135 lb (61 kg)
Non-Pneumatic – Solid	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	280 lb (127 kg)
Mining	12 L x 16.5	56.9 in (1.45 m)	70.0 in (1.78 m)	380 lb (173 kg)
Flotation	33 L x 15.5 x 16.5	59.0 in (1.50 m)	76.0 in (1.93 m)	143 lb (65 kg)
Premium	14 L x 17.5	62.0 in (1.58 m)	76.0 in (1.93 m)	148 lb (67 kg)

NOTE: *Tire weight does not include the wheel weight.

OPTIONAL BUCKETS

Type	Width	Weight	Heaped Capacity
Dirt & Foundry	72 in (1.83 m)	420 lb (190 kg)	16.2 ft ³ (0.46 m ³)
	78 in (1.98 m)	440 lb (200 kg)	17.7 ft ³ (0.50 m ³)
Low Profile	72 in (1.83 m)	480 lb (218 kg)	14.8 ft ³ (0.42 m ³)
Low Profile Extended	72 in (1.83 m)	510 lb (232 kg)	17.7 ft ³ (0.50 m ³)
	78 in (1.98 m)	540 lb (245 kg)	19.1 ft ³ (0.54 m ³)
	84 in (2.13 m)	575 lb (262 kg)	20.5 ft ³ (0.58 m ³)
Light Material	72 in (1.83 m)	475 lb (216 kg)	23.3 ft ³ (0.66 m ³)
	84 in (2.13 m)	540 lb (245 kg)	27.5 ft ³ (0.78 m ³)
Manure & Slurry	72 in (1.83 m)	480 lb (218 kg)	19.1 ft ³ (0.54 m ³)
	84 in (2.13 m)	545 lb (248 kg)	22.6 ft ³ (0.64 m ³)
Heavy-Duty	72 in (1.83 m)	510 lb (230 kg)	14.1 ft ³ (0.40 m ³)
	78 in (1.98 m)	530 lb (240 kg)	15.5 ft ³ (0.44 m ³)
	84 in (2.13 m)	550 lb (250 kg)	17.0 ft ³ (0.48 m ³)
Heavy-Duty with spillguard	72 in (1.83 m)	585 lb (265 kg)	18.4 ft ³ (0.52 m ³)
	78 in (1.98 m)	605 lb (275 kg)	19.8 ft ³ (0.56 m ³)
	84 in (2.13 m)	640 lb (290 kg)	21.5 ft ³ (0.61 m ³)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5B FL413 E*B002
207 CID (3.4 L) Turbo
Tier 4 Final Certified
Diesel Oxidation Catalyst (DOC) with Selective Catalytic Reduction (SCR) muffler
Charged Air Cooler (CAC)
High Pressure Common Rail (HPCR) fuel injection
Horsepower:
Gross: 90 hp (67 kW)
Net: 84 hp (63 kW)
Peak torque 282 lb-ft (383 N-m)
160 amp alternator
Dual element air cleaner
Organic Acid Technology (OAT)
Anti-freeze solution to -34° F
Fuel tank - 25.5 gal (U.S.)
Over and under radiator and oil cooler
3-stack after cooler/radiator/oil cooler configuration
Glow plugs

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy with side screens
Keyed start ignition
Ventilation system with integrated heater
Electro-hydraulic controls:
For drive/steering, loader functions
Switchable between H and ISO patterns
Adjustable sensitivity of controls
Mechanical hand controls
Hand and foot controls:
Hand controls the loader drive function and foot controls the bucket and boom
Non suspension seat
Suspension seat, vinyl
Open cab interior trim package
Demolition cab door with polycarbonate
FOPS level 2

Integral engine oil cooler
Fuel filter with water trap
1,000 CCA 12V battery
Master electrical disconnect

DRIVETRAIN

2-speed hydrostatic four wheel drive
ASA #100HS drive chain
SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:
@ 3,450 psi (238 bar) – 24.2 gpm (91.5 L/min)
6 micron oil filtration system
3-spool loader control valve
Auxiliary hydraulic disconnects, ISO flat-face – connect-under-pressure with case drain
Hydraulic circuit pedal lock
Auxiliary function lockout override
Loader lift lockout override
Heavy-duty hydraulic oil cooler
Loader arm float position
Hydraulic one-way self-leveling
Ride control
Connect under pressure auxiliary hydraulic disconnects

HYDRAULICS

High-flow auxiliary hydraulics – combined:
@ 3,450 psi (238 bar) – 38.7 gpm (146.5 L/min)
Enhanced High-Flow auxiliary hydraulics – EHF:
@ 4,000 psi (276 bar) – 35.0 gpm (132.5 L/min)
Second auxiliary hydraulics

LOADER

Auxiliary front electric control
Hydraulic attachment coupler

LOADER

Heavy duty hydraulic attachment coupler
Vertical lift geometry
Loader lift arm support strut
SAE operating load: 3,400 lbs
Tipping load: 6,800 lbs
In-cab loader lock

TIRES

14 X 17.5 Heavy duty

OTHER STANDARD FEATURES

Halogen lights - 2 front, 2 side, 2 rear flood
Heavy duty front lights
Pre-wired for rotating beacon
Lockable service access hood
Single-point daily service
Rear tail lights
Remote oil drain
Remote oil and fuel filters
Block heater
Debris ingress sealing
Mounting points for add-on counterweights
Heavy duty rear door
Deluxe cloth, air suspension seat

OTHER

Language decals
Factory-installed tires – see page 3
Buckets – see page 3
Bolt-on bucket cutting edges
Bolt-on heavy-duty bucket spill guard
Special paint
Offsite service arrangement
Telematics

FACTORY SUPPLIED ATTACHMENTS

Interior mirror
Add-on counterweights
Road lights
Rotating beacon
Four-corner LED strobe
Bolt-on heavy-duty bucket teeth
48 in (1.22 m) pallet forks

SERVICE PARTS

3 inch (76.2 mm) retractable seat belt

CaseCE.com

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CASE Construction Equipment is biodiesel-friendly. NOTE: All engines meet current EPA emissions regulations. All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.



Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs and use any safety features provided.

Form No. CCE201608SV340

SV340



DEERE

317

20
NORTRAX



COLCHESTER
 28 Jasper Mine Road
 Colchester, VT 05446
 (802)893-1555

BANGOR
 59 Contractor Drive
 Hermon, ME 04401
 (207) 848-2050

CONCORD
 231 Sheep Davis Road
 Concord, NH 03301
 (603) 225-6621

SCARBOROUGH
 14 Gibson Road
 Scarborough, ME 04074
 (207) 885-0600

Quotation

Date: 8/2/2018

To: **South Portland Water Res.**
 111 waterman drive
 South Portland ,ME
 Attn: Dave Thomes

Phone 207-767-7680
 Cell Phone
 E-Mail -

Equip: New CASE SV340 Skid Steer
 Incl: Cab, AC, EH Controls, Air Ride Susp Seat, Hyd QC, Block Heater,
 12 x 16.5 Tires, 84" Low Profile Extended Bucket with Edge
 High Flow Aux Hydraulics

	\$68,000.00
Sub Total	\$68,000.00
Tax & Fees	
Total	\$68,000.00

Finance		Lease	
Loan Term	_____	Lease Term	_____
Int. Rate	_____	Security Dep	_____
Payoff	_____	Payoff	_____
Down Pay't	_____	1 Adv Pay't	_____
Payment	_____	Payment	_____

Jim Swain
 Salesperson

 Customer

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Environmental Protection
Water Resource Protection

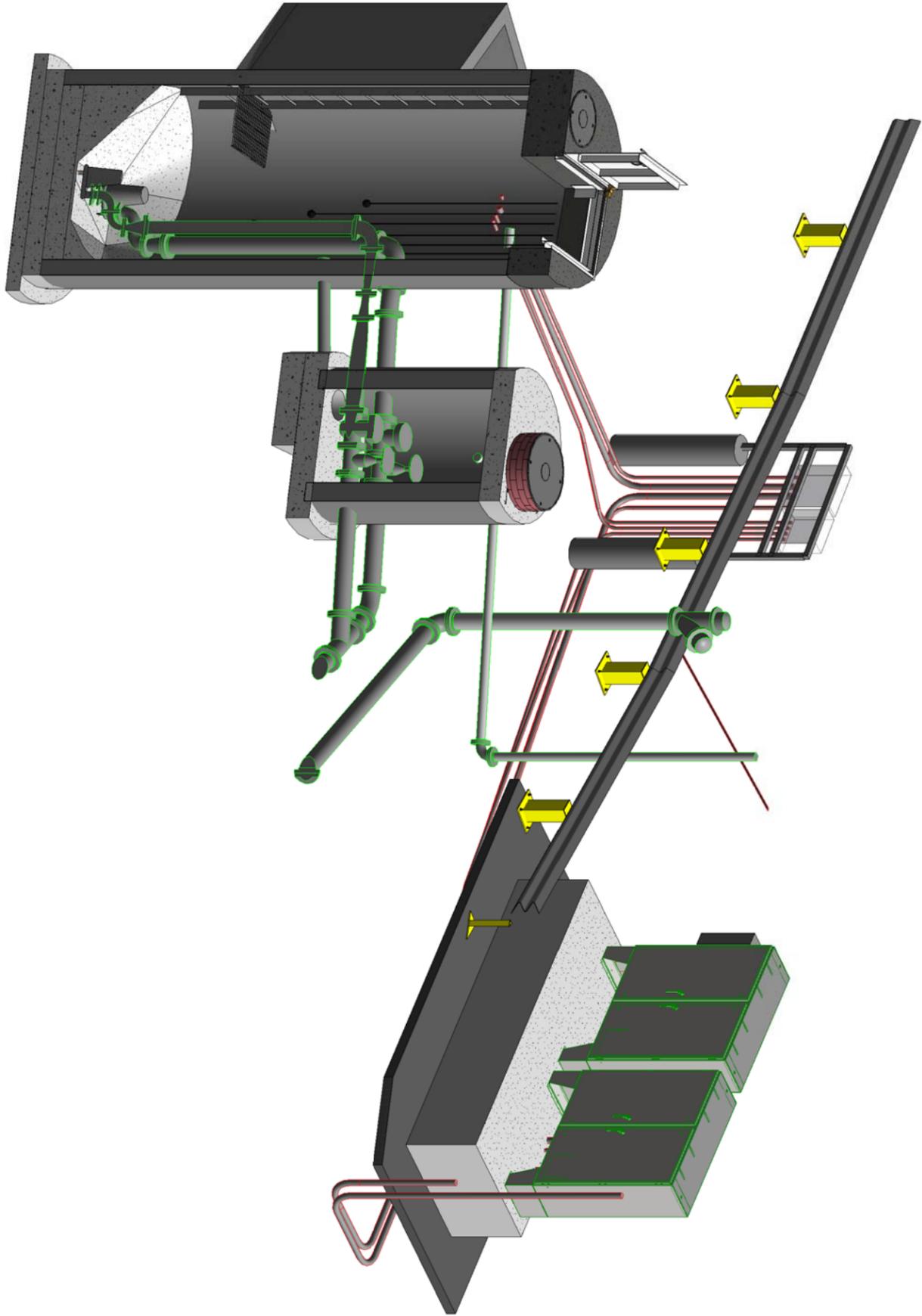
E Street Pump Station Update

This 2020 capital improvement is for updates to the pumps and piping systems at the E Street wastewater pumping station located at the end of E Street in Knightville. The E St pump station was originally designed and installed in the early 70's as part of the City's efforts to improve water quality in the Fore River and Casco Bay. The updates will replace aging station infrastructure including replacing the existing 40 year old submersible pumps, relocate failing valves out of the sewage wetwell, and re-piping to allow for safer ease of access by operations and maintenance personnel. Updates to the pumps will include updating to energy efficient VFDs. Work will primarily be performed by WRP maintenance personnel with outside specialist contract assistance.

WRP is estimating the cost of this work based on the engineering estimate at the Mechanic St pump station because of similarities in size and scope.

Project Cost: \$60,000
Funding Source: Sewer User Fund Reserve
Source of Cost Estimate: WRP Engineering
Projected Useful Life: 20 years

① E STREET PUMP STATION



DWG D-1	CITY OF SOUTH PORTLAND E ST PUMP STATION RECORD DRAWING	 <p>Water Resource Protection 111 Waterman Drive PO Box 9422 South Portland, ME 04116-9422 Ph # 207-767-7675 Fax # 207-767-5697</p>	DRAWN BY Author		No.	Description	App'd	Date
	E STREET PUMP STATION		APPROVED BY Designer	DATE	CHECKED BY Checker			
			DATE	12/21/18				
			PROJECT NO.	12345				
			SCALE					

Environmental Protection
Water Resource Protection

Western Ave #1 Pump Station Repairs

This 2020 capital improvement is for the replacement pumps for the Western Avenue #1 wastewater pumping station. The Western Avenue #1 pump station is located just off the parking lot of Tire Warehouse. The original ejector station, installed in the late 1970's was replaced in 1992 with a Smith & Loveless suction lift station. The station is a duplex station (2 pumps in an alternate lead-lag configuration). Normal preventive and corrective maintenance has been performed on the pumps as needed; however, both pumps have nearly worn to the point of failure. Smith and Loveless was contacted and have provided the pricing for the original equipment manufacturer (OEM) replacements.

Project Cost:	\$25,000
Funding Source:	Sewer User Fund Reserve
Source of Cost Estimate:	Smith and Loveless (OEM vendor)
Projected Useful Life:	15 years



SALES AGREEMENT

Smith & Loveless, Inc.
14040 Santa Fe Trail Drive
Lenexa, Kansas 66215-1284, USA
Phone: (913) 888-5201; Fax: (913) 748-0106

DATE: 12/13/2018
PROJECT: S Portland, ME
INQ #: RR-28051-1
EXISTING S&L SN: 14-1732

CUSTOMER CONTACT:
CUSTOMER PHONE:
CUSTOMER E-MAIL:

YOUR LOCAL SMITH & LOVELESS REPRESENTATIVE CONTACT INFORMATION:

SALES PERSON & CONTACT PH: Jim Russell-207-944-3991-C
REPRESENTATIVE COMPANY: Russell Resources
REPRESENTATIVE FAX: (207) 433-1080

SCOPE OF EQUIPMENT: **Two (2) SMITH & LOVELESS® Model 4B2B STAR ONE™ Vacuum Primed complete pump.**

- 5 HP, 1200 RPM, 3/60/208 volt ODP motors.
- The pump motor shall be Premium Efficiency and Inverter Ready.
- Impeller trimmed to 9" for 260 GPM @ 33' TDH.
- The complete pump includes the motor, bronze seal housing assembly, motor adapter, impeller, volute, and front head.
- **SONIC START® STREAMLINE™** vacuum priming system, with probe and 2-way solenoid valve/dome assembly, time delay relay and **SONIC START®** Operating Module.
- Includes touch-up paint kit and installation hardware for attaching the volute discharge nozzle to piping and suction to suction piping.

PRICE (includes freight): **\$24,637**

-MORE-

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**Environmental Protection
Water Resource Protection**

Belt Filter Press No. 1 Repairs

This 2020 capital improvement is for the repair parts for the No. 1 belt filter press. The wastewater has two belt filter presses (BFP) for dewatering of waste solids. Waste solids are the byproduct of treating wastewater in a secondary activated wastewater treatment plant like the City's. Waste solids are blended with a polymer solution to help separate out water. The polymer-sludge blend flows out across the BFP gravity zone where the sludge spreads out across the belts and into the BFP pressure zone as they travel up and over multiple sets of rollers before being discharged to a conveyor and to disposal.

These BFPs were installed in 1998 as part of an upgrade to the wastewater treatment plant. The BFPs replaced the original antiquated dissolved air flotation units and coil dewatering drums. The bearings and rollers on the BFPs have worn to the point where they need to be replaced. Komline Sanderson, the manufacture of the BFPs performed an inspection and made recommendations on repairs to be made to extend the life of the BFPs.

Press #2 failed prematurely and repairs have been completed. This request is for the hardware needed to make proactive repairs to BFP #1. The quote in this request highlights the necessary parts needed for the rebuild (All work on the presses performed in house by maintenance staff)

Project Cost:	\$60,000
Funding Source:	Sewer User Fund Reserve
Source of Cost Estimate:	Komline Sanderson (OEM vendor)
Projected Useful Life:	15 years



Komline-Sanderson

12 Holland Av Peapack, NJ 07977-0257
908-234-1000 Fax: 908-234-9487
www.komline.com

FIELD SERVICE REPORT FORM

Date: June 13, 2018

Customer: City of South Portland WRR

Location: South Portland, Maine

Contact: Frank Moulton

Phone: (207) 767-7675 x 7570

E-Mail: fmoulton@southportland.org

Belt Filter Press (BFP), Model GRSLX-2 Series III,

Equipment: Qty. (2)

K-S Job No.: S-3540

Serial No.: UN-843 & UN-844

Completed By: T.E. Mascola

Date/s of Service: May 31, 2018

Place X next to items that are complete	Complete	Date
Installation Inspected		
Electrical Checkout		
Mechanical Checkout		
Equipment Start-Up		
Operation & Maintenance Training		
Performance Test (if required)		
Spare Parts On Site (if applicable)		
Warranty Service		
Aftermarket Service	X	5/31/18

Note: List any comments on pages below as required. Attach any additional information.

Comments

On Wednesday, May 30 travelled to the City of South Portland Water Resource Recovery Plant. The purpose of the visit was to complete an equipment inspection of the two installed Model GRSLX-2 Series III (hydraulic) BFP's.

Both of these BFP's have been in service since 1998. The main frames are in good condition and the BFP's are kept clean and well maintained. The thickening mode on BFP #1 is presently not being used. BFP #2 was not furnished as a combo unit.

Serial Number UN-843:

1. 20 inch diameter solid drum: Nylon covering was found cracked. The carbon steel core is corroded and has started to delaminate. This drum will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.
2. Two (2) 12-3/4 inch diameter solid drums: Nylon covering was found cracked. The carbon steel core is corroded and has started to delaminate. These drums will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.
3. Both the upper and lower rubber covered drive rolls are worn. The rubber is lifting off the rolls. The carbon steel core is corroded and has started to delaminate. Both drive rolls will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.
4. All washwater spray header spray nozzles are worn and will need to be replaced. The Victaulic coupling clamps are corroded and will need to be replaced. Plant has internal nozzle cleaning brushes.
5. All washbox brush seals are worn and covered with hair and sludge. These will need to be replaced.
6. Both discharge scraper blades are worn and will need to be replaced.
7. Upper and lower belt take up rack and pinion gear cross shafts are moving side to side. They appear to be slightly bent from not rotating within the mounting bearing blocks. The racks and pinion gears were found loose. Replace cross shafts, mounting bearing blocks, racks and gears.
8. One (1) take-up cylinder body is corroded. Plant has purchased hydraulic cylinders from Hanna.

Comments

9. Filter belts are slightly wrinkled from the worn drive roll rubber covering. Both filter belts can be used until the drive rolls are replaced.

10. Belt support bars / grid tubes appear to be in satisfactory condition.

11. Gravity side seals appear to be in satisfactory condition.

12. Polymer injection ring lines should be periodically removed and cleaned. The mixing valve inspection cover should be removed once a year for inspection and cleaning.

Serial Number UN-844:

1. 20 inch diameter solid drum: Nylon covering was found cracked. The carbon steel core is corroded and has started to delaminate. This drum will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.

2. Two (2) 12-3/4 inch diameter solid drums: Nylon covering was found cracked. The carbon steel core is corroded and has started to delaminate. These drums will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.

3. Fifth 10-3/4 inch diameter solid drum: Nylon covering was found cracked. The carbon steel core is corroded and has started to delaminate. This drum will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.

4. Both the upper and lower rubber covered drive rolls are worn. The rubber is lifting off the rolls. The carbon steel core is corroded and has started to delaminate. Both drive rolls will need to be replaced. The bearings if properly removed without damage for cleaning and inspection may possibly be reused if in good condition.

5. All washwater spray header spray nozzles are worn and will need to be replaced. The Victaulic coupling clamps are corroded and will need to be replaced. Plant has internal nozzle cleaning brushes.

6. All washbox brush seals are worn and covered with hair and sludge. These will need to be replaced.

7. Both discharge scraper blades are worn and will need to be replaced.

Comments

8. Upper and lower belt take up rack and pinion gear cross shafts are moving side to side. They appear to be slightly bent from not rotating within the mounting bearing blocks. The racks and pinion gears were found loose. Replace cross shafts, mounting bearing blocks, racks and gears.

9. Filter belts are slightly wrinkled from the worn drive rolls. Both filter belts can be used until the drive rolls are replaced.

10. Lower steering cylinder is missing the lower trunnion hub and cap screw. It appears the tapped threads in the cylinder head are stripped. Either replace cylinder head or entire cylinder.

11. Belt support bars / grid tubes appear to be in satisfactory condition.

12. Gravity side seals appear to be in satisfactory condition.

13. Polymer injection ring lines should be periodically removed and cleaned. The mixing valve inspection cover should be removed once a year for inspection and cleaning.

Recommended Replacement Parts:

1. Two (2) 20 inch diameter nylon covered drums and bearings.
2. Four (4) 12-3/4 inch diameter nylon covered drums and bearings.
3. Four (4) rubber covered drive rolls and bearings.
4. One (1) 10-3/4 inch diameter nylon covered drum and bearings.
5. Four (4) sets of spray header nozzles with gaskets.
6. Four (4) Victaulic coupling clamps.
7. Sixteen (16) washbox brush seals.
8. Four (4) discharge scraper blades.
9. Four (4) take up pinion gear cross shafts.
10. Eight (8) take up racks and pinion gears.
11. Two (2) sets of filter belts.
12. One (1) steering cylinder.
13. One (1) steering cylinder head and seal kit.



