City of Keene, New Hampshire

CONSERVATION COMMISSION

Monday, December 20, 2021 **4:30 PM** **City Council Chambers**

Commission Members

Alexander Von Plinsky, IV, Chair	Councilor Robert Williams
Eloise Clark, Vice Chair	Brian Reilly, Alternate
Kenneth Bergman	Thomas P. Haynes, Alternate
Art Walker	Steven Bill, Alternate
Andrew Madison	John Therriault, Alternate

1. Call to Order

2. Approval of Meeting Minutes – November 15, 2021

3. Applications:
   Eversource: North Keene Substation, 115 Park Ave.

4. Informational

   a. Subcommittee reports
      - Outreach Subcommittee
      - Arm Fund Subcommittee-Non Public Session
      - Greater Goose Pond Forest Stewardship
   b. Invasive Species
   c. Summit Road/Summit Ridge Dr. ponding

5. Discussion Items

   a. Conservation Commission speaking events
   b. Multiyear Pollinator Census results for Cheshire County
   c. Beaver Brook to Cemetery

6. New or Other Business
   a. 2022 Calendar

7. Adjournment – Next meeting date **Tuesday, January 18, 2022**

Page intentionally left blank

City of Keene
New Hampshire

CONSERVATION COMMISSION MEETING MINUTES

Monday, November 15, 2021 **4:30 PM** **Council Chambers, City Hall**

Members Present:
Eloise Clark, Vice Chair
Councilor Robert Williams
Art Walker
Ken Bergman
Thomas Haynes, Alternate
Brian Reilly, Alternate
Steven Bill, Alternate
John Therriault, Alternate

Staff Present:
Corinne Marcou, Administrative Assistant

Members Not Present:
Alexander Von Plinsky, IV, Chair
Councilor Andrew Madison

SITE VISIT: **At 3:30 PM before the meeting, Commissioners visited the proposed U-Haul site at 472 Winchester Street.**

1) Call to Order

Vice Chair Clark acted as Chairperson and called the meeting to order at 4:30 PM.

2) Approval of Meeting Minutes – October 18, 2021

Revision: line 225, delete the word *asked*.

Mr. Bergman moved to adopt the Minutes of October 18, 2021 as amended, which Mr. Reilly seconded, and the motion passed unanimously.

3) Applications

A) Planning Board referral – Surface Water Protection Conditional Use Permit Application – Eversource – A152 and T198 Transmission Line Pole Replacement Project

Vice Chair Clark welcomed Lindsey White of GZA Geoenvironmental and Jeremy Fennel of Eversource.

Ms. White and GZA are helping Eversource with permitting an upcoming utility pole replacement project that requires temporary impacts to the Surface Water Protection District. This project involves that T-198 and A-152 transmission lines that run parallel to each other in the City and extend between the Emerald Street substation and Swanzey/Keene town line. Eight utility poles were proposed for replacement along the T-198 line and 20 on A-152. Most of the work area intersects the Surface Water Protection District. Timber matting would be used to minimize wetland impacts, which is typical for prior Eversource projects. Within the 75-foot wetland buffer, restoration is proposed after work is complete. There was a pre-application meeting on November 10 and Ms. White felt the proceedings were standard to these sorts of applications. She assured the Committee that the proposal included restoring the wetland buffer with a pollinator seed mix as the Commission has requested typically. She has been in contact with the City Engineer, Don Lussier, for Encumbrance Permits and Excavation Permits and so the Engineering Division is prepped on this upcoming project. Ms. White welcomed questions.

Councilor Williams understood why timber mats are needed but asked what happens to the compacted ground underneath once the mats are removed. Ms. White replied that the vegetation under the mats usually returns on its own, but the areas would also be seeded and mulched when the timber mats are removed from the wetland areas. Councilor Williams stated his concern that what frequently comes back could be invasive species and he thought the preference of the Commission would be for the mat areas to be overplanted with something native and pollinator friendly. Ms. White said absolutely.

Mr. Bill commented on section two (or three on the old map), where he said there is a sand pit and a lot of the material underlying it is loose, fine sand that was likely blown in by wind. He asked if that impacts the treatment of the area and species there. Discussion ensued as to the exact location, which Mr. Bill said was near the old railroad bridge and a snowmobile trail, but he could not provide a location/structure number on the maps. Mr. Bill asked if the procedure for this sort of project is different when faced with a sand substrate, knowing that sand tends to be unstable. Mr. Fennel replied that if there were an unstable sandy substrate, which they encounter more in Swanzey, they would temporarily stabilize the area (e.g., mats, silt fence, straw waddle), reduce the work pad area, and employ erosion control matting or rip rap in extreme situations; these are the general best management practices to keep sand out of the wetland. Mr. Bill thought there might be windblown sand in the proposed work area.

Mr. Bergman referred to page four of the GZA letter, specifically the last paragraph about rare species, and he presented two questions. First, he noted the common language stating that turtles and snakes would be moved off the path and reported to NH Fish & Game, and he asked if that actually happens. Ms. White said yes, when they encounter a rare, threatened, or endangered species identified by the Natural Heritage Bureau the sightings are added to their database. Mr. Bergman's second question regarded common nighthawks, which are historically naturally

ground nesting but have been more so on rooftops in recent years and are nearly gone from nesting in the Keene area. He asked the time of year this work was proposed. Ms. White said the overall schedule for the entire project of more than 100 poles is between February–August 2022. However, they do communicate with NH Fish & Game and know that common nighthawk is a rare species on the line so they provide photos and best management practices for construction crew to be aware and monitor for them. Mr. Bergman cited an active volunteer program monitoring common nighthawk nesting and populations in the State; they could refer to the Natural Heritage Bureau database to learn of local sightings.

Vice Chair Clark reminded that this was about impacts to the Surface Water Protection District as referred by the Planning Board. She read the following:

- The Conservation Commission may conduct an evaluation of the application based on the criteria in Section 11.6.2 and provide advisory comments to the Planning Board.

She continued listing some things outlined in Section 11.6.2 such as: whether proposed use cannot be located in a manner to avoid encroachment into the Surface Water Protection Overlay District, encroachment has been minimized to the extent possible, etc. She asked the Commission to focus on these issues and whether this application was worthy of proceeding. She said a motion to not intervene would allow the project to move forward in the Planning Board process.

Councilor Williams moved to not intervene, which Mr. Walker seconded.

Mr. Bergman asked the Vice Chair whether she had any concerns based on the stipulations she had just read. Vice Chair Clark said no, noting that through the Ashuelot River Local Advisory Committee, these projects are scrutinized and so she felt confident in what they do at this point.

The motion to not intervene passed unanimously.

B) Planning Board Referral – Surface Water Protection Conditional Use Permit Application – U-Haul of South Keene Site Plan Review

Vice Chair Clark welcomed John Noonan of Fieldstone Land Consultants and Jeff Bane, the U-Haul International owners' representative, to provide further details on their application to encroach on a wetland buffer to accommodate a paved driveway and display area.

Mr. Newnan said this work is proposed in the southwest corner of the former Clark Distributors building. The driveway will provide sufficient access to emergency vehicles as asked for in the initial hearing with City Staff, including Fire Department Cpt. John Bates, who wanted fire truck access around all sides of the building. The proposed driveway would also be used by clients and owners. He said the Ash Swamp Brook runs along the southern border of the property, very near to the existing building, and the 30-foot setback from the wetland aligns with the corner of the building and so the pavement there would encroach upon that surface water setback. Mr. Noonan said the applicant is willing to include plant pollinator friendly seedlings in the back of the

building and shrubs around the floodplain compensation basin at the back as well; they were willing to ensure that they were wetland shrubs and seed mixes.

Vice Chair Clark read some things the Commission needed consider in reviewing a Conditional Use Permit:

- The size, character, and quality of the surface water and the buffer being encroached upon.
- Location and connectivity of the surface water in relation to other surface waters in the surrounding watershed.
- The nature of the ecological and hydrological functions served by the surface water.
- The nature of the topography, slopes, soils, and vegetation in the surface water buffer.
- The role of the surface water buffer in mitigating soil erosion, sediment and nutrient transport, ground water recharge, flood storage, and flow dispersion.
- The extent to which the surface water buffer serves as a wildlife habitat or travel corridor.
- The rate, timing, and volume of storm water runoff and its potential to influence water quality associated with the effected surface water or any downstream surface waters.
- The sensitivity of the surface water and the buffer to destruction from changes in the grade or plant and animal habitats in the buffer zone.

Mr. Therriault asked about the stabilization of the slope because where the corner of the building goes to the slope is exactly 30 feet, and theoretically adding vehicles to that driveway would add to the weight on that steep slope to the brook. He was concerned especially for the slope carrying the weight during wetter conditions when soil adhesion breaks down and can slump. Mr. Noonan said there would be test borings prior to construction for all proposed pavement areas and they would box cut-out the native soils under the proposed pavement and install gravel (between bank-run and crushed), which will take the load bearing weight and pavement on top of it. He clarified that the bank would not be disturbed via this proposal, and it would not take any of the weight from the proposed structure or vehicles. He was unaware whether there would be riprap stone or concrete through that area associated with the bridge project when the banks are disturbed near to this site, according to his conversations with the City Engineer. This proposal should not impact the bank at all.

Vice Chair Clark asked how things associated with transportation, like salt or oil, would be kept from running off the new pavement and into the brook. Mr. Noonan said that the plans show that on the end encroaching the setback, there would be an asphalt curb line, that would divert water into catch basins, which are four feet deep. This would allow sediment to build-up, which are inspected by owners once annually per their Operational Terrain Permit obtained by the state, so that it does not overflow into the culvert then the surface water. On the culvert side, exiting each catch basin, there is an oil and debris hood that catches any floatable debris like oils, plastic bottles, or wood and keeps them in the deep sump of each catch basin. Once the water enters the culvert, there are perforated pipes with stone around them and the soil drains out impurities before reaching the ground water table or any surface water. Mr. Bill asked who is responsible

for the maintenance of the catch basins and how often. Mr. Noonan confirmed U-Haul is responsible for maintenance at least once annually. On the question of transportation salt, Mr. Bane added that the U-Haul policy is no rock salt usage at storage facilities like this, one for environmental reasons and two, because salt damages the storage units. They use strictly sand in the winter.

In response to Mr. Bergman, Mr. Noonan confirmed that there would be a catch basin near Winchester Street. Mr. Bergman then asked if that catch basin construction would need to await the bridgework by the City. Mr. Noonan replied that the City would encroach to the corner of the U-Haul parking lot where that catch basin is located on the plans and not onto the pavement. That catch basin will be in place when the bridgework begins, which is not anticipated until 2025–2026. The temporary bridge would also not encroach upon the catch basin site.

Vice Chair Clark asked for comments from the site visit about the overflow area for the record. Mr. Therriault said that in the overflow area he wanted to see native wildflowers planted, including flowering shrubs, if possible, that are consistent with a wetland environment. They also discussed that a few willow trees would be nice additions as early season pollinator plants.

Councilor Williams thought that digging out this area in the floodplain was very important after the City Council heard this year from citizens experiencing flooding downstream of this area. He thinks one of the primary causes of flooding is runoff from buildings like this one and he thinks there is a need to mitigate this degree of pavement and how it could affect the pulse of water entering ash swamp brook. He was glad to know there would be some cut-down of the floodplain, which he thought could mitigate some problems downstream. Councilor Williams asked whether Mr. Noonan had a sense of how often the area would be flooded. Mr. Noonan said he did not, but that the flood elevation is considered as 100-year, though those floods are becoming more often. Technically, there is a one-percentile chance of flooding to that location. To meet Federal Emergency Management Agency and City rules, all buildings at this location will be one foot above the flood elevation in addition to the area where flood water can backfill into the site. Currently, the floodplain can flood into the buildings and so providing a larger volume area in one spot allows the backfilling without crossing the Krif Road area. Councilor Williams said he hoped that the lower area down by the floodplain does flood occasionally to support a wetland habitat, which he thinks would be valuable in that part of the watershed to prevent flooding downstream.

Mr. Reilly asked if there had been discussion about alternatives to asphalt by the new storage sheds, such as hard pack. Mr. Newnan said that was planned originally as a gravel surface but in modeling and considering maintenance, gravel would be too difficult due to the sediment from the gravel entering the catch basins. Additionally, there was little difference between the gravel and pavement surfaces in the model for the amount of water leaving the site. Mr. Bill asked if the runoff would be flashier with the paved surface into the catchment area. Mr. Newnan said there are shallow slopes on the asphalt. Mr. Newnan said the flow rate is nearly the same for gravel and asphalt. They modeled the present surface (trees and grasses) versus the area with asphalt

and building surfaces, which determines the capacity of the underground drainage system; the pre-construction amount of water leaving the site is the same or less post-construction. They measure velocity and volume of water in pre- and post-built condition.

Vice Chair Clark asked exactly, how many catch basins were proposed and Mr. Newnan replied 18.

Mr. Bergman said that without the Fire Department insistence on such a wide corner around the building, he would not be happy about that part of the plan, but that would have to accept the emergency services evaluation. Vice Chair Clark asked whether there was documentation of that Fire Department recommendation. Mr. Newnan said that arose at the formal meeting with City Staff before the Planning Board meeting. The Vice Chair agreed with Mr. Bergman that it was regrettable having the pavement so close to the brook.

Discussion ensued on the language for a motion and recommendation to the Planning Board. Ms. Marcou agreed that a pre-submission meeting with the Fire Department was formal. There was Commission agreement that it could be negligent to not make this statement about pavement near the brook for the record. Mr. Newnan confirmed that the width of the pavement was determined by the proposed design, not the Fire Department, which only provided the fire truck dimensions. Mr. Newnan said the pavement could be narrowed further at that corner of the building down to 22 feet and still accommodate the fire trucks. He also discussed removing some of the display pavement at the corner closest to Winchester street as well. Vice Chair Clark was concerned that there would be more traffic on this pavement that emergency vehicles. Mr. Bill suggested making it a one-lane road to limit the volume of traffic and there was agreement that this could actually increase traffic around that corner.

Discussion ensued on the motion language and consensus was reached.

Mr. Therriault made the following motion, which Councilor Williams seconded. The Conservation Commission unanimously moved to not intervene, provided the Planning Board confirms the Fire Department requirement of pavement around the corner of the building, and to encourage reconsideration of that pavement due to Conservation Commission concern for pavement of that width approaching the brook so closely.

4) <u>Informational</u>

A) Subcommittee Reports

i) *Outreach Subcommittee*

The Subcommittee would meet next on November 17 at 9:30 AM at the Recreation Center to discuss winter and spring activities for 2022. Vice Chair Clark continues sending Nature Nuggets to Ms. Marcou.

ii) *ARM Fund Subcommittee*

No updates.

iii) *Greater Goose Pond Stewardship Subcommittee*

Mr. Haynes reported that the Subcommittee met on November 12 to continue their process of prioritizing actions to take based on the 2019 Forest Stewardship Plan. Trails are the initial focus, particularly in the first segment of the forest, which is the pond and connecting trails. The Subcommittee created a priority list based on the Stewardship Plan and would begin fieldwork at their next meeting. Current efforts are working toward a document to look for funding this spring. Mr. Bill added that the focus currently is maintaining the trails directly around the pond, where there are signage issues, and a lot of work is needed at the old trailhead.

Vice Chair Clark said, she was sad to have missed Mr. Bill's geology walk at Goose Pond. Mr. Bill offered to take a similar walk with the Vice Chair to help her create a Nature Nugget about it. Mr. Bill said his public walk went well; approximately one dozen people attended on a nice day. Mr. Bill offered to lead a similar walk for just the Committee or for the public again at other locations, like Robin Hood Park; Vice Chair Clark also suggested Beech Hill.

5) Discussion Items

A) Invasive Species November 11 Event

Councilor Williams reported that the November 11 volunteer effort to pull burning bush along the Industrial Heritage Rail Trail near to where the trailhead meets Eastern Avenue. Eight or nine volunteers attended and worked on a large thicket of the invasive, which the Councilor has seen more of around town. The volunteers filled nine large garbage bags as a good start. Councilor Williams said that this invasives volunteer effort is long-term and that knowledge and resources are gained along the way. At some point, more resources would be needed, such as selective herbicide application, to address the more pervasive patches of plants that volunteers alone could not eradicate; an issue then becomes replacing those patches with large shrubs to compete with any invasives that try to return. The Councilor's strategy is to continue addressing small patches to prevent them from becoming large. This event closed the season, and he hopes to put together an advanced schedule next year to addresses different invasives as appropriate throughout the seasons, with more formal organization and connection to regular volunteers. Vice Chair Clark said Councilor Williams did an excellent job spearheading this first years' effort.

