Town of Hampden
106 Western Avenue
Hampden, Maine 04444

Phone: **(207) 862-3034**
Fax: **(207) 862-5067**
Email:
townmanager@hampdenmaine.gov

TO: Planning & Development Committee
FROM: Angus Jennings, Town Manager
DATE: March 15, 2016
RE: Sewer line through Ammo Park to serve new development

As you know, the 8" sewer line installed by Maine Ground Developers (MGD) to serve the Ammo Park and provide a connection to the proposed extension serving the MRC/Fiberight development area needs to be re-installed in order to resolve problems with initial installation. MGD is ready to proceed with this work, and their contractor is awaiting notice to proceed.

Our peer review engineer for the MRC/Fiberight proposal has advised that the 8" line would have sufficient capacity, in their opinion, to serve the new development and the newly developable area that would have access to the new sewer line.

This line represents a long-term capital investment, and there is a public interest in ensuring that the line is sized properly to allow the Town to permit significant new development in this area. We have asked Woodard & Curran to provide an opinion regarding how much additional development - beyond current and MRC/Fiberight - could be supported by a 10" or 12" line.

Following a meeting last week, Sargent Corp., the contractor to MGD, prepared an estimate of the incremental costs, above and beyond the re-installation, to upgrade to 10" or 12" pipe. Incremental costs are estimated at $61,720 (10") up to $68,020 (12"). Much of the cost is driven by the need to replace ten manholes at $5,000 apiece.

If the Town wishes to pay some or all of these incremental costs, in the interest of optimizing this infrastructure for future economic development, it would be an eligible expenditure of the Emera TIF funds. Eligible expenses include infrastructure costs "directly related to and made necessary by the Town Tract / Coldbrook Road District… in order to extend utilities and infrastructure from their current location to the District on Coldbrook Road."

At next Monday's 3/21 Council meeting, consideration will continue regarding how to manage the TIF funds that were not part of the recent budget adjustment to meet the Credit Enhancement Agreement obligations under the approved TIFs. Within that discussion, I am working to bring forward a proposal for Council consideration of funding all or a portion of the incremental costs associated with a larger pipe. I will notify MRC/Fiberight and H.O. Bouchard that this matter is under consideration. I do not believe that we have the ability to require their contribution to this expense, but since their interests would be served by a larger pipe, I would make them aware that this is under consideration.

Ammo Park Sewer

		10" pipe		12" pipe	
		Cost/LF	Cost	Cost/LF	Cost
Pipe (LF)	2930	$ 4.00	$ 11,720.00	$ 6.15	$ 18,019.50
Manholes	10	$ 5,000.00	$ 50,000.00	$ 5,000.00	$ 50,000.00
			$ 61,720.00		$ 68,019.50

Source: Estimate from Sargent Corp., March 9, 2016

Angus Jennings <townmanager@hampdenmaine.gov>

FW: Sewer Installation Options

1 message

tthibodeau <tthibodeau@post.freightlinerofmaine.com> Wed, Mar 9, 2016 at 12:10 PM
To: publicworks <publicworks@hampdenmaine.gov>, townmanager <townmanager@hampdenmaine.gov>
Cc: economicdevelopment <economicdevelopment@hampdenmaine.gov>

Gentlemen,

I am responding t to the request to have Sargent's provide the cost differential on pipe sizing. The attached letter indicates the variations of size changes from the 8" through to 12". For math purposes, there are approximately 2,930 feet of pipe in the ground. Unfortunately, the 10 manholes currently installed will not take a larger pipe without replacement.

As discussed in Monday's meeting, Maine Ground has no interest in costs in excess of our backfill requirement. Also, there seems to be no specific need to increase the volume based upon the computations presented. Therefore, if there is interest (and other party funding) in replacing the 10 manholes and upgrading the pipe size we are at the crossroads of a decision regarding it. It is imperative to to move on this project expeditiously. I anticipate having marching orders in place by the weeks end.