Komline-Sanderson

Parts & Filter Fabrics Sales

12 Holland Avenue, Peapack, NJ 07977

Phone: (908) 234-1000 or
(800) 225-5457

Fax Orders To: (908) 234-9047 or
(800) 329-7457

Now Accepting Visa, Mastercard and
American Express Credit Cards

NOTE: Please Advise Quotation Number When Ordering Parts

SALES QUOTATION

QUOTE NO: AMQ21864

QUOTE DATE: 6/18/2018

REVISION NO: 0

THIS QUOTATION HAS BEEN PREPARED IN RESPONSE TO YOUR REQUEST

BILL TO:

South Portland Water
Resource Protection
Box No. 9422
South Portland, ME 04116
USA

SHIP TO:

South Portland Water
Resource Protection
111 Waterman Drive
South Portland, ME 04116
USA

REFERENCE S3540	SHIP VIA *Best Way	FOB *Shipping Point	SALESPERSON LEOTTI JR,FRANK
EXPIRATION 07/15/2018	TERMS Net 30 Days	FREIGHT TERMS Prepaid & Add	REPRESENTATIVE Technology Sales

Line	ITEM DESCRIPTION	Est. Shipping	U/M	QTY/break	UNIT PRICE	EXT PRICE
1	0390483 Drum, 20", GRSIII, 2M	1-2 wks	ea	2.00	9,792.0000	19,584.00 USD
2	37A2042 Bearing, PB,KS, 2-13/16 (Closed) Customer Item: for 20" Drum (item 1)	1-2 wks	ea	4.00	688.0000	2,752.00 USD
3	0390480 Drum, 12-3/4, GRSIII- 2M	1-2 wks	ea	4.00	5,987.0000	23,948.00 USD
4	37A2042 Bearing, PB,KS, 2-13/16 (Closed) Customer Item: for 12-3/4" Drum (item 3)	1-2 wks	ea	8.00	688.0000	5,504.00 USD
5	KKO65-47029C-01 Prim. Drive Roll, 10", 2M, Rub Cov	8-12 wks	ea	4.00	9,628.0000	38,512.00 USD
6	37A2036 Brg.PTC Link-Belt,Spherical Roller Customer Item: for Drive Roll (item 5)	1-2 wks	ea	4.00	0.0000	0.00 USD
7	0390477 Drum, 10-3/4, GRSIII-2M	1-2 wks	ea	1.00	5,015.0000	5,015.00 USD
8	37A2042 Bearing, PB,KS, 2-13/16 (Closed) Customer Item: for 10-3/4" Drum (item 7)	1-2 wks	ea	2.00	688.0000	1,376.00 USD
9	Z6391028 qty: 22 22 Pk.Nozzle,317LSS,2.5(2.2M)^	1-2 wks	ea	4.00	186.0000	744.00 USD
10	6391017 Retaining Ring,SS,B&F #2	1-2 wks	ea	88.00	10.0000	880.00 USD
11	29A2827 Coupling,Steel,Galv.,1-1/2"&Gasket	1-2 wks	ea	4.00	148.0000	592.00 USD
12	6391021 Brush Seal,Washbx,2M,96"GRSIII^	1-2 wks	ea	16.00	111.0000	1,776.00 USD



Komline-Sanderson

Parts & Filter Fabrics Sales

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Phone: (908) 234-1000 or
(800) 225-5457

Fax Orders To: (908) 234-9047 or
(800) 329-7457

Now Accepting Visa, Mastercard and
American Express Credit Cards

NOTE: Please Advise Quotation Number When Ordering Parts

SALES QUOTATION

QUOTE NO: AMQ22704
QUOTE DATE: 11/26/2018
REVISION NO: 0
QUOTE TYPE:
PORTAL NO:

THIS QUOTATION HAS BEEN PREPARED IN RESPONSE TO YOUR REQUEST

BILL TO:

South Portland Water
ATTN: Frank Moulton
Resource Protection
Box No. 9422
South Portland ME 04116
USAPh: 207-767-7675 ext 757

SHIP TO:

South Portland Water
Resource Protection
111 Waterman Drive
South Portland ME 04116
USA

REFERENCE S3540	SHIP VIA Truck - YRC	FOB *Shipping Point	SALESPERSON MILOSCIA,FRANK E
EXPIRATION 12/26/2018	TERMS Net 30 Days	FREIGHT TERMS Prepaid & Add	REPRESENTATIVE Technology Sales

LINE	ITEM DESCRIPTION	Est. Shipping	U/M	QTY/break	UNIT PRICE	EXT PRICE
	Customer requires 24 Hour Notice Prior to Delivery Freight Approx. \$250.00					
1	0390391 Roll, Take-Up, 8-5/8, GRSIII-2M	1-2 Wks	ea	1.00	4,162.00	4,162.00
2	37A2022 Bearing, P.B,KS,2-11/16"Close End	1-2 Wks	ea	2.00	543.00	1,086.00
3	37A2029 Kit, Bearing, Seal, Adapt, 2-11/16	1-2 Wks	ea	2.00	395.00	790.00

Grand Total: 6,038.00 USD

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General Government
Economic Development

Wayfinding Signs

In late 2013, the City of South Portland undertook a program to develop updated and uniform gateway and wayfinding signs throughout the City, beginning with major intersections (Phase I). Over the course of 2014 and 2015 an inventory of existing signs was completed, designs developed, and locational engineering completed. In mid-2015 the Assistant City Manager/Economic Development Director followed shortly thereafter, by the City Manager, who were leading this project left the City's employ and the implementation of this project was put on hold until mid-2018 when it was assigned to the City's newly hired Economic Development Director (EDD) for implementation. Following a review of the program/project history and consultation with various parties to update the information and cost estimates for the implementation of Phase I of the City's Wayfinding initiative this funding request/recommendation has been prepared. Phase II is proposed for the FY21 CIP in the amount of \$50,000.

Upon approval of this funding request, a bid package will be issued seeking costs for

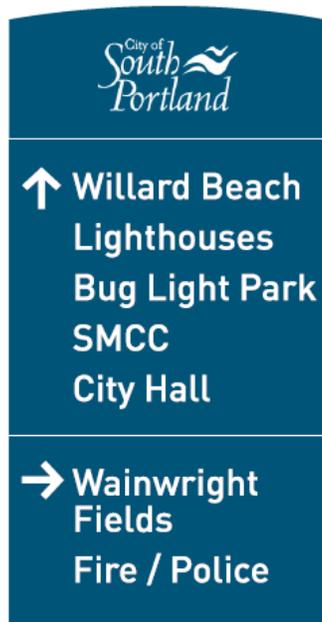
- A.) Full implementation of Phase I of the project, and
- B.) Completed signs and mounting materials (poles, concrete bases and fasteners) without installation. Assumption - signs installed by the City's Parks and Recreation Department.

An example image of one of the signs and a list of the sign locations for Phase one of Wayfinding initiative are set forth on the following page.

*Locations that are closer to sources of ocean salt/spray may require refreshing every 5+/- years.

Below left, is an example of the sign design that was completed in 2015 and below right, is a listing of the locations where the initial (Phase I) signs will be placed.

Sample Sign Design



Size: 36,41"x 71,14"

Sign Locations

- 1 - Ocean St. and Broadway
 - 2 - Ocean St. and Cottage Road
 - 3A - Broadway and Evans Street
 - 3B - Broadway and Evans Street
 - 4A - Broadway and Pickett Street
 - 4B - Pickett Street and Broadway
 - 4C - Breakwater and Broadway
 - 5A - Cash Corner
 - 5B - Cash Corner
 - 6A - Casco Bay Bridge app. and Broadway
 - 6B - Casco Bay Bridge app. and Broadway
 - 7 - I-295 (Exit 3) off-ramp and Westbrook St.
 - 8A - Gorham Road and Western Avenue
 - 8B - Gorham Road and Western Avenue
 - 9 - Maine Mall Road and Running Hill Road
 - 10 - Maine Mall Road and Highway spur
 - 11 - Rt. 703 App. Road and Rte. 1 (Main St.)
 - 12 - Maine Mall Road and Western Avenue
 - 13 - Veteran's Mem. Bridge & Rte. 1
- If funding allows additional signs will be placed at the following locations:
- 14 - Evans Street and Highland Avenue
 - 15 - Jetport Boulevard App. to Johnson St.

The cost of signs is expected to be somewhere in the neighborhood of \$4,500 to \$5,000 per sign using an estimated average sign size of 36" x 77". This assumes a 3/16" thick aluminum sign panel with custom baked enamel background with 3M Scotchlite white reflective graphics and lettering (all directional text/lettering shall be 3" in height, South Portland Logo - Sign Header will be larger, and Making All Things Possible – Sign Footer will be smaller – likely 2").

Project Cost:	\$100,000
Funding Source:	Development District (DD)/Tax Increment Financing District (TIF) Funds.
Source of Cost Estimate:	Staff, Sebago Technics, Bailey Sign Company, and Simmons & Ardell Design.
Projected Useful Life:	7 to 10 years*

CITY OF SOUTH PORTLAND WAYFINDING SIGN PROJECT



SHEET INDEX

- 1 COVER SHEET
- 2 SIGN LOCATION PLAN-SIGN NO. 7
- 3 SIGN LOCATION PLAN-SIGN NO. 8A
- 4 SIGN LOCATION PLAN-SIGN NO. 8B
- 5 SIGN LOCATION PLAN-SIGN NO. 8C
- 6 SIGN LOCATION PLAN-SIGN NO. 9
- 7 SIGN LOCATION PLAN-SIGN NO. 10 EAST
- 8 SIGN LOCATION PLAN-SIGN NO. 10 WEST
- 9 SIGN LOCATION PLAN-SIGN NO. 12
- DETAILS

LEGEND

- New Wayfinding Signs
- Water Main
- Storm Structures
- Catchbasin
- Drain Manhole
- Outlet Control
- Storm Pipes
- Culvert
- Gravity
- Outfalls
- Wastewater Manholes
- SMH
- Wastewater Pipes
- Force Main
- Gravity
- Parcels

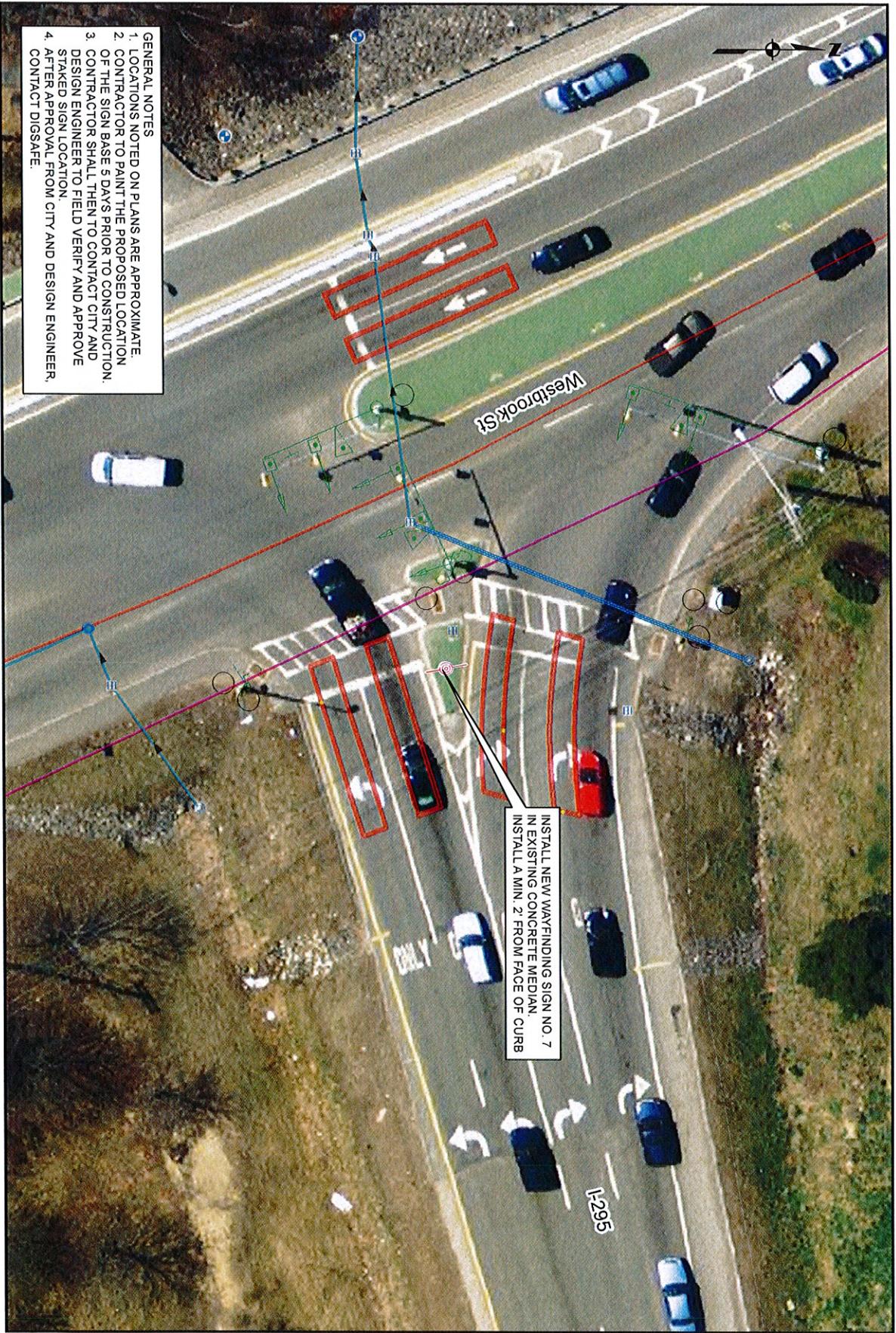
CLIENT



PREPARED BY:



CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE



- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO PAINT THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

INSTALL NEW WAYFINDING SIGN NO. 7
 IN EXISTING CONCRETE MEDIAN.
 INSTALL A MIN. 2' FROM FACE OF CURB

SHEET 2

SIGN LOCATION PLAN-SIGN NO. 7
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 WESTBROOK STREET
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

DATE: 4/2/15

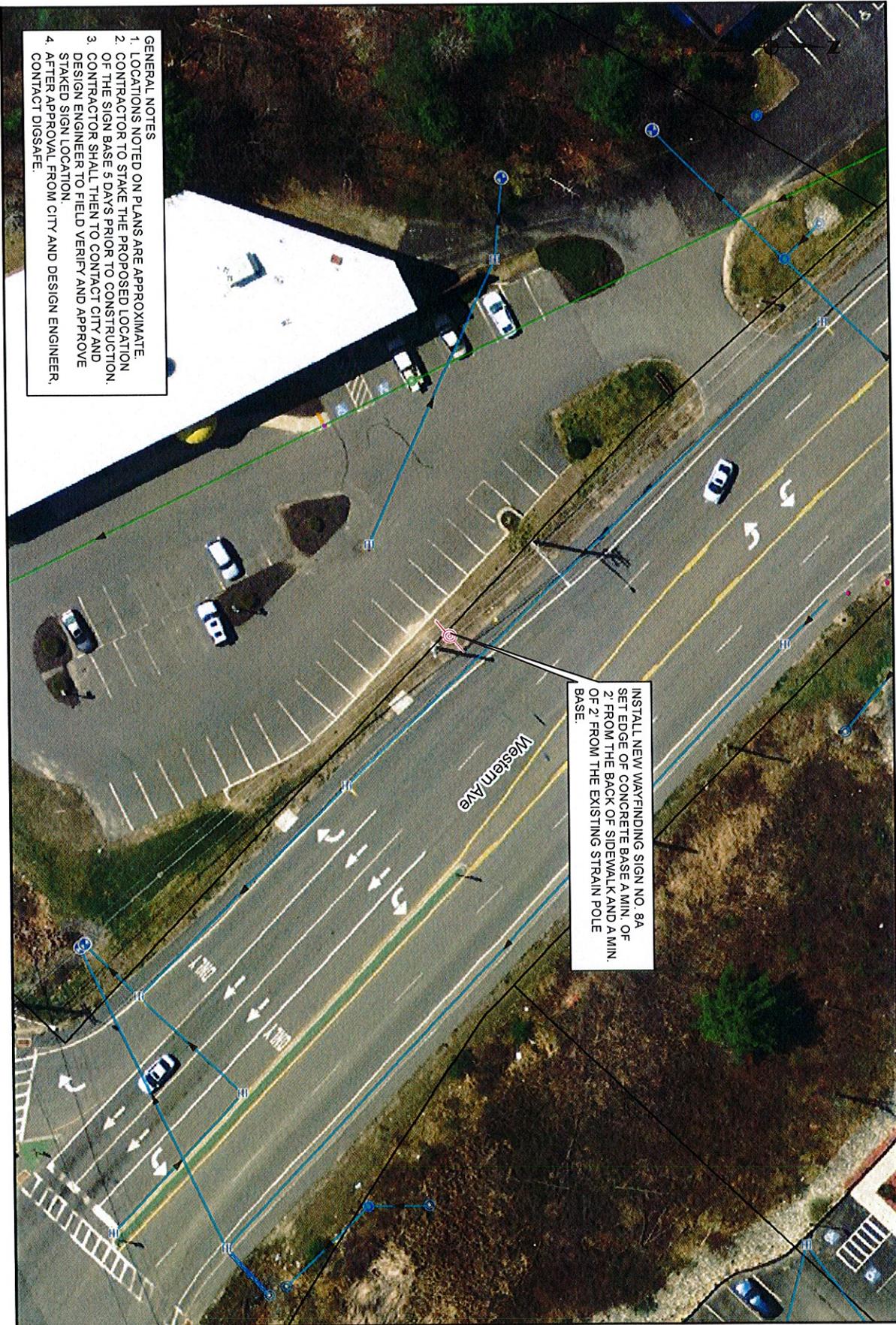
SCALE: 1" = 20'

PROJ. NO.: 14373

SEBAGO
 TECHNICS
 WWW.SE BAGOTECHNICS.COM

75 John Roberts Rd. - Suite 1A
 South Portland, ME 04106
 Tel. 207-200-2100

260 Goddard Rd. - Suite B
 Lewiston, ME 04240
 Tel. 207-783-6656



INSTALL NEW WAYFINDING SIGN NO. 8A
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE BACK OF SIDEWALK AND A MIN.
 OF 2' FROM THE EXISTING STRAIN POLE
 BASE.

- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DISSAISE.

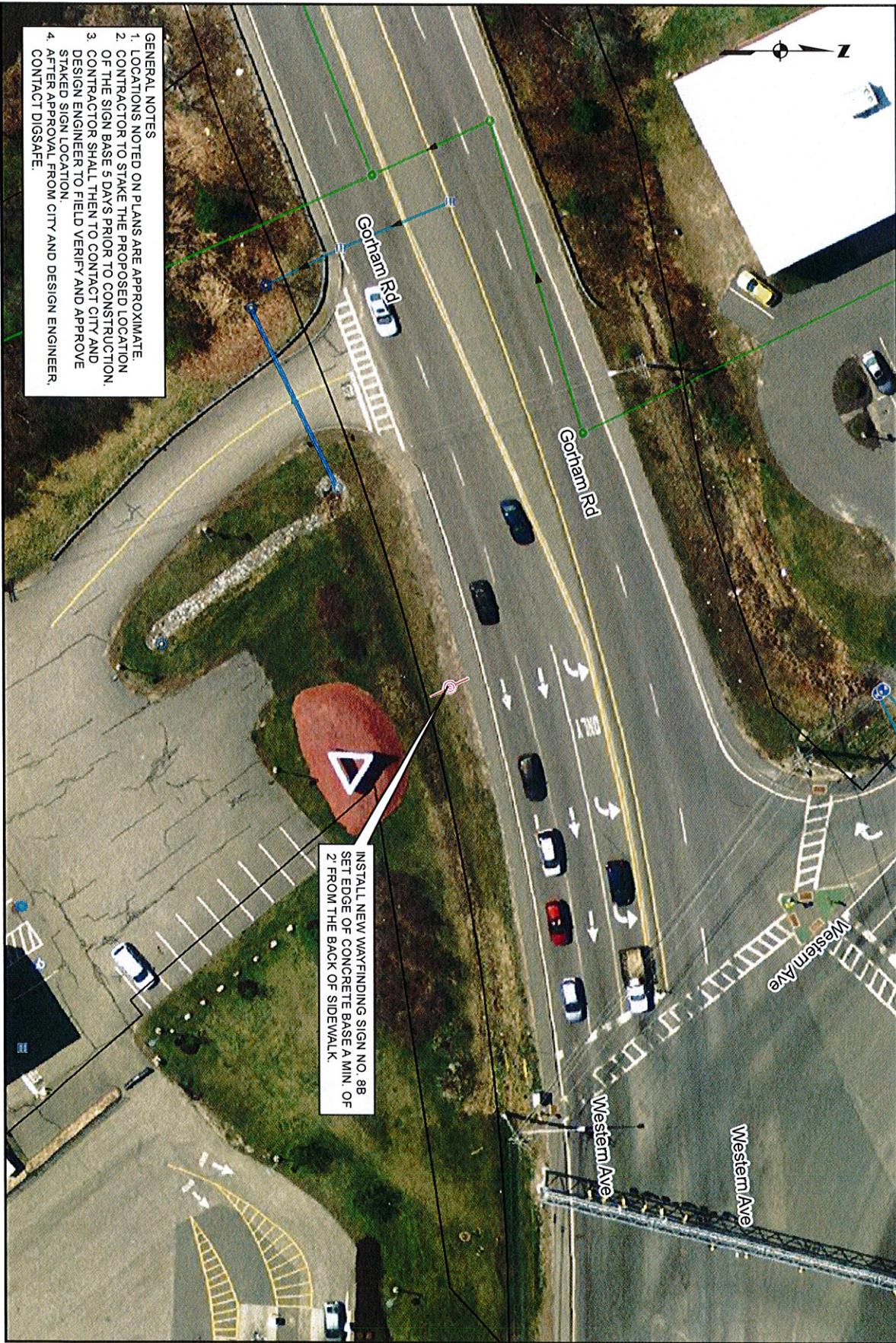
SIGN LOCATION PLAN-SIGN NO. 8A
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 WESTERN AVENUE
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

DATE: _____ DATE
 SCALE: 1" = 30' DATE
 PROJ. NO.: 14373

SHEET 3

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 South Portland, ME 04106 Lewiston, ME 04240
 Tel. 207-200-2100 Tel. 207-783-6656



- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTRACTOR TO DIGSAFE.

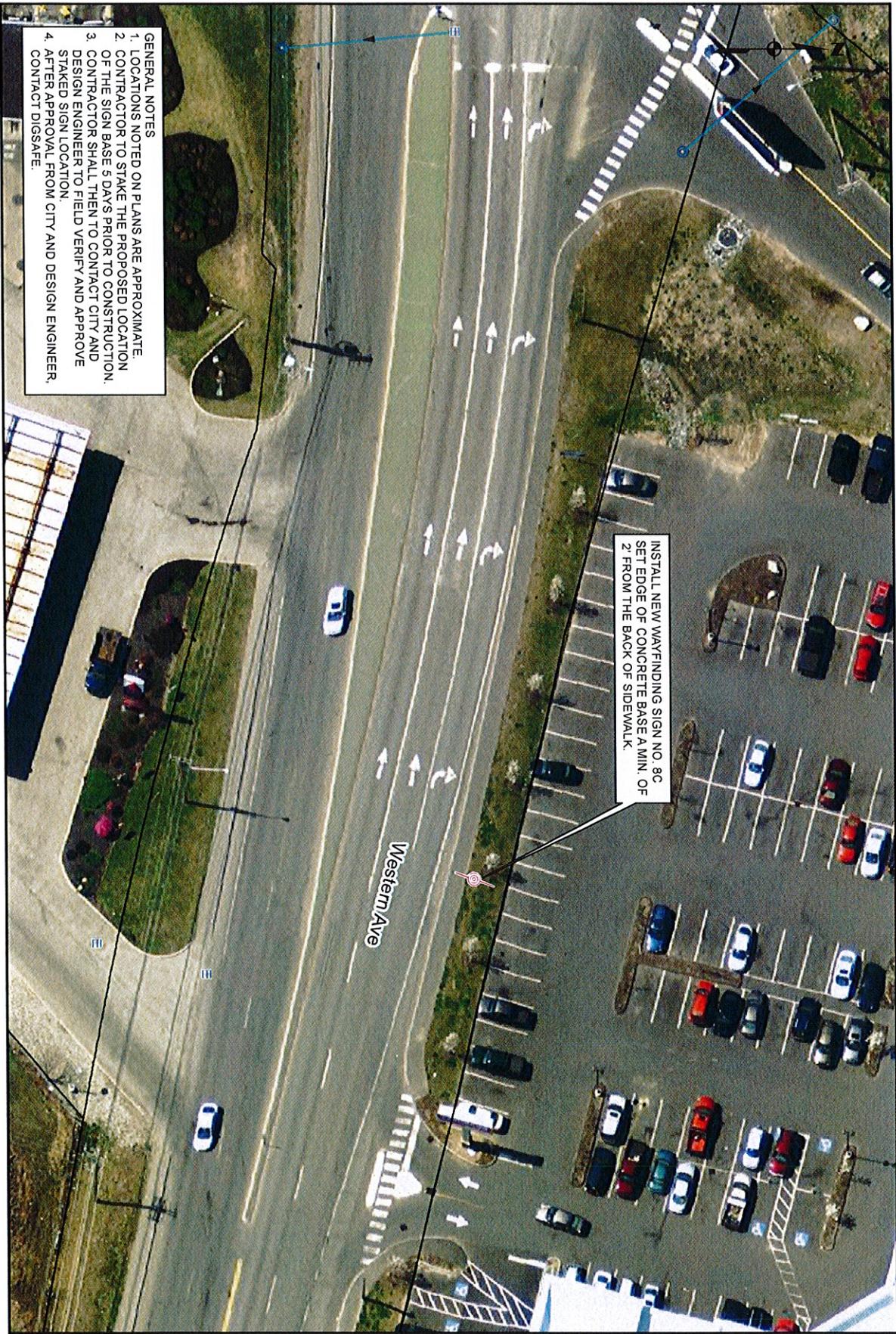
INSTALL NEW WAVYFINDING SIGN NO. 8B
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE BACK OF SIDEWALK.