Mr. Bergman wondered whether it was appropriate for the Commission to request an increase in its annual budget from the City Council to be more engaged on the ground with things like replacement shrubs or equipment; the amount the Commission gets annually is fairly minimal. Councilor Williams said he would like to try that, but some fellow Councilors are tight-fisted; still, he said that there is possibility if value is added and people can see benefits from a real plan that makes sense well within the realm of possibility. Mr. Haynes cited the annual Commission contribution from the Land Use Change Tax Fund and suggested not requesting more money but asking to have portions allocated to educational outreach (e.g., stipends for speakers), equipment,

or shrubs, for example. He said that if the Commission wants to increase activities, they will need more income to do those well and reallocating the funds the Commission already receives could help. Councilor Williams thought the use of those funds might be limited by State statutes but said it would be nice to find out.

Vice Chair Clark suggested borrowing or renting a weed wrench from the Cheshire County Conservation District to cut down large patches and then work on the roots. With things like burning bush, any bit of root left in the ground returns next year.

B) Summit Road/Summit Ridge Drive Ponding

Ms. Marcou relayed information from the Community Development Director, Rhett Lamb, who said that the City Engineer, Don Lussier, was supposed to attend this meeting. The City Engineer was not present, and Ms. Marcou would invite him to the next meeting.

C) See-Click-Fix

Ms. Marcou spoke to the Office Manager in the Public Works Department, who is acquiring the See-Click-Fix tutorial to send to the Commission. Mr. Bergman noted that the Commission also wanted training on how to submit invasives specifically and had asked when the public could start using the app for this purchase. Ms. Marcou would follow-up with the Public Works Department before the next meeting.

6) New or Other Business

Councilor Williams wanted to recognize that Mr. Lamb would be retiring on December 3 and stated how valuable he had been to the Commission as just one of the many things he does for the City. All Commissioners agreed that Mr. Lamb's wealth of institutional knowledge and ability to articulate everything so well and quickly would be missed and thanked him for his service.

Vice Chair Clark reported that her Ashuelot River Local Advisory Committee survey of the Ashuelot River's banks in Keene concluded successfully. She was pleased to report that there was no concerning erosion other than evidence of natural processes and that there was no concerning discharge into the river identified. However, there is overwhelming prevalence of the invasive glossy buckthorn in the understory as well as some bittersweet climbing into the canopies and honeysuckle, which is each to pull. The overall impression was of the pervasive invasive species. The Vice Chair said the river looks really good despite the high e-coli rates downstream of Keene. She said an overwhelming problem is non-point source pollution like parking lots and other permeable surfaces within that corridor.

Mr. Bill recalled the discussion of the West Street Dam at the last meeting and thought Mr. Lamb was looking into that timeline, though not imminent. Vice Chair Clark knew from ARLAC

that the Rhode Island School of Design project was simply an exercise to benefit their research versus anything intended to impact City policy. However, the City does have their information to use, which included interesting ideas for the dam.

Councilor Williams shared a message from Councilor Jan Manwaring, expressing concern about rain gardens, for which there is insufficient City Staff to maintain them around town, despite the gardens being a valued resource. Councilor Manwaring hoped the Commission would consider a volunteer effort like that for invasives to maintain rain gardens and provide the needed support and training. Councilor Williams suggested another Commissioner spearheading this effort. There were no volunteers currently.

Mr. Bergman noted that his term would expire at years' end, and he sent a message to the Mayor expressing his desire to continue serving for another term. Ms. Marcou said the Mayor would be reaching out to those with terms expiring to see if they would like to continue. Discussion ensued inaudibly about an alternate position on the Commission.

7) Adjournment

There being no further business, Vice Chair Clark adjourned the meeting at 5:40 PM.

Respectfully submitted by,
Katryna Kibler, Minute Taker
November 18, 2021

Reviewed and edited by,
Corinne Marcou, Administrative Assistant

Page intentionally left blank

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

November 12, 2021
Revised December 8, 2021

Mari Brunner, Planner
City of Keene, NH, Community Development Department
City Hall, 4th Floor, 3 Washington Street
Keene, NH 03431

RE: Conditional Use Permit – Disturbance to Surface Water Protection Buffer
City of Keene Land Development Code
Section 11.6. Surface Water Protection Overlay District
Eversource North Keene Substation
115 Park Avenue, Keene, NH 03431, Tax Map 233, Lot 2

On behalf of our Client, Public Service Company of NH (DBA Eversource Energy, we respectively request a Conditional Use Permit (CUP) for 16,050+/- square-feet of disturbance to the City's 75-foot Surface Water Protection Buffer for reconstruction of a temporary gravel access drive at the existing Eversource North Keene Substation, located at the above noted address.

The proposed reconstruction will require a disturbance to a surface water protection buffer per Section 11.6. Surface Water Protection Overlay District, of the City of Keene Land Development Code. This section of the Code indicates the Planning Board may grant a conditional use permit allowing the disturbance of a buffer in conjunction with construction of new roads, driveways, and parking lots. In addition to the requirements of Section 25.14 Conditional Use Permits of this Code, an applicant for a permit shall provide adequate documentation in order for the Planning Board to make a finding that the proposed disturbance of the buffer meets the following conditions:

A. The proposed use and/or activity cannot be located in a manner to avoid encroachment into the Surface Water Protection Overlay District;

   The proposed gravel access drive has been sited within the existing Utility Right-of-Way (ROW) in approximately the same location as the former temporary gravel driveway associated with the original substation construction in 2014. The temporary gravel driveway was removed upon completion of the original substation construction with a small portion since re-installed in association with the ongoing utility line work for the Eversource D-108 Line.

   The proposed driveway cannot be located fully outside of the Surface Water Protection Buffer due to the presence of the existing utility structures, overhead electric transmission lines and associated clear distances required by the National Electric Safety Code (NESC). Stormwater management areas have been sited outside of the buffer, with swales to direct stormwater associated with the driveway construction away from the buffer area.

B. Encroachment into the buffer area has been minimized to the maximum extent possible, including reasonable modification of the scale or design of the proposed use;

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

The proposed driveway has been sited outside of the buffer to the greatest extent possible and utilizes areas of prior disturbance to minimize impacts to existing vegetation within the buffer. The driveway alignment has been refined to avoid the buffer where possible, while maintaining required NESC clearances from the existing transmission line and structures. Locating the driveway completely outside of the buffer would not comply with the required NESCE clearances, nor provide a safe intersection location per NHDOT all-season sight-distance requirements at NH Route 12 associated with the temporary driveway connection.

The proposed buffer impacts are located within the area previously permitted under the original substation construction. As currently shown, the location proposes the least impactful layout to reasonably use the areas of the property located outside of the Surface Water Protection Overlay District.

C. 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;

The proposed stormwater management systems provide attenuation, pre-treatment, treatment, and groundwater recharge consistent with NHDES and the City of Keene stormwater management regulations. The proposed area of work currently consists of varying qualities of grasses and gravel roads, located within the existing Utility ROW. Consistent with Eversource's Vegetative Maintenance Program, there is no wooded vegetation within the existing Utility ROW and as such, there is no proposed tree removal as part of the proposed work. The area within the buffer will not dramatically change in regard to the function of habitat, as existing wooded vegetation along Tenant Swamp will remain in its current condition.

A New Hampshire Natural Heritage Bureau (NH NHB) DataCheck was conducted on the parcel, in which no adverse impacts to species of concern were identified.

The proposed layout avoids impacts to the adjacent wetland complex and minimizes impacts to the buffer and maintains the ecological values of the existing wetlands. Surface Water Protection buffers exist to protect downstream wetlands from changes in hydrological connectivity, prevent sediment and erosion during and post-construction from running into the wetland areas and maintaining natural wooded vegetation to support existing habitats. In that the area of proposed buffer disturbance is located within a previously disturbed area, the requested impacts to the buffer are minimal. Appropriate Best Management Practices (BMPs) will be utilized throughout the duration of construction to prevent construction related sediments from leaving the proposed area of work. Per NHDES regulations, within 50-feet of an existing wetland, a double row of pre-fabricated silt-sock will be installed at the downstream limits of disturbance. This allows the stormwater to follow existing flow paths down gradient to the adjacent wetlands, while capturing sediment on the upgradient side of the BMP. Upon completion of construction, all areas of disturbance not covered by an impervious surface shall be permanently stabilized with loam and seed.

D. The surface water buffer area shall be left in a natural state to the maximum extent possible. The Planning Board may establish conditions of approval regarding the preservation of the buffer, including the extent to which trees, saplings and ground cover shall be preserved;

1. Dead, diseased, unsafe, fallen, or invasive trees, saplings, shrubs, or ground cover may be removed from the surface water buffer area;
   There is no tree removal under the proposed work. If invasive species are encountered during construction, the contractor shall dispose of in accordance with RSA 430:53 and Agr, 3800 (denoted on the Site Plans).
2. Tree stumps and their root systems shall be left intact in the ground, unless removal is specifically approved in conjunction with a surface water protection conditional use permit granted by the Planning Board. The stumps and root balls of exotic, invasive species may be removed by hand digging and/or hand cutting;
   See response to Item D.1. above.
3. Preservation of dead and living trees that provide dens and nesting places for wildlife is encouraged. Planting of native species of trees, shrubs, or ground cover that are beneficial to wildlife is encouraged; and
   See response to Item D.1. above.
4. Where there has been disturbance of alteration of the surface water buffer during construction, revegetation with native species may be required by the Planning Board.
   See response to Item C. above.

Per CUP Standard 11.6.2.E, the Planning Board may consider the following to determine whether allowing the proposed encroachment will result in an adverse impact on the surface water resource.

1. The size, character, and quality of the surface water and the surface water buffer being encroached upon.

   Partially located within the property but located outside the proposed areas of work, Tenant Swamp is a large wetland complex which is within the City of Keene Conservation Easement. This wetland is largely separated from the project area by an existing vegetated berm.

   The proposed buffer impacts are located within the area previously permitted under the original substation construction. As currently shown, the location proposes the least impactful layout to reasonably use the areas of the property located outside of the Surface Water Protection Overlay District.

   A Phase 1: Threatened and Endangered Wildlife and Habitat Assessment was performed by Pond View Wetland Consultants, LLC in November 2021, and it was concluded that the proposed project will not create negative impacts on the surface water or buffer. A copy of the Wildlife Habitat Assessment has been included as part of this CUP Application.

2. The location and connectivity of the surface water in relation to other surface waters in the surrounding watershed.

   There are no proposed impacts to the surface water (Tenant Swamp), as such there will be no change to the existing location and connectivity of the surface water in relation to other surface waters in the surrounding watershed.

3. The nature of the ecological and hydrological functions served by the surface water.

   There are no proposed impacts to the surface water (Tenant Swamp), as such there will be no change to the existing ecological and hydrological functions served by the surface water.

4. The nature of the topography, slopes, soils, and vegetation in the surface water buffer.

As stated above, Tenant Swamp is separated from the project area by an existing vegetated berm varying from 12-ft to 28-ft in height adjacent to the substation. From the top of berm, the elevation decreases to the limits of the surface water. Within the area of proposed buffer impacts, the existing topography consists of a relatively level utility corridor which will remain in in this condition after construction.

Soils throughout the site consists of Caesar and Windsor loamy sand, an excessively drainage soil. The adjacent wetland communities consist of Ossipee mucky peat.

Within the surface water buffer existing vegetation consists of tall white pine, Eastern hemlock, red oak and beech. Outside the existing treeline, within the utility corridor, vegetation consists of varying grasses.

5. The role of the surface water buffer in mitigating soil erosion, sediment and nutrient transport, groundwater recharge, flood storage, and flow dispersion.

   The area of proposed wetland buffer impacts do not substantially influence soil erosion, sediment and nutrient transport, groundwater recharge, flood storage, and flow dispersion. Work within the buffer will be largely limited to grading for the gravel drive and grassed swales which will collect and convey stormwater runoff to the proposed Infiltration Basins with sediment forebays, located outside the surface water buffer. Sediment forebays allow particulates the opportunity to settle out of stormwater prior to discharging to the main cell of the basin. Areas of concentrated flows have been equipped with rip-rap aprons to prevent erosion. The stormwater management systems have been designed in accordance with NHDES and the City of Keene Regulations and provide pre-treatment, treatment and groundwater recharge.

6. The extent to which the surface water buffer serves as wildlife habitat or travel corridor.

   The proposed buffer impacts are located within the area previously permitted under the original substation construction. This area consists of varying qualities of grasses with existing overheard electric transmission lines and structures, and there is no proposed clearing of wooded vegetation associated with the proposed work.

   A Phase 1: Threatened and Endangered Wildlife and Habitat Assessment was performed by a Pond View Wetland Consultants, LLC in November 2021, and it was concluded that the proposed project will not create negative impacts on wildlife habitat or travel corridors. A copy of the Wildlife Assessment has been included as part of this CUP Application.

7. The rate, timing and volume of stormwater runoff and its potential to influence water quality associated with the affected surface water or any associated downstream surface waters.

   The stormwater management systems have been designed in accordance with NHDES and the City of Keene Regulations and provide pre-treatment, treatment, and groundwater recharge of stormwater runoff associated with the project. Pre- and post-development hydraulic analysis calculations are included in the Stormwater Management Report included as part of the Site Plan Application. As designed, the systems do not discharge to the downstream surface waters and will not create an adverse effect on the rate, timing or volume of stormwater runoff associated with the downstream surface waters.

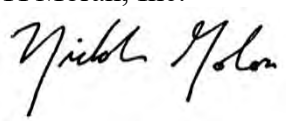
8. The sensitivity of the surface water and the surface water buffer to disruption from changes in the grade or plant and animal habitat in the buffer zone.

   As stated above, a Phase 1: Threatened and Endangered Wildlife and Habitat Assessment was performed by a Pond View Wetland Consultants, LLC in November 2021, and it was concluded that the proposed project will not create negative impacts on the surface water or surface water buffer.

In addition to the requested CUP, a NHDES Alteration of Terrain (AoT) Permit, NHDOT Temporary Driveway Permit, City Site Plan approval will be required for the proposed project. Two (2) Variances were granted by the City of Keene Zoning Board of Adjustment, to allow a building height greater than 35-feet and to allow maximum impervious coverage greater than 20%, were granted on November 1, 2021.

Should there be any questions or concerns regarding this submittal or the project in general please do not hesitate to contact the undersigned at (603) 472-4488 or ngolon@tfmoran.com.

Sincerely,
TFMoran, Inc.