Please review the attached document with the parties you feel would have specific interest in and funding for the project and let us know the outcome in the coming days. Thank you Tracy

Tracy Thibodeau

Chief Financial Officer

Freightliner of Maine, Inc

422 Perry Road

Bangor, ME 04401

Dir line 207-217-6935 fax 207-947-6557

From: Jim Braley [mailto:jbraley@sargent-corp.com]
Sent: Wednesday, March 09, 2016 8:49 AM
To: Tracy Thibodeau
Cc: smilligan@sargent-corp.com
Subject: Sewer Installation Options

Tracy,

Please find our letter attached.

Jim Braley

Project Manager

Sargent Corporation - Bangor Division

489 Odlin Road, Suite 101

Bangor, ME 04401

Phone: 207-990-1735

Fax: 207-990-2432

Cell: 207-478-4092

Email: jbraley@sargent-corp.com

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Women and Minorities are encouraged to apply.

AMMO Sewer Options.pdf
49K

SARGENT
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AN EMPLOYEE OWNED COMPANY

March 9, 2016

Mr. Tracy Thibodeau
Freightliner of Maine
422 Perry Road
Bangor, ME 04401

Re: Ammo Industrial Park Sewer Installation

Tracy,

As requested, here are the price differentials for the 10” and 12” sewer pipe options.

The additional cost to increase the pipe size from 8” SDR 35 PVC pipe to 10” SDR 35 PVC pipe is $4.00/lf.

The additional cost to increase the pipe size from 8” SDR 35 PVC to 12” SDR 35 PVC is $6.15/lf.

If the pipe size is increased to either 10” or 12”, the manholes will also have to be replaced or modified. The core size for an 8” boot is 12”, and 16” for 10” and 12” boots. To accommodate the larger pipe size the manholes will have to be exposed, re-cored and the inverts demolished and reconstructed, in a confined space. The labor and equipment costs to perform this will exceed the cost of the new precast materials, so we recommend replacing the manholes. The unit cost to furnish and install a new 4’ diameter manhole is $5,000/ea.

Feel free to call with any questions, 207-990-1735.

Sincerely,

James M. Braley
Project Manager

Main Office
378 Bennoch Road
P.O. Box 435
Stillwater, Maine 04489
Phone: (207) 827-4435
Fax: (207) 827-6150

Bangor Regional Office
489 Odlin Road
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Phone: (207) 990-1735
Fax: (207) 990-2432

Mid-Atlantic Regional Office
11139 Air Park Road
Suite 1
Ashland, VA 23005
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Fax: (804) 368-7387

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Women and Minorities are encouraged to apply

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T 800.564.2333
T 207.945.5105
F 207.945.5492

MEMORANDUM

TO: Sean Currier – Public Works Director

FROM: Kyle Corbeil, P.E.

DATE: March 11, 2016

RE: Ammo Park Sewer Capacity

As requested, we have reviewed the sewer main capacity for the segment installed in Ammo Park connecting to the Carey Circle sewer that serves the Town's Business Park, particularly with regard to the proposed MRC/Fiberight Solid Waste Processing Facility.

Construction plans were provided for review that were designed by Down to Earth Professional Land Services, Inc. and titled as follows:

- Sanitary Sewer Plan and Profile, Maine Ground Developers, Inc., Ammo Park Connector Road, Hampden Maine

The installed sewer is 8-inch diameter SDR 35 PVC, with an approximate length of 3,000 feet and connects to the 12-inch diameter sewer on Carey Circle.

Based on the lowest slope section of sewer main, which has a slope of 0.005 feet/feet, we calculated the overall capacity of this main as 1.57 cfs or 700 gpm.

While the existing sewer main is sufficient for the current use, the planned MRC/Fiberight solid waste processing facility is planning a connection that would significantly increase its use. The new MRC/Fiberight facility plans to include a wastewater pump station located along the proposed access road and a 6-inch forcemain connecting it to the Ammo Park sewer main.

