

## LETTER OF TRANSMITTAL

**Date:** May 2, 2016 **JN:** 10973.002

<p><b>To:</b> <u>Town of Hampden</u>  <u>Attn: Dean Bennett</u>  <u>Comm &amp; Econ Develop Director</u>  <u>106 Western Avenue</u>  <u>Hampden, ME 04444</u></p>	<p><b>Re:</b> <u>Solid Waste Processing Facility</u>  <u>Coldbrook Road</u>  <u>Hampden, Maine</u></p>
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**WE ARE SENDING YOU**

ATTACHED       BY EMAIL       UNDER SEPARATE COVER \_\_\_\_\_

COPIES	DATE	DESCRIPTION
15	May 2, 2016	Site Plan Review App. – Supplemental Information

**THESE ARE TRANSMITTED AS CHECKED BELOW:**

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| <input checked="" type="checkbox"/> For Approval | <input type="checkbox"/> Approved as Submitted    | <input type="checkbox"/> Resubmit ___ Copies for Approval   |
| <input type="checkbox"/> For Your Use            | <input type="checkbox"/> Approved as Noted        | <input type="checkbox"/> Submit ___ Copies for Distribution |
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| <input type="checkbox"/> For Review and Comment  | <input type="checkbox"/> For Bids Due _____ 20__  | <input type="checkbox"/> Prints Returned After Loan to CES  |
| <input type="checkbox"/> Other                   |   |   |

**Remarks:**

Copy To: \_\_\_\_\_ Signed: Sean Thies, PE

**SENSIBLE SOLUTIONS**



**Corporate Office**  
465 South Main Street  
PO Box 639  
Brewer, Maine 04412  
207.989.4824

[www.ces-maine.com](http://www.ces-maine.com)



**SUPPLEMENTAL INFORMATION**

FOR

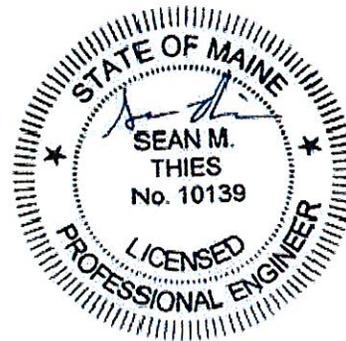
**HAMPDEN SITE PLAN REVIEW APPLICATION  
PER ARTICLE 4 - GENERAL REGULATIONS**

FOR

**SOLID WASTE PROCESSING FACILITY  
Coldbrook Road, Hampden, Maine**

Tax Map 9, Lot 35-39 | Tax Map 14, Lot 7  
Book 2838, Page 171 | Book 9145, Page 295  
Book 4822, Page 251 | Book 9245, Page 295

**Applicant:** Municipal Review Committee, Inc.  
& Fiberight, LLC  
395 State Street  
Ellsworth, ME 04605  
207.664.1700



**MAY 2, 2016  
JN: 10973.002**

**Application Prepared By:**  
CES, Inc.  
465 South Main Street  
P.O. Box 639  
Brewer, ME 04412  
207.989.4824

May 2, 2016

Mr. Dean Bennett  
Director of Community and Economic Development  
Town of Hampden  
106 Western Avenue  
Hampden, Maine 04444

**Re: MRC/Fiberight Response to Review Comments**

Dear Dean:

We are providing this letter and the accompanying information in response to the review comments that we received from Woodard & Curran in letters dated March 30<sup>th</sup> and April 7<sup>th</sup>. This information also includes supporting documentation to address public comments that were heard at the Planning Board meeting on April 13<sup>th</sup>, mainly related to traffic and odor concerns. Included with this letter is our previous letter response that we provided on April 8<sup>th</sup> addressing the March 30<sup>th</sup> letter. This response and accompanying information is being submitted as supplemental information for distribution to the Planning Board members in preparation for the upcoming planning board meeting on May 11<sup>th</sup>.

Included with this letter are:

- ♦ Copy of CES, Inc. response dated April 8<sup>th</sup>
- ♦ Capacity statement from Hampden Public Works regarding sewer
- ♦ Copy of letter from Bangor Gas
- ♦ Additional Traffic Study information requested by Maine Traffic Resources
- ♦ Revised plan sheets C101, C102, and C103

The following information addresses the issues raised in the April 7<sup>th</sup> Woodard & Curran letter related to Zoning Ordinance Review. Based on our discussions with you, it is our understanding that issues raised related to the Town Way Ordinance and the Sewer Ordinance are not relative to the Planning Board approval. These issues will be addressed through separate applications to the Town Council.

**Zoning Ordinance Standards for Industrial District (Article 3.2)**

1. No response needed. Standards are met.

2. We believe this issue was resolved through the letter provided by Eaton Peabody dated April 8<sup>th</sup>, which provided an opinion on subdivision review and Town Way acceptance. The proposed access way is intended to be accepted prior to issuance of a building permit for the lot development. Therefore, the lot will have in excess of 1900 feet of frontage on the Town Way. A note was added to Sheet C103 indicating such.
3. The additional setback lines have been added to the plan sheets.
4. Tank heights have been added to Sheet C103.
5. Line types and setbacks have been added/corrected on the plan sheets.

#### **Zoning Ordinance Site Plan Standards (Article 4.1)**

1. No response needed.
2. Plan sheets have been updated as requested. Due to scale of the plans, setbacks are most clearly shown on Sheet C103.
- 3a. Included with this letter is a capacity statement from Hampden Public Works regarding sewer.
- 3b. A capacity statement has been requested from Emera Maine and will be provided to the Town as soon as we receive it. Included with this letter is a letter from Bangor Gas regarding the gas injection from the facility. The facility is not proposing to utilize natural gas, so a capacity statement is not necessary.

#### **Zoning Ordinance Parking Standards (Article 4.7)**

1. The proposed facility will have approximately 70 total employees; however, the employees will be spread out over different shift times and schedules. We do not anticipate more than 50 employees at any one shift change time, so that is what we have based the parking requirement on. The requirement of  $\frac{3}{4}$  space per employee would equal 38 spaces based on 50 employees, 47 spaces have been provided.

Our attached letter response dated April 8<sup>th</sup> includes additional information regarding odor controls which should be helpful in addressing the odor concerns raised during the public hearing.

The attached traffic study information is being provided to Maine Traffic Resources in response to their memo dated March 25<sup>th</sup>. Our traffic engineer has discussed the results of the traffic study with Ms. Morabito to confirm the limits of the study and verify that we have addressed her concerns.

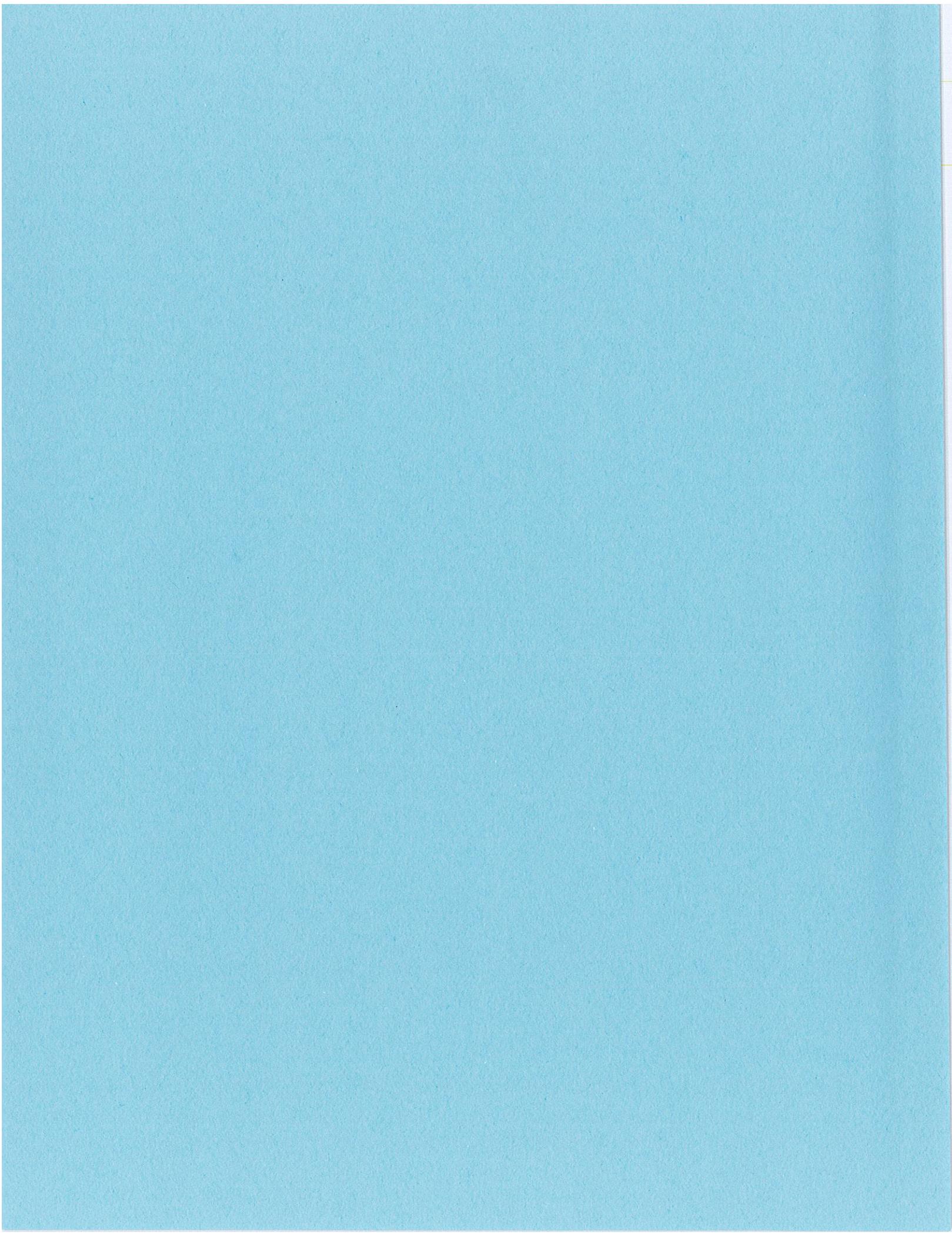
Please let us know if you have any questions or need additional information. We look forward to discussing these items in more detail with the town and Planning Board on May 11<sup>th</sup>.

Sincerely,  
CES, Inc.

A handwritten signature in blue ink, appearing to read "Sean Thies".

Sean Thies, P.E.  
Senior Project Manager

SMT/gdr  
Enc.  
Cc: Greg Louder, MRC  
Jon Pottle, EP



April 8, 2016

Mr. Dean Bennett  
Director of Community and Economic Development  
Town of Hampden  
106 Western Avenue  
Hampden, Maine 04444

**Re: MRC/Fiberight Response to Review Comments**

Dear Dean:

We have reviewed the letter provided by Woodard and Curran based on their preliminary review of the Site Plan Application that we've submitted on behalf of the Municipal Review Committee (MRC) and Fiberight, LLC. Based on our discussions with you, we thought that it may be helpful to provide some additional information in response to some of the technical items noted in the Woodard and Curran letter prior to the Planning Board meeting on April 13<sup>th</sup> as part of MRC/Fiberight's Application. Eaton Peabody will be providing a separate letter addressing the applicability of the Subdivision Ordinance.

Regarding Article 4.1.7.2 and 4.1.7.6, building elevations have not been prepared at this time and the ordinance does not indicate that they are required. The proposed processing portion of the building will be a metal building typical of what would be found in an industrial park setting. The administration portion of the building will most likely be a wood frame structure. There are no existing buildings in the vicinity, but the proposed building would integrate well with other industrial type buildings, which matches the zoning of the property.

Regarding Article 4.1.7.9, stormwater management, we have submitted a Stormwater Permit application to Maine Department of Environmental Protection (MDEP) that addresses the stormwater along the access road. The MDEP Solid Waste Permit application addresses stormwater management for the facility development. It is our understanding that the review of these portions of the permits has been completed and all MDEP comments have been addressed. If the MDEP permits have not been issued by the time that the Planning Board is prepared to make a determination on this project, we would suggest that the MDEP permit approvals be a condition of the Town approval.

Regarding Articles 4.1.7.13, 4.2.3.4, and 4.4.1 air emissions and odor standards, we offer the following response to letters a-f in the review letter:

- (a) There are no locally operated facilities, similar in process, that are provided with odor controls comparable to those being proposed for the Fiberight facility. The facility most similar in operations is the Fiberight facility in Lawrenceville, Virginia. To date, there have been no odor complaints at the Virginia facility.

Mr. Dean Bennett | 04.08.2016 | 10973.002 | Page 1

- (b) In order to address the MDEP requirement for the prevention of nuisance odors at occupied buildings, the revised DRAFT Operations and Maintenance Plan (O&M) manual submitted to MDEP on March 30, 2016, includes revisions to the Odor Management Section. The updated O&M manual includes provisions for regular site inspection and odor survey with the purpose of identifying sources of potential odors. The inspection and odor survey will include the waste receiving areas, truck queuing area, and truck maneuvering areas. The applicant will be submitting the results of these inspections and odor surveys to the MDEP on a weekly basis. Section F.3 of the revised O&M manual states the following in regard to the inspection intervals:

During the first month of, and for a total of 6 months during, the first year of operation a daily inspection and odor survey will be conducted around the facility. The daily inspection period must include the summer months when waste odors are expected to be strongest. If operations commence in the winter months and no odor issues are identified during the first month, inspections will be reduced to weekly until warmer weather. If after 6 months, including summer months, no odor issues are identified, inspections will be permanently reduced to weekly.

- (c) As specified in Section F.2 of the Revised O&M manual, queued waste trucks that exhibit strong odors will be prioritized for offloading to minimize the time the truck is waiting to unload. Trucks containing waste that is typically more odorous may be scheduled for receipt to minimize the time the truck is in queue. Following off-loading onto the tipping floor, trucks will be allowed to drain remaining leachate to the maximum extent practicable inside the building. This practice will minimize the potential for leaks or drips from trucks outside the building or on public roadways. The drained leachate is collected in the trench drain system and reintroduced into the pulping process. In addition to the operational and mechanical controls that are proposed, the Applicant will maintain sufficient odor neutralizing agents for application as necessary. The neutralizing agent will be available in both spray and solid form.

The Applicant will have no legal control over the routes that waste haulers use to transport waste from the source to the Applicant's facility. Based on input from the Town of Hampden, the Applicant can request that waste haulers avoid certain roadways or intersections but will have no enforcement capability. In accordance with Chapter 411 of the Solid Waste Rules, waste haulers must be licensed in order to transport waste within the State of Maine. Waste haulers must comply Chapter 411, Section 5(C) which states "All waste must be properly contained during transportation to prevent any leaking, spilling, blowing or any other type of discharge to the environment. No conveyance shall be loaded beyond its legal capacities." Trucks and haulers that do not comply with this regulation will be warned by Fiberight that waste will not be accepted if the hauler continues to be out of compliance with the MDEP licensing General Conditions.

Fiberight and MRC chose the proposed site, in part, based on its location in respect to separation from occupied buildings. The nearest occupied residence is located at a distance of approximately 3500' and is buffered by a generally forested area. Seasonal prevailing wind directions were evaluated based on 5 years of meteorological data collected at the Bangor

International Airport (BIA). Given the proximity of BIA to the proposed site, and the similarities in topography, this data should be representative of the prevailing wind directions at the proposed site. During the spring and summer months when the potential for nuisance odors to exist is generally higher, the prevailing wind direction is to the north. This direction is away from the closest residences. During the autumn and winter months when the potential for nuisance odor generation is the lowest, the prevailing wind direction is to the southeast. Neither of the conditions will convey potential nuisance odors in the direction of the nearest occupied buildings.

- (d) Section F.5 of the revised O&M manual addresses the process for handling odor complaints. Fiberight will provide trained staff to receive complaints from the public 24 hours per day, 7 days per week. The Town of Hampden will be supplied with this contact information. In the event that complaints are received by Town of Hampden, they can be forwarded to the Applicant. The following is the Basic Process for Odor Complaint Response:
1. When an odor complaint call is received, Fiberight staff shall obtain the necessary information from the caller to fill out an Odor Complaint Response Form (Form). This information includes: the caller's name and address; date and time of the complaint; and whether the caller would like someone to visit them at the location of the complaint, either on-site or as a result of truck traffic, to verify the odor. A copy of the Odor Complaint Response Form is attached.
  2. The Form will be completed by the staff member answering the phone and the information relayed to the appropriately trained response staff for follow-up action.
  3. If a visit is requested, the appropriate staff member should note the conditions observed during the visit. At a minimum, the following should be noted; wind direction, distance from the facility, and odor noted.
  4. If a visit is not requested, or upon return from a visit, staff should perform an inspection of the facility to check for obvious sources of potential odor. Upon completion of the inspection, the appropriate corrective measures should be taken.
  5. The Fiberight staff member who is addressing the complaint shall notify Fiberight's Operations Manager within four hours of the complaint and notify MRC (as the landlord and owner of the property) and MDEP (as the regulatory agency) of the complaint immediately.
  6. If MDEP determines that the facility created an off-site odor nuisance, Fiberight will submit a written report to the Department detailing the cause of the nuisance odor, follow-up actions taken, as well as plans for future treatment, minimization, and control of nuisance odors. This report will be submitted within 30 days.
- (e) There are no anticipated odor issues associated with the operation of the flare or boiler. The flare and thermal oxidizer are the control mechanism for tail gas and potential bypass gas. There are no anticipated odor issues anticipated from the combustion of gas. The fuel source for the boilers, post-hydrolysis solids, similar to the flare gas, is not expected to generate odors during combustion or storage.

- (f) Section B.1(2) Operations addresses the control of dust on roadways as follows:
2. A paved road provides access to the facility. If necessary during dry periods, the access ways may need to be wetted to control excessive dust generation resulting from facility activities. The access road will be kept free of excessive dirt and debris by sweeping or other methods, to ensure a clear travel way. All proposed roadways will be paved, so there should not be any dust issues from the access road or the site upon construction completion.

Section B.9 Routine Maintenance and General Cleanliness and Section B.12 Litter Control. As discussed in the response to Item 4(c), “All waste must be properly contained during transportation to prevent any leaking, spilling, blowing, or any other type of discharge to the environment”, this will limit potential litter issues on the roads leading to the site. Trucks will be required to keep their loads covered until they reach the scale house. Regular inspections, daily, and weekly will be conducted around the facility and any litter will be noted and removed at that time. If it becomes evident that litter is becoming problematic, staff will review waste handling protocol to determine the likely cause and the appropriate change will be made, as practicable.

Regarding traffic, based on our discussions with you, we are examining the haul routes of current MRC towns that could potentially travel within Hampden (e.g., Route 1A), on their way to the proposed facility. Based on the historical tonnage from these towns, we will estimate the expected number of trips per day/week from this region. We will be prepared to discuss this in more detail at the Planning Board meeting next week.

Please let us know if you have any questions or need additional information. We look forward to discussing these items in more detail with the town and Planning Board next week.

Sincerely,  
CES, Inc.



Sean Thies, P.E.  
Senior Project Manager

SMT/jok  
Enc.  
Cc: Greg Louder, MRC  
Jon Pottle, EP

### ODOR COMPLAINT REPORT

*Top portion of this form is to be filled out at the time of the complaint.*

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Name of caller: \_\_\_\_\_

Contact information for the caller:

\_\_\_\_\_  
Location of complaint:

Does the caller wish to have the odor verified? (y/n)

\*\*\*\*\*  
\*\*\*\*\*

*Bottom portion of this form is to be filled out by the responder.*

Was a visit to the caller conducted? (y/n)

Distance of the complaint from the facility: \_\_\_\_\_

Was an odor noted? (y/n)

Was the caller's location downwind of the facility? (y/n)

Is there anything unusual happening at the facility? (Shutdown, maintenance, etc.?) (y/n)

Any unusually odorous waste loads delivered? (y/n)

Was a follow-up inspection conducted at the facility? (y/n)

List any items identified during the inspection that require attention.