Nicholas Golon, P.E.
Principal

EVERSOURCE NORTH KEENE SUBSTATION

115 PARK AVENUE
KEENE, NEW HAMPSHIRE

GENERAL INFORMATION

OWNER
MAP 233 LOT 2
PUBLIC SERVICE CO OF NH
(DBA EVERSOURCE ENERGY)
PO BOX 270
HARTFORD, CT 06141-0270

APPLICANT/PREPARED FOR
PUBLIC SERVICE CO OF NH
(DBA EVERSOURCE ENERGY)
C/O KURT NELSON
13 LEGENDS DRIVE
HOOKSETT, NH 03106

RESOURCE LIST
COMMUNITY DEVELOPMENT
CITY HALL, 4TH FLOOR
3 WASHINGTON STREET
KEENE, NH 03431
603-352-5440
W. RHETT LAMB, ASSISTANT CITY MANAGER/PLANNING DIRECTOR

BUILDING DEPARTMENT
CITY HALL, 4TH FLOOR
3 WASHINGTON STREET
KEENE, NH 03431
603-352-5440
JOHN ROGERS, BUILDING & HEALTH OFFICER

PUBLIC WORKS DEPARTMENT
350 MARLBORO STREET
KEENE, NH 03431
603-352-6550
KURT BLOMQUIST, PUBLIC WORKS DIRECTOR

POLICE DEPARTMENT
400 MARLBORO STREET
KEENE, NH 03431
603-357-9813
STEVEN RUSSO, FIRE CHIEF

FIRE DEPARTMENT
31 VERNON STREET
KEENE, NH 03431
603-357-9861
MARK HOWARD, FIRE CHIEF

ASSOCIATED PROFESSIONALS
CIVIL ENGINEER
TFMORAN, INC.
48 CONSTITUTION DRIVE
BEDFORD, NH 03110
603-472-4488
NICHOLAS GOLON, PE, PRINCIPAL

ELECTRICAL ENGINEER
RLC ENGINEERING
267 WHITTEN ROAD
HALLOWELL, ME 04347
207-621-1077
JOHN JOYCE, PMP, SENIOR PROJECT MANAGER

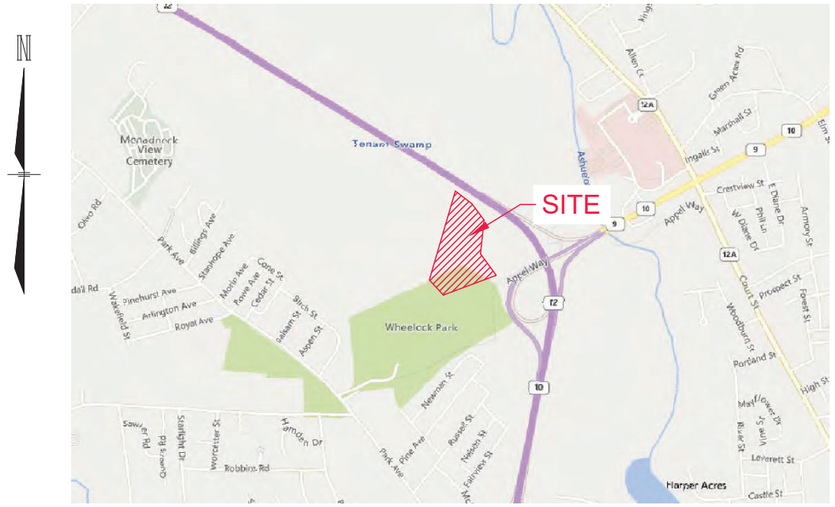
ENVIRONMENTAL SERVICES
TFMORAN, INC.
48 CONSTITUTION DRIVE
BEDFORD, NH 03110
603-472-4488
CHRISTOPHER K. DANFORTH, CWS

GEOTECHNICAL SERVICES
S.W.COLE ENGINEERING, INC.
13 DELTA DRIVE #8
LONDONDERRY, NH 03053
CHAD MICHAUD, PE, SENIOR GEOTECHNICAL ENGINEER

ABUTTERS
MAP 228 LOTS 2 & 3, MAP 233 LOT 1
CITY OF KEENE
3 WASHINGTON STREET
KEENE, NH 03431

MAP 233 LOT 3
REALTIES, INC.
3704 STONEGATE DRIVE
DURHAM, NC 27705

LOCATION MAP



HORIZONTAL SCALE 1"=1,000'
1,000 500 0 1,000

INDEX OF SHEETS

SHEET	SHEET TITLE
074899001	COVER SHEET
074899002	NOTES & LEGEND
V-01 TO V-02	EXISTING CONDITIONS PLAN
074899005 TO 074899006	SITE PREPARATION & DEMOLITION PLAN
074899007	OVERALL SITE LAYOUT PLAN
074899008	SITE LAYOUT PLAN
074899009	GRADING, DRAINAGE & UTILITY PLAN
074899010	ACCESS DRIVE PLAN & PROFILE
074899011	SIGHT DISTANCE PLAN & PROFILE
074899012 TO 074899013	STORMWATER MANAGEMENT PLAN
074899014 TO 074899015	DETAILS
074899016	PRELIMINARY ARCHITECTURAL ELEVATIONS

PERMITS/APPROVALS

	NUMBER	APPROVED	EXPIRES
CITY OF KEENE SITE PLAN REVIEW			
CITY OF KEENE CUP			
NHDES ALT. OF TERRAIN			
NHDOT DRIVEWAY PERMIT			
USEPA CGP			

VARIANCES

THE FOLLOWING VARIANCES FROM THE CITY OF KEENE ZONING ORDINANCE WERE GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON NOVEMBER 1, 2021:
1. ARTICLE 7, SECTION 7.3.3 – MAXIMUM IMPERVIOUS COVEREAGE
TO PERMIT A MAXIMUM IMPERVIOUS COVERAGE NOT TO EXCEED 23% WHERE 20% IS ALLOWABLE
2. ARTICLE 7, SECTION 7.3.4 – MAXIMUM BUILDING HEIGHT
TO PERMIT A MAXIMUM STRUCTURE HEIGHT NOT TO EXCEED 40-FT WHERE 35-FT IS ALLOWABLE

WAIVERS

THE FOLLOWING WAIVER FROM THE CITY OF KEENE DEVELOPMENT STANDARDS IS REQUESTED FROM THE PLANNING BOARD:
2. ARTICLE 20, SECTION 6 – SCREENING

APPROVED BY THE CITY OF KEENE PLANNING BOARD

ON _____

BOARD MEMBER _____ *AND*

BOARD MEMBER _____

OWNER'S SIGNATURE

THE PROPERTY WILL BE DEVELOPED IN ACCORDANCE WITH THIS PLAN AND THE ORDINANCES OF THE CITY OF KEENE, NEW HAMPSHIRE, INCLUDING PROVISIONS OF THE LAND DEVELOPMENT CODE.

OWNER OR AUTHORIZED AGENT _____ *DATE* 11/12/21

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
11/12/21

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

COVER SHEET

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE: AS NOTED
FILE: 82566-01 COVER & DETAILS.DWG
IMAGE:
DRAWING NO. 074899001

EVERSOURCE VER: 04/2015

11/12/2021 10:16 AM - JBetlonger - F:\TFM Projects\82566 Eversource- Keene, NH\82566-01 Eversource - North Keene Substation\82566-01_C3D\PRODUCTION\82566-01 Cover & Details.dwg - COVER

LEGEND

PROPOSED

- GRAVEL ROAD
- EOP — EDGE OF PAVEMENT
- SAWCUT
- BUILDING
- BUILDING ENTRANCE
- OVERHEAD DOOR
- TREE LINE
- FENCE (CHAIN LINK)
- SS — SILT SOCK
- SOIL BOUNDARY
- XXX — CONTOUR
- 100.00 — SPOT GRADE
- SIGN (SINGLE POST)
- CONCRETE
- GRAVEL
- CONSTRUCTION ENTRANCE
- SNOW STORAGE
- RIPRAP
- INLET PROTECTION
- D — DRAIN LINE
- STORMWATER BMP
- OHE — OVERHEAD UTILITY LINE
- UGE — UNDERGROUND UTILITY LINE
- CATCH BASIN
- FARED END SECTION
- FLOOD LIGHT
- LIGHT POLE
- UTILITY POLE
- GUY POLE
- B-# — BORING LOCATION
- TP-# — TEST PIT LOCATION
- IT-# — INFILTRATION TEST LOCATION

SITE PREPARATION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
2. THE CONTRACTOR SHALL VERIFY ALL SURVEY INFORMATION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. EXISTING UTILITY SERVICES TO BE DISCONTINUED ARE TO BE CAPPED AS REQUIRED BY THE RESPECTIVE UTILITY COMPANIES.
4. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
5. CONTRACTOR TO LIMIT AREA OF DISTURBANCE DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
6. CONTRACTOR TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE WORK.
7. ALL WORK PERFORMED ON BEHALF OF THIS PROJECT, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF KEENE CONSTRUCTION STANDARDS AND DETAILS, LATEST ADDITION.

CONSTRUCTION SEQUENCE NOTES

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CUT AND CLEAR TREES WITHIN AREA OF DISTURBANCE UNLESS OTHERWISE NOTED.
3. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES PRIOR TO ANY EARTH MOVING OPERATION.
4. ROUGH GRADE SITE OR PHASED WORK AREA. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72 HOURS AFTER CONSTRUCTION ACTIVITY CEASES. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21 DAYS, THE AREA SHALL BE STABILIZED.

   AN AREA SHALL BE CONSIDERED STABILIZED IF:
   A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED, OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
5. CONSTRUCT CULVERTS AND INFILTRATION BASINS. PLACE RIP-RAP AND OTHER DRAINAGE FACILITIES ACCORDING TO PLAN. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND BASINS PRIOR TO DIRECTING FLOW TO THEM.
6. CONSTRUCT BUILDING AND ELECTRICAL EQUIPMENT. CONTRACTOR TO COORDINATE BASELINE COORDINATES OF EXISTING AND PROPOSED SUBSTATION YARD WITH EVERSOURCE AND ELECTRICAL CONTRACTOR PRIOR TO STARTING CONSTRUCTION OF ELECTRICAL EQUIPMENT.
7. INSTALL UTILITIES.
8. FINISH GRADE SITE ACCORDING TO PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
9. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES WEEKLY AND IMMEDIATELY AFTER 0.5" OF RAINFALL.
10. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
11. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.

*REFER TO THE STORMWATER MANAGEMENT PLAN FOR EROSION CONTROL MEASURES AND SPECIFIC INFORMATION.

GENERAL NOTES

1. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN, INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
2. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE CITY OF KEENE PLANNING BOARD.
3. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF KEENE, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK TO CONFORM TO THE CITY OF KEENE DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS. ALL WORK WITHIN THE RIGHT-OF-WAY OF THE CITY OF KEENE AND/OR STATE SHALL COMPLY WITH APPLICABLE STANDARDS. COORDINATE ALL WORK WITHIN THE RIGHT-OF-WAY WITH APPROPRIATE CITY OF KEENE, COUNTY, AND/OR STATE AGENCY.
4. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
5. CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN THE EASEMENTS.
6. PRIOR TO COMMENCING ANY SITE WORK ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
7. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
8. TFMORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
9. ALL DEMOLITION SHALL INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND ANY OTHER ADJACENT OPERATING FACILITIES. PRIOR WRITTEN PERMISSION FROM THE OWNER/DEVELOPER AND LOCAL PERMITTING AUTHORITY IS REQUIRED IF CLOSURE/OBSTRUCTIONS TO ROADS, STREET, WALKWAYS, AND OTHERS IS DEEMED NECESSARY. CONTRACTOR TO PROVIDE ALTERNATE ROUTES AROUND CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.
10. REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS, PADS, AND COMPACTOR PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.
11. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
12. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
13. CONTRACTOR'S GENERAL RESPONSIBILITIES:
    A. BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS.
    B. NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND/OR EXISTING FEATURES.
    C. EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
    D. THE CONTRACTOR SHALL BE RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF INTENTIONS AT LEAST 48 HOURS IN ADVANCE.
    E. TAKE APPROPRIATE MEASURES TO REDUCE, TO THE FULLEST EXTENT POSSIBLE, NOISE, DUST AND UNSIGHTLY DEBRIS.
    F. MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
    G. IN ACCORDANCE WITH RSA 430:53 AND AGR 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
    H. COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
    I. PROTECT NEW AND EXISTING BURIED UTILITIES DURING INSTALLATION OF ALL SITE ELEMENTS. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
    J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
    K. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
    L. VERIFY LAYOUT OF PROPOSED BUILDING FOUNDATIONS WITH ARCHITECT AND THAT PROPOSED FOUNDATION MEETS PROPERTY LINE SETBACKS PRIOR TO COMMENCING ANY FOUNDATION CONSTRUCTION.
    M. THIS PROJECT IS SUBJECT TO THE AOT PERMIT LISTED ON THE COVER SHEET. THE CONTRACTOR SHALL CONFORM TO ALL CONDITIONS OF THE PERMIT AND PROVIDE THE FOLLOWING DOCUMENTATION TO OWNER AND ENGINEER:
       1) ADVANCE WRITTEN NOTICE AT LEAST ONE WEEK PRIOR TO COMMENCING ANY WORK UNDER THE PERMIT.
       2) IF ANY UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS WERE INSTALLED, FOR EACH SUCH SYSTEM:
          A) REPRESENTATIVE PHOTOGRAPHS OF THE SYSTEM AFTER COMPLETION BUT PRIOR TO BACKFILLING; AND
          B) A LETTER SIGNED BY A QUALIFIED ENGINEER WHO OBSERVED THE SYSTEM PRIOR TO BACKFILLING, THAT THE SYSTEM CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.
       3) UPON COMPLETION OF CONSTRUCTION, WRITTEN CERTIFICATION THAT:
          A) ALL WORK UNDER THE PERMIT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
          B) IF ANY DEVIATIONS FROM THE APPROVED PLANS WERE MADE, WRITTEN DESCRIPTIONS AND AS-BUILT DRAWINGS OF ALL SUCH DEVIATIONS, STAMPED BY A QUALIFIED ENGINEER, SHALL BE PROVIDED.
          C) CONTRACTOR SHALL BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE REQUIRED.

GRADING NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF KEENE, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL SURROUNDING CONDITIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
6. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS UNLESS OTHERWISE NOTED.
7. STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
8. ALL MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
9. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
10. IN ACCORDANCE WITH RSA 430:53 AND Agr 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
11. THE SITE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE.
12. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED GRADING AT BUILDING, AND SIZE AND LOCATION OF ALL BUILDING SERVICES.
13. COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING INFORMATION.
14. COORDINATE WITH MECHANICAL AND PLUMBING PLANS FOR ROOF DRAIN INFORMATION.
15. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT, CURBING, SIDEWALKS AND ALIGNMENTS.
16. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEERS RECOMMENDED METHODS TO ADDRESS ANY GROUNDWATER ISSUES THAT ARE FOUND ON SITE.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS AT THE SITE. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT DISCREPANCIES TO THE ENGINEER.
18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS COMMENCED.
19. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
20. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
21. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
22. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
23. TFMORAN INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
24. THE SITE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
25. AT COMPLETION OF CONSTRUCTION, THE SITE CONTRACTOR SHALL PROVIDE A LETTER CERTIFYING THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND A LETTER STAMPED BY A QUALIFIED ENGINEER THAT THEY HAVE OBSERVED ALL UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS PRIOR TO BACKFILL, AND THAT SUCH SYSTEMS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS.
26. IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE REQUIRED.

GENERAL CONSTRUCTION NOTES

1. ALL IN PAVEMENT MANHOLES SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
2. WHERE DEPTH OF COVER IS LESS THAN 3 FEET CLASS V REINFORCED CONCRETE PIPE SHALL BE USED.
3. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
5. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
6. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THESE DETAILS SERVE AS A GUIDE ONLY.
7. REFER TO THE CITY STANDARD DETAILS, LATEST REVISION, FOR ADDITIONAL INFORMATION AND CRITERIA.
8. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING FLOW TO THEM.
9. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

WINTER CONSTRUCTION NOTES

IN ADDITION TO THE OTHER NOTES CONTAINED ON THIS PLAN, THE FOLLOWING MUST BE IMPLEMENTED:

1. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED AS SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
2. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.
3. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.
4. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THE SAME DAY.
5. IN THE EVENT OF A SNOWFALL GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.
6. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.
7. A DITCH THAT WILL BE CONSTRUCTED DURING THE WINTER MUST BE STABILIZED WITH RIPRAP.
8. ALL PROPOSED VEGETATIVE AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
9. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
10. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF GRAVEL PER NHDOT ITEM 304.3.