In addition, due to a requirement to replace the backfill material used in the original construction of the Ammo Park sewer main, there has been a discussion regarding the need to increase the pipe size. Increasing the pipe size would require replacement of the manhole structures to ensure that watertight connections can be installed.

Based on the size and existing use of the sewer main, there is adequate capacity to connect the proposed wastewater pump station, contingent on an appropriate design flow rate. The pumping rate of the proposed wastewater pump station must be evaluated prior to Town approval and acceptance so that the overall capacity of the existing sewer main is not exceeded.

We have not received planning documents that include the design information for the proposed wastewater pump station. The Applicant for the MRC/Fiberight facility should consider that design flow rates exceeding 500 gpm may exceed the capacity of the sewer main to serve existing users and will require additional downstream impacts analysis.

The following was taken from the December 21, 2015 MRC/Fiberight Request for Information memo from Woodard & Curran to Sean Currier regarding wastewater pump station design considerations for the proposed MRC/Fiberight facility and bears repeating.

Below is a list of other related wastewater infrastructure items that the Applicant should consider in their application as they prepare for submittal:

1. Operations and Maintenance costs for new wastewater infrastructure should be factored into the Applicant's economic analysis of preferred waste treatment processes as these will be used by the Town of Hampden to establish the sewer usage fees.

2. The Applicant must demonstrate that connection of new wastewater infrastructure to the existing 8" PVC sewer in the Ammo Industrial Park will not exceed the capacity of the existing sewer and associated structures.

3. Pump stations required as a result of this application and proposed in the Site Application will be designed by the applicant to handle the anticipated flow (current and future). The pump station(s) will be consistent with the type, pumps, controls and other equipment already in use in the Town of Hampden.

Angus Jennings <townmanager@hampdenmaine.gov>

Fwd: Ammo Park Sewer

1 message

Sean Currier <publicworks@hampdenmaine.gov> Fri, Mar 11, 2016 at 11:59 AM
To: Kyle Corbeil <KCorbeil@woodardcurran.com>, Angus Jennings <townmanager@hampdenmaine.gov>

---------- Forwarded message ----------
From: "Oscar Emerson" <oemerson48829@roadrunner.com>
Date: Mar 11, 2016 11:57 AM
Subject: Ammo Park Sewer
To: "Sean Currier" <publicworks@hampdenmaine.gov>
Cc: "tthibodeau" <tthibodeau@post.freightlinerofmaine.com>

Sean,

I have just reviewed the 3/11/16 memorandum from W&C regarding existing sewer capacity of the Ammo Park 8" sewer line. Based upon the referenced memo and conversation during the 3/7/16 meeting at the municipal office, I wish to submit a point of clarification. I have indicated that my calculations are consistent with the other consultants results, however they do remain more conservative. My standard practice in evaluating the capacity of PVC sewer line over a period of approximately 20 years is to calculate the pipe 70% full and use a mannings coefficient of 0.013 (anticipated residue). Based on this approach and potential build out of Ammo Park, my results are approximately 400 gpm available for off-site sources.

Thanks, Oscar

Oscar F. Emerson, PE, PLS, LSE, CPESC

Down to Earth Professional Land Services, Inc.

PO Box 443, Bradley, ME 04411

Tel. 207-827-6733

www.downtoearthpls.com

Scanned for viruses. www.avast.com

Angus Jennings <townmanager@hampdenmaine.gov>

Re: Fwd: Ammo Park Sewer Main Capacity memo

1 message

Sean Currier <publicworks@hampdenmaine.gov> Fri, Mar 11, 2016 at 2:34 PM
To: tthibodeau <tthibodeau@post.freightlinerofmaine.com>
Cc: Angus Jennings <townmanager@hampdenmaine.gov>, Kyle Corbeil <KCorbeil@woodardcurran.com>, Dean Bennett <economicdevelopment@hampdenmaine.gov>

Tracy, I would recommend Maine Ground Developers get a commitment from MRC/Fiberight to the flow restriction or contribution toward installing a larger pipe. The Town's understanding is that the 8" pipe would be sufficient with limitations on pumping rates from Fiberight. Based on information available at this time, I do not plan to recommend that the Planning Board require upsizing the pipe within the Fiberight permitting process.