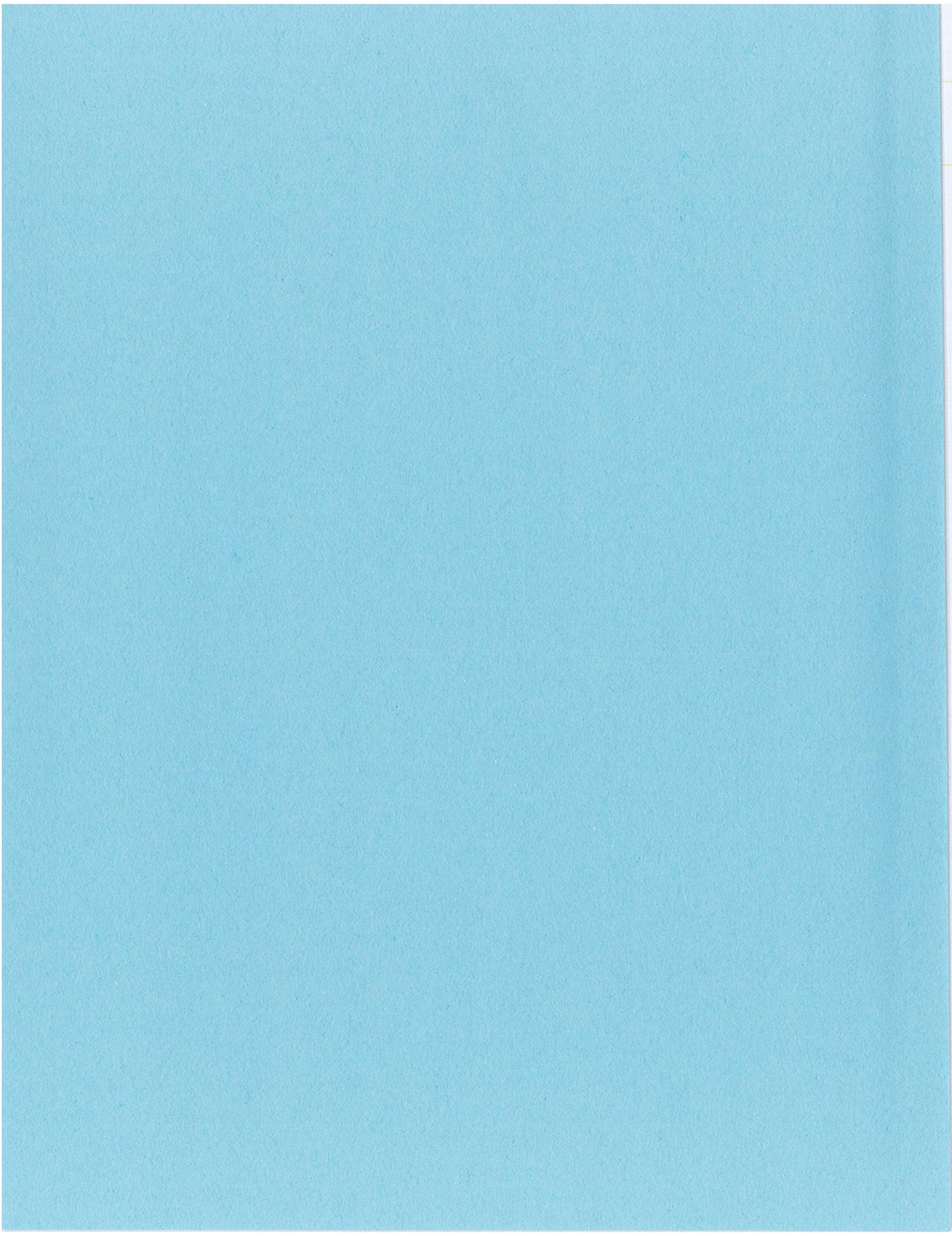
\_\_\_\_\_

\_\_\_\_\_

What steps were taken to correct any issues identified?

\_\_\_\_\_

\_\_\_\_\_





**TOWN OF HAMPDEN**  
**DEPARTMENT OF PUBLIC WORKS**

106 WESTERN AVE.  
HAMPDEN, ME 04444  
TEL 862-3337 FAX 862-5067

March 9, 2016

To: Travis Noyes, P.E.  
CES, Inc.  
465 South Main Street  
P.O. Box 639  
Brewer, Me. 04412

From: Sean Currier  
Subject: NEW SEWER SERVICE FOR FIBERIGHT FACILITY, HAMPDEN

Travis,

The Town of Hampden has reviewed the information provided by CES, pertinent to the proposed Fiberight Facility in Hampden. The information stated that the sewer flow is estimated at 150,000 gpd. The Town of Hampden sewer collection system has capacity, at this time, to accept this additional flow in the applicable sewershed below Carey Circle Business Park.

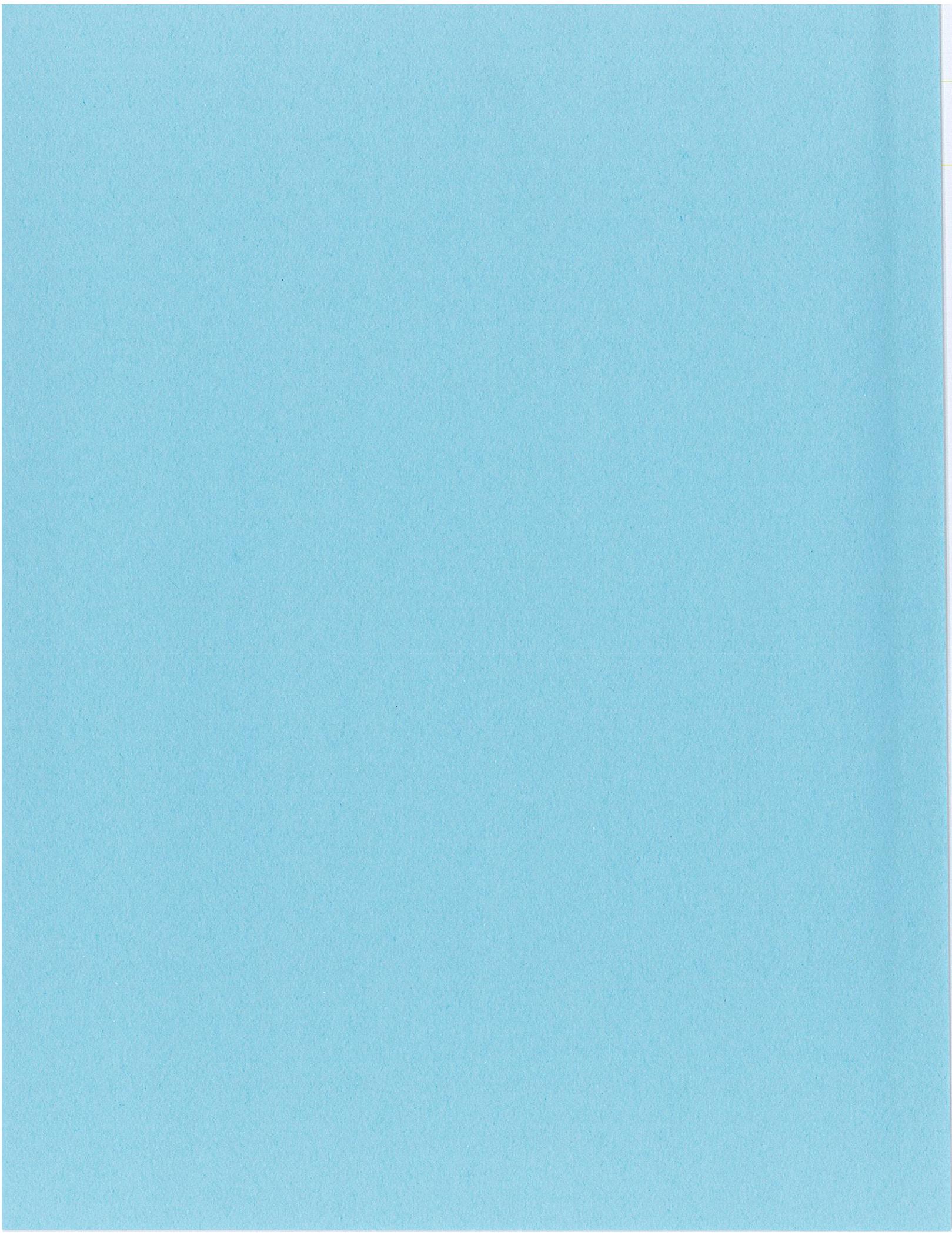
It is our understanding that the sewer service for Fiberight will extend from the proposed facility location, cross country to the Maine Ground Development (Ammo Park) land. The sewer in this vicinity is currently being reviewed for acceptance by the Town to become Town owned infrastructure. As you are aware, there are some technical items to be rectified as part of this review but we anticipate favorable resolution of these items and will continue to keep you and your client apprised.

As with similar agreement with the City of Bangor wastewater treatment facility, the user shall meet all requirements of the Federal and State Pretreatment regulations, the Town of Hampden and City of Bangor Sewer Use Ordinances concerning reporting, construction & maintenance, installation of sample points, flow metering devices and other pretreatment controls. The user shall provide access to the Town personnel (or its designee) for purposes of inspection, sampling and routine maintenance to the sewer easement, sewer system and any associated sewer appurtenances. The user shall apply to the Town for a sewer connection permit, submit appropriate fees and adhere to the installation/connection inspection process. All infrastructure proposed to be accepted as Town infrastructure shall go through the planning review process and be inspected both during and after construction per the Town's ordinance and satisfaction. The Town Council is the approving authority for the Town to accept privately constructed infrastructure.

The Town of Hampden and City of Bangor reserve the right to modify, amend or reject any agreement, plan or proposal for the purpose of protecting the integrity of the WWTP, sewer collection system and any and all control mechanisms in existence.

Respectfully,

Sean Currier  
Town of Hampden  
Director of Public Works



# **Bangor** *Natural Gas*

*498 Maine Ave.  
P.O. Box 980  
Bangor, ME 04402-980  
Tele. 207-941-9595  
Fax 207-942-0101*

February 10, 2016

Mr. Alan P Iantosca  
Fiberight LLC  
PO Box 21171  
Catonsville, MD 21228

Dear Alan,

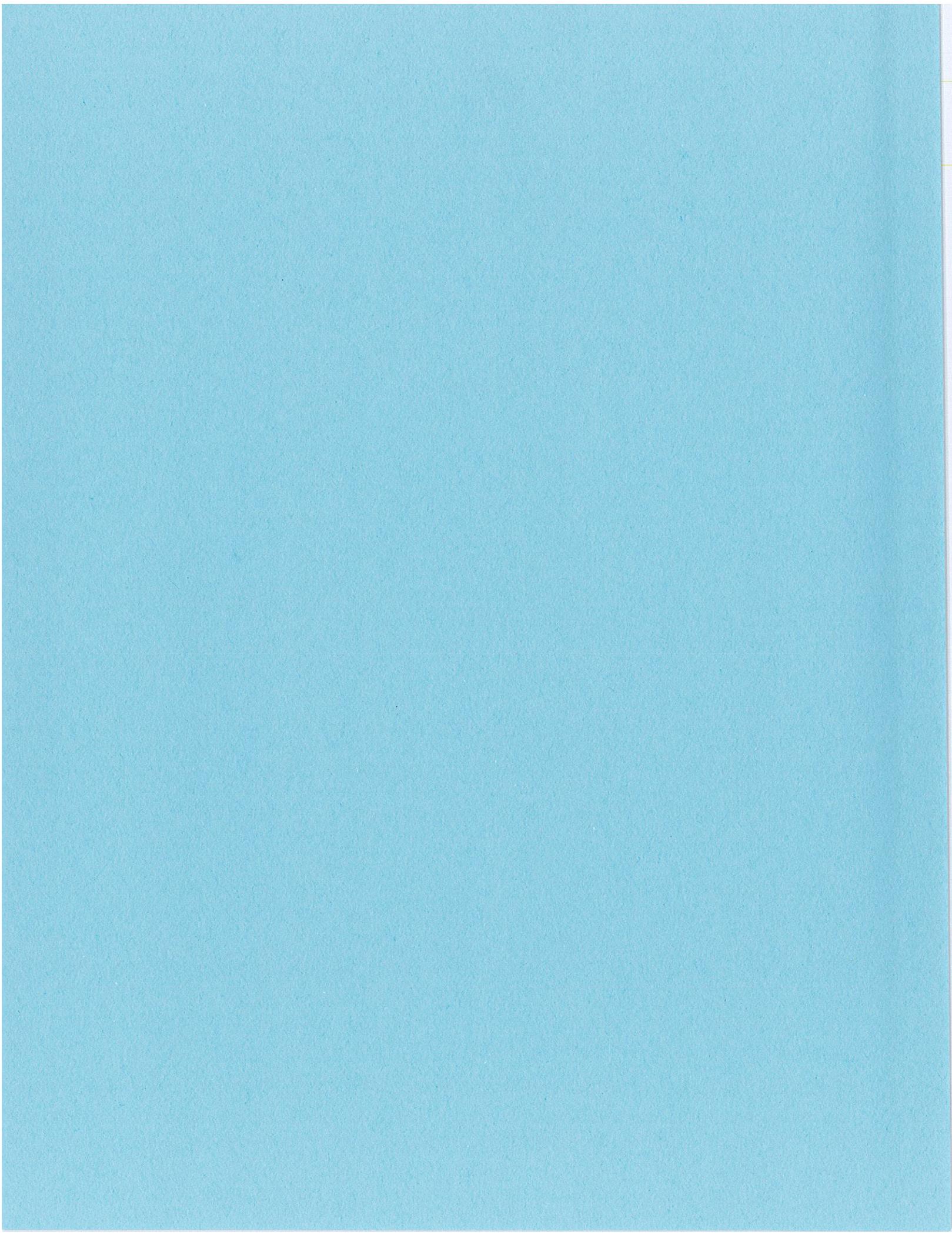
Bangor Gas has surveyed and assessed the Loring Pipeline between Union Street in Bangor and Hampden. The pipe is in very good condition and we have completed 85% of the work needed to put natural gas in this section. We have replaced all the old oil valves to new gas valves and installed a corrosion control system in general accordance with PHMSA Chapter 192 rules for natural gas pipelines.

The last part of our due diligence on this section of pipe is to replace a 100' of pipe that is under a creek as we can't see the pipe to inspect the cathodic protection wrapping around it, so it makes more sense just to replace that section. We anticipate that the required work together with testing and modification will be completed prior to the Fiberight facility coming on line.

Regards



Andrew Barrowman  
Manager Sales & Marketing



## TRAFFIC IMPACT STUDY

Traffic at the proposed Fiberight waste processing facility will enter and exit at a single point of access located at the northeast corner of the property. The facility entrance will be located at the end of a proposed 4,460 foot long access road which will enter onto the Coldbrook Road directly across from the existing HO Bouchard truck facility. The proposed access road will consist of two 12-foot travel lanes with 3-foot shoulders. A Maine Department of Transportation (MaineDOT) Entrance Permit Application for the access road entrance onto Coldbrook Road was submitted and an Entrance Permit was subsequently issued by the MaineDOT.

The main traffic generators at this proposed facility will be the incoming MSW deliveries, employees, and to a lesser extent the outgoing waste and commodities. These materials will enter and exit the facility in trucks ranging from packer trucks to trailer trucks. Passenger vehicles will make up the remainder of the facilities traffic and will be spread out over the full 24-hours of the day as employees will be needed for multiple shifts throughout the day. No MaineDOT Traffic Movement Permit is required because the project's estimated overall traffic volume is less than 100 passenger car equivalents during the peak hour.

### TRAFFIC VOLUMES

Traffic to the facility will be composed of varying traffic components. The two primary components will be employees and incoming haul trucks carrying MSW. Additional traffic components will include general deliveries, outgoing waste residues and recyclables generated by processing, material deliveries related to the processing facility, and the outgoing product deliveries. These traffic components are broken down as follows.

#### **Employees, Visitors, and General Deliveries**

The facility is expected to employ 66 employees at full operation. These employees will work different shifts and will enter and exit the facility at different times of the day. Peak traffic movements for employees will occur around the 7:00 AM peak hour and 3:00 PM peak hour when the majority of the employees are arriving or departing their work stations. It is anticipated that these employees will arrive and depart in personal vehicles such as passenger cars and trucks.

Employees fall into three distinct groups and will be staffed as follows:

General Plant Staffing	(9 employees, Monday-Friday, 7:00 AM-3:00 PM)
MSW side of plant	
Day shift	(21 employees, Monday-Friday, 7:00 AM-3:00 PM)
Evening shift	(16 employees, Monday-Friday, 3:00 PM-11:00 PM)
Wet side of plant	
Day shift 1	(4 employees, Monday-Friday, 7:00 AM-3:00 PM)
Day shift 2	(4 employees, 7 days/week, 7:00 AM-7:00 PM)
Night shift	(4 employees, 7 days/week, 7:00 PM-7:00 AM)

AM and PM peak employee traffic movements are provided in the Appendix. The AM peak hour for employees will occur between 6:30-7:30 AM with 38 employees entering and 4 employees exiting. The PM peak hour for employees will occur between 2:30-3:30 PM with 16 employees

entering and 34 employees exiting. Both of these peak hours will occur ½ hour before shift change to ½ hour after shift change.

Notes:

- 1) There are 8 additional employees that do not come to the plant on any given day. These employees are required to staff the rotating seven day/week 12-hour shifts on the wet side of the plant.
- 2) Production employees in general do not leave their work station after clocking in. General plant staffing will have the ability to leave the site to perform work related activities.

Visitors and general day to day deliveries may account for an additional 20-25% increase above and beyond the total number of employees for a total of 84 employees, visitors, and general deliveries per day. This equates to 168 total daily vehicle trips for this facility during ordinary operations. It is not expected that these additional trips will occur during shift changes and will not impact the peak hour traffic.

### **Incoming MSW**

MSW generation varies by time of year which will correspondingly result in an increase or decrease of shipments into the facility. Peak daily MSW deliveries to the facility will generally occur during the month of July based upon the monthly volumes provided by MRC. The peak monthly tonnage was calculated from 2015 data and amounts to 17,260 Tons brought to the facility. Using 20 delivery days in a month this equals an average of 863 Tons delivered each day.

Delivery methods are known for the MRC communities that send MSW to the proposed processing facility. The included MSW generator sheets were created using the 2015 tonnage data and knowing the delivery method we have calculated the daily deliveries assuming 20 delivery days per month. The daily MSW deliveries to the facility during the month of July will be 81 deliveries.

To account for variations in daily deliveries we have factored the peak delivery day by a factor of 1.1. This brings the peak daily tonnage to 950 Tons/day which corresponds to the peak expected daily tonnage provided in the MDEP Application. The highest expected total MSW deliveries to this facility on any given day will be 89 deliveries. All peak hour traffic volumes will be based on 89 truck deliveries to the facility in a day.

### **Additional Traffic Sources**

The facility will generate a daily average of 82-130 Tons of residue waste and recyclables which will need to be shipped to a landfill for disposal or to the recycling commodities market. Residue waste and recyclables will be transported in trailers containing 28 Tons of material per trailer. This equates to a daily total of 4-5 trailers exiting the facility daily. These deliveries will be scheduled outside of the peak hours of traffic generation for the facility.

The plant's boiler is expected to generate 1,825 ton/year of ash. Ash will be transported to a landfill for disposal using 40 CY roll-offs. At 1.5 tons/CY this equates to 69 trips/year or 1 trip every 4-5 days.

Phosphoric acid is used during processing at the proposed facility. It is estimated that 19,000 gal/year will be required. Phosphoric acid will be delivered to the facility in 55 gallon drums or totes in truckload quantities. Deliveries of phosphoric acid will equate to 4-5 deliveries per year.

## DELIVERY TRUCK HAUL ROUTES

Six distinct origins have been developed for MSW originating from the MRC communities. These routes, MSW generation, delivery methods, and daily trucks are provided on the MSW Generator sheets in the Appendix. The summary below shows the routes through the Town of Hampden and the adjusted peak daily deliveries that will use these routes.

US 1A/Western Ave./US Route 202/Coldbrook Road	8 trucks/day
US Route 202/Route 69/I-95 NB/Coldbrook Road	6 trucks/day
US Route 2/Coldbrook Road *	3 trucks/day
I-95 NB/Coldbrook Road	13 trucks/day
I-95 SB/Coldbrook Road	39 trucks/day
I-395 WB/US Route 202/Coldbrook Road	21 trucks/day

\*As noted on the I-95 NB MSW Generator Sheet we have assigned the Town of Hermon's and the Town of Carmel's MSW deliveries to US Route 2 and the Coldbrook Road.

The total daily truck deliveries listed above sum to 90 deliveries/day. This is due to rounding error.

The intersection of US Route 1A and Coldbrook Road is not expected to see delivery traffic but it should be noted the City of Bangor collects and delivers MSW in packer trucks and depending on the neighborhood may send an occasional packer to this intersection. This is not expected as easy access to I-395 westbound is located very close to the Bangor/Hampden line. In addition, all of Bangor's MSW deliveries have been assigned to I-95 SB which is not likely to be the case. The estimated left turns at the Coldbrook Road I-95 off-ramp will be lower than predicted in this study but analysis will be conducted for the full number of left-turns during the peak hour.

The enclosed drawing titled DAILY TRUCKS shows the daily expected turning movements along the proposed haul routes through the Town of Hampden.

## PEAK HOUR TRAFFIC

The traffic volumes section of this report explained the various shifts during operation of the Proposed MSW processing facility and the numbers of employees each shift contained. Employees will create two distinct peak hour traffic movements at the proposed facility. The AM Peak hour traffic movement will occur between 6:30 AM to 7:30 AM and will consist of 38 employees entering the facility and 4 employees leaving the facility. The second peak hour traffic movement will occur between 2:30 PM and 3:30 PM and will consist of 16 employees entering the facility and 34 employees leaving the facility.

Employee traffic was distributed to the roadway system using a basic distribution model based on the populations of the neighboring towns. This population model and the included towns are included in the Appendices. The peak hour employee traffic distributions are shown on the included sheets titled AM PEAK EMPLOYEES and PM PEAK EMPLOYEES.

To determine the peak truck movements during any hour we counted the truck traffic at the existing PERC plant in Orrington to determine how arrivals and departures are distributed throughout the day. The trucks were counted from 6:00 AM until 6:15 PM on April 19<sup>th</sup>. The AM peak hour movements and PM peak hour movements were found and a percentage factor

created versus the daily total number of movements. The AM factor was computed to be 0.103 and the PM factor was computed to be 0.12.

The AM and PM peak hour truck were then determined by multiplying the appropriate factor to the daily truck numbers. Doing this we assume that every truck that enters during the hour is able to leave in that same hour. The AM peak truck movements for this facility will be 19 trucks. The PM peak truck movements for the facility will be 22 trucks. These AM and PM peak truck movements were then distributed to the system based on the probable truck routes determined above. The AM and PM peak truck movements are shown on the included sheets titled AM PEAK TRUCKS and PM PEAK TRUCKS.

To determine the total passenger car equivalents (PCE) for the proposed facility in the AM and PM peak hour an addition needs to be made. The peak hour traffic generated by the employees is added to the peak hour traffic generated by the trucks multiplied by 2. For the proposed facility we get the following peak traffic movements:

AM Peak	80 PCE
PM Peak	94 PCE

These trips are distributed through the system by combining the peak hour employees with the peak hour truck movements. These diagrams titled PEAK AM PCE and PEAK PM PCE are attached.

## SAFETY ANALYSIS

The access road to the facility will intersect with the Coldbrook Road directly across from the HO Bouchard truck facility entrance. This location provides safe access to the Coldbrook Road and is located to eliminate potential conflict points with the existing entrance across the Coldbrook Road.

The Coldbrook Road is a 2-lane roadway with 12-foot travel lanes and 10-foot paved shoulders designed to move trucks between US Route 202 and Interstate 95 at exit 180. Sight distance along the Coldbrook Road is very good and provides safe access for all vehicles.

A Maine Department of Transportation inventory and analysis of traffic crashes is included for the entire Coldbrook Road corridor from the southbound off-ramp of Interstate 95 to the intersection of US Route 202. Analysis of this report shows that there are no locations along that corridor, including the intersections, which are classified as High Crash Locations (HCL) as defined by MaineDOT. An HCL is defined as any roadway segment or intersection with more than 8 crashes in any 3-year period and has a Critical Rate Factor greater than 1.0.

Analysis of the data shows that the Coldbrook Road and the related intersections are very safe. The average number of crashes on any roadway segment along Coldbrook Road ranges from 0-4 in the latest 3-year period. The intersections show similar numbers except for the intersection of Coldbrook Road and US Route 202.

This intersection of Coldbrook Road and US Route 202 shows 11 crashes in the latest 3-year period but does not have a Critical Rate Factor greater than 1.0 and therefore it is not defined as an HCL. Analysis of the crash reports show that there are no identifiable safety issues with this intersection. The crashes were broken down as follows; 6 red light running crashes, 4 rear

end crashes, and 1 failure to yield crash. This type of crash history shows that there are no safety design issues with the intersection itself.

An inventory and analysis of traffic crashes is also included for the following roadways:

- 1) US Route 202 from I-395 to the intersection of Western Avenue; and
- 2) Western Avenue from the intersection with US Route 202 to Main Street.

Analysis of this data also shows that there are no defined HCL's on these roadways. There were 5 locations that stood out as having a higher number of crashes than the surrounding area. We obtained the crash reports from Maine DOT to determine if there were any safety issues with these five locations. The five locations are as follows.

- 1) Intersection of Coldbrook Road and US Route 202. There were eleven crashes there as mentioned above. There is no indication of unsafe conditions at this intersection.
- 2) Intersection of Main Road and Western Avenue. There were 7 crashes at this intersection consisting of 2 rear end collisions, 3 failure to yield crashes, 1 incorrect lane change, and 1 truck crossing lanes during a right turn. This crash history suggests that there are no significant safety issues with this intersection.
- 3) The section of Route 202 from Crosby Way to Main Trail. There were 14 crashes on this section of Route 202. Thirteen of the crashes were deer hits and there was one other crash associated with poor roadway conditions. There are no correctable safety issues with this section of roadway other than reducing the deer population.
- 4) Intersection of US Route 202 and Western Avenue. This intersection had the most crashes at 18 and all but one were rear-end collisions which is not a sign of safety issues but driver inattention. The other crash at this location occurred due to poor road conditions.
- 5) The intersection of US Route 202 and the Mecaw Road had a total of 6 crashes. Five of the 6 crashes were the result of failure to yield right-of-way. The other crash at this location was the result of improper passing on the right.

The data shows the roadways around the proposed MSW processing facility are safe and can safely handle the increase in traffic associated with the facility.

## **SIGHT DISTANCE**

The proposed access road will be located onto the Coldbrook Road directly across the road from the HO Bouchard truck terminal. The sight distance to the left is more than 2,000 feet in this direction. The sight distance to the right is 740 feet in this direction. These sight distances exceed the requirements for a Maine Department of Transportation Entrance Permit which, as noted above, has been issued for the access road. The existing sight distance will thus provide safe and efficient access to the Coldbrook Road.

## CAPACITY ANALYSIS

Capacity analyses were conducted for intersections where the peak lane movements were greater than 25 PCE for left turns or a combination of left turns and through movements. This criterion was met at the proposed access road to the facility and at the southbound ramps at the intersection with I-95. Future and full build analyses were conducted at the proposed access road. Existing conditions, future no build conditions, and full build conditions were analyzed for the SB ramps. All analyses were conducted using Trafficware’s Synchro 6 traffic capacity software.

Capacity analyses for existing conditions were completed using traffic volumes factored to the 30<sup>th</sup> highest hour. Analyses for future no-build conditions were completed using the 30<sup>th</sup> highest traffic volumes increased by 2% per year for the 2 years until the beginning of operations in 2018. Full build conditions were analyzed by adding the expected facility traffic to the future traffic volumes.

Level of service rankings are assigned to each intersection movement based on the control delay per vehicle. The letter rankings are similar to academic rankings where an ‘A’ is very good with little delay and an ‘F’ represents poor conditions with excessive delay. If an unsignalized intersection falls below a ‘D’ then traffic signal warrants should be evaluated to determine whether a traffic signal is needed.

Control delay is computed using the peak 15 minute period of the peak hour. This ensures that the absolute worst conditions are modeled for an intersection. When the peak hour is looked at as a whole the average control delay decreases to a delay much closer to the threshold levels of LOS “F”.

The relationship between delay and the level of service is given in the table below for unsignalized intersections.

**Level of Service Criteria (Unsignalized Intersections)**

Level of Service	Control Delay/Vehicle (sec)
A	Less than 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Over 50.0

The intersection created by the new access road was analyzed for future no-build and full build conditions. Existing conditions were not analyzed because there are no apparent issues with the HO Bouchard entrance. The capacity analysis for the new intersection is summarized in the table below:

Movement	AM Future No Build	AM Future Full Build	PM Future No Build	PM Future Full Build
NB Coldbrook	A (0.4)	A (0.0.4)	A (0.1)	A (0.1)
SB Coldbrook	A (0.0)	A (1.5)	A (0.0)	A (1.0)
HO Bouchard	B (12.4)	C (15.6)	B (14.4)	C (17.4)
Access Road	NA	B(13.9)	NA	C (17.9)

As the summary above shows there are no capacity concerns during the AM or PM peak hour at the proposed access road.

As part of the capacity analysis for the proposed access road, left-turn warrants were investigated for Coldbrook Road. These diagrams (attached) show that a left-turn lane is not warranted for Coldbrook Road.

The intersection of Coldbrook Road and the I-95 southbound ramps is the only other intersection which approaches the 25 PCE threshold and was analyzed for the facilities peak hour of traffic movement. This intersection was analyzed for existing, future no-build, and full build-out conditions. The results are summarized below for the AM and PM peak hours.

**Intersection of Coldbrook and I-95 SB Ramps  
AM Peak Hour**

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (2.2)	A (2.2)	A (2.3)
SB Coldbrook	A (0.0)	A (0.1)	A (0.1)
I95 Off-ramp LT	F (87.3)	F (116.6)	F (158.4)

(Control Delay in seconds)

**Intersection of Coldbrook and I-95 SB Ramps  
PM Peak Hour**

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (1.0)	A (1.0)	A (1.2)
SB Coldbrook	A (0.0)	A (0.0)	A (0.0)
I95 Off-ramp LT	F (104.9)	F (137.3)	F (165.0)

(Control Delay in seconds)

It needs to be noted that analyses of these types are heavily influenced by the peak 15 minute traffic volumes. In the situation of the PM peak hour the 15 minute volumes for the left out of the I-95 SB ramp were 51, 53, 38, and 83 vehicles. A large peak during any given 15 minute period (such as the 83 counted) will amplify the traffic volumes used during analysis and create a higher control delay. If the intersection movements have traffic volume spikes during different 15 minute periods during the count these movements also get amplified during the analysis. For example, if the identical traffic volumes are used for the full buildout PM peak and are relatively spread out over the hour long period of consideration, then the PM peak control delay for the left turn off from the I-95 SB ramp is computed to be 49.1 seconds for a LOS of E. This indicates that the intersection can and does move the traffic volumes through the intersection during any given hour.

The second reason to look closely at what is happening to this intersection is that capacity issues as seen in this analysis usually manifest themselves as safety issues and higher crash rates due to the overcapacity issues. The crash summary indicates that there are not a large number of crashes at this intersection and it is not considered a High Crash Location by the MaineDOT.

We believe that the high control delay numbers are a product of 15 minute peaks that do not coincide with the peak volumes expected at the facility. The one day count showed a peak

movement (83 left-turns) during the 3:15 to 3:30 period which significantly skewed the total 1-hour count of left-movements out of the SB off-ramp used in the analysis.

## **SUMMARY**

Based on the above information, the project has been designed to provide adequate provisions for safe and uncongested traffic movement into, out of, and within the proposed facility for the estimated peak day traffic volume of 348 vehicle trips/day.

The estimated peak daily traffic volume will be spread out throughout the entire day and will not create a congestion issue during either of the typical AM or PM peak hours on Coldbrook Road or the closest intersections that does not already exist. The left turn out of the I-95 SB off-ramp presently operates at a computed LOS F for existing, future no-build, and future full-build conditions. The 16 AM Peak vehicles and the 15 PM Peak vehicles added to the intersection are not the cause of the congestion at this location.

The Coldbrook Road and its intersections with US Route 202 and Interstate I-95 are designed for the largest trucks expected at the proposed facility and the crash data supports that there are no safety issues along this corridor.

The entrance onto Coldbrook Road and the interior road network have been designed with adequate sight distance and provide for safe traffic movements.

## Route 1A MSW Generators

	Peak Monthly Tonnage	Transfer Method	Tons per Trip	One-way Trips (month)
Rockland	463.53	Trailer	28	17
Midcoast SWD*	749.77	20 Ton Roll-off	20	38
Searsport	102.81	Roll-off	12	9
TCSWMO	198.32	Trailer	28	8
Stockton Springs	45.65	Packer	7	7
Verona	30	Packer	7	5
Thomaston	423.55	Roll-off	12	36
Searsmont	16.55	Roll-off	12	2
Belfast	82	Roll-off	12	7
<b>Total</b>	<b>2112.18</b>	<b>Total</b>		<b>129</b>

Daily trips which may use Route 1A/Western Avenue intersection

**7**

\*Daily trips without Midcoast SWD

**4.3**

Trips from South of Route 69 in Winterport = 126 (100%)

Trips from South of Route 7 in Belfast = 109 (87%)

### Notes:

1. Peak monthly tonnage occurs in July in most cases
2. Trips based on 7 tons in a packer, 12 tons in a roll-off, and 28 tons in a trailer
3. Assume Transfer stations use packers or trailers.
4. Assume 20 travel days /month

## I-95 Southbound MSW Generators

	Peak Monthly Tonnage	Transfer Method	Tons per Trip	One-way Trips (month)
Mars Hill	87.13	Trailer	28	4
Oakfield	25.44	Roll-off	12	3
Sherman	83.19	Roll-off	12	7
Medway	68.07	Roll-off	12	6
East Millinocket	80.18	Roll-off	12	7
Millinocket	265.02	Trailer	28	10
Haynesville	7.78	Packer	7	2
Bancroft	1.75	Packer	7	1
Reed Pt.	7.18	Packer	7	2
Macwahoc PLT	4.67	Packer	7	1
Drew PLT	1.56	Packer	7	1
Mattawamkeag	35.04	Packer	7	6
Winn	18.32	Roll-off	12	2
Springfield*	13.28	Packer	7	2
Lee	43.98	Packer	7	7
Chester	39.31	Packer	7	6
Lincoln	324.63	20 Ton Trailer	20	17
Howland	30.37	Roll-off	12	3
Enfield	81.54	Roll-off	12	7
Passadumkeag	16.04	Packer	7	3
Edinburg	6.16	Packer	7	1
Greenbush	62.27	Packer	7	9
Old Town	257.46	Packer	7	37
Orono	335.86	Packer	7	48
Bradley	48.05	Packer	7	7
Milford	74.96	Packer	7	11
Brownville	56.46	Packer	7	9
Milo	137.94	Packer	7	20
Lagrange	30.66	Packer	7	5
Alton	27.04	Packer	7	4
Piscataquis Cty.	52.25	Roll-off	12	5
Hudson	13.81	Packer	7	2
Glenburn	231.18	Packer	7	34
Kenduskeag	35.64	Packer	7	6
Central Penobscot	233.03	Roll-off	12	20
Garland	15.89	Roll-off	12	2
Dover-Foxcroft	317.58	Trailer	28	12
Parkman	25.21	Roll-off	12	3
Abbot	14.59	Roll-off	12	2
Bangor **	2418.49	Packer	7	346
Maxfield	4.79	Packer	7	1

N. Katahdin	147.29	Trailer	28	6
Penobscot Cty	79.18	Roll-off	12	7
Veazie	56.29	Packer	7	9
Monson	28.71	Roll-off	12	3
<b>Total</b>	<b>5945.27333</b>	<b>Total</b>	<b>706</b>	

Daily trips which will use SB I95/Coldbrook Road intersection **35**

\*Zero tonnage reported for June-Sept 2015. Value given is based on average monthly.

\*\*Bangor deliveries are assigned to SB I95 but depending on area of pick-up may use alternate routes such as I-395 to US Route 202

Notes:

1. Peak monthly tonnage occurs in July in most cases
2. Trips based on 7 tons in a packer, 12 tons in a roll-off, and 28 tons in a trailer
3. Assume Transfer stations use packers or trailers.
4. Assume 20 travel days /month

## I-95 Northbound MSW Generators

	Peak Monthly Tonnage	Transfer Method	Tons per Trip	One-way Trips (month)
West Gardiner	91.06	Roll-off	12	8
Boothbay RRDD	591.95	Roll-off	12	50
Wiscasset	174.42	Trailer	28	7
Winthrop	282.98	Trailer	28	11
Oakland	602.7	Trailer	28	22
Capital City TS	205.74	Trailer	28	8
Vassalboro	133.47	Roll-off	12	12
MMSWA	515.65	Trailer	28	19
Palmyra	94.67	Packer	7	14
Burnham	62.57	Packer	7	9
Plymouth	49.99	Packer	7	8
Etna	15.46	Packer	7	3
Stetson	50.73	Packer	7	8
Hampden	293	Roll-off	12	25
Hermon*	343.74	Packer	7	50
Carmel*	94.02	Packer	7	14
Clinton	112.04	Roll-off	12	10
Fairfiled	447.71	Trailer	28	16
Levant	92.49	Packer	7	14
<b>Total</b>	<b>4254.39</b>	<b>Total</b>		<b>308</b>

Daily trips which will use NB I-95/Coldbrook Road intersection **13**

\* Herman and Carmel have been assigned to Route 2 connecting to Coldbrook Road

Daily trips originating from Hermon and Carmel **3**

Notes:

1. Peak monthly tonnage occurs in July/August in most cases
2. Trips based on 7 tons in a packer, 12 tons in a roll-off, and 28 tons in a trailer
3. Assume Transfer stations use packers or trailers.
4. Assume 20 travel days /month

### Rt. 202/69/I-95 Northbound

	Peak Monthly Tonnage	Transfer Method	One-way Trips (month)	
Waldoboro	263.74	Roll-off	12	22
China	125.42	Roll-off	12	11
Albion	100.39	Packer	7	15
Unity	94.92	Packer	7	14
Freedom	28.2	Packer	7	5
Knox	38.1	Roll-off	12	4
Thorndike	24.83	Packer	7	4
Troy	20.36	Packer	7	3
Brooks	40	Roll-off	12	4
Jackson	20.5	Roll-off	12	2
Dixmont	14.07	Packer	7	3
Newburgh	49.61	Packer	7	8
Montville	12.23	Roll-off	12	2
<b>Total</b>	<b>832.37</b>	<b>Total</b>	<b>97</b>	

Daily trips which may use US Route 202/Route 69 intersection **5**

Notes:

1. Peak monthly tonnage occurs in July in most cases
2. Trips based on 7 tons in a packer, 12 tons in a roll-off, and 28 tons in a trailer
3. Assume Transfer stations use packers or trailers.
4. Assume 20 travel days /month

## I-395/202/Coldbrook Road-Down East

	Peak Monthly Tonnage	Transfer Method	One-way Trips (month)	
Baileyville	160.89	Roll-off	12	14
Cherryfield	33.69	Packer	7	5
Union River SWD	42.7	Packer	7	7
Otis	24.08	Roll-off	12	3
Clifton	43.19	Packer	7	7
Holden	103.68	Packer	7	15
Eddington	78.75	Packer	7	12
Dedham	80.86	Packer	7	12
Brewer	483.92	Packer	7	70
Bucksport	115.85	Packer	7	17
Machis	188.78	Roll-off	12	16
Pleasant River SWD	62.88	Roll-off	12	6
Harrington	46.22	Packer	7	7
Milbridge	70.33	Packer	7	11
Steuben	72.57	Packer	7	11
Gouldsboro	43.35	Packer	7	7
Mt. Desert Isl.	762.31	Trailer	28	28
Bar Harbor	809.43	Trailer	28	29
Winter Harbor	17.77	Packer	7	3
Franklin	27.45	Packer	7	4
Sullivan	12.5	Packer	7	2
Lamoine	61.76	Packer	7	9
Blue Hill	455.21	Roll-off	12	38
Mariaville	17.78	Roll-off	12	2
Hancock	35.26	Packer	7	6
Castine	37.72	Roll-off	12	4
Penobscot	49.78	Roll-off	12	5
Sorrento	7.63	Packer	7	2
Stonington	146.86	Roll-off	12	13
Swans Island	22.29	Packer	7	4
<b>Total</b>	<b>4115.49</b>	<b>Total</b>	<b>369</b>	

Daily trips which may use US Route 202/Coldbrook Road intersection 19

Notes:

1. Peak monthly tonnage occurs in July in most cases
2. Trips based on 7 tons in a packer, 12 tons in a roll-off, and 28 tons in a trailer
3. Assume Transfer stations use packers or trailers.
4. Assume 20 travel days /month

# PERC Deliveries

4/19/2016

Used to determine factors for peak hour traffic

Start Time	ENTER	EXIT	Peak Hour		Start Time	ENTER	EXIT	Peak Hour
6:00			13		12:00	3	1	19
6:15	4	1	19	AM Peak	12:15	4	1	18
6:30	1	2	17		12:30	3	2	16
6:45	3	2	18		12:45	2	3	17
7:00	4	2	16		13:00	2	1	17
7:15	1	2	14		13:15	2	1	18
7:30	3	1	16		13:30	4	2	19
7:45	3	0	18		13:45	2	3	22
8:00	3	1	17		14:00	4	0	21
8:15	3	2	16		14:15	3	1	21
8:30	1	5	14		14:30	5	4	18
8:45	1	1	10		14:45	2	2	11
9:00	1	2	11		15:00	1	3	13
9:15	1	2	14		15:15	1	0	10
9:30	0	2	13		15:30	1	1	12
9:45	3	0	14		15:45	2	4	12
10:00	1	5	13		16:00	1	0	8
10:15	1	1	9		16:15	1	2	9
10:30	1	2	10		16:30	0	2	12
10:45	1	1	12		16:45	1	1	15
11:00	2	0	16		17:00	2	0	14
11:15	2	1	18		17:15	1	5	18
11:30	1	4	20		17:30	1	4	
11:45	3	3	20		17:45	0	1	
					18:00	1	5	

SUBTOTAL      44                  42                                  49                  49

Total Trucks                          184

AM Peak %                          0.103261

PM Peak %                          0.119565

## Work Force Population:

	Population		%	%	%	%
				I95 SB	1A/WA	I395
Bangor	32568	I95 SB/I395	48.5%	32.3%	16.7%	40.2%
Hampden	7392	1A/WA	11.0%			
Hermon	5762	CB Road	8.6%			
Brewer	9317	I395	13.9%			
Holden	3090	I395	4.6%	%	%	
Orrington	3707	I395	5.5%	CB Road	US 202	
Winterport	3793	1A/WA	5.6%	8.6%	2.3%	
Newburgh	1531	US 202	2.3%			
Total	67160					

### Shifts coming and going to work:

#### General Plant staffing (All 8 hour shifts)

9 Employees - arrive for 7:00 AM start time  
 Leave at 3:00 PM

#### Wet side processing, general maintenance, and testing

8 Employees - arrive for 7:00 AM start time  
 Wet side processing works 12-hour shift (4 employees) Leave at 7:00 PM  
 General Maintenance and testing on 8-hour shift (4 employees) Leave at 3:00 PM

4 employees arrive for second shift at 7:00PM

#### MSW side processing (8- hour shifts)

21 employees-arrive at 7:00 AM Leave at 3:00 PM

16 employees-arrive at 3:00PM Leave at 11:00 PM

# Traffic Counts (AM)

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
6:00	19	1	15	0	1	0	286
6:15	21	3	33	2	3	1	369
6:30	21	4	39	2	1	0	427
6:45	48	5	65	0	1	1	515
7:00	59	2	51	5	0	2	545
7:15	56	3	59	2	1	0	541
7:30	54	1	97	2	1	0	503
7:45	63	1	85	1	0	0	435
8:00	55	0	60	0	0	0	374
8:15	39	1	42	0	0	1	
8:30	33	0	53	1	0	0	
8:45	40	1	46	1	0	1	

NOTES:

NB Coldbrook is traffic heading towards the interstate

# Traffic Counts

(AM) Factored

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
6:00	23	1	18	0	1	0	343
6:15	25	4	40	2	4	1	443
6:30	25	5	47	2	1	0	512
6:45	58	6	78	0	1	1	618
7:00	71	2	61	6	0	2	654
7:15	67	4	71	2	1	0	649
7:30	65	1	116	2	1	0	604
7:45	76	1	102	1	0	0	522
8:00	66	0	72	0	0	0	449
8:15	47	1	50	0	0	1	
8:30	40	0	64	1	0	0	
8:45	48	1	55	1	0	1	

NOTES:

NB Coldbrook is traffic heading towards the interstate

30th Highest hour factor (Group 1)

0.96/ 0.80=

1.2

# Traffic Counts

(AM) Future

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
6:00	24	1	19	0	1	0	364
6:15	27	4	42	3	4	1	470
6:30	27	5	50	3	1	0	544
6:45	61	6	83	0	1	1	656
7:00	75	3	65	6	0	3	694
7:15	71	4	75	3	1	0	689
7:30	69	1	124	3	1	0	641
7:45	80	1	108	1	0	0	554
8:00	70	0	76	0	0	0	476
8:15	50	1	53	0	0	1	
8:30	42	0	67	1	0	0	
8:45	51	1	59	1	0	1	

NOTES:

NB Coldbrook is traffic heading towards the interstate

Future Growth (2%/year) Factor 1.06121  
Build out 2019

6:30 - 7:30 Peak Flows  
234 18 273 11 4 4

# Traffic Counts (PM)

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
15:00	64	3	70	0	2	3	529
15:15	53	1	51	2	0	1	516
15:30	69	1	62	0	2	2	539
15:45	72	1	67	0	0	3	548
16:00	69	0	55	1	2	2	548
16:15	78	1	47	1	1	3	632
16:30	75	3	62	0	0	5	655
16:45	89	1	50	0	1	2	621
17:00	96	2	97	0	2	16	591
17:15	93	0	59	0	1	1	
17:30	64	0	46	0	0	1	
17:45	57	2	54	0	0	0	

NOTES:

NB Coldbrook is traffic heading towards the interstate

# Traffic Counts

(PM) Factored

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
15:00	77	4	84	0	2	4	635
15:15	64	1	61	2	0	1	619
15:30	83	1	74	0	2	2	647
15:45	86	1	80	0	0	4	658
16:00	83	0	66	1	2	2	658
16:15	94	1	56	1	1	4	758
16:30	90	4	74	0	0	6	786
16:45	107	1	60	0	1	2	745
17:00	115	2	116	0	2	19	709
17:15	112	0	71	0	1	1	
17:30	77	0	55	0	0	1	
17:45	68	2	65	0	0	0	

NOTES:

NB Coldbrook is traffic heading towards the interstate

30th Highest hour factor (Group 1)

0.96/ 0.80=

1.2

# Traffic Counts

(PM) Future

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left	Hourly Volume
15:00	82	4	89	0	3	4	674
15:15	67	1	65	3	0	1	657
15:30	88	1	79	0	3	3	686
15:45	92	1	85	0	0	4	698
16:00	88	0	70	1	3	3	698
16:15	99	1	60	1	1	4	805
16:30	96	4	79	0	0	6	834
16:45	113	1	64	0	1	3	791
17:00	122	3	124	0	3	20	753
17:15	118	0	75	0	1	1	
17:30	82	0	59	0	0	1	
17:45	73	3	69	0	0	0	

NOTES:

NB Coldbrook is traffic heading towards the interstate

Future Growth (2%/year) Factor 1.06121  
Build out 2019

3:00-4:00 PM Peak  
329 8 318 3 5 11

# Traffic Counts (AM)

Date: 4/27/2016

## Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	55	11	32	7	14	28
6:30	74	7	39	7	22	21
6:45	81	20	67	10	25	47
7:00	89	16	63	14	33	38
7:15	133	9	64	11	36	35
7:30	140	23	56	11	33	40
7:45	120	16	68	9	35	44
8:00	119	23	44	10	16	32
8:15	97	23	47	11	27	40
8:30	83	14	43	11	19	35
8:45	84	11	45	3	19	38

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

377                      52                      233                      42                      116                      141

Traffic Counts (AM) Factored

Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	63	13	37	8	16	32
6:30	85	8	45	8	25	24
6:45	93	23	77	12	29	54
7:00	102	18	72	16	38	44
7:15	153	10	74	13	41	40
7:30	161	26	64	13	38	46
7:45	138	18	78	10	40	51
8:00	137	26	51	12	18	37
8:15	112	26	54	13	31	46
8:30	95	16	49	13	22	40
8:45	97	13	52	3	22	44

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

434                      60                      268                      48                      133                      162

30th Highest hour factor= 0.92/0.80                      1.15

Traffic Counts (AM) Future

Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	67	13	39	9	17	34
6:30	90	9	48	9	27	26
6:45	99	24	82	12	31	57
7:00	109	20	77	17	40	46
7:15	162	11	78	13	44	43
7:30	171	28	68	13	40	49
7:45	146	20	83	11	43	54
8:00	145	28	54	12	20	39
8:15	118	28	57	13	33	49
8:30	101	17	52	13	23	43
8:45	103	13	55	4	23	46

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

460                      63                      284                      51                      142                      172

Assume 2% growth rate for 3 years to full build

Factor = 1.061208

Traffic Counts (PM)

Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	79	15	39	6	51	46
14:45	65	19	36	3	53	36
15:00	74	20	39	6	38	49
15:15	63	22	58	9	83	41
15:30	99	18	43	5	45	53
15:45	55	24	33	8	69	61
16:00	69	23	51	13	55	61
16:15	67	24	39	10	76	73

NB Coldbrook is traffic heading towards the Dysart's

Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

281                  76                  172                  24                  225                  172

# Traffic Counts (PM) Factored

Date: 4/27/2016

## Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	91	17	45	7	59	53
14:45	75	22	41	3	61	41
15:00	85	23	45	7	44	56
15:15	72	25	67	10	95	47
15:30	114	21	49	6	52	61
15:45	63	28	38	9	79	70
16:00	79	26	59	15	63	70
16:15	77	28	45	12	87	84

NB Coldbrook is traffic heading towards the Dysart's

Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

323	87	198	28	259	198
-----	----	-----	----	-----	-----

30th Highest hour factor = 0.92/0.8

1.15

# Traffic Counts (PM) Future

Date: 4/27/2016

## Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	96	18	48	7	62	56
14:45	79	23	44	4	65	44
15:00	90	24	48	7	46	60
15:15	77	27	71	11	101	50
15:30	121	22	52	6	55	65
15:45	67	29	40	10	84	74
16:00	84	28	62	16	67	74
16:15	82	29	48	12	93	89

NB Coldbrook is traffic heading towards the Dysart's

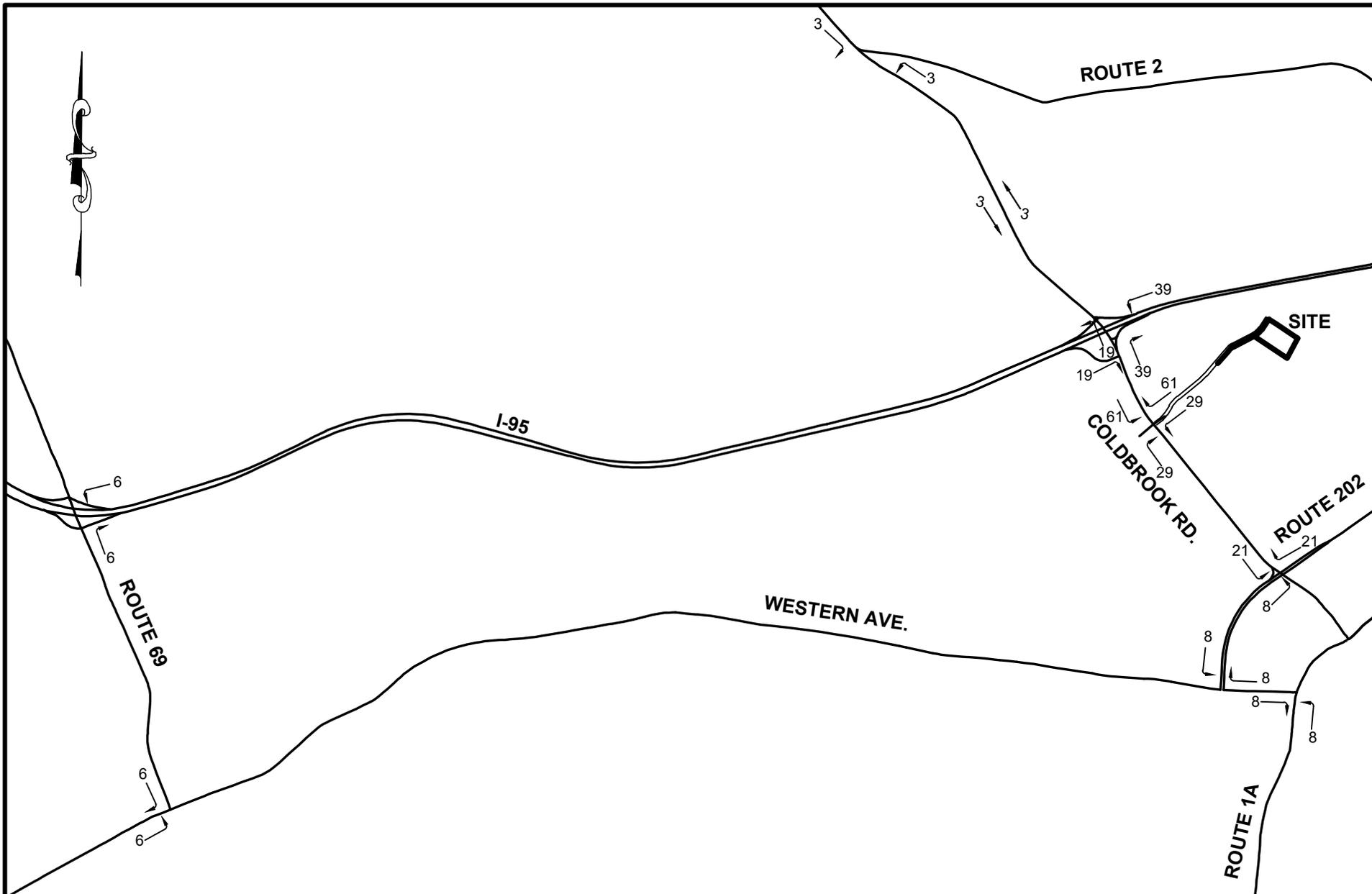
Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