SHEET 4

SIGN LOCATION PLAN-SIGN NO. 8B
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 WESTERN AVENUE
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

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 South Portland, ME 04106 Lewiston, ME 04240
 Tel. 207-200-2100 Tel. 207-783-6666



- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

INSTALL NEW WAYFINDING SIGN NO. 8C
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE BACK OF SIDEWALK.

SHEET 5

SIGN LOCATION PLAN-SIGN NO. 8C
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 WESTERN AVENUE
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

DATE: _____ DATE

SCALE: 1" = 30'

PROJ. NO: 14373

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 South Portland, ME 04106 Lewiston, ME 04240
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INSTALL NEW WAYFINDING SIGN NO. 9.
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE FACE OF CURB.

GENERAL NOTES

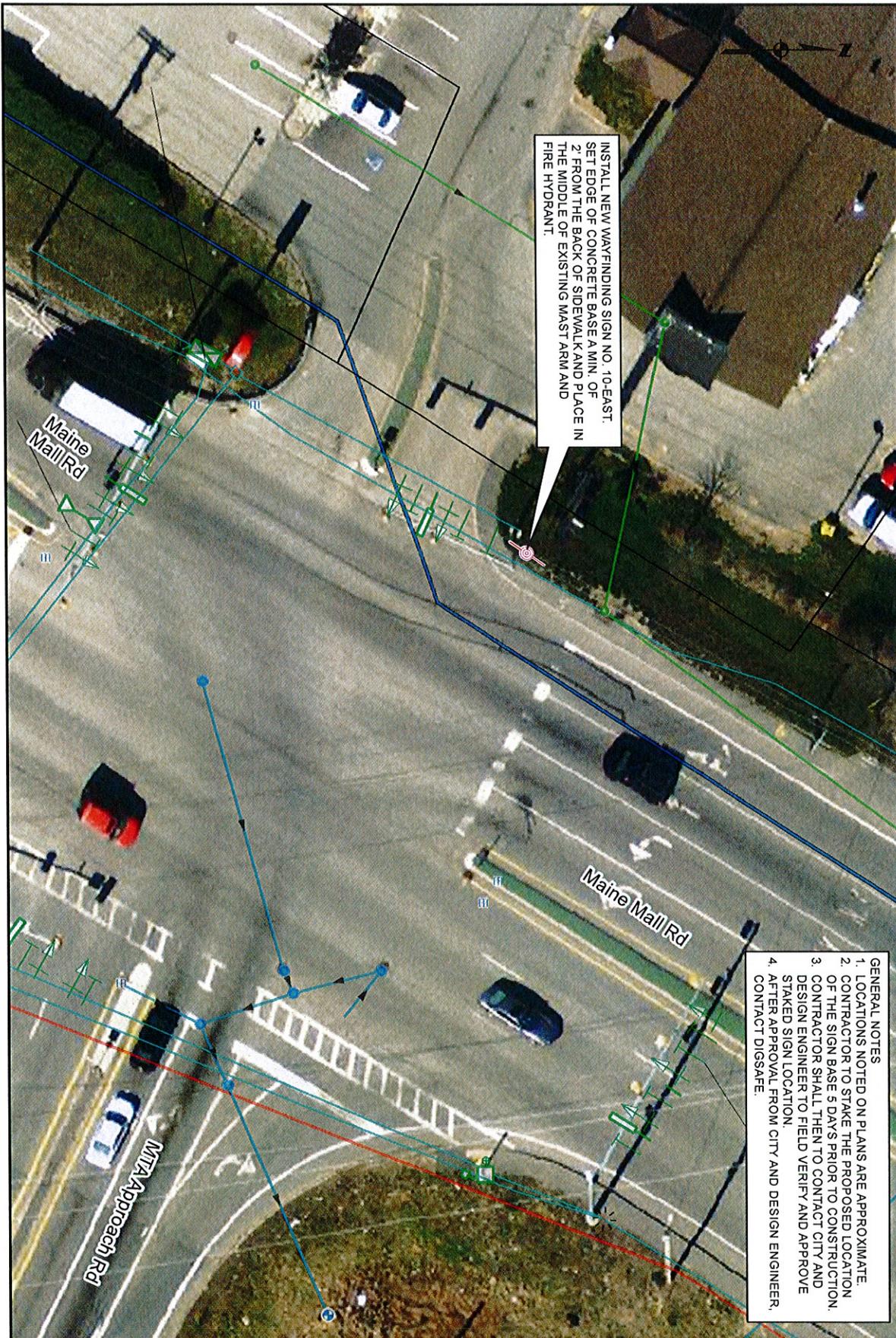
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

DATE: 4/21/15
 SCALE: 1" = 20'
 PROJ. NO.: 14373
SHEET 6

SIGN LOCATION PLAN-SIGN NO. 9
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 RUNNING HILL ROAD
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

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 South Portland, ME 04106 Lewiston, ME 04240
 Tel. 207-269-2100 Tel. 207-783-5656



INSTALL NEW WAYFINDING SIGN NO. 10-EAST.
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE BACK OF SIDEWALK AND PLACE IN
 THE MIDDLE OF EXISTING MAST ARM AND
 FIRE HYDRANT.

- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

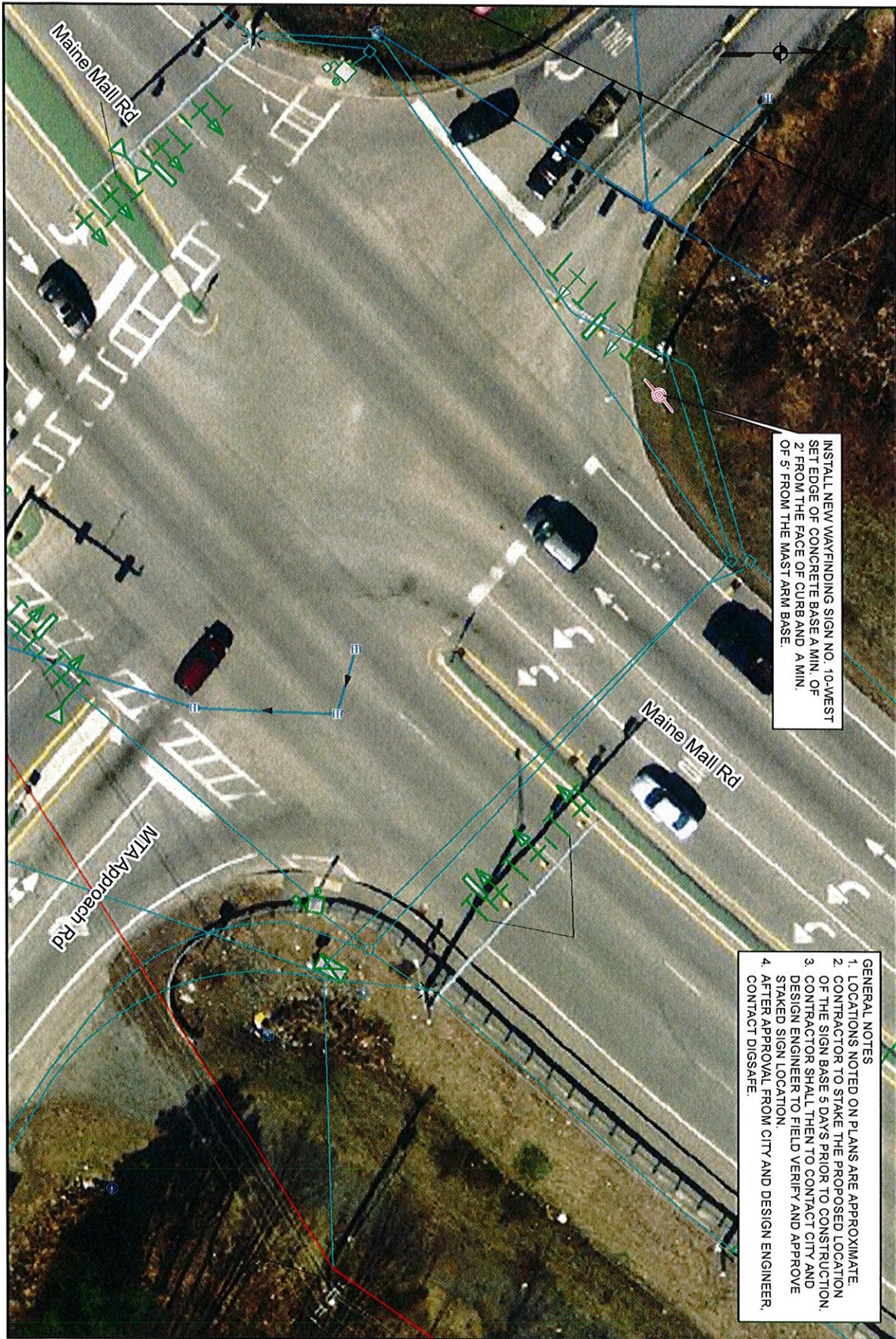
SIGN LOCATION PLAN-SIGN NO. 10-EAST
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 MAINE MALL ROAD
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

DATE: 4/2/15
 SCALE: 1" = 30'
 PROJ. NO.: 14373

SHEET 7

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 260 Goddard Rd. - Suite B Lewiston, ME 04240 Tel. 207-783-6656



INSTALL NEW WAYFINDING SIGN NO. 10-WEST
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE FACE OF CURB AND A MIN.
 OF 5' FROM THE MAST ARM BASE.

- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

SIGN LOCATION PLAN-SIGN NO. 10-WEST
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 MAINE MALL ROAD
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

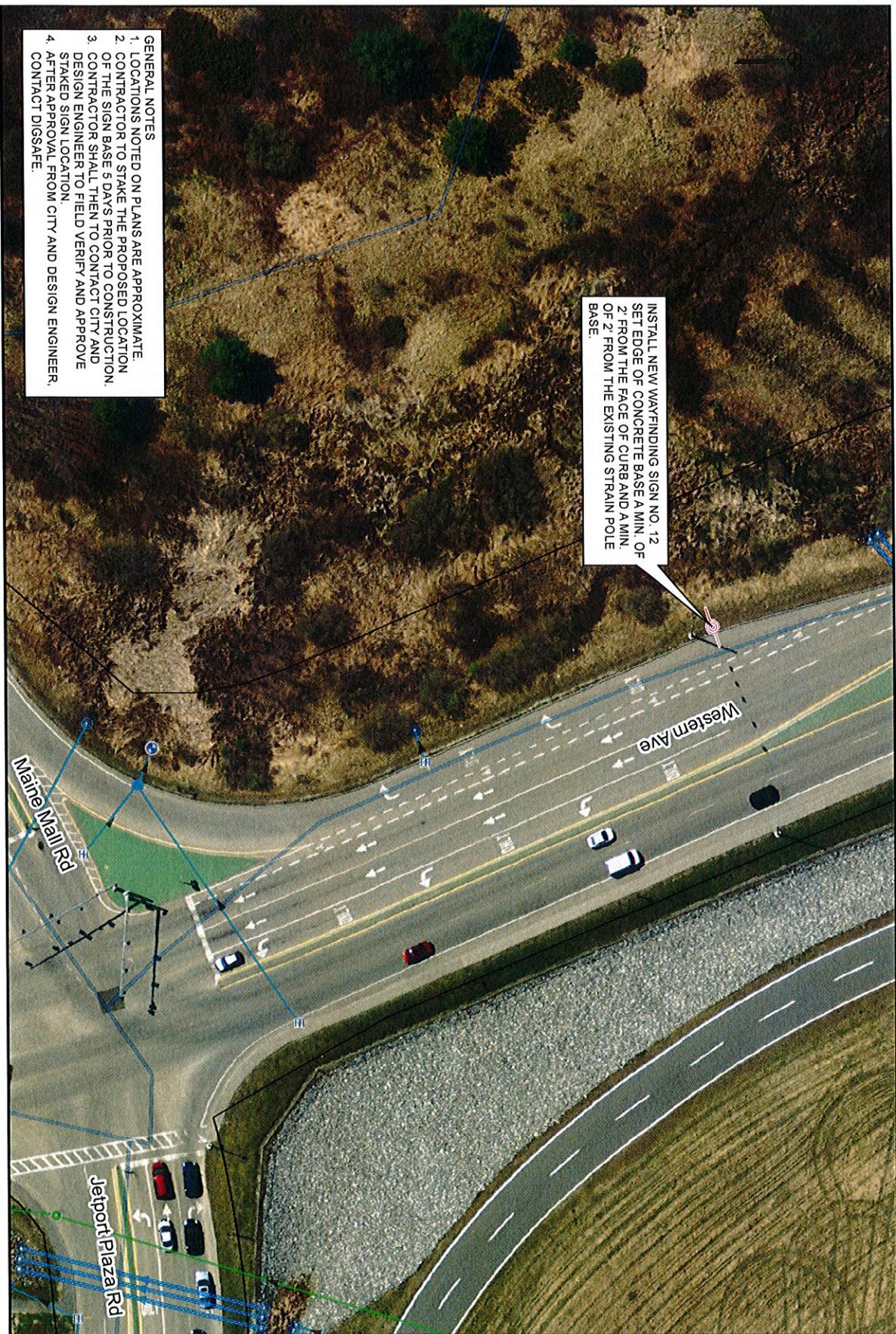
DATE: 4/2/15
 SCALE: 1" = 20'
 PROJ. NO.: 14373

SHEET 8

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 TECHNICS
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 South Portland, ME 04106
 Tel. 207-200-2100

250 Goddard Rd. - Suite B
 Lewiston, ME 04240
 Tel. 207-783-5656



INSTALL NEW WAYFINDING SIGN NO. 12
 SET EDGE OF CONCRETE BASE A MIN. OF
 2' FROM THE FACE OF CURB AND A MIN.
 OF 2' FROM THE EXISTING STRAIN POLE
 BASE.

- GENERAL NOTES**
1. LOCATIONS NOTED ON PLANS ARE APPROXIMATE.
 2. CONTRACTOR TO STAKE THE PROPOSED LOCATION OF THE SIGN BASE 5 DAYS PRIOR TO CONSTRUCTION.
 3. CONTRACTOR SHALL THEN TO CONTACT CITY AND DESIGN ENGINEER TO FIELD VERIFY AND APPROVE STAKED SIGN LOCATION.
 4. AFTER APPROVAL FROM CITY AND DESIGN ENGINEER, CONTACT DIGSAFE.

SHEET 9

SIGN LOCATION PLAN-SIGN NO. 12
 OF:
SOUTH PORTLAND WAYFINDING SIGNS
 WESTERN AVENUE
 SOUTH PORTLAND, MAINE
 FOR:
CITY OF SOUTH PORTLAND
 25 COTTAGE ROAD
 SOUTH PORTLAND, MAINE

DATE: 4/21/15
 SCALE: 1" = 40'
 PROJ. NO.: 14373

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 Tel. 207-200-2100 Tel. 207-783-5656

BASE BID SIGN 7



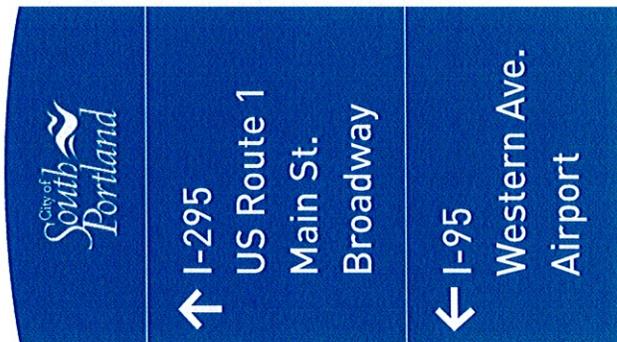
Size: 36.41" x 61.11"

**BASE BID
SIGN 8A, B, C**



Size: 36.41" x 49.57"

SIGN 8A



Size: 36.41" x 66.94"

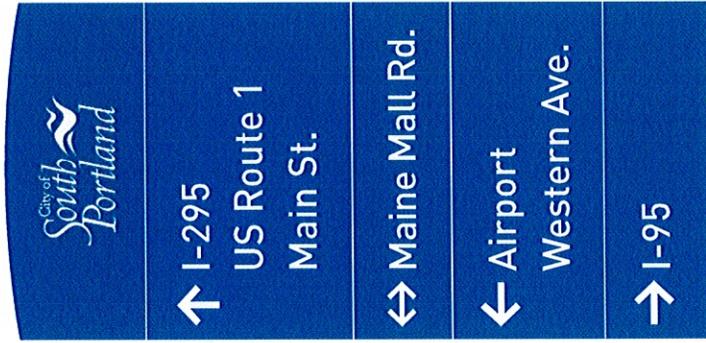
SIGN 8B



Size: 36.41" x 61.11"

SIGN 8C

BASE BID SIGN 9



Size: 36.41" x 77"

BASE BID SIGN 10



Size: 36.41" x 65.35"

BASE BID SIGN 12



Size: 36.41" x 72.78"

ADD ALTERNATE SIGN 1



Size: 36.41" x 83.63"

ADD ALTERNATE SIGN 2



Size: 36.41" x 82.05"

ADD ALTERNATE SIGN 3A AND 3B



Size: 36.41" x 69.59"



Size: 36.41" x 87.1"

ADD ALTERNATE SIGN 4



Size: 36.41" x 71.23"

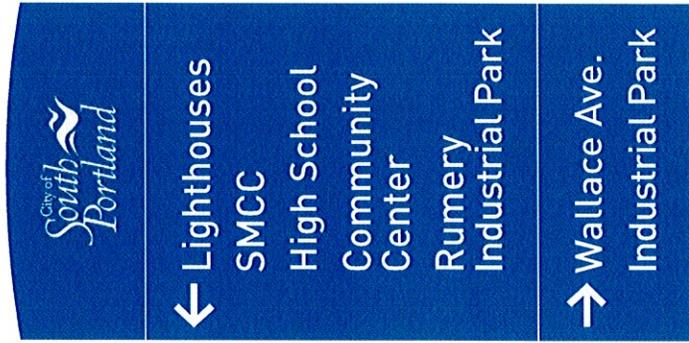
ADD ALTERNATE SIGN 5



ADD ALTERNATE SIGN 6



ADD ALTERNATE SIGN 11



Size: 36.41" x 75.43"

ADD ALTERNATE SIGN 13



Size: 36.41" x 76.24"

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General Government

Facilities

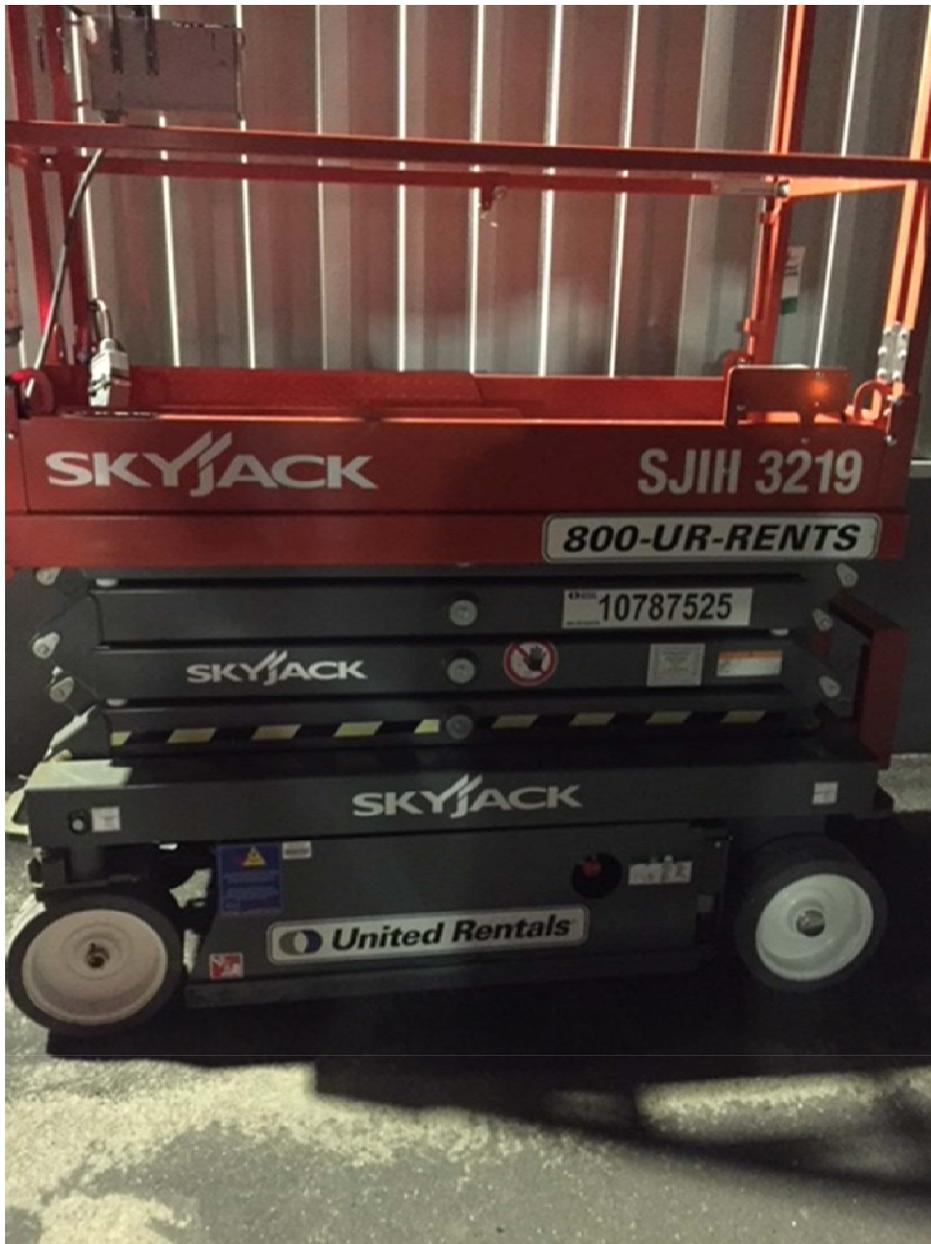
Scissors Lift

This FY20 Capital Improvement Program request is for the purchase of a scissors lift. With the new Municipal Facilities Department, we are now able to handle more complex building maintenance in-house. Currently when we need to reach high out of the way spaces, we rent the equipment for a minimum of one day, some times more, at a cost of \$300.00 per day; and when a contractor rents a unit to perform work for the City, we pay an average of \$500.00 per day. Having this piece of equipment will allow the maintenance staff to:

1. Replace burnt out lighting in Gym ceilings at Redbank and Community Ct. along with Emergency lighting in ceiling.
2. Poolside lighting and emergency lights.
3. Cleaning of and painting of the gym rafters at both locations.
4. Cleaning of Duct work vents in several areas
5. Replacing burnt out lights in parking lots /building lights of several buildings.
6. Exterior projects-Installation of water proofing at Community Ct./Painting of ext. trim.

