



Planning Board – Monday, October 28, 2019, 6:30PM
City Hall Council Chambers – 3 Washington Street, 2nd floor

AGENDA

- I. **Call to Order** – Roll Call
- II. **Minutes of Previous Meeting** – September 23, 2019 Meeting
- III. **Advice and Comment**
Rob Pearson, on behalf of owner Brady Sullivan Properties, seeks input on proposed modifications to the site plan, SPR-972 Modification #3, for the Colony Mill at 222 West Street. The Applicant is requesting that the Planning Board determine these proposed modifications to the site landscaping, roof venting, and other features be approved administratively. The site is 4.6 acres in size and located in the Commerce District (TMP# 567-009-000).
- IV. **Public Hearings**
SPR-06-19 – Froling Energy – 560 Main Street – Site Plan – Applicant 560 Main Street LLC, on behalf of owner, City of Keene, proposes to construct two new buildings on the property located at 560 Main Street (TMP #114-012-000) in two phases. A 38,500 sf wood chip processing facility is proposed for Phase 1, and the removal of an existing City salt shed and installation of a 10,000 sf building for offices, truck storage and maintenance is proposed for Phase 2. A waiver is requested from Standard #6, Landscaping. The site is 9.88 acres in size and is located in the Industrial District.
- V. **Community Development Director Report**
- VI. **New Business**
- VII. **Upcoming Dates of Interest – November 2019**
Planning Board Meeting – November 25; 6:30 PM
Planning Board Steering Committee – November 12; 11:00 AM
Joint PB/PLD Committee – **Tuesday**, November 12; 6:30 PM
Planning Board Site Visits – November 20, 8:00 AM – **To Be Confirmed**

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**CITY OF KEENE
NEW HAMPSHIRE**

**PLANNING BOARD
MEETING MINUTES**

Monday, September 23, 2019

6:30 PM

Council Chambers

Members Present:

Douglas Barrett, Chairman
Michael Burke
Martha Landry
Councilor George Hansel
Mayor Kendall Lane
Gary Spykman
Pamela Russell Slack
Tammy Adams

Staff:

Rhett Lamb, Asst. City Manager/Community
Development Director
Mari Brunner, Planner

Members Not Present:

Chris Cusack, Vice-Chair
Andrew Weglinski

I. Call to order – Roll Call

Chair Barrett called the meeting to order at 6:30 PM and roll call was taken.

II. Minutes of previous meeting – August 26, 2019 Planning Board Meeting Minutes

A motion was made by Mayor Kendall Lane to accept the August 26, 2019 minutes. The motion was seconded by Councilor George Hansel and was unanimously approved.

III. Boundary Line Adjustment

1. **S-06-19 – 14 & 18 Wildwood Rd – Boundary Line Adjustment** – Applicant Wendy Pelletier of Cardinal Surveying and Land Planning, on behalf of owners, Daniel Fox and Ronnie Brown, proposes a boundary line adjustment between the property located at 18 Wildwood Rd (TMP #107-031-000) and the adjacent lot at 14 Wildwood Rd (TMP# 107-030-000) owned by Janice U. Walker. This adjustment would transfer 0.14-acres from the 0.92-acre parcel at 14 Wildwood Road to the 0.73-acre parcel at 18 Wildwood Road. A waiver is requested from Section III.C.5 of the Planning Board Regulations regarding the requirement to submit an updated survey showing all meets and bounds of the revised parcels. Both properties are located in the Low Density District.

A. **Board Determination of Completeness.**

Planner Mari Brunner stated the Applicant has requested exemptions from submitting a Grading Plan, a Landscaping Plan, and a Lighting Plan. After reviewing this information staff has determined that exempting the applicant from submitting this information will have no bearing on the merits of the application. In addition, she stated the applicant has requested an exemption from providing a surveyed plan that shows all metes and bounds of the two parcels. The submitted plan shows all metes and bounds for 18 Wildwood Road but not for the east and south parcel boundaries of the property at 14 Wildwood Road. Ms. Brunner stated the applicant has submitted a waiver request, which is included in the Board's packet. She added it is up to the Board to decide if this information is required to consider the application as complete.

A motion was made by Councilor George Hansel recommending the Board accept the Application S-06-19 – 14 & 18 Wildwood Road as complete. The motion was seconded by Mayor Kendall Lane and was unanimously approved.

B. Public Hearing

Ms. Wendy Pelletier of Cardinal Surveying stated this is a minor boundary line adjustment. It was discovered by the applicant (owner of property at 18 Wildwood Road) that a pin was missing and that the applicant has been using a portion of the property in the rear that belongs to the abutting property owner at 14 Wildwood Road. As a result, they have approached the abutter to purchase this area and square up the lot. Both parcels would meet minimum lot size requirements, and no frontage is being changed.

With respect to the survey for metes and bounds –Ms. Pelletier noted she did not complete the entire survey for this area and hence did not want to place metes and bounds on the survey, and determined this area belongs to the applicant.

Staff comments were next. Ms. Brunner stated this is a straightforward boundary line adjustment. She indicated no new development is being proposed, none of the Planning Board standards apply.

The Chairman noted this is not a public hearing, but would welcome public comment.

Mr. Mike Selby of 26 Wildwood Road stated he has no objection to this request but wanted to know what the intended use for this property was. Mayor Lane noted it has been stated there is no change in use; both properties will be used as they are today. He added there will be no changes to frontage and that this lot line adjustment would not create a new lot. Mr. Selby asked, if development were to be proposed at a future date, if the matter will come before the Planning Board. Mayor Lane answered in the negative and added the Board does not regulate uses on single-family properties. Unless the proposed development would require a variance from the Zoning Board, the matter would not need to come before a public body.

With no further comments, the Chairman closed the public hearing.

C. Board Discussion and Action

A motion was made by Mayor Kendall Lane that the Planning Board approve S-06-19 and the requested waiver, as shown on the plan identified as “Boundary Line Adjustment, Lots 107-031-000 & 107-030-000, 14 & 18 Wildwood Road, Keene, NH 03431” prepared by Cardinal Surveying and Land Planning at a scale of 1 inch = 20 feet and dated August 14, 2019 with the following conditions prior to signature by the Planning Board chair:

1. Owners’ signatures appear on plan.

The motion was seconded by Councilor George Hansel and was unanimously approved.

IV. Public Hearings

1. SPR-05-19 – Colonial Theatre – 89 Main St – Site Plan – Applicant Weller & Michal Architects, on behalf of owner Colonial Theatre Group Inc., proposes modifications to the main entrance and a 2,800 sf addition to the Colonial Theatre building located at 89 Main St

(TMP# 575-008-000). A waiver is requested from Planning Board Standard #1, Drainage. The site is 0.36 acres and is located in the Central Business District.

Chair Barrett was recused from this application as his spouse is on the Board of Directors for the Colonial Theater. He stated in the absence of the Chairman and the Vice-Chair the Mayor assumes the role of Chairman.

A. Board Determination of Completeness.

Planner Mari Brunner said the applicant has requested exemptions from submitting a Grading Plan, a Landscaping Plan, and a Lighting Plan as well as the Traffic, Drainage and Soils Reports. Engineering staff has determined that a drainage report is necessary in order to determine compliance with Development Standard #1, Drainage. The applicant has submitted a waiver request from this standard. If the Board is inclined to grant the requested exemption from providing a drainage report, staff recommends the Planning Board grant the other requested exemptions and accept the application as complete. Ms. Brunner went on to say that addressing the waiver would be during the public hearing and the Board has not opened the public hearing yet. What the Board is determining at this time is whether or not to hear the application in the absence of a drainage report. She went on to say during the public hearing, if the Board decides it would like a drainage report, they could always request one.

A motion was made by Councilor George Hansel that the Board accept this application as complete. The motion was seconded by Councilor George Hansel and was unanimously approved.

B. Public Hearing

Mr. Charles Michal of Weller and Michal Architects addressed the Board. Mr. Weller stated the proposal is to renovate the existing building and to add an addition to the rear portion of the building and fully utilize the entire lot. He referred to a floor plan and noted the areas shown in blue are the areas being renovated inside of the building. The areas shown in yellow and the main auditorium will not see any change. He stated what is changing is the stage area which is being reworked to accommodate the physical requirements of a theater; the current design cannot accommodate the needs of a modern theater. The area shaded brown is the area of new construction; this area is currently used for ground mounted equipment and is going to be replaced by fixed equipment.

Mr. Weller noted there will be three primary levels to the building addition. The first level is the stage level that will be for the “back of house” activity – loading, unloading, and handicap accessible dressing rooms. The second level up will have full dressing rooms, green rooms and production offices. The third level will have the new HVAC equipment.

Mr. Weller stated the use of the site is not changing and it will continue to be used as a theater. The applicant has received a special exception from the Zoning Board to go beyond the 55 foot height allowed in this zone. The Historic District Commission has also granted approval for the appearance of the building.

With regards to site impacts, Mr. Weller noted there will be no change to use of the building. There will be two new necessary exit doors at the rear with required lighting.

Mr. Weller noted the applicant recognizes an increase to impervious cover – the mechanical yard at the rear is being replaced by a building. He added the only change to drainage is the loss of grassy area between these structures that exist there now. He further stated that engineers have indicated that preparing post and pre development drainage will be misleading because the affected area is so small. Mr. Weller also pointed out the current surface drainage in this area is from all surrounding properties. What the applicant is proposing is to capture all the runoff into roof drain and pipe it into catch basin located west of the property – this is why a waiver was requested.

Mr. Weller went over waiver criteria

- a) *That granting the waiver will not be contrary to the spirit and intent of these regulations;*
- b) *That granting the waiver will not increase the potential for creating adverse impacts to abutters, the community or the environment; and*
- c) *That granting the waiver has not been shown to diminish the property values of abutting properties.*
- d) *Consideration will also be given to whether strict conformity with the regulations or Development Standards would pose an unnecessary hardship to the applicant.”*

The only area made impervious is 1,500 square feet, less than 10% of the site.

Mr. Weller stated to improve visitor experience, the ground floor is being expanded but this type of improvement requires machinery in the rear to be rebuilt.

Mr. Weller then referred to a rendering of the proposed site, a view from Commercial Street. He explained the original building is being retained, expanding to the back to the limit of the property line, adding some brick at the western end - the end will be a multi- level structure.

Mayor Lane asked whether this addition is on a slab. Mr. Weller stated it would be on a foundation. The Mayor asked whether there will be a basement. Mr. Weller stated there is currently a basement but plans do not call for a full basement but a partial basement. The Mayor asked whether the existing basement has any water seepage issues. Mr. Weller stated there is an operating sump pit in the electrical room, which does not run all the time and noted the new construction will have modern equipment to provide better waterproofing. Mayor Lane noted during storms water collects in this parking area and asked whether this water seeps into the existing basement. Mr. Weller stated he was not sure but according to the individual in charge of facilities, water seepage is not because of the sump pump but because of a poorly constructed basement stairs, which allow water getting into this area and noted the new construction with better equipment should resolve this problem.

The Mayor asked what material is being used on the addition. Mr. Spykman in response to that question stated the issue with standard 19 has been taken away from this Board because as this property is located in the Historic District and the Historic District Commission has approved this plan. Mr. Weller stated he would be happy to go over this plan and noted the accepted material for the downtown district is brick and metal and both those materials are being used on this site. A pre-finished metal skin system will be used as part of the walls. Blue with accenting dove grey and brick would be the look for this site.

Ms. Landry referred to language from Mr. Weller's September 9 letter "*...An increase in impermeable surface area, and peak rate of runoff, is typically offset by a detention basin which is impractical/impossible in an area so densely developed ...*" and asked how this might look like and where this would go compared to the rooftop solution the applicant is proposing. Mr. Weller stated what they are proposing is the 1,500 square feet which is being changed is not going to create any dangerous offsite flow. He added the rooftop solution they are creating has to accommodate the same storm.

Ms. Adams asked how much height is going to be added to the fly space. Mr. Weller stated it would be 15 feet.

Mr. Spykman asked where the dumpster is going to be located as there is no more space for one anymore. Mr. Weller stated the applicant has made application to use a nearby location on city property. Mayor Lane stated it is not uncommon in downtown to use city property for dumpsters because of limited space.

Mayor Lane asked for explanation for exterior lighting. Mr. Weller stated the existing building has small LED fixtures directing over the exterior doors; the city-owned decorative pole light that sits on the corner of the exterior building is going to be moved about 25 feet to the west, which will light more of the lot.

Ms. Russell Slack asked whether there was going to be a wider sidewalk. Mr. Weller noted that no part of the Colonial building is at grade, and there needs to be provisions made for a handicap ramp somewhere on the site. The applicant is proposing one that runs parallel to the sidewalk – touches the sidewalk but does not encroach on it; hence, it does not widen it or narrow it.

Staff comments were next. Ms. Brunner stated this is a historic building in downtown Keene and is on the Historic Registry for historic places. She noted this project is going to be occurring in two phases. Phase 1 would include interior renovations and relocation of the entry doors closer to Main Street, which was approved by the Historic District Commission. Phase 2 would consist the addition to the rear of the building. Phase 1 is being planned for the 2020 construction cycle and phase 2 in the 2021 construction cycle. The applicant has applied for and received from the Zoning Board special exception for the height restriction at the rear; it is 57 feet above grade presently and will be going to about 75 feet.

Ms. Brunner stated staff did receive comments from engineering on this item and it was mostly on approvals the applicant will need to obtain – such as approval from City Council to place a portion of the steps and ramp of the new addition, which would be partially placed on Commercial Street. An Encumbrance Permit from Public Works will be required for encumbrances on a public way while the project moves forward. Engineering staff also asked for pre- and post-drainage calculations and absent that, staff will not be able to confirm this standard has been met.

Ms. Brunner then went over the development standards:

Drainage - The applicant proposes to construct a 2,800 square foot addition, which would increase the impervious area by a little less than 1,500 square feet. The applicant proposes to direct runoff from the new addition through internal roof drains into a catch basin located in the public right of way and staff recommends that City approval of this use of City land be a

requirement be included as a condition of approval. In addition, the applicant has requested a waiver from this standard, this is included on page 27 of the Board's packet, and the waiver criteria are on page 23 of the packet.

