

**COMMITMENT & INTEGRITY  
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April 7, 2016



Dean Bennett  
Director of Community and Economic Development  
Town of Hampden  
106 Western Avenue  
Hampden, ME 04444

Re: MRC/Fiberight Solid Waste Processing Facility Site Plan Review

Dear Dean:

We have completed a preliminary review of the Site Plan Application submitted for Municipal Review Committee, Inc. & Fiberight, LLC (Applicant) by CES, Inc. (Agent) dated March 3, 2016, for a proposed 144,000 square foot solid waste Processing Facility, 9,800 square foot Administration Building, and access road. This review is focused on conformance with Zoning Ordinance requirements as well as other applicable ordinances as referenced below.

#### **Zoning Ordinance Review**

As described in our Preliminary MRC/Fiberight Solid Waste Processing Facility Site Plan Review dated 3/30/2016, the Applicant project is classified as a Conditional Use within the Industrial Zone.

Several concerns were noted in the previous review letter, which is attached to this letter in lieu of repeating those concerns. The following is a review of specific standards that appear to be met as well as any other concerns raised during a detailed review of the submitted Site Plan Application.

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

1. Submittal appears to meet the standards of this section for minimum lot area, setback requirements, and ground coverage. The site plan indicates a building height of 60 feet where the maximum allowable building height is specified to be 35, except where additional setback distances are provided.
2. The Site Plans Sheets C101 through C103 do not detail the lot frontage. As noted in our previous review, it is not clear that frontage along the access road will be available to claim as front on a Town Way and a minimum of 150 feet of frontage is not provided elsewhere with the proposed lot configuration. We recommend that the Applicant address this issue as detailed in our previous review.
3. The Street Yard setback line on Sheet C103 shows the required 50-foot street yard setback. The 75-foot street yard setback line for the processing facility building height of 60-feet (special regulation based on the Article 3.2.5.3 requirement) should also be shown. The Proposed Admin Building (building height of 20 feet) is within the 75-foot setback, but the remainder of the facility does not extend into this setback area.
4. We recommend that the Applicant provide tank heights on Sheet C103.
5. The proposed property line to the north of the facility shown on Sheet C103 uses the linetype for setback and the side yard setback line is shown at 100-feet from the property line. We



recommend that the Applicant correct the plan according to the linetypes shown on the legend and adjust the setback lines to 35 feet (standard minimum) and 60 feet (special regulation based on the Article 3.2.5.3 requirement). It does not appear that any structures are proposed beyond the side yard setback distance of 35 feet and the Scale House is the only structure within the 60-foot side yard setback.

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

1. The Application appears to have submitted items addressing each of the items in Article 4.1.6, with the exception of the "Location and type of existing and proposed fences, hedges, and trees of twelve (12") inch diameter and over at a point four and one (4.5') above ground level." The Applicant has requested a waiver from this requirement in the Application narrative.
2. We recommend that the Applicant revise Sheets C101 and C102 to label contour lines and modify the setback lines as stated previously in this letter regard Sheet C103.
3. A number of concerns were stated in the 3/30/2016 Preliminary Review letter regarding conformance with Article 4.1.7. In addition to those concerns, we have noted the following:
  - a. The Applicant has provided utility capacity letters from the Hampden Water District and the Bangor Wastewater Treatment Plant with conditional statements of capacity. The Applicant did not include the statement of capacity from the Town's Public Works regarding sewer capacity.
  - b. The Applicant has not provided statement from the electrical (Emera) or natural gas (Bangor Gas Company) utilities regarding capacity or conditions for this facility.

#### Zoning Ordinance Conditional Use and Performance Standards (Article 4.2 and 4.4)

No additional concerns regarding Conditional Use Standards were noted beyond those noted in the 3/30/2016 Preliminary Review letter.

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

1. The Applicant does not appear to meet the minimum off-street parking space requirement for "Industrial Use" in Article 4.7.1.1.10. Based on statements in Appendix 1 regarding 70 employees and the required  $\frac{3}{4}$  space per employee, a total of 52 spaces should be provided. Sheet C103 states that proposed parking includes 47 spots.

#### Town Way Ordinance Review

The access road was reviewed based on the assumption that it would be conveyed to the Town as a Town Way with an Industrial classification.

1. The proposed road appears to meet the 100-foot right-of-way width requirement based on the property lines shown on the plans.
2. The proposed road appears to meet the requirements for grades and side slopes.
3. In addition to the comments provided by Maine Traffic Resources (MTR) in their Preliminary Traffic Review memo dated 3/25/2016, please see the following comments.