I believe that we have a trailer in the Parks dept. that would accommodate the moving of this unit from sight to sight. We would have use for this machine in the Facility Dept. 6-8 times per year and I would estimate the Parks Department would have the same use.

Project Cost:	\$10,000
Funding Source:	\$10,000 Fund Balance
Source of Cost Estimate:	United Rental
Projected Useful Life:	10 years



**General Government
Facilities**

1/2 ton Light Duty Truck

The Facilities Department seeks funds to purchase a used light duty truck. Since this is a new department, staff is in need of a vehicle to provide both transportation of staff from one municipal building to another and, to transport equipment and supplies to the various buildings.



Project Cost:	\$12,000
Funding Source:	\$12,000 Fund Balance
Source of Cost Estimate:	Yankee Ford
Projected Useful Life:	10 years

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General Government
Assessing Department

Vision Appraisal Software Update

The Assessing Office at the City of South Portland has been using Vision Appraisal software for nearly 30 years to do the assessing function. The software maintains and permits updates to all real estate and personal property valuations of taxable properties in the City. The software operates on a database product (Oracle) that is scheduled to expire in the year 2021.

The firm used this expiration as an opportunity to do improvement to their software to both in able to perform on a newer database product (Microsoft SQL Server) and update to software to meet the current needs of the assessing community.

Project Cost:	\$16,875
Funding Source:	\$15,075 Fund Balance \$1,800 Prior Years' CIP
Source of Cost Estimate:	Quote from software provider
Projected Useful Life:	N/A

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**General Government
Information Systems**

Computer Reserve

In 1999, the City installed a new networked data and financial management system. Beginning in July of 1999, the City appropriated \$50,000 per year from the Municipal General Fund Budget to replace and upgrade computer hardware equipment and software.

This Computer Reserve is used to purchase new software licenses and to replace the PCs/laptops at a 5-year refresh interval, or as hardware failures occur. PCs/laptops exist in every municipal building, police squad cruisers, fire trucks, and rescue units. Due to aging server components and PC replacement plan, this year this request should be increased to \$50,000.

Project Cost:	\$50,000
Funding Source:	Fund Balance
Source of Cost Estimate:	IT Staff
Projected Useful Life:	N/A

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General Government

Land Bank Account

On August 2, 2010, the City Council passed an ordinance establishing the City of South Portland Land Bank. The purpose was to further the acquisition and creation of land and land uses.

Sec. 18-76. Land Bank Fund.

The City shall meet the financial obligations of the Land Bank by drawing upon a municipal land bank fund to be set up as a separate revolving or sinking account within the City. Deposits into the fund shall include:

1. Any funds appropriated to be deposited into the fund by vote of the City Council.
2. Voluntary contributions of money or other liquid assets to the fund.
3. Interest from deposits and investments of the fund.
4. Net proceeds from disposal of real property interests pursuant to Code of Ordinances Section 2-171 as follows:
 - (a) Sixty percent (60%) of the net proceeds from the sale of unimproved real property, unless waived by the City Council for good cause shown.
 - (b) Thirty percent (30%) of the net proceeds from the sale of improved real property, unless waived by the City Council for good cause shown.
5. Any grant funds received on behalf of the Land Bank.
6. Subject to the annual budget process, an annual contribution of \$35,000 from the City's Capital Improvement Plan, provided that any such annual contribution that causes the land bank fund balance to exceed one million dollars (\$1,000,000) shall be reduced as necessary so as not to cause the land bank fund balance to exceed one million dollars (\$1,000,000).

The current balance in the Land Bank Fund is \$933,210

Project Cost:	\$35,000
Funding Source:	Fund Balance
Source of Cost Estimate:	City Council Ordinance
Projected Useful Life:	N/A



CITY OF SOUTH PORTLAND

ROSEMARIE DE ANGELIS
Mayor

JAMES H. GAILEY
City Manager

SUSAN M. MOONEY
City Clerk

SALLY J. DAGGETT
Jensen Baird Gardner & Henry

District One
THOMAS S. COWARD

District Two
PATRICIA A. SMITH

District Three
ROSEMARIE DE ANGELIS

District Four
MAXINE BEECHER

District Five
JAMES HUGHES

At Large
ALAN LIVINGSTON

At Large
THOMAS E. BLAKE

Sec. 18-76. Land Bank Fund.

The City shall meet the financial obligations of the Land Bank by drawing upon a municipal land bank fund to be set up as a separate revolving or sinking account within the City. Deposits into the fund shall include:

. . .

6. Subject to the annual budget process, an annual contribution of \$35,000 from the City's Capital Improvement Plan, provided that any such annual contribution that causes the land bank fund balance to exceed one million dollars (\$1,000,000) shall be reduced as necessary so as not to cause the land bank fund balance to exceed one million dollars (\$1,000,000).

General Government
SPC-TV Capital Outlay

HD Fiber Transmission Upgrade

Upon completion of SPC-TV's internal upgrade to High Definition (HD) broadcast standard in acquisition and broadcast capabilities, the need to replace the existing Standard Definition (SD) fiber transmitter/receiver pairs for cablecast on Spectrum channels 121-1 and 121-2 is necessary. The existing fiber transmitter/receiver pairs installed have been in constant operation since before FY 2006 and are well passed their expected life span.

For FY 2020 \$10,000 of the SPC-TV Capital Grant will be used to purchase and install 2 new fiber transmitter/receiver pairs capable of delivering HD content to Spectrum.

Project Cost:	\$10,000
Funding Source:	Franchise Capital Reserve
Source of Cost Estimate:	SPC-TV Staff
Projected Useful Life:	N/A

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General Government
SPC-TV Capital Outlay

Infrastructure and Production Equipment Outlay

In an effort to streamline and aggregate the City's communication to the public, SPC-TV will upgrade its internal infrastructure and build out its production capacity.

For FY 2020 \$5,000 of the SPC-TV Capital Grant will be used to purchase infrastructure and video production equipment

Project Cost:	\$5,000
Funding Source:	Franchise Capital Reserve
Source of Cost Estimate:	SPC-TV Staff
Projected Useful Life:	N/A

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General Government
Parks, Recreation, and Waterfront

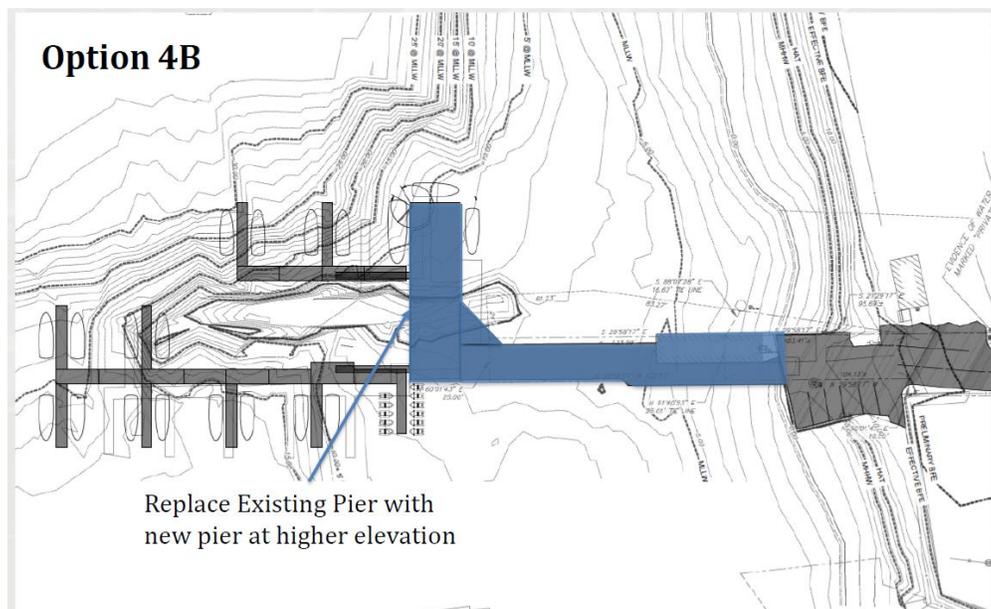
Portland Street Pier Reconstruction - Installment #1

The Parks, Recreation, and Waterfront Department is seeking \$550,000 as a first installment for a \$1.8 million project to replace the Portland Street Pier. If the Council is supportive of this project, the City will pursue available grant funds from the State of Maine and federal government in the coming year, and the requested funds will be used as a local match for those grant funds. Grant funds, if awarded, are estimated to be less than 50% of the total project cost, and therefore the City would need to set aside more than \$900,000 in the coming years to implement this project.

The reconstructed pier would be built at a higher elevation to mitigate flood risk, would be slightly longer to alleviate the need for future dredging, and would be more structurally sound to allow for vehicles and heavier uses as a working pier to support the fishing and aquaculture industries. It should be noted the current pier has not yet reached the end of its useful life, but is limited in its ability to expand current operations.

If funded, construction is not estimated to begin until the winter of 2021/22 at the earliest.

- Project Cost: \$550,000 – PHASE I
- Funding Source: \$287,010 TIF
\$250,000 Grant
\$12,990 Prior Years' CIP
- Source of Cost Estimate: Project Cost Estimate provided by GEI Consultants
- Projected Useful Life: 50+ years



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General Government
Planning & Development

Hamlin Building

This proposal is a continuation of improvements included in the FY19 CIP to the offices of the Planning, Code Enforcement, and Economic Development staff necessary to provide a safe, accessible, and professional work environment. It assumes this Department will continue to be housed in the Hamlin building for a minimum of five more years. An assessment of the building's needs was completed this year with a series of improvement needs to be done to continue to occupy the building.



Proposed improvements include such items as:

- Provide ADA accessibility (entrance)
- Heating control upgrades
- Installation of High Efficiency Heat Pumps
- Roof maintenance

Project Cost:	\$195,000
Funding Source:	\$57,500 TIF \$137,500 Fund Balance
Source of Cost Estimate:	Staff
Projected Useful Life:	10+ years

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General Government

Planning & Development

Waterfront Master Plan

The proposal for a Waterfront Master Plan (WMP) fulfills the first of the City Council's 2018-21 strategic goals. Its purpose is to assess what the South Portland waterfront will be like in the years ahead, develop a shared vision, and make recommendations for achieving the vision. The WMP is intended to be officially adopted as an amendment to the City's Comprehensive Plan. Suggested topics include:

- Resiliency and flood management related to climate change and sea level rise.
- Recreation, including public access to the waterfront.
- Shoreland environmental protection.
- Economic development, including water-dependent industries.
- Land use and land use regulations.
- Transportation, including water-based transportation.
- Evacuation planning.
- Laying a foundation for brownfield grants
- Tax base enhancement.
- Infrastructure protection and improvements.

The geographic extent of the WMP is from the Cape Elizabeth town line to the Portland International Jetport, including the navigable portion of Long Creek. However, only certain sections of the waterfront are expected to be focus areas of the plan. The inland extent will vary by area and issue but generally will include land within 1,000 feet of the shore.

In terms of a time horizon, the WMP needs to look sufficiently far ahead as to enable both the accumulation of financial reserves necessary for major investments as well as the full depreciation of existing assets determined not to be in keeping with the vision for a given area of the waterfront. It also needs to reflect whatever year is chosen for making a sea level rise estimate. Considering

these factors, a provisional time horizon of 2050 is suggested within which the plan's recommendations will be divided into short-, medium-, and long-term time periods.

The WMP will be a major planning project requiring the outside expertise, objective viewpoint, and staff resources that are provided by consulting services. The Request for Proposals is recommended to include meeting facilitation, memo and report writing, public engagement, technical services (including GIS), and development of alternative solutions.

The WMP will include a technical process for evaluating existing waterfront conditions associated with the planning elements listed above and for forecasting future conditions. The most up-to-date science and best management practices will be used. Extensive use of graphics, including 3-D views, will enable the visualization of concepts and recommendations. The City's GIS data will be used for the creation of a variety of maps. The financial and fiscal impacts of alternative approaches will be evaluated.

The WMP will employ a robust public engagement process that will include periodically assessing the degree to which citizens feel the WMP process is addressing real problems and opportunities and will then make adjustments based on this feedback. The WMP will enable effective participation by all potentially affected interests. It will employ extensive facilitation to achieve a workable level of agreement regarding a vision for the different sections of the waterfront. A City Council appointed representative committee will guide the work of the consultants and staff.

The WMP will coordinate with other related City plans under development, such as the Climate Action Plan, and will align with existing plans where appropriate or recommend new directions as needed. The WMP recommendations will replace the waterfront-related policies of the existing Comprehensive Plan.

The WMP process will include such products as the public engagement plan, a final report with recommendations, interim reports associated with the planning elements, memos to the committee, maps, graphics, forecasts, and financial/fiscal assessments.

The Comprehensive Plan Implementation Committee, augmented by volunteers from the WMP Committee, will be responsible for implementing the WMP recommendations.

The WMP process is expected to take two years at an estimated cost of \$175,000, of which \$100,000 is being requested in FY20 (\$75,000 will be requested in FY21, if necessary.)

Project Cost:	\$100,000
Funding Source:	\$17,050 Prior Years' CIP \$50,000 TIF \$32,900 Fund Balance
Source of Cost Estimate:	Planning Director
Projected Useful Life:	10 Years

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Parks and Open Space
Parks, Recreation, and Waterfront

Willard Beach Master Plan

The Parks, Recreation, and Waterfront Department seeks \$50,000 in funds to develop a master plan and feasibility study for Willard Beach. The development of this master plan will be created and presented to council by an engineering firm guided by a proposed ad hoc committee.

The plan must include, but is not limited to: reviewing and providing recommendations on beach re-nourishment/sand replenishment, the adequacy of existing facilities, environmental considerations (i.e. stormwater/sea level rise/resiliency, hazard mitigation), existing policies and procedures, and maintenance by City staff. The plan must include timelines and cost estimates for each recommendation, as well as, several opportunities for input from the South Portland Community.

The plan will also include a review of previous plans for Willard Beach and relevant sections of other documents, such as the City’s 2012 Comprehensive Plan. Consultation with experts from other various state and federal agencies – such as the Maine Department of Environmental Protection – along with local stakeholder groups. The creation of the plan will also include the hosting of several public events where members of the public can provide feedback to be considered for incorporation into the plan.

If funded, the master plan estimated completion would be Summer of 2020

Project Cost:	\$50,000
Funding Source:	\$10,000 Fund Balance \$40,000 General Fund Reserves
Source of Cost Estimate:	Staff experience with other like Master Plans (Open Space Plan)
Projected Useful Life:	50+ years

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Parks and Open Space
Parks, Recreation, and Waterfront

Deake St. Entrance to Willard Beach

The Parks, Recreation, and Waterfront Department seeks \$572,500 in funds to construct a new entrance to replace the deteriorating conditions of the current structures at the location on Willard Beach from Deake St.

The October storm in 2017 caused considerable damage to the slate stairs that access the beach. The high surf covered the bottom third of the staircase and washed out the platforms of the bottom few steps. Leaving these steps with holes and sediment exposed causing a dangerous footing surface for visitors to step onto. The high water mark has risen over the years and during high tides these bottom steps will be covered by water. However, the violent surf that accompanied this storm crumbled the slate platform of the steps and caused more significant damage than the usual small patch jobs that our department has had to perform in the past.

Along with the stair damage, the concrete ramp access was also compromised, due to the storm. Again, the violent surf that accompanied this storm caused considerable erosion of the beach under the ramp. What used to be a short step off, onto the beach, from the ramp is now currently over 2 feet, and has caused the end of the ramp to protrude out in a dangerous fashion. This gap is very concerning for anyone who is carrying a kayak, children playing in the area, and really for anyone who steps off the ramp.

Over the years, the wave action and storm damage have caused significant erosion under the beach access ramp, staircase and stone retaining wall. As shown in the attached application to FEMA, the city has tried to bolster the toe of the stonewalls by placing rip rap to prevent tipping. Additionally, periodic maintenance of the stairs and access ramp has occurred. However, it is now unsafe for public use. As a result of the poor condition of the walls, ramp and staircase, the retaining wall is near failure. Should the retaining wall fail, the earth will slide into the ocean, destroy the dunes, and eliminate access to the natural resource.

Willard Beach is of great importance to the community and the residents of South Portland. Neighbors of the beach are very ardent stewards of the site. There are many residents and non-residents alike who use the facility for not only the usual beach activities, but also for taking walks or runs on the beach during off hours, as well as launching their kayaks, and paddle boards for excursions into Casco Bay. Willard Beach is a regional attraction for the community and surrounding area, as 80,000 – 100,000 people visit the beach annually.

Maintaining a public access point at Deake Street is of high importance as this is the only public access on the south side of Willard Beach. Many users of the beach will walk the length of the beach starting from Southern Maine Community College and use the south end stairs to access the pathway to Fisherman’s Point, a park with exceptional views of Casco Bay, Spring Point Lighthouse and the islands. Then back through the access point, heading back to the other end of the beach to complete their walk. It is also used by locals and visitors to bring their small water-craft down the existing ramp to launch for a day on the water. Without this access point, visitors will be less likely to find that this beach is a nice spot for all activities, and less likely to frequent one of the special natural areas of South Portland.

If funded, the project would commence as soon as funds became available and estimated completion would be Summer of 2020.

Project Cost:	\$572,500.00
Funding Source:	\$429,375.00 FEMA Grant (75%) \$143,125.00 Local Share (25%) \$40,000.00 currently allocated in Parks Department Budget Account #10477565-658000 \$103,125.00 Fund Balance
Source of Cost Estimate:	Owens McCullough, Sebago Technics FEMA Application Attached
Projected Useful Life:	30+ years

Parks and Open Space

Parks

2006 GMC Sierra Replacement

The Parks, Recreation and Waterfront Department seeks funds to replace a 2006 half ton GMC Sierra pickup truck (#80) which has exceeded its useful life. Replacing this truck is mission critical as it is used for year round work, to include 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 plowing and hauling snow removal equipment.

The truck quoted is a 2019 Ford F-250 4x4 three-quarter ton Superduty with plow package. Our quote was obtained from Yankee Ford of South Portland, Maine.

Project Cost:	\$45,300
Funding Source:	\$45,300 Fund Balance
Source of Cost Estimate:	Yankee Ford, South Portland, ME
Projected Useful Life:	10 years



Preview Order 0002 - F2B 4x4 Reg Cab SRW: Order Summary Time of Preview: 12/03/2018 08:02:46

Dealership Name: Yankee Ford

Sales Code : F11209

Dealer Rep.	s-bonney	Type	Retail	Vehicle Line	Superduty	Order Code	0002
Customer Name	C Sopo	Priority Code	19	Model Year	2019	Price Level	930

DESCRIPTION	MSRP	INVOICE	DESCRIPTION	MSRP	INVOICE
F250 4X4 STYLESIDE PICKUP/142	\$40165	\$37956	PLATFORM RUNNING BOARDS	\$320	\$295
142 INCH WHEELBASE	\$0	\$0	10000# GVWR PACKAGE	\$0	\$0
INGOT SILVER METALLIC	\$0	\$0	50 STATE EMISSIONS	\$0	\$0
40/20/40 CLOTH SEAT	\$0	\$0	BACKGLASS DEFROST	\$60	\$56
MEDIUM EARTH GRAY	\$0	\$0	110V/400W OUTLET	\$175	\$161
PREFERRED EQUIPMENT PKG.603A	\$0	\$0	SNOW PLOW PACKAGE	\$185	\$171
.XLT TRIM	\$0	\$0	SPARE TIRE AND WHEEL	\$0	\$0
.TRAILER TOWING PACKAGE	\$0	\$0	ROOF CLEARANCE LIGHTS	\$95	\$88
.AM/FM STEREO MP3/CLK	\$0	\$0	BLIS (BLIND SPOT INFO SYSTEM)	\$540	\$496
.6.2L EFI V-8 ENGINE	\$0	\$0	JACK	\$0	\$0
6-SPEED AUTOMATIC TRANS G	\$0	\$0	SPLASH GUARDS - FRONT	\$130	\$119
LT275/70R18E OWL ALL TERRAIN	\$290	\$267	SPLASH GUARDS - REAR	\$0	\$0
3.73 ELECTRONIC-LOCKING AXLE	\$390	\$359	LED BOX LIGHTING	\$60	\$56
JOB #1 ORDER	\$0	\$0	UPFITTER SWITCHES	\$165	\$152
FLOOR MAT IN LIEU OF CARPET	\$-50	\$-47	EXTRA EXTRA HEAVY DUTY ALTRNTR	\$0	\$0
XLT VALUE PACKAGE	\$1460	\$1344	REMOTE START SYSTEM	\$250	\$231
.FOG LAMPS	\$0	\$0	TOUGH BED SPRAY IN BEDLINER	\$595	\$548
.REVERSE VEHICLE AID SENSOR	\$0	\$0	FUEL CHARGE	\$0	\$90.78
.8-WAY POWER SEAT-DRIVER	\$0	\$0	PRICED DORA	\$0	\$0
FX4 OFF-ROAD PACKAGE	\$400	\$368	DESTINATION & DELIVERY	\$1495	\$1495
.SKID PLATES	\$0	\$0			
TOTAL BASE AND OPTIONS				MSRP	INVOICE
DISCOUNTS				NA	NA
TOTAL				\$46725	\$44205.78

LINK,
 \$44205
 + 6800 PLOW (1/2-9/2V BLADE)
 \$51,005
 - <6,500> G.P.C.

Customer Name:
 Customer Address:

Customer Email:
 Customer Phone:

44,500
+ 800 ZIEBART (BIDDEFORD)
\$45,300.00 BUDGET PURPOSES!!

TEMPORARY BID:

Parks and Open Space

Parks

Weedtechnics Model SW800 Steamwand System

The Parks, Recreation and Waterfront Department seeks funds to purchase a Weedtechnics Steamwand system. This machine will be used at the Wainwright Recreation Complex, and all City parks. This product is innovative new technology in **organic weed control**, and will continue with the City's initiative in using green practices during maintenance of parks and fields. The SW800 Steamwand System uses only hot water to produce the steam. The steam is at a temperature of 200 – 220 degrees when applied directly on the weed through the wand; the steams excessive heat boils and ruptures the cell walls causing it to wilt. This product uses **no chemicals**, therefore providing cleaner air and a healthy environment. Our quote was obtained Allied Equipment, LLC of Rockwood Maine.

The Weedtechnics Model SW800 Steamwand System will come with two added options we would like included: an aluminum trailer for remote mounting of heat unit, and a power hose reel with remote controller for easy reel rewind.