UTILITY NOTES

1. ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEDDING, BACKFILL, COMPACTION, TESTING, CONNECTIONS, AND CONSTRUCTION SHALL BE COORDINATED WITH AND COMPLETED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS, CODES, AND STANDARDS OF ALL CORRESPONDING UTILITY ENTITIES AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
3. COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT ELEVATIONS ARE COORDINATED PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY, AND/OR PRIVATE UTILITY COMPANY.
6. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE UTILITY INSTALLATION COMPLETE AND OPERATIONAL.
7. ALL UTILITY COMPANIES REQUIRE INDIVIDUAL CONDUITS. CONTRACTOR TO COORDINATE WITH TELEPHONE, CABLE, AND ELECTRIC COMPANIES REGARDING NUMBER, SIZE, AND TYPE OF CONDUITS REQUIRED PRIOR TO INSTALLATION OF ANY CONDUIT.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
9. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, TESTING AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER, UNLESS OTHERWISE INDICATED.
10. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO VEHICLE LOADS.
11. THE PROPERTY WILL BE SERVICED BY THE FOLLOWING:

DRAINAGE	PRIVATE
SEWER	N/A
WATER	N/A
GAS	N.A
ELECTRIC	EVERSOURCE
TELEPHONE	CONSOLIDATED COMMUNICATIONS
CABLE	COMCAST

EROSION CONTROL NOTES

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:

1. INSTALLATION OF SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY GIVEN AREA. PREFABRICATED SILTATION FENCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A VEGETATIVE COVER OF GREATER THAN 85%. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY RAINFALL.
3. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
4. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
5. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM. ACCEPTABLE SEED MIXES ARE AS FOLLOWS:

   PARK SEED MIX (NHDOT TYPE 44) MIN. 135 LBS/ACRE:

33% CREEPING RED FESCUE	(MIN. 45 LBS/ACRE)
42% PERENNIAL RYEGRASS	(MIN. 55 LBS/ACRE)
21% KENTUCKY BLUEGRASS	(MIN. 30 LBS/ACRE)
4% REDTOP	(MIN. 5 LBS/ACRE)

   TEMPORARY LAWN MIX: (MIN. 47 LBS/ACRE)
   100% ANNUAL RYE

   SLOPE SEED (WF) (NHDOT TYPE 45) MIX 3:1 OR GREATER SLOPES (MIN. 105 LBS/ACRE):

38% CREEPING RED FESCUE	(MIN. 40 LBS/ACRE)
32% PERENNIAL RYEGRASS	(MIN. 35 LBS/ACRE)
5% REDTOP	(MIN. 5 LBS/ACRE)
5% ALSIKE CLOVER	(MIN. 5 LBS/ACRE)
5% BIRDSFOOT TREFOIL	(MIN. 5 LBS/ACRE)
3% LANCE-LEAF COREOPSIS	(MIN. 3 LBS/ACRE)
3% OXEYE DAISY	(MIN. 3 LBS/ACRE)
3% BUTTERFLY WEED	(MIN. 3 LBS/ACRE)
3% BLACKEYED SUSAN	(MIN. 3 LBS/ACRE)
3% WILD LUPINE	(MIN. 3 LBS/ACRE)

   SLOPE SEED (NHDOT TYPE 44) MIX 3:1 OR GREATER SLOPES (MIN. 90 LBS/ACRE):

44% CREEPING RED FESCUE	(MIN. 40 LBS/ACRE)
38% PERENNIAL RYEGRASS	(MIN. 35 LBS/ACRE)
6% REDTOP	(MIN. 5 LBS/ACRE)
6% ALSIKE CLOVER	(MIN. 5 LBS/ACRE)
6% BIRDSFOOT TREFOIL	(MIN. 5 LBS/ACRE)

   A. PLACING LOAM ON SITE
      a. ALL SUBGRADE ELEVATIONS SHOULD BE UNIFORMLY GRADED TO RECEIVE LOAM AND SHALL BE INSPECTED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLACEMENT OF LOAM.
      b. PLACE LOAM TO FORM A MINIMUM DEPTH OF 4" WHEN ROLLED, UNLESS OTHERWISE INDICATED.
      c. ALL DEPRESSIONS EXPOSED DURING THE ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM.

   B. SEED BED PREPARATION
      AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDED SHALL BE LOOSENED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEEDBED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEEDBED NOT MORE THAN 48 HOURS AFTER THE SEEDBED HAS BEEN PREPARED.
6. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.
7. HAY MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
8. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.
9. WATER SHALL BE USED FOR DUST CONTROL IN APPROPRIATE AREAS.
10. SEDIMENT TRAPS AND/OR BASINS MUST BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

OVERWINTER STABILIZATION NOTES

1. PERMANENT STABILIZATION CONSISTS OF AT LEAST 85% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.
2. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.
3. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.
4. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR MIX FOR ALL SLOPES GREATER THAN 8% OR OTHER AREAS EXPOSED TO DIRECT WIND.
5. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3%.
6. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

STATE OF NEW HAMPSHIRE — NICHOLAS C. GOLON No. 14086 — LICENSED PROFESSIONAL ENGINEER — 11/12/2021

TFM®
Civil Engineers | 48 Constitution Drive
Structural Engineers | Bedford, NH 03110
Traffic Engineers | Phone (603) 472-4488
Land Surveyors | Fax (603) 472-9747
Landscape Architects | www.tfmoran.com
Scientists | TFM Proj: 82566-01

CONTRACT SERVICES						
REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

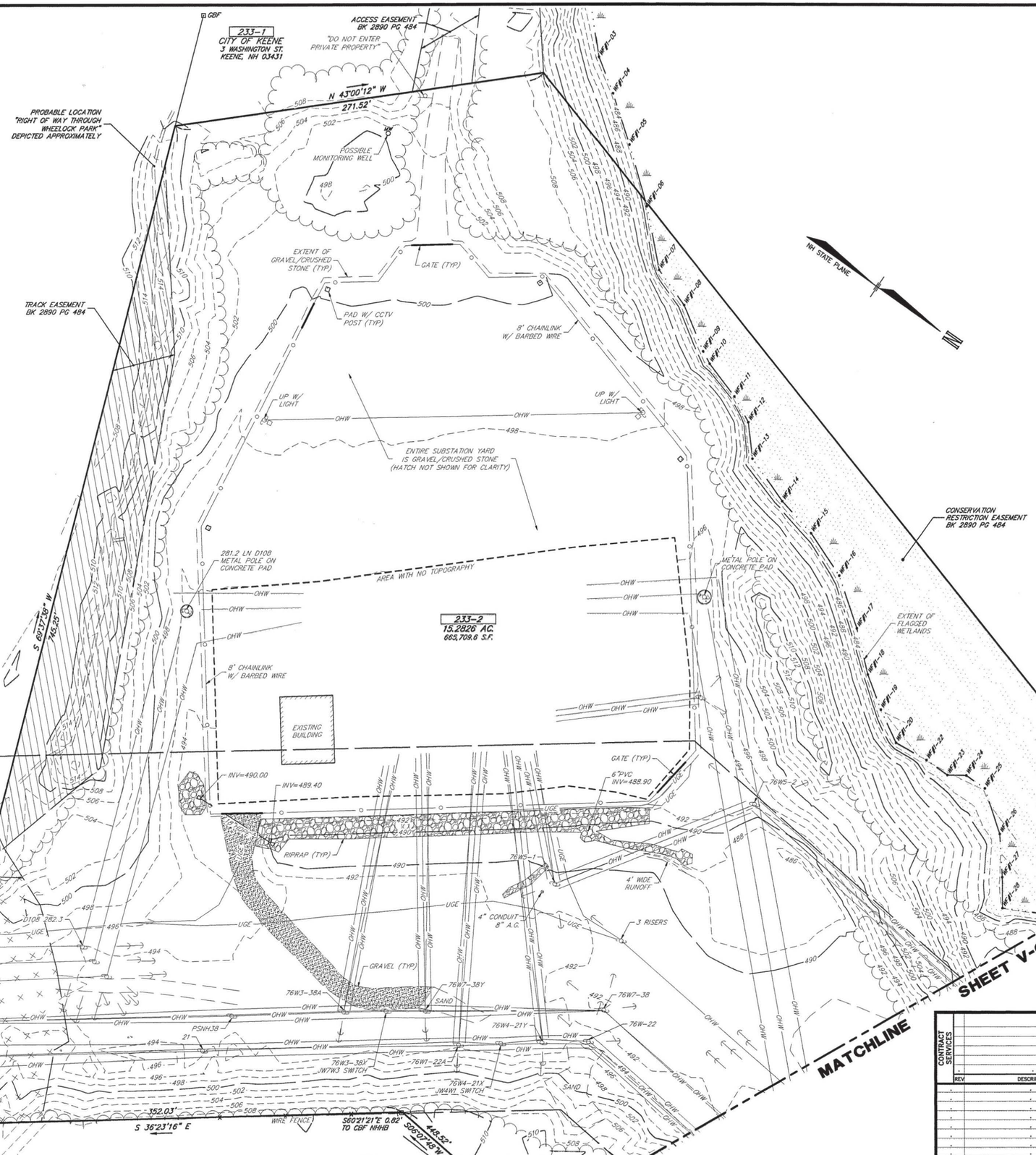
NOTES & LEGEND

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE:	82566-01 COVER & DETAILS.DWG
IMAGE:	
DRAWING NO.	074899002



REFERENCE PLANS

1. PUBLIC SERVICE OF NEW HAMPSHIRE SUBDIVISION PLAN OF LAND OFF PARK AVENUE MAP 912 BLOCK 17 LOT 16.0100 IN KEENE, NEW HAMPSHIRE 2/12/2014 AND LAST REVISED 10/23/14 BY VHB. C.C.R.D. PLAN #14114.
2. PUBLIC SERVICE OF NEW HAMPSHIRE ACCESS EASEMENT PLAN OFF PARK AVENUE MAP 912 BLOCK 17 LOT 16.0100 IN KEENE, NEW HAMPSHIRE 10/23/14 BY VHB. C.C.R.D. PLAN #14115.

NOTES

1. OWNER OF RECORD OF MAP 233 LOT 2 IS PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE PO BOX 270 HARTFORD, CT 06141-0270.

   DEED REFERENCE TO PARCEL IS BK. 2890 PG. 484 IN THE CCRD.
2. 233-2 INDICATES TAX MAP, BLOCK AND LOT NUMBER.
3. THE PURPOSE OF THIS PLAN IS TO SHOW THE RESULTS OF AN EXISTING CONDITIONS SURVEY OF LOT 233-2.
4. CURRENT ZONING IS CON- CONSERVATION DISTRICT.
5. HORIZONTAL COORDINATES: PROJECTION: NH STATE PLANE
   HORIZONTAL DATUM: NAD 83/86
   VERTICAL DATUM: NAVD 1988
6. EASEMENTS, RIGHTS AND RESTICTIONS

   SEE B. 2890 P. 484 IN THE CCRD.

   EASEMENTS, RIGHTS AND RESTICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH PERFORMED AT THE CHESHIRE COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS OR RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PARCELS WOULD DETERMINE.
7. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. TFMORAN INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.

I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN TEN THOUSAND (1:10,000).

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. (RSA 676:18-III)

STATE OF NEW HAMPSHIRE — LICENSED LAND SURVEYOR — No. 787 — HANS-GEORG C. MERTSCH, JR.

10/15/2021

WETLAND CERTIFICATION

JURISDICTIONAL WETLANDS SHOWN ON THIS PLAN WERE DELINEATED ON JUNE, 2021 BY CHRISTOPHER K. DANFORTH CWS #077. THE WETLANDS WERE DELINEATED ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012. DOMINANT HYDRIC SOILS WITHIN THE WETLAND(S) WERE IDENTIFIED USING "FIELD INDICATORS OF HYDRIC SOILS OF THE UNITIED STATES" A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, NRCS, VERSION 8.1, 2017. DOMINANCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE USACE NATIONAL WETLAND PLANT LIST, NWPL 2016 VERSION 3.3 HTTP://WETLAND_PLANTS.USACE.ARMY.MIL.

STATE OF NEW HAMPSHIRE — CHRISTOPHER K. DANFORTH — No. 077 — CERTIFIED WETLAND SCIENTIST — 9/9/2021

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566.00

TOPOGRAPHIC EXISTING CONDITIONS PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NEW HAMPSHIRE
NORTH KEENE SUBSTATION

T	#
DRAWN	JAT
ENGINEER	—
CHECKED	HGM
APPROVED	HGM
DATE	7/30/21
SCALE	1"=40'
FILE:	82566-00 SURVEY-XREF.DWG
IMAGE:	
DRAWING NO.	V-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

EVERSOURCE VER: 04/2015

9/16/2021 3:08 PM - jbate - F:\TFM Projects\82566 Eversource- Keene, NH\82566-00 Eversource - North Keene Survey\82566-00_C3D\PRODUCTION\XREFS\82566-00 Survey-Xref.dwg - Existing V-01

NOTES

1. SEE SHEET V-01 FOR PLAN REFERENCES AND NOTES.

I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN TEN THOUSAND (1:10,000).

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. (RSA 676:18-III)

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 787 HANS-GEORG A. MERTSCH, JR.

[illegible] 10/15/2021

WETLAND CERTIFICATION

JURISDICTIONAL WETLANDS SHOWN ON THIS PLAN WERE DELINEATED ON JUNE, 2021 BY CHRISTOPHER K. DANFORTH CWS #077.
THE WETLANDS WERE DELINEATED ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012. DOMINANT HYDRIC SOILS WITHIN THE WETLAND(S) WERE IDENTIFIED USING "FIELD INDICATORS OF HYDRIC SOILS OF THE UNITIED STATES" A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, NRCS, VERSION 8.1, 2017. DOMINANCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE USACE NATIONAL WETLAND PLANT LIST, NWPL 2016 VERSION 3.3 HTTP://WETLAND_PLANTS.USACE.ARMY.MIL.

STATE OF NEW HAMPSHIRE CHRISTOPHER K. DANFORTH No. 077 CERTIFIED WETLAND SCIENTIST

[illegible] 8/19/2021

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566.00

CONTRACT SERVICES						
REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TOPOGRAPHIC EXISTING CONDITIONS PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

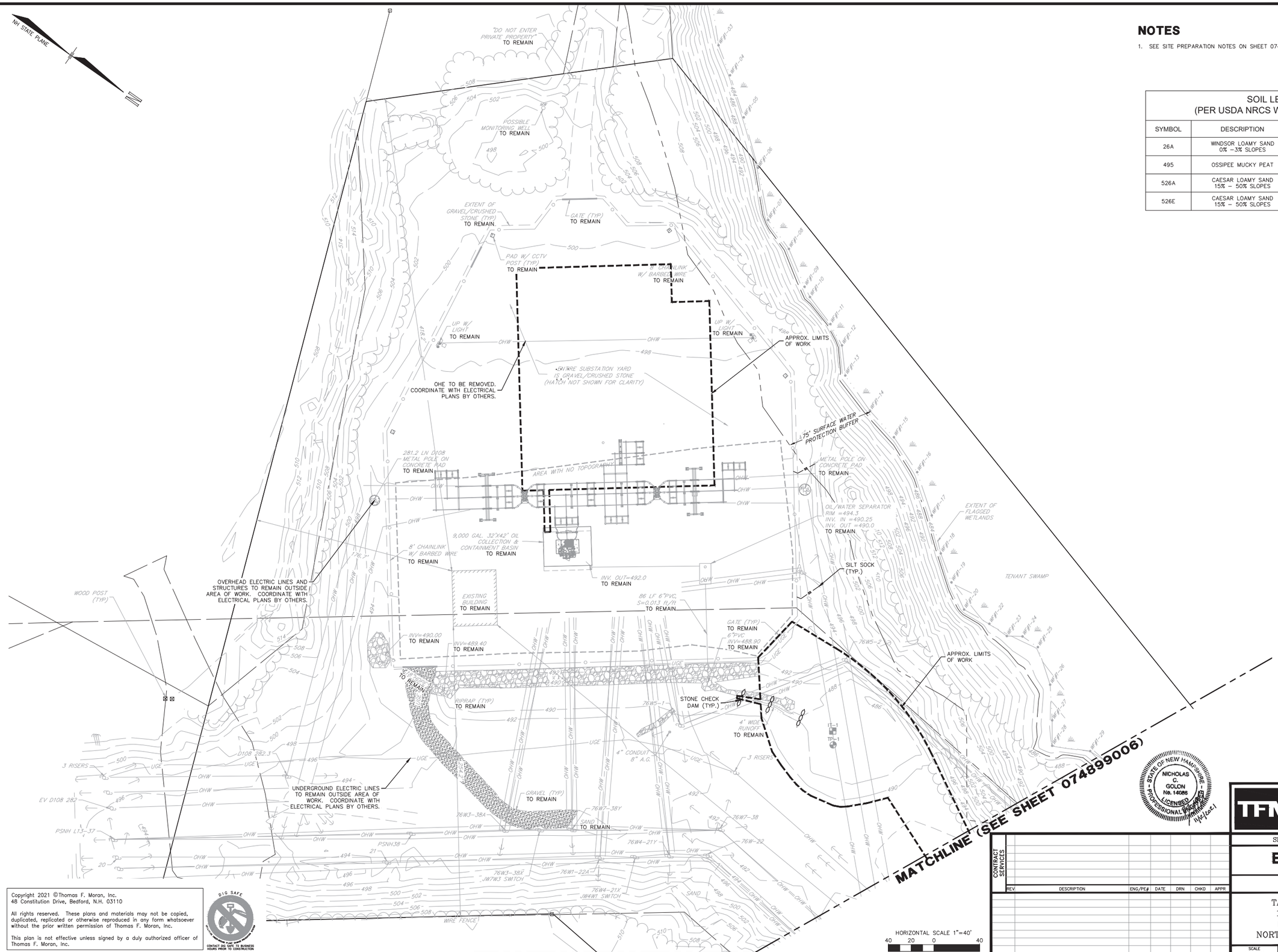
TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NEW HAMPSHIRE
NORTH KEENE SUBSTATION