Sean

Sean Currier
Public Works Director
Town of Hampden
106 Western Avenue
Hampden, ME 04444
(207)862-3337

On Fri, Mar 11, 2016 at 1:02 PM, tthibodeau <tthibodeau@post.freightlinerofmaine.com> wrote:

> Sean, I want to be sure of where we are in the process here. I would like confirmation there is or is not movement towards a larger pipe. My time window is quickly closing on a decision as to how to proceed.
> Tracy
>
> Tracy Thibodeau
>
> Chief Financial Officer
>
> Freightliner of Maine, Inc
>
> 422 Perry Road
>
> Bangor, ME 04401
>
> Dir line 207-217-6935 fax 207-947-6557
>
> ---
>
> **From:** Sean Currier [mailto:publicworks@hampdenmaine.gov]
> **Sent:** Friday, March 11, 2016 11:05 AM

To: Travis Noyes; Tracy Thibodeau
Cc: Kyle Corbeil; Angus Jennings; Dean Bennett
Subject: Fwd: Ammo Park Sewer Main Capacity memo

Tracy/Travis, Please find attached information from W&C regarding the sewer capacity of the existing 8" sewer service.

Sean

Sean Currier

Public Works Director

Town of Hampden

106 Western Avenue

Hampden, ME 04444

(207)862-3337

---------- Forwarded message ----------
From: **Kyle Corbeil** <kcorbeil@woodardcurran.com>
Date: Fri, Mar 11, 2016 at 9:39 AM
Subject: Ammo Park Sewer Main Capacity memo
To: Sean Currier <publicworks@hampdenmaine.gov>

Hi Sean,

Please find the attached memo regarding the Ammo Park sewer main capacity. Please let me know if you have any concerns or comments on what I've presented. Unfortunately, it's not a straightforward "yes" on capacity, but rather a "yes, as long as" answer.

Review of the proposed pump station should be definitive.

Thanks,

Kyle Corbeil, P.E.

Project Engineer

Angus Jennings <townmanager@hampdenmaine.gov>

RE: Ammo Park Sewer Main Capacity memo

1 message

Kyle Corbeil <kcorbeil@woodardcurran.com> Mon, Mar 14, 2016 at 10:42 AM
To: Angus Jennings <townmanager@hampdenmaine.gov>
Cc: Sean Currier <publicworks@hampdenmaine.gov>, Dean Bennett <economicdevelopment@hampdenmaine.gov>

Hi Angus,

I've attached some of the background information that I revised before I issued the memo to Sean on Friday, but did not include with the memo. There is a file with the anticipated loading based on the area between Cold Brook Road and Ammo Industrial Park. The area itself is approximated in the PDF map of the parcels included in the analysis. The map is a little rough and done in Google Earth, but shows the extents of my analysis.

As you know, it is difficult to approximate use for industrial areas given the wide range of usage types. However, MRC/Fiberight consists of a very large portion of the allocated flow compared to existing usage. The MRC facility is flow restricted by Industrial User permitting, meaning that their contributing volume is relatively constant. The peaking factors used include MRC's volume, even though MRC's volume will not be peak above the permitted volume and flow rate, which allows for additional "wet user" or "Industrial User" capacity without specifically listing them.

To answer your questions directly, the existing and future wastewater volumes were calculated in the "Flows and Loads" spreadsheet with peaking factors. There is an allowance for infiltration and inflow based on modern sewer design standards, all of the existing users in Ammo, plus the anticipated full buildout based on Zoning Ordinance minimum lot sizes and similar usage patterns. The summary sheet showing peaking factors and flow rates combine the users and apply peaking factors on which sewer capacity can be based.