Project Cost:	\$25,782
Funding Source:	\$5,800 From Previous Years CIP Balances \$19,982 Fund Balance
Source of Cost Estimate:	Allied Equipment, LLC of Rockwood, Maine
Projected Useful Life:	15 years

Allied Equipment, LLC
 PO Box 398
 Rockwood, Maine 04478
 603-892-8535 ph
 207-512-1434 fax

Quote

Date	Quote #
10/17/2018	620

Name / Address
South Portland Maine, City of Parks and Recreation 21 Nelson Road South Portland Maine 04106



Rep	Project

Description	Qty	Cost	Total
Weedtechnics Model SW800 Steamwand system: -Model SW800 base heating unit -270 Gallon tank -Skid mounting kit for mounting in a truck bed -manual hose reel with 100' of heat jacketed hose -50' fresh water fill hose with reel -Satusteam head kit, to include Steam wand and 3 heads -Spike set for root killing	1	19,882.00	19,882.00
Optional Equipment power hose reel with remote controller for reel rewind - please add \$2,900.00 Aluminum trailer for remote mounting of heat unit - please add \$3,000.00 additional 100' of heat jacketed hose - please add \$1,184.00	1	0.00	0.00

Stewart L Sevey

Sales Tax (5.5%)	\$0.00
Total	\$19,882.00

Satusteam - A proven, cost effective, safe alternative to Glyphosate based chemical weed control. Weedtechnics provides a range of products designed to kill weeds with high temperature supersaturated steam - "*Satusteam*" technology. 100% water, no additives of any kind, and designed for use in any application where weeds can grow. The Steamwand is perfect for:

- Schools and Playgrounds
- Downtown improvement Districts
- Walkways and Common Areas
- Hospitals, Malls, Campuses
- Agricultural Farmland and Orchards

If weeds can grow there, the Steamwand can kill them - without the use of any chemicals.



Weedtechnics
SATUSTEAM™ WEED CONTROL

**Safe.
Effective.
Steam.**



PO Box 398 Rockwood Maine USA 04478
www.alliedequipsales.com 603-892-8535

Weedtechnics
SATUSTEAM™ WEED CONTROL



Organic Weed Control

The Steamwand. A range of Hydro-Thermal Weed Killers designed to control weeds organically with highly saturated super high temperature steam. 100% water, 100% organic, and 100% safe for the environment.



- ★ SW600
- ★ SW700
- ★ SW800
- ★ SW900



- No Permits
- No Special Training
- Safe around Children

- Skid Mount
- Trailer Mount
- ATV Mount
- Wheel Cart Mount



For More information or an onsite demo, call today!

Call 603-892-8535
www.alliedequipsales.com

The Steamwand SW Range

SW 800 Range	Water Usage:	80 gal/ hr (300 L/ hr)				
	Petrol Pump Motor:	0.25 gal/ hr (1 L/ hr)				
	Diesel Burner:	1.75 gal/ hr (6.5 L/ hr)				
	Weight:	550-770 lbs (250-350 kg)				
Note: Consumption figures are guide only						
Package	Length	Width		Height		
		Bare	Carryall			
Bare	3' 4"	102 cm	1' 11"	58 cm	3' 5"	106 cm
Carryall	4' 0"	92 cm	3' 0"	92 cm	3' 8"	112 cm
Short Skid	3' 4"	102 cm	3' 1"	93 cm	3' 5"	106 cm
Tank Skid	7' 0"	213 cm	3' 11"	121 cm	3' 1"	121 cm
Trailer	10' 3"	310 cm	5' 9"	175 cm	5' 2"	156 cm

- ◆ 100% Organic - No Additives
 - ◆ Super Saturated Steam
 - ◆ Fast Heating - High Volume
 - ◆ Apply Anytime, Anywhere
 - ◆ Quiet, Safe, Effective
 - ◆ Purpose Built to Last
- The time has come to develop a new strategy. Weed control requires planning and safe execution to create and maintain public areas that are free of unsightly weeds, aesthetically pleasing, and safe for the public. Weedtechnics offers a range of equipment that will help you help your community or your customer maintain beauty and safety.



Patent: US8740109 - Apparatus producing superheated water and/or steam for weed killing and other applications



PUBLIC SAFETY

Fire Department

Western Ave Heating and HVAC

This fall the City was required to perform an emergency replacement of the boiler system at the Western Avenue Fire Station. The City Council was informed the repairs required needed to be done immediately and the City Manager approved proceeding with this project. The cost for these improvements was approximately \$90,000 and the intention was to fund these repairs with Fund Balance. This item has been added to include the project in the FY20 CIP. Additionally, this past summer mold issues were discovered at the Western Avenue Station in the HVAC system. The mold was removed from the ceiling tiles and the vent system. New ductwork was installed and the station was free of mold. The current system is not sufficient to handle the load at the station as well as it lacks dehumidification system. The city facilities management team is planning a review of the system for this winter, but it is anticipated that new HVAC components and controls will be required to ensure that mold does not return next summer.

Project Cost: \$290,000.00
Funding Source: \$200,000 - General Obligation Bond
\$90,000 – Fund Balance
Source of Cost Estimate: Sebago Technics
Projected Useful Life: 15 years

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PUBLIC SAFETY

Fire Department

Replacement Command Vehicle



The department is looking to replace a 2004 GMC Yukon, which is used as a department command vehicle for the chief officers. Based on a 12-year life span this vehicle should have been replaced in the 2016 (FY17 CIP) but due to the need for a Quint it was delayed. This vehicle has 123,346 miles and has had significant rust issues in the past few years. For this purchase, we are looking to change to a crew cab pickup truck with a cap. This not only provides more usable space, it would also separate the cab from the gear storage separating fire gear, which is a significant concern now from a number of cancer studies. Additionally, SUVs have increased significantly in cost making a crew cab pickup now being a better cost value. Quote below is for reference only and does not include rear cap, emergency lighting/siren, radios, lettering, and rear command center insert.

Project Cost: \$50,000.00

Funding Source: \$13,461 Prior Years' CIP
\$36,539 General Fund Reserves

Source of Cost Estimate: Scarborough Fire Department

Projected Useful Life: 12 years





2019 Super Duty F-250 XL



Representative exterior image shown. Actual exterior may vary. See your dealer for details.

Payment

Base MSRP^{S1}	\$36,745
Total of Options^{S4}	\$4,180
Destination Charges^{S17}	\$1,495
Total MSRP^{S16}	\$42,420
Available Incentives^{S3}	-\$500

Ford Credit Retail Bonus Customer Cash
 Program #13344: \$500.00 Ford Credit Bonus cash requires Ford Credit financing. Not all buyers will qualify. Take new retail delivery from dealer stock by 01/02/2019. See dealer for complete details.
 Amount: \$500, Offer Valid: Oct 2, 2018-Jan 2, 2019

Estimated Net Price^{S5}	\$41,920
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PUBLIC SAFETY

Fire Department

Service Truck with Plow



This request is for a pickup truck with snowplow. The fire department is responsible for initial snow clearing at the five fire stations during and after storms. Public Works and outside contractors do assist with loading and hauling snow days after the storm but the stations require constant snow removal to ensure a rapid response. Additionally, these pickups are used to transport items such as; fire hose after fires, foam & hazmat trailers to emergencies, and supplies to emergency scenes. They are also used daily to run errands and move staff around as needed. This vehicle will be replacing a 2004 pickup truck that has reached its end of life and reliability to respond to emergency events. It should have been replaced in 2016 (FY17) but has received significant repairs in recent years which has extended its life span beyond replacement date. Quote below is for reference only and does not include snowplow or rack body.

Project Cost: \$45,000
Funding Source: \$45,000 General Fund Reserves
Source of Cost Estimate: Scarborough Fire Department
Projected Useful Life: 12 years



2019 Super Duty F-350 XL



Representative exterior image shown. Actual exterior may vary. See your dealer for details.

Payment

Base MSRP ⁵¹	\$33,150
Total of Options ⁵⁴	\$5,385
Destination Charges ⁵⁷	\$1,495
Total MSRP ^{51,56}	\$40,030
Available Incentives ⁵³	-\$500

Ford Credit Retail Bonus Customer Cash
 Program #13344: \$500.00 Ford Credit Bonus cash requires Ford Credit financing. Not all buyers will qualify. Take new retail delivery from dealer stock by 01/02/2019. See dealer for complete details.
 Amount: \$500, Offer Valid: Oct 2, 2018-Jan 2, 2019

Estimated Net Price ⁵⁵	\$39,530
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PUBLIC SAFETY

Fire Department

Defibrillator



The Department is looking to replace a defibrillator/cardiac monitor. Currently the department has six defibrillator/cardiac monitors, one on every staffed fire apparatus and one on both primary ambulances and as well as one on the backup ambulance. As a department, and a city, we are very fortunate to have a significant number of our employees who are Paramedics, which allows us to routinely staff each apparatus at the Paramedic level. These monitors are critical to providing the best level of prehospital care, as they are not only capable of defibrillating patients in cardiac arrest but can also assist the heart by pacing the heart. Additionally, the monitors provide EKG rhythms, oxygen levels, and vitals, which allow our responders to diagnose issues before they become serious. Some our current monitors are 12 years or older and are approaching or already have reached the end of service agreements (the company will no longer support them). We have started a replacement cycle of one unit every two years with the goal that we never have any that are older than 12 years and thus no longer supported.

Project Cost: \$38,000.00
Funding Source: \$20,000 Prior Years' CIP
\$18,000 Grants
Source of Cost Estimate: Physio Control
Projected Useful Life: 12 years

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PUBLIC SAFETY
Fire and Police Departments

Computer Aided Dispatch (CAD) Upgrade

As a partner in the Portland Regional Dispatch Center, part of the costs to operate include the dispatching software or CAD. This software handles all Police and Fire/EMS 911 calls for the three municipalities that are received in the dispatch center and then assigns the appropriate resources depending on location and emergency type. The current CAD has reached the end of its useful life and is starting to become obsolete as well as being difficult to integrate with the newer programs that are used by the Police and Fire Departments. This purchase will be split between both Portland and South Portland Departments using the per capita formula. The total anticipated cost is \$2,000,000.00 with South Portland responsible for \$500,000.00, split between the Police and Fire Departments. \$250,000.00 was allocated last CIP and the remaining \$250,000.00 (1/2 to each department) is requested this year.

Project Cost: \$250,000.00
Funding Source: Fund Balance
Source of Cost Estimate: Portland IT Department
Projected Useful Life: 10 years

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PUBLIC SAFETY
Fire Department
Cash Corner Fire Station Replacement



Although this project was in last year's CIP, at that time, it was offered as a renovation project vs an outright replacement project. During the assessment process conducted by Sebago Technics a multitude of additional issues were uncovered thus giving staff and at least one Councilor pause as to renovate or replace.

At the May 8, 2018 City Council Workshop, this item was discussed and Owens McCullough of Sebago Technics offered an overview of the issue and what he believed to be the potential cost of a new facility. This project is now awaiting funding to proceed with replacing the current building

Project Cost:	\$7,500,000
Funding Source:	\$1,500,000 Prior Yrs' CIP \$ 6,000,000 General Obligation Bonds
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	50+ years



Cash Corner Fire Station Planning, Design & Permitting Sebago Technics, Inc. – Scope of Work

Introduction:

Sebago Technics, Inc. in cooperation with Grant-Hayes Associates and Allied Engineering were retained by the City of South Portland to complete concept level planning for the replacement of the Cash Corner Fire Station. This planning level work was intended to provide the City of South Portland the information necessary to make an informed decision regarding size and general programming needs for a replacement fire station. Through this planning process a preferred floor plan was identified and is depicted in the attached concept facility plans. As agreed by the City of South Portland, this plan will serve as the basis of design.

The next step in the planning, design and implementation process is to initiate the full facility design based upon a 30% design, 90% design and issuance of Construction Documents (CD's). To assist the City of South Portland with the project implementation, we have assembled the following scope of work to provide the project design, permitting, energy modeling, preparation of construction documents, bidding, construction administration/services and commissioning.

Project Background:

The need to replace the Cash Corner Fire Station stemmed from a 2017 mold study (refer to February 24, 2017 report prepared by ESH, Inc.) resulting in substantive health and safety concerns for station staff occupying the office and living quarters area. The results of the mold study concluded significant remediation and renovations are needed to address extensive mold accumulation in wall cavities, ceiling and insulation. A preliminary planning assessment was undertaken to better understand the extend of remediation and restoration which resulted in a project cost estimate of approximately \$1.7 million dollars. After discussion with the City Council it was determined this level of renovation would not address a much broader need for expansion of the station and modernization. As a result, the City Council has instructed the City Staff to proceed with a station replacement project, costing and a referendum vote in June of 2019.

Building Program:

Following this direction by the City Council a programming study was undertaken in collaboration with City staff and the Fire Department to evaluate several alternatives for a new facility on the existing site. The result was a two-story option with a footprint of approximately 11,000 square feet with a partial finished second level totally approximately 6,000 square feet. The basis of design is depicted on the attached concept plans and as generally described in the following:

Apparatus/Utility - First Floor

- Decon Room – shower, washer/dryer, sink.
- Unisex Toilet Room
- Elevator & Elevator Machine Room
- 2 Egress Stairs
- Secured Vestibule for general public (access to stair/elevator if 2 story)
- Boiler Room, Sprinkler, Utility Entrance Room.
- Air Compressor
- Gear Lockers (40)
- Repair Room – 12' x 12'
- EMS Storage Room – 6' x 6' minimum
- Apparatus Bay w/ secured employee entrance
- Need employee parking. Twenty to twenty-five spaces
- Outside area of grilling and picnic table. Patio space to seat 12
- Admin offices. Some of offices may potentially have four different people working out of them for different shifts. Four difference shifts with filing cabinets.
- Generator
- If new key intersection, need generator to run intersection lights
- Need outside shed/garage for mowers, misc. items. Maybe outside 12' x 12' pad.

Administrative/Living - Second Floor

- Four (4) shifts per day. Staffing per shift will be 3-4 per shift but could grow up to 10 people. 10 single occupancy bedrooms with 4 lockable storage “closets in each.
- If a new truck is added - will need to add four firefighters plus deputy and rescue get to 10 people.
- Potentially 2 unisex shower rooms and one unisex bathroom depending on occupant loads/Maine State Plumbing Code.
- Laundry room to include storage for house linens, clean/dirty separation.
- Custodial – mop receptor, cleaning supplies storage, floor machines (vacuum, etc.).
- Multipurpose training room. 20 to 30 people to train.
- EOC? Current location not good. No added space just utilizes the multi-purpose room.
- Kitchen/Dining/Day Area – Large open space with furniture flexibility. Do not need a traditional Day Room since most staff watch tv or use computers in their bunk rooms.
- Two (2) offices- 8' x 10' minimum. Need ability to have 2 guest chairs in each. Duty Officer and Shift Commander (Spare).
- No dispatch.
- Exercise Room
- IT room/Closet

Cash Corner Fire Station History:

The Fire Station is located at Cash Corner in South Portland and based upon historic plan information was designed by Leasure, Tuttle & Lee Architects & Engineers in the late 1960's and subsequently constructed/occupied in the early 1970's. The fire station contains approximately 7,400 square feet and is a single-story reinforced concrete & masonry structure with a long span steel framed roof system. Utilized as a fully occupied (24/7) fire station, the building contains spaces typical for an emergency response facility. The building includes a multi-vehicle apparatus bay, a utility room for mechanical and electrical systems, gear repair area, hose and gear storage, lounge/meeting room, kitchen, fitness room, watch room, main office, single and multi-user toilet rooms and showers, laundry area, and multiple bedrooms.

Deliverable Method: Design -Bid Build

Project Team:

The project team includes:

1. **Sebago Technics, Inc.:** *Lead Consultant and Project Manager including Site/Civil Design, Permitting, Survey, Cost Estimating, Traffic Engineering and Construction Services.*
2. **Grant Hayes Associates:** *Architectural Building Design, Interior Design and Supporting construction Services.*
3. **Allied Engineering:** *Heating, Ventilation, Air Conditioning, Structural Engineering, Plumbing Design, Electrical and Mechanical Design Services:*
4. **Maine Controls:** *System Integration and Controls*
5. **S.W. Cole Engineering:** *Geotechnical Engineering.*
6. **City of South Portland:**
 - Project Manager: Chief James Wilson
 - Co-Project Manager: Chris Copp
 - Technical Support and Advisor: Brad Weeks and David Cunningham

Permitting:

1. Given the size of the project, we anticipate permitting through the City of South Portland Site Plan review process.
2. Local Building Code Permits
3. State Fire Marshal Office Maine Construction Permit.

Probable Project Schedule:

Task	Tentative Deliverable Date
Finalize Design and Construction Services Scope of Work and Budget	February 28, 2019
Develop Concept Site Plan	March 22, 2019
Geotechnical Borings	April, 2019
30% Design Complete (5 Weeks)	April 19, 2019
Initial Budgeting Estimate for Construction	April 26, 2019
Site Plan Application with City	May 30, 2019
Owner Review and approval of 30% Design	April 26, 2019
Issue Contractor Pre-Qualification Package	June 1, 2019
90% DD Documents (10 weeks)	June 28, 2019
Owner 90% Review & Issue Demolition Bid Only	July 11, 2019
Pre-Qualify Contractors	July 20, 2019
CD's and Issue Bid	August 28, 2019
Bidding Period	August 28 through September 19, 2019
Award Contract after Council Approval/Demolition Complete.	October 1, 2019
Construction Period	October 14, 2019 through December 10, 2020
Owner Occupancy	January, 2021

Scope of Services

The following sets forth our scope of services and anticipated budget for the engineering, geotechnical, traffic, survey and building design for this project:

Survey and Wetland Mapping:

Task 1 - Survey Services

Sebago Technics has already completed a site boundary and topographical survey of the project site.

Task 2 - Wetlands Mapping

While it is highly unlikely wetlands are on the property, it is advisable to verify the presence or lack of wetlands on the property. Our staff wetlands scientist will field review the site for the presence of wetlands in general conformance with the U.S. Army Corps of Engineers (USACOE) Wetlands Delineation Manual. This will include field delineation and preparation of a report describing the wetlands.

Since the project site is fully developed and located in an urban area, we do not expect the presence of wetlands will be encountered and therefore no regulatory permitting. Should our review find otherwise, we will issue an addendum to this scope of work.

Phase I – Advance Concept Design to 30% Preliminary Design:

Task 1 - Preliminary Site Planning and Regulatory Coordination - Civil

- A. Prepare a Preliminary Site Development Plan depicting locations of access roadways, buildings, circulation roads, parking areas and aprons. The conceptual site planning work will be completed in coordination with the previously completed building programming.
- B. Prepare a Preliminary Site Grading/Drainage Plan. Stormwater management will be an important consideration in the project given the permitting requirements and sensitivity to water quality.
- C. Coordination meetings with the City of South Portland Planning Staff and regulatory authorities.
- D. Project and team meetings.
- E. Project Cost Estimating
- F. Prepare Contractor Pre-Qualification Request and Administer Process.

Task 2 - Traffic Evaluation

- A. Visit the site, review area roadways and intersections, and measure sight distances at the site drive location.
- B. Research historical traffic information related to the project site.
- C. Conduct AM/PM peak hour counts at the existing site drive.
- D. Estimate trip generation and distribution associated with the proposed project.
- E. Prepare a Traffic Study to be submitted for review by the City of South Portland Planning Board.
- F. Coordinate with the Planning Department and Public Works Director regarding ongoing City Traffic Light improvements.
- G. Review options for controllability of existing intersection traffic lights from the fire station at the project site.

Our scope for traffic work does not include any offsite intersection studies or design of offsite improvements or a TMP through the MaineDOT.

Task 3 – Architectural Services

Preliminary REVIT Format Architectural Design Report (25% Design) as follows;

- A. Prepare and finalize project programming analysis.
- B. Prepare project code analysis.
- C. Prepare scaled concept floor plans.

- D. Prepare scaled concept building elevations.
- E. Prepare scaled concept building sections.
- F. Prepare outline format specifications
- G. Attend four (4) Owner/team coordination meetings.
- H. Project technical consultation during contractor pre-qualification process to include review of pre-qualification package prepared by Sebago and review of contractor submittals.

Task 4 – Mechanical, Electrical, Structural and Plumbing Services

Schematic Design/Preliminary Design Report (SD/PDR):

- A. Site visits to review field conditions.
- B. During the schematic design phase, AEI and our team will discuss the feasibility of incorporating environmentally responsible design approaches into the project. Through the discussion, AEI and owner/architect are to reach an understanding with regard to the project’s overall requirements, and if and how environmentally responsible design will be incorporated.
- C. Narrative descriptions of proposed HVAC, plumbing, fire protection, and electrical systems.
- D. Schematic Layouts, sketches and conceptual design of structural systems.
- E. Investigate alternative energy conservation methods such as heat pumps, solar and geothermal energy. This will be accomplished through energy modeling and comparative cost assessments.
- F. Attend project team planning meetings. Four (4) meeting assumed.

Task 5 – Geotechnical Services

- A. Review proposed facility layout to determine critical structure locations, major areas where significant fill will be placed, earth retaining structures, underground tanks and utilities.
- B. Prepare a program of subsurface explorations:
- C. Conduct laboratory testing on selected soil samples collected from the explorations to assist in sample classification and determining engineering soil properties.
- D. Conduct design-level engineering analyses related to geotechnical engineering aspects of foundation design, site development and construction, and prepare a Geotechnical Report to generally include:
Boring logs, test pit logs and records of other explorations including soil and rock conditions and water levels encountered.
 - 1. Location plan of subsurface explorations.
 - 2. Summary of subsurface geologic conditions as interpreted from the explorations.
 - 3. Results of laboratory tests.

4. Design criteria for proposed buildings and structures including allowable bearing capacity, minimum size, pile design requirements and minimum bearing depth for frost protection.
5. Seismic site classification and design criteria, based on applicable provisions of the latest edition of the International Building Code.
6. Recommendations for treatment of ground floor slabs, either earth supported slabs-on-grade or structural slabs.
7. Comments and recommendations for perimeter foundation and under-slab drainage systems.
8. Comments on the reuse potential for existing on-site soils.
9. Recommended pavement sections.
10. Comments on geotechnical aspects of foundation construction and site development including excavation, filling, and dewatering.

Task 6 – Building Cost Estimating

- A. Based upon the 30% design, we will have an independent cost estimate completed for the building cost estimate. At this time, we plan to utilize the services of CONESTCO.
- B. Using the 30% design, Sebago Technics, Inc will generate a site development cost estimate.

Phase 2 – Design Development and Permitting (90%) Design:

Task 1 - Preparation of Design Plans and Permitting - Civil

Our work in this task will focus on preparation of the civil design and permitting drawings based upon the proposed building program and preliminary plan developed in Phase I of our Scope of Services.

- A. Preparation of site grading, drainage and utility plans for permitting. This work will include preparing a Site Layout Plan depicting building, parking, sidewalks, circulation areas, general notes, property boundaries, utilities (public), grading and drainage improvements, stormwater measures, catch basins, sewer and water collection distribution system, locations of curbing, handicap ramps, and other site improvements.
- B. Computations, analysis and preparation of a Stormwater Management Plan for project development. This will be a key component of the overall project and will be required as part of the permitting process at both the local and state levels. Utilizing the development plans, we will map the on-site watersheds and complete pre- and post-development calculations to determine the peak rates of runoff for the 2, 10 and 25-year storm events. In addition, we will utilize these calculations to size stormwater piping, vegetated swales, level lip spreaders, and stormwater management/treatment features. Treatment of stormwater will be required, which could include treatment ponds, vegetated swales, or proprietary devices. Once we have completed our

Stormwater Management Plan, we will assemble a report with supporting calculations and recommendations with design information for submittal to the MDEP and City.

- C. Contact the utility agencies to obtain an “ability to serve” letter. We will also obtain from the Portland Water District the most recent fire hydrant flow data in the project area.
- D. Coordinate with the City Fire Chief to review hydrant placement.
- E. Prepare a preliminary cost estimate for civil elements of the project development.
- F. Prepare a City of South Portland Site Plan Application.
- G. Prepare supporting design and construction details.
- H. Prepare a Sedimentation and Erosion Control Plan.
- I. Prepare a Landscape Plan.
- J. Provide technical representation at Planning Board meetings, three meetings with the staff, and two meetings with the MDEP.
- K. Preparation of a Site Plan Permit Application to the City of South Portland. We will also provide technical representations at staff and planning board meetings.
- L. During the permitting and design process, we weekly team and design coordination meetings.
- M. Preparation of draft front end and site bidding documents and technical specifications. Architect/MEP and Structural Engineer to provide building related specifications.