343	93	210	29	275	210
-----	----	-----	----	-----	-----

Assume 2% growth rate for 3 years to full build

Factor = 1.061208



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **DAILY TRUCKS**

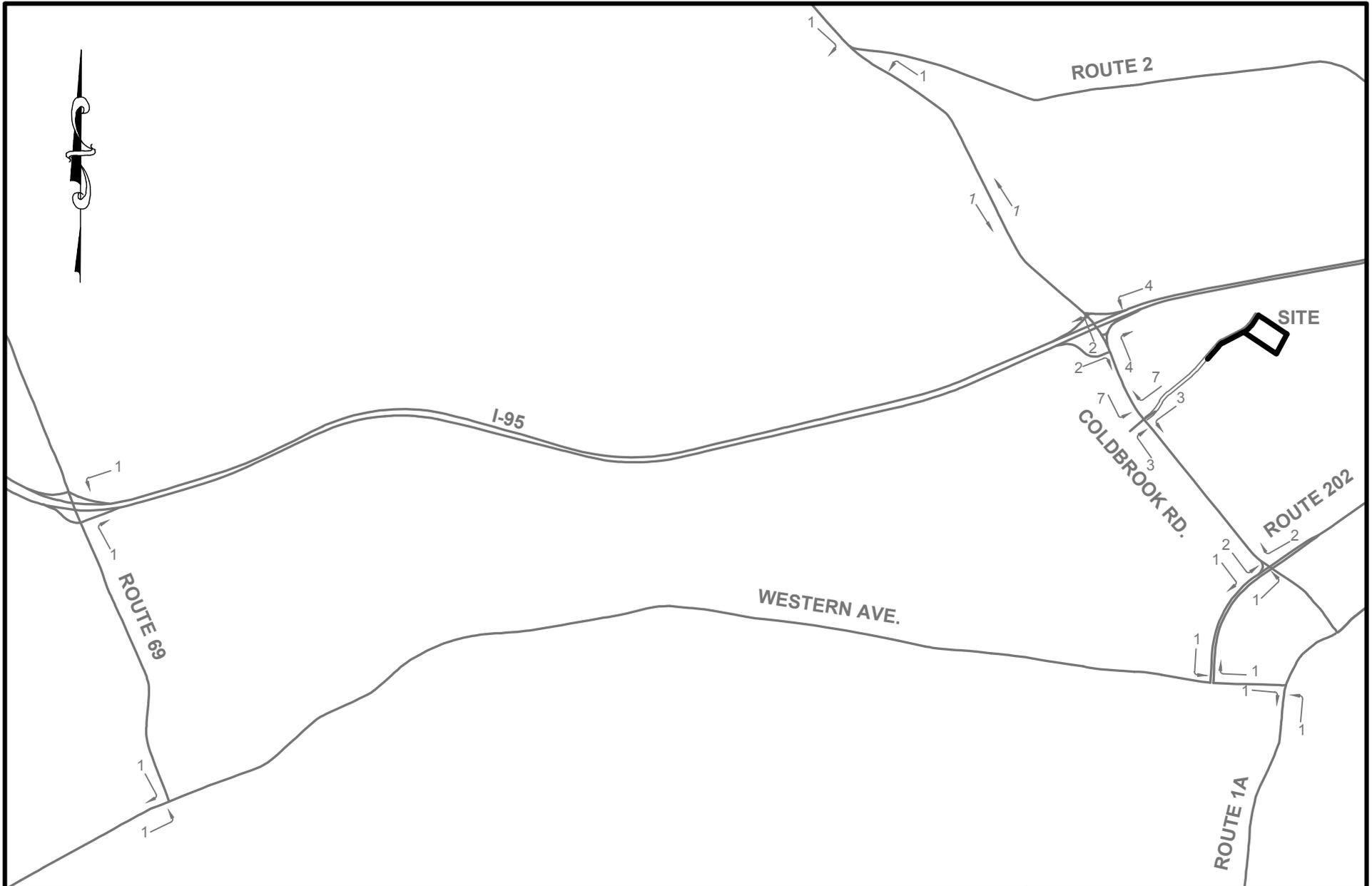
DWG: **SK101**

JN: 11293.001  
SCALE: NTS

BY: BTH  
DATE: 4/29/2016

REV:  
REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **AM PEAK TRUCKS**

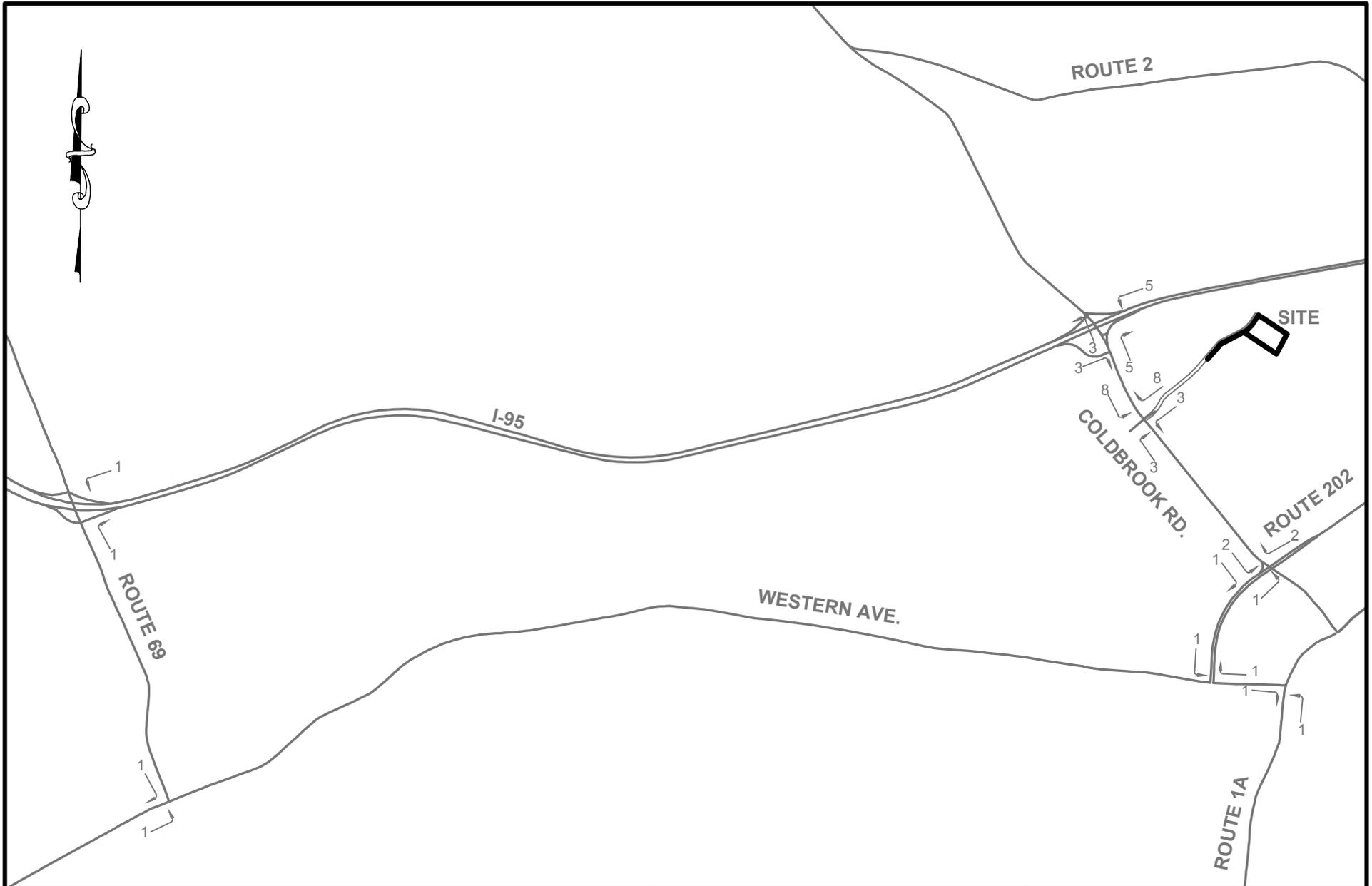
DWG: **SK102**

JN: 11293.001  
SCALE: NTS

BY: BTH  
DATE: 4/29/2016

REV:  
REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **PM PEAK TRUCKS**

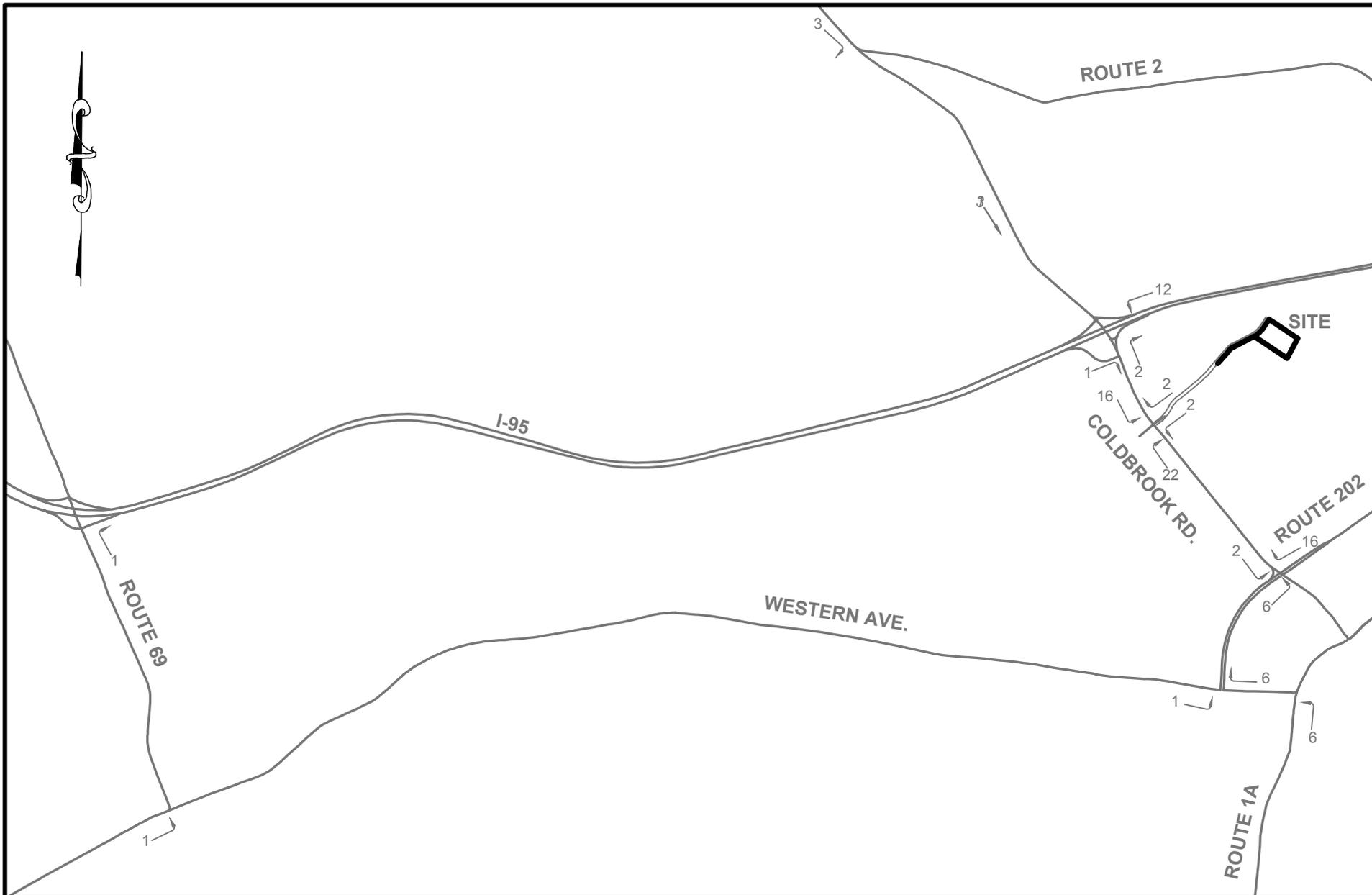
DWG: **SK103**

JN: 11293.001  
SCALE: NTS

BY: BTH  
DATE: 4/29/2016

REV:  
REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

DWG: **SK104**

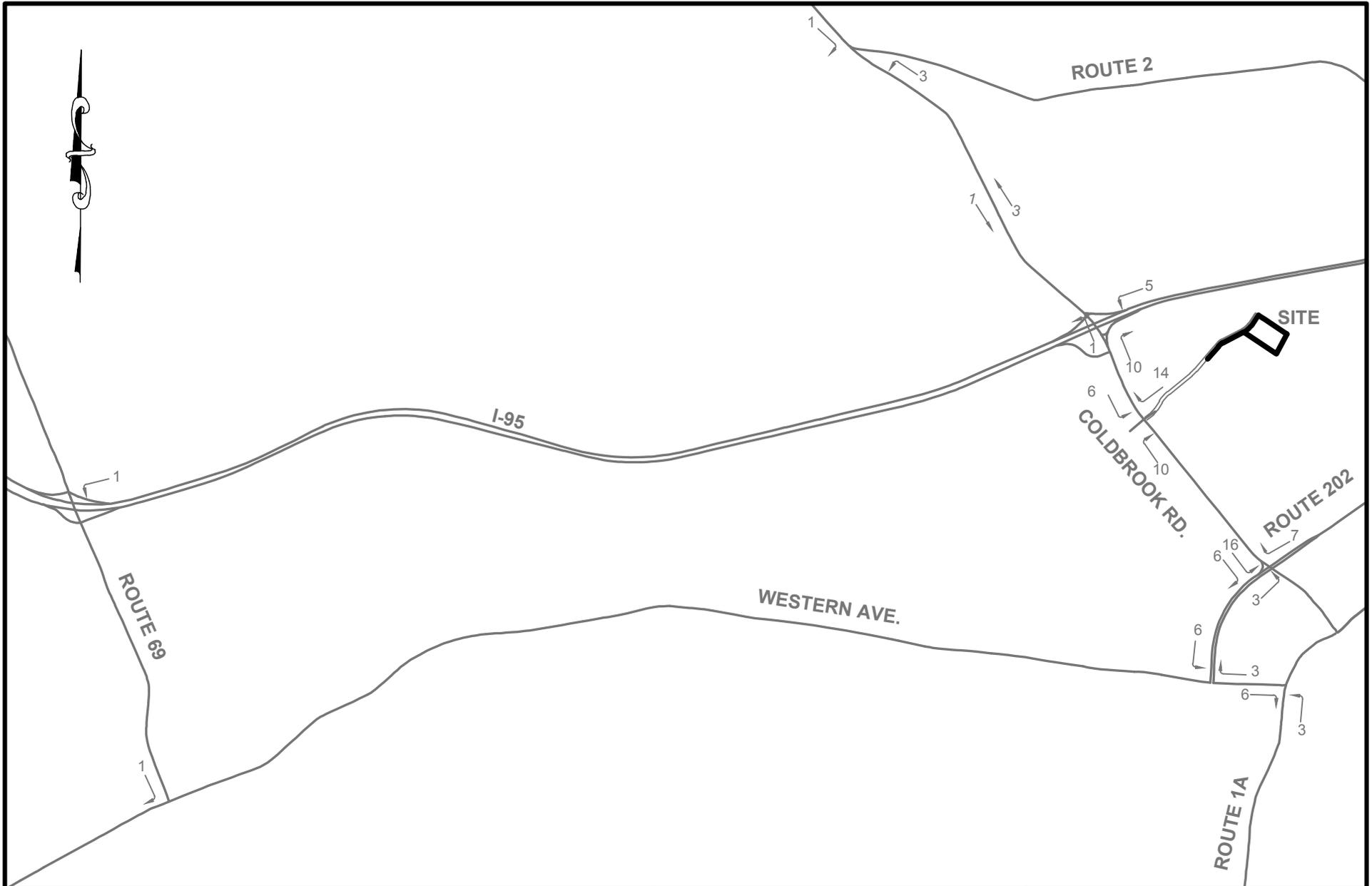
BY: BTH  
DATE: 4/29/2016

SHEET TITLE: **AM PEAK EMPLOYEES**

JN: 11293.001  
SCALE: NTS

REV:  
REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **PM PEAK EMPLOYEES**

DWG: **SK106**

JN: 11293.001  
SCALE: NTS

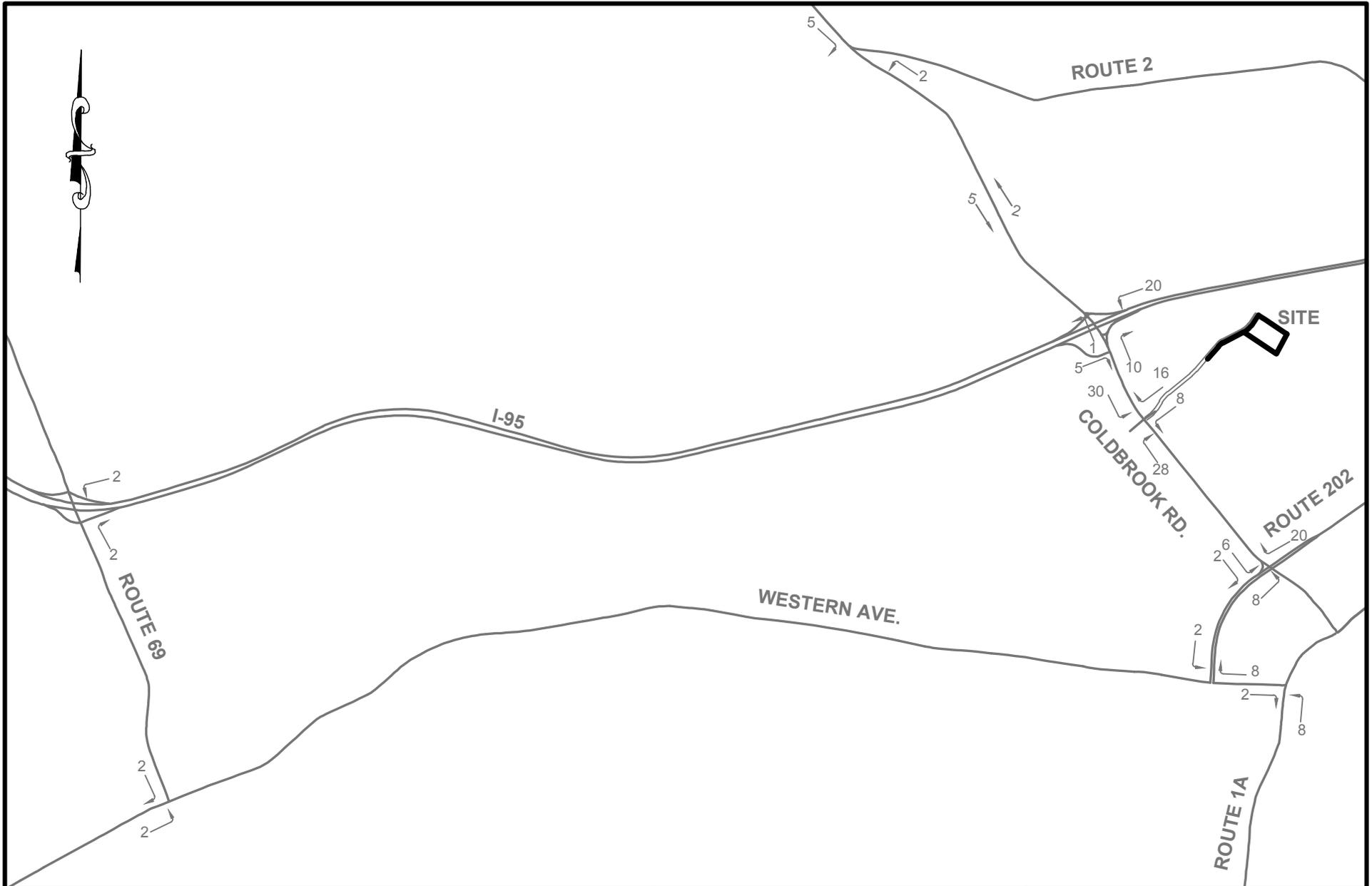
BY: BTH

DATE: 4/29/2016

REV:

REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **AM PEAK PCE**

DWG: **SK105**

JN: 11293.001  
SCALE: NTS

BY: BTH

DATE: 4/29/2016

REV:

REV DATE:

**CES** INC  
Engineers • Environmental Scientists • Surveyors





COLDBROOK RD.

SITE ENTRANCE

HO BOUCHARD ENTRANCE

0 (0)  
230 (322)  
17 (7)

0 (0)  
267 (312)  
11 (2)

4 (5)  
0 (0)  
4 (11)

**NOTE:**

AM 6:30 - 7:30 AM  
(PM) 2:30 - 3:30 PM - COUNT  
USED FOR ANALYSIS  
WAS 3:00 - 4:00 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

DWG: **SK111**

BY: **BTH**

DATE: **4/29/2016**

SHEET TITLE: **FUTURE TRAFFIC (2018)  
NO BUILD**

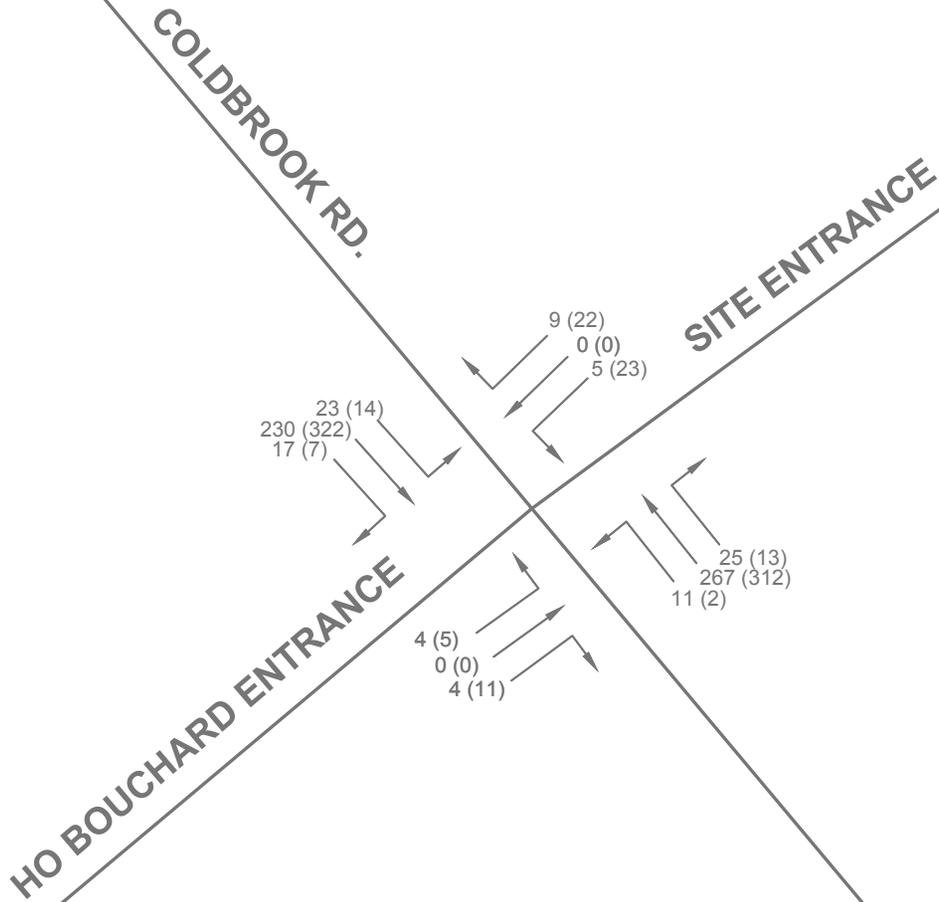
JN: **11293.001**

REV:

SCALE: **NTS**

REV DATE:





**NOTE:**

AM 6:30 - 7:30 AM  
(PM) 2:30 - 3:30 PM - COUNT  
USED FOR ANALYSIS  
WAS 3:00 - 4:00 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET TITLE: **FUTURE TRAFFIC (2018)  
FULL BUILDOUT**

DWG: **SK110**

JN: 11293.001

SCALE: NTS

BY: BTH

DATE: 4/29/2016

REV:

REV DATE:





COLDBROOK RD.

I-95 SB OFF RAMP

434 (323)

133 (259)

268 (198)  
48 (28)

I-95 SB ON RAMP

**NOTE:**

AM 6:30 - 7:30 AM  
(PM) 2:30 - 3:30 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

DWG: **SK112**

BY: BTH

DATE: 4/29/2016

SHEET TITLE: **I-95 SB RAMPS  
EXISTING TRAFFIC**

JN: 11293.001

REV:

SCALE: NTS

REV DATE:





COLDBROOK RD.

I-95 SB OFF RAMP

451 (336)

139 (269)

279 (206)  
50 (29)

I-95 SB ON RAMP

**NOTE:**

AM 6:30 - 7:30 AM  
(PM) 2:30 - 3:30 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

DWG: **SK109**

BY: BTH

DATE: 4/29/2016

SHEET TITLE: **I-95 SB RAMPS  
FUTURE TRAFFIC (2018) NO BUILD**

JN: 11293.001

REV:

SCALE: NTS

REV DATE:





COLDBROOK RD.

I-95 SB OFF RAMP

453 (337)

155 (279)

282 (209)  
52 (33)

I-95 SB ON RAMP

**NOTE:**

AM 6:30 - 7:30 AM  
(PM) 2:30 - 3:30 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

DWG: **SK108**

BY: BTH

DATE: 4/29/2016

SHEET TITLE: **I-95 SB RAMPS  
FUTURE TRAFFIC (2018) FULL BUILDOUT**

JN: 11293.001

REV:

SCALE: NTS

REV DATE:





Hermon

Hampden

64503  
38972

38037

38034

38035

41164

39070

40692

38889

40302

40299

39611

39612

39613

40682

39609

39608

63450

39607

63449

39606

70488

39605



Bangor

Hampden

US HWY 202

60577

41364

60578

37950

60575

39615

59998

70488

38224

38228

ROAD RD

ODLIN RD

195 SB

AMMO PARK

UNIMED PARK

CAREY CIR

COMMERCE BL

HAMEL AV

MARINER RD

OLD COUNTRY RD

SCHOOL HOUSE LN

TRIANGLE RD

KELLY LN

MAIN RD N

PERRY RD

GODSOE RD

CROSBY ST

THATCHER ST

DILLINGHAM ST

OLIVE ST

OLIVE HTS

MAIN ST

NADINES LN

MEGAN RD

COVE RD

SPAIN ST

40482

# Crash Summary Report

## Report Selections and Input Parameters

### REPORT SELECTIONS

Crash Summary I     
  Section Detail     
  Crash Summary II     
  1320 Public     
  1320 Private     
  1320 Summary

### REPORT DESCRIPTION

Rte 202 Cold Brook Rd and Western Ave area in Hampden

### REPORT PARAMETERS

Year 2013, Start Month 1 through Year 2015 End Month: 12

Route: <b>1900553</b>	Start Node: <b>38037</b> End Node: <b>39612</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node
Route: <b>0202X</b>	Start Node: <b>39608</b> End Node: <b>41364</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input type="checkbox"/> Exclude First Node <input type="checkbox"/> Exclude Last Node
Route: <b>0202S</b>	Start Node: <b>39613</b> End Node: <b>39612</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input checked="" type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node
Route: <b>0202S</b>	Start Node: <b>39612</b> End Node: <b>39608</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input checked="" type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node
Route: <b>0202S</b>	Start Node: <b>60576</b> End Node: <b>60575</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node
Route: <b>0009X</b>	Start Node: <b>39608</b> End Node: <b>39606</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input checked="" type="checkbox"/> Exclude First Node <input type="checkbox"/> Exclude Last Node
Route: <b>0009W</b>	Start Node: <b>63450</b> End Node: <b>39608</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input checked="" type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node
Route: <b>0009W</b>	Start Node: <b>39606</b> End Node: <b>63449</b>	Start Offset: <b>0</b> End Offset: <b>0</b>	<input checked="" type="checkbox"/> Exclude First Node <input checked="" type="checkbox"/> Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

# Crash Summary I

Nodes															
Node	Route - MP	Node Description	U/R	Total Crashes	K	Injury A	Crashes B	Crashes C	PD	Percent Annual M Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF	
A38037	1900553 - 1.97	Int of COLDBROOK RD RAMP OFF TO COLD BROOK RD	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
												Statewide Crash Rate:	0.03		
A64503	1900553 - 2	Int of COLDBROOK RD RD INV 3201739	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
												Statewide Crash Rate:	0.03		
A38972	1900553 - 2.02	TL Hampden Hermon	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
												Statewide Crash Rate:	0.03		
P41276	1900553 - 2.03	Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	1	4	0	0	2	0	2	50.0	5.557	0.24	0.11	2.20	
												Statewide Crash Rate:	0.03		
38034	1900553 - 2.16	Int of COLDBROOK RD RAMP CON	1	2	0	0	0	0	2	0.0	2.821	0.24	0.12	1.90	
												Statewide Crash Rate:	0.03		
38035	1900553 - 2.23	Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	1	0	0	0	0	0	0	0.0	2.308	0.00	0.13	0.00	
												Statewide Crash Rate:	0.03		
41164	1900553 - 2.27	Int of COLDBROOK RD RAMP E OFF TO COLD BROOK RD	1	2	0	0	0	0	2	0.0	3.080	0.22	0.12	1.76	
												Statewide Crash Rate:	0.03		
39070	1900553 - 2.47	Int of COLDBROOK RD, OLD COLDBROOK RD	1	0	0	0	0	0	0	0.0	2.291	0.00	0.41	0.00	
												Statewide Crash Rate:	0.13		
40692	1900553 - 2.70	Int of BRYER LN COLDBROOK RD	1	1	0	0	0	0	1	0.0	2.196	0.15	0.42	0.00	
												Statewide Crash Rate:	0.13		
38889	1900553 - 3.18	Int of COLDBROOK RD, PAPER MILL RD	1	0	0	0	0	0	0	0.0	2.157	0.00	0.42	0.00	
												Statewide Crash Rate:	0.13		
40302	1900553 - 3.36	Int of COLDBROOK RD LINDSEY WY	1	0	0	0	0	0	0	0.0	2.022	0.00	0.42	0.00	
												Statewide Crash Rate:	0.13		
40299	1900553 - 3.60	Int of COLDBROOK RD, EMERSON DR	1	0	0	0	0	0	0	0.0	2.085	0.00	0.42	0.00	
												Statewide Crash Rate:	0.13		
39611	1900553 - 3.72	Int of COLDBROOK RD RAMP CON	1	0	0	0	0	0	0	0.0	1.660	0.00	0.45	0.00	
												Statewide Crash Rate:	0.13		
39608	0202X - 164.61	Int of ENT HAMPDEN ACADEMY US HWY 202 WESTERN /	9	18	0	0	1	5	12	33.3	5.534	1.08	1.16	0.00	
												Statewide Crash Rate:	0.67		
39609	0202X - 164.95	BRG 6079 US HWY 202 over SOUADABSCOOK STREAM	1	0	0	0	0	0	0	0.0	2.122	0.00	0.37	0.00	
												Statewide Crash Rate:	0.11		
39612	0202X - 165.37	Int of COLD BROOK RD COLDBROOK RD US HWY 202	9	11	0	0	0	1	10	9.1	4.726	0.78	1.19	0.00	
												Statewide Crash Rate:	0.67		
39613	0202X - 165.69	Non Int US HWY 202	1	0	0	0	0	0	0	0.0	3.184	0.00	0.33	0.00	
												Statewide Crash Rate:	0.11		
40682	0202X - 165.82	Int of MAIN TRL US HWY 202	1	2	0	0	1	1	0	100.0	3.313	0.20	0.33	0.00	
												Statewide Crash Rate:	0.11		
70488	0202X - 167.09	Int of CROSBY WY US HWY 202	1	0	0	0	0	0	0	0.0	1.646	0.00	0.39	0.00	
												Statewide Crash Rate:	0.11		
59998	0202X - 167.69	Int of CAREY CIR US HWY 202	1	1	0	1	0	0	0	100.0	3.146	0.11	0.34	0.00	
												Statewide Crash Rate:	0.11		
39615	0202X - 168.08	Int of MECAW RD PENOBSCOT MEADOW DR US HWY 202	1	6	0	2	1	0	3	50.0	4.139	0.48	0.31	1.55	
												Statewide Crash Rate:	0.11		
60575	0202X - 168.15	Non Int US HWY 202	1	0	0	0	0	0	0	0.0	3.877	0.00	0.32	0.00	
												Statewide Crash Rate:	0.11		

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

## Crash Summary I

Nodes															
Node	Route - MP	Node Description	U/R	Total Crashes	K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF	
37950	0202X - 168.37	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.891	0.00	0.43	0.00	
												Statewide Crash Rate: 0.13			
41364	0202X - 168.44	Int of RAMP ON FROM US 202 US 202	2	0	0	0	0	0	0	0.0	1.891	0.00	0.41	0.00	
												Statewide Crash Rate: 0.12			
60571	0202S - 1.77	Int of RAMP CON US HWY 202	1	0	0	0	0	0	0	0.0	2.218	0.00	0.37	0.00	
												Statewide Crash Rate: 0.11			
60576	0202S - 0.88	Int of RAMP OFF TO US-202, US HWY 202	2	0	0	0	0	0	0	0.0	1.048	0.00	0.46	0.00	
												Statewide Crash Rate: 0.12			
60577	0202S - 1.04	Int of RAMP OFF TO US 202 US HWY 202	2	0	0	0	0	0	0	0.0	1.920	0.00	0.41	0.00	
												Statewide Crash Rate: 0.12			
60578	0202S - 1.15	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.955	0.00	0.43	0.00	
												Statewide Crash Rate: 0.13			
63450	0009X - 188.40	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.842	0.00	0.32	0.00	
												Statewide Crash Rate: 0.11			
39607	0009X - 188.61	Int of DEWEY ST WESTERN AV	1	0	0	0	0	0	0	0.0	3.529	0.00	0.33	0.00	
												Statewide Crash Rate: 0.11			
63449	0009X - 188.73	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.367	0.00	0.33	0.00	
												Statewide Crash Rate: 0.11			
39606	0009X - 188.75	Int of CANOE CLUB RD MAIN RD N WESTERN AV	9	7	0	0	0	1	6	14.3	4.855	0.48	1.19	0.00	
												Statewide Crash Rate: 0.67			
<b>Study Years: 3.00</b>			<b>NODE TOTALS:</b>		54	0	3	5	8	38	29.6	84.380	0.21	0.27	0.78

## Crash Summary I

## Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	Injury Crashes				Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
								A	B	C	PD					
38037	64503	3116304	0 - 0.03	1900553 - 1.97 Int of COLDBROOK RD RAMP OFF TO COLD BROOK RD	0.03	1	0	0	0	0	0	0.0	0.00087	0.00	638.37	0.00
														Statewide Crash Rate: 171.11		
64503	38972	3120227	0 - 0.02	1900553 - 2 Int of COLDBROOK RD RD INV 3201739	0.02	1	0	0	0	0	0	0.0	0.00053	0.00	702.02	0.00
														Statewide Crash Rate: 171.11		
38972	41276	3110802	0 - 0.01	1900553 - 2.02 TL Hampden Hermon	0.01	1	0	0	0	0	0	0.0	0.00034	0.00	736.38	0.00
														Statewide Crash Rate: 171.11		
41276	38034	3944372	0 - 0.13	1900553 - 2.03 Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	0.13	1	2	0	0	0	2	0.0	0.00458	145.69	422.28	0.00
														Statewide Crash Rate: 171.11		
38034	38035	3110617	0 - 0.07	1900553 - 2.16 Int of COLDBROOK RD RAMP CON	0.07	1	0	0	0	0	0	0.0	0.00149	0.00	563.65	0.00
														Statewide Crash Rate: 171.11		
38035	41164	3110619	0 - 0.04	1900553 - 2.23 Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	0.04	1	0	0	0	0	0	0.0	0.00100	0.00	619.99	0.00
														Statewide Crash Rate: 171.11		
39070	41164	3124219	0 - 0.20	1900553 - 2.27 Int of COLDBROOK RD, OLD COLDBROOK RD	0.20	1	4	0	0	0	4	0.0	0.00469	284.32	419.66	0.00
														Statewide Crash Rate: 171.11		
39070	40692	3110833	0 - 0.23	1900553 - 2.47 Int of COLDBROOK RD, OLD COLDBROOK RD	0.23	1	1	0	0	0	1	0.0	0.00511	65.21	410.61	0.00
														Statewide Crash Rate: 171.11		
38889	40692	3110751	0 - 0.48	1900553 - 2.70 Int of COLDBROOK RD, PAPER MILL RD	0.48	1	3	0	0	0	3	0.0	0.01035	96.66	346.27	0.00
														Statewide Crash Rate: 171.11		
38889	40302	3110750	0 - 0.18	1900553 - 3.18 Int of COLDBROOK RD, PAPER MILL RD	0.18	1	1	0	0	0	1	100.0	0.00367	90.92	446.96	0.00
														Statewide Crash Rate: 171.11		
40299	40302	3111224	0 - 0.24	1900553 - 3.36 Int of COLDBROOK RD, EMERSON DR	0.24	1	1	0	0	1	0	100.0	0.00475	70.25	418.40	0.00
														Statewide Crash Rate: 171.11		
39611	40299	3110964	0 - 0.12	1900553 - 3.60 Int of COLDBROOK RD RAMP CON	0.12	1	0	0	0	0	0	0.0	0.00260	0.00	488.35	0.00
														Statewide Crash Rate: 171.11		
39611	39612	3132117	0 - 0.06	1900553 - 3.72 Int of COLDBROOK RD RAMP CON	0.06	1	0	0	0	0	0	0.0	0.00069	0.00	670.09	0.00
														Statewide Crash Rate: 171.11		
39608	39609	3115292	0 - 0.34	0202X - 164.61 Int of ENT HAMPDEN ACADEMY US HWY 202 WESTERN AV	0.34	1	3	0	0	0	1	33.3	0.00721	138.62	256.53	0.00
														Statewide Crash Rate: 102.42		
39609	39612	3939665	0 - 0.42	0202X - 164.95 BRG 6079 US HWY 202 over SOUADABSCOOK STREAM	0.42	1	1	0	0	0	0	0.0	0.00891	37.41	243.16	0.00
														Statewide Crash Rate: 102.42		
39612	39613	3140142	0 - 0.32	0202X - 165.37 Int of COLD BROOK RD COLDBROOK RD US HWY 202	0.32	1	1	0	0	0	0	0.0	0.00510	65.35	280.49	0.00
														Statewide Crash Rate: 102.42		
39613	40682	3121370	0 - 0.13	0202X - 165.69 Non Int US HWY 202	0.13	1	0	0	0	0	0	0.0	0.00413	0.00	296.18	0.00
														Statewide Crash Rate: 102.42		
70488	40682	3562196	0 - 1.27	0202X - 165.82 Int of CROSBY WY US HWY 202	1.27	1	14	0	0	0	14	0.0	0.04177	111.72	172.07	0.00
														Statewide Crash Rate: 102.42		

## Crash Summary I

## Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	Injury Crashes				Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF		
								A	B	C	PD							
59998	70488	3562195	0 - 0.60	0202X - 167.09 US 202	0.60	1	3	0	0	0	0	3	0.0	0.01973	50.67	201.12	0.00	
Int of CAREY CIR US HWY 202 Statewide Crash Rate: 102.42																		
59998	39615	3939462	0 - 0.39	0202X - 167.69 US 202	0.39	1	3	0	0	0	1	2	33.3	0.01168	85.60	227.41	0.00	
Int of CAREY CIR US HWY 202 Statewide Crash Rate: 102.42																		
60575	39615	2079512	0 - 0.07	0202X - 168.08 US 202	0.07	1	2	0	0	0	0	2	0.0	0.00269	247.65	330.60	0.00	
Non Int US HWY 202 Statewide Crash Rate: 102.42																		
37950	60575	3139144	0 - 0.22	0202X - 168.15 US 202	0.22	1	0	0	0	0	0	0	0.0	0.00416	0.00	295.70	0.00	
TL Bangor Hampden Statewide Crash Rate: 102.42																		
37950	41364	3132064	0 - 0.07	0202X - 168.37 US 202	0.07	2	0	0	0	0	0	0	0.0	0.00132	0.00	615.53	0.00	
TL Bangor Hampden Statewide Crash Rate: 185.19																		
39613	39612	3139140	0 - 0.32	0202S - 1.37 US 202 SB	0.32	1	2	0	0	0	0	2	0.0	0.00508	131.30	280.83	0.00	
Non Int US HWY 202 Statewide Crash Rate: 102.42																		
39612	60571	3121371	0 - 0.08	0202S - 1.69 US 202 SB	0.08	1	0	0	0	0	0	0	0.0	0.00096	0.00	414.65	0.00	
Int of COLD BROOK RD COLDBROOK RD US HWY 202 Statewide Crash Rate: 102.42																		
60571	39608	3115295	0 - 0.70	0202S - 1.77 US 202 SB	0.70	1	2	0	0	1	0	1	50.0	0.01553	42.94	212.48	0.00	
Int of RAMP CON US HWY 202 Statewide Crash Rate: 102.42																		
60576	60577	3121373	0 - 0.16	0202S - 0.88 US 202 SB	0.16	2	0	0	0	0	0	0	0.0	0.00168	0.00	580.12	0.00	
Int of RAMP OFF TO US-202, US HWY 202 Statewide Crash Rate: 185.19																		
60577	60578	3118435	0 - 0.11	0202S - 1.04 US 202 SB	0.11	2	0	0	0	0	0	0	0.0	0.00215	0.00	544.16	0.00	
Int of RAMP OFF TO US 202 US HWY 202 Statewide Crash Rate: 185.19																		
60578	60575	3116045	0 - 0.22	0202S - 1.15 US 202 SB	0.22	1	0	0	0	0	0	0	0.0	0.00430	0.00	293.19	0.00	
TL Bangor Hampden Statewide Crash Rate: 102.42																		
63450	39608	3120362	0 - 0.06	0009X - 188.34 ST RTE 9	0.06	1	0	0	0	0	0	0	0.0	0.00120	0.00	397.78	0.00	
Non Int WESTERN AV Statewide Crash Rate: 102.42																		
39607	63450	3116114	0 - 0.21	0009X - 188.40 ST RTE 9	0.21	1	1	0	0	1	0	0	100.0	0.00771	43.24	252.22	0.00	
Int of DEWEY ST WESTERN AV Statewide Crash Rate: 102.42																		
63449	39607	3139582	0 - 0.12	0009X - 188.61 ST RTE 9	0.12	1	0	0	0	0	0	0	0.0	0.00404	0.00	297.97	0.00	
Non Int WESTERN AV Statewide Crash Rate: 102.42																		
39606	63449	3129073	0 - 0.02	0009X - 188.73 ST RTE 9	0.02	1	0	0	0	0	0	0	0.0	0.00034	0.00	427.68	0.00	
Int of CANOE CLUB RD MAIN RD N WESTERN AV Statewide Crash Rate: 102.42																		
63450	39608	3116115	0 - 0.06	0009W - 0.48 ST RTE 9W	0.06	1	0	0	0	0	0	0	0.0	0.00100	0.00	411.80	0.00	
Non Int WESTERN AV Statewide Crash Rate: 102.42																		
39606	63449	3139583	0 - 0.02	0009W - 0.46 ST RTE 9W	0.02	1	0	0	0	0	0	0	0.0	0.00034	0.00	427.68	0.00	
Int of CANOE CLUB RD MAIN RD N WESTERN AV Statewide Crash Rate: 102.42																		
<b>Study Years:</b> 3.00					<b>Section Totals:</b>		7.72	44	0	0	3	3	38	13.6	0.19169	76.51	155.43	0.49
					<b>Grand Totals:</b>		7.72	98	0	3	8	11	76	22.4	0.19169	170.41	189.96	0.90

## Crash Summary

## Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes					Crash Report	Crash Date	Crash Mile Point	Injury Degree
						K	A	B	C	PD				
38037	64503	3116304	0 - 0.03	1900553 - 1.97	0	0	0	0	0	0				
64503	38972	3120227	0 - 0.02	1900553 - 2	0	0	0	0	0	0				
38972	41276	3110802	0 - 0.01	1900553 - 2.02	0	0	0	0	0	0				
41276	38034	3944372	0 - 0.13	1900553 - 2.03	2	0	0	0	0	2	2014-37966	06/30/2014	2.12	PD
											2013-872	01/08/2013	2.14	PD
38034	38035	3110617	0 - 0.07	1900553 - 2.16	0	0	0	0	0	0				
38035	41164	3110619	0 - 0.04	1900553 - 2.23	0	0	0	0	0	0				
39070	41164	3124219	0 - 0.20	1900553 - 2.27	4	0	0	0	0	4	2014-4916	02/09/2014	2.31	PD
											2015-14980	05/18/2015	2.34	PD
											2014-25819	09/24/2014	2.37	PD
											2014-6614	02/20/2014	2.43	PD
39070	40692	3110833	0 - 0.23	1900553 - 2.47	1	0	0	0	0	1	2015-49288	11/24/2015	2.61	PD
38889	40692	3110751	0 - 0.48	1900553 - 2.70	3	0	0	0	0	3	2014-26560	10/01/2014	3	PD
											2015-47370	10/28/2015	3.03	PD
											2014-31104	11/10/2014	3.14	PD
38889	40302	3110750	0 - 0.18	1900553 - 3.18	1	0	0	0	1	0	2013-20271	08/12/2013	3.24	C
40299	40302	3111224	0 - 0.24	1900553 - 3.36	1	0	0	1	0	0	2013-12961	05/16/2013	3.48	B
39611	40299	3110964	0 - 0.12	1900553 - 3.60	0	0	0	0	0	0				
39611	39612	3132117	0 - 0.06	1900553 - 3.72	0	0	0	0	0	0				
39608	39609	3115292	0 - 0.34	0202X - 164.61	3	0	0	0	1	2	2013-28349	11/08/2013	164.79	C
											2014-30706	11/10/2014	164.84	PD
											2013-15804	06/27/2013	164.94	PD
39609	39612	3939665	0 - 0.42	0202X - 164.95	1	0	0	0	0	1	2013-18770	07/31/2013	165.20	PD
39612	39613	3140142	0 - 0.32	0202X - 165.37	1	0	0	0	0	1	2014-27490	10/11/2014	165.67	PD
39613	40682	3121370	0 - 0.13	0202X - 165.69	0	0	0	0	0	0				

## Crash Summary

## Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	K	Injury Crashes			Crash Report	Crash Date	Crash Mile Point	Injury Degree	
							A	B	C					PD
70488	40682	3562196	0 - 1.27	0202X - 165.82	14	0	0	0	0	14	2014-35455	12/15/2014	166.01	PD
											2014-27936	10/16/2014	166.02	PD
											2013-1285	01/14/2013	166.38	PD
											2014-7799	02/22/2014	166.38	PD
											2014-9797	03/22/2014	166.53	PD
											2014-36937	12/25/2014	166.60	PD
											2013-7297	03/15/2013	166.62	PD
											2015-41219	09/02/2015	166.69	PD
											2015-18808	06/28/2015	166.82	PD
											2014-2093	01/11/2014	166.82	PD
											2015-17546	06/08/2015	166.82	PD
											2014-32863	11/25/2014	166.83	PD
											2014-9800	03/21/2014	166.95	PD
											2014-9799	03/27/2014	166.98	PD
59998	70488	3562195	0 - 0.60	0202X - 167.09	3	0	0	0	0	3	2013-18991	08/03/2013	167.14	PD
											2015-14752	05/13/2015	167.35	PD
											2014-32869	11/26/2014	167.56	PD
59998	39615	3939462	0 - 0.39	0202X - 167.69	3	0	0	0	1	2	2015-13192	04/22/2015	167.76	PD
											2014-36491	12/18/2014	167.98	C
											2015-48800	11/22/2015	168.02	PD
60575	39615	2079512	0 - 0.07	0202X - 168.08	2	0	0	0	0	2	2013-25491	10/14/2013	168.11	PD
											2015-18463	06/23/2015	168.12	PD
37950	60575	3139144	0 - 0.22	0202X - 168.15	0	0	0	0	0	0				
37950	41364	3132064	0 - 0.07	0202X - 168.37	0	0	0	0	0	0				
39613	39612	3139140	0 - 0.32	0202S - 1.37	2	0	0	0	0	2	2015-47950	11/15/2015	1.46	PD
											2013-27931	11/06/2013	1.54	PD
39612	60571	3121371	0 - 0.08	0202S - 1.69	0	0	0	0	0	0				
60571	39608	3115295	0 - 0.70	0202S - 1.77	2	0	0	1	0	1	2014-31630	11/16/2014	1.87	PD
											2013-6782	03/04/2013	2.06	B
60576	60577	3121373	0 - 0.16	0202S - 0.88	0	0	0	0	0	0				
60577	60578	3118435	0 - 0.11	0202S - 1.04	0	0	0	0	0	0				
60578	60575	3116045	0 - 0.22	0202S - 1.15	0	0	0	0	0	0				
63450	39608	3120362	0 - 0.06	0009X - 188.34	0	0	0	0	0	0				
39607	63450	3116114	0 - 0.21	0009X - 188.40	1	0	0	1	0	0	2014-23227	08/15/2014	188.42	B

## Crash Summary

### Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	K	Injury Crashes			Crash Report	Crash Date	Crash Mile Point	Injury Degree
							A	B	C				
63449	39607	3139582	0 - 0.12	0009X - 188.61	0	0	0	0	0				
39606	63449	3129073	0 - 0.02	0009X - 188.73	0	0	0	0	0				
63450	39608	3116115	0 - 0.06	0009W - 0.48	0	0	0	0	0				
39606	63449	3139583	0 - 0.02	0009W - 0.46	0	0	0	0	0				
<b>Totals:</b>					44	0	0	3	3	38			

## Crash Summary II - Characteristics

### Crashes by Day and Hour

Day Of Week	AM											PM											Un	Tot		
	Hour of Day											Hour of Day														
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
SUNDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	2	2	0	2	0	0	1	0	0	11
MONDAY	0	0	1	2	0	0	1	1	2	0	1	0	1	0	1	0	4	1	0	0	2	1	1	0	0	19
TUESDAY	0	0	0	0	0	0	1	2	1	0	1	0	1	0	0	0	1	2	1	1	1	0	0	0	0	12
WEDNESDAY	0	0	0	0	1	1	0	1	2	1	1	1	0	0	2	1	0	2	3	0	1	0	0	0	0	17
THURSDAY	0	0	1	0	0	0	0	0	1	0	0	2	1	2	1	2	1	0	2	2	1	0	0	0	0	16
FRIDAY	0	1	0	0	0	0	0	0	2	0	0	3	0	0	1	0	2	1	1	1	1	0	0	0	0	13
SATURDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	3	0	1	0	1	1	0	1	0	0	10
<b>Totals</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>98</b>

### Vehicle Counts by Type

Unit Type	Total	Unit Type	Total
1-Passenger Car	91	23-Bicyclist	0
2-(Sport) Utility Vehicle	29	24-Witness	13
3-Passenger Van	7	25-Other	4
4-Cargo Van (10K lbs or Less)	2	<b>Total</b>	<b>176</b>
5-Pickup	20		
6-Motor Home	0		
7-School Bus	0		
8-Transit Bus	0		
9-Motor Coach	0		
10-Other Bus	0		
11-Motorcycle	3		
12-Moped	0		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	0		
17-Medium/Heavy Trucks (More than 10,000 lbs)	7		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	0		

## Crash Summary II - Characteristics

### Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	59	33	3	0	0	0	95
Ran Off Roadway	2	0	0	0	0	0	2
Failed to Yield Right-of-Way	17	1	1	0	0	0	19
Ran Red Light	3	2	0	0	0	0	5
Ran Stop Sign	1	0	0	0	0	0	1
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	4	3	0	0	0	0	7
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	1	0	0	0	0	1
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	2	9	1	0	0	0	12
Failed to Keep in Proper Lane	1	2	0	0	0	0	3
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	1	2	0	0	0	0	3
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	2	0	0	0	0	0	2
Over-Correcting/Over-Steering	0	1	0	0	0	0	1
Other Contributing Action	5	3	0	0	0	0	8
Unknown	0	0	0	0	0	0	0
<b>Total</b>	<b>97</b>	<b>57</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>159</b>

### Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	97	56	5	0	0	0	158
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
<b>Total</b>	<b>97</b>	<b>57</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>159</b>

### Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	17	0	0	0	0	17
20-24	13	0	0	0	0	13
25-29	19	0	0	0	0	19
30-39	27	0	0	0	0	27
40-49	23	0	0	0	0	23
50-59	33	0	0	0	0	33
60-69	15	0	0	0	0	15
70-79	8	0	0	0	0	8
80-Over	5	0	0	0	0	5
Unknown	3	0	0	0	0	3
<b>Total</b>	<b>163</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163</b>

## Crash Summary II - Characteristics

Most Harmful Event			
Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	3	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0		
6-Fell / Jumped from Motor Vehicle	0	<b>Total</b>	<b>160</b>
7-Thrown or Falling Object	2		
8-Other Non-Collision	4		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	25		
13-Motor Vehicle in Transport	118		
14-Parked Motor Vehicle	1		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	1		
16-Work Zone / Maintenance Equipment	1		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	1		
27-Guardrail Face	1		
28-Guardrail End	1		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	1		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post Pole or Support	1		

Traffic Control Devices		
Traffic Control Device	Total	
1-Traffic Signals (Stop & Go)	35	
2-Traffic Signals (Flashing)	1	
3-Advisory/Warning Sign	0	
4-Stop Signs - All Approaches	1	
5-Stop Signs - Other	9	
6-Yield Sign	0	
7-Curve Warning Sign	0	
8-Officer, Flagman, School Patrol	0	
9-School Bus Stop Arm	0	
10-School Zone Sign	0	
11-R.R. Crossing Device	0	
12-No Passing Zone	0	
13-None	51	
14-Other	1	
<b>Total</b>	<b>98</b>	

Injury Data		
Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	3	3
B	8	10
C	11	16
PD	76	0
<b>Total</b>	<b>98</b>	<b>29</b>

Road Character	
Road Grade	Total
1-Level	87
2-On Grade	11
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
<b>Total</b>	<b>98</b>

Light	
Light Condition	Total
1-Daylight	55
2-Dawn	1
3-Dusk	4
4-Dark - Lighted	14
5-Dark - Not Lighted	24
6-Dark - Unknown Lighting	0
7-Unknown	0
<b>Total</b>	<b>98</b>

**Crash Summary II - Characteristics****Crashes by Year and Month**

<b>Month</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
JANUARY	4	4	2	10
FEBRUARY	4	4	3	11
MARCH	5	5	1	11
APRIL	0	1	4	5
MAY	3	3	2	8
JUNE	1	5	4	10
JULY	2	0	0	2
AUGUST	3	1	2	6
SEPTEMBER	2	4	3	9
OCTOBER	1	5	1	7
NOVEMBER	3	5	4	12
DECEMBER	4	3	0	7
<b>Total</b>	<b>32</b>	<b>40</b>	<b>26</b>	<b>98</b>

Report is limited to the last 10 years of data.

## Crash Summary II - Characteristics

### Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	2	1	4	26	0	1	0	0	0	0	0	0	0	34
Head-on / Sideswipe	1	0	0	0	0	0	1	0	0	0	0	0	0	2
Intersection Movement	0	0	5	16	0	0	0	0	0	0	0	0	0	21
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	6	0	0	0	0	0	0	1	0	0	0	0	0	7
All Other Animal	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	0	1	0	0	2	1	0	0	0	0	0	0	5
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	25	1	0	0	0	0	0	0	0	0	0	0	0	26
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>38</b>	<b>2</b>	<b>10</b>	<b>42</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98</b>

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

## Crash Summary II - Characteristics

### Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
<b>Blowing Sand, Soil, Dirt</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Blowing Snow</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Clear</b>												
Dark - Lighted	9	2	0	0	0	0	0	0	0	0	0	11
Dark - Not Lighted	18	1	0	0	0	0	0	0	0	0	1	20
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	1	0	0	0	0	0	0	0	0	0	0	1
Daylight	37	0	0	0	0	0	0	3	0	0	1	41
Dusk	0	0	0	0	0	0	0	1	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Cloudy</b>												
Dark - Lighted	0	1	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	5	0	0	0	0	0	0	1	0	0	1	7
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

## Crash Summary II - Characteristics

### Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
<b>Fog, Smog, Smoke</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Rain</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	3	3
Dusk	0	0	0	0	0	0	0	0	0	0	2	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Severe Crosswinds</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

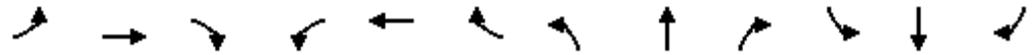
## Crash Summary II - Characteristics

### Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
<b>Sleet, Hail (Freezing Rain or Drizzle)</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	1	0	0	0	0	0	0	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Snow</b>												
Dark - Lighted	0	0	0	0	0	0	0	1	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	1	0	0	1	2
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	1	1	0	0	0	0	0	1	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	1	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>72</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98</b>

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & HO Bouchard

AM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	11	267	0	0	230	17	0	0	0	4	0	4
Peak Hour Factor	0.95	0.82	0.95	0.95	0.77	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	326	0	0	299	18	0	0	0	4	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	317			326			661	665	326	656	656	308
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	317			326			661	665	326	656	656	308
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	99	100	99
cM capacity (veh/h)	1244			1234			371	377	716	376	381	732
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	337	317	0	9								
Volume Left	12	0	0	4								
Volume Right	0	18	0	4								
cSH	1244	1234	1700	497								
Volume to Capacity	0.01	0.00	0.00	0.02								
Queue Length 95th (ft)	1	0	0	1								
Control Delay (s)	0.4	0.0	0.0	12.4								
Lane LOS	A		A	B								
Approach Delay (s)	0.4	0.0	0.0	12.4								
Approach LOS			A	B								
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			33.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
3: Coldbrook Road & HO Bouchard

AM Peak Hour  
5/2/2016



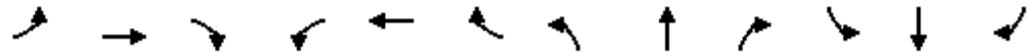
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	11	267	25	23	230	17	5	0	9	4	0	4
Peak Hour Factor	0.95	0.82	0.50	0.50	0.77	0.95	0.50	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	12	326	50	46	299	18	10	0	18	4	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	317			376			753	757	326	766	798	308
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	317			376			753	757	326	766	798	308
tC, single (s)	4.1			4.4			7.7	6.5	6.2	7.9	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.5			4.0	4.0	3.3	4.2	4.0	3.3
p0 queue free %	99			96			96	100	97	98	100	99
cM capacity (veh/h)	1244			1045			252	319	716	227	302	732

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	337	50	363	28	9
Volume Left	12	0	46	10	4
Volume Right	0	50	18	18	4
cSH	1244	1700	1045	431	347
Volume to Capacity	0.01	0.03	0.04	0.06	0.03
Queue Length 95th (ft)	1	0	3	5	2
Control Delay (s)	0.4	0.0	1.5	13.9	15.6
Lane LOS	A		A	B	C
Approach Delay (s)	0.3		1.5	13.9	15.6
Approach LOS				B	C

Intersection Summary		
Average Delay		1.5
Intersection Capacity Utilization	42.4%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & HO Bouchard

PM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	312	0	0	322	7	0	0	0	11	0	5
Peak Hour Factor	0.95	0.90	0.95	0.95	0.89	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	347	0	0	362	7	0	0	0	12	0	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	369			347			722	720	347	716	716	365
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			347			722	720	347	716	716	365
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	100			100			100	100	100	97	100	99
cM capacity (veh/h)	1189			1212			339	353	696	345	355	631

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	349	369	0	17
Volume Left	2	0	0	12
Volume Right	0	7	0	5
cSH	1189	1212	1700	402
Volume to Capacity	0.00	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.1	0.0	0.0	14.4
Lane LOS	A		A	B
Approach Delay (s)	0.1	0.0	0.0	14.4
Approach LOS			A	B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & HO Bouchard

PM Peak Hour  
 5/2/2016



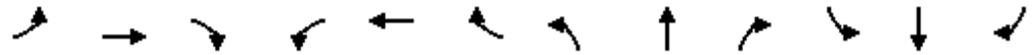
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	312	13	14	322	7	23	0	22	11	0	5
Peak Hour Factor	0.95	0.80	0.50	0.50	0.89	0.95	0.50	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	2	390	26	28	362	7	46	0	44	12	0	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	369			416			821	819	390	860	842	365
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			416			821	819	390	860	842	365
tC, single (s)	4.1			4.7			7.2	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.7			3.6	4.0	3.6	3.5	4.0	3.5
p0 queue free %	100			97			83	100	93	95	100	99
cM capacity (veh/h)	1189			901			272	300	592	249	291	631

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	392	26	397	90	17
Volume Left	2	0	28	46	12
Volume Right	0	26	7	44	5
cSH	1189	1700	901	369	307
Volume to Capacity	0.00	0.02	0.03	0.24	0.06
Queue Length 95th (ft)	0	0	2	24	4
Control Delay (s)	0.1	0.0	1.0	17.9	17.4
Lane LOS	A		A	C	C
Approach Delay (s)	0.1		1.0	17.9	17.4
Approach LOS				C	C

Intersection Summary		
Average Delay		2.5
Intersection Capacity Utilization	38.8%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

AM Peak Hour  
 5/2/2016



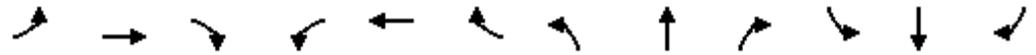
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	48	268	0	0	434	0	133	0	0	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.95	0.81	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	64	308	0	0	620	0	164	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	620			308			1056	1056	308	1056	1056	620
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	620			308			1056	1056	308	1056	1056	620
tC, single (s)	4.1			4.1			7.2	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.6	3.5	4.0	3.5
p0 queue free %	93			100			13	100	100	100	100	100
cM capacity (veh/h)	951			1253			188	210	661	193	210	449

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	372	620	164
Volume Left	64	0	164
Volume Right	0	0	0
cSH	951	1700	188
Volume to Capacity	0.07	0.36	0.87
Queue Length 95th (ft)	5	0	163
Control Delay (s)	2.2	0.0	87.3
Lane LOS	A		F
Approach Delay (s)	2.2	0.0	87.3
Approach LOS			F

Intersection Summary		
Average Delay		13.1
Intersection Capacity Utilization	57.0%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

AM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	279	0	0	451	0	139	0	0	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.95	0.81	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	67	321	0	0	644	0	172	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	644			321			1098	1098	321	1098	1098	644
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	644			321			1098	1098	321	1098	1098	644
tC, single (s)	4.1			4.1			7.2	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.6	3.5	4.0	3.5
p0 queue free %	93			100			2	100	100	100	100	100
cM capacity (veh/h)	931			1239			175	197	650	180	197	434

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	387	644	172
Volume Left	67	0	172
Volume Right	0	0	0
cSH	931	1700	175
Volume to Capacity	0.07	0.38	0.98
Queue Length 95th (ft)	6	0	195
Control Delay (s)	2.2	0.0	116.6
Lane LOS	A		F
Approach Delay (s)	2.2	0.0	116.6
Approach LOS			F

Intersection Summary		
Average Delay		17.4
Intersection Capacity Utilization	58.9%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

AM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑		↔					
Sign Control		Free			Free		↔		Stop		Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	52	282	0	0	453	0	155	0	0	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.95	0.81	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	69	324	0	0	647	0	191	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	647			324			1110	1110	324	1110	1110	647
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	647			324			1110	1110	324	1110	1110	647
tC, single (s)	4.1			4.1			7.2	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.6	3.5	4.0	3.5
p0 queue free %	93			100			0	100	100	100	100	100
cM capacity (veh/h)	929			1236			171	194	647	176	194	432

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	393	647	191
Volume Left	69	0	191
Volume Right	0	0	0
cSH	929	1700	171
Volume to Capacity	0.07	0.38	1.12
Queue Length 95th (ft)	6	0	245
Control Delay (s)	2.3	0.0	158.4
Lane LOS	A		F
Approach Delay (s)	2.3	0.0	158.4
Approach LOS			F

Intersection Summary		
Average Delay		25.3
Intersection Capacity Utilization	60.1%	ICU Level of Service
Analysis Period (min)		15
		B

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

PM Peak Hour  
 5/2/2016



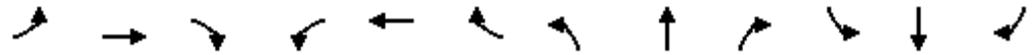
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	28	198	0	0	323	0	259	0	0	0	0	0
Peak Hour Factor	0.95	0.75	0.50	0.50	0.89	0.95	0.68	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	29	264	0	0	363	0	381	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	363			264			686	686	264	686	686	363
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	363			264			686	686	264	686	686	363
tC, single (s)	4.1			4.1			7.1	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.6	3.5	4.0	3.5
p0 queue free %	98			100			0	100	100	100	100	100
cM capacity (veh/h)	1196			1300			354	361	701	355	361	633

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	293	363	381
Volume Left	29	0	381
Volume Right	0	0	0
cSH	1196	1700	354
Volume to Capacity	0.02	0.21	1.08
Queue Length 95th (ft)	2	0	344
Control Delay (s)	1.0	0.0	104.9
Lane LOS	A		F
Approach Delay (s)	1.0	0.0	104.9
Approach LOS			F

Intersection Summary		
Average Delay		38.8
Intersection Capacity Utilization	53.3%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

PM Peak Hour  
 5/2/2016



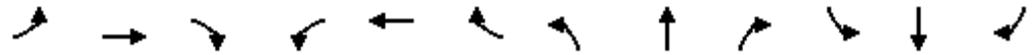
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	29	206	0	0	336	0	269	0	0	0	0	0
Peak Hour Factor	0.95	0.75	0.50	0.50	0.89	0.95	0.68	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	31	275	0	0	378	0	396	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	378			275			713	713	275	713	713	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	378			275			713	713	275	713	713	378
tC, single (s)	4.1			4.1			7.1	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.6	3.5	4.0	3.5
p0 queue free %	97			100			0	100	100	100	100	100
cM capacity (veh/h)	1181			1288			339	348	691	340	348	621

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	305	378	396
Volume Left	31	0	396
Volume Right	0	0	0
cSH	1181	1700	339
Volume to Capacity	0.03	0.22	1.17
Queue Length 95th (ft)	2	0	406
Control Delay (s)	1.0	0.0	137.3
Lane LOS	A		F
Approach Delay (s)	1.0	0.0	137.3
Approach LOS			F

Intersection Summary		
Average Delay		50.7
Intersection Capacity Utilization	55.0%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

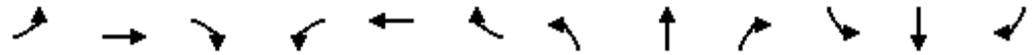
PM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	33	209	0	0	337	0	279	0	0	0	0	0
Peak Hour Factor	0.95	0.75	0.50	0.50	0.89	0.95	0.68	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	35	279	0	0	379	0	410	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	379			279			727	727	279	727	727	379
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	379			279			727	727	279	727	727	379
tC, single (s)	4.1			4.1			7.1	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.6	3.5	4.0	3.5
p0 queue free %	97			100			0	100	100	100	100	100
cM capacity (veh/h)	1180			1284			331	340	688	332	340	620
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>									
Volume Total	313	379	410									
Volume Left	35	0	410									
Volume Right	0	0	0									
cSH	1180	1700	331									
Volume to Capacity	0.03	0.22	1.24									
Queue Length 95th (ft)	2	0	459									
Control Delay (s)	1.2	0.0	165.0									
Lane LOS	A		F									
Approach Delay (s)	1.2	0.0	165.0									
Approach LOS			F									
<b>Intersection Summary</b>												
Average Delay			61.8									
Intersection Capacity Utilization		56.0%		ICU Level of Service		B						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 3: Coldbrook Road & SB Off-ramp

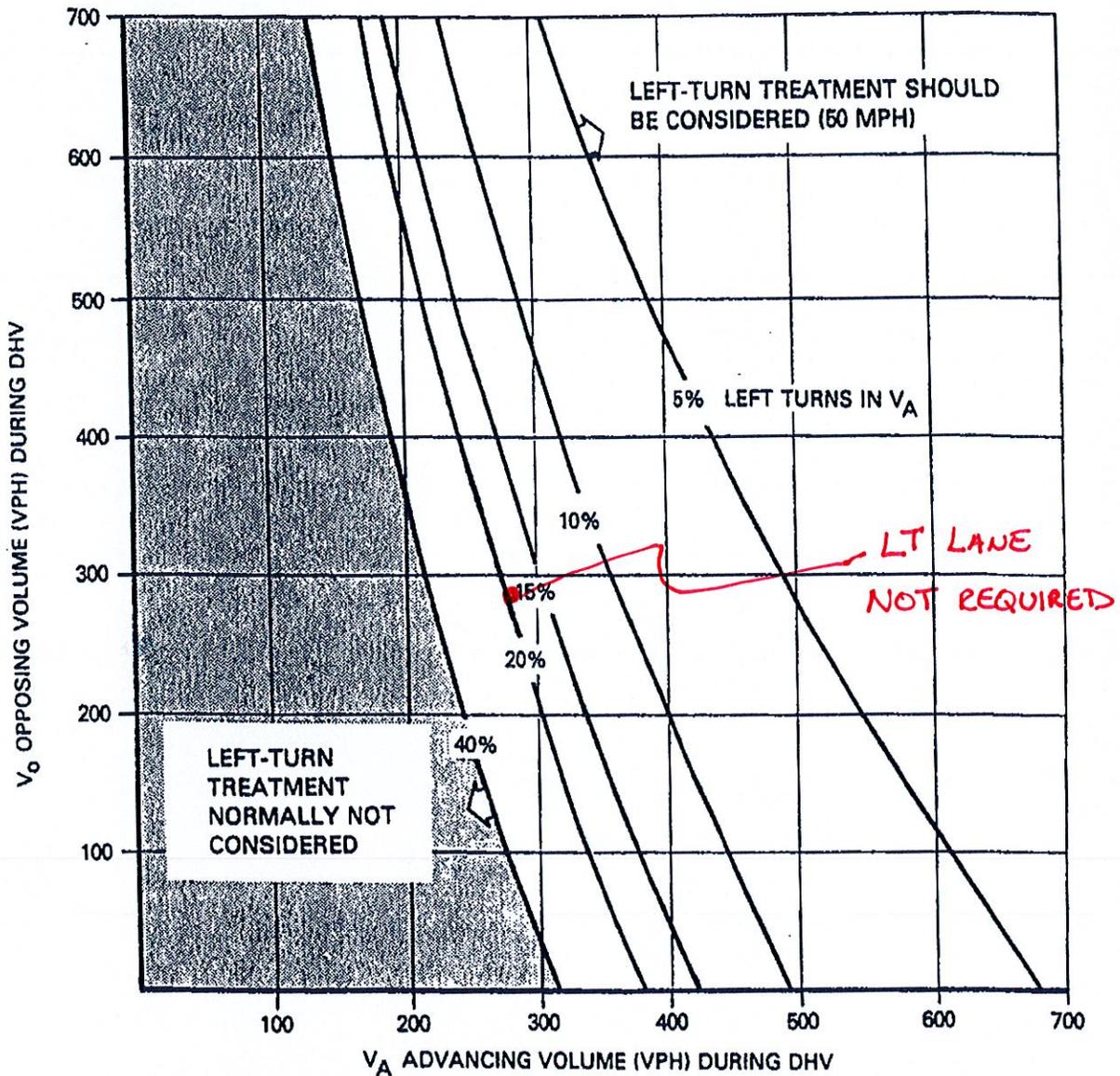
PM Peak Hour  
 5/2/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕					
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	33	209	0	0	337	0	279	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.50	0.50	0.92	0.95	0.92	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	36	227	0	0	366	0	303	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	366			227			665	665	227	665	665	366
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	366			227			665	665	227	665	665	366
tC, single (s)	4.1			4.1			7.1	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.6	3.5	4.0	3.5
p0 queue free %	97			100			17	100	100	100	100	100
cM capacity (veh/h)	1192			1341			363	369	737	365	369	630

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	263	366	303
Volume Left	36	0	303
Volume Right	0	0	0
cSH	1192	1700	363
Volume to Capacity	0.03	0.22	0.83
Queue Length 95th (ft)	2	0	189
Control Delay (s)	1.3	0.0	49.1
Lane LOS	A		E
Approach Delay (s)	1.3	0.0	49.1
Approach LOS			E

Intersection Summary		
Average Delay		16.3
Intersection Capacity Utilization	56.0%	ICU Level of Service B
Analysis Period (min)		15



**Instructions:**

1. The family of curves represent the percent of left turns in the advancing volume ( $V_A$ ). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read  $V_A$  and  $V_O$  into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

AM PEAK

$V_A = 282$

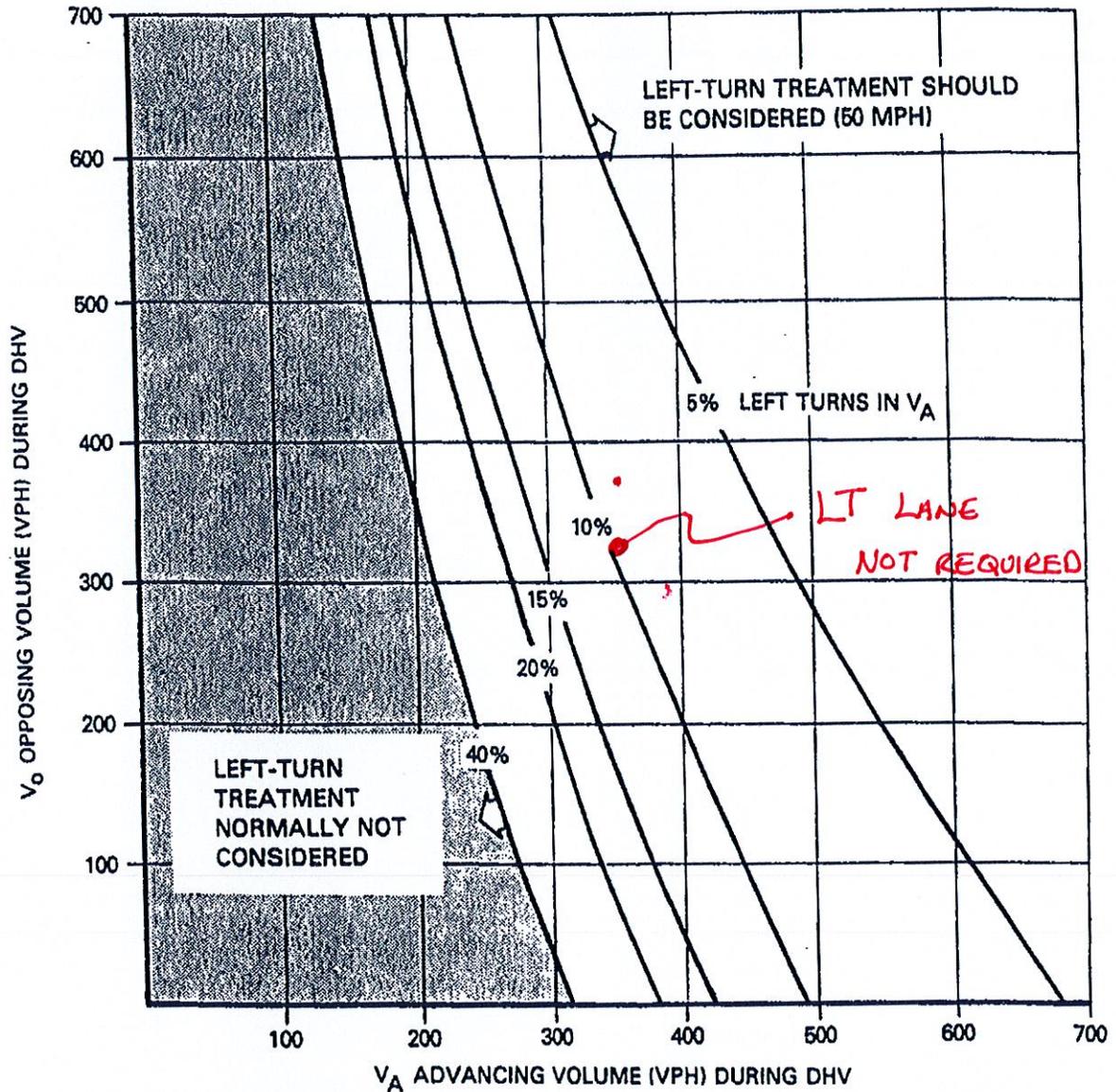
LT = 30

$V_O = 285$

% LT = 10.6%

**VOLUME WARRANTS FOR LEFT-TURN LANES  
AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS  
(50 mph)**

Figure 8-18



**Instructions:**

1. The family of curves represent the percent of left turns in the advancing volume ( $V_A$ ). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read  $V_A$  and  $V_O$  into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

PH PEAK

$V_A = 351$

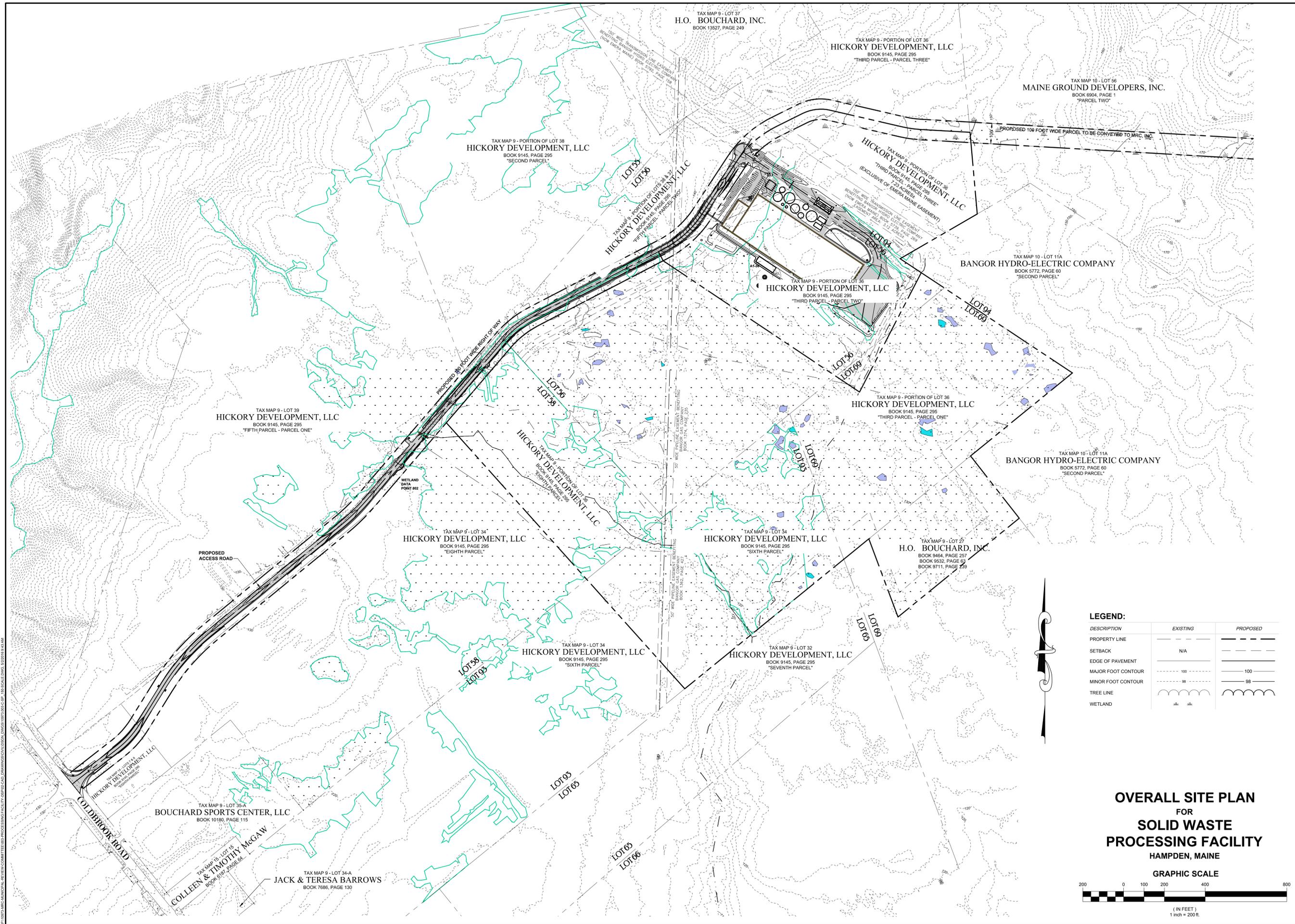
LT = 22

$V_O = 321$

%LT = 6%

**VOLUME WARRANTS FOR LEFT-TURN LANES  
AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS  
(50 mph)**

Figure 8-18



TAX MAP 9 - LOT 30  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "FIFTH PARCEL - PARCEL ONE"

TAX MAP 9 - LOT 34  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "EIGHTH PARCEL"

TAX MAP 9 - PORTION OF LOT 38  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "SECOND PARCEL"

TAX MAP 9 - PORTION OF LOTS 34 & 37  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "FIFTH PARCEL - PARCEL TWO"

TAX MAP 9 - PORTION OF LOT 36  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "THIRD PARCEL - PARCEL TWO"

TAX MAP 9 - PORTION OF LOT 36  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "THIRD PARCEL - PARCEL THREE"

TAX MAP 9 - PORTION OF LOT 36  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "THIRD PARCEL - PARCEL THREE"

TAX MAP 9 - PORTION OF LOT 36  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "THIRD PARCEL - PARCEL ONE"

TAX MAP 9 - LOT 34  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "SIXTH PARCEL"

TAX MAP 9 - LOT 32  
**HICKORY DEVELOPMENT, LLC**  
 BOOK 9145, PAGE 295  
 "SEVENTH PARCEL"

TAX MAP 9 - LOT 27  
**H.O. BOUCHARD, INC.**  
 BOOK 9454, PAGE 257  
 BOOK 9532, PAGE 52  
 BOOK 9711, PAGE 239

TAX MAP 10 - LOT 56  
**MAINE GROUND DEVELOPERS, INC.**  
 BOOK 6904, PAGE 1  
 "PARCEL TWO"

TAX MAP 10 - LOT 11A  
**BANGOR HYDRO-ELECTRIC COMPANY**  
 BOOK 5772, PAGE 60  
 "SECOND PARCEL"

TAX MAP 10 - LOT 11A  
**BANGOR HYDRO-ELECTRIC COMPANY**  
 BOOK 5772, PAGE 60  
 "SECOND PARCEL"

TAX MAP 9 - LOT 35-A  
**BOUCHARD SPORTS CENTER, LLC**  
 BOOK 10180, PAGE 115

TAX MAP 9 - LOT 34-A  
**JACK & TERESA BARROWS**  
 BOOK 7686, PAGE 130

**LEGEND:**

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE	---	---
SETBACK	N/A	---
EDGE OF PAVEMENT	---	---
MAJOR FOOT CONTOUR	--- 100 ---	--- 100 ---
MINOR FOOT CONTOUR	--- 98 ---	--- 98 ---
TREE LINE	~ ~ ~	~ ~ ~
WETLAND	~ ~ ~	~ ~ ~

**OVERALL SITE PLAN  
 FOR  
 SOLID WASTE  
 PROCESSING FACILITY  
 HAMPDEN, MAINE**

**GRAPHIC SCALE**

(IN FEET)  
 1 inch = 200 ft.

**CES INC**  
 Engineers • Environmental Scientists • Surveyors

Waldenville  
 44 Main Street  
 Waldenville, ME  
 F. 207-680-2202  
 F. 207-795-8412  
 F. 207-795-8414  
 F. 207-686-0204

Brewer  
 465 South Main Street  
 Brewer, ME  
 F. 207-589-4824  
 F. 207-589-4821  
 F. 207-589-4821

Lebanon  
 1365 State Hwy 102  
 840 Main Street  
 Lewiston, ME  
 Bar Harbor, ME  
 F. 207-252-3270  
 F. 207-252-5887

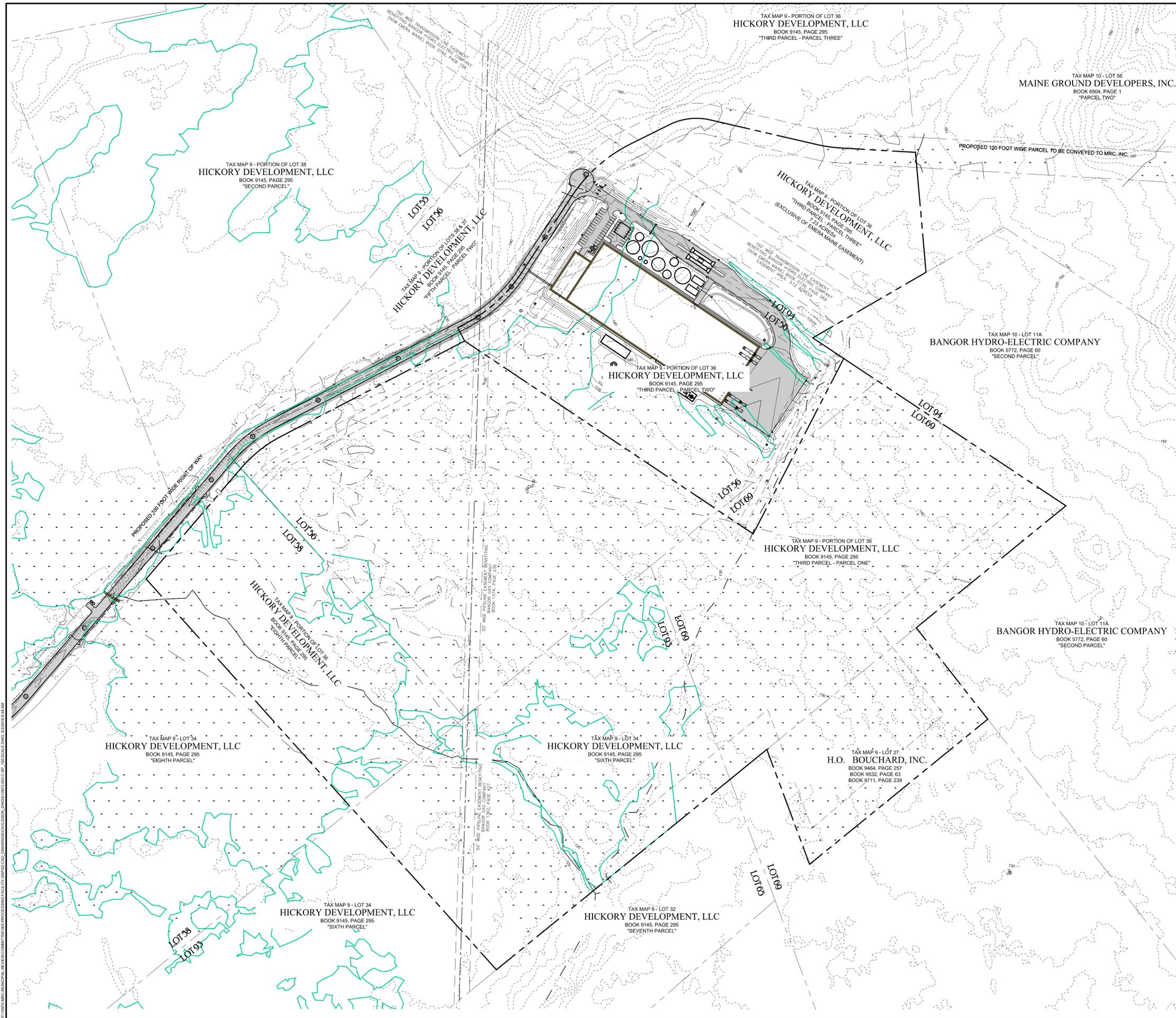
PROJECT TITLE  
**MRC / FIBERIGHT SOLID WASTE PROCESSING FACILITY  
 HAMPDEN, MAINE**

SHEET NO.  
**OVERALL SITE PLAN**

NO.	DATE	DESCRIPTION	BY
01	2016-04-08	UPDATED BOUNDARY INFORMATION	SMT
02			
03			
04			
05			
06			
07			
08			
09			
10			

STATE OF MAINE  
 SEAN M. THIES  
 No. 10139  
 05/02/2016  
 LICENSE  
 PROFESSIONAL ENGINEER

SCALE: 1"=200'  
 DATE: 2016-04-08  
 DRAWN BY: BLO CHECKED BY: SMT  
 DESIGNED BY: SMT APPROVED BY: SMT  
 JOB NUMBER: 10673.003  
 DRAWING NUMBER: **C101**



**LEGEND:**

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE	---	---
SETBACK	N/A	---
EDGE OF PAVEMENT	---	---
MAJOR FOOT CONTOUR	--- 100 ---	--- 100 ---
MINOR FOOT CONTOUR	--- 98 ---	--- 98 ---
TREE LINE	~ ~ ~	~ ~ ~
WETLAND		

Waterbury  
44 Main Street  
Waterbury, ME  
F. 207-860-2302  
F. 207-795-8412  
F. 207-860-2302

Brewer  
465 South Main Street  
Brewer, ME  
F. 207-589-4824  
F. 207-699-9681  
F. 207-589-4824

Presque Isle  
559 Main Street  
Presque Isle, ME  
F. 207-795-8412  
F. 207-860-2302

Levenson  
1365 State Hwy 102  
Levenson, ME  
F. 207-288-0588  
F. 207-795-6129



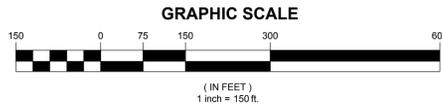
PROJECT TITLE  
**MRC / FIBERIGHT SOLID WASTE PROCESSING FACILITY  
HAMPDEN, MAINE**

SHEET NO.  
**SITE PLAN**

REV.	DESCRIPTION	DATE	BY	DATE	BY
01	CHANGES PER TOWN REVIEW COMMENTS	2016-05-02	BLQ		SMT



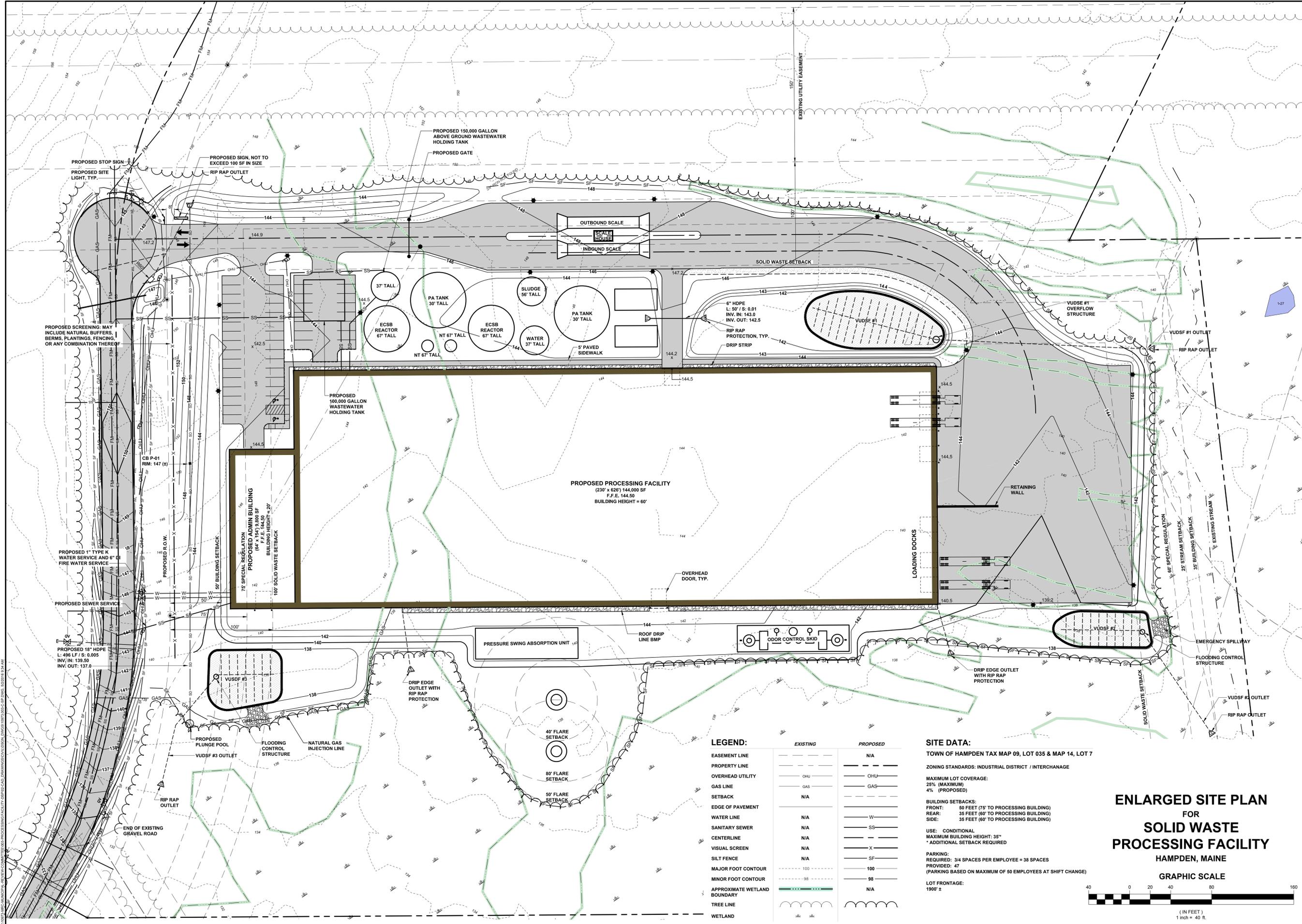
**PROPOSED SITE PLAN  
FOR  
SOLID WASTE  
PROCESSING FACILITY  
HAMPDEN, MAINE**



SCALE	1"=150'
DATE	2016-02-29
DRAWN BY	BLQ
CHECKED BY	SMT
DESIGNED BY	BLQ/SMT
APPROVED BY	SMT
JOB NUMBER	10973.003
DRAWING NUMBER	

**C102**

P:\2017\MRC MUNICIPAL REVIEW COMMITTEE\PROCESSED FACILITY\SPRING CAD DRAWINGS\DWG\10973.003-SP-103.DWG, 02/29/16 9:49 AM



Waterville  
 44 Main Street  
 Waterville, ME  
 F. 207-860-2302  
 F. 207-795-8412  
 F. 207-795-8414  
 F. 207-868-8264  
 Brewer  
 465 South Main Street  
 Brewer, ME  
 F. 207-589-4824  
 F. 207-589-4821  
 F. 207-589-4821  
 Lewiston  
 811 Dublin Street  
 Lewiston, ME  
 T. 207-252-3270  
 F. 207-252-5887

**CES INC**  
 Engineers • Environmental Scientists • Surveyors

PROJECT: MRC / FIBERRIGHT SOLID WASTE PROCESSING FACILITY  
 SHEET: HAMPDEN, MAINE  
 DATE: 05/02/2016  
 DRAWN BY: BLO/WAB  
 CHECKED BY: SMT  
 DESIGNED BY: BLO/SMI  
 APPROVED BY: SMT  
 JOB NUMBER: 10673.003  
 DRAWING NUMBER:

**NOT FOR CONSTRUCTION**

STATE OF MAINE  
 SEAN M. THIES  
 No. 10139  
 05/02/2016  
 LICENSED PROFESSIONAL ENGINEER

SCALE: 1"=40'  
 DATE: 2015-12-10  
 DRAWN BY: BLO/WAB  
 CHECKED BY: SMT  
 DESIGNED BY: BLO/SMI  
 APPROVED BY: SMT  
 JOB NUMBER: 10673.003  
 DRAWING NUMBER:

**C103**

**LEGEND:**

	EXISTING	PROPOSED
EASEMENT LINE	---	N/A
PROPERTY LINE	---	---
OVERHEAD UTILITY	OHU	OHU
GAS LINE	GAS	GAS
SETBACK	N/A	---
EDGE OF PAVEMENT	---	---
WATER LINE	N/A	W
SANITARY SEWER	N/A	SS
CENTERLINE	N/A	---
VISUAL SCREEN	N/A	X
SILT FENCE	N/A	SF
MAJOR FOOT CONTOUR	100	100
MINOR FOOT CONTOUR	98	98
APPROXIMATE WETLAND BOUNDARY	---	N/A
TREE LINE	---	---
WETLAND	---	---

**SITE DATA:**  
 TOWN OF HAMPDEN TAX MAP 09, LOT 035 & MAP 14, LOT 7  
 ZONING STANDARDS: INDUSTRIAL DISTRICT / INTERCHANGE  
 MAXIMUM LOT COVERAGE:  
 25% (MAXIMUM)  
 4% (PROPOSED)  
 BUILDING SETBACKS:  
 FRONT: 50 FEET (75' TO PROCESSING BUILDING)  
 REAR: 35 FEET (60' TO PROCESSING BUILDING)  
 SIDE: 35 FEET (60' TO PROCESSING BUILDING)  
 USE: CONDITIONAL  
 MAXIMUM BUILDING HEIGHT: 35'  
 \* ADDITIONAL SETBACK REQUIRED  
 PARKING:  
 REQUIRED: 3/4 SPACES PER EMPLOYEE = 38 SPACES  
 PROVIDED: 47  
 (PARKING BASED ON MAXIMUM OF 50 EMPLOYEES AT SHIFT CHANGE)  
 LOT FRONTAGE:  
 1900 ±

**ENLARGED SITE PLAN**  
 FOR  
**SOLID WASTE PROCESSING FACILITY**  
 HAMPDEN, MAINE  
 GRAPHIC SCALE  
 0 20 40 80 160  
 (IN FEET)  
 1 inch = 40 ft.