

Environmental Protection
Water Resource Protection
Cold Planer Attachment

This 2015 capital improvement request is for the purchase of an Asphalt Cold Planer Attachment to be installed on our existing John Deere Skid Steer. The cold planer is used to mill asphalt down on a paved trench so a new final coat of pavement can be applied. City ordinance requires all trenches be milled and repaved the following year that the excavation on the public roadway was done. This equipment will ensure our roadways are correctly rebuilt after utility work is complete and will also allow us to be in compliance with our street opening ordinance. The project cost of \$18,900 was received from Sunbelt Equipment.

Project Cost:	\$18,900
Funding Source	Sewer User Fund Surplus
Source of Cost Estimate:	Sunbelt Equipment, Inc.
Projected Useful Life:	10-15 years



SUNBELT
RENTALS

Equipment. Service. Guaranteed.

SALES QUOTE

Customer

Company City of South Portland WRP
 Contact Name Dave Thomes
 Address _____
 City South Portland State ME
 ZIP _____ Email _____
 Phone _____ Fax _____

Date 12/18/2013
 F.O.B. _____
 Terms Net 30 days
 Delivery _____

Manufacturer	Description	Quantity	Unit Price	TOTAL
Paladin	Skid Steer Cold Planer - Model HP450 12" Planer Width Includes: Wiring Harness	1		\$18,900.00
QUOTATION VALID 90 DAYS				

Sub Total

Acct. Mgr. Name: _____
 Signature: _____
 Date: _____

Discount _____
 Taxes _____
 Freight _____ **Included**

Accepted By: x _____
 Date: _____

TOTAL



PRODUCTS

- < ALL PRODUCTS
- < CATEGORIES
- COLD PLANER SERIES II
- COLD PLANER

COLD PLANER

Products > Categories > Cold Planers > Cold Planer

CALL PALADIN LIGHT CONSTRUCTION
SALES AT (800) 488-7100



[View Larger](#)

Cold Planer



- For standard flow and high flow models available for skid-steer loaders
- 12" to 40" planing widths available
- 0" to 5" planing depth
- manual depth and tilt option available on standard flow

[Description](#) [Specs](#) [Manual](#) [Video](#)

- Standard flow & high flow available
- Planetary drive delivers high torque
- T1 steel construction in high wear areas
- Depth & tilt position indicators
- Standard general purpose picks
- Optional water tank/pump available
- 1 year limited warranty

	SP300	HP400	HP450	HP600	HP750	HP1000
Hydraulic Requirements	Standard Flow	High Flow	High Flow	High Flow	High Flow	High Flow
Hydraulic Flow (GPM)	12 to 22	22 to 40				
Width (overall)	51.94"	64.94"	64.94"	64.94"	64.94"	64.94"
Height (overall)	32.15"	34.57"	34.57"	34.57"	34.57"	34.57"
Length (overall)	43.86"	50.30"	50.30"	50.30"	50.30"	50.30"
Planing Width	12"	16"	18"	24"	30"	40"
Planing Depth	0" to 5"					
Tilt	±11°	±8°	±8°	±8°	±8°	±8°
Drum Diameter	19"	22"	22"	22"	22"	22"
Carbide Picks	37	43	45	57	69	89
Weight (lbs)	1,500	2,150	2,200	2,400	2,600	3,100
Sideshift center to right	0" to 19"	-3" to 22"				
Operating Pressure (PSI)	2,500 to 3,000					

[12" Standard Flow Cold Planer Operator's and Parts Manual](#)

[16" - 40" High Flow Cold Planer Operator's and Parts Manual](#)

[16" - 40" High Flow with 3-Function Control and Selector Valve Operator's and Parts Manual](#)

HANDBOOKS

- [French Handbook - ISO](#)
- [German Handbook - ISO](#)
- [Spanish Handbook - ISO](#)
- [Russian Handbook - ISO](#)
- [Turkish Handbook - ISO 3-Function Control](#)