Task 2 - Preparation of Design- Development Plans – Architectural

Preparation of 90% REVIT Format Architectural Design Documents as follows:

- A. Prepare demolition floor plan and elevations.
- B. Prepare scaled floor plans with code-compliance notes and dimensions.
- C. Prepare reflected ceiling plans, roof plan, and related details.
- D. Prepare scaled exterior elevations, building sections and wall sections.
- E. Prepare Door, Window, and Finish Schedules; and related details.
- F. Prepare partition details, large scale construction details.
- G. Prepare scaled interior elevations with notes and dimensions for selected areas and ADA compliance elements.
- H. Prepare stair and elevator plans, sections, and details.
- I. Prepare millwork plans, elevations, and details
- J. Prepare accessibility details and notes.
- K. Prepare project specifications.
- L. Offer input on project costs.
- M. Attend Owner/team coordination meetings. Three (3) Project Meetings assumed.

- N. Review project with the State Fire Marshal Office – secure FMO Construction Permit.
- O. Review project with South Portland AHJ.
- P. Attend Planning Board Meeting and prepare graphics.

Task 3 – Preparation of Design Development Plans - Mechanical, Electrical, Structural and Plumbing Services (90% Design) as follows:

- A. Site visits to review field conditions.
- B. Preparation of 90% design documents for building structural, mechanical, electrical, heating, ventilation, air conditioning and plumbing plans.
- C. AEI will collaborate in the creation of a Project BIM Model utilizing REVIT software. AEI will integrate our work with the Project Model by providing weekly updates of the Model once the Project has entered the DD phase. Modifications issued during the CA phase will be integrated into the Project Model. In general, the following elements shall be three dimensionally represented in our Model.
 - Plumbing: Pipes and valves greater than 3", plumbing fixtures, floor drains, roof drains, and other elements that will impact the coordination of the Project.
 - HVAC: Ductwork and accessories, diffusers, HVAC units, piping greater than 3", HVAC terminal units, air systems, and other elements that will impact the coordination of the Project.
 - Electrical: Conduits 4" and larger, electrical panels, and light fixtures.
 - Fire Protection: Pipe mains 4" and larger, fire pumps, sprinkler heads where required for proper coordination of architectural/technically significant spaces.
- D. Systems engineering and design for energy conservation and sustainability. It is expected lighting will be LED.
- E. Contract Efficiency Maine to assess potential rebate programs.
- F. Prepare plans and technical specifications for bidding.
- G. Progress submissions will be made as requested. For Basic Services, we have assumed two progress submissions.
- H. Attend project team meetings. Eight (8) project meetings assumed.

Phase 3 – Construction Documents (Bidding):

This phase of the project will focus on preparing the documentation necessary to bid the project as follows:

Task 1 - Preparation of 100% Construction Documents – All disciplines.

- A. Finalizing construction details, notes, phasing/sequencing of construction and coordination between civil, architectural, structural, mechanical, electrical, HVAC systems.
- B. Preparation of 100% bidding documents with technical specifications. Sebago Technics, Inc will administer the bid on behalf of the City of South Portland. Sebago will prepare front end documents using EJCDC. Technical specification to be CSI format with standard divisions.
- C. Coordination meetings with the Project Team and City staff (All disciplines).

- D. Attend and coordinate Mandatory Pre-bid meeting (All disciplines).
- E. Issue RFI's and Addenda during bidding process (All disciplines).
- F. Presentation to Council in coordination with City Staff (Sebago to lead and representatives for Grant-Hayes and AEI to attend).
- G. Review bids upon receipt, meetings with owner and contractor prior to award (All disciplines).
- H. Preparation of construction contract (Sebago)

Phase V – Construction Administration:

Our project team will provide construction administration of the project for both the building and site. Sebago Technics will take the lead role with the Architect providing overall support. We anticipate the construction phase to take approximately 14 months to complete the project.

Construction Phase Scope of Work:

- A. Sebago to provide full-time Resident for the project.
- B. Pre-Construction Meeting and coordination (All disciplines)
- C. Weekly owner/contractor meetings (Sebago). Grant-Hayes and AEI to attend monthly meeting.
- D. Coordination with City and Building Officials (All disciplines).
- E. Review construction submittals and shop drawings (All disciplines).
- F. General coordination with site contractor and oversight (Sebago with support as needed from Grant-Hays and AEI).
- G. Provide periodic construction administration and field review during facility construction (Monthly visits by Grant-Hayes and AEI).
- H. Prepare field reports documenting our observations and recommendations (Sebago).
- I. Answer RFIs during construction (All disciplines as needed).
- J. Coordinate and provide representation(s) at project meetings.
- K. At substantial completion, we will perform a field review of site work completed and prepare a punch list (All disciplines and commissioning).
- L. Coordinate materials testing work for the project (Sebago).
- M. Establish survey control for building layout and site (Sebago).
- N. Building commissioning (AEI).
- O. Preparation of AutoCAD and Revitt plans using contractor provided As-Built information (Sebago).

Compensation

As with our previous projects, we will complete the provided scope of services on a time and materials bases (not to exceed) in general conformance without general services contact. The following is summary of each consultant’s budget through construction services. We have also appended a man-hour breakdown and copies of each subconsultants proposal and scope of work. As agreed to, Sebago does not mark up any of the subconsultant costs and provides these as a pass-through cost for each billing.

Team Member	Budget Amount
Sebago Technics, Inc. (Includes 14 Months of Construction Services – Full Time Resident)	\$276,505.00
Grant Hays Architects – Building Design	\$166,000.00
Grant Hays Architects – Interior & FFE	\$6,000.00
Allied Engineering, Energy Modeling & Commissioning (Excludes Enhanced Commissioning)	\$208,550.00
S.W.Cole (non-winter conditions)	\$25,000.00
CONESTCO (Independent Cost Estimating)	\$5,500.00
Maine Controls (Allowance)	\$5,000.00
Materials Testing (Allowance – Construction Services)	\$10,000.00
Expenses (Allowance)	\$10,000.00
TOTAL PROJECT BUDGET	\$712,555.00

Cost Alternate:

1. Geothermal: Should the City determine a geothermal system is viable, S.W. Cole will need to provide a supplemental scope of work for installation of geothermal test well and associated testing. This is a substantive cost as it requires the installation of a full geothermal well. The well will then be reused as part of the geothermal field when construction occurs. As a result, this cost is a cost that would have otherwise been incurred during construction. Approximate budget cost for geotechnical services, and installation of one geothermal well for testing: \$30,000.

2. High Definition Scan As-Built Survey (HDS). The City of South Portland has initiated an asset management program that includes the objective of optimizing and tracking facility maintenance and future improvements. The focus of the HDS scan will be to as-built various phases of the project through scanning technology. Sebago Technics, Inc. has performed these scans and several City project. We anticipate scanning the site at the time of foundation/pile installation, structural steel installation (core and shell) and prior to finished ceiling installation to map major facility HVAC and electrical component and lastly a scan of the project site.

There are two levels to this scope of work:

- a. HDS scanning and register the scans to provide the City with a Point Cloud.
Budget: \$11,900.00
- b. Preparation of an as-built Revit model.
Budget: \$10,000.00

Sincerely,

SEBAGO TECHNICS, INC.

A handwritten signature in black ink, appearing to read "Owens A. McCullough". The signature is fluid and cursive, with the first name "Owens" being the most prominent.

Owens A. McCullough, P.E.; LEED A.P.
Sr. Vice President of Strategy and Client Development

OAM: oam

Design and Construction Services

SEBAGO TECHNICS, INC.
 PROJECT NO: 17152
 PROJECT NAME: Cash Corner Fire Station
 DATE: Jan-19
 EST. BY: oam



Scope Item	Sebago Technics, Inc.							
	PM	Design Eng.	Survey Crew	Survey PLS	Admin Asst	LA	CAD	Construction Inspector
Survey Layout			16.0	8.0				
Concept Planning & Analysis	12.0	8.0				8.0	24.0	16.0
Cost Estimating	3.0	8.0						
Permitting Plans, Stormwater and Site Details	24.0	80.0				4.0	80.0	
Permitting - City	12.0	24.0			40.0			
Project Coordination & Mgmt. & Meeting	56.0							
Plan Review - All Disciplines	8.0							40.0
Final Design	8.0	60.0					40.0	
CC/CD's	8.0	16.0					24.0	4.0
Specifications	16.0	24.0			6.0			6.0
Cost Estimate	40.0							
Discipline Coordination	20.0							8.0
Bid/RFI's	8.0				12.0			
Addendum	4.0							
Administrative	4.0							
Bid Review, Recommendation, Council Mtg.	4.0							
Construction Administration & Inspection (14 Months - 40 hrs/wk)	80.0				8.0			2240.0
Site Visits	120.0							
Weekly Project Meetings	208.0							
Punch Lists	16.0							24.0
As-builts	4.0						12.0	8.0
Submittals	24.0				16.0			80.0
Total Hours	679.0	220.0	16.0	8.0	82.0	12.0	180.0	2,426.0
Hourly Rate	\$115.00	\$90.00	\$120.00	\$80.00	\$55.00	\$105.00	\$70.00	\$65.00
Total Cost	\$78,085.00	\$19,800.00	\$1,920.00	\$640.00	\$4,510.00	\$1,260.00	\$12,600.00	\$157,690.00
Sebago Technics, Inc.								\$276,505.00
Grant Hays Architects								\$166,000.00
Grant Hays Interior FFE								\$6,000.00
Allied Engineering								\$208,550.00
S.W.Cole								\$25,000.00
CONESTCO								\$5,500.00
Maine Controls (ALLOWANCE)								\$5,000.00
Materials Testing (ALLOWANCE)								\$10,000.00
Expenses								\$10,000.00
TOTAL PROJECT BUDGET								<u>\$712,555.00</u>

GRANT HAYS ASSOCIATES

ARCHITECTURE  INTERIOR DESIGN

September 24, 2018
Revised February 22, 2019

Owens McCullough
Sebago Technics
75 John Roberts Road, Suite 1A
South Portland, Maine 04106

**Re: Professional Architectural Design Services
New Fire Station – Cash Corner
South Portland, Maine**

Dear Owens,

Thank you for giving Grant Hays Associates this opportunity to submit an architectural design services proposal for the new Fire Station located on the existing city parcel at Cash Corner in South Portland. This proposal outlines the anticipated services necessary to complete the requested work based on information obtained from meetings and discussions with City personnel, and our concept design drawings dated September 11, 2018.

INTRODUCTION

Grant Hays Associates (GHA) is a twenty-four-year old firm with diverse experience in designing hospitality, manufacturing, municipal, industrial, and office facilities. Our work has encompassed new construction and renovation/rehabilitation. We are well versed in local ordinances, state and federal building codes, and the Americans with Disabilities Act.

All projects undertaken by **GHA** are led by one of the two partners. This provides you with a direct line to an individual in the firm that is involved with the work on a daily basis and is capable of making decisions that may affect **GHA**. Also, this provides for internal checks and balance for any product that we produce in our office. **GHA** holds weekly project reviews in order to facilitate the completeness of the work and ensure timely delivery, thereby meeting project deadlines.

We have a strong reputation for creative planning and design, sensitivity to surrounding neighborhoods, and a willingness to truly listen to the client's needs. We are well known for working closely with our clients, the community, and our consultants, acting as project advocates on all levels. Our design and technical skills, attention to detail, calm and efficient working manner and the ability to bring projects in within budget and on schedule are evident in our growth and increasing base of repeat clientele. Our references can attest to the fact that we are diligent, reliable, and easy to work with.

This proposal is broken down into several sections indicating our understanding of the project, the scope of work, schedule, and compensation.

PROJECT UNDERSTANDING

The work consists of preparing architectural design development and construction documents suitable for obtaining Contractor bids, State Fire Marshall approval for construction, and a local building permitting. We are aware the Structural, Mechanical, Electrical, and Plumbing system engineering design will be performed by Allied Engineering. We are also aware Sebago Technics will provide all site engineering, and overall project management services. As such, GHA will act as a sub-consultant to Sebago Technics for this project.

GHA will produce the appropriate architectural drawings (REVIT) and specifications (C/I Format) necessary for code compliance and permitting as indicated herein. We will review the completed documents with the State Fire Marshal's Office and local Authority Having Jurisdiction for construction permitting. We will secure the building permit from the State Fire Marshal. Local construction permitting will be the responsibility of the selected General Contractor.

We understand the completed design documents will be cost estimated by an independent source, such as Conestco, for the purposes of providing the City with a project cost the City Council can evaluate for the purposes of issuing a referendum to the voters. As such, we have included all phases of the architectural work in this proposal for you to include in the project soft-cost aspects to the City for their use in determining overall project expenses.

SCOPE OF SERVICE

Phase I – Concept Design/Planning Approval REVIT Format Architectural Documents (25% Design)

- Prepare project programming analysis.
- Prepare project code analysis.
- Prepare scaled concept floor plans.
- Prepare scaled concept building elevations.
- Prepare scaled concept building sections.
- Prepare outline format specifications
- Prepare preliminary construction budget.
- Attend four (4) Owner/team coordination meetings.
- Assist Sebago Technics with South Portland Planning Board submission package and presentation.

Phase II – Final REVIT Format Architectural Design Construction Documents (100% Design)

- Prepare demolition floor plan and elevations.
- Prepare scaled floor plans with code-compliance notes and dimensions.
- Prepare reflected ceiling plans, roof plan, and related details.
- Prepare scaled exterior elevations, building sections and wall sections.
- Prepare Door, Window, and Finish Schedules; and related details.
- Prepare partition details, large scale construction details.
- Prepare scaled interior elevations with notes and dimensions for selected areas and ADA compliance elements.
- Prepare stair and elevator plans, sections, and details.
- Prepare millwork plans, elevations, and details
- Prepare accessibility details and notes.
- Prepare project specifications.
- Prepare project cost estimate.
- Attend Owner/team coordination meetings.

- Review project with the State Fire Marshal Office – secure FMO Construction Permit.
- Review project with South Portland AHJ.

Phase III – Bidding and Negotiation

- Provide Sebago Technics with the Architectural PDF documents of the drawings and technical specifications.
- Assist Sebago Technics by providing RFI clarifications to the drawings and specifications in the form of Addendum PDF's.

Phase IV – Construction Administration Phase Services

- Attend Pre-Construction meeting.
- Attend monthly Owner's Requisition meeting.
- Provide written responses to RFI's.
- Review product submittals and shop drawings for compliance with the construction documents.
- Perform monthly field visits during construction period to observe progress and compliance with the construction documents. Prepare report of observations.
- Perform substantial completion inspection/punch list and subsequent final completion inspection for compliance with contract documents.

COMPENSATION

We propose a lump sum fee of \$166,000. The fee breakdown is indicated below, which also includes \$5,000.00 in reimbursable expenses. Any scope changes will require appropriate fee adjustments. Both parties will endeavor to reach a mutual agreement prior to proceeding. The total fee percentage per phase shall be broken down as follows:

- Phase I – Planning Board/Conceptual Design 7%
- Phase II – Design Development/Construction Documents 70%
- Phase III – Bid/Negotiation 3%
- Phase IV – Construction Administration 20%

Reimbursable expenses consist of printing, copying, telephone, travel, tolls, photography, supplies, and postage, as they apply to the project. Expenses are billed at cost-plus-ten-percent in addition to the labor fee.

Labor hourly billing rates for additional services beyond the scope noted herein shall be billed in accordance with the attached compensation rate sheet.

Fees are billed the first of each month for work completed within the previous thirty-day period in accordance with the attached compensation sheet. Payment is due within 30 days of the invoice date. Final payment is due prior to release of final sealed documents.

Late payment will be charged a 1.25% late fee (18% per annum). The Owner will be responsible for payment/reimbursement of all legal and collection expenses incurred by Grant Hays Associates attributed to securing payments due under this agreement.

If this proposal is acceptable, please return one signed copy to our office. Upon receipt, we will commence with the work in accordance with the anticipated schedule indicated below

SCHEDULE

We understand the project will likely start in March 2019. Based on this assumption, we expect the following schedule, which is subject to review and adjustment based on the actual written date of commencement.

- Phase I – Concept/Planning Approvals 4-8 weeks (TBD/Planning Board)
- Phase II - Construction Documents 12 weeks
- Phase III - Bidding 4 weeks
- Phase IV - Construction Phase: 52 weeks (TBD)

TERMS & CONDITIONS

INFORMATION PROVIDED BY OTHERS

The Design Professional shall indicate to the Client the information needed for rendering of services hereunder. The Client shall provide to the Design Professional such information as is available to the Client and the Client's consultants and contractors, and the Design Professional shall be entitled to rely upon the accuracy and completeness thereof. The Client recognizes that it is impossible for the Design Professional to assure the accuracy, completeness and sufficiency of such information, either because it is impossible to verify, or because of errors or omissions which may have occurred in assembling the information the Client is providing. Accordingly, the Client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional and the Design Professional's sub-consultants harmless from any claim, liability or cost (including reasonable attorneys' fees and costs of defense) or injury or loss arising or allegedly arising from errors, omissions or inaccuracies in documents or other information provided by the Client to the Design Professional.

The attachments indicated herein shall be made part of this agreement in their entirety. No other services shall be construed as part of this agreement unless specifically stated herein.

Owens, we appreciate the opportunity to work with you again. We look forward to assisting you in achieving the successful completion of this project. Please do not hesitate to call should you have any questions regarding this proposal.

Sincerely,

Approved:

Michael F. Hays, Principal
GRANT HAYS ASSOCIATES

Owens McCullough, Vice President
SEBAGO TECHNIQS

Attachments: GHA Compensation Rates
Terms & Conditions of Agreement
Man-Hour Breakdown

GRANT HAYS ASSOCIATES

ARCHITECTURE & INTERIOR DESIGN

P.O. BOX 6179, FALMOUTH, MAINE 04105, 207.871.5900

January 14, 2019

Revised February 22, 2019

Owens McCullough
Sebago Technics
John Roberts Road, Suite
South Portland, Maine 04106

Re: Cash Corner Fire Station Interior Furniture Design Services Proposal

Dear Owens,

As requested, Grant Hays Associates will provide design assistance with the interior furniture portion of the New Cash Corner Fire Station project as indicated herein.

Scope of Services

Phase I:

- Conduct initial interviews with appropriate staff and city members to determine furniture needs in each residential/office room.
- Prepare preliminary design floor plan layouts of furniture based on interviews.
- Review preliminary design plans with appropriate staff members for accuracy and completeness. Review schedule of furniture items in support of plans.
- Revise & refine floor plan designs and lists of furniture. Discuss color and finish selections in coordination with other building finishes.
- Deliver floor plans and furniture lists to the City of South Portland. The City will facilitate the bid process for the FF&E procurement.

Additional Services: The following services may be added to the scope of work for additional fees to be determined at the time of selection.

- Assistance the City with evaluation of Bid packages.
- Assist the City with material finished selections (fabric/paint finish colors, woodgrain finish, etc)
- Limited on-site observation of the FF&E installation.

Compensation

We propose to provide the services indicated above for a not-to-exceed fee as follows:

- Phase I \$6,000.00

Schedule

We propose to start during the Architectural Design Development Phase for the building. We expect the work to be complete within 4 weeks of commencement.

No other services shall be construed as included in this proposal other than those specifically stated herein.

All terms and conditions shall be the same as GHA's initial professional services agreement with the City of South Portland for the base contract for the Fire Station.

Owens, we appreciate the opportunity to submit this proposal and look forward to assisting the City in the successful completion of this project. Please do not hesitate to contact me directly with any questions or comments.

Sincerely,

Michael F. Hays, R.A., Principal
Grant Hays Associates

GRANT HAYS ASSOCIATES

ARCHITECTURE  INTERIOR DESIGN

MEMO

DATE: September 24, 2018
Revised February 22, 2019

TO: Owens McCullough

FROM: Mike Hays

RE: South Portland Cash Corner Fire Station
Proposal Man-Hour Breakdown

CC: file

<u>PHASE</u>	<u>PROJECT ARCHITECT</u>	<u>INTERIOR DESIGNER</u>	<u>CAD TECH</u>
PH 1 – CONCEPT & PLANNING APPROVAL	60	0	40
PH 2 – CD'S	480	240	320
PH 3 – B/M	40	8	8
PH 4 – CA	176	80	24
<hr/>			
TOTAL	757 HR'S	328 HR'S	392 HR'S

Revised February 14, 2019

Owens McCullough, P.E., LEED-AP
Vice President, Engineering
Sebago Technics
75 John Roberts Rd., Suite 1A
South Portland, ME 04106

RE: CASH CORNER FIRE STATION-SOUTH PORTLAND, MAINE

Dear Owens:

Thank you for asking **Allied Engineering, Inc. (AEI)** to provide this proposal for engineering services. Please consider the following:

I. PROJECT BACKGROUND AND UNDERSTANDING:

Sebago Technics requests professional engineering services for a new Fire Station at Cash Corner in South Portland, Maine. Based upon our review of conceptual sketches developed by Grant Hays Associates, we understand that the facility will be of two-story construction, comprising approximately 16,600 sf and will include small and large Garage Bays, a Decon Room, Multi-Purpose Room, Fitness Room, and Administrative offices.

Sebago Technics will be the prime consultant and will provide Civil Engineering for the project. Grant Hays Associates will be the Architect of Record.

Based upon our discussions with the City of South Portland, we understand that sustainable design will be of utmost importance as the City has committed to meeting 100% Renewable Energy by 2040.

Services proposed herein include design and construction administration for mechanical, plumbing, electrical, structural, and fire protection systems as well as commissioning services for the mechanical/lighting controls systems and energy modeling to analyze the life cycle cost associated with several options for mechanical heating, ventilating, and air conditioning systems.

AEI proposes to sub-contract the services of Commercial Constructing Consulting, Inc for Fire Protection Design, Thornton Tomasetti for Energy Modeling, and Sparhawk Group for Commissioning Services. Also, AEI will work directly with Maine Controls, Inc for developing the project Building Automation System specifications, to insure seamless integration with the City of South Portland's central system.

Structural (AEI)

- Develop Construction Documents for new building foundations and building framing
- Coordination with site requirements for installation of piles as anticipated based upon soil conditions.
- Develop Details and Notes
- Develop Material Specifications for applicable Divisions 3, 4 and 5

- Preparation of a Revit building information model (BIM)

Mechanical and Plumbing (AEI)

- HVAC systems and controls
- Plumbing and roof drainage systems.
- Plumbing systems and fixtures

Fire Protection (Commercial Construction Consulting, inc)

- Sprinkler piping and head location plan
- Sprinkler hydraulic calculations

Energy Modeling (Thornton Tomasetti)

- Create an energy model based on drawings from preliminary design phase.
- Create up to three iterations specifically focused on HVAC system alternatives.
- Provide Life Cycle Cost Analysis (LCCA) for each of the iterations studied. The analysis will be based upon cost data provided by Sebago Technics' independent cost estimator.
- Formulate and submit a report summarizing the analyses.