While the H.O. Bouchard lot truck wash facility was not specifically included in the overall volume, there is capacity in the system for other industrial users. The exact impact will have to be evaluated on a case by case basis. The design of the MRC access road wastewater pump station could be a limiting factor in the allowable usage. The H.O. Bouchard lot to the west of Cold Brook Road is not included in the extent map, but the overall area may be offset by the portions of existing lots that would not be built out in the next 20 years or could be served alternatively by crossing Cold Brook Road or directly into Carey Circle. Regardless, the design of the MRC access road wastewater pump station should anticipate all connecting users and allow for development. We have not seen any information regarding this pump station to date.

Hopefully that helps provide an understanding of the process used to date. Feel free to comment on any portion of this as the exact extent and number of users has been a fluid target to date.

Kyle Corbeil, P.E.

Project Engineer

Woodard & Curran

Phone: (207) 945-5105/ 800-564-2333

Fax: (207) 945-5492

Email: kcorbeil@woodardcurran.com

From: Angus Jennings [mailto:townmanager@hampdenmaine.gov]
Sent: Monday, March 14, 2016 9:42 AM
To: Kyle Corbeil <kcorbeil@woodardcurran.com>
Cc: Sean Currier <publicworks@hampdenmaine.gov>; Dean Bennett <economicdevelopment@hampdenmaine.gov>
Subject: Re: Ammo Park Sewer Main Capacity memo

Kyle,

Can you please clarify these points:

- In addition to the existing Ammo Park development that would be served by the 8" line, plus the MRC/Fiberight facility, what additional (existing and future) development was factored in to your analysis of the adequacy of the pipe size?
- What assumptions were made regarding flow to be generated by the H.O. Bouchard site, including truck washing? Has H.O. Bouchard provided input re what capacity they think they'll need for that site or for additional land under their control to be served?

It will be helpful to be able to provide the Council information regarding both the geographic extent of area assumed to be served by the new sewer line, as well as what level of additional development (along the new MRC/Fiberight road, and near its intersection with Coldbrook) could be accommodated by the 8" line.

I understand this work relies on assumptions re type of uses and their flow generation, and I want to understand these assumptions so I can communicate them clearly to the Council.

Thanks,

Angus

On Fri, Mar 11, 2016 at 11:04 AM, Sean Currier <publicworks@hampdenmaine.gov> wrote:

> Tracy/Travis, Please find attached information from W&C

Town of Hampden

Industrial and Interchange Area for Wastewater Flow Estimate

	Peaking Factor	Average Total Flow	
		(gpd)	(cfs)
Total ADF =	**1**	208,128	0.32
Total MMF =	**1.2**	249,754	0.39
Total MDF =	**3**	624,385	0.97
Total PHF =	**5**	1,040,641	1.61

WOODARD &CURRAN
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1 MERCHANTS PLAZA
SUITE 501
BANGOR, MAINE 04401
TEL.(207)945-5105

CLIENT Hampden, ME
PROJECT MRC/Fiberight Site Plan Application
DESIGNED BY Kyle Corbeil DATE 12/29/2015
CHECKED BY DATE Rev(3/11/2016)
PROJECT NO. 213351

Map/Book/Lot	Name	Zone	Category 1	Category 2	Address	Source	Lot Size Acres	Max. Lots	Units	Unit Flow (gal/unit-day)	Quantity Units	WEF Flow (gpd ADF)	Notes
Existing Users on System (Includes future buildout of properties currently served)													
10-0-061	Quarry	Industrial 2	Industrial Building		Industrial Park Way	Hampden GIS Lot Data	31.74	NA		0			
10-0-056-05	Portland Air Freight	Industrial 2	Industrial Building		Industrial Park Way	Hampden GIS Lot Data	9.2	NA	gal/day/employee	20	6	120	Employee count based on parking spaces
10-0-056-3	Freightliner of Maine/Formerly Thibodeau	Industrial 2	Industrial Building		Industrial Park Way	Hampden GIS Lot Data	3.26	NA	gal/day/employee/	20	42	840	Employee count based on parking spaces
10-0-056	Ammo Industrial Park	Industrial 2	Industrial Building		Industrial Park Way	Hampden GIS Lot Data	208.09	138	gal/day/employee/lot	20	5	13,800	Estimated 1.5 acre lots, no min. area in this zone
10-0-056-4	Ammo Industrial Park Lot	Industrial 2	Industrial Building		Industrial Park Way	Hampden GIS Lot Data	1.5	0	gal/day/employee	20	5	100	
									Total Existing Flow *(Includes I/I for Existing Sewer)* =			**16,324**	
Existing Users on System and Not Connected													
										Total "Not Connected" Flow =		**0**	
Future Growth Potential													
09-0-041-A	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	11.91	11	gal/day/employee/lot	20	5	1,100	Assume Industrial Use
14-0-006	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	1.06	1	gal/day/employee/lot	20	5	100	Assume Industrial Use
09-0-041	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	22.5	22	gal/day/employee/lot	20	5	2,200	Assume Industrial Use
09-0-040	Interchange/Industrial Lot	Industrial	Industrial Building		Cold Brook Rd	Hampden GIS Lot Data	28.63	14	gal/day/employee/lot	20	5	1,400	
09-0-039	Interchange/Industrial Lot	Industrial	Industrial Building		Cold Brook Rd	Hampden GIS Lot Data	78.24	39	gal/day/employee/lot	20	5	3,900	
14-0-007	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	1.94	1	gal/day/employee/lot	20	5	100	Assume Industrial Use
14-0-008	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	1.93	1	gal/day/employee/lot	20	5	100	Assume Industrial Use
09-0-035-A	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	8.99	8	gal/day/employee/lot	20	5	800	Assume Industrial Use
15-0-015	Interchange Lot	Interchange	Industrial Building	Hotel/Motel/Rest	Cold Brook Rd	Hampden GIS Lot Data	1.16	1	gal/day/employee/lot	20	5	100	Assume Industrial Use
09-0-035	Interchange/Industrial Lot	Industrial	Industrial Building		Future Access Rd	Hampden GIS Lot Data	55.2	27	gal/day/employee/lot	20	5	2,700	
09-0-038	Industrial Lot	Industrial	Industrial Building		Future Access Rd	Hampden GIS Lot Data	37.61	18	gal/day/employee/lot	20	5	1,800	
09-0-037	Industrial Lot	Industrial	Industrial Building		Future Access Rd	Hampden GIS Lot Data	23.45	11	gal/day/employee/lot	20	5	1,100	
09-0-036	MRC Lot	Industrial	Industrial Building		Future Access Rd	Hampden GIS Lot Data	87.69	NA	gal/day/employee	20	70	1,400	Assume 70 empl. as stated in Solid Waste Applic.
09-0-036	MRC Lot	Industrial	Industrial Building		Future Access Rd	Hampden GIS Lot Data		NA	gal/day/employee/lot	150000	1	150,000	From material submitted to Town 12/22/2015
10-0-056	Industrial Lot	Industrial	Industrial Building		NA	Hampden GIS Lot Data	58.36	29	gal/day/employee/lot	20	5	2,900	
10-0-058	Industrial Lot	Industrial	Industrial Building		NA	Hampden GIS Lot Data	12.26	6	gal/day/employee/lot	20	5	600	
10-0-056-2	Industrial 2 Lot	Industrial 2	Industrial Building		Route 202	Hampden GIS Lot Data	219.1	109	gal/day/employee/lot	20	5	10,900	
										Total Future Flow *(Includes I/I for Future Sewer)* =		**190,341**	
											Total Flow =	**206,665**	

	Quantities	Units
	Existing	
Sewer Diameter	8	inches
Sewer Length	3000	LF
VF of Manhole	100	VF
Existing Infiltration	1464	GPD
	Future	
Sewer Diameter	8	inches
Sewer Length	20000	LF
VF of Manhole	50	VF
Infiltration	9141	GPD
Total Infiltration	10605	GPD