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Environmental Protection
Water Resource Protection
Maine Mall Road Sewer Replacement

This 2015 capital improvement item is for the funding of the replacement of an existing sewer located beside Maine Mall Road that services the businesses from the intersection of Gorham Road/Maine Mall Road north to Long Creek. The sewer was accepted by the City in the early 90's. The public system there is mostly a public 4" gravity line that drains to a bigger 8" gravity line but is interrupted by a privately owned pump station that takes in public sewer flow. There have been a number of operational and maintenance issues with the pump station and the small gravity lines. This can be corrected by replacing the small gravity line and pump station with a gravity system.

The City will be partnering with the Long Creek Watershed Management Districts construction project for Gorham Road and Maine Mall Road. The collaboration will save the City some costs by participating in the districts bigger construction project and will remove the need for going back after the bigger job is complete.

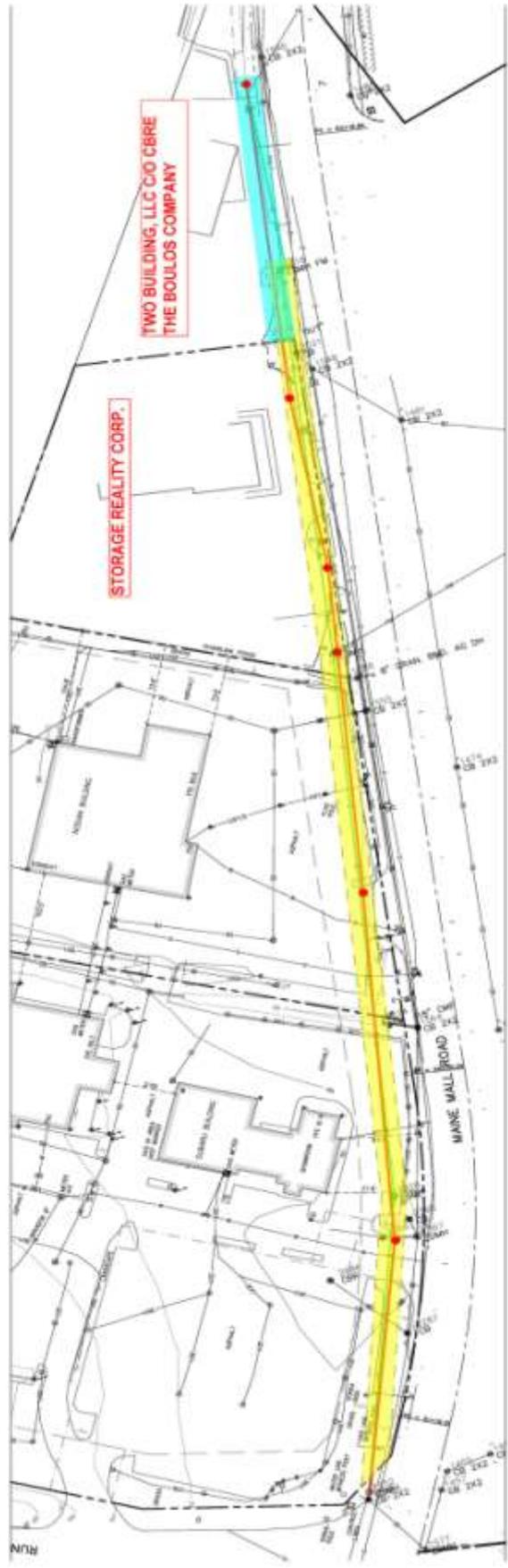
Project Cost:	\$241,340
Funding Source	Sewer User Fund Surplus
Source of Cost Estimate:	Sebago Technics Engineers
Projected Useful Life:	65 years