Commissioning (Sparhawk Group)

Base Commissioning

- Develop a construction phase commissioning plan.
- Independent submittal review for pertinent mechanical and electrical submittals
- Develop pre-functional and functional test sheets for mechanical and electrical systems as noted herein
- Execute pre-functional and functional testing of systems noted herein
- Review pertinent O+M data for mechanical and electrical systems noted herein
- Submit a final commissioning report
- Conduct a post occupancy site visit
- Systems to be commissioned (Based upon an assumption for the basis of design systems):
- Water Source Heat Pump (WSHP) System
- Cabinet Unit Heaters and Unit Heaters (25% Sample Rate)
- Condensing Boilers and Associated Pumps and Controls
- Radiant Panels(25% Sample Rate)
- Exhaust Fans(25% Sample Rate)
- Dedicated Outside Air Unit (DOAS) with HW coil and DX cooling
- Energy Recovery Unit
- Ductless Air Conditioning Unit
- Radiant Floor Zones(25% Sample Rate)

- Direct-Fired Domestic Hot Water Heater
- Snowmelt System
- Lighting Control
- Solar PV Array (Alternate)

Enhanced Commissioning

- ~~Peer Design Review~~
- ~~Systems Manual~~
- ~~Training Review~~

Electrical (AEI)

- Electrical systems service entrance and power distribution
- Standby emergency generator
- Lighting design
- HVAC and equipment power
- Fire alarm system
- Wiring and devices
- Site lighting
- Emergency lighting
- Layout of empty raceway systems for technology systems (voice, data, communications, audio-visual, and security systems), as needed. Provide functional power supplies to these systems. The engineering of such systems shall be the responsibilities of others.

II. SCOPE OF SERVICES “BASIC SERVICES”:

AEI will prepare a set of construction documents indicating the scope, extent and character of the work to be performed and furnished by the contractor. Our services will include complete, traditional engineering services throughout all phases of the Project. Specifications will be prepared in general conformance with the Construction Specifications Institute’s MasterFormat 2004.

AEI is prepared to perform the following tasks:

Schematic Design/Preliminary Design Report (SD/PDR) Phase:

- ~~1. Site visits to review field conditions.~~
- ~~2. During the schematic design phase, **AEI** and our team will discuss the feasibility of incorporating environmentally responsible design approaches into the project. Through the discussion, **AEI** and owner/architect are to reach an understanding with regard to the projects overall requirements, and if and how environmentally responsible design will be incorporated. The owner may require environmentally responsible design solutions that exceed the limit of **AEI**’s basic services. These services include unique system designs, in depth research, and energy modeling.~~
- ~~3. Narrative descriptions of proposed HVAC, plumbing, fire protection, and electrical systems.~~
- ~~4. Schematic Layouts, sketches and conceptual design of structural systems.~~
- ~~5. Review meeting.~~

Design Development (DD) Phase:

1. Site visits to review field conditions.
2. The DD documents will illustrate and describe the development of the approved SD documents and shall consist of drawings and specifications as required to fix and describe the scope and character of the project. Physical space requirements for major MEP systems will be coordinated.
3. Design development review meeting.

Construction Documents (CD) Phase:

1. Site visits to review field conditions.
2. Based on the Owner's approval of the DD documents, and on the Owner's authorization of adjustments in the project requirements and budget for the cost of the work, AEI will prepare construction documents. The CD's will illustrate and describe the further development of the approved DD documents and will consist of drawings and specifications setting forth the quality levels of materials and systems and other requirements for the construction of the work.
3. **AEI** will collaborate in the creation of a Project BIM Model utilizing REVIT software. AEI will integrate our work with the Project Model by providing weekly updates of the Model once the Project has entered the DD phase. Modifications issued during the CA phase will be integrated into the Project Model. In general, the following elements shall be three dimensionally represented in our Model.
 - a. Plumbing: Pipes and valves greater than 3", plumbing fixtures, floor drains, roof drains, and other elements that will impact the coordination of the Project.
 - b. HVAC: Ductwork and accessories, diffusers, HVAC units, piping greater than 3", HVAC terminal units, air systems, and other elements that will impact the coordination of the Project.
 - c. Electrical: Conduits 4" and larger, electrical panels, and light fixtures.
 - d. Fire Protection: Pipe mains 4" and larger, fire pumps, sprinkler heads where required for proper coordination of architectural/technically significant spaces.
4. Prepare plans and technical specifications for bidding.
5. Progress submissions will be made as requested. For Basic Services, we have assumed two progress submissions.

Bidding Negotiations:

1. Assistance to your office during the bidding and negotiations of the project.
2. Documentation of addenda required for clarification of contract documents issued for bid.

Construction Administration (CA) Phase Services:

1. Shop Drawing Review – Review of shop drawings. **AEI** will review up to two (2) submissions of any single shop drawing. Additional reviews of any single shop drawing submittal will be performed on an hourly basis as indicated on the attached rate schedule.
2. Clarifications and Interpretations of Field Orders or RFI's – Issue necessary clarifications and interpretations of the Contract Documents.
3. Field Visits: Additional visits by our engineering staff will be performed on a time and expense basis and will require your approval prior to the visit.

Visit Type	Mechanical, Plumbing	Electrical	Structural	Fire Protection	Commissioning
Pre-construction Meeting	1	0	0	0	

Periodic Site Visits/ Attendance at Job Meetings	17	4	3	0	
Punch List	1	1	1	1	
Final Inspection	1	1	1	1	
Start- up/Commissioning	0	0	0	0	See Hourly Breakdown Summary
Post Occupancy	0	0	0	0	

III. EXCLUSIONS/ADDITIONAL SERVICES:

This proposal is limited to the services described in Section II. Without attempting to be a complete list or description of all services or potential services that will be excluded from this Agreement and which will not be performed by the **AEI**, the following services are specifically excluded from this Agreement. Any task excluded can be provided if directed to do so for an additional agreed upon fee.

1. General

- a. Occasionally it is necessary to redesign a building. Redesign may be due to changes in functional requirements, reduced funding available, a personnel change in the Client's administration, or for a variety of other reasons beyond the control of the Engineer.
- b. An unreasonable prolongation of the contract time.
- c. Value analysis
- d. Cost estimates will be provided by the Architect's cost estimator.
- e. Revisions to work once design is approved and working documents are in production, unreasonable prolongation of the contract time, or for reasons over which **AEI** has no control.
- f. Preparing for, coordinating with, participating in, and responding to structured independent review processes, including but not limited to: construction management, cost estimating, project peer review, value engineering and constructability review; and performing or furnishing services required to review studies, reports, drawings, specifications, or other bidding documents as a result of such review processes.
- g. Preparation of designs not included in the bid set of documents and as built drawings.
- h. Providing assistance in resolving any Hazardous Environmental Condition in compliance with current Laws and Regulations.
- i. Preparing to serve or serving as a consultant or witness for owner in any litigation, arbitration or other dispute resolution process related to the Project.

2. Tasks related to outside agencies:

- a. Preparation of applications and supporting documents for private or governmental grants, loans or advances in connection with the project.
- b. Preparation or review of environmental assessments, permits, or impact statements; review and evaluation of the effects on the design requirements for the project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the project.
- c. Attendance at planning board meetings, presentations to officials or governing authorities, or other special meetings.
- d. U.S. Green Building Council **LEED™** Project Certification Process or Rebate Programs
- e. Lead the liaison work and prepare application submittals to local, state, and federal agencies.

- f. Interfacing with local and state authorities, Department of Environmental Protection or other, after completion of the design phase is not included.
3. Related building design tasks:
- a. Civil engineering
 - b. Design of utility services (i.e. water, gas, sanitary and storm sewers) within 5 ft. – 0 in. of the building foundation is included. Utility design work beyond this point will be by the civil engineer.
 - c. We assume adequate city water and water pressure is available. The design of water pressure boosting systems is not anticipated.
 - d. Asbestos, lead, radon, hazardous material, or other environmental surveys/assessment/abatement plans.
 - e. Design of attic ventilation (roof and eave vents) by Architect.
 - f. Site retaining walls.
 - g. Arc Flash Hazard Analysis or Lightning Protection systems
 - h. Security evaluation and planning, security systems design.
 - i. Head end/systems for voice, data, and intercom
 - j. Additional services for environmentally responsible design: Alternative energy systems including but not limited to: solar thermal, rainwater or gray water systems, composting toilets, solar photovoltaics, geothermal, biomass, wind energy, etc. Geothermal well design to be a separate sub-consultant. If this system type is pursued a consultant will need to be hired to design the bore hole well field.
 - k. Division 1 specification to be prepared by Architect.
4. Bidding Phase
- a. Assist Owner in advertising for and obtaining bids or negotiating proposals for Work. Maintain a record of prospective bidders to whom Contract Documents have been issued. Receive and process Bidders deposits or charges for the distribution of Contract Documents.
 - b. Attend CM subcontractor selection meetings.
5. Construction Phase:
- a. Construction phase services that include on-site project field representative services and/or visits to the project in addition to those included in Basic Services.
 - b. Redesign or inspection work required due to damage by fire or other causes during the term of the contract.
 - c. Performance of expediting or scheduling services during construction.
 - d. Addressing defective work of the contractor that **AEI** could not have reasonably observed. Evaluating an unreasonable claim or an excessive number of claims submitted by Contractor or others in connection with the Work
 - e. Assistance in connection with Bid protests, re-bidding, or renegotiating contracts for construction, materials, equipment, or services.
 - f. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
 - g. If **AEI** is delayed at any time in the progress of the services by any reason beyond the **AEI**'s control, including any act or omission of the Owner, by any act or omission of a Contractor, or by adverse weather or other conditions not reasonably anticipated, the time for completion of the Services shall be extended for a time equal to the time of such delay and an equitable adjustment in **AEI**'s fee shall be made as may be reasonable under the circumstances.
 - h. Time spent reviewing and administering owner-initiated change orders (additional scope).

6. Project Closeout:

- a. Preparation of operating instructions.
- b. Preparation of record drawings. (CAD input of Contractor's certified "As-Built" information to the original project files. **AEI** cannot verify or certify "as-built" conditions.

IV. CLIENT OR OWNER-FURNISHED SERVICES:

1. Overall project coordination with the Owner and Sub-consultants.
2. Printing and reproduction of all documents required by the Owner for progress submissions, review meetings, bid documents, etc. **AEI** provide PDF's for these submissions.
3. All necessary topographical site surveys showing utilities, invert elevations, structure, trees, roads, walks, etc. Test boring data indicating rock and water, if present.
4. Geotechnical engineering.
5. Liaison work and application submittals to all local, state, and federal agencies.
6. Owner part-time staff engineer to assist in overall coordination.

V. FEES:

AEI proposes to provide the above services for a Base Fixed Fee as follows:

Preliminary Design Development (25% Design):	\$28,655.00
Construction Documents:	\$105,600.00
Bidding:	\$8,170.00
Construction Administration:	\$31,880.00
Base Commissioning:	\$23,200.00
Enhanced Commissioning:	\$10,295.00
Solar PV Commissioning:	<u>\$2,320.00</u>
Subtotal:	\$199,825.00
Allowance for Reimbursibles:	\$2,000.00

The fee above is based on the following:

1. Reimbursable costs are outlined in the attached Standard Rate Schedule.
2. Invoices will be sent monthly.
3. Payments are due and payable thirty (30) days from the date of **AEI's** invoice. **AEI** reserves the right to stop working on the project if payments are not received within 45 days from the date of invoice.
4. Timely review of submitted information.
5. A change in the scope of services will require an adjustment of fees.

VI. TERMS AND CONDITIONS:

Sebago Technics will formulate an EJCDC based contract based upon their contract with The City of South Portland.

VII. PROJECT SCHEDULE:

We will mobilize to work on this project upon your written authorization to proceed.

Thank you again for this opportunity to present this proposal for your consideration. **AEI** is excited about the possibility of working with you on this project. Should you have questions about our proposal, please feel free to call me. If you would like to proceed, please sign the following Work Authorization and forward a copy to our office.

Regards,
Allied Engineering, Inc.

Anthony Davis, P.E.
Principal

Enclosures: Work Authorization Statement
 Rate Schedule

WORK AUTHORIZATION STATEMENT:

Please sign and return a copy to **Allied Engineering, Inc.** for our files

Date: Revised 02-14-19

Client: Owens McCullough, P.E., LEED-AP
Vice President, Engineering
Sebago Technics

Project: **CASH CORNER FIRE STATION**

Contract Terms: Work summary and fee structure as per attached proposal.
Terms and Conditions shall be as described in the attached Allied Engineering, Inc. Standard Terms and Conditions.

Attachments: Rate Schedule
Standard Terms and Conditions

Billing Procedures:

Name of billing contact: _____

Email address of contact: _____

Do you have any special billing requirements? _____

Payment is due within 30 days of billing unless otherwise agreed upon in writing. We intend to bill monthly, what is your accounts payable schedule (indicate day of month)? _____

APPROVED AND ACCEPTED BY:

By: _____
Client Authorized Signature Date

02-14-19

AEI Authorized Signature Date

STANDARD RATE SCHEDULE

PERSONNEL AND EQUIPMENT

Principal	\$ 185.00/Hour
Associate/Senior Engineer	\$ 160.00/Hour
Commissioning/Construction Administrator	\$ 135.00/Hour
Technology Specialist	\$ 130.00/Hour
Engineer	\$ 135.00/Hour
Construction Administrator	\$ 115.00/Hour
Senior Designer	\$ 115.00/Hour
Designer	\$ 105.00/Hour
Technical	\$ 95.00/Hour
Clerical	\$ 50.00/Hour

* Overtime at 1.5 x billing rate over 8 hours in a day.

REIMBURSABLES

Laboratory Testing:	Cost Plus 15%
Printing:	
8-1/2" x 11" copies	\$.08/Page
Outsourced	Cost Plus 15%
Postage:	Cost Plus 15%
Travel:	
Mileage	\$.55/Mile
Lodging	Actual Cost
Food	Actual Cost
Photographs:	\$ 1.00/Each
Photography Reproductions - Not In-house:	Cost Plus 15%
Geotechnical Work and Borings:	Cost Plus 15%
Advertising:	Cost Plus 15%
Colored Renderings:	Cost Plus 15%
Rental Equipment:	Cost Plus 15%
Subcontractors:	Cost Plus 15%

Owens McCullough

From: Bruce Sanford <conestco@fairpoint.net>
Sent: Tuesday, January 15, 2019 9:57 AM
To: Owens McCullough
Subject: RE: Upcoming Project - Cash Corner Fire Station

Hi Owens –

Just another year in the saddle over here . same for you, I imagine ..

Building looks to be about a 10,000 sf footprint + 2nd floor .. not a huge project ..

If you allow 32 hours for each cost effort, that is plenty .. would not surprise if it comes in less than that, but this would cover some phone conference calls and minor VE work if needed .. 24 hours for the actual building+ a day for the whatevers ..

$32 \times \$85 = \$2,720$ not to exceed per cost effort .. I'll only bill for what I actually eat up in hours, so this is a not to exceed total of \$5,440 .. if we don't need a lot of talkie time and there is no VE work, expect it would hug closer to 24 hours each = \$2,040 or \$4,080 total .. we'll see ..

This assumes that Grant Hays has a skeletal spec or narrative and that structural and MEP skeletal specs or narratives are available at 30% .. I can mock up a design-build performance based outline spec based on what I see in the drawings, but that would be extra time, probably 4 to 6 hours added .. some architects actually use my outline spec as a template for early submittals to the State, wish I had found that out years ago and charged royalties or something)<:

CONESTCO

BRUCE SANFORD
Principal

222 Mountain Road
Raymond ME 04071

207.627.4099 phone
207.627.4099 fax

conestco@fairpoint.net
<https://conestco.com/>

From: Owens McCullough [mailto:omccullough@sebagotechnics.com]
Sent: Sunday, January 13, 2019 7:23 PM
To: conestco@fairpoint.net
Subject: Upcoming Project - Cash Corner Fire Station

Hi Bruce,

Hope all is well and you have some time to estimate a project for me. I working for the City of South Portland on a new fire station. The project team includes Sebago as the lead, Grant-Hays as the Architect and Allied Engineering providing the structural, MEP and HVAC. I have attached the schematic plans.

All I need for now, is a budget from you to estimate the project at 30% design and then update at 90% design. I am expecting I would have a 30% design (floor plans, elevations, outline specifications and mechanical narratives) sometime in early to mid March and would need the estimate by mid April.

Don't worry about site costs as Sebago will take care of that. Just need foundation, building and related systems costing. If you could send me an e-mail or letter with you budget estimate, I will include with my final scope to the City. End of the week would be great, if possible.

Looking forward to working with you.

Thanks, Owens

Owens A. McCullough, P.E., LEED A.P.
Sebago Technics, Inc.

Owens McCullough

From: Tim Boyce <TBoyce@SWCole.com>
Sent: Wednesday, September 26, 2018 10:31 AM
To: Owens McCullough
Cc: Evan Walker
Subject: RE: Cash Corner Fire Station Reconstruction - S.W.COLE Geotechnical Services

Owens,

Based on info provided, recommend following scope and fee for geotechnical design phase services:

- Explorations & Geotechnical Report: For up to 3 days of test borings and a geotechnical report with foundation, earthwork and pavement recommendations, our fee will be \$17k lump sum including drill rig. Add 30% if winter conditions.
- Evaluation of Existing Foundations (Optional): If there is desire to re-use the prior foundations/piles, recommend an additional \$5k fee for test pits to expose pile caps and piles around perimeter. Add 30% if winter conditions.
- Meetings and Construction Document Review: Recommend budget of \$3k to attend meetings and perform geotechnical review of construction docs.

If this meets approval, we will prepare a formal Agreement on notice to proceed.

Best, Tim

Tim Boyce, P.E. | Vice President & Senior Geotechnical Engineer

S. W. Cole Engineering Inc.

286 Portland Road

Gray, Maine 04039

Phone: 207.657.2866 | Direct: 207.517.4869

www.swcole.com

Notice: Email subject to important restrictions at <http://www.swcole.com/disclaimer>

 Please consider the environment before printing this email.

From: Owens McCullough [mailto:omccullough@sebagotechnics.com]

Sent: Sunday, September 16, 2018 7:56 PM

To: Tim Boyce <TBoyce@SWCole.com>

Subject: Cash Corner Fire Station Reconstruction

Hi Tim,

We are pricing a fire station replacement project for the City of South Portland at the Existing Cash Corner Fire Station. The station will be demolished and rebuilt in the same general location. I have attached the original plans from

the 70's that show some boring information. I believe the building is pile supported. I will need a proposal from you to conduct a geotechnical investigation and provide us with foundation recommendations. The project team will be Sebago Technics, Mike Hayes and Allied Engineering.

Need the scope and budget the week of the 24th.

Thanks, O-

Owens McCullough, P.E., LEED-AP *SVP Strategy & Client Development*

Office: 207.200.2100 | Direct: 207.200.2073

75 John Roberts Rd., Suite 4A, South Portland, ME 04106

omccullough@sebagotechnics.com | www.sebagotechnics.com

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PUBLIC SAFETY

Fire Department

Study and Rehab of Façade Central Fire

Background: The Central Fire Station was constructed in the early 1950's and is showing signs of age and the need for rehabilitation. Some concerns include:

1. The inside of the building has only passive ventilation and there are signs of moisture and potentially mold accumulation.
2. The exterior of the facility (concrete façade near entrance) is spalling and becoming a fall hazard to people that might use the entrance or walk under the entrance.
3. The entire building systems are antiquated and inefficient.
4. Building hazardous materials to included PCB's in window glazing and asbestos containing materials requiring a full hazardous building materials investigation.
5. No sprinkler system.
6. Probably non-compliant code considerations (egress, life safety, electrical, ventilation, others).
7. The existing boiler is at or past its serviceable life and needs replacement.
8. Interior finishes and space are aged and in need of modernization.
9. Ventilation is limited to operable windows and should be improved for better climate control.

Given the age of the building, consideration for modernization to improve the life cycle of the building is needed to maintain healthy, safe and functional facility. Staff is recommending two action items:

- 1. Failing Concrete Façade:** Address the failing concrete façade. This process has been initiated; however, the solutions are likely to be expensive due to the advanced deterioration of the façade. Staff is currently working with a building envelope specialist to identify repair and restoration alternatives. Since the investigation work is continuing a definitive cost for the repairs cannot be determined at this time. A budget of \$125,000 is recommended which will be refined based upon the outcome of the assessment.



2. Building Evaluation, Assessment and Short/Long-Term Planning:

Conduct a full building assessment including mechanical systems, ventilation, heating, electrical, code compliance, structural, roofing, space utilization, current and future needs, hazardous materials investigation followed by a report of finding, recommendations and anticipated costs. A budget of \$60,000 is recommended. At the same time, the City will review the general condition of the Pleasantdale, Thornton Heights and Willard Square call stations. This will allow the City to evaluate short- and long-term capital investment requirements for the facility.



We are anticipating significant issues being uncovered during the assessment and to ensure we have the funds to address some of these additional obstacles we are including additional monies for this project.

Project Cost: \$500,000
Funding Source: General Obligation Bonds
Source of Cost Estimate: Sebago Technics
Projected Useful Life: 50 + Years

PUBLIC SAFETY

Police Department

New HVAC Controls System

This capital improvement request is for a new HVAC controls system for the police department. In 2018, the Council authorized a transfer of 2017 CIP money originally designated for HVAC control replacement to fund the Planning Study for HVAC and Systems/Controls Improvements and a Hazardous Building Materials Study as proposed by Sebago Technics.

The recommendation from Sebago Technics based on this study is to add a central direct digital control building automation system (BAS) to monitor and control the mechanical systems throughout the PD, and this request would fund an electronic direct digital control system that can monitor and control all of the components of the HVAC mechanical systems in the PD's 1967 building as well as the 1997 building. This upgrade will improve operational efficiency as well as occupant comfort throughout the building.

Project Cost:	\$80,000
Funding Source:	General Obligation Bonds
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	Ten to fifteen years

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PUBLIC SAFETY

Police Department

Roof Maintenance (1967 Section, 1997 Section and Garage)

This capital improvement request is for roof maintenance on the 1967 PD building, the 1997 PD building, and the PD garage. According to a comprehensive study done by Sebago Technics, the existing roofing membranes on all three buildings appear to be in decent condition, and the lifespan of the existing roofing could be extended by 10-15 years if repairs are performed. The repairs would consist of identifying any areas of existing insulation that have been compromised by moisture infiltration, replacing the compromised insulation, stripping the roofing seams, and replacing the roofing seams and roof patches.

Project Cost:	\$45,000
Funding Source:	General Obligation Bonds
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	Ten to fifteen years

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PUBLIC SAFETY

Police Department

Boiler Conversion to Gas and Boiler Combustion Ventilation

This capital improvement request is to convert the existing oil fired boiler to gas fired and to replace the existing non-code compliant boiler combustion air system with a new fan powered combustion air supply system. This will slightly improve the operational efficiency, reduce maintenance costs, and provide options to maximize short term and long-term investments to meet future building needs. This request is based on recommendations from the Planning Study for HVAC and Systems / Controls Improvements and a Hazardous Building Materials Study conducted by Sebago Technics.

Project Cost:	\$45,000
Funding Source:	General Obligation Bonds
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	Ten to fifteen years

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PUBLIC SAFETY

Police Department

VRF Heat Pumps

This capital improvement request is for the purchase of a Variable Refrigerant Flow (VRF) heat pump system to serve the offices and functional spaces throughout the upper and lower levels of the PD. This system will provide first stage heating in the winter, supplemented by the existing fin tube radiation, and will provide zoned cooling in the summer for occupied spaces. Each occupied room would have its own heat pump for optimum occupant comfort control. This item represents an improvement to indoor air quality and offers great efficiency improvement over the current high temperature boiler and window mounted air conditioning units. This request is based on recommendations from the Planning Study for HVAC and Systems / Controls Improvements and a Hazardous Building Materials Study conducted by Sebago Technics.