The applicant does not propose sediment and erosion control measures.

No landscaping is proposed for this project.

Screening – All HVAC equipment will be screened from view by an enclosed penthouse or with a parapet. There is an existing truck loading area but no changes are being proposed for this area. The applicant is proposing to use an offsite location to locate the dumpster, which will require City approval.

Lighting – There are two lights required by the building code above the egress doors and this meet the Board's standard for full cut-off LED fixtures.

Sewer and Water - This site currently connects to City water and sewer lines and no new connections to the Main Street sewer line are proposed.

Traffic - The applicant has noted that the seating capacity of the theatre is not changing and hence no increase in traffic generation is expected and there will be no change in truck traffic to the site.

Comprehensive Access Management - This site is located right off Main Street and pedestrians access it coming from the parking lot or from Main Street. There is no driveway or parking located on site - there is currently a bicycle rack located on the sidewalk in front of the building that is owned and maintained by the City.

No fill or excavation is proposed as part of this application.

Architecture and Visual Appearance - This property is located in the Downtown Historic District and the proposed activity required the issuance of a Certificate of Appropriateness from the Historic District Commission, which was granted at their September 18, 2019 meeting. Per Section III.B.4 of the Planning Board Site Plan and Subdivision Regulations, development on property located within the Downtown Historic District is not be subject to the requirements of Planning Board Development Standard 19.

Ms. Brunner went on to say staff has recently learned the applicant is planning to use pile caps on the foundation, which would extend into the public right of way and/or onto private property. Staff are recommending a condition of approval that would require the applicant to receive permission from the City and abutting property owners to permanently place the pile caps on property not owned by the applicant.

She noted that, because this construction is happening in two phases, the applicant requested from the HDC that this approval last three years instead of the customary one year – the recommended motion addresses this item as well.

Councilor Hansel asked what the process was for connecting to the city catch basin.

Ms. Brunner stated it is a license from either Public Works or approval from City Council. The Councilor asked whether it is a one-time license. Mr. Lamb stated it is an agreement between the applicant and the city (through Public Works) as to the capacity of the basins and this is why staff asked for a drainage study. He added this is not an unusual request with lot line to lot line developments as there is no other place to locate catch basins on site. Hence, when there is new development public works asks for a study and an agreement, which will run for the term of the existence of the site – it is a one-time agreement.

Mr. Spykman stated he wanted to make sure the Board understands the issue with the foundation; the building will be at the lot line but the foundation has to be wider than the walls of the buildings and extend into the public right of way and onto abutter's properties. Mr. Weller explained the foundation of a building always ends up on footings. When constructed at a zero lot line, the foundation will extend past the vertical line defined by the boundary line. He added with this building the site also does not have deep bearing soils which won't allow for weight to rest on it, hence piles need to be driven down into the ground 90 feet down until something solid is hit.

The Mayor asked what the existing building sits on. Mr. Weller stated they did not know what it currently sits on. The Mayor stated he hoped driving piles would not move the existing building too much.

Mr. Lamb stated staff understands this type of construction does happen but what staff is saying is there is the potential of this construction having an impact on city properties and abutters and some recognition from other properties is necessary.

The Mayor asked for public comment. With no comments from the public, the Mayor closed the public hearing.

Mr. Spykman stated the Colonial is a gem and he supports them to become financially viable. He stated he likes the architectural design of the proposed addition. He added he is especially happy the main entry doors are being retained and are being moved forward.

C. Board Discussion and Action

A motion was made by Councilor George Hansel that the Planning Board approve SPR-05-19 and a waiver from Standard 1 – Drainage as shown on the site plan identified as “Proposed Site Plan, 2020 Addition and Renovation, 95 Main Street Keene, NH” prepared by Weller and Michal Architects Inc. at a scale of 1 inch = 10 feet, dated August 27, 2019 and revised through September 9, 2019 with the following conditions:

1. Prior to signature by Planning Board Chair:
 - a. Owner's signature appears on plan.
 - b. Applicant obtains all necessary approvals and licenses from the City, including but not limited to an encumbrance permit, a license for use of City property, and an air rights lease.
 - c. Applicant demonstrates all necessary permissions or approvals to use property other than that of the applicant to construct the proposed addition as shown on the site plan.

- d. Applicant demonstrates permission or approval to use property other than that of the applicant for locating a dumpster, or submits a trash removal plan approved by the Community Development Director.
2. Prior to Issuance of a Building Permit, the applicant obtains a license from City Council for use of City property for construction staging and contractor parking, if needed.
3. The Board agrees with the applicant that additional time is needed to complete both phases of the project and the completion date for the active and substantial development for this project will be three years from the date of this approval.

The motion was seconded by Pamela Russell Slack.

Ms. Landry asked whether anything needs to be said about granting of the waiver for drainage. Mr. Lamb stated by granting the approval of the site plan, which refers to the waiver, the Board is granting this waiver.

The motion was unanimously approved.

Chair Barrett rejoined the session.

2. **SPR-876, Modification #1 – Ametek (formerly Precitech) – 44 Black Brook Rd – Site Plan** – Applicant Brickstone Land Use Consultants LLC, on behalf of owner NH Black Brook LLC, proposes a 7,870 sf building addition and the installation of new parking areas to the north and east of the existing building for the property located at 44 Black Brook Rd (TMP #221-021-000). A waiver is requested from Planning Board Standard #6, Landscaping. The applicant requests a Surface Water Protection Conditional Use Permit to install paving and grading in a 1,600 sf area within the wetland buffer. The site is 18.43 acres and is located in the Corporate Park District.

A. Board Determination of Completeness.

Ms. Brunner stated the Applicant requests exemptions from submitting a Traffic study. Staff has determined that exempting the applicant from submitting this information would have no bearing on the merits of this application and recommends that the Planning Board accept the application as complete.”

A motion was made by Councilor George Hansel that the Board accept this application as complete. The motion was seconded by Mayor Kendall Lane and was unanimously approved.

B. Public Hearing

Mr. Jim Phippard of Brickstone Landuse Consultants addressed the Board on behalf of NH Black Brook LLC, the owner of the property located at 44 Black Brook Road. The existing building is 69,899 square feet and was constructed in 1999. Until 2 years ago, it existed as Precitech and was recently acquired by Ametek. Ametek also purchased the property at the end of Corporate Park where Janos Technology is located.

Mr. Phippard referred to Black Brook Road and noted that where it ends in a cul de sac there is an easement that extends north and east. This easement is held by the City of Keene. The right of way was retained by the City for future road extension. Since that time, Hillside Village was

developed to the north. As part of that development, Hillside Village purchased an easement from Precitech and Ametek for an emergency access driveway. Therefore, the easement to extend Black Brook Road is no longer required.

Mr. Phippard stated that Ametek is proposing to add an 7,870 square foot addition and noted the darkened area on the site plan is the area that would be expanded. The existing loading dock will be moved, and that space will now be used by their research and development department. There are no plans to bring in more staff at this time, but this is something that will be considered for later.

Ametek will also be occupying apportion of an existing parking area and will be eliminating 22 parking spaces in this area. Mr. Phippard noted the Conservation Commission has raised the issue of parking spaces exceeding the number required by zoning and noted this is because Ametek has employees who work two shifts which overlap, hence the need for extra spaces. The eliminated spaces are being replaced along the north and easterly side of the building. The applicant is petitioning the City Council to discontinue the easement the city holds in this area. Mr. Phippard stated now that the emergency access driveway has been constructed, this easement can be discontinued. This easement is through a forested wetland area. Creation of these spaces cause an easier truck traffic access but he noted the amount of traffic generated does not change with this proposal.

Mr. Phippard stated the drainage will be changed slightly to pick up run off that will be created from the newly created parking. He referred to the location where a new storm water collection area will be located which will eventually discharge into an existing storm water pond. He noted there is an application for a conditional use permit as the applicant is encroaching slightly (at the north) into a wetland buffer with the newly created circulation driveway. The pavement will be 24 feet from the wetland (the buffer is 30 feet), there will be 1,600 square feet of impact in the buffer. There will be curbing along this encroachment area to prevent runoff from entering the wetland.

Mr. Phippard explained this wetland is a significant wetland area; it is part of Black Brook Swamp, which is part of Tenant Swamp. The entire compound is about 143 acres in size of forested wetland and is considered a prime wetland.

Mr. Phippard stated the applicant is also requesting a waiver from a portion of the landscape standard. The applicant is requesting a waiver from the requirement to plant one tree for every ten spaces for the new parking on the north of the building and noted this is because this area is not visible from the public right of way or Hillside Village, and it is adjacent to a wooded area.

Mr. Phippard referred to the lighting plan and noted lighting has been added in the newly created circulation driveway area. Most of the proposed lights are full cut-off LED wall packs, and one pole light is being added on the easterly location.

With regards to architecture, the existing building is 20 feet in height and the proposed expansion will be 26 feet in height. On the north elevation, the loading dock will be painted concrete block to match the existing loading dock. He referred to the west elevation expanded area (view from driveway – not visible from Black Brook Road) – which will match the existing structure.

Councilor Hansel asked how the individuals who park at the rear of the site will enter the building. Mr. Phippard referred to the existing doors at the loading docks, which would be used to access the building.

Chair Barrett asked what kind of material will be used on the curbing for the area that encroaches into the wetland area. Mr. Phippard stated it would be asphalt curbing.

Staff comments were next.

Ms. Brunner stated the applicant is requesting a waiver from the Board's landscape standards. She noted the waiver criteria are listed on page 43 of the Board packet.

As far as the discontinuance of the easement, staff is recommending this be included as a condition of approval.

She stated the Surface Water Conditional Use Permit was referred to the Conservation Commission and this item was discussed at their September 16 meeting. The Conservation Commission recommended the Planning Board consider hooded outlets for catch basins to minimize petroleum or any such products entering the basins, which will have the same effect. She noted the Board could add this as a condition of approval.

She noted the applicant proposes to impact about 1,600 square foot area in the wetland buffer, the pavement will be 24 feet away and the buffer is 30 feet (page 41 has an image of the impacted area).

Per Sec. 102-1489 sub-section (c) of City code, the construction of new driveways and parking areas requires the issuance of a conditional use permit by the Planning Board. The criteria for granting a conditional use permit is included.

Sec. 102-1490

The proposed use and/or activity cannot be located in a manner to avoid encroachment into the overlay district.

The applicant has noted that, due to the location of the existing building, it is not possible to avoid placing the circulation road outside the buffer while still meeting the parking requirements of the business due to overlapping worker shifts.

The nature, design, siting, and scale of the proposed use and the characteristics of the site including but not limited to topography, soils, vegetation, and habitat are such that when taken as a whole, will avoid the potential for adverse impacts to the surface water resource. –

Ms. Brunner explained this area is located between the existing building and a forested area. Due to the small size of the area affected, its location in relation to the wetland and the proposed mitigation measures (including a detention basin and infiltration strip), it appears as though the proposed encroachment will avoid the potential for adverse impacts to the wetland area.

Ms. Brunner called the Board's attention to page 43 of the Board's packet where it explains the importance of the wetland resource.

With regards to architecture and visual appearance, Ms. Brunner stated the applicant is proposing a 7,870 square foot, single-story addition that will be 26 feet tall, four feet taller than the existing

structure, and would be clad in insulated metal panels and concrete masonry units painted to match the color of the existing building.

Ms. Landry asked for explanation of the Conservation Commission recommendation.

Ms. Brunner stated what they are recommending is for the catch basins to have a hooded outlet which is a measure to prevent petroleum from getting out of the drain into the detention basin.

Mr. Phippard added what is being requested is to replace the outlet pipe with an elbow at the end, which would project out and below the water surface, which would prevent oil from getting into the detention basin. This is a standard requirement from DES. This is included in the applicant's details.

Mr. Spykman asked if there is a schedule to clean these pipes. Mr. Phippard stated the manufacturer of the hooded outlets provide for a maintenance service – to include an inspection, cleaning and removal.

The Chairman asked for public comment, with no public comment the Chairman closed the public hearing.

C. Board Discussion and Action

A motion was made by Mayor Kendall Lane that the Planning Board approve the applications for Conditional Use Permit SWP-CUP-2019-01, and Site Plan Review SPR-876 Modification #1 including granting of a waiver from Development Standard 6, Landscaping, as shown on the plan set identified as: "Modification to SPR 876, Proposed Addition" prepared by Brickstone Land Use Consultants LLC at varying scales on August 14, 2019 and revised September 9, 2019 and as shown on the architectural elevations identified as "Precitech Warehouse Expansion" prepared by JA Saccoccio Workshop PLLC at a scale of 1/16 inch = 1 foot and dated July 15, 2019, with the following conditions prior to signature by Planning Board Chair:

1. Owner's signature appears on plan.
2. Architect's stamp appears on the architectural elevations.
3. Discontinuance of easement for possible future road extension, as shown on the plan entitled "6 Lot Subdivision of Land Described in Book 1530, Page 512, Prepared for Keene Economic Development & Revitalization Corporation, 20 Central Square, Suite 1, Keene, NH 03431."

The motion was seconded by Councilor George Hansel.

Chair Barrett asked whether the recommendation from the Conservation Commission should be included in the plan.

Mayor Lane made an amendment motion to add an Item D. Councilor Hansel withdrew his second.

d. Submittal of revised plan to show inclusion of hooded outlets.

Pamela Russell Slack seconded the amended motion, which was unanimously approved.

Ms. Russell Slack commended Ms. Brunner's presentations.

V. Community Development Director Report

None

VI. New Business

Mayor Lane referred to the site plan for the Colony Mill, which showed that all the mechanical equipment was going to be located on the roof and not be visible from the public right of way. Mr. Lamb stated some condensers were going to be located along the easterly side as well as the side that faces Ye Goodie Shoppe. The Mayor stated the view from Island Street is equipment on the roof (highly visible) on the two-story portion. Mr. Lamb stated staff will look into this.

Ms. Landry referred to a prior discussion regarding agricultural uses being waived from certain studies and asked for an update. Mr. Spykman recalled a request from Mark Florenz from Archway Farm who had indicated to the expense of providing such a study and the Board had discussed perhaps waving some of those studies. This was a discussion that was supposed to happen at the Joint session. Mayor Lane stated he recalls not moving forward yet as the Board did not want to put in place standards just for Archway Farm because there are other facilities in Keene which were not as desirable as Archway Farm and referred to the one on Basehill Road.