**LONG CREEK
WATERSHED MANAGEMENT
DISTRICT
Maine Mall Road Sewer
Preliminary Developmental Costs
STI Project No. 13373**



Sec.	No.	Units	Item	Unit Cost	Total	Notes
General						
	1	Lump Sum	Mobilization	\$ 9,930.00	\$ 9,930.00	5% of Costs
	1	Lump Sum	Bonds and Insurance	\$ 3,970.00	\$ 3,970.00	2% of Costs
	1	Lump Sum	Work Zone Traffic Control	\$ 3,970.00	\$ 3,970.00	2% of Costs
	1	Lump Sum	Temporary Soil Erosion and Water Pollution Control	\$ 2,980.00	\$ 2,980.00	1.5% of Costs
Sewer						
	6	Each	4' Diam. Sewer Manholes	\$ 3,500.00	\$ 21,000.00	
	1305	Linear Feet	8" PVC Sanitary Pipe	\$ 110.00	\$ 143,550.00	
	1	Lump Sum	Connect to Existing Manhole	\$ 1,500.00	\$ 1,500.00	
	14	Days	Bypass Pumping	\$ 1,000.00	\$ 14,000.00	
	1	Lump Sum	Removal Services by Vac Truck	\$ 3,500.00	\$ 3,500.00	
Pavement/Earthwork						
	1	Lump Sum	Incidental excavation, removal & earthwork, & restoration	\$ 15,000.00	\$ 15,000.00	
			Sub-Total		\$ 219,400.00	
			10% Contingency		\$ 21,940.00	
			Total		\$ 241,340.00	



PROPOSED SEWER

EXISTING SEWER

EXISTING EASEMENTS

PROPOSED EASEMENT



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



City of
*South
Portland*

**Water Resource
Protection**

GIS
MAPPING & ANALYSIS



Environmental Protection
Water Resource Protection
Steerable CCTV Transporter

This 2015 capital improvement request is for the purchase of a Steerable Closed Circuit Television Transporter. The Department's sewer camera is mounted on the transporter and put in the sewer and stormwater pipe lines to perform video inspection. The steerable transporter is designed to traverse silt, mud, and debris commonly found in storm and sanitary sewers. The transporter can turn 360 degrees within its own radius which allows it to negotiate around debris and most difficult entry conditions. The project cost of \$25,000 was obtained from an equipment sales company.

Project Cost:	\$25,000
Funding Source	Sewer User Fund Surplus
Source of Cost Estimate:	Bahr Sales, Inc.
Projected Useful Life:	10-12 years



1185 South Broad Street, Wallingford, CT 06492
203-265-6711ph 203-269-5323fx

July 2, 2013

David Thomes
Leo Gagnon
South Portland ME

David/Lee:

Following is our quotation to supply a steerable pipe ranger to your existing CUES components:

Steerable pipe ranger	\$20,050.00
10"-15" tire kit	\$ 1,510.00
Knobby tire 18"-60" (4)	\$ 1,510.00
Wired USB Controller	\$ 810.00
PCB Assy Buck Switcher, K2	\$ 1020.00
Delivery	\$ 100.00
Total	\$25,000.00

Upon further discussion with CUES, they have told us you can install the PCB assembly on your own. They can walk you through the install over the phone when required.

Please let us know if you need anything further.

Sincerely,
Victoria Kavanaugh
BAHR SALES, INC.

"The Standard of the Industry"



Steerable Pipe Ranger

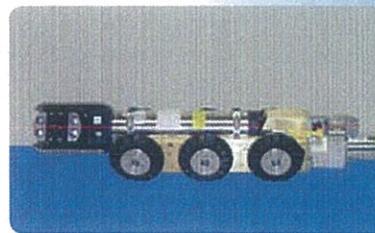
Multi and Single Conductor III Wheeled Transporters

The Steerable Pipe Ranger is a rugged and versatile low-maintenance transporter that's specially designed to traverse silt, mud and debris commonly found in storm and sanitary sewers. Three standard wheel sizes and optional manual or electric camera lifts are available to maximize performance. Optional high traction tires are available for extreme slippery conditions.