T	#
DRAWN	JAT
ENGINEER	–
CHECKED	HGM
APPROVED	HGM
DATE	7/30/21

SCALE 1"=40' | FILE: 82566-00 SURVEY-XREF.DWG | IMAGE: | DRAWING NO. V-02

EVERSOURCE VER: 04/2015

9/16/2021 3:08 PM - jtate - F:\TFM Projects\82566 Eversource- Keene, NH\82566-00 Eversource - North Keene Survey\82566-00_C3D\PRODUCTION\XREF\82566-00 Survey-Xref.dwg - Existing V-02



NOTES

1. SEE SITE PREPARATION NOTES ON SHEET 074899002.

SOIL LEGEND (PER USDA NRCS WEB SOIL SURVEY)			
SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	DRAINAGE CLASS
26A	WINDSOR LOAMY SAND 0% – 3% SLOPES	A	EXCESSIVELY
495	OSSIPEE MUCKY PEAT	B/D	VERY POORLY
526A	CAESAR LOAMY SAND 15% – 50% SLOPES	A	EXCESSIVELY
526E	CAESAR LOAMY SAND 15% – 50% SLOPES	A	EXCESSIVELY

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
11/12/21

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472–4488
Fax (603) 472–9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

SITE PREPARATION & DEMOLITION PLAN

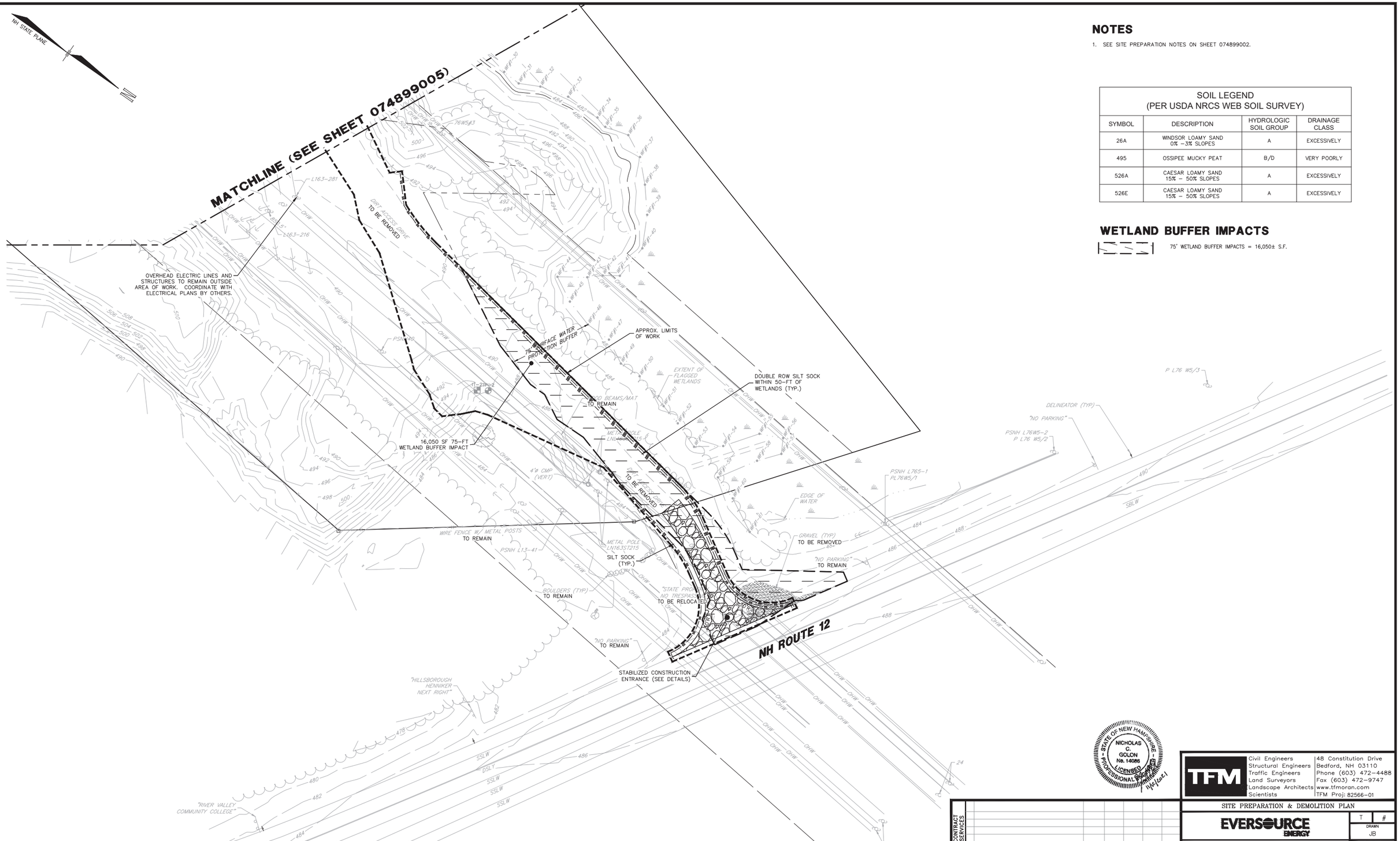
EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE 1"=40'
FILE: 82566-01 DESIGN_LAYOUT.DWG
IMAGE:
DRAWING NO. 074899005



NOTES

1. SEE SITE PREPARATION NOTES ON SHEET 074899002.

SOIL LEGEND (PER USDA NRCS WEB SOIL SURVEY)			
SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	DRAINAGE CLASS
26A	WINDSOR LOAMY SAND 0% – 3% SLOPES	A	EXCESSIVELY
495	OSSIPEE MUCKY PEAT	B/D	VERY POORLY
526A	CAESAR LOAMY SAND 15% – 50% SLOPES	A	EXCESSIVELY
526E	CAESAR LOAMY SAND 15% – 50% SLOPES	A	EXCESSIVELY

WETLAND BUFFER IMPACTS

75' WETLAND BUFFER IMPACTS = 16,050± S.F.

HORIZONTAL SCALE 1"=40'
40 20 0 40

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14088
LICENSED PROFESSIONAL ENGINEER
11/12/21

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

SITE PREPARATION & DEMOLITION PLAN

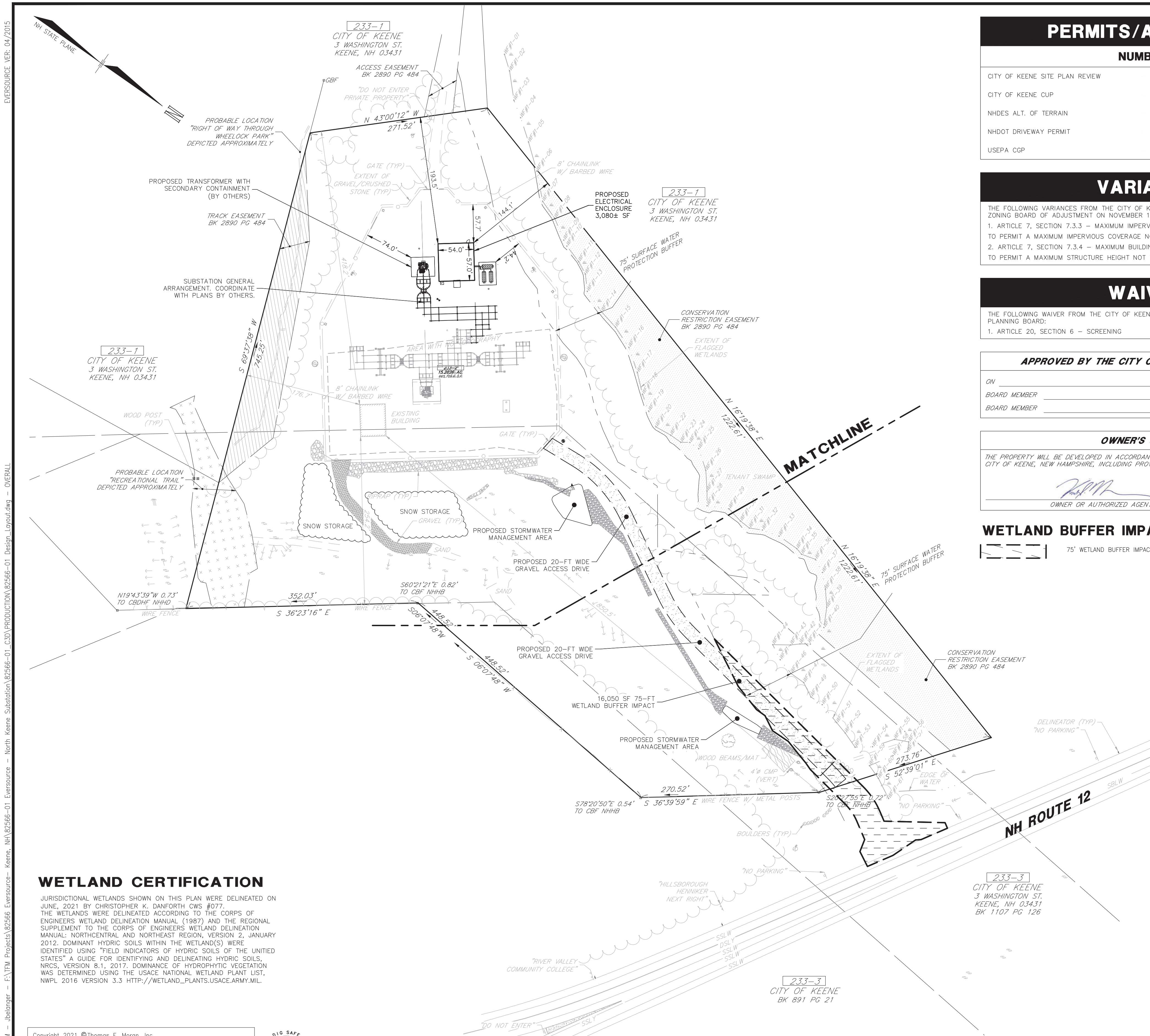
EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE 1"=40'
FILE: 82566-01 DESIGN_LAYOUT.DWG
IMAGE:
DRAWING NO. 074899006



PERMITS/APPROVALS

	NUMBER	APPROVED	EXPIRES
CITY OF KEENE SITE PLAN REVIEW			
CITY OF KEENE CUP			
NHDES ALT. OF TERRAIN			
NHDOT DRIVEWAY PERMIT			
USEPA CGP			

VARIANCES

THE FOLLOWING VARIANCES FROM THE CITY OF KEENE ZONING ORDINANCE WERE GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON NOVEMBER 1, 2021:

1. ARTICLE 7, SECTION 7.3.3 – MAXIMUM IMPERVIOUS COVEREAGE

TO PERMIT A MAXIMUM IMPERVIOUS COVERAGE NOT TO EXCEED 23% WHERE 20% IS ALLOWABLE

2. ARTICLE 7, SECTION 7.3.4 – MAXIMUM BUILDING HEIGHT

TO PERMIT A MAXIMUM STRUCTURE HEIGHT NOT TO EXCEED 40-FT WHERE 35-FT IS ALLOWABLE

WAIVERS

THE FOLLOWING WAIVER FROM THE CITY OF KEENE DEVELOPMENT CODE IS REQUESTED FROM THE PLANNING BOARD:

1. ARTICLE 20, SECTION 6 – SCREENING

APPROVED BY THE CITY OF KEENE PLANNING BOARD

ON ______________________

BOARD MEMBER ______________________ *AND*

BOARD MEMBER ______________________

OWNER'S SIGNATURE

THE PROPERTY WILL BE DEVELOPED IN ACCORDANCE WITH THIS PLAN AND THE ORDINANCES OF THE CITY OF KEENE, NEW HAMPSHIRE, INCLUDING PROVISIONS OF THE LAND DEVELOPMENT CODE.

______________________ *11/12/21*

OWNER OR AUTHORIZED AGENT *DATE*

WETLAND BUFFER IMPACTS

75' WETLAND BUFFER IMPACTS = 16,050± S.F.

VICINITY PLAN

SCALE: 1"=1000'

NOTES

1. OWNER OF RECORD OF MAP 233 LOT 2: PUBLIC SERVICE CO OF NH, PO BOX 270, HARTFORD, CT 06141-0270
   DEED REFERENCE TO PARCEL IS BK 2890 PG 484
   AREA OF PARCEL = 665,710± SF OR 15.3± ACRES
2. THE PURPOSE OF THIS PLAN IS TO CONSTRUCT AN ELECTRICAL ENCLOSURE, INSTALL ELECTRIC EQUIPMENT UPGRADES AND RECONSTRUCT A GRAVEL ACCESS DRIVEWAY AT THE EXISTING EVERSOURCE ENERGY NORTH KEENE SUBSTATION.
3. CURRENT ZONING IS CONSERVATION (CON) ZONING DISTRICT.

	REQUIRED	EXISTING/PROPOSED
MIN. LOT SIZE:	5.0 ACRES	15.3 ACRES/15.3 ACRES
MIN. LOT FRONTAGE:	50'	273.76'(NH ROUTE 12)
MIN. BUILDING SETBACKS:		
FRONT	50'	850.5'/850.5'
SIDE	50'	176.7'/144.1'
REAR	50'	254.2'/254.2'
MAX. BUILDING COVERAGE	10%	0.3%/0.5%
MAX. LOT COVERAGE:	20%	22%/23%*
MAX. STORIES ABOVE GRADE:	2-STORIES	1-STORY/1-STORY
MAX. BUILDING HEIGHT:	35'	20'/40'*

*VARIANCES GRANTED BY THE CITY OF KEENE ZONING BOARD OF ADJUSTMENT ON NOVEMBER 1, 2021

5. PARKING CALCULATIONS:
   REQUIRED: NOT REQUIRED BY ORDINANCE
   PROPOSED: ADEQUATE PARKING PROVIDED WITHIN SUBSTATION YARD.
6. EXAMINATION OF THE FEMA FLOOD INSURANCE RATE MAP FOR CHESHIRE COUNTY, NEW HAMPSHIRE (ALL JURISDICTIONS) MAP NUMBER 33005C0258E, EFFECTIVE DATE: MAY 23, 2006, INDICATES THAT A PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A FLOOD HAZARD AREA (ZONE X).
7. IN THE EVENT THAT THE SNOW STORAGE AREAS PROVIDED ON THE SITE ARE COMPLETELY UTILIZED, EXCESS SNOW SHALL BE TRANSPORTED OFF SITE FOR DISPOSAL IN ACCORDANCE WITH N.H.D.E.S. REGULATIONS.
8. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS AND STANDARDS.
9. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL SURROUNDING CONDITIONS. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF HIS INTENTIONS AT LEAST 48 HOURS IN ADVANCE.
12. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
13. LIGHTING, SIGNAGE, LANDSCAPING, AND SCREENING SHALL MEET THE REQUIREMENTS OF THE TOWN OF KEENE ZONING ORDINANCE AND SITE PLAN REGULATIONS.
14. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER SHALL BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
15. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
16. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
17. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
18. TFMORAN INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
19. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF KEENE CONSTRUCTION STANDARDS AND DETAILS (LATEST ADDITION). THESE CONSTRUCTION STANDARDS SHALL TAKE PRECEDENCE IN THE EVENT OF CONFLICTS BETWEEN PLANS, DETAILS OR OTHER DRAWINGS.

WETLAND CERTIFICATION

JURISDICTIONAL WETLANDS SHOWN ON THIS PLAN WERE DELINEATED ON JUNE, 2021 BY CHRISTOPHER K. DANFORTH CWS #077.
THE WETLANDS WERE DELINEATED ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012. DOMINANT HYDRIC SOILS WITHIN THE WETLAND(S) WERE IDENTIFIED USING "FIELD INDICATORS OF HYDRIC SOILS OF THE UNITIED STATES" A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, NRCS, VERSION 8.1, 2017. DOMINANCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE USACE NATIONAL WETLAND PLANT LIST, NWPL 2016 VERSION 3.3 HTTP://WETLAND_PLANTS.USACE.ARMY.MIL.