Mr. Spykman stated there was also a statewide study that was happening and the Board had chosen to hold off until that study was complete. Mr. Lamb stated he would do some research on this topic and report back next month.

VII. Upcoming Dates of Interest – October 2019

Planning Board Meeting – October 28; 6:30 PM

Planning Board Steering Committee – October 15; 11:00 AM

Joint PB/PLD Committee – **Tuesday**, October 15; 6:30 PM

Planning Board Site Visits – October 23, 8:00 AM – To Be Confirmed

The meeting adjourned at 8:20 pm

Respectfully submitted,

Krishni Pahl
Minute Taker

Reviewed and edited by Mari Brunner, Planner



October 14, 2019

Tara Kessler

City of Keene, Community Development Department
3 Washington Street
Keene, NH 03431
Phone: 603-352-5440

Hello Tara.

Brady Sullivan Properties would like to request the opportunity to be placed on the agenda for the advice and comment session at the October 28th, 2019 Planning Board meeting. We are looking to wrap up the project and want to go over a few items and would like to get the advice of the board, mainly landscaping and roof venting on Island Street.

Thank You,

Rob Pearson
Property Manager Colony Mill
BRADY SULLIVAN PROPERTIES
603-716-7301
rpearson@bradysullivan.com

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STAFF REPORT

SPR-06-19– SITE PLAN REVIEW – 560 Main Street, Froling Energy

Request:

Applicant 560 Main Street LLC, on behalf of owner, City of Keene, proposes to construct two new buildings on the property located at 560 Main Street (TMP #114-012-000) in two phases. A 38,500 sf wood chip processing facility is proposed for Phase 1, and the removal of an existing City salt shed and installation of a 10,000 sf building for offices, truck storage and maintenance is proposed for Phase 2. A waiver is requested from Standard #6, Landscaping. The site is 9.88 acres in size and is located in the Industrial District.

Background:

This site is bordered by NH Route 101 and a commercial property to the north, City land to the east, the Branch River to the south, and Cheshire Tire and residential properties to the west. Access to the site is from a 40-foot wide easement that runs over property owned by 580 Main St LLC (site of Cheshire Tire). Until recently, there was an ~2-acre area in the northwest portion of the property in the Commerce Zoning District; however, City Council voted at their meeting on October 17, 2019 to amend the Zoning Map to locate the entire parcel in the Industrial district.



The approximate location of the property located at 560 Main Street is shown above in yellow.

This property was originally part of a 30.2-acre parcel used by the City's Public Works Department for materials storage, stockpiling and handling. The Planning Board approved subdivision S-05-19 at the August 26, 2019 meeting to subdivide the 30.2-acre parent parcel into a 9.88-acre lot and a 20.93-acre lot.

The City has owned this property since 1876. In the early 1950s, several buildings were constructed to house the Public Works Department. These facilities were located on this land until the Public Works building at 350 Main Street was constructed in 2003. Throughout the mid-20th century, this property was the site of open burning solid waste disposal, the City's incinerator, and the disposal of liquid materials. As a result of these activities, there are known environmental challenges associated with this property that may impact the future development of the site.

The applicant proposes to develop the site in two phases. A 38,500 sf wood chip processing facility is proposed for Phase 1 and a 10,000 sf office and truck storage and maintenance building is proposed for Phase 2. The applicant is requesting a waiver from Development Standard #6, Landscaping.

Completeness:

The applicant has submitted a full plan set, drainage report, and soils report. An exemption is requested from providing a traffic report. Staff have determined that the requested exemption would have no bearing on the merits of the application, and recommend accepting the application as complete.

Departmental Comments:

Initially, there were comments from the Engineering Division and Police Department; however, these comments have been addressed by the applicant. There are no remaining questions or comments from City departments.

STAFF REPORT

Application Analysis: The following is a review of the Planning Board development standards relevant to this application.

1. **Drainage:** This standard states that site design and drainage systems shall incorporate Low Impact Development (LID) measures unless the applicant is able to demonstrate that the use of LID measures is not possible. This site is a Brownfield site with an active Groundwater Management Permit and an Activity and Use Restriction (AUR) Covenant with the New Hampshire Department of Environmental Services (NHDES). The AUR covenant stipulates no increase in stormwater infiltration on the site. As a result of this restriction, the applicant notes that LID measures that increase infiltration are not possible.

The applicant proposes to collect runoff from the proposed wood chip storage and processing facility and associated paved areas (Phase 1) with a series of catch basins that would direct the runoff into a gravel wetland with two bays and an impermeable liner. The overflow from the gravel wetland would be diverted into a grass treatment swale with an impermeable liner, then to an existing natural wetland and, ultimately, to the Branch River. The runoff from Phase 2 of the proposed development (new building for office and truck storage/maintenance) would be directed into two grass treatment swales with impermeable liners, then to the natural wetland and the Branch River.

The applicant submitted a drainage narrative dated 9/20/19 to demonstrate that the proposed development is not expected to result in an increase in runoff from the site.

2. **Sedimentation and Erosion Control:** The applicant proposes to install a double row of silt fencing and/or waddles between the areas to be disturbed and the existing wetland and Branch River located to the south of the area to be developed. In addition, the applicant proposes to install a stabilized construction entrance to minimize off-site sediment transport on vehicles and equipment. The proposed construction requires an Alteration of Terrain permit through NHDES.
3. **Hillsides:** No hillsides are present on the site; this standard does not apply.
4. **Snow Storage:** The applicant has indicated snow storage areas on the proposed conditions plan, including the areas to the north and east of the proposed wood chip processing facility. These areas drain away from the existing wetland and the Branch River.
5. **Flooding:** A small section of the south end of the property adjacent to the Branch River is in the 100-year floodplain; however, no site work is proposed which would impact this area.
6. **Landscaping:** The applicant proposes to install 44 Balsam fir trees as part of Phase 1 of this project, including 30 trees along the west parcel boundary to provide screening for residential properties on Manchester Street and 14 trees along the northeast boundary of the property to provide screening from NH Route 101. Proposed landscaping for Phase 2 of this project includes 2 Chanticleer pear trees, four shrubs (rhododendron and spirea), and 4 perennial sedum plants.

A waiver is requested from the requirement to plant trees at a ratio of one tree per 10 parking spaces in the parking lot area associated with the woodchip processing facility. The written waiver request is included in the project narrative as an attachment to this staff report. In deciding whether to grant a waiver, the Planning Board should find that the granting of the waiver would meet each of the following waiver criteria listed in Section X.1 of the Planning Board Site Plan and Subdivision Regulations:

STAFF REPORT

- “a) *That granting the waiver will not be contrary to the spirit and intent of these regulations;*
- b) *That granting the waiver will not increase the potential for creating adverse impacts to abutters, the community or the environment; and*
- c) *That granting the waiver has not been shown to diminish the property values of abutting properties.*
- d) *Consideration will also be given to whether strict conformity with the regulations or Development Standards would pose an unnecessary hardship to the applicant.”*

7. **Noise:** The applicant notes that all sorting and processing of wood chips will be conducted inside the central, enclosed portion of the building. Green wood chips will be delivered to the open canopy on the west end of the building, and dry wood chips will be picked up from the open canopy on the east end of the building. During the heating season, the applicant states there will be an average of 6 truck trips per day (3 round trips).

Potential sources of noise from the site include truck deliveries, loading and unloading of wood chips, and truck back-up alarms. The west end of the proposed building (where green chips will be delivered) is about 100 feet from the nearest residential property. The board might consider asking the applicant to provide more information regarding the expected noise level at the property line in the area adjacent to residential development.

8. **Screening:** As noted earlier under Standard #6 – Landscaping, the applicant proposes to install 30 balsam fir trees to provide year-round vegetative screening for residential properties on Manchester Street, and 14 balsam fir trees to screen the site from NH Route 101. A dumpster is proposed on the north side of the proposed wood chip processing facility; the applicant notes that this location is not visible from NH Route 101 or the adjacent residential properties on Manchester Street.
9. **Air Quality:** This standard states that projects that require federal or state air quality permits must have obtained those permits prior to the issuance of a building permit. The proposed woodchip processing facility, which will use a biomass boiler to process green woodchips, requires an Air Quality permit from NHDES. The applicant notes that they are in the process of obtaining this permit from NH DES.
10. **Lighting:** For Phase 1 of this project, the applicant proposes to install 18 wall pack lights and 3, 25-foot pole-mounted lights to illuminate the paved areas and parking around the processing facility. For Phase 2, the applicant proposes 4 wall pack lights and 1, 25-foot pole-mounted light. All light fixtures are full cut-off LEDs. The applicant submitted a lighting plan (Sheet LT-1) and a reduced lighting plan (Sheet LT-2), which demonstrate that light levels are 0.0 footcandles (fc) at all property lines, and provided the light levels listed in the table below. The full lighting levels are consistent with the recommended light levels for low to medium activity parking lots. This standard appears to be met.

Illumination Levels	Phase One		Phase Two	
	Full Lighting	Reduced lighting	Full Lighting	Reduced lighting
Average (fc)	1.98	0.99	1.43	0.90
Minimum (fc)	0.5	0.2	0.4	0.2
Uniformity Ratio	3.96	4.95	3.58	4.50

11. **Sewer and Water:** The site is serviced by City sewer from Manchester Street and City water from the 40-foot access easement to the site. The applicant notes that there is adequate capacity in the existing

STAFF REPORT

water and sewer system to provide service for the proposed development. This standard appears to be met.

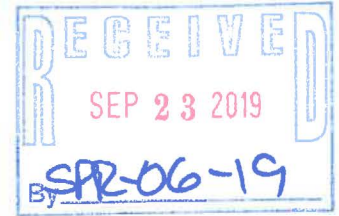
12. Traffic: The applicant has stated that the expected traffic generation during the busiest time of year for this site is about 20-25 vehicles trips per day, including 6 truck trips per day. The facility would operate between 6:00 AM and 10:00 PM during the heating season (August through May). Based on these traffic generation estimates, staff do not have concerns that there will be adverse impacts to the existing capacity or safety of City streets.
13. Comprehensive Access Management: Access to this site is from Main Street via Manchester Street and a 40-foot access easement that crosses the adjacent property at 580 Main Street. While Main Street has sidewalks, Manchester Street does not. The applicant proposes to install a bicycle rack next to the office building to accommodate bicycle commuters to the site.
14. Hazardous or Toxic Materials: This property, which was previously used as a landfill for the City of Keene, is a known Brownfield site with an active Groundwater Management Permit through NHDES. The applicant is currently working with NHDES to meet all of the requirements of the Alteration of Terrain Permit and the Groundwater Management Permit associated with this site.
15. Filling and Excavation: No wetland, floodplain, or steep hillsides are proposed to be excavated or filled as part of this project. All fill excavated during construction will be stored on this site or on adjacent City land.
16. Wetlands: There are existing wetlands on the southern portion of the site adjacent to the Branch River; however, no work is proposed within these wetland areas or within the City's Surface Water Protection Ordinance 30-foot wetland buffer. This standard appears to be met.
17. Surface Water: Surface waters on the site include natural wetlands adjacent to the Branch River, and the River itself, which borders the southern portion of the property. No work is proposed within a 30-foot buffer of the wetlands or the Branch River. While the Branch River is within the jurisdiction of the state Shoreland Water Quality Protection Act, this portion of the Branch River is designated as exempt. This standard appears to be met.
19. Architecture and Visual Appearance: The applicant proposes to construct a 38,500 sf structure for the storage and processing of wood chips during Phase 1 of this project. The woodchip processing facility will consist of 2 open canopy areas on the east and west ends of the building joined by an enclosed processing facility in the center of the building. The canopy area on the west end of the building will be open on the north and south sides, and the canopy area on the east end of the building will be open on the south side only. All roofs will be slightly pitched (7%) towards the back of the building, and there will be 5 smokestacks extending from the roof of the processing facility, the tallest of which will be 48 feet above grade. The applicant proposes to clad the structure with metal siding and metal roofing. Proposed colors include a light gray color identified as "Ash Gray," a darker gray color identified as "Charcoal Gray," and an orange color identified as "Carrot Orange."

A 10,000 sf structure is proposed for Phase 2 of this project to be used for office space and truck storage/maintenance. This structure will match the woodchip processing facility in terms of materials (metal siding and roofing) and colors (gray and orange). The northwest portion of the structure will be used as office space, with the remaining area used for truck storage and maintenance.

Recommended Motion:

Staff will provide a recommended motion at the meeting on October 28, 2019.

Site Plan Application Narrative
Froling Energy
560 Main Street, LLC
560 Main Street
Keene, NH



September 20, 2019

560 Main Street, LLC has an agreement to purchase a 9.88 tract from the City of Keene located off Manchester Street and Lower Main Street. The tract is primarily located in the Industrial District with a small area at the northwest corner of the property in the Commerce District. An ordinance is pending at the Keene City Council to re-zone the northwest corner from Commerce to Industrial. The property is currently used by the Department of Public Works and contains the City salt shed. The City will retain the rights to continue using the existing salt shed for three years, at which time the salt shed will be removed from the site and relocated to a different city-owned property.

The applicant wishes to construct a new facility for Froling Energy, a full service biomass boiler system contractor specializing in the installation of wood chip and wood pellet boiler systems. The proposed facility will be constructed in two phases. Phase one will consist of a 38,500 sf structure for the storage and processing of wood chips. The left (west) side of the proposed new structure will be an 8500 sf open canopy used to store green wood chips. The central portion of the structure will house a 10,000 sf processing plant which sorts and dries the wood chips. The right (east) side of the structure will be a 20,000 sf open canopy used to store the dried wood chips. Dried chips are then loaded into trailer trucks to be delivered to customers. The open canopy structure will be open on the north and south sides and walled on the west side. The east canopy structure will be walled on the north side (facing Rt. 101), and on the east side. The south side of the wood chip storage areas will be open.