Project Cost:	\$130,000
Funding Source:	General Obligation Bonds
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	Ten to fifteen years

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PUBLIC SAFETY

Police Department

Regional Crime Lab

On October 2, 2006 the City Council passed RESOLVE #2-06/07 joining the Metro Regional Coalition. This group, formed in April of 2006, consists of officials from several municipalities with the mission to study ways in which various municipal departments could be combined regionally as a cost savings measure, as well as provide improved services to the public.

One aspect of this undertaking was to research the creation of a regional crime lab. Since inception, member law enforcement agencies have worked collaboratively on this effort. Currently, Portland, Scarborough, Westbrook, Falmouth, Cape Elizabeth, Yarmouth, South Portland and Cumberland County share in this endeavor.

Each of the joining municipalities 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 2019 Capital Improvement Plan request is for \$11,779 to fund the facilities bond and lab supplies as the equipment bond is completed.

Project Cost: \$11,779
Funding Source: Fund Balance
Source of Cost Estimate: Inter-local Agreement
Projected Useful Life: 20 years





CITY OF SOUTH PORTLAND

MAXINE R. BEECHER
Mayor

THADDEUS J. JANKOWSKI, JR.
City Manager

SUSAN M. MOONEY
City Clerk

MARY KAHL
Corporation Counsel

IN CITY COUNCIL

RESOLVE #2-06/07

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SOUTH PORTLAND, MAINE, THAT

District One
CLAUDE V. MORGAN

District Two
KATHERINE H. LORING

District Three
ROSEMARIE DE ANGELIS

District Four
MAXINE R. BEECHER

District Five
JAMES HUGHES

At Large
LINDA R. BOUDREAU

At Large
RALPH C. BAXTER SR.

WHEREAS, Maine citizens and taxpayers expect quality municipal services from their towns and cities; and

WHEREAS, the cost of providing basic municipal services continues to increase as the overall cost of living increases; and

WHEREAS, the local property taxes are the predominant funding source for these basic municipal services; and

WHEREAS, Maine citizens and taxpayers expect their elected representatives and officials to diligently explore the potential benefits, cost savings and efficiencies to be gained through collaborative relationships within and among municipalities and other units of government; and

WHEREAS, the communities of the Greater Portland region have a long history of collaborating in the provision of municipal services, including collaboration on solid waste management and recycling, transportation planning and funding, public bus service, municipal water service, cooperative purchasing alliances, as well as other examples shown on Attachment A; and

WHEREAS, representatives from the elected leadership and staff of the Cities of Portland, South Portland, and Westbrook together with the Towns of Cape Elizabeth, Falmouth, and Scarborough have been meeting regularly on an informal basis since March 2006 for the purpose of expanding opportunities to collaborate in the provision of municipal services, including the identification of areas of common interest and the evaluation of new collaborative initiatives; and

NOW, THEREFORE, BE IT RESOLVED, as follows:

1. That the above-referenced municipalities, working with staff of the Greater Portland Council of Governments and with the participation of the County of Cumberland, will meet on a regular basis as the Metro Regional Coalition for the purpose of finding, exploring, and implementing opportunities for regional cooperation in the provision of municipal services and infrastructure; and
2. That each participating municipality will designate as representatives to the Coalition one elected official and one representative of their city or town managers; and
3. That the representatives designated to the Coalition will select a rotating chair for a one year period who is responsible for calling and running meetings of the Coalition; and
4. That the representatives to the Coalition, from time to time, may designate subcommittees of the Coalition for the purpose of addressing specific issues of regional cooperation.

AND BE IT FURTHER RESOLVED, that the Metro Regional Coalition shall adopt the following *guiding principles*:

1. Each participating municipality shall individually determine the extent to which it chooses to participate in the deliberations and initiatives of the Coalition; and
2. Participation in any projects, studies or initiatives developed through the Coalition will be voluntary by the municipal and County participants and other non-member municipalities and government organizations; and
3. Regional or collaborative efforts among any members of the Coalition should be pursued only if they either lower costs and/or improve services for the participating members; and
4. Successful regional or collaborative initiatives among members of the Coalition must offer a mutual benefit to all the participants; and
5. Members of the Coalition recognize there is value in maintaining local community or neighborhood connections or identities; and
6. Members of the Coalition recognize by participating through a collaborative or regional process, each member can benefit through the sharing of information to achieve "best practices" developed in one or more of the communities; and
7. Membership in the Metro Regional Coalition is not limited to existing participating members but may be broadened to include other communities upon mutual agreement of member and prospective member municipalities or government organizations.

Fiscal note: Less than \$1,000

Dated: October 2, 2006

ATTACHMENT A

Examples of Municipal Collaboration within the Greater Portland Region

- Regional Disaster Aid Agreement for Cumberland County
- Public Safety Mutual Aid Agreements
- Maine Regional Financial Services Group-procurement of common accounting software
- PACTS Regional Transportation Plan
- GPCOG Cooperative Purchasing Program
- Cumberland County Community Development Block Grant Entitlement Initiative
- Reorganization of Regional Waste Systems as Eco Maine and increased community recycling participation
- Formation of sub-regional corridor coalitions to facilitate municipal collaboration and planning
- South Portland–Westbrook sharing of Assessor staff
- Public Works Directors equipment sharing program
- Falmouth-Portland coordination agreement of “Silver Bullet” recycling containers
- Regional Aerial Mapping and Data Imagery
- Casco Bay Inter-local Stormwater Working Group involving 14 municipalities to facilitate the cost effective planning and management of unfunded, federal stormwater management requirements.
- Scarborough-Saco sharing of staff recycling coordinator
- Regional household hazardous waste collection programs

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Public Safety

Police Department

Tactical Body Armor

This capital improvement request is for the purchase of tactical body armor for the police department. This equipment is a necessary safety item issued tactical officers every five years or sooner if the item shows signs of wear. Five years is the manufacturer's accepted replacement time period. We need to replace ten sets of the tactical body armor this year at a cost of \$3,300 each, totaling \$33,000.



Projected Cost:	\$33,000
Funding Source:	\$16,500 – Public Safety Equipment Reserve \$16,500 – Homeland Security Grant
Source of Cost Estimate:	Atlantic Tactical
Projected Useful Life:	5 years

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Public Safety

Police Department

Dual Band Mobile Radios

This capital improvement request is for the purchase of dual band mobile radios for the police department. The new equipment will integrate all of our radio communications into one mobile unit which is what our portable radios are now capable of doing. They will replace separate Kenwood VHF radios that are fifteen years old and at the end of their useful life and Motorola 800 MHz radios which are nine years old and could be reassigned to other vehicles not needing dual band capability. This transition to dual band radios will involve a total of twenty-two (22) command, supervisor and patrol vehicles.

Project Cost:	\$150,000
Funding Source:	\$75,000 – Police Communications Reserve Account \$75,000 – Fund Balance
Source of Cost Estimate:	Motorola
Projected Useful Life:	Ten to fifteen years



CUSTOMER:

Todd Bernard
 South Portland Maine Police Dept.
 30 Anthoine St
 South Portland, ME 04106
(207)874-8575

DATE: 3.6.2019

APX8500 Dual Band						
DESCRIPTION	MODEL	QTY.	LIST	DCST	D. EXT.	D.TOTAL
APX8500 ALL BAND MP MOBILE	M37TSS9PW1 N	1	\$4,770.00	27%	\$ 3,482.10	\$ 3,482.10
ENH: ASTRO DIGITAL CAI OP APX	G806	1	\$515.00	27%	\$ 375.95	\$ 375.95
ENH: SMARTZONE OPERATION APX	G51	1	\$1,500.00	27%	\$ 1,095.00	\$ 1,095.00
ENH: P25 TRUNKING SOFTWARE APX	G361	1	\$300.00	27%	\$ 219.00	\$ 219.00
ADD: O5 CONTROL HEAD	G442	1	\$432.00	27%	\$ 315.36	\$ 315.36
ADD: APX CONTROL HEAD SOFTWARE	G444	1	\$0.00	0%	\$ -	\$ -
ADD: REMOTE MOUNT MID POWER	G67	1	\$297.00	27%	\$ 216.81	\$ 216.81
MULTIPLEXER QMA	H1919	1	\$250.00	27%	\$ 182.50	\$ 182.50
ADD: ANT 3DB ELEVATED FEED 762-870	G175	1	\$75.00	27%	\$ 54.75	\$ 54.75
ADD: 3BD ANT 136-174MHZ	G301	1	\$58.50	27%	\$ 42.71	\$ 42.71
ADD: GPS/GNSS MAG MOUNT ANTENNA	GA01305	1	\$60.00	27%	\$ 43.80	\$ 43.80
ENH: HAND MIC,GCAI WATER RESISTANT	G892	1	\$72.00	27%	\$ 52.56	\$ 52.56
ADD: SPKR 15W WATER RESISTANT	G831	1	\$60.00	27%	\$ 43.80	\$ 43.80
ADD: 3Y ESSENTIAL SERVICE	G78	1	\$168.00	0%	\$ 168.00	\$ 168.00
ADD: MULTIPLE KEY ENCRYPTION OPERATION	W969	1	\$330.00	27%	\$ 240.90	\$ 240.90
ADD: AES/DES-XL/DES-OFB ENCRYPTION	G851	1	\$799.00	27%	\$ 583.27	\$ 583.27
ENH: OVER THE AIR PROVISIONING	G996	1	\$100.00	27%	\$ 73.00	\$ 73.00
DEL: DELETE UHF BAND	GA05509	1	(\$800.00)	0%	\$ (800.00)	\$ (800.00)
ADD: RADIO MANAGEMENT LICENSES ONLINE	UA00049AA	1	\$100.00	27%	\$ 73.00	\$ 73.00
					TOTAL	\$ 6,462.51

ORDERING:

PLEASE CONTACT
 Scott Cruikshank (978)270-5505
scott.cruikshank@motorolasolutions.com

DELIVERY:

15-30 DAYS

TERMS:

NET 45 FROM INVOICE AS SHIPPED
NASPO VALUE POINT Discounts Applied
 Terms and condition are per the NVP contract

Public Works and Transportation
Bus Service

Transit Bus Reserve

Due to the length of time to procure and receive delivery of replacement transit buses under the replacement schedule of the Federal Transit Administration, an increasing amounts of City funds have been dedicated to vehicle maintenance costs including parts and tooling. The Bus Reserve funding has been used to extend the life of all buses currently in the fleet until they are replaced.

Also, Bus Reserve funding has been used to acquire ancillary equipment used to service buses and augment bus service such as maintaining bicycle racks, radio equipment, and signage.

In summary, this FY20 request is based on the need to continue bus repairs and maintenance to extend the useful life of buses and the acquisition of ancillary maintenance equipment.

Project Cost:	\$50,000
Funding Source:	General Fund
Source of Cost Estimate:	Analysis and experience during FY 2018/2019 budget process
Projected Useful Life:	12 years

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Bus Service
Transportation Department

Replacement 2-Way Radios

The current radio system was transferred to the Municipal Services Facility from 46 O’Neil Street. Unfortunately, the re-installed antenna’s location is not adequate for serving the entire Bus Service area. We cannot talk to buses at the Mall or downtown Portland with any reliability. We need to have reliable communication between the dispatch office, mechanic’s office and the buses at all times to handle routine schedule adjustments, repair advisories, and medical and criminal incidents. Our current radio repair vendor studied the situation and concluded there was no other solution other than using the proposed 800 system used by the Police and Fire Departments.

Project Cost:	\$42,812.10
Funding Source:	\$16,000 from FTA Section 5307 Grant; \$26,812.10 from previous CIP balances
Source of Cost Estimate:	Competitive Bid
Projected Useful Life:	10 years

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Public Works and Transportation Planning & Development

Pedestrian Warning Flashers

This request is for the purchase and installation of three pedestrian flashers. The City has installed a number of these Rectangular Rapid Flashing Beacons (RRFBs) in recent years, and we have found that they generally are working as intended. As streets become busier, it is important to protect those who walk and bike around our community. Far too often, in Maine, we hear news reports of pedestrians being hit as they try to cross the road.

These pedestrian flashers will be placed in areas of high traffic volume and key crossing areas for pedestrians. The units are solar powered, which saves in energy costs. The projected locations include:

- Broadway at Stanford (Boys & Girls Club) per the WSP 2018 Smart Corridor report and recommended alternatives.
- Highland Avenue for CMP Trail crossing to Hinckley Park.
- Broadway at Walnut Street per the Sebago Technics evaluation of 11-19-18.



The total cost of the project is \$45,000. Occasionally the Maine Department of Transportation will announce the availability of RRFBs to municipalities at reduced cost. If this happens again the

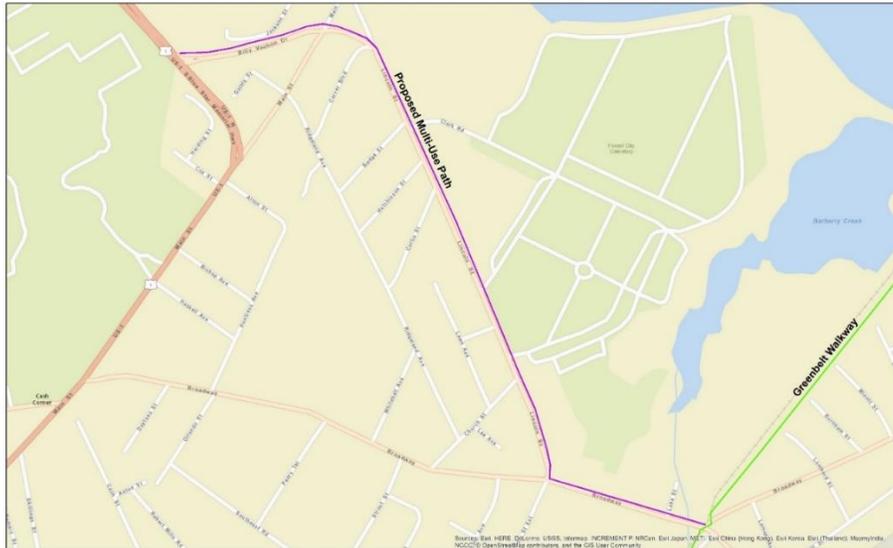
City will either save the CIP funds for another use in the future or will install additional RRFBs at other needed road crossings.

Project Cost:	\$45,000
Funding Source:	Fund Balance
Source of Cost Estimate:	Planning Director
Projected Useful Life:	20 Years

Public Works and Transportation Planning and Development

Vachon, Lincoln, Broadway Multi-Use Path

This project includes the creation of a bicycle and pedestrian multi-use path along Billy Vachon Drive, Lincoln Street, and Broadway as well as reconstructing sections of Lincoln Street to repair areas that have been damaged by improper drainage. It will improve the City's bicycle and pedestrian system by connecting the multi-use path at the Veterans' Memorial Bridge with the Greenbelt Walkway/East Coast Greenway. (See map below.)



The City Council granted approval to submit an application to PACTS for this project on June 16, 2014, through Resolve #26-13/14. On August 21, 2018 the Council adopted Order #39-18/19 authorizing the City Manager to sign a three-party agreement with PACTS and MDOT for the project that included an estimated net local share of \$273,240—the amount of this request. (The City Council already allocated \$68,310 as a local share of the engineering work for the project in the FY18 CIP.)

Project Cost:	\$1,024,650
Funding Source:	\$250,000 Amended Hannaford TIF \$751,410 Grant \$23,240 General Fund Reserve
Source of Cost Estimate:	MDOT
Projected Useful Life:	25 Years

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Public Works and Transportation Planning and Development

High Speed Internet Expansion in Knightville

The proposed project is to extend fiber optic cable throughout South Portland's Knightville neighborhood in order to provide a high-speed, high-bandwidth internet service option for residents and businesses. The project implementer would be GWI, one of Maine's longest standing internet service providers.

Fiber optic cable is the fastest type of internet technology but is unavailable in most parts of the country. GWI, which is based in Biddeford, used a partnership between private businesses and public institutions in 2009 to create the Three Ring Binder, a 10 gigabit open-access fiber optic network serving western, eastern, and northern Maine. More recently, GWI, working with the City of South Portland, has installed 9.75 miles of open-access dark fiber "offering a mixed-use network with symmetric gigabit offerings." This network was laid out to serve municipal buildings and schools across the City. Over time GWI will expand the network depending on demand.



A portion of the network is depicted above. However, as the graphic shows, the current network includes “E” Street but does not extend further into Knightville. The proposed project would extend GWI’s fiber optic cable down Ocean Street and Waterman Drive and along the “letter streets” to provide fiber-based internet service throughout Knightville.

This project is needed to help revitalize South Portland’s traditional village downtown. As established in the City’s last three Comprehensive Plans, it has been the City’s long-standing policy to help Knightville recover from the impacts of the Maine Mall, remove excessive traffic by rerouting the bridge from Portland around the peninsula, and realize its potential as a mixed-use, waterfront center. The proposed high-speed internet project will aid in this revitalization by providing benefits to both residents and businesses.

Residents will have the means to fully access and participate in our increasingly internet-based economy. For example, the bandwidth and speed that can support video over the internet will help with medical support, shopping, and other services—many of which will be needed in assisting older residents to age in place. They also will increase telecommuting job opportunities that in particular would help low-moderate income residents by reducing their transportation costs.

Businesses in Knightville would prosper by having an option for ultra-fast internet service. Existing businesses would be able to do business more quickly and reliably and would be able to offer more options to their customers. In addition, high-tech entrepreneurs would be drawn to Knightville to set up shop in a highly livable center close to Portland with a level of internet service that they are as yet unable to get in many parts of Boston and New York. In effect, the proposed project would put Knightville on the map as a budding tech center.

The expected outcomes for residents from having the option of fiber-based high-speed internet service are increased employment and home-business opportunities, better medical support and more ability to stay in the home while aging, increased educational opportunities, and a better ability, in general, to participate in our internet-based economy. Outcomes for businesses include greater ability for local businesses to compete by having available the best possible level of internet service. In addition, new businesses, many of whom will include younger, tech-savvy personnel who will help offset South Portland’s aging population, will be attracted here because of the competitive advantage accruing from fiber optic internet service.

Knightville residents and businesses will benefit from directly the project. Indirectly, South Portland property owners as a whole will benefit from improved services offered by Knightville businesses and from the stimulus to the City budget from the redevelopment of some of Knightville's older building stock by small- and moderate-sized software development firms and other tech shops.

GWI, a well-established Maine internet service provider, has installed fiber optic cable and associated equipment in many communities in Maine, including South Portland. As Knightville is not currently an area planned by GWI for expansion of its South Portland network, this application's proposal is to provide \$50,000 in CDBG funds to leverage an additional \$47,000 from GWI to fund the approximate \$97,000 cost of extending fiber throughout Knightville.

The GWI Board of Directors committed to this project; GWI estimates it will take six months to complete the project upon funds being made available.

Project Cost:	\$97,000
Funding Source:	Grants - \$50,000 CDBG; \$47,000 GWI
Source of Cost Estimate:	GWI
Projected Useful Life:	30 years

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Public Works and Transportation

Public Works

Sidewalk Program

This is a request to authorize the commitment of \$350,000 for sidewalk maintenance and repair.

The funding would support various sidewalk construction and maintenance throughout the City. Based on the survey and condition assessment performed by Sebago Technics, this is the minimum amount required to repair the sidewalks rated in poor condition.

The estimated useful life of this project is 15-20 years.

Project Cost:	\$350,000 (NOTE: the department's initial request was for \$500,000)
Funding Source:	\$300,000 Fund Balance \$50,000 Prior years' CIP
Source of Cost Estimate:	Public Works
Projected Useful Life:	15 to 20 years

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Public Works and Transportation

Public Works

Two (2) One-Ton Trucks with Plow

The Public Works has two trucks that need replacing. These trucks are a 2001 and a 2004 with 112,000 and 100,000 miles respectively and have exceeded their life expectancy. Both are currently out of service.

Project Cost:	\$170,000
Funding Source:	\$160,000 - Local Roads Assistance funds \$10,000 – Prior Years' CIP
Source of Cost Estimate:	Rowe Ford and HP Fairfield
Projected Useful Life:	12 years

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Public Works and Transportation

Public Works

Superintendent SUV

This is a request to authorize \$40,000 to purchase an SUV/truck to be used by the Public Works Superintendent. This vehicle will replace a 2005 Chevrolet Trailblazer that has close to 150,000 miles. This vehicle will be utilized by the Public Works Superintendent in the day-to-day operations of Public Works. The duties of the Superintendent include checking on the Public Works crews, meeting with residents to discuss their concerns or requests for service, and following up on work to be performed or scheduled.

Most importantly, this vehicle needs to be a dependable four-wheel drive truck or SUV due to winter operations. The Superintendent is on the road during snowstorms and other emergencies directing operations and responding to the needs of the crew and the City.

Project Cost:	\$40,000
Funding Source:	URIP Funding (Local Roads Assistance Funding)
Source of Cost Estimate:	Several local dealers as well as previous similar purchases
Projected Useful Life:	10-12 years

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Public Works and Transportation

Public Works

Additional Air Line Drops in the Municipal Services Maintenance Garage

This request is to authorize \$15,000 to install additional airline drops in the Municipal Services Facility.

The additional air drops would include two drops in the welding and fabrication area, two drops in the vehicle storage area, and 3 drops at the entrance to the maintenance bays. The drops in the welding and fabrication area would operate air tools needed in that area. The drops in the vehicle storage area would allow operators the ability to inflate tires and use a grease gun to perform preventative maintenance on their equipment. The drops are needed in the front of the maintenance bays to allow access to air when the bays have equipment that is being repaired in the bay. These drops would also allow the ability for multiple vehicles in one bay.

Project Cost:	\$15,000
Funding Source:	General Fund Reserves
Source of Cost Estimate:	Johnson and Jordan
Projected Useful Life:	50 years

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Public Works and Transportation

Public Works

Annual Traffic Signal Improvements

Upon analyzing traffic signals' infrastructure in the City, it is anticipated a substantial investment over the next few years is needed to maintain adequate functioning. These funds are being set aside to address those needs when they arise.



Project Cost:	\$100,000
Funding Source:	\$25,000 TIF \$75,000 Fund Balance
Source of Cost Estimate:	Sebago Technics Engineers
Projected Useful Life:	20 years

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Public Works and Transportation

Public Works

Traffic Signal on Broadway at Sokokis

The request is to authorize \$180,000 to install a traffic signal on Broadway at Sokokis St. This project was brought forth due to the severity of crashes at this intersection. Crash reports from the South Portland Police Department shows crashes that have severe property damage and personal injury. The crashes have been the result of either traveling east on Broadway and turning left onto the ramp to Highway 295 or traveling West on Broadway and turning left onto Sokokis St. These left turn movements require a vehicle to cross two lanes of oncoming traffic to complete their turn.

Sebago Technics did a traffic signal warrant study for this intersection in November of 2017. The result of this study confirmed that this intersection did meet the warrants for a traffic signal. The City request that the Maine Department of Transportation (MDOT) install a traffic signal at this intersection based on the findings of the study. MDOT agrees the intersection met the warrants however it was not a priority intersection and they would not fund the installation.

The project costs include the costs of the equipment, installation, and engineering needed for a complete project

Project Cost:	\$180,000
Funding Source:	\$40,000 General Fund \$140,000 Fund Balance
Source of Cost Estimate:	Sebago Technics
Projected Useful Life:	30-50 years

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 6 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 5 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 4 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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