The unit is designed to operate with 2000' of single-conductor cable or 1500' of multi-conductor cable to inspect 8" relined pipe through 60" diameter pipe. Its unique two (2) speed transmission doubles the torque of the unit to produce maximum pulling power in large diameter pipe when the 10.5" diameter tires are installed. The Steerable Pipe Ranger includes full proportional steering that enables you to traverse meandering pipe and 45° and 90° turns. One joystick is used to control steering, the optional remotely controlled camera lift, and a pan and tilt zoom camera. The remote controlled camera lift precludes manhole entry during insertion and retrieval.

When assembled with a pan-and-tilt camera, the reduced length of the transporter / camera assembly can negotiate most difficult entry conditions and standard sweeps. The Steerable Pipe Ranger combined with the CUES OZ II optical zoom camera offers you one of the most compact assemblies in the industry.

Operates with multi & single conductor systems!



Features & Benefits:

- Operates with CUES multi or single conductor systems
- Can operate on all truck-mounted and portable systems
- Operates with all CUES cameras: pan-and-tilt and optical zoom
- Designed to traverse storm drains and pipe with debris and silt
- Freewheel, powered reverse, forward variable speed control
- Rugged, durable and sealed to eliminate water intrusion
- Designed to provide clearance in a 7" diameter pipe; can inspect 8" relined pipe
- All-wheel drive is enclosed and sealed; all brass and stainless steel construction
- Two-speed transmission doubles the torque and maximizes traction in larger diameter pipe or in tough conditions
- Can turn 360° within its own radius; pinpoint control maximizes the ability to traverse challenging pipe conditions
- Flight stick controller to operate the transporter, optional camera lift, and camera movements with one hand; provides operational simplicity
- Three wheel sets (3.7", 5.0", and 10.5" diameter) for small, intermediate, and large diameter pipes; optional high-traction wheels for slippery pipe
- Rear tip-up bulkhead connector minimizes strain on the cable connection during the inspection and retrieval
- Compact camera/transporter length with optical zoom pan & tilt camera (OZ II) facilitates entry into small inverts, small manholes, dead end lines, and traversal of sweeps
- Full proportional steering control to traverse meandering pipe with 45° and 90° turns; minimizes transporter turnover in small diameter pipe
- Inspection speed can be optimized to match pipe conditions and pipe size in 8" through 60" pipe

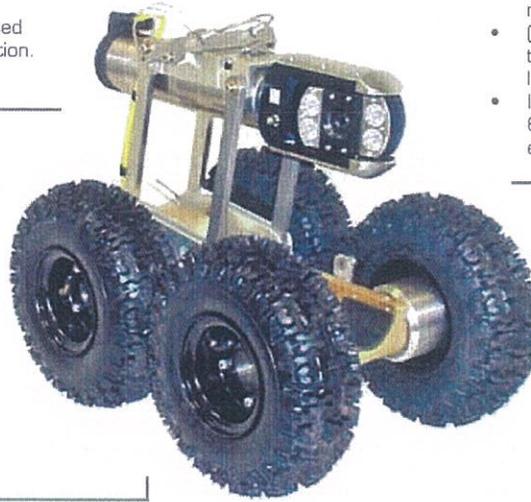


Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com

Camera Lift (optional)

- An optional manual or electric camera lift is provided for pipeline inspections ranging from 18" – 60" in diameter to prevent the need for an operator to enter the manhole during inspection and retrieval.
- Camera height varies from the collapsed position to 10.5" in the extended position.



Tires

- (6) wheels are available in various sizes to maximize traction in each pipe size
- (2) smaller diameter wheels remain affixed to the middle axle to help negotiate offsets in larger pipe configurations
- Inspections can be performed in pipes up to 60" diameter with the addition of large diameter wheels

Steerable Transporter

- Base unit includes (6) driven wheels for 8"-15" pipe; (4) driven wheels via multiple sets for 18"- 60" pipe
- Operates on 1500+ feet of multi-conductor video cable in suitable pipe conditions
- Includes a *two-speed* transmission to optimize traction by doubling the torque in difficult pipe conditions or in larger diameter pipe
- Includes full-proportional steering to traverse curved pipe, turn at 90 degree elbows within larger pipeline, turns at tees within larger pipeline, and conduct a complete 360 degree turn within its own radius
- Comes equipped with self-propelled power forward, power reverse, and free wheel capabilities
- Constructed of brass, stainless steel, and aluminum alloy
- Unit is retrieved in the free wheel mode by the video cable reel to reduce the normal wear on the drive motor by 50%
- Compatible with pan and tilt, fixed view, straight line, and optical zoom pan and tilt cameras



Joystick Camera/Transporter Controller Operations

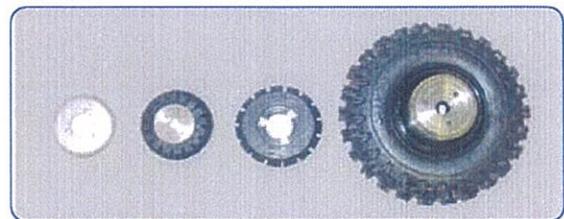
- Speed
- Direction Forward/ Reverse/Freewheel
- Steering Straight/Right/Left
- Camera Auto Center 0 degree return for horizontal / vertical axis
- Camera Rotate 360 degrees Rotate
- Camera Pan 330 degrees Optical Pan
- Camera Electric Lift Up/Down
- Transporter Cruise Control

OPTIONAL EQUIPMENT



Rear-viewing Camera

- Panel-mounted or stand-alone controller
- Manual or adjustable camera lift to optically center the camera in larger pipe
- Chevron tread or knobby tread for large diameter tires
- Rear-viewing camera to avoid obstacles when pulling back or driving in reverse (for use only with the multi-conductor version and must be used in conjunction with the manual or power lift assemblies)
- Lite Ranger (Pipe Ranger with an aluminum body) for customers that require a light-weight transporter
- High-traction tires for slippery pipe



Multiple wheel sets are available to maximize bottom-clearance, traction, and optimum camera position!

Environmental Protection
Water Resource Protection
Thornton Heights Separation Phase I Construction

This 2015 capital improvement item is for the first phase construction of the separation of the Thornton Heights area streets. This phase of the project is to be completed in this year's upcoming construction season in 2014. The work will cover the streets in the area south of Main Street which contribute to a drainage area that significantly impacts the Cash Corner CSO #005, one of the most active CSO's in the City. The streets are Union, Tremont, Wilson, Gerry, McLean, Carignan, Grandview, and Sunset (drawing attached). This CSO is significant in that all the flow from the west end of the City and all of Thornton Heights to Scarborough converges into a single pipe at Cash Corner on its way to the treatment plant. The hydraulics in this area are too much for the sewer system to contain the combined sewer/stormwater flows during wet weather events that discharge into Calvary Pond at CSO #005.

Taking out the stormwater from the Thornton Heights area would dramatically reduce the overflows occurring at Cash Corner but also affect the other major CSO's downstream. The other two CSO's downstream are Broadway/Evans CSO # 006 and Elm Street CSO # 024. These are also larger active CSO's. This project is part of the City's 12-year implementation plan outlined in the CSO Facilities Plan required by Maine DEP.