Access to the new facility will be via an existing 40' wide access easement from Manchester Street, through the Cheshire Tire property. Trucks delivering green wood chips to the facility will go to a truck scale at the south side of the phase 1 development area and then to the green wood chip storage area on the left side of the building. Trucks leaving the facility to deliver dried wood chips will go the truck scale and then exit via the access easement to lower Main Street. No traffic will use Manchester Street where there is an existing residential neighborhood. On site parking for 23 vehicles will be provided in Phase 1.

Phase 2 of the Froling Energy project will be the construction of a new 10,000 sf building where the existing salt shed is located. In three years, when the salt shed is relocated, the applicant is proposing to construct office space and two truck storage and maintenance bays. The office space will be approximately 2000 sf and the truck storage and maintenance area will be approximately 8000 sf. 10 parking spaces, plus the two truck bays will be added to accommodate the Phase 2 building.

The existing site is serviced by city water, city sewer, and 3-phase electric. Adequate capacity exists in all utilities to service the proposed new buildings.

LID measures incorporated into the site design include the use of three-foot sumps in catch basins, hooded outlet pipes where appropriate and construction of a gravel

wetland for the filtering and treatment of stormwater. The treated stormwater will then be discharged to a grassy swale leading to the Branch River.

Exemptions are requested from providing a traffic report and from checklist items which do not exist on the property or are not applicable.

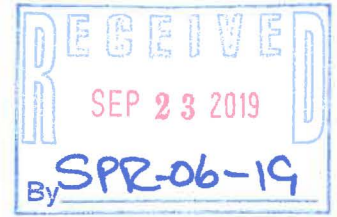
Waiver: A waiver is requested under section X.1. of the Planning Board Regulations from providing landscaping in the new Phase 1 parking areas at the rear of the building and along the west and south sides of the developed area.

- a) Granting the waiver is not contrary to the spirit and intent of the regulations because the parking areas are not visible from Manchester Street, Rt. 101 or from lower Main Street. Screen plantings are proposed near the end of Manchester Street which will provide a year-round screen of the building and the parking areas.
- b) Granting the waiver will not increase the potential for creating adverse impacts to abutters, the community or the environment. This parking areas are not visible to the community or to abutters and will be well screened with Balsam Firs.
- c) Granting the waiver has not been shown to diminish property values of abutting properties. The properties to the west of the site are residential buildings on Manchester Street. Screen plantings will provide a year-round screen and buffer of the proposed parking areas. To the south of the proposed parking areas will be land owned by the applicant. The area to the north is Rt. 101 and will not be visible through the existing trees and the proposed Balsam Firs to be planted. There are no adjacent properties adversely affected by this proposal.
- d) Strict conformity with the regulations or the Development Standards will pose an unnecessary hardship to the owner. There is no reason to plant trees in areas where they will not be visible to the public or to adjacent properties.



Site Plan Review Application Narrative

560 Main Street LLC
Froling Energy
560 Main Street
Keene, NH



September 20, 2019

Development Standards

- 1. Drainage** - This is an existing Brownfield site which is under a Groundwater Management Permit and an Activity and Use Restriction (AUR) covenant from NHDES which prohibits any increase in stormwater infiltration on the site. The existing drainage patterns will be maintained with no increase in runoff leaving the site. Runoff from the new building and the paved parking areas will be collected on-site in a series of catch basins with three-foot sumps and hooded outlet pipes. The collected stormwater will be directed to a lined gravel wetland on the south side of the site for filtering and treatment. Discharge from the gravel wetland will pass through a grassy swale and into the Branch River. No increase in runoff from the site is proposed. See attached drainage report. An Alteration of Terrain Permit is required from NHDES.
- 2. Sediment/Erosion Control** – A double row of silt fence and/or waddles will be installed between the areas to be disturbed and the Branch River and existing wetland areas to the south of the site. This will prevent any sediments from discharging into the existing wetlands or to the Branch River.
- 3. Hillside Protection** - N/A
- 4. Snow Storage and Removal** – Snow storage is designated in areas adjacent to the parking areas. There is ample room for snow storage on site.
- 5. Flooding** - This property is partially located within the 100-year floodplain for the Branch River as shown on FEMA FIRM 33005C0267E, dated May 23, 2006. No changes are proposed which will impact the 100-year floodplain.
- 6. Landscaping** – Two new trees are proposed adjacent to the parking spaces at the future office building along with a variety of shrubs. 44 Balsam Firs are proposed for new screen plantings to the west and north of the new processing building. A waiver is requested from providing deciduous tree plantings adjacent to the new parking spaces in Phase 1. The parking areas are not visible from the public right of way or from abutting properties.



7. **Noise** - All sorting and processing of wood chips will be conducted inside the building. No excess noise will be generated outside the proposed processing building.
8. **Screening** – New screening is proposed along the west side of the site adjacent to Manchester Street and along the north side of the site between the new building and Rt. 101. Balsam Fir trees will be planted to create a year-round vegetative screen from the residential area on Manchester Street and from Rt. 101. The dumpster location is not visible from the public right of way or from abutting properties.
9. **Air Quality** – An Air Quality permit is required by NHDES for the emissions from the boiler in the processing plant. An Air permit application has been filed with NHDES and is under review.
10. **Lighting** – New lighting is proposed at the processing building and along the new parking areas adjacent to the building. 18 new wall paks are proposed and 3 new pole lights are proposed in Phase 1. In Phase 2 new lights will consist of 4 wall paks and 2 pole lights. All fixtures are full cutoff LED fixtures. The average light levels in the new areas will be 1.98 footcandles with a uniformity ratio of 3.96 in Phase 1. The average light levels will be 1.43 footcandles with a uniformity ratio of 3.58 in Phase 2. The company currently works two shifts and lights will remain on until 11:00 PM when lighting will be reduced by 50% through the use of timers.
11. **Sewer and Water** – The site is serviced by city sewer and city water via Manchester Street and lower Main Street. Adequate capacity exists to service the proposed building addition.
12. **Traffic** – Froling Energy is a very low volume traffic generator. During the heating season, August through May, Froling Energy operates over two shifts from 6AM – 10 PM. During that time two trailer trucks are delivering wood chips to the facility for processing or delivering dry wood chips to customers throughout northern New England. This averages six truck trips per day. There are also five additional full-time employees working at the site M-F. Four employees work in the office and one employee is a yard person. Total vehicle trips per day during the heating season will average from 20 – 25 trips. During summer months, the total vehicle trips per day will be less than 20.

The Keene Public Works Department uses the remaining 22 acre land area for storage of materials and for piling snow removed from the downtown area. They will be sharing use of the existing access easement from Manchester Street and lower Main Street. DPW reports that they generate an average of approximately 50 vehicle trips per day during winter months when salt and sand are needed for road treatments. Most of these trips occur at night, depending on the timing of storm events. Fewer trips per day are generated during the rest of the year.

Access to the site will be from lower Main Street, to Manchester Street and over an existing access easement crossing the Cheshire Tire Property. Lower Main Street has an existing center turn lane from Rt. 101 to the bridge over the Branch River. The center turn lane allows vehicles turning left into the site to safely stack until they can proceed into the site. The low volume of traffic generated by Froling Energy and Keene DPW can be safely accommodated without reducing the safety or capacity at lower Main Street.



13. **Comprehensive Access Management**– Lower Main Street has sidewalks on both sides of the road. Manchester Street has no sidewalk. Lower Main Street is serviced by the City Express and the Friendly Bus. A bicycle rack will be installed next to the office building.
14. **Hazardous and Toxic Materials** – This is a Brownfield site currently owned by the City of Keene. NHDES has issued a Groundwater Management Permit and Activity and Use (AUR) restrictions for the property. The property is known to contain ash and residue from burning trash, and numerous contaminants from liquid disposal on the site when it was operated as a waste disposal facility by the City of Keene. Any material excavated on site during construction must remain on site per the AUR issued by NHDES. The City of Keene has retained the right to enter the property for access to monitoring wells which will continue to be monitored by the City’s environmental consultant.
15. **Filling/Excavation** – Filling and excavation will be necessary in the area of the new buildings and the new parking spaces. Fill routes will include NH Rt. 12 to Main Street and Manchester Street. Any material excavated on site will remain on site as required under the AUR for this property.
16. **Wetlands** – There are existing wetland areas on the site located to the south of the proposed development area adjacent to Black Brook. No impacts to wetlands are proposed.
17. **Surface Waters** – The Branch River is adjacent to the property on the south. Stormwater which has been collected and treated on site will discharge to the Branch River in accordance with NHDES Alteration of Terrain permit requirements.
18. **Stump Dumps** – None
19. **Architecture and Visual Appearance** – The proposed new processing building will consist of two open canopy areas facing south joined by a central, enclosed processing facility. The open canopy sections will house the green wood chips on the west side and the dry wood chips on the east side. The west canopy sections will be walled on the west side and open on the north and south sides. The east canopy section will be walled on the north and east sides and open on the south side. The siding material will be metal siding, light gray in color, appropriate for the industrial use of the site.

CITY OF KEENE | PLANNING BOARD

SITE PLAN REVIEW / MODIFICATION APPLICATION



This form must be filled out in its entirety. If a box is not checked, staff will assume that the information is not provided and the application is, therefore, not complete. Incomplete applications will not be accepted for review.



A Project Name
FROLING ENERGY

Date Received/Date of Submission:

Date of pre-application meeting:

Tax Map Parcel number(s)
114-012-000-000-000

Date Application is Complete:

Community Development Dept File #:
SPR-06-19

Project Address:
560 MAIN STREET

Owner

PRINTED Name:
City of Keene

Signature: *Elyse...*

Address: **3 Washington St**

Acres/S.F. of Parcel:
9.88 | 430,607 +/- SF

Telephone\ Email:

Zoning District:
Industrial

Applicant

PRINTED Name:
560 Main Street LLC

Signature: *[Signature]*

Address:

Telephone\ Email:

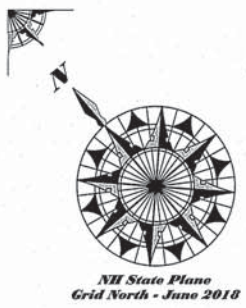
Modifications: Is this a modification to a previously-approved site plan: No Yes: SPR#: ___ Date: ___

For those sections of the application that are not affected by the proposed modification to the previously approved site plan, you are encouraged to request exemptions in lieu of submitting required documents.

B Descriptive Narrative Including

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Type of development | <input checked="" type="checkbox"/> Sedimentation Control | <input checked="" type="checkbox"/> Scope/scale of development |
| <input checked="" type="checkbox"/> Proposed uses | <input checked="" type="checkbox"/> Vegetation | <input checked="" type="checkbox"/> Parcel size |
| <input checked="" type="checkbox"/> Location of access points | <input checked="" type="checkbox"/> Debris management | <input checked="" type="checkbox"/> Proposed stormwater, drainage & erosion plan |
| <input checked="" type="checkbox"/> Any other descriptive information | <input checked="" type="checkbox"/> Disposal proposals for boulders, stumps & debris | |

C A complete application must include the following



[114-003-000]
MONROE MUFFLER BRAKE INC
200 Hollister Pkwy
Rochester, NY 14615-3808
2608/922

[114-006-000]
MONROE MUFFLER
BRAKE INC
200 Hollister Pkwy
Rochester, NY 14615-3808
2608/922

[114-007-000]
RDH PROPERTY
MANAGEMENT LLC
PO Box 1090
Keene, NH 03431-1090
2780/410

[114-008-000]
DIANE E. &
TARA M. TINKER
52 Manchester St
Keene, NH 03431
2339/970

[114-009-000]
MARGARET M. &
ROBERT B.
TREBILCOCK
45-50 Manchester St
Keene, NH 03431
2029/011

[114-013-000]
580 MAIN STREET LLC
PO Box 177
Chesterfield, NH 03443
2383/541

[114-012-100]
9.885 Acres
430,607 Sq Ft.
80.45' Frontage
(Manchester Street)

[114-014-000]
DPKR REALTY LLC
28 Owens Drive #24
Swanzey, NH 03446
2899/472

Symbol Legend

- | | | | |
|--|---|--|-----------------------------------|
| | MONITORING WELL | | CHAIN LINK FENCE |
| | CATCH BASIN | | WOOD RAIL/STOCKADE FENCE |
| | DRAIN MANHOLE | | GUARDRAIL |
| | HYDRANT | | EDGE OF WATER |
| | WATER VALVE | | TREE LINE |
| | SEWER MANHOLE | | EDGE OF PAVEMENT |
| | MANHOLE | | EDGE OF GRAVEL |
| | UTILITY POLE W/ GUY
WIRES, OVERHEAD
LINES AND NUMBERS | | IRON PIN/PIPE |
| | ELECTRIC MANHOLE | | NAIL |
| | ELECTRICAL BOX/PEDESTAL | | STONE/CONCRETE BOUND |
| | LIGHT POLE | | RAILROAD SPIKE |
| | TELECOM MANHOLE | | DISK |
| | TELEPHONE BOX/PEDESTAL | | 5/8" REBAR WITH CAP (SET) |
| | GAS SHUT OFF VALVE LID | | RAILROAD SPIKE SET |
| | SIGN | | KEENE ENGINEERING DEPARTMENT |
| | POST/BOLLARD | | CHESHIRE COUNTY REGISTRY OF DEEDS |
| | SOILS TYPE KEY LETTER | | TAX MAP PARCEL NUMBER |
| | WETLAND FLAG & NUMBER | | DEED VOLUME & PAGE |