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE – NICHOLAS C. GOLON No. 14086 LICENSED PROFESSIONAL ENGINEER – 11/12/2021

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES						
REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

OVERALL SITE LAYOUT PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

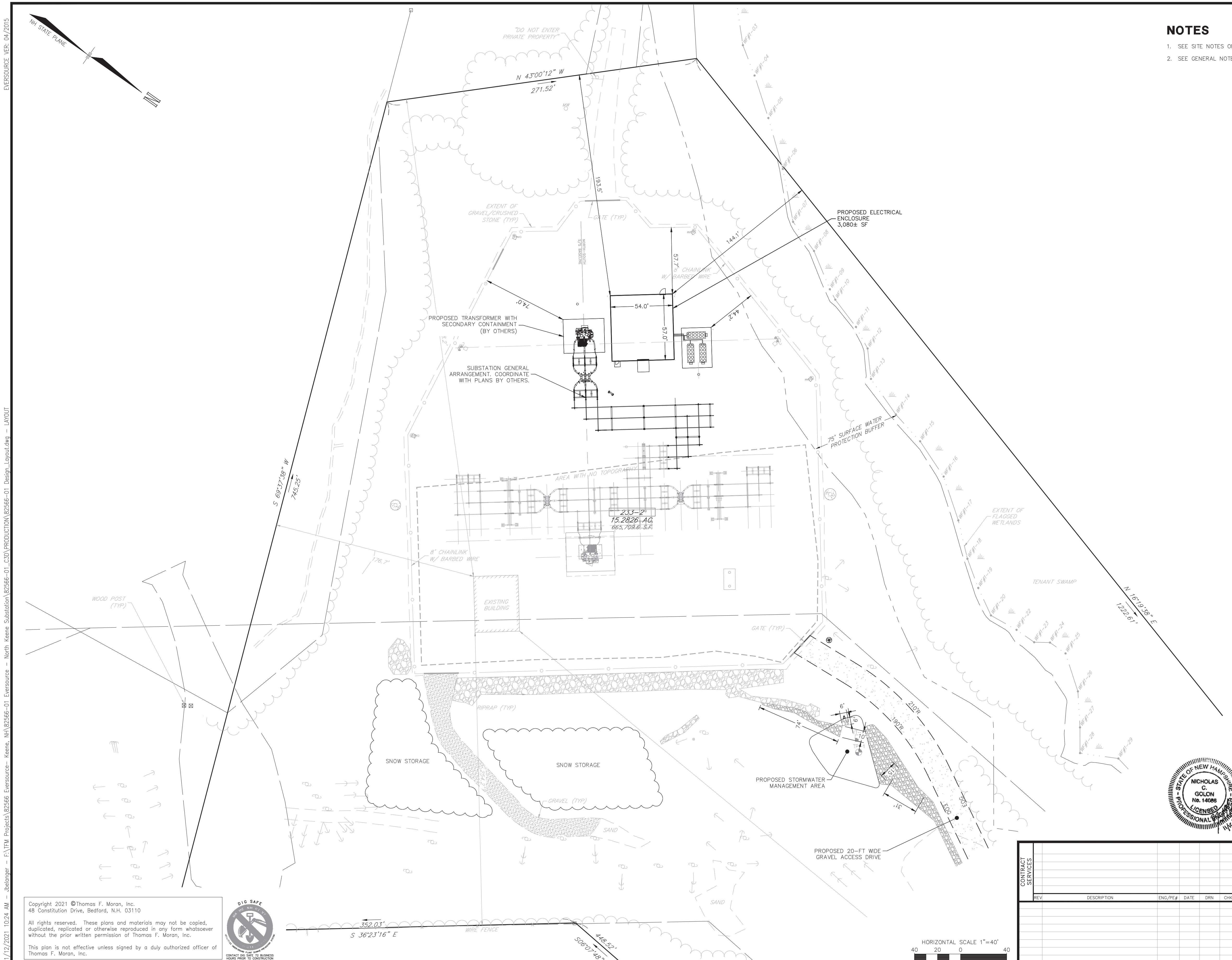
TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE 1"=80' | FILE: 82566-01 DESIGN_LAYOUT.DWG | IMAGE: | DRAWING NO. 074899007

NOTES

1. SEE SITE NOTES ON SHEET 074899007.
2. SEE GENERAL NOTES ON SHEET 074899002.



DIG SAFE — CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE — NICHOLAS C. GOLON No. 14086 LICENSED PROFESSIONAL ENGINEER — 11/12/2021

TFM® — Civil Engineers, Structural Engineers, Traffic Engineers, Land Surveyors, Landscape Architects, Scientists
48 Constitution Drive, Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

SITE LAYOUT PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE 1"=40' | FILE: 82566-01 DESIGN_LAYOUT.DWG | IMAGE: | DRAWING NO. 074899008

EVERSOURCE VER: 04/2015

11/12/2021 10:24 AM – jbelanger – F:\TFM Projects\82566 Eversource– Keene, NH\82566-01 Eversource – North Keene Substation\82566-01 C3D\PRODUCTION\82566-01 Design_Layout.dwg – GRADING & DRAIN & UTIL

NH STATE PLANE

NOTES

1. SEE GRADING AND DRAINAGE NOTES ON SHEET 074899002.
2. SEE UTILITY NOTES ON SHEET 074899002.

PROPOSED ELECTRICAL ENCLOSURE
3,080± SF
SLAB=499.5±

499.0
498.5
498.5
498.0
498.0

INV.OUT=495.0
SLAB=499.0±
SLAB= 499.0±
UP W/ LIGHT
LIGHT

160 LF 6" PVC SDR35
S=0.015 ft/ft

75' SURFACE WATER PROTECTION BUFFER

281.2 LN D108 METAL POLE ON CONCRETE PAD

AREA WITH NO TOPOGRAPHY

METAL POLE ON CONCRETE PAD

INV.IN=492.5

9,000 GAL. 32'X42' OIL COLLECTION & CONTAINMENT BASIN

INV. OUT=492.0

OIL/WATER SEPARATOR
RIM =494.3
INV. IN =490.25
INV. OUT =490.0

EXTENT OF FLAGGED WETLANDS

TENANT SWAMP

EXISTING BUILDING

86 LF 6"PVC, S=0.013 ft/ft

CB1
RIM=493.3±
INV.OUT=489.3±

493.0

6"PVC INV=488.90

INV=490.00

INV=489.40

BLANKET SLOPE PROTECTION (SEE DETAILS)

490.6

70 LF 12" HDPE
S= 0.03 ft/ft

4' WIDE RUNOFF

FES 1
INV.OUT=487.0

3 RISERS

4" CONDUIT 8" A.C.

RIPRAP APRON (TYP.)

INFILTRATION BASIN #1
BERM=490.2
BTTM.ELEV=487.0

FOREBAY #1
BERM=487.0
BTTM.ELEV=485.0

133 LF RIPRAP V-NOTCH SWALE
S=0.009 ft/ft

490.5

MATCHLINE (SEE SHEET 074899010)

PAD W/ CCTV POST (TYP)

POSSIBLE MONITORING WELL

76W5-1
76W5-2
76W7-38Y
76W3-38A
76W4-21Y
76W3-38X
JW7W3 SWITCH
76W1-22A
76W4-21X
JW4W1 SWITCH
PSNH L13-37
PSNH38
EV D108 282
D108 282.3

HORIZONTAL SCALE 1"=40'
40 20 0 40

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

GRADING, DRAINAGE & UTILITY PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

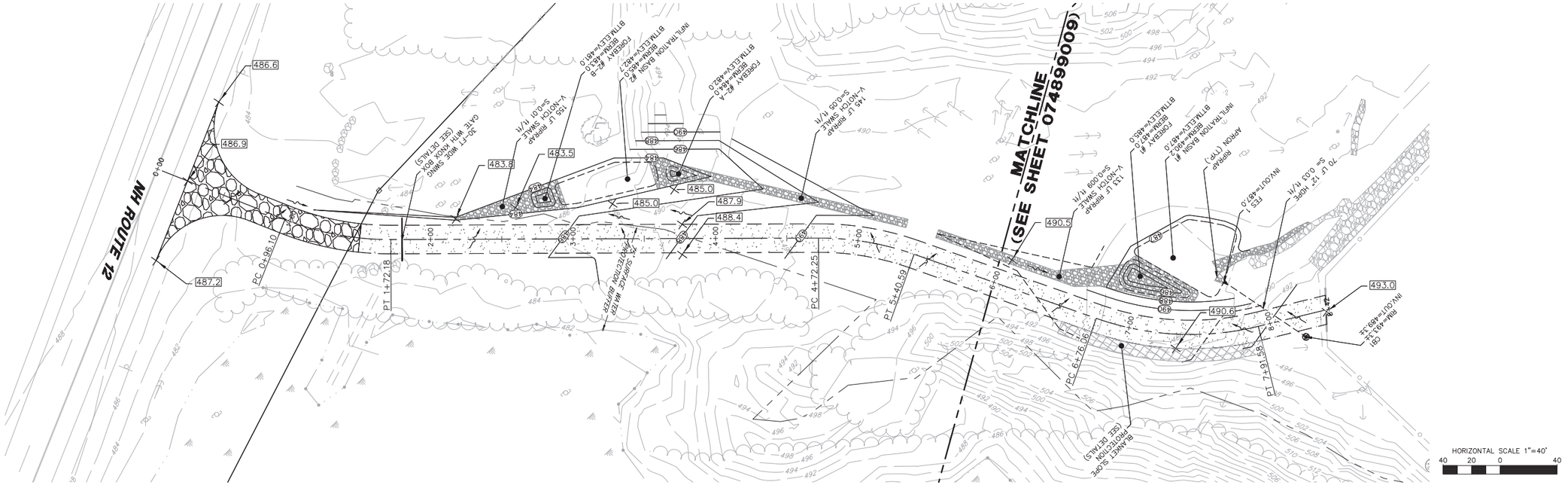
T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

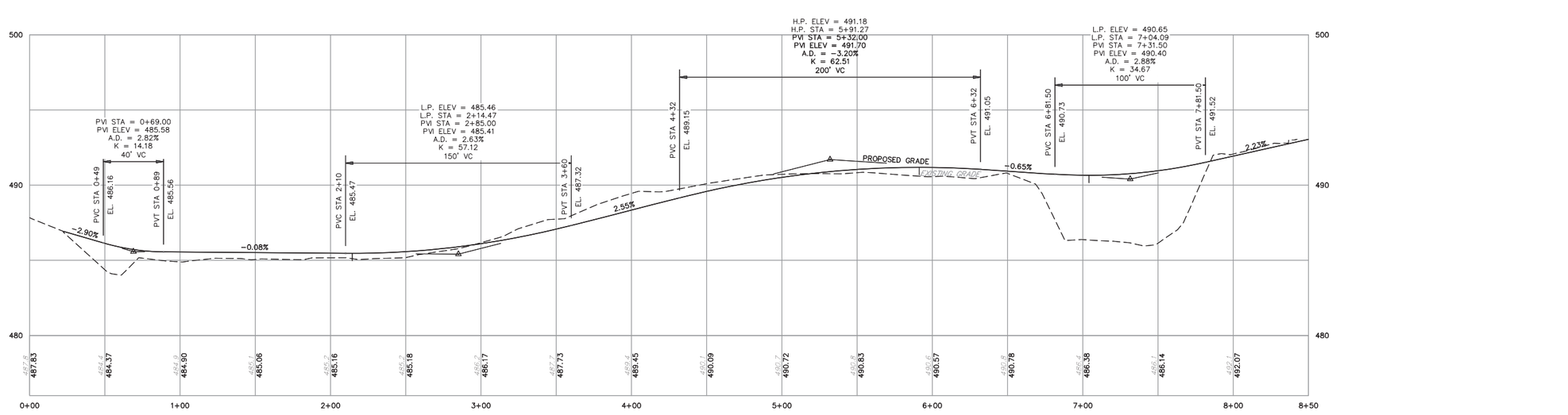
SCALE 1"=40'
FILE: 82566-01 DESIGN_LAYOUT.DWG
IMAGE:
DRAWING NO. 074899009

NH STATE PLANE

NOTES

1. SEE GRADING AND DRAINAGE NOTES ON SHEET 074899002.





ALIGNMENT - PROPOSED TEMPORARY GRAVEL ACCESS DRIVE

HORIZONTAL SCALE 1"=40'
40 20 0 40
VERTICAL SCALE 1"=4'
4 0 4

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

ACCESS DRIVE PLAN & PROFILE

EVERSOURCE ENERGY

NEW HAMPSHIRE

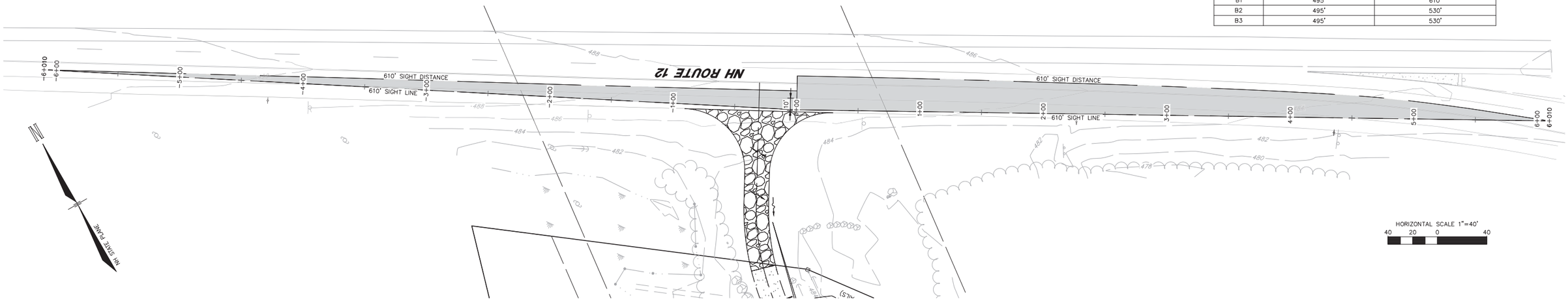
TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE:	82566-01 DESIGN_LAYOUT.DWG
IMAGE:	
DRAWING NO.	074899010

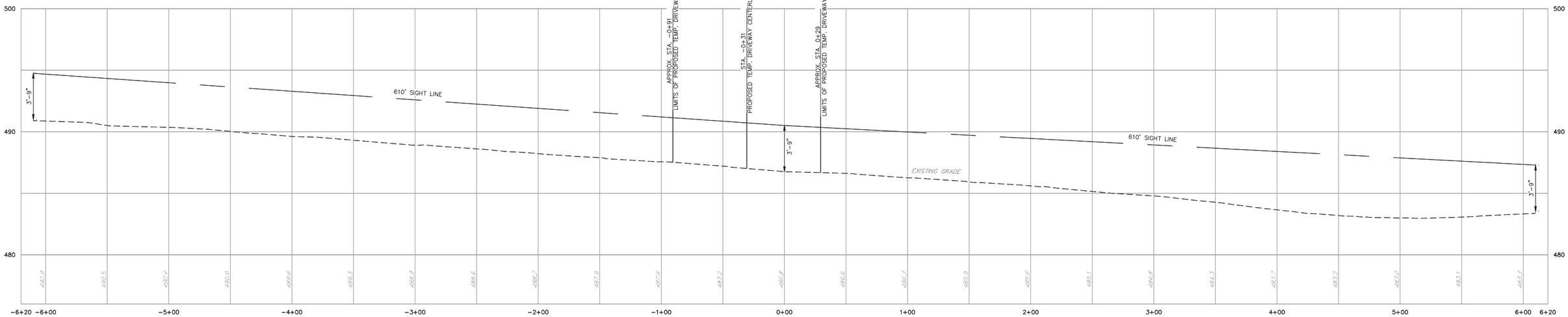
NOTES

1. 610' NHDOT ALL-SEASON INTERSECTION SIGHT DISTANCE USED FOR ANALYSIS.
2. POSTED SPEED LIMIT IS 55 MPH.

AASHTO SIGHT DISTANCE CRITERIA FOR 55 MPH DESIGN SPEED		
CASE	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE
B1	495'	610'
B2	495'	530'
B3	495'	530'



HORIZONTAL SCALE 1"=40'
40 20 0 40



PROPOSED DRIVEWAY SIGHT DISTANCE

HORIZONTAL SCALE 1"=40'
40 20 0 40
4 0 4
VERTICAL SCALE 1"=4'

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
11/12/21

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

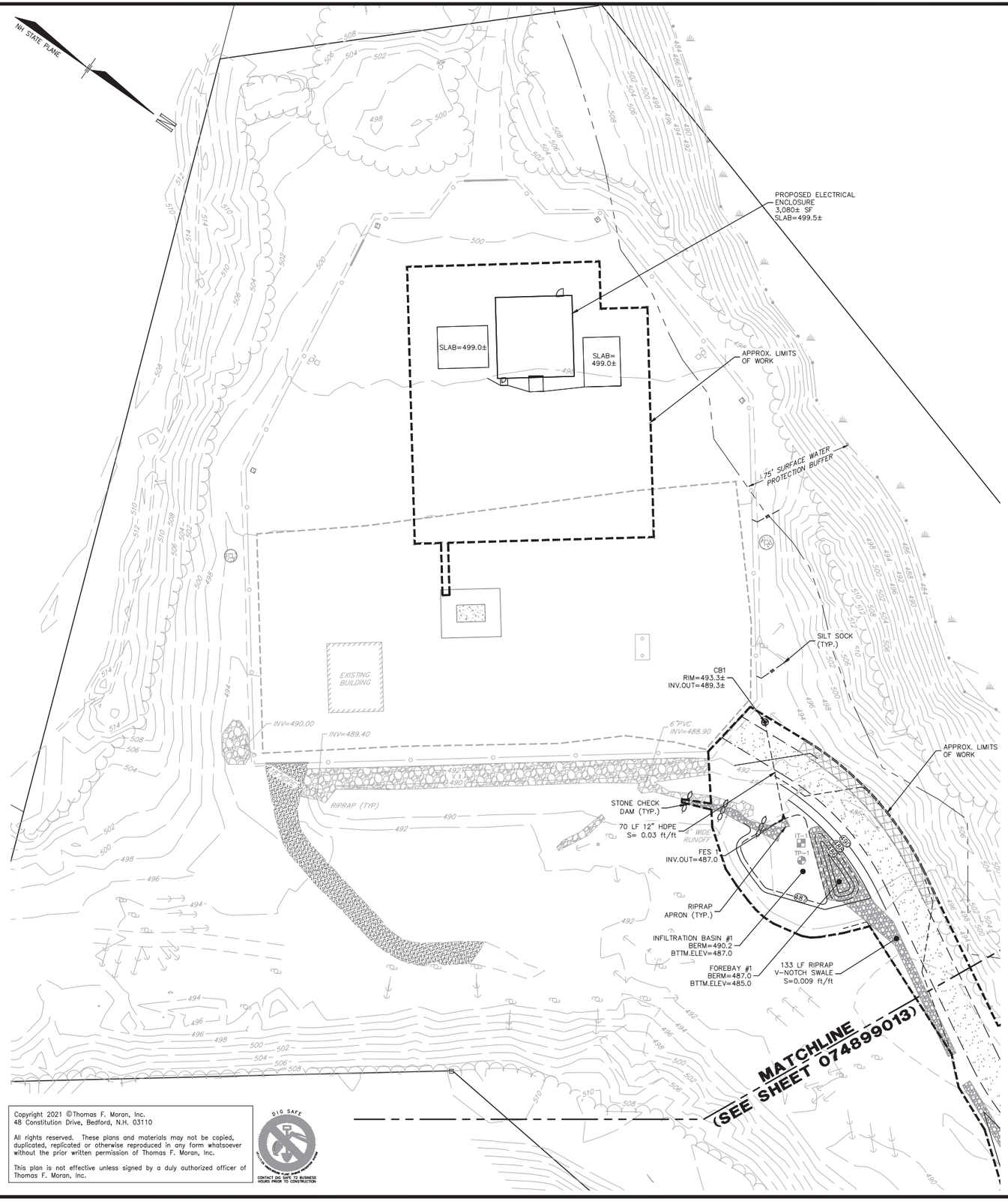
SIGHT DISTANCE PLAN & PROFILE

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE:	82566-01 DESIGN_LAYOUT.DWG
IMAGE:	
DRAWING NO.	074899011



HORIZONTAL SCALE 1"=40'
40 20 0 40

CONSTRUCTION GENERAL PERMIT

1. THE OWNER, IN CONJUNCTION WITH THE CONTRACTOR (OPERATORS), MUST OBTAIN A CONSTRUCTION GENERAL PERMIT (CGP) FOR LARGE CONSTRUCTION ACTIVITIES (FIVE OR MORE ACRES) OR SMALL CONSTRUCTION ACTIVITIES (GREATER THAN ONE ACRE BUT LESS THAN FIVE ACRES) FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA). AS PART OF THE CGP, A STORMWATER NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO THE EPA AT LEAST 7 DAYS PRIOR TO COMMENCING CONSTRUCTION. THE NOI MUST BE SUBMITTED TO STORM WATER NOTICE OF INTENT (4203M), USEPA, 1200 PENNSYLVANIA AVE. NW, WASHINGTON, DC 20460.

2. THE CGP OUTLINES A SET OF PROVISIONS MANDATING THE OWNER AND CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER REGULATIONS, INCLUDING, BUT NOT LIMITED TO, STORM WATER POLLUTION PREVENTION PLANS (SWPPP'S), IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROLS, EQUIPMENT MAINTENANCE GUIDELINES, ETC. PLEASE CONTACT USEPA OFFICE OF WASTEWATER MANAGEMENT AT 202-564-9545 OR AT WWW.EPA.GOV/NPDES/STORMWATER FOR ADDITIONAL INFORMATION. FOR FURTHER ASSISTANCE, CONTACT ABBY SWAINE OF NEW ENGLAND'S EPA REGION 1 AT 617-918-1841.

NOTES

IT IS BEING PROPOSED TO AN ELECTRICAL ENCLOSURE, INSTALL ELECTRIC EQUIPMENT UPGRADES AND RECONSTRUCT A GRAVEL ACCESS DRIVEWAY AT THE EXISTING EVERSOURCE ENERGY NORTH KEENE SUBSTATION.

3. TOTAL SITE AREA: 15.3 AC
   TOTAL AREA OF DISTURBANCE: 2.0 AC

4. SOILS SHOWN ARE FROM THE SOIL SURVEY OF CHESHIRE COUNTY, NEW HAMPSHIRE, PREPARED BY USDA-SOIL CONSERVATION SERVICES.
   26A – WINDSOR LOAMY SAND, 0%-3% SLOPES
   495 – OSSIPEE MUCKY PEAT
   526A – CEASAR LOAMY SAND, 0%-3% SLOPES
   526E – CEASAR LOAMY SAND, 15%-50% SLOPES

5. STORM WATER DRAINAGE SYSTEM IS SHOWN ON THE PLAN. SEE GRADING & DRAINAGE PLAN FOR RIM, INVERT, PIPE LENGTH, AND SLOPE INFORMATION.
   POST-CONSTRUCTION RUNOFF COEFFICIENT: C=0.43
   IMPERVIOUS SURFACE AREA: 3.7± AC

6. STABILIZATION PRACTICES FOR EROSION AND SEDIMENTATION CONTROLS:

   TEMPORARY STABILIZATION – TOPSOIL STOCKPILES AND DISTURBED AREAS OF THE CONSTRUCTION SITE THAT WILL NOT BE REDISTURBED FOR 14 DAYS OR MORE MUST BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE. THE TEMPORARY SEED SHALL BE ANNUAL RYE APPLIED AT THE RATE OF 1.1 LBS PER 1,000 SF. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY. AREAS OF THE SITE THAT WILL BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILES AND A STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED. CALCIUM CHLORIDE SHALL BE USED FOR DUST CONTROL IF NEEDED.

   PERMANENT STABILIZATION – DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 3 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE PERMANENT SEED MIX SHALL CONSIST OF 0.45 LBS/1,000 SF TALL FESCUE, 0.20 LBS/1,000 SF CREEPING RED FESCUE, AND 0.20 LBS/1,000 SF BIRDSFOOT TREFOIL. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE IF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY.

7. STRUCTURAL PRACTICES FOR EROSION AND SEDIMENTATION CONTROL

   SILT SOCK – WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE DISTURBED AREAS AND WILL DELINEATE THE LIMITS OF WORK FOR THE PROPOSED CONSTRUCTION. THE SILT SOCK WILL BE INSTALLED BY OTHERS. POSTS SHALL BE USED WITH AT LEAST 6" OF THE POST BURIED BELOW THE GROUND SURFACE TO PREVENT THE SILT SOCK FROM FORMING GAPS NEAR THE GROUND SURFACE. RUNOFF WILL FLOW THROUGH THE OPENINGS IN THE SILT SOCK WHILE RETAINING THE SEDIMENT WITHIN THE CONSTRUCTION AREA.

   STABILIZED CONSTRUCTION ENTRANCE – WILL BE INSTALLED IN ACCORDANCE WITH THE DETAIL AT THE ENTRANCE TO THE CONSTRUCTION SITE TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE SITE. THE STABILIZED ENTRANCE WILL BE 20'-WIDE AND FLARE AT THE ENTRANCE TO THE PAVED ROAD AND HAVE A DEPTH OF 12" OF STONE. THE STABILIZED ENTRANCE SHALL BE MAINTAINED UNTIL THE REMAINDER OF THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED. THE PAVED STREET ADJACENT TO THE SITE SHALL BE SWEPT ON A WEEKLY BASIS TO REMOVE EXCESS MUD AND DIRT FROM BEING TRACKED FROM THE SITE. TRUCKS HAULING MATERIAL TO AND/OR FROM THE SITE SHALL BE COVERED WITH A TARPAULIN.

   CATCH BASINS – WILL BE CLEANED ON AN ANNUAL BASIS TO REMOVE ALL SEDIMENTS FROM THE CATCH BASIN SUMPS.

   CATCH BASIN PROTECTION – WILL BE INSTALLED AT ALL CATCH BASINS WITHIN THE CONSTRUCTION AREA. FILTER FABRIC WILL BE INSTALLED AROUND THE GRATES OF CATCH BASINS THAT ARE LOCATED IN THE TRAVEL WAY AND STONE/FILTER FABRIC PROTECTION WILL BE INSTALLED AT THE CATCH BASINS FOUND WITHIN THE PARKING AREA AND GRASS.

   BLANKET SLOPE PROTECTION – SHALL BE INSTALLED ON ALL 2:1 SLOPES OR STEEPER ON SITE. ANCHOR THE TOP OF THE BLANKET BY ANCHORING THE BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING. ROLL THE BLANKET IN THE DIRECTION OF STORM WATER FLOW. WHERE 2 OR MORE STRIPS OF BLANKET ARE REQUIRED, A MINIMUM OF 4" OF OVERLAP SHALL BE PROVIDED.

   STONE CHECK DAMS – WILL BE INSTALLED IN EXISTING AND PROPOSED GRASS SWALES TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS AND PREVENT EROSION OF THE SWALE.

8. STORM WATER MANAGEMENT

   STORM WATER DRAINAGE FOR DEVELOPED AREAS WILL BE COLLECTED BY OPEN AND CLOSED DRAINAGE SYSTEMS. APPROXIMATELY 13.3 ACRES OF THE 15.3 ACRE SITE WILL REMAIN IN ITS CURRENT CONDITION.

9. ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURE DUMPSTERS OR APPROVED ENCLOSURE AND REMOVED FROM THE SITE ON A WEEKLY BASIS. NO CONSTRUCTION WASTE SHALL BE BURIED ON SITE. PORTABLE TOILET SANITARY WASTE FACILITIES WILL BE PROVIDED DURING CONSTRUCTION AND MAINTAINED/DISPOSED OF ON A REGULAR BASIS IN ACCORDANCE WITH TOWN AND STATE REGULATIONS.

10. THRUST BLOCK SHALL BE PROVIDED WHERE WATER LINE CHANGES DIRECTION OR TAPS INTO EXISTING WATER LINE.

11. A LIST OF CONSTRUCTION ITEMS AND OTHER PRODUCTS USED ON THIS PROJECT SHALL BE KEPT ON RECORD WITH THIS PLAN ONSITE. ALL CHEMICALS, PETROLEUM PRODUCTS AND OTHER MATERIALS USED DURING CONSTRUCTION SHALL BE STORED IN A SECURE AREA, AND PRECAUTIONS USED TO PREVENT POTENTIAL SOURCES OF CONTAMINATION OR POLLUTION. ANY SPILL OF THESE TYPES OF SUBSTANCES SHALL BE CLEANED UP AND DISPOSED OF IN A LEGAL MANNER AS SPECIFIED BY STATE REGULATIONS AND THE MANUFACTURER. ANY SPILL IN AMOUNTS EQUAL TO OR EXCEEDING REPORTABLE QUANTITY AS DEFINED BY THE EPA SHALL TAKE THE FOLLOWING STEPS:
    - NOTIFY THE NATIONAL RESPONSE CENTER IMMEDIATELY AT (888) 424-8802; IN WASHINGTON, D.C., CALL (202) 426-2675.
    - WITHIN 14 DAYS, SUBMIT A WRITTEN DESCRIPTION OF THE RELEASE TO THE EPA REGIONAL OFFICE PROVIDING THE DATE AND CIRCUMSTANCES OF THE RELEASE AND THE STEPS TO BE TAKEN TO PREVENT ANOTHER RELEASE.
    - MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE INFORMATION LISTED ABOVE.

    GOOD HOUSEKEEPING:
    THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.
    - AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB;
    - ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
    - PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL;
    - SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
    - WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER;
    - MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED;
    - TRASH DUMPSTERS SHALL BE GASKETED OR HAVE A SECURE WATERTIGHT LID AND BE PLACED AWAY FROM STORMWATER CONVEYANCES AND DRAINS.
    - THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

    HAZARDOUS PRODUCTS:
    THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
    - PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
    - ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION;
    - IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

    PRODUCT SPECIFIC PRACTICES:
    THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:

    PETROLEUM PRODUCTS:
    ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

    FERTILIZERS:
    FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

    PAINTS:
    ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

    CONCRETE TRUCKS:
    EXCESS CONCRETE SHALL BE USED IN AREAS DESIGNATED BY THE SITE CONTRACTOR. WASH WATER SHALL BE DISPOSED OF USING BEST MANAGEMENT PRACTICES. BUILDING CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL DRUM WASH WATER ASSOCIATED WITH CONCRETE FOR THE BUILDING PAD. SITE CONTRACTOR TO COORDINATE AND PROVIDE BUILDING CONTRACTOR WITH AN AREA FOR DRUM WASH WATER.

    SPILL CONTROL PRACTICES:
    IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
    - MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
    - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
    - ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
    - THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
    - SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.
    - THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
    - THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THEY WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL EACH RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.

12. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING DATES OF MAJOR GRADING ACTIVITIES, DATES WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED ON A PORTION OF THE SITE, DATES WHEN WORK IS COMPLETED ON A PORTION OF THE SITE, AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ONSITE.

13. THE CONTRACTOR SHALL PERFORM INSPECTIONS OR HAVE A CONSULTING ENGINEER PERFORM INSPECTIONS EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM OF 0.5" OR GREATER. INSPECTIONS REPORTS ARE TO BE KEPT ON FILE AT THE SITE WITH THIS PLAN. MAINTENANCE OR MODIFICATION SHALL BE IMPLEMENTED AND ADDED TO THE PLAN AS RECOMMENDED BY THE QUALIFIED INSPECTOR.

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

NICHOLAS C. GOLON No. 14086 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 11/12/21

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

STORMWATER MANAGEMENT PLAN

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T #

DRAWN JB
ENGINEER JB
CHECKED NG
APPROVED NG
DATE 11/12/21

SCALE 1"=40'
FILE: 82566-01 DESIGN_LAYOUT.DWG
IMAGE:
DRAWING NO. 074899012

EVERSOURCE VER: 04/2015

11/12/2021 10:24 AM – jbelanger – F:\TFM Projects\82566 Eversource– Keene, NH\82566-01 Eversource – North Keene Substation\82566-01_C3D\PRODUCTION\82566-01 Design_Layout.dwg – SWMP

EVERSOURCE VER: 04/2015

11/12/2021 10:24 AM – jbelanger – F:\TFM Projects\82566 Eversource– Keene, NH\82566-01 Eversource – North Keene Substation\82566-01_c3d\PRODUCTION\82566-01_Design_Layout.dwg – SWMP (2)

NH STATE PLANE

NOTES

1. SEE STORMWATER MANAGEMENT NOTES ON SHEET 074899012

MATCHLINE (SEE SHEET 074899012)

145 LF RIPRAP V-NOTCH SWALE S=0.05 ft/ft

FOREBAY #2-A BERM=484.0 BTTM.ELEV=482.0

INFILTRATION BASIN #2 BERM=485.0 BTTM.ELEV=482.7

FOREBAY #2-B BERM=483.0 BTTM.ELEV=481.0

155 LF RIPRAP V-NOTCH SWALE S=0.01 ft/ft

75' SURFACE WATER PROTECTION BUFFER

APPROX. LIMITS OF WORK

EXTENT OF FLAGGED WETLANDS

DOUBLE ROW SILT SOCK WITHIN 50-FT OF WETLANDS (TYP.)

EDGE OF WATER

WIRE FENCE W/ METAL POSTS

SILT SOCK (TYP.)

BOULDERS (TYP)

NH ROUTE 12

STABILIZED CONSTRUCTION ENTRANCE (SEE DETAILS)

HORIZONTAL SCALE 1"=40'
40 20 0 40

DIG SAFE
CONTACT DIG-SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14088
LICENSED PROFESSIONAL ENGINEER
11/12/21

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

STORMWATER MANAGEMENT PLAN

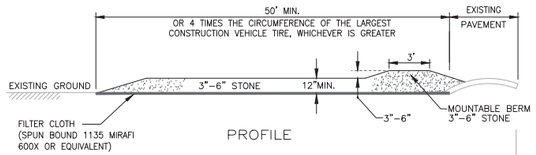
EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21

SCALE 1"=40'
FILE: 82566-01 DESIGN_LAYOUT.DWG
IMAGE:
DRAWING NO. 074899013



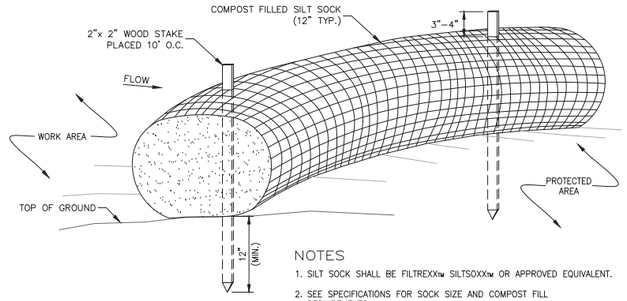
NOTES

1. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE SURFACE.
2. NO SURFACE WATER SHALL BE DIRECTED TOWARD CONSTRUCTION ENTRANCES.
3. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
4. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN STORM EVENT.

STABILIZED CONSTRUCTION ENTRANCE

SEE SITE PREPARATION PLAN FOR PROPOSED LOCATION & GEOMETRY

NOT TO SCALE

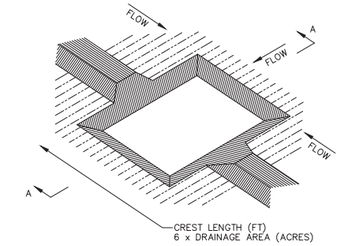


NOTES

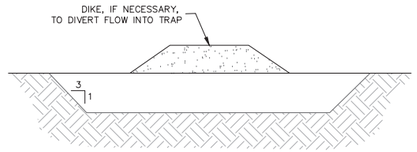
1. SILT SOCK SHALL BE FILTREXX® SILTSOXX® OR APPROVED EQUIVALENT.
2. SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

SILT SOCK

NOT TO SCALE



SEDIMENT TRAP – ISOMETRIC VIEW



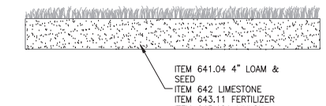
SECTION A–A

NOTES

1. SEDIMENT TRAP TO BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL BASINS/PONDS ARE STABILIZED. IF IT IS DETERMINED THAT CONSTRUCTION OF A SEDIMENT TRAP IS WARRANTED, CONSULT WITH ENGINEER TO DETERMINE APPROPRIATE NUMBER AND DIMENSIONS.

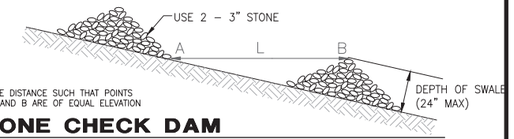
SEDIMENT TRAP

NOT TO SCALE



LOAM & SEED DETAIL

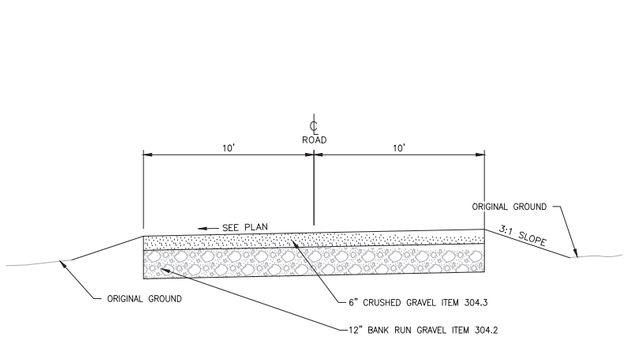
NOT TO SCALE



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

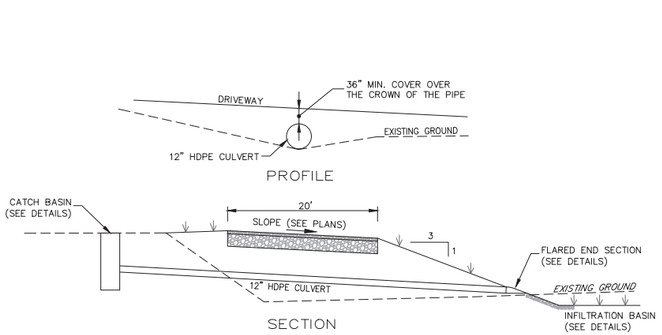
STONE CHECK DAM

NOT TO SCALE



GRAVEL ACCESS DRIVE

NOT TO SCALE



CULVERT AT GRAVEL DRIVE

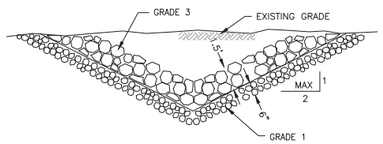
NOT TO SCALE

GRADE 3

MIN. STONE VOLUME	%
2 CUBIC FEET	75
1/2 CUBIC FOOT	25

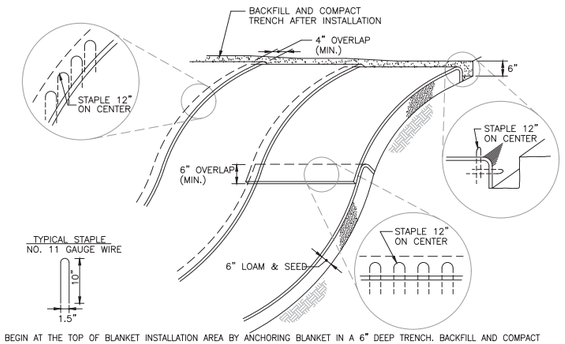
GRADE 1

SIEVE SIZE	% WEIGHT PASSING
3–1/2"	100
3"	85–100
1–1/2"	60–90
3/4"	40–70
3/8"	20–50
No 4	10–40
No 200	0–8



V-BOTTOM RIP RAP SWALE

NOT TO SCALE



1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKET SHALL BE NORTH AMERICAN GREEN C125BN, EAST COAST EROSION CONTROL ECC–2B, AMERICAN EXCELSIOR COMPANY CURLEX III FIBRENET, ROLANKA GEONATURAL EROSION & SEDIMENT CONTROL MATTE JUTEMAT OR BIOD–OCF 30, OR APPROVED EQUAL.
6. BLANKET SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC, MULTI–FILAMENT, OR MONO–FILAMENT POLYPROPYLENE NETTING OR MESH.

BLANKET SLOPE PROTECTION

FOR EROSION CONTROL

NOT TO SCALE

STATE OF NEW HAMPSHIRE – NICHOLAS C. GOLON No. 14088 – LICENSED PROFESSIONAL ENGINEER – 11/12/21

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472–4488
Fax (603) 472–9747
www.tfmoran.com
TFM Proj: 82566–01

CONTRACT SERVICES

REV.	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

DETAILS

EVERSOURCE ENERGY

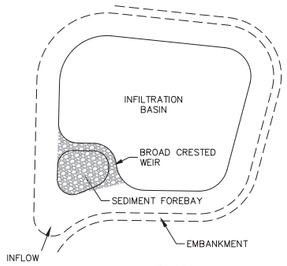
NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

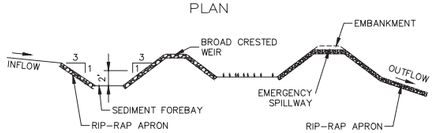
T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE: 82566–01 COVER & DETAILS.DWG	
IMAGE:	
DRAWING NO.	074899014

EVERSOURCE VER: 04/2015

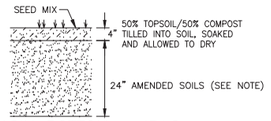
11/12/2021 10:16 AM – jbelanger – F:\TFM Projects\82566 Eversource– Keene, NH\82566–01 Eversource – North Keene Substation\82566–01_C3D\PRODUCTION\82566–01 Cover & Details.dwg – DETAILS–1



PLAN



PROFILE

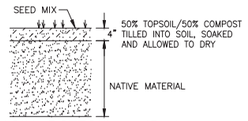


BASIN BOTTOM – IB#2

NOTES

1. THE INSTALLER SHALL NOT ALLOW ANY VEHICULAR OR CONSTRUCTION EQUIPMENT TRAVEL TO OCCUR ACROSS THE PROPOSED RECHARGE BASIN AREA AT ANY TIME EXCEPT DURING EXCAVATION OF TOPSOIL, SUBSOIL AND OTHER MATERIALS NOT SUITABLE FOR BED BOTTOM CONDITIONS.

   CAUTION SHOULD BE EXERCISED DURING SITE PREPARATION TO AVOID COMPACTION OF THE
2. INFILTRATIVE SURFACE.



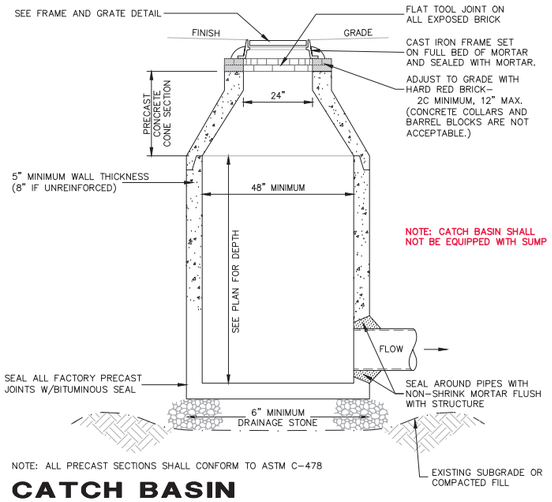
BASIN BOTTOM – IB#1

AMENDED SOIL NOTE

1. CERTIFIED SOIL SCIENTIST, ENGINEER OR PROFESSIONAL GEOLOGIST TO CONFIRM INFILTRATION RATE OF AMENDED SOIL IN ACCORDANCE WITH ENV-WQ. 1504.14(e). RESULTS TO BE SUBMITTED TO NHDES WITHIN 7 DAYS OF TESTING.

INFILTRATION BASIN

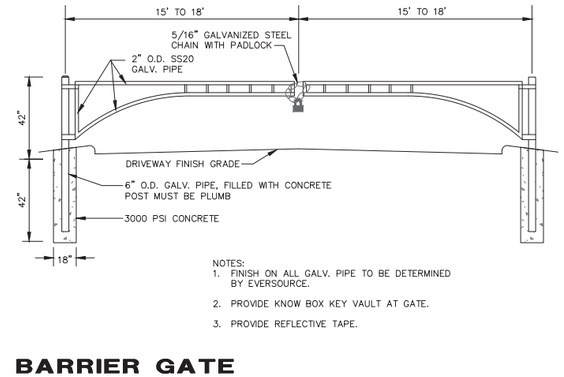
NOT TO SCALE



NOTE: ALL PRECAST SECTIONS SHALL CONFORM TO ASTM C-478

CATCH BASIN

CONCENTRIC CONE NOT TO SCALE



NOTES:
1. FINISH ON ALL GALV. PIPE TO BE DETERMINED BY EVERSOURCE.
2. PROVIDE KNOW BOX KEY VAULT AT GATE.
3. PROVIDE REFLECTIVE TAPE.

BARRIER GATE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

PREPARE BEDDING:

BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE, PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION, EXCAVATE AN AREA IN THE BEDDING WHERE TOE TROUGH WILL SEAT SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.

PLACE END SECTION OF PIPE:

OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.

SECURE THE END SECTION:

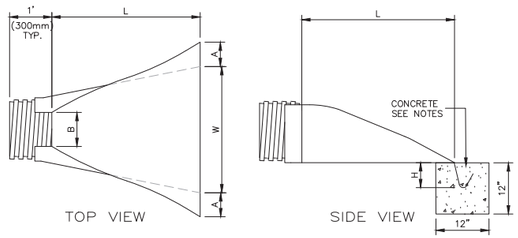
SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.

SECURE THE TOE TROUGH:

TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:

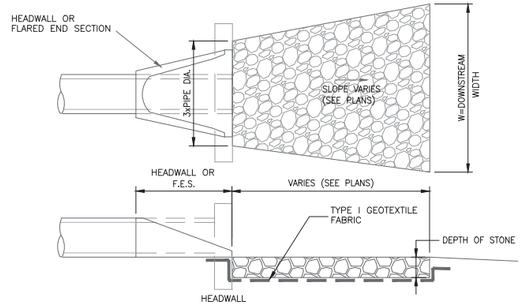
SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING, AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.



	DIMENSIONS, INCHES (mm)						
PIPE DIAMETER	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
12", 15" (300,375)	1210 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)
18" (450)	1810 NP	7.5 (190)	15 (380)	6.5 (168)	32 (812)	35 (890)
24" (600)	2410 NP	7.5 (190)	18 (450)	6.5 (165)	36 (900)	45 (1140)
30" (750)	3010 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)
36" (900)	3610 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)

FLARED END SECTION

HIGH DENSITY POLYETHYLENE (HDPE) NOT TO SCALE



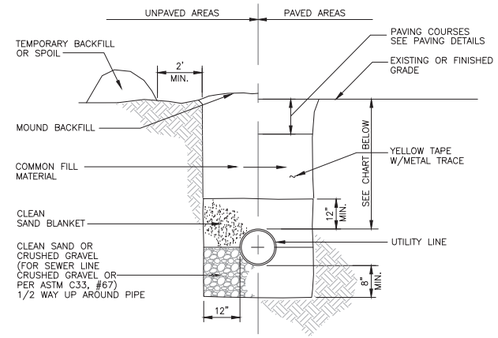
*SEE PLANS FOR RIPRAP DIMENSIONS

CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK USED FOR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

OUTLET APRON

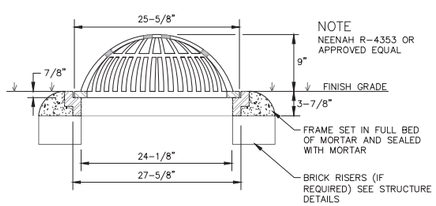
NOT TO SCALE



UTILITY	MINIMUM PIPE COVER	
	PAVED AREAS	UNPAVED AREAS
SANITARY SEWER MAIN	6'	4'
STORM DRAIN	3'	3'
WATER MAIN	5'	5'

TRENCH

FOR SEWER, WATER AND DRAIN LINES NOT TO SCALE



BEEHIVE FRAME AND GRATE

LIGHT DUTY – FOR USE IN GRASSED AREAS NOT TO SCALE

STATE OF NEW HAMPSHIRE – NICHOLAS C. GOLON No. 14086 LICENSED PROFESSIONAL ENGINEER – 11/12/21

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

TFM Civil Engineers, Structural Engineers, Traffic Engineers, Land Surveyors, Landscape Architects, Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