4. No street signage was detailed. We recommend that the Applicant provide details and locations on the plans in accordance with Manual on Uniform Traffic Control Devices (MUTCD) standards regarding street signage including, but not limited to, stop sign, "No Outlet" sign, street name signage, speed limit signage, and others as applicable. See MTR Review Memo dated 3/25/2016.
5. Sheet C103:
  - a. The proposed natural gas injection line is shown overlying the proposed water main. We recommend modifying the piping layout to maintain adequate distance between utilities.
  - b. Please clarify if a structure will be required where the proposed natural gas injection line meets the existing Bangor Gas Company pipeline.
6. Sheet C201:
  - a. Several curb cuts are shown with the apparent intent to direct stormwater off of the roadway. No erosion control methods are specified at these locations. We recommend that the Applicant detail a suitable means of dispersing stormwater at these locations to prevent erosion damage.
  - b. The curb cuts shown near Station 6+50 appear to be very close to existing grade and contour lines are not shown in this area. We recommend that the Applicant detail these areas further to ensure that roadway flooding does not occur.
  - c. The distance between roadway high points stormwater outlets, either curb cuts or Filterra units, appears to exceed 600 feet. We recommend that the Applicant present evidence that the proposed spacing does not result in an excess of flowing water impacting the travel lane or reduce the spacing between outlets.
7. Sheet C202:
  - a. The distance between roadway high points stormwater outlets, either curb cuts or Filterra units, appears to exceed 900 feet. We recommend that the Applicant present evidence that the proposed spacing does not result in an excess of flowing water impacting the travel lane or reduce the spacing between outlets.
8. Sheet C203:
  - a. The distance between roadway high points stormwater outlets, either curb cuts or Filterra units, appears to exceed 1,500 feet. We recommend that the Applicant present evidence that the proposed spacing does not result in an excess of flowing water impacting the travel lane or reduce the spacing between outlets.
  - b. The proposed sewer pump station appears to show a paved driveway. We recommend that the Applicant specify that the driveway match pavement and base gravel requirements for the roadway.



9. Sheet C204:

- a. The location of the existing Bangor Gas Company natural gas pipe and proposed gas injection pipe shown on Sheet C102 is not shown on the C204 plan and profile.

10. Sheet C502:

- a. Comments regarding "Typical Crowned Roadway Cross Section":
  - i. Pavement and gravel specifications layers are not detailed. Recommend referencing applicable detail or adding callouts for all materials shown in the cross section.
  - ii. No material specification for loam or depth of loam is shown. We recommend a minimum of 4 inches and including a material specification for loam.
  - iii. Subgrade and fill materials are not specified. We recommend adding specifications for fill material and compaction requirements in addition to the Aggregate Base and Aggregate Subbase gravel shown.
  - iv. Detail shows "box cut" type of gravel installation. We recommend extension of Aggregate Base and Subbase layers to the full width of the cross section, not just below the pavement and curb.
  - v. Review of the cross section against the plan sheets C201 through C204 shows that gravel layers will be below existing grade for significant portions of the road length. No subbase drainage via ditch construction or underdrain is included in the design. The Applicant should present evidence that the proposed design will be resistant to frost heave and thawing damage for the anticipated traffic loads. Load limitation during thawing conditions will not be an option with this road due to the nature of the proposed facility, so resistant to freeze-thaw damage is critical.
  - vi. The "Typical Trench Detail – HDPE Water Main" appears to reference the wrong pipe material as ductile iron pipe is specified on the plans. We recommend correcting this detail to reflect ductile iron pipe.
  - vii. The "Typical Box Culvert Detail" appears to show the culvert footings placed on native subgrade material. We recommend that the Applicant clarify if this is suitable installation method or if installation of support gravel or stone is required.
- b. The "Typical Roadway Buildup Detail" specifies a total of 4 inches of pavement and 24 inches of gravel base. Per our comment regarding freeze-thaw protection, we recommend that the Applicant present evidence that the proposed design will be resistant to frost heave and thawing damage for the anticipate traffic loading.
- c. No pavement marking details were provided to show centerline and shoulder marking dimensions. We recommend that the Applicant provide details for lane markings. See MTR Review Memo dated 3/25/2016.