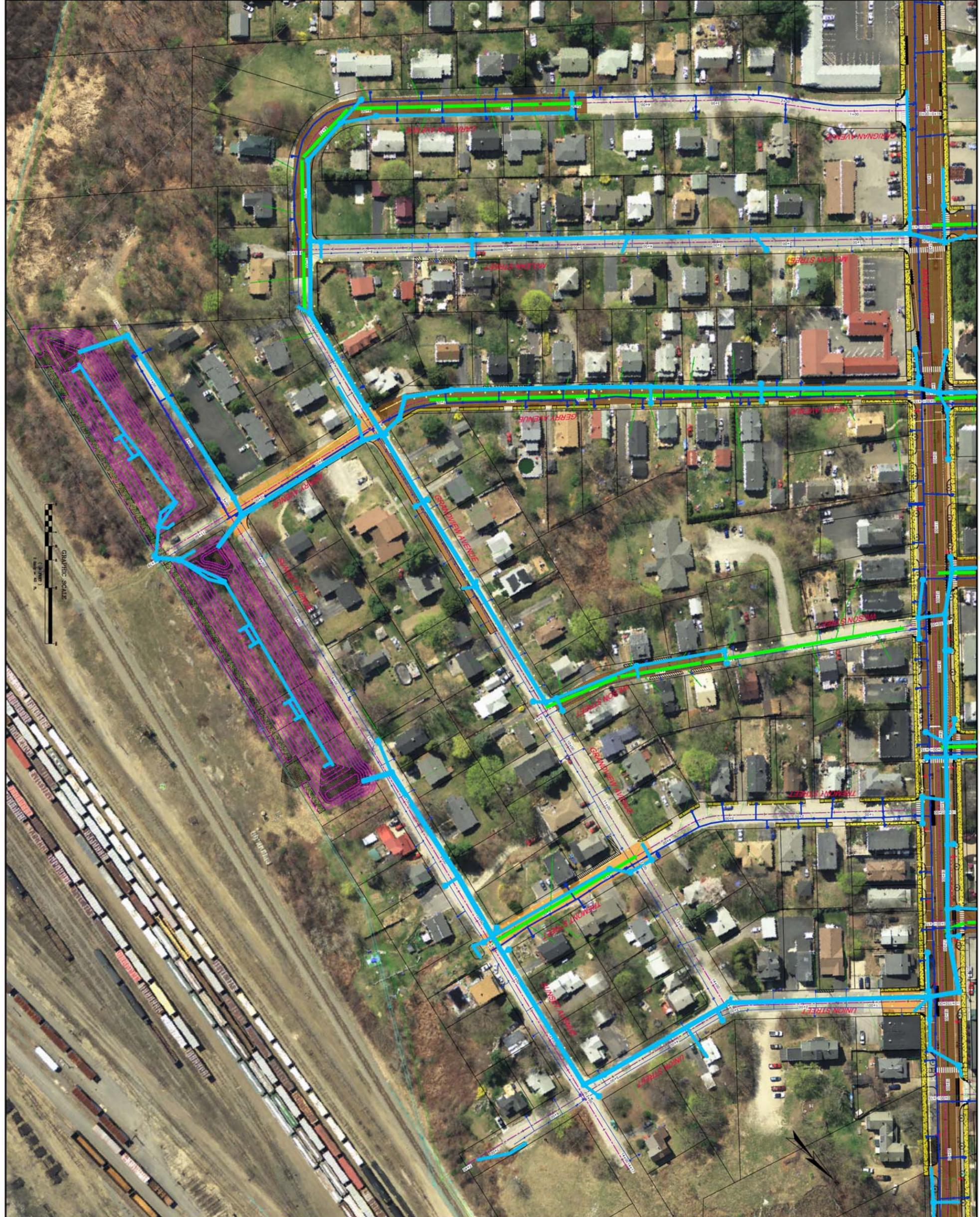
This project is the first in a four phase project that will cover Thornton Heights in three phases and Pleasantdale in the fourth phase. The attached table discusses the construction costs per phase, the costs related to stormwater, sewers, and streets, and funding strategy. This year's project does not require bonding, however do to the timing needed, it will be necessary to begin the process of bonding \$3.5 million which will require us to send to the voters a voter referendum this coming November. If the bonding is approved, it would cover the needed borrowed funds for the entire project. Sources of funding that will cover this year's Phase I construction costs include the Sewer User Fund Reserves/Fund Balance, TIF funds, and available project funds.

Project Cost:	\$2,874,577	
Funding Source:	\$136,083	TIF Funds
	\$528,494	Sewer User Fund Reserves/Fund Balance
	\$2,210,000	Prior Years' CIP Balances
Source of Cost Estimate:	Sebago Technics Engineers	
Projected Useful Life:	65 years	

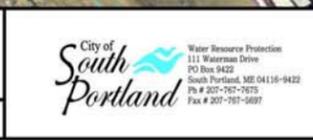
Thorton Heights Cost Summary

General Category	TH (Sunset) Phase 1	TH (Wythburn) Phase 2	TH (Main St) Phase 3	Pleasantdale Phase 4	Project Total
Stormwater Collection	\$933,145	\$1,411,482	\$753,850	\$616,460	\$3,714,937
Stormwater BMPs	\$360,500	\$383,200	In Storm collection cost		\$743,700
Sewer Collection Mains	\$332,675	\$588,000	\$0	\$288,325	\$1,209,000
Sewer Laterals (ROW)	\$0	\$0	\$0	\$0	\$0
Sewer Laterals (Private)	\$0	\$0	\$0	\$0	\$0
Curb and Sidewalk Improvements	\$114,498	\$414,680	\$711,808	\$122,470	\$1,363,456
Paving and Street Reconstruction	\$139,835	\$367,770	\$246,260	\$364,674	\$1,118,539
Misc. General Construction Costs	\$330,560	\$353,270	\$197,865	\$194,445	\$1,076,140
Street Lighting	\$0	\$0	\$325,984		\$325,984
Park Reconstruction		\$0			\$0
Subtotal Construction Cost	\$2,211,213	\$3,518,402	\$2,235,767	\$1,586,374	\$9,551,756
Mobilization/General Conditions 10%	\$221,121	\$351,840	\$223,577	\$158,637	\$955,176
Subtotal Construction Contract	\$2,432,334	\$3,870,243	\$2,459,343	\$1,745,011	\$10,506,932
Engineering and Const. Management 20% of Construction Cost	\$442,243	\$703,680	\$447,153	\$317,275	\$1,910,351
Estimated Phase Total	\$2,874,577	\$4,573,923	\$2,906,497	\$2,062,286	\$12,417,283
Stormwater Costs:					
Construction	\$1,293,645	\$1,794,682	\$753,850	\$616,460	
Misc Construction	\$227,382	\$200,310	\$73,193	\$86,116	
Mobilization	\$152,103	\$199,499	\$82,704	\$70,258	
Engineering	\$304,205	\$398,998	\$165,409	\$140,515	
Total Stormwater Costs	\$1,977,336	\$2,593,489	\$1,075,156	\$913,349	\$6,559,330
Sewer Costs:					
Construction	\$332,675	\$588,000	\$0	\$288,325	
Misc Construction	\$58,474	\$65,628	\$0	\$40,277	
Mobilization	\$39,115	\$65,363	\$0	\$32,860	
Engineering	\$78,230	\$130,726	\$0	\$65,720	
Total Sewer Costs	\$508,494	\$849,717	\$0	\$427,183	\$1,785,394
Street Costs:					
Construction	\$254,333	\$782,450	\$1,284,052	\$487,144	
Misc Construction	\$44,704	\$87,332	\$124,672	\$68,051	
Mobilization	\$29,904	\$86,978	\$140,872	\$55,520	
Engineering	\$59,807	\$173,956	\$281,745	\$111,039	
Total Street Costs	\$388,748	\$1,130,717	\$1,831,341	\$721,754	\$4,072,559

	Phase 1	Phase 2	Phase 3	Phase 4	Total
Phase Cost Total	\$2,874,577	\$4,573,923	\$2,906,497	\$2,062,286	#REF!
Funding Sources:					
TIF Funding (Stormwater Costs)	\$156,083	\$1,347,413	\$1,075,156	\$913,349	\$3,492,001
TIF Funding (Street Costs)	\$0	\$1,203,693	\$331,341	\$171,754	\$1,706,788
Sewer Reserves/Fund Balance	\$508,494	\$0	\$0	\$0	\$508,494
Available Project Funds	\$710,000	\$0	\$0	\$0	\$710,000
Reprogrammed Outfall Project	\$1,500,000	\$0	\$0	\$0	\$1,500,000
SRF Loans (Stormwater Costs)	\$0	\$0	\$0	\$0	\$0
PACTS/MDOT (MPI)	\$0	\$0	\$500,000	\$0	\$500,000
URIP		\$100,000	\$100,000		\$200,000
CDBG					\$0
Approved Pleasantdale Project Amt	\$0	\$0	\$0	\$300,000	\$300,000
Sewer Bonding	\$0	\$944,047		\$477,183	\$1,421,230
Stormwater Bonding		\$978,770	\$400,000	\$200,000	\$1,578,770
City Bonding	\$0	\$0	\$500,000	\$0	\$500,000
TOTAL	\$2,874,577	\$4,573,923	\$2,906,497	\$2,062,286	\$12,417,283



DWG 1
 CITY OF SOUTH PORTLAND
 THORNTON HEIGHTS AND PLEASANTDALE
 SEWER SEPARATION PROJECT
 THORNTON HEIGHTS (PHASE 1 & 2)
 OVERALL PLAN 1



PRELIMINARY

NOT FOR CONSTRUCTION

DRAWN BY: JRH
 APPROVED BY: _____
 DATE: 07-18-13
 CHECKED BY: DLR
 DATE: _____
 PROJECT NO: 13036
 SCALE: AS NOTED

REVISIONS		APP'D	DATE
		DLR	9-4-13

PROGRESS PRINT

Environmental Protection
Water Resource Protection
Thornton Heights Separation Phases II, III and IV

This project is the first in a four phase project that will cover Thornton Heights in three phases and Pleasantdale in the fourth phase. The project includes the construction costs per phase, the costs related to stormwater, sewers, and streets and funding strategy.

This year's project does not require bonding, however do to the timing needed, it will be necessary to begin the process of bonding \$3.5 million which will require us to send to the voters a voter referendum this coming November. If the bonding is approved, it would cover the needed borrowed funds for the entire project. Sources of funding that will cover this year's Phase I construction costs include the Sewer User Fund Reserves/Fund Balance, TIF funds, and available project funds.

The bonding for the subsequent three phases will be; Phase II - \$1,922,817, Phase III - \$900,000, Phase IV - \$677,183. The cost by infrastructure category is Sewer - \$1,421,230, Stormwater - \$1,578,770, Streets - \$500,000.

Project Cost:	\$3,500,000
Funding Source	General Obligation Bond
Source of Cost Estimate:	Sebago Technics Engineers
Projected Useful Life:	65 years

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Environmental Protection
Water Resource Protection
Treatment Plant Boiler Replacement

This 2015 capital improvement is for replacement of the 37 year old gas fired boiler located at the treatment plant. The timing for doing this project now is to provide some additional space for the 1st floor modifications of the employee spaces in the treatment plant building. The department has made some organizational changes that have required the movement of maintenance staff to the treatment plant. The employee accommodations at the plant are 30 years old and are not designed for this many people. Employees at the moment are eating in the plant equipment area and work hours are being staggered so employees can utilize the shower facilities. The original boiler was installed with the treatment plant in the 70's and is terribly inefficient. The new boilers will be much smaller, highly efficient, and expected to save significantly on the gas consumption in the building. The project for the employee space will be moving forward for bid in February and the boiler replacement will be added to the project per the new floor plan design.

Project Cost:	\$264,000
Funding Source:	Sewer User Fund Reserves
Source of Cost Estimate:	Wright-Pierce Engineers
Projected Useful Life:	25 years