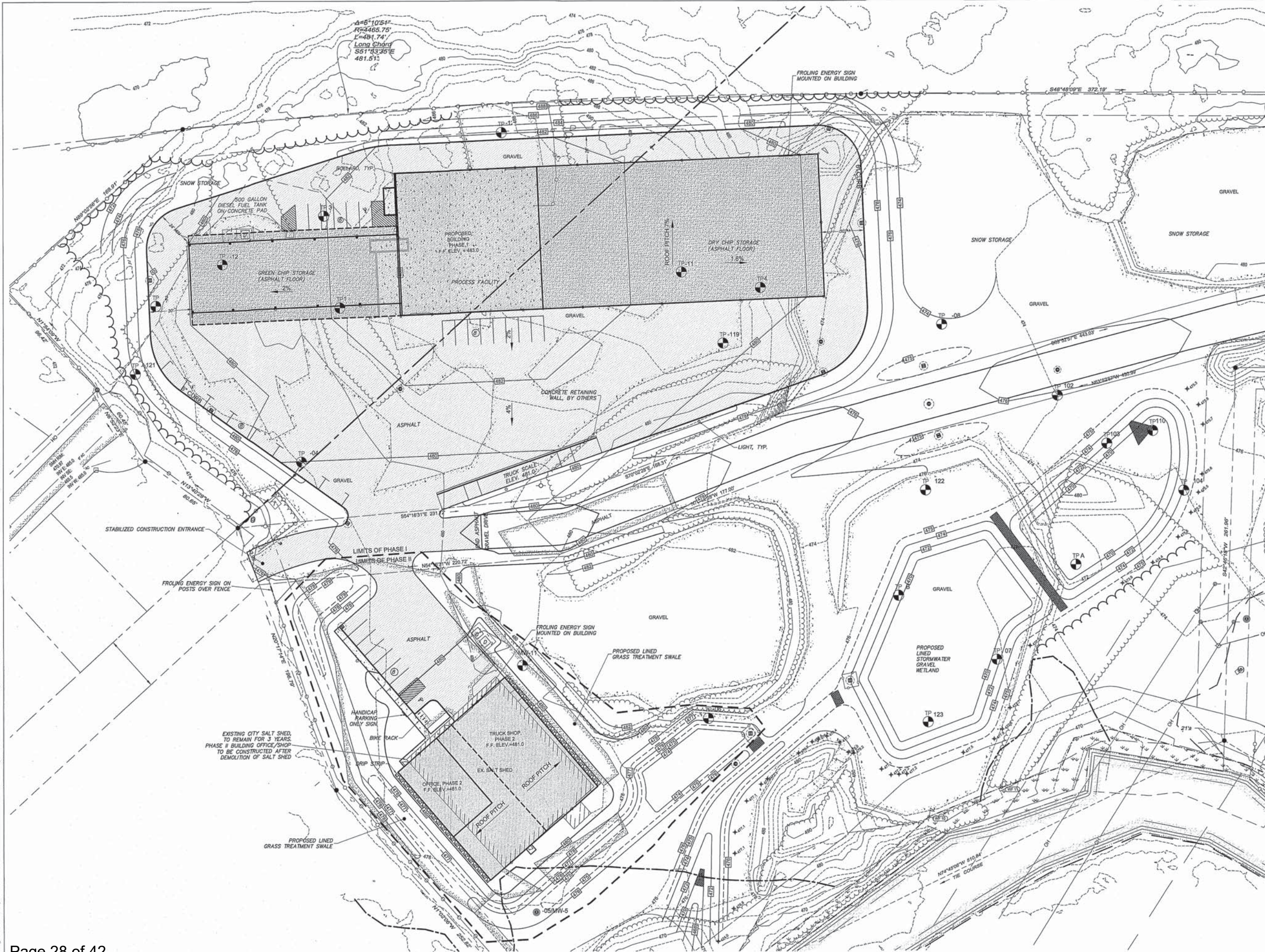
Existing Condition Plan
LAND OF
City of Keene, New Hampshire
located at
Tax Map Parcel No. 114-012-100
560 Main Street, Keene, Cheshire County, New Hampshire
Book 253, Page 421

Sheet 2 of 2

Scale 1"= 40'
Surveyed: See Note 3 Plan prepared 09/07/2019
Project No. H19-043 Cad File No. H19-043B Excon.dwg

Huntley Survey & Design, PLLC
NH & VT Land Surveying, Wetlands & NH Septic System Design
659 West Road, Temple, NH 03084 (603) 924-1669 www.huntleysurvey.com

NO.	DATE	REVISION	BY



L.P.S. 10/7/19
LIZA P. SARGENT DATE

R.C.E. NUMBER: 13365

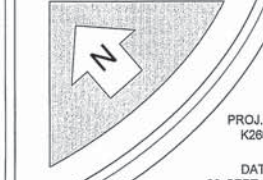
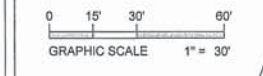
FOR PERMITTING

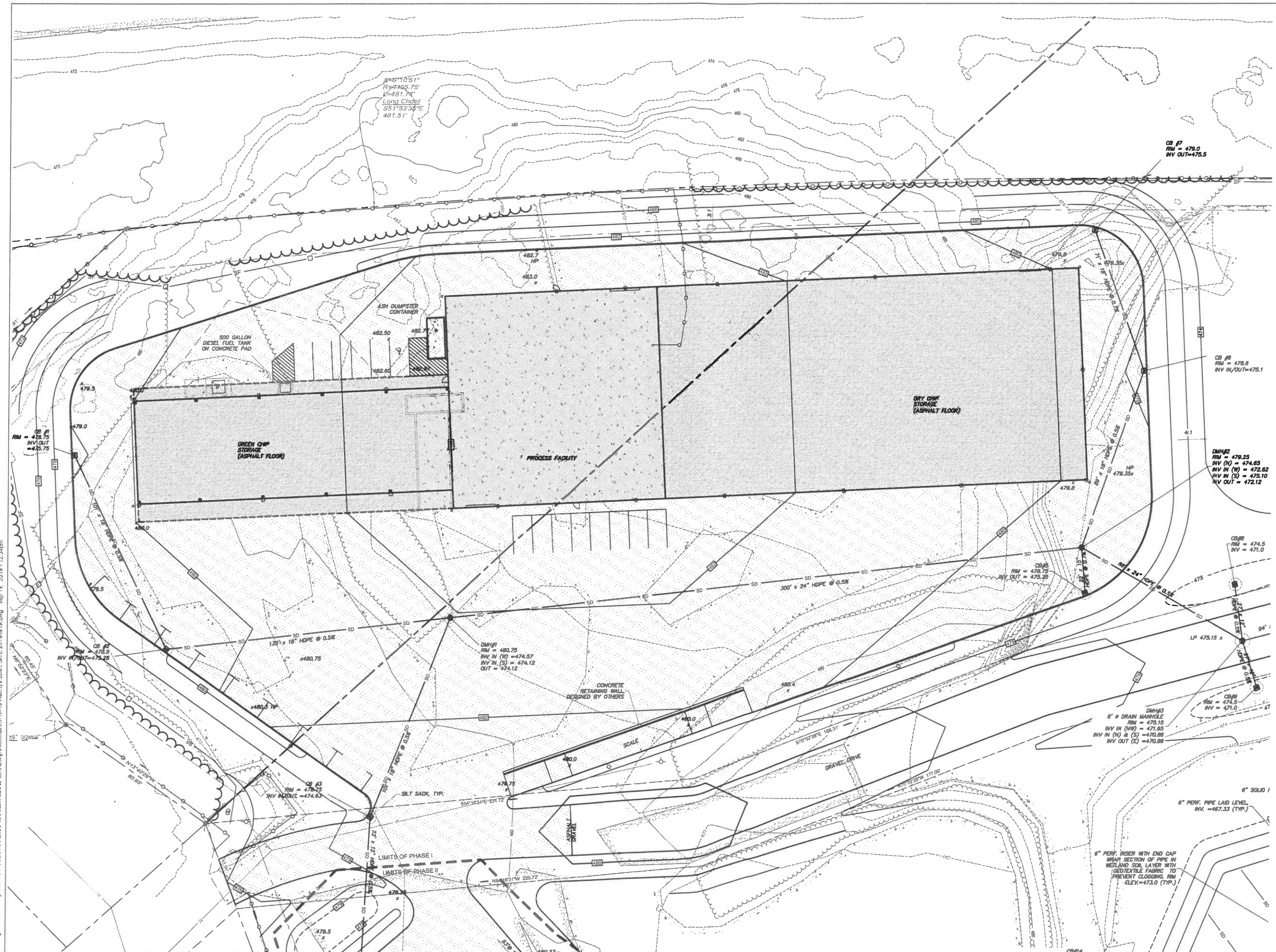
NO.	REVISION	DATE	DWN	CHK

SVE © 2019
 Engineering
 Planning
 Landscape Architecture
 Surveying

SVE Associates
 P.O. Box 1818
 439 West River Road
 Brattleboro, VT 05302
 T 802.257.0561
 F 802.257.0721
 www.sveassoc.com

OVERALL SITE PLAN
 560 MAIN STREET
 560 MAIN STREET, LLC
 560 Hancock Road
 Peterborough, NH 03458





Drawing name: P:\projects\1199\1199-01-19 Rammer\1199-01-19 Rammer.dwg SITE 20190919.dwg Sep 13, 2019 - 12:34pm

DATE	BY	CHK

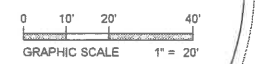
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 P.O. Box 1818
 439 West River Road
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 T 802.257.0561
 F 802.257.0721
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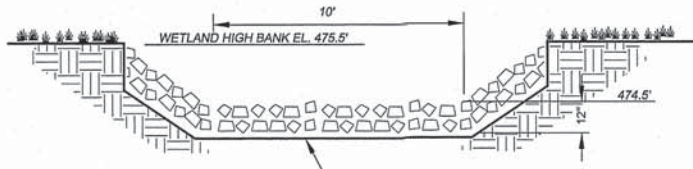
GRADING & DRAINAGE PLAN - PHASE I NORTH

560 MAIN STREET
 560 MAIN STREET, LLC
 590 Hancock Road
 Peterborough, NH 03458

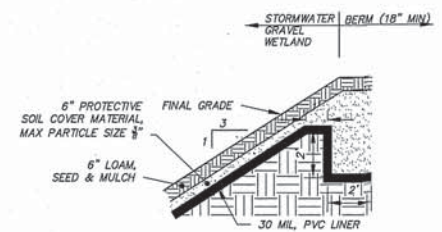


PROJ. #
K2665
DATE:
20-SEPT-19

DESIGN: LPS SHEET
 DRAWN: LPS **C-2**



EMERGENCY SPILLWAY
NOT TO SCALE



IMPERVIOUS LINER ANCHOR
NOT TO SCALE

PLANTING KEY

SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	HEIGHT	CONTAINER
[Stippled pattern]	4,000 sf	NORTH AMERICAN GREEN BIO NET C125B DOUBLE NET EROSION CONTROL BLANKET OR EQUAL			
[Dotted pattern]	24lbs/acre		NEW ENGLAND WETMIX	Seed	
rf	8	Althium filix-femina	LADY FERN		1 Gal.
rd	14	Cornus Sericea	RED OSIER DOGWOOD	18"	1 Gal.
aw	6	Viburnum Recognitum	ARROW WOOD	18"	1 Gal.
sw	14	Ilex Laevigata	SMOOTH WINTERBERRY	12"	2 Gal.

SEEDING INFO

THE NEW ENGLAND WETMIX (WETLAND SEED MIX) CONTAINS A WIDE VARIETY OF NATIVE SEEDS WHICH ARE SUITABLE FOR MOST WETLAND SITES THAT ARE NOT PERMANENTLY INUNDATED. ALL SPECIES ARE BEST SUITED TO MOIST DISTURBED GROUND AS FOUND IN MOST WET MEADOWS, SCRUB SHRUB, OR FORESTED WETLAND RESTORATION AREAS. THIS MIX IS WELL SUITED FOR DETENTION BASIN BORDERS, AND THE BOTTOM OF DETENTION BASINS NOT GENERALLY UNDER STANDING WATER. THE SEEDS WILL NOT GERMINATE UNDER INUNDATED CONDITIONS.

DURING THE FIRST YEAR OF GROWTH, SEVERAL SPECIES WILL PRODUCE SEEDS, WHILE OTHER SPECIES WILL PRODUCE SEEDS AFTER THE SECOND GROWING SEASON. NOT ALL SPECIES WILL GROW IN ALL WETLAND SITUATIONS.

THIS MIX IS COMPOSED OF THE WETLAND SPECIES MOST LIKELY TO GROW IN CREATED/RESTORED WETLANDS AND SHOULD PRODUCE MORE THAN 75% GROUND COVER IN TWO FULL GROWING SEASONS.

ALWAYS APPLY ON CLEAN BARE SOIL. THE MIX MAY BE APPLIED BY HYDROSEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND.

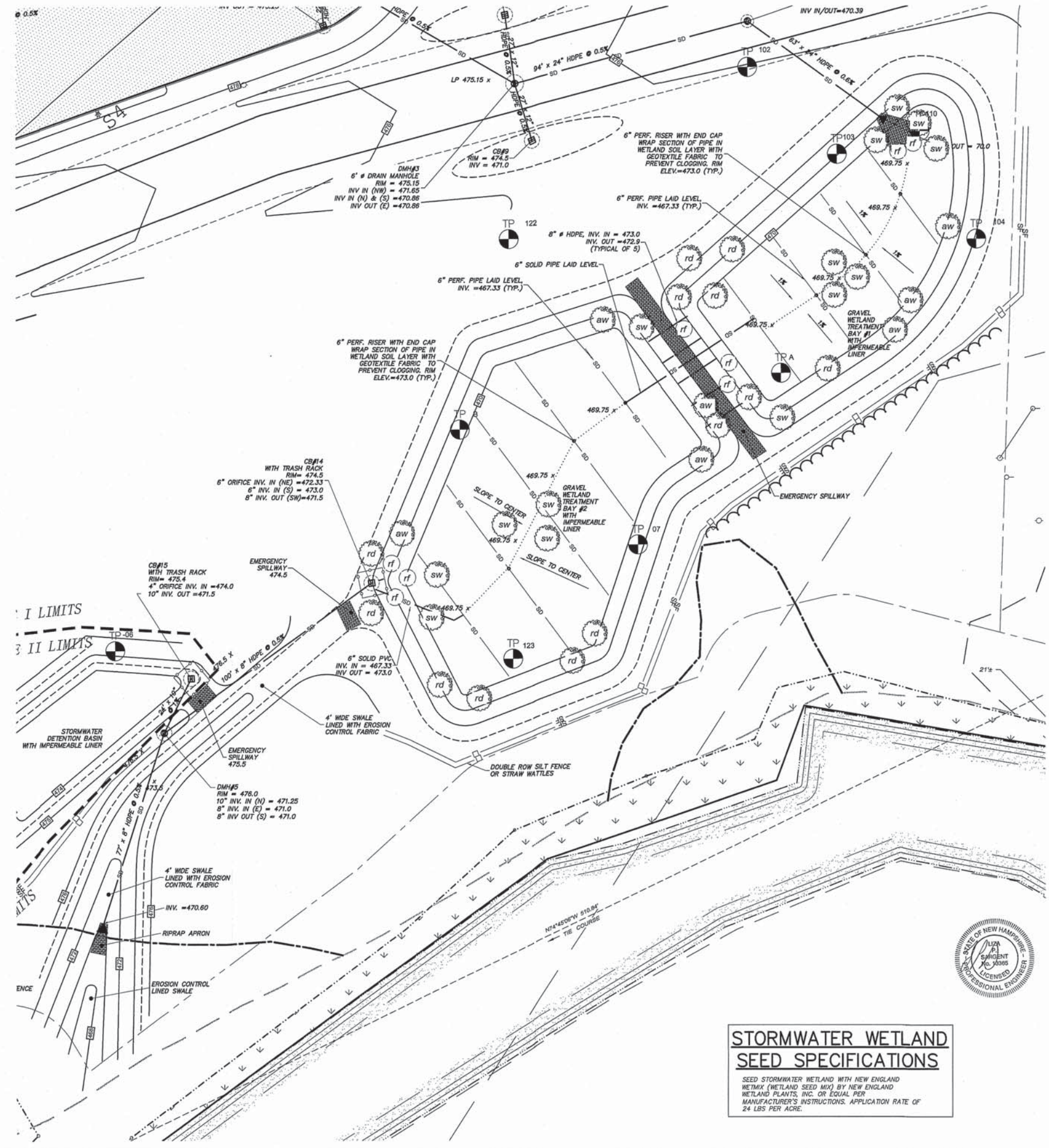
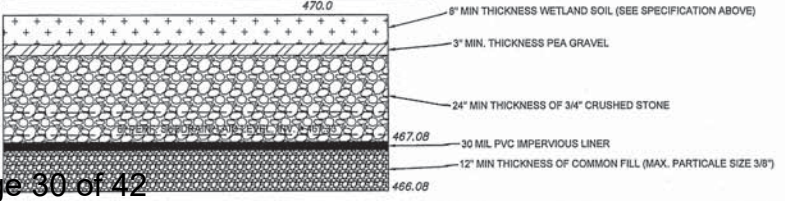
LIGHTLY RAKE, OR ROLL TO ENSURE PROPER SEED TO SOIL CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING SEEDING. LATE SPRING AND EARLY SUMMER SEEDING WILL BENEFIT WITH A LIGHT MULCHING OF CLEAN WEED-FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL WATERING MAY BE REQUIRED. LATE FALL AND WINTER DORMANT SEEDING REQUIRE AN INCREASE IN THE SEEDING RATE.

FERTILIZATION IS NOT RECOMMENDED. PREPARATION OF A CLEAN WEED FREE SEED BED IS NECESSARY FOR OPTIMAL RESULTS.

WETLAND SOIL SPECIFICATION

US STANDARD SIEVE SIZE (IN)	PERCENT PASSING
0.5	100
#10	90-75
#100	40-50
#200	25-50

GRAVEL WETLAND MATERIALS CROSS-SECTION



STORMWATER WETLAND SEED SPECIFICATIONS

SEED STORMWATER WETLAND WITH NEW ENGLAND WETMIX (WETLAND SEED MIX) BY NEW ENGLAND WETLAND PLANTS, INC. OR EQUAL PER MANUFACTURER'S INSTRUCTIONS. APPLICATION RATE OF 24 LBS PER ACRE.



RUSSELL J. HUNTLEY
WETLAND SCIENTIST No.166
LIZA P. SARGENT
R.C.E. NUMBER: 48985

DATE: 10/21/19
FOR PERMITTING

NO.	REVISION	DATE	CHK	LPS
1		07-OCT-19	DWN	LPS

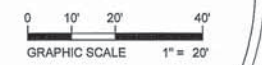
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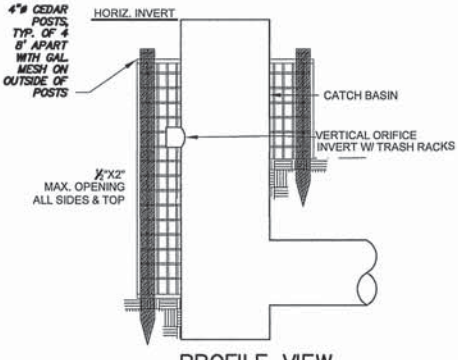
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Branford, VT 05302
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F 802.257.0721
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STORMWATER GRAVEL WETLAND

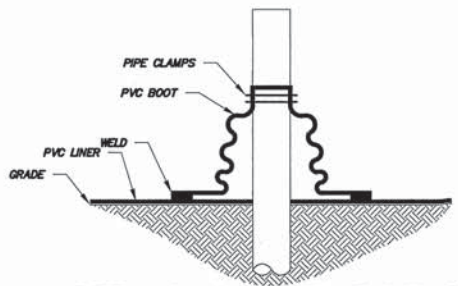
560 MAIN STREET
560 MAIN STREET, LLC
590 Hancock Road
Peterborough, NH 03458



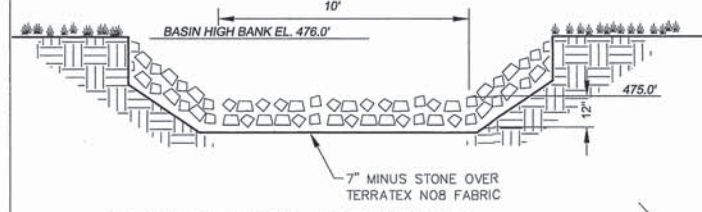
PROJ. #: K2685
DATE: 20-SEPT-19
DESIGN: LPS
DRAWN: LPS
CHECKED: LPS



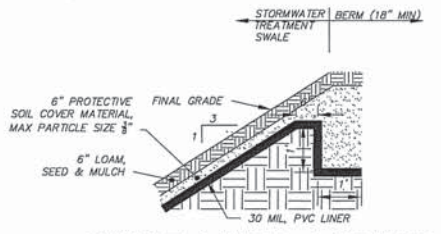
TRASH RACK DETAIL
NO SCALE
ALL ORIFICES 8" OR SMALLER SHALL HAVE A TRASH RACK



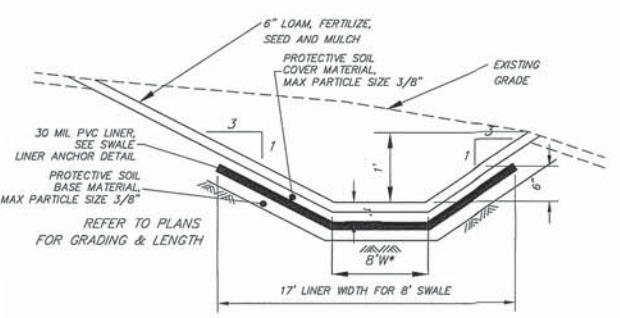
IMPERVIOUS LINER PIPE BOOT
NO SCALE



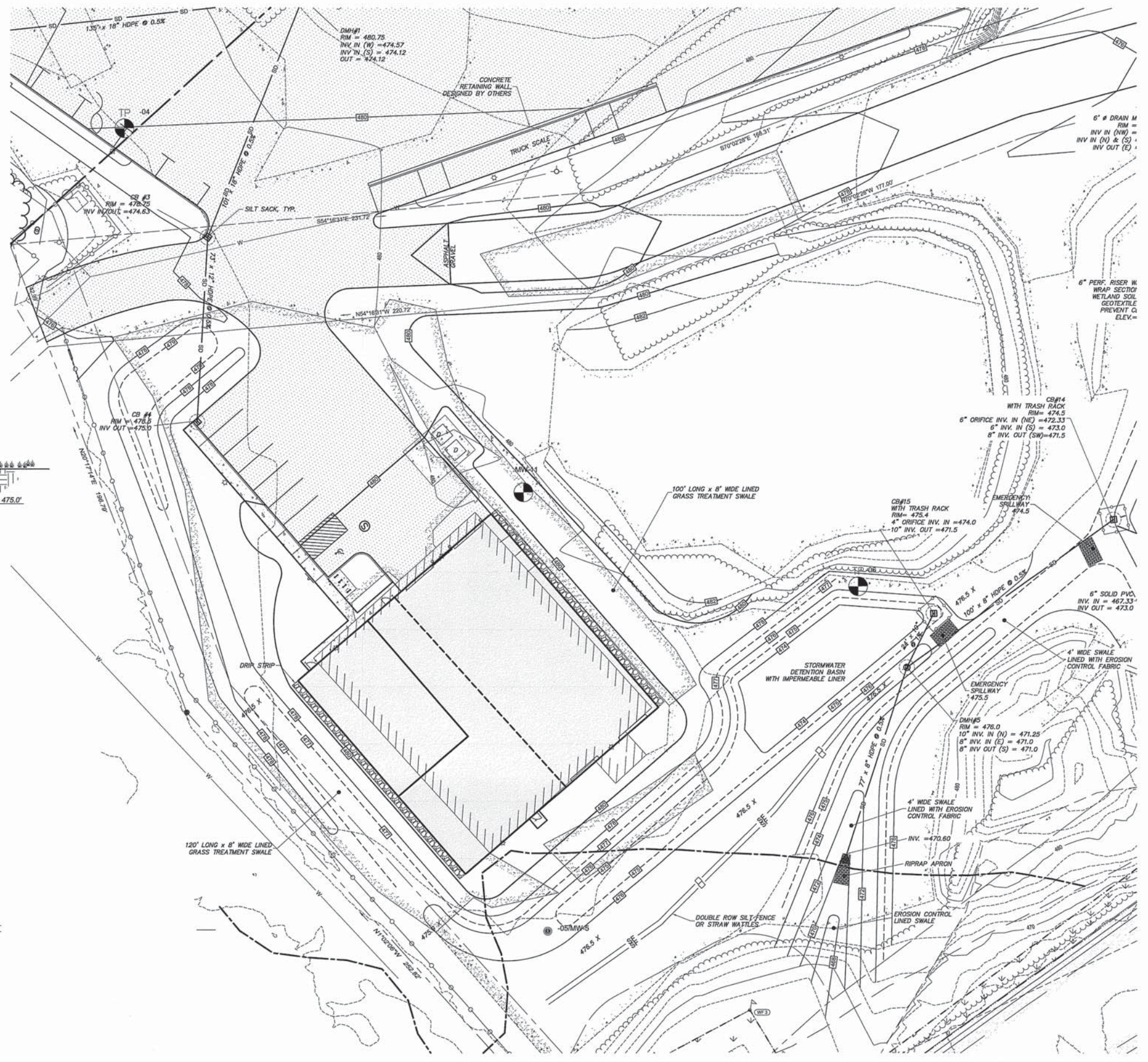
EMERGENCY SPILLWAY
NOT TO SCALE



SWALE LINER ANCHOR
NOT TO SCALE



GRASS TREATMENT SWALE
NOT TO SCALE

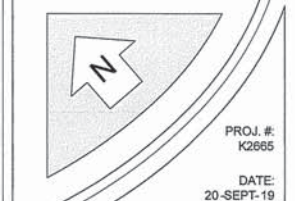
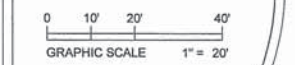


LIZA P. SARGENT
R.C.E. NUMBER: 13365
DATE: 10/7/19
FOR PERMITTING

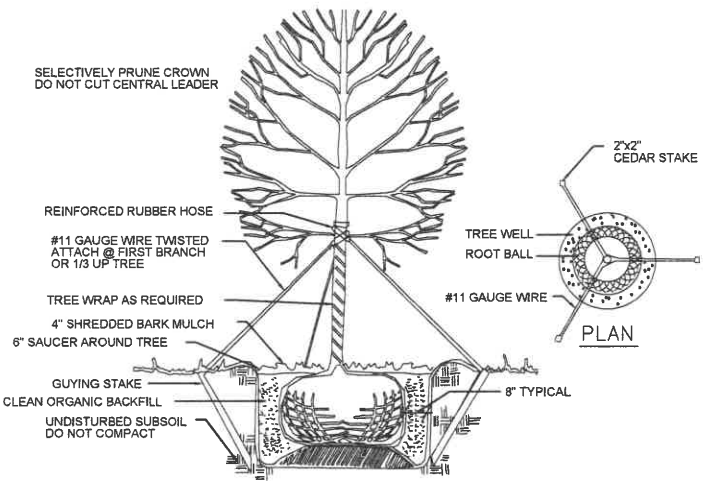
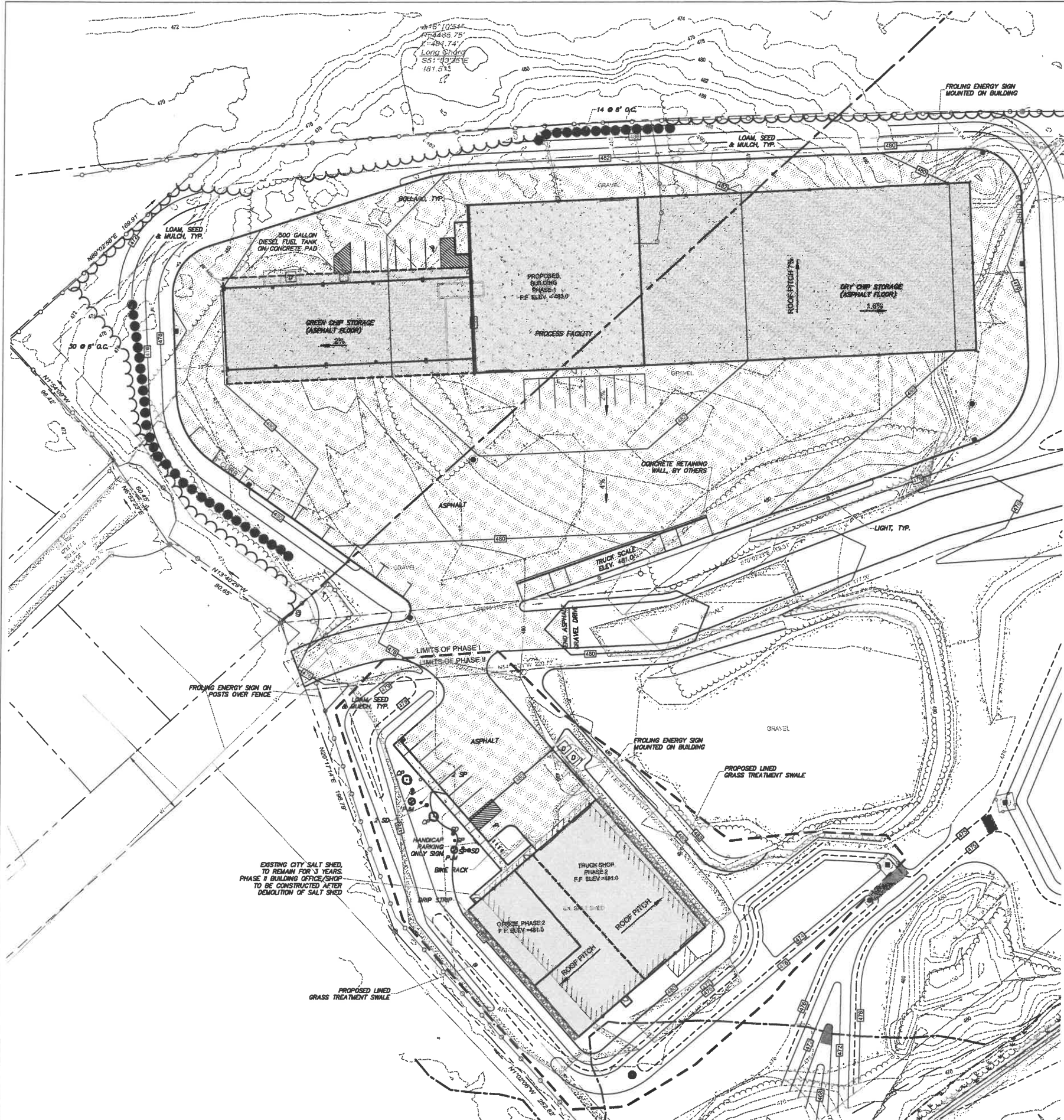
NO.	REVISION	DATE	CHK	LPS
1	FOR PERMITTING	07-OCT-19	LPS	LPS

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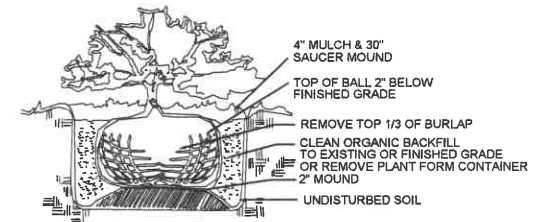
STORMWATER TREATMENT SWALES
560 MAIN STREET
560 MAIN STREET, LLC
590 Hancock Road
Peterborough, NH 03458



PROJ. #
K2665
DATE:
20-SEPT-19
DESIGN: LPS SHEET
DRAWN: LPS
CHECKED: LPS
C-12



TREE PLANTING & GUYING DETAIL
NO SCALE



SHRUB PLANTING DETAIL
NO SCALE

TEST PITS BY
ARIES
ENGINEERING,
TYP.

LANDSCAPE LEGEND

TYPE	QUANTITY	SIZE AT PLANTING	MATURE HEIGHT
BF-BALSAM FIR	44	5-6"	30'-50'
CP-CHANTICLEER PEAR	2	3" CAL	25'-30'
PJM-PJM RHODODENDRON	2	2 GAL	8'
SP-SPirea	4	1 GAL	2'
SD-SEDUM	4	1 GAL	2'

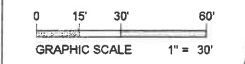
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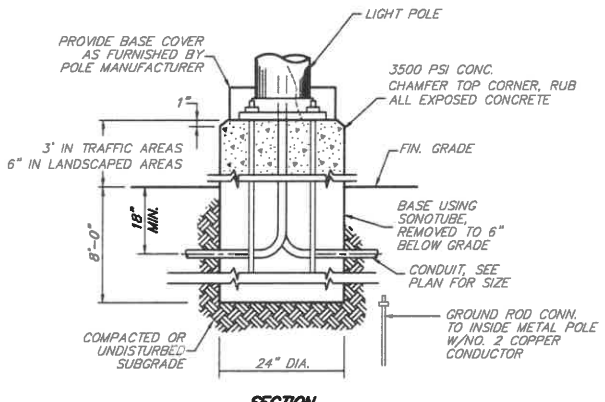
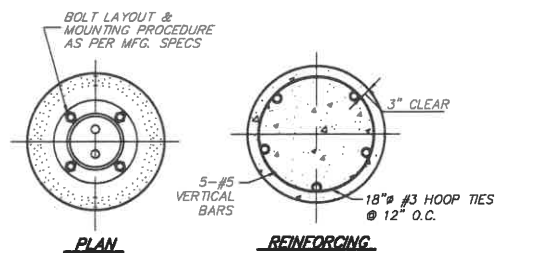
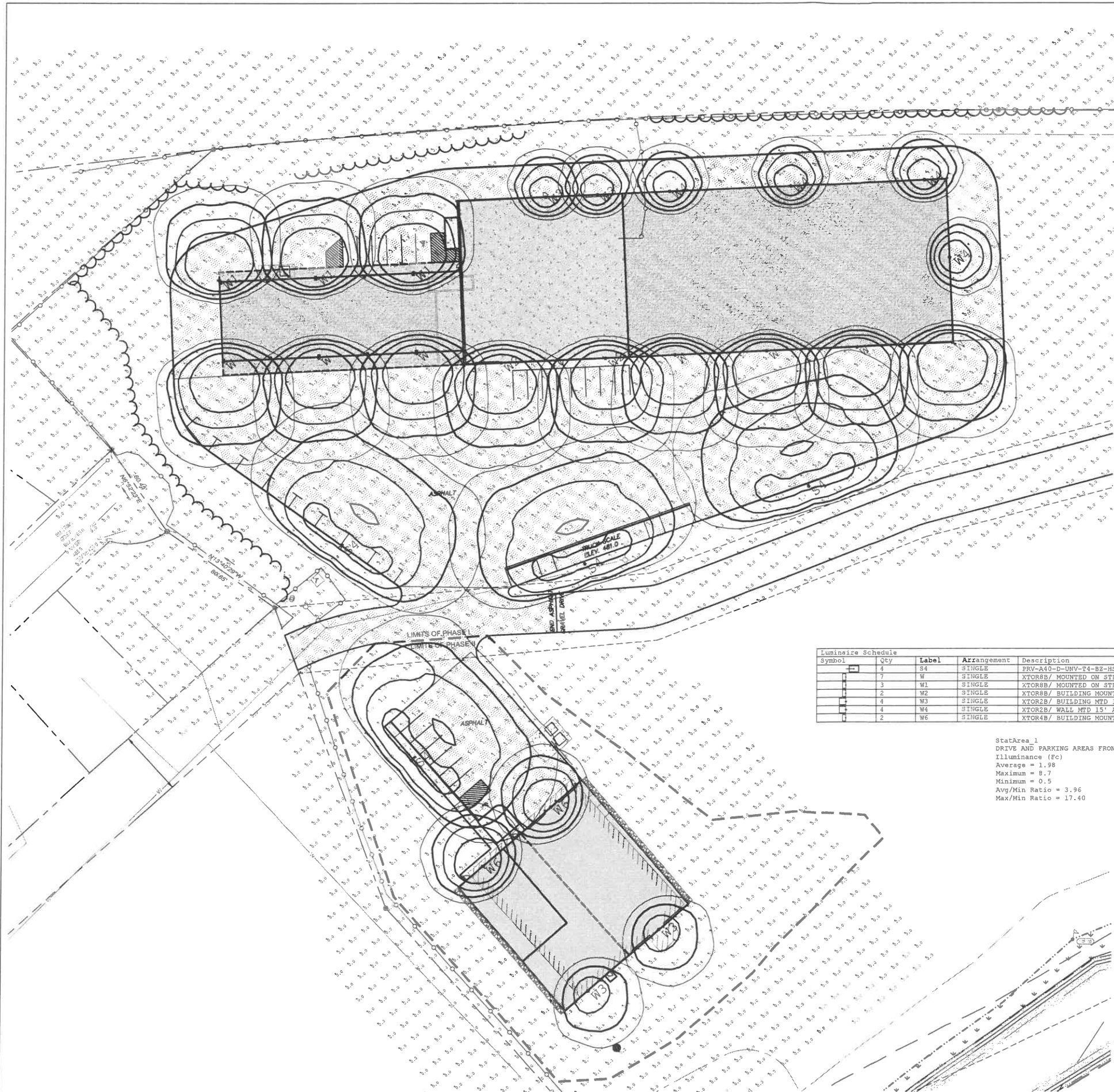
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LANDSCAPING PLAN

560 MAIN STREET
560 MAIN STREET, LLC
500 Hancock Road
Peterborough, NH 03458



PROJ. #
K2665
DATE:
20-SEPT-19
DESIGN: LPS SHEET
DRAWN: TS/LPS
CHECKED: RH **LA-1**



NOTE: LIGHT POLE BASE LOCATIONS:
 1. TRAFFIC AREAS: 4 FEET FROM FACE OF POLE BASE TO PAVEMENT EDGE.
 2. PEDESTRIAN AREAS: 2 FEET FROM FACE OF POLE BASE TO SIDEWALK/TRAVEL WAY EDGE.

LIGHT POLE BASE DETAIL
 NOT TO SCALE

Symbol	Qty	Label	Arrangement	Description
W1	4	S4	SINGLE	FRV-A40-D-UNV-T4-B2-HSS/ SSS4A25AFN1 (25' AFG)
W2	7	W	SINGLE	XTOR8B/ MOUNTED ON STRUCTURE BEAM 24' AFG
W3	3	W1	SINGLE	XTOR8B/ MOUNTED ON STRUCTURE BEAM 20' AFG
W4	2	W2	SINGLE	XTOR8B/ BUILDING MOUNTED 24' AFG
W5	4	W3	SINGLE	XTOR2B/ BUILDING MTD 15' AFG
W6	4	W4	SINGLE	XTOR2B/ WALL MTD 15' AFG
W7	2	W6	SINGLE	XTOR4B/ BUILDING MOUNTED 20' AFG

StatArea 1
 DRIVE AND PARKING AREAS FRONT OF BUILDING
 Illuminance (Fc)
 Average = 1.98
 Maximum = 8.7
 Minimum = 0.5
 Avg/Min Ratio = 3.96
 Max/Min Ratio = 17.40

StatArea 2
 PARKING LOT AREA FOR PHASE II
 Illuminance (Fc)
 Average = 1.43
 Maximum = 4.0
 Minimum = 0.4
 Avg/Min Ratio = 3.58
 Max/Min Ratio = 10.00

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 F 802.257.0721
 www.sveassoc.com

LIGHTING PLAN

560 MAIN STREET

560 MAIN STREET, LLC
 500 Hancock Road
 Peterborough, NH 03458

0 15' 30' 60'
 GRAPHIC SCALE 1" = 30'

PROJ. #
 K2665

DATE:
 20-SEPT-19

DESIGN: LPS SHEET
 DRAWN: TS/LPS
 CHECKED: RH **LT-1**

Drawing name: P:\Projects\NY PROJECTS\K2665 560 Main Street, LLC\Drawings\Lighting\19-19 Raunyk\2665 SITE 20190919.dwg Sep 19 - 12:38pm

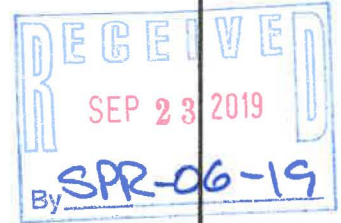
Drainage Narrative
for the
560 Main Street, LLC
560 Main Street
Keene, N.H.

Dated: 9/20/19

Prepared For:
560 Main Street, LLC
590 Hancock Road
Peterborough, NH 03458

Prepared By:
SVE Associates
P.O. Box 1818
Brattleboro, VT 05302

Reviewed By:
Liza Sargent P.E.
SVE Associates
P.O. Box 1818
Brattleboro, VT 05302



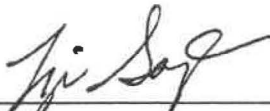
SVE

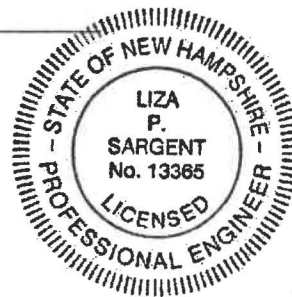
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Brattleboro, VT 05302

Tel: 802.257.0561

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Liza Sargent, P.E.
PE No. 13365



1.0 Introduction

This Drainage Narrative documents the drainage impacts associated with the proposed redevelopment of the former City Landfill located at 560 Main Street, Keene, NH. The property is currently owned by the City of Keene and contains the City Salt Shed, and is a mixture of gravel & asphalt surfaces, with portions forested. 560 Main Street, LLC is looking to construct a wood chip processing facility now in Phase I. As part of the purchase and sales agreement, the City would like to maintain the Salt Shed for a period of 3 years. Phase II would commence after 3 years, with the removal of the Salt Shed, and replacement with an office/truck shop and associated parking.

2.0 Existing Conditions

2.1 Site Characteristics

The lot has been owned by the City of Keene for over 100 years and has functioned for a variety of uses over that period. Currently the property contains the City Salt Shed and is used for snow storage among other storage uses. There are two existing hydrants, however there isn't a sewer service currently. The property slopes generally towards Route 101, towards the access easement and towards Branch River.

2.2 Soil Characteristics

Review of the Natural Resources Conservation Service Web Soil Survey indicates the redevelopment project area is Udorthents and Rippowam-Saco complex soils. From the recommendation of DES Alteration of Terrain Staff, confirmed by Thomas Peragallo, Certified Soil Scientist, no Site Specific Soil Survey was performed, and soils are considered to have a hydrologic classification of A.

2.3 Flood Plain

Review of the Flood Insurance Rate Map (FIRM) for the City of Keene, New Hampshire, Community Panel 33005C0267E effective date: May 23, 2006, indicates the subject property falls primarily within zone X, an area of minimal flood hazard. There are two pockets on the south portion of the property that fall within Zone AE-1%. The east pocket will not be impacted by this redevelopment. The west pocket will have a net cut volume as a function of grading for the stormwater treatment system outlet. The base flood elevation is 472.0'.

2.4 Existing Hydrology

The drainage area studied for this project is approximately 8.9+/- acres in size. Hydrological calculations indicate the expected runoff generated from the existing property. The stormwater runs overland to three locations, to the west, to the north (near Route 101) and to the South (Branch River).

The table below summarizes the results of the existing runoff calculations for the property. Flow is represented in cubic feet per second (CFS).

Design Storm	Existing 100R	Existing 101R	Existing 102R
Q2	1.84	2.64	0.57
Q ₁₀	3.93	6.59	1.99
Q ₂₅	5.68	10.09	3.32
Q ₅₀	7.36	13.51	4.67

3.0 Developed Conditions

3.1 Design Objectives

The objective of this Stormwater Management Report is to analyze the pre- and post-development stormwater runoff conditions and impacts to downgradient properties for the proposed redevelopment of the property. There will be approximately +/-23,565 square feet less of impervious area. Stormwater generated on the redeveloped site will be collected in deep sump catch basins and routed to a stormwater gravel wetland with two bays (with impermeable liner). The overflow from the stormwater wetland is to the Branch River. Stormwater from Phase II will be treated via two grass treatment swales with impermeable liners and then detained in a detention basin and eventually discharged to the Branch River.

3.2 Developed Hydrology

The limited drainage area studied for the developed hydrology consists of the same overall area examined in the existing hydrology.

3.3 Summary of Post Developed Hydrology (CFS)

Design Storm	Developed 100R	Developed 101R	Developed 102R
Q ₂	0.15	1.45	0.37
Q ₁₀	0.44	3.17	1.72
Q ₂₅	0.74	4.63	3.24
Q ₅₀	1.05	6.04	4.76

4.0 Stormwater Management Standards

The Surface Water Drainage System is consistent with the NHDES Alteration of Terrain Regulations.

- A. There is no significant increase in runoff in the post development condition.
- B. The stormwater runoff will be pretreated via deep sump catch basins and treated in the gravel wetland therefore no degradation of water quality is expected;

5.0 Conclusion

This Drainage Narrative has been prepared to document the stormwater impacts associated with the redevelopment at 560 Main Street. The calculation presented have been completed in accordance with NHDES Alteration of Terrain Regulations, Env-Wq 1500. The proposed storm drainage system was designed for the 2, 10, 25 and 50 year design storms. The conclusion based on system design indicates the onsite runoff will be managed and there will be no adverse impacts to downstream abutters.

August 8, 2019

Froling Energy
590 Hancock Road
Peterborough, NH 03458
attn: Mark Froling

re: Keene Old City Landfill, 560 Main Street
Test Pits of August 14, 2019

Dear Mark,

On August 14, I met you at the above referenced site, as scheduled, for the inspection of geotechnical test pits. You had arranged for an excavator and operator from Germaine & Sons Construction to meet us at the site. A survey crew was laying out proposed building corners, based on a plan which has since been modified. We agreed on four test pit locations, based on proposed building corners and accessible locations. We were aiming for around 12' in depth, which required additional setups for the smaller excavator. The test pit depths were ultimately decided based on soil or fill conditions.

The four test pit logs are attached. Deep layers of fill were found in the first three locations, the last location is in an area that has previously been filled. We had been provided with past reports and maps showing the extent of ash and solid waste fill in the area, so this was not a surprise. The deepest fill was found at pits 1 and 3, near the west side of the proposed central processing plant. Fill containing significant solid waste (primarily metal with some glass and other debris) was found to at least 11.5' in these locations. The depth of ash fill in these two locations was not as significant as feared, the solid waste component was more significant. At TP-2, at the west end of the south side of the proposed building, there was no significant ash, and trash only extended to about 6.5' below grade. Underlying native soil was a good looking bank run gravel. TP-4 appeared to be entirely in a fill, generally consisting of a silty sand with gravel. Minor debris was found. No groundwater or refusal was encountered at any of the locations.

As noted above, the site plan is still being updated, and the test pits don't necessarily reflect column lines. They do show that a variety of soil and fill conditions can be anticipated across the building footprint. These test pits will be supplemented by test borings later this week, this will provide greater area coverage and obtain data on the water table and underlying native soils.

The proposed building consists of three sections, with long open storage buildings on either side of a central enclosed processing plant. The open areas will be paved, and used for wood chip storage. The central building will have a concrete floor.

As the test pits were requested to provide preliminary opinions regarding design and construction, I would offer the following (preliminary) observations;

1) The overall building length will be 600 feet, so significant site grading will be needed. The current topography is uneven through the building footprint, and the site is heavily wooded in areas. The current conceptual plan provides for a significant cut through the center of the building, and fill at either end.

2) The effects of the cut and fill will provide some challenges to structural and site design. Stripping off soil may expose ash and trash layers, and leave an unsuitable surface for construction traffic. Footings will bear in a variety of soil conditions around the building perimeter, including trash fill, ash, previously placed fills, newly placed fill, and native soils. These soil conditions, and changes in anticipated settlement rates and amounts, make foundation design a challenge. Support of interior slabs or pavement will also be spread across a variety of soil conditions, creating a greater than normal risk of differential movement and cracking. The addition of fill in other areas may place footings in better soil layers, or with an increased distance to underlying fill layers, but it also adds weight in addition to the structure which may accelerate settlement.

3) As the options for building placement of the size and orientation of the building you desire are limited, the intention of you and the design team is to find a design and construction solution which works for the area where the building is ultimately sited. That will require a discussion about your risk tolerance as far as settlement, and possibly a variety of foundation solutions to suit the areas of the building and the anticipated soil/fill conditions.

The open ends of the building are supported on column footings, so a limited pile or pier design just at the columns may be appropriate. This would transfer the column loads through the trash into suitable soils below (if they are found to exist at appropriate depths and with decent soil characteristics), minimizing the risk of settlement of the actual structure over time. The interior of the building could be proof rolled to minimize immediate settlements, and built on a bed of stabilization fabric and gravel to try to limit differential settlement. Pavement would likely need to be replaced on a regular cycle (maybe 10-12 years) over time, this would provide an opportunity to regrade and fix settlement issues.

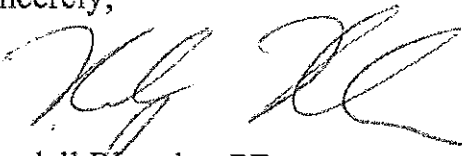
The central portion of the building will be the least tolerable of settlement, and especially differential settlement. Removal of ash and solid waste is not desired, as this material would need to be stored elsewhere. The first option we have been discussing is designing for a low bearing capacity and using conventional frost walls and wide footings. This was the design approach for the salt shed on the site. The drawback to this approach is that the rate of settlement is difficult to determine, as it relies primarily on the decay and settlement of the trash layer. We can discuss other options to prevent building settlement, such as piles or geopiers, after we know more about the underlying soil profile.

4) The larger site development will face issues similar to those provided above for the building. There will be a variety of soil conditions at pavement subgrade. Excavated subgrades will consist of ash or trash in some areas, these will likely need to be box cut and replaced with fabric and imported gravels.

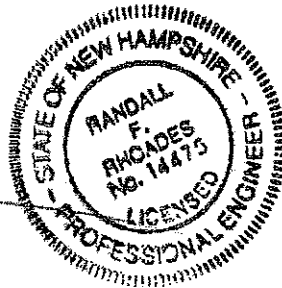
5) An engineered fill will be required at the east end of the building. This will be a structural fill, as columns will bear on this end wall. Recommendations for this fill will depend on what the foundation options are for the rest of the building, and what the existing soils are found to be.

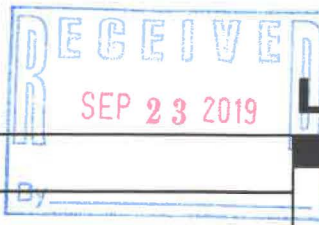
The final Geotechnical Report will provide much more detail, and more specific recommendations. The final site plan and elevations will be required for the preparation of this report.

Sincerely,



Randall Rhoades, PE
Principal





DESCRIPTION

The Prevail LED area, site luminaire combines optical performance, energy efficiency and long term reliability in an advanced, patent pending modern design. Utilizing the latest LED technology, the Prevail luminaire delivers unparalleled uniformity resulting in greater pole spacing. A versatile mount standard arm facilitates ease of installation for both retrofit and new installations. With energy savings greater than 62%, the Prevail fixture replaces 150-450W metal halide fixtures in general area lighting applications such as parking lots, walkways, roadways and building areas.

Catalog #		Type
Project		
Comments	SPR-06-19	Date
Prepared by		

SPECIFICATION FEATURES

Construction

Construction is comprised of a heavy-duty, single-piece die-cast aluminum housing. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. The die-cast aluminum door is tethered to provide easy access to the driver if replacement is required. A one-piece silicone gasket seals the door to the fixture housing. The optics is mounted on a versatile, aluminum plate that dissipates heat from the LEDs resulting in longer life of the fixture. The fixture is IP66 and 3G vibration rated (ANSI C136.31) to insure strength of construction and longevity in the selected application.

Optics

Precision molded, high efficiency optics are precisely designed to shape the distribution, maximizing efficiency and application spacing. Available in Type II, III, IV and V distributions with lumen packages ranging from 6,100 to 18,900 nominal lumens. Light engine configurations consist of 1 or 2 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L92/60,000 hours at 25°C) per IESNA TM-21. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed.

Electrical

LED drivers are mounted to the fixture for optimal heat sinking and ease of maintenance. Thermal management incorporates both conduction and convection to transfer heat rapidly away from the LED source for optimal efficiency and light output. Class 1 electronic drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Available in 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. 10kV/10 kA surge protection standard. 0-10V dimming driver is standard with leads external to the fixture. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. Standard NEMA 3-PIN twistlock photocontrol receptacle and NEMA 7-PIN twistlock photocontrol receptacles are available as options.

Mounting

Standard pole mount arm is bolted directly to the pole and the fixture slides onto the arm and locks in place with a bolt facilitating quick and easy installation. The versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the standard mounting arm enables wiring of the fixture without having to access the driver compartment. A knock-out on the standard mounting arm enables round pole mounting. Wall mount and mast arm mounting options are available. Mast arm adapter fits 2-3/8" O.D. tenon.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is bronze. Additional colors available in white, grey, black, dark platinum and graphite metallic.

Warranty

Five-year warranty.

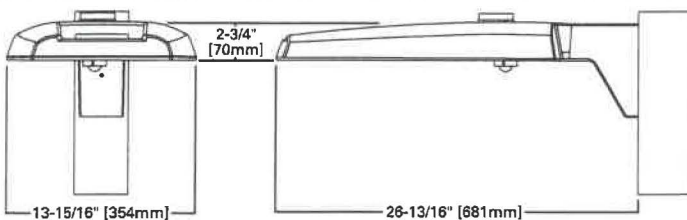


PRV PREVAIL

LED

AREA / SITE / ROADWAY LUMINAIRE

DIMENSIONS



CERTIFICATION DATA

UL and cUL Wet Location Listed
 IP66-Rated
 3G Vibration Rated
 ISO 9001
 DesignLights Consortium® Qualified*
 Dark Sky Approved (3000K CCT and warmer only)

ENERGY DATA

Electronic LED Driver
 0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 and 60Hz,
 347V/60Hz, 480V/60Hz
 -40°C Minimum Temperature Rating
 +40°C Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.75

SHIPPING DATA

Approximate Net Weight:
 20 lbs. (9.09 kgs.)



DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaires provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/ surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

SPECIFICATION FEATURES

Construction

Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 58W, 81W and 102W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens

assembly designed for maximum forward throw. Solid state LED Crosstour MAXX luminaires are thermally optimized with eight lumen packages in cool 5000K, neutral 4000K, or warm 3000K LED color temperature (CCT).

Electrical

LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W, 81W and 102W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation. 480V is compatible for use with 480V Wye systems only.

Emergency Egress

Optional integral cold weather battery emergency egress includes emergency operation test switch (available in 58W and 81W models only), an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting

Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish

Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

Five-year warranty.



XTOR CROSSTOUR MAXX LED

APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated
DesignLights Consortium® Qualified*

TECHNICAL DATA

40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

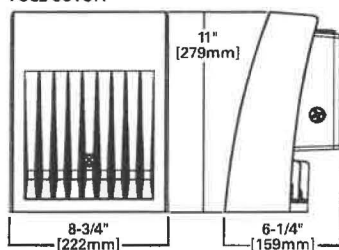
Effective Projected Area (Sq. Ft.):
XTOR6B, XTOR8B, XTOR12B=0.54
With Pole Mount Arm=0.98

SHIPPING DATA:

Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

DIMENSIONS

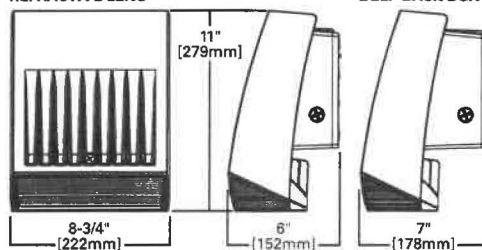
FULL CUTOFF



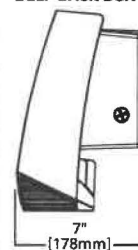
DEEP BACK BOX



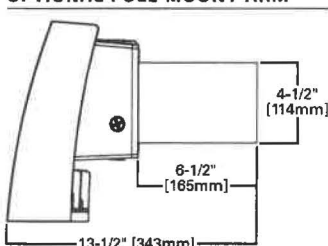
REFRACTIVE LENS



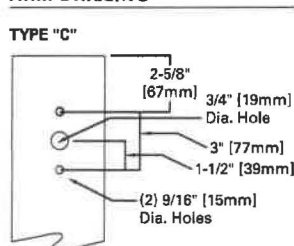
DEEP BACK BOX



OPTIONAL POLE MOUNT ARM



ARM DRILLING



ESCUTCHEON PLATES