### Sewer Ordinance

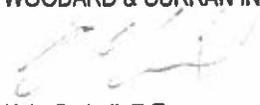
A partial review of Sewer Ordinance conformance has been completed, but as noted in the 3/30/2016 Preliminary Review letter, we are not able to perform a complete review due to the omission of several elements. Our comments regarding the submitted sewer design for the access road are as follows:

1. Sheet C502:
  - a. Per Article 5.3.4, we recommend modifying the "Typical Sewer Trench Detail" to add a geotextile layer between the crushed stone bedding material and backfill material.
2. The Applicant did not provide a detail for force main piping. We cannot comment on the adequacy of the force main piping design except that the "Typical Sewer Trench Detail" is not adequate for force main installation conditions.
3. The Applicant did not provide sewer manhole details for review. We cannot comment on the adequacy of the sewer structure design.
4. The Applicant did not provide pipe insulation details. It appears that insulation will be necessary in the vicinity of Station 0+00 due to a pipe depth of less than 5 feet.
5. The Applicant did not provide details regarding the sewer pump station. We cannot comment on the adequacy of the design, including force main sizing, design flow, or wet well size.

If you should have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

WOODARD & CURRAN INC.



Kyle Corbeil, P.E.  
Project Engineer

KMC  
213351.00 040

Attachments

March 30, 2016



Dean Bennett  
Director of Community and Economic Development  
Town of Hampden  
106 Western Avenue  
Hampden, ME 04444

Re: Preliminary MRC/Fiberight Solid Waste Processing Facility Site Plan Review

Dear Dean:

We have completed a preliminary review of the Site Plan Application submitted for Municipal Review Committee, Inc. & Fiberight, LLC (Applicant) by CES, Inc. (Agent) dated March 3, 2016, for a proposed 144,000 square foot solid waste Processing Facility, 9,800 square foot Administration Building, and access road. This review is focused on applicability of the Town Ordinance requirements and completeness of the application with regard to these ordinances.

Our review of Town Ordinance applicability is intended to ensure that the Town permitting process is clear and can be completed in a timely manner, as this project involves elements spanning the requirements of multiple ordinances.

The overall project includes all of the elements necessary to provide access and utilities to the proposed MRC/Fiberight partnership solid waste processing facility. The project includes the creation of what appear to be three distinct parcels consisting of the following; an access road parcel, the solid waste processing facility parcel, and a 100-foot wide utility corridor parcel. The access road is intended to be conveyed to the Town upon completion and serve as access for the proposed solid waste processing facility and for future development of parcels through which the road passes. The affected parcels along the access road are not shown as being modified beyond the creation of a road right of way. The solid waste processing facility is located on a proposed new lot, created from portions of existing lots, located at the end of the proposed access road. There is also a proposed parcel, created from portions of existing lots, extending east beyond the end of the proposed access road toward Ammo Park that is intended as a utility corridor for sewer.

Of primary concern was the combination of the project elements, including the processing facility, access road, and 100-foot wide parcel, into one Zoning Ordinance Site Plan Application. We have identified several potential issues with this approach that we recommend the Applicant address, as follows:

1. The application site plans detail the creation of three new lots from multiple existing lots, an access road lot, the processing facility lot, and sewer extension lot. The Applicant's intent, based on discussions and development agreements in this Application, is to construct a road meeting Town Way standards for eventual conveyance to the Town. Sewer, water, and gas utility provisions are included along the length of the proposed access road, indicating an intent to further divide adjacent parcels. As the intent and layout of the proposed project reflect the intent to create a subdivision, and this term and regulation thereof are subject to State Statute, we recommend that the Applicant provide a legal opinion regarding the applicability of this project, or parts thereof, to Subdivision Ordinance versus the Zoning Ordinance. The Applicant should be aware of the implications regarding development classification for the affected lots along the access road. If this application does not meet the



legal definition of a subdivision, further development or parcel modifications of the properties along the access road will likely trigger Subdivision Ordinance requirements unless the statutory length of time passes after splitting the parcels.

2. Zoning Ordinance Article 3.3.4 requires 150 feet of road frontage for Industrial Zone lots. The Applicant does not explicitly state the amount of road frontage provided, but it appears to utilize frontage along the access road parcel bordering the facility, which is noted as a "Proposed Right of Way" on several plans. Although the intent of the Applicant, through discussion, has been to construct and transfer the road as a Town Way, the application does not make clear how the proposed access road meets the Zoning Ordinance definition of road or street per Article 7.2. As the Zoning Ordinance does not appear to address the creation of a Town Way, the access road may require approval in accordance with the Subdivision Ordinance to avoid creating a Non-conforming lot or lot(s). It is not clear if the Applicant can meet the Zoning Ordinance frontage requirement based on the submitted plans.
3. Zoning Ordinance Article 5.3.1.8 details the requirements that must be met prior to issuance of a building permit, including Town acceptance of roads providing frontage pursuant to the Town Ways Ordinance.
4. For the purposes of Town Zoning Ordinance compliance, further review of the portions of the project with potential to be subject to Subdivision Ordinance should be conducted and assigned to the appropriate application process based on ordinance applicability.

### Zoning Ordinance

The project involves several parcels of land that span two zoning districts, the Interchange District and Industrial District. The solid waste processing facility is proposed within the Industrial District and will be subject to conformance with the Industrial District standards, except as allowed in Article 2.1 for parcels involving more than one zoning district. For the purposes of this portion of the review, we are considering the completeness of the application materials regarding the processing facility site located on the proposed parcel shown on Sheet C101 Overall Site Plan and in further detail on Sheet C103 Enlarged Site Plan and not the access road parcel, which is considered separately in this letter as a Town Ways Ordinance issue.

The facility does not meet the definition of a Permitted Use for the Industrial Zone, but appears to meet the criteria for Conditional Use, as it is a processing and treatment plant with a gross floor area greater than 5,000 square feet.

With regard to Article 4.1.6. Required Information on Plans, the Applicant has met the requirements with the following exceptions:

1. The Applicant has requested a waiver from including the location and type of trees 12-inch diameter and over.

With regard to Article 4.1.7. Performance Standards appears to have met the requirements with the following exceptions:

1. The Applicant has not provided submittal information regarding building design per Article 4.1.7.2 and 4.1.7.6 such as building elevation drawings, intended type of construction, or other information that allows review for compliance with this standard.
2. Please see the attached Memorandum from Maine Traffic Resources dated March 25, 2016 regarding a preliminary review of traffic of this application. There are a number of concerns with regard to meeting Article 4.1.7.3 and 4.1.7.4 standards.



3. The application addresses stormwater requirements in Article 4.1.7.9, although we have deferred review of stormwater modeling and treatment device design to the Maine DEP Solid Waste Processing Facility application. We request the Applicant provide evidence of meeting Maine DEP standards regarding these items.
4. Article 4.1.7.13, in addition to Article 4.2.3.4 and Article 4.4.1, applies to air emissions and odor standards. The Applicant has stated the use of operational and engineering controls to limit nuisance odors. The Applicant states that they are using an enclosed building, minimizing the time that access doors are open, minimizing the volume of solid waste on the tipping floor, and maintaining a negative air pressure via an air handling system. An odor control system has been proposed for odor reduction. In addition to the materials provided in the Site Plan Application, CES forwarded supplemental application materials from the MDEP Solid Waste Processing Facility Application. We have not reviewed the MDEP application materials in depth, although these materials may be necessary to address the following concerns regarding the Town Site Plan Application:
  - a. The Applicant has not demonstrated that the proposed controls are adequate to fully address odor emissions. We recommend requesting records of odor complaints from existing similar facilities, including identification of conditions that resulted in complaints and any corrective actions to address these conditions. Reference to comparable facilities with similar odor emissions sources and control technologies should be provided.
  - b. The Applicant has not presented a monitoring plan to ensure odor emissions are controlled or to demonstrate compliance with stated statute requirements. We recommend that the Applicant propose a monitoring plan with the goal of maintaining compliance with statute requirements and Zoning Ordinance standards.
  - c. The application has not addressed the odor concerns from queued vehicles (both full and empty), impacts along concentrated haul routes (refer to traffic review comments), and impacts of odor generation based on varying meteorological conditions. We recommend that the Applicant provide evidence of their ability to manage these impacts.
  - d. The Applicant has not presented a process for handling odor complaints. We recommend that the Applicant propose a systematic process for receiving and addressing odor complaints from the Town of Hampden employees and its residents that ensures continued compliance with Zoning Ordinance standards and does not place an undue burden on Town employees.
  - e. The Applicant has not addressed the potential for odor emissions from the gas flare or boiler system or control thereof.
  - f. The Appendix 6 narrative identifies an "Operations and Maintenance Plan" with regard to fugitive dust. In addition to dust control, we recommend that the Applicant demonstrate compliance with control of dust, trash, and other debris generated not only at the facility, but along concentrated haul routes and surrounding properties.

As a Conditional Use, the Applicant is subject to additional review subject to Article 4.2.3 Standards Governing Conditional Use Permits. The Application does not appear to meet these additional standards based on findings regarding items listed above and the following:



1. Article 4.2.3.1, regarding the requirement for compliance with all provisions of the Zoning Ordinance and operated and maintained in compliance with Article 4.4 Performance Standards.
2. Article 4.2.3.3 regarding effects on abutting property, particularly those located along the proposed haul routes and surrounding properties potentially affected by air emissions.
3. Article 4.2.3.4, particularly regarding odor emissions and their impact upon residential properties.
4. Article 4.2.3.5 regarding traffic concerns as noted previously and in the attached Maine Traffic Resources review.

The Planning Board may assign additional conditions to the Applicant per Article 4.2.4, such as operational controls, professional inspection and maintenance, type of construction and other conditions as necessary to ensure compliance with the Zoning Ordinance standards.

#### **Other Ordinance Requirements**

As stated previously, this application contains elements with applicability to several Town ordinances in addition to the Zoning Ordinance. Each item is discussed below in terms of applicability and review processes for the benefit of the Applicant. Depending on finding of applicability, these items may need to proceed on parallel paths to the Site Plan Application in order to meet the Applicant's proposed schedule.

#### **Town Ways Ordinance**

The access road, if not applicable to Subdivision Ordinance requirements, would be applicable to the Town Ways Ordinance. This ordinance details the process for acceptance of a privately constructed road as a Town Way, including:

1. Demonstration of design and construction in accordance with Article II – Standards and Requirements for an Industrial Way;
2. Provision for an improvement guarantee;
3. Town Attorney review and approval of conveyance documents, improvements, and any applicable easements;
4. Utility statements regarding acceptance of installed infrastructure;
5. At the discretion of the Town Council, acceptance of the road prior to installation of the surface pavement with an approved performance guarantee for completed paving; and
6. Town Council acceptance as Town Way.

In addition to the issued identified in the Maine Traffic Resources memo previously referenced, the application does not provide sufficient information to demonstrate compliance with Article II of the Town Ways Ordinance.

#### **Sewer Ordinance**

The proposed sewer collection system, unless also applicable to the Subdivision Ordinance, is subject to Sewer Ordinance requirements. These include, but are not limited to, the following:

1. Approval by the Town to construct sewer extension including review of engineering documents, design data, etc. as listed in Article 5.3. This includes demonstrating compliance



with Article 5.3.1 regarding the use of sewer pump stations, limitations in force main length, and feasibility for gravity sewer;

2. Arrangement for Town inspection of the sewer installation and establishment of account for developer reimbursement of inspection expenses;
3. Town approval of construction shop drawings prior to issuance of construction permit;
4. Completion of testing per Article 5.4 regarding sewer extensions constructed by Private Developer prior to connection to Town sewer;
5. Completion of Article 5.5 requirements for transfer of ownership; and
6. Town Council acceptance of private sewer.

The application partially fulfills the Sewer Ordinance requirements for initial submittal documents, as the engineering plans for the gravity sewer and installation details are included. However, the sewer pump station, a large portion of the sewer force main, and determination of feasibility for any portion of gravity sewer for the "cross-country" route has not been provided. Without these components, a complete Sewer Ordinance review cannot be provided.

The Applicant is proposing a facility subject to the Industrial Pretreatment Program, administered by the City of Bangor Wastewater. The Applicant has not provided materials demonstrating the ability to comply with this program's requirements in this application. The process for or status of obtaining an Industrial User Permit is not described in the application.

The Applicant will be subject to a Special Charge for Industrial Organizations per Section 10.3 of the Sewer Ordinance. The applicant has not submitted information that allows the Town to develop this sewer use fee, including sewer pump station design, flow and pumping calculations, force main maintenance, establishment of Town right of way year-round utility access, and other appurtenant costs associated with conveying and treating waste from the Applicant's facility. The Applicant should be aware that the Town Council is considering amendments to the Sewer Ordinance that may affect the requirements applicable to this development.

If you should have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

WOODARD & CURRAN INC.

A handwritten signature in black ink, appearing to read "Kyle Corbeil".

Kyle Corbeil, P.E.  
Project Engineer

KMC/eah

PN: 213351.00 040

## SUMMARY MEMORANDUM

Mr. Kyle Corbeil, P.E.  
Project Engineer  
Woodard & Curran  
One Merchants Plaza  
Bangor, ME 04401

March 25, 2016

RE: Preliminary Traffic Review for Hampden Solid Waste Processing Facility

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The purpose of this memorandum is to summarize my preliminary review of the proposed Solid Waste Processing Facility in regard to traffic, as requested by Woodard and Curran and the Town of Hampden. I reviewed "Hampden Site Plan Review Application for Solid Waste Processing Facility, Appendix 1, Traffic Narrative," prepared by Victor J. Smith, P.E. and dated June 24, 2015. In addition, I reviewed the site plans prepared by CES, Inc, dated March 3, 2016. My preliminary review comments are summarized below:

1. **Trip Generation:** The Institute of Transportation Engineers (ITE) "Trip Generation" report does not provide a Land Use Code for Solid Waste Facilities. While the application provided daily traffic estimates it did not attempt to estimate peak hour flows. The application anticipates 70 employees at full operation, spread over three shifts. Generally, employment is heaviest during the first two shifts with the peak hour occurring when the first shift is ending and the second shift is starting. Assuming 10 employees for the overnight shift and 60 employees for the other two shifts combined would result in up to 60 peak hour trips, when first shift employees are departing and second shift employees are arriving. It is also important to note that the application assumed just two daily trips per employee. Since some employees leave at lunch or to run errands, the daily average number of trips per worker is typically 3.3 trips, based upon typical ITE office data, resulting in a total of 260 daily one-way trips for employees and visitors, as opposed to the 168 cited in the application.

In addition to the employee traffic, there will be up to 89 truck deliveries of incoming waste per day. Assuming most of these occur over a twelve hour period results in 8 round trip truck trips per hour = 16 one-way trips, which is then doubled to equate to passenger car equivalents (pces). This yields a projected afternoon peak hour of 60 employee trips and 32 pce truck trips for a total of 92 pces. While I concur that the project will likely not exceed the 100 trip-threshold, which would require a Traffic Movement Permit from the Maine Department of Transportation (MaineDOT) this is a significant level of traffic as discussed in the following paragraph.

Based upon standard operating practice in Maine, this level of traffic (92 pces) would warrant a full Traffic Impact Study. The general study area, according to Maine standard practice, extends to where a project is expected to contribute 25 or more lane hour trips

(defined in pces). As a result, the study area should extend from the site through the site drive intersection and then along Coldbrook Road to where there are fewer than 25 lane hour trips (again, defined in terms of pces) in the peak hour.

It is requested that CES provide peak hour trip estimates and trip assignments to finalize the study area. The best method to estimate trip generation for the new facility may be to collect data at the existing PERC facility in Orrington and appropriately increase or decrease those results, based upon both employee data and waste tonnages. It may also be necessary to adjust any trip generation counts performed this spring to peak summer conditions, when waste generation is highest in Maine.

2. **Trip Assignments:** Since no peak hour data was provided in the narrative, no peak hour trip assignments were provided by CES. Based upon the anticipated haul routes and existing traffic patterns relative to employee trips, trip assignments should be provided. The purpose of these trip assignments will be to determine study area for capacity purposes, as previously discussed, and also to allow for traffic impacts to be analyzed for no-build and build conditions.
3. **Traffic Volumes:** No traffic volume data was provided. A turning movement count should be conducted at the intersection of Coldbrook Road and the H.O. Bouchard Drive (at a minimum) to determine existing traffic volumes for the peak hour period, based upon the trip generation analysis results, which is expected to be the afternoon/PM peak hour period. Dependent upon the trip assignments and the resultant study area, additional turning movement counts may be needed.
4. **Traffic Analysis.** Level of service (LOS) analysis should be performed for both no-build and build conditions for the determined study area intersections to assure acceptable traffic operations. At a minimum, the study area will include the site drive intersection of Coldbrook Road and LOS analysis should be provided for the site drive to assure acceptable drive operations.
5. **Auxiliary Turn-Lane Warrants.** In addition to LOS analysis, turn-lane warrants should be provided for Coldbrook Road at the site drive to determine the need for either a right-turn lane or a left-turn lane to serve traffic entering the site. These warrants should be performed according to the procedure of the MaineDOT "Highway Design Guide".
6. **Accident Data:** Mr. Smith obtained accident data for Coldbrook Road from I-95 to Route 202. Depending upon the results of the trip assignments and resulting study area, since a new portion of the haul route is Route 202 from Route 2 to Coldbrook Road, additional accident data may need to be obtained and analyzed. Based upon the data provided there are no high crash locations along the Coldbrook Road corridor.

The study area for accident review purposes is often extended beyond the 25 lane hour trips. Additional accident data should be obtained and analyzed for all areas of concern identified by the Town as outlined in the following section.

7. **Haul Routes:** The application shows the intended haul routes to the facility. How will the facility mandate these haul routes? For example, trucks that are headed from the northeast are expected to take Route 202 to Coldbrook Road. How will they be managed to assure that they do not take Main North Road and the Town portion of Coldbrook Road to access the site? Most trucks would be expected to simply take the shortest, most direct route. The haul route map show trucks coming from the southeast up Route 1A towards the facility but it then expects them to travel to I-395. I think many of these trucks will simply opt to stay on Route 1A. How can the trucks possibly be controlled to require the specific haul routes noted in the application?

It is understood that the Town of Hampden is concerned with trucks at three particular intersections in the vicinity of the facility, which could indeed be impacted by trucks using the shortest, most direct route. These intersections are:

Main Road North (Route 1A) and Western Avenue  
Western Avenue and Route 202.  
Coldbrook Road and Main Road North (Route 1A)

Since the above intersections are generally within two miles of the facility and are noted to be of particular concern to the Town, they should be specifically addressed in some manner in the Traffic Impact Study. The Town also feels that there are sight distance restrictions at the intersection of Main Road North and Coldbrook Road so this should be evaluated in the study.

8. **Driveway Sight Distances:** Sight distances were provided for the proposed new drive across from the HO Bouchard Drive. For the 45 mph speed limit zone, the Maine Department of Transportation requirement is 635' for drives with a high number of large vehicles. Mr. Smith stated sight distance to the right is 740' and that it exceeds 2,000' to the left. These sight distances are more than adequate. It is important to note that MTR did not perform a field review to verify these sight distances.
9. **Interior Road Network:** The site plan (C103 dated 3/3/16) was reviewed in regard to on-site circulation for both pedestrians and vehicles since circulation, pedestrians and access by emergency vehicles are outlined as items of importance in the Town of Hampden Ordinance. CES appropriately provided a paved sidewalk for employees to enter both the processing facility and the admin building.

AutoTurn runs performed by Maine Traffic Resources show that a WB-67 tractor trailer truck will need to use all of the access road to make the turn in and out of the facility in the area of the cul-de-sac making it unsafe for other vehicles, particularly for automobiles entering or exiting the parking lots. The access road needs to be widened in this area to assure that trucks do not need to cross centerline to access the facility. AutoTurn runs showed no issues at the Coldbrook Road intersection. The AutoTurn runs are attached for your information.

No stop signs or pavement markings are shown on the plans. Who has the right-of-way at the cul-de-sac? Appropriate stop signs and pavement markings, such as stop lines, should be shown on the plans.

Is a speed limit being posted on the access road?

10. ***Right-of-Way.*** The plan shows a 100' wide right-of-way extending beyond the facility. It is understood that this a utility corridor that extends to Ammo Industrial Park and that it will have a gravel surface. It is understood that this access is to be to be gated by no gate is shown on the plans,

To summarize, Maine Traffic Resources requests a complete Traffic Impact Study (TIS) to be provided based upon standard traffic engineering practice in Maine. The TIS is required to demonstrate to the Town of Hampden that this project will not have a significant impact on safety or traffic operations and that no off-site mitigation is required to accommodate the proposed waste processing facility. As stated in Section 4.1.3, the burden of proof is upon the applicant. The off-site Traffic Impact Study should include the following at a minimum:

- Peak hour trip generation analysis. This may best be obtained by performing trip generation counts at the existing Orrington facility and appropriately adjusting them to both Hampden and peak summer conditions for waste facilities.
- Peak hour trip assignments based upon the intended haul routes and area traffic patterns to determine study area and traffic operational impacts.
- A truck Management Plan detailing how the waste trucks will be mandated to only use the haul routes or off-site mitigation as needed to address the Town of Hampden's concerns.
- Associated turning movement counts at study area intersections, appropriately factored to peak summer conditions.
- Level of service calculations for study area intersections under existing, no-build and build conditions.
- Auxiliary turn-lane warrants for Coldbrook Road at the site drive.
- Additional accident review for the expanded study area.
- Sight distance review at the intersection of Main Road North and Coldbrook Road since it has been flagged as a concern of the Town.

As always, if you have any questions regarding these preliminary review comments please do not hesitate to contact me. I'll look forward to continuing my review when the additional materials are received.

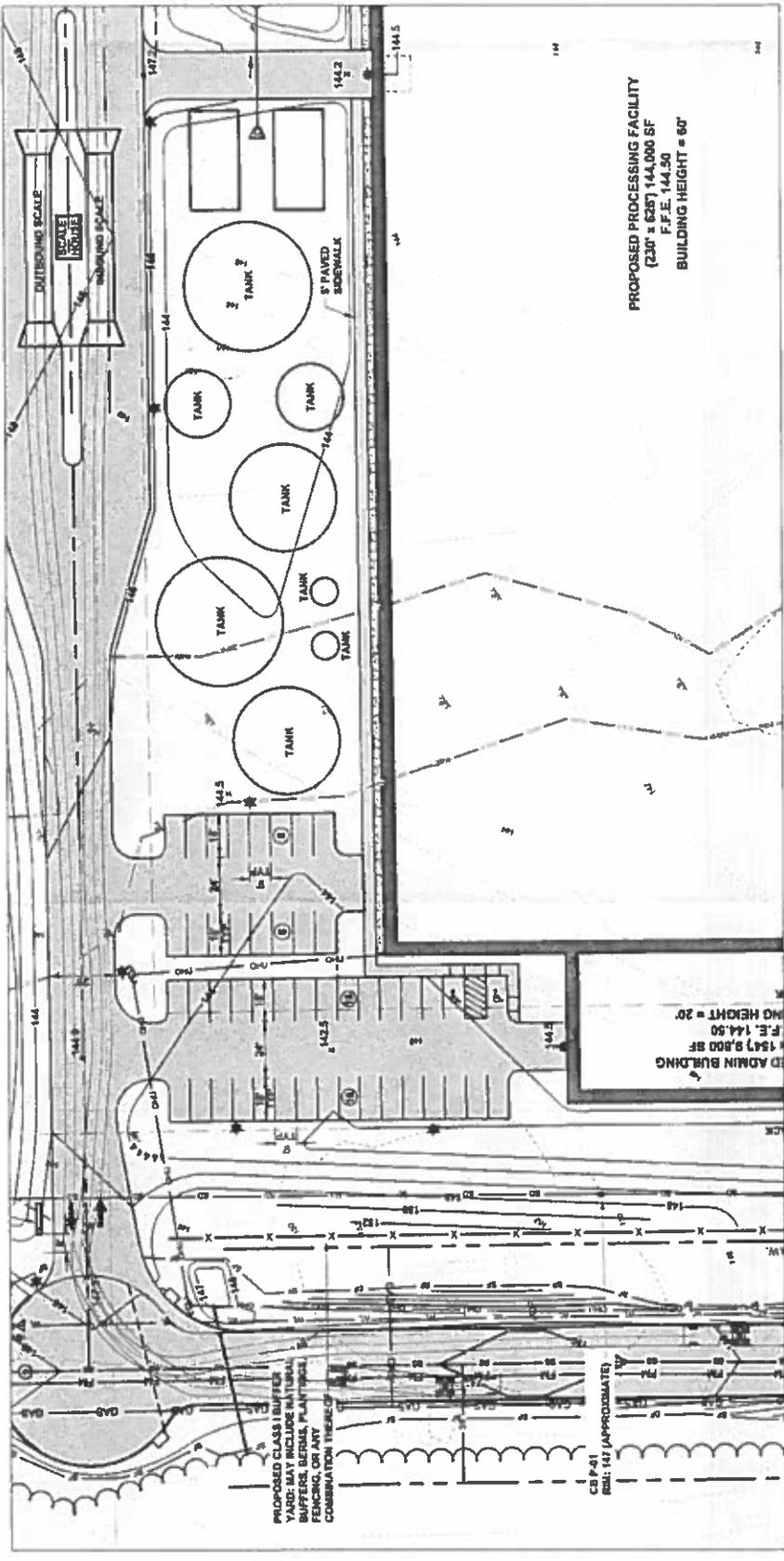


Sincerely,

A handwritten signature in black ink that reads "Diane W. Morabito". The signature is fluid and cursive, with a long horizontal stroke at the end.

Diane W. Morabito, P.E. PTOE  
President

# Hampden Solid Waste Processing Facility



**WB-67 @ 5 mph**  
**Hampden, Maine**  
**March 25, 2016**

**WB-67 @ 8 mph  
Hampden, Maine  
March 25, 2016  
Right In and Right Out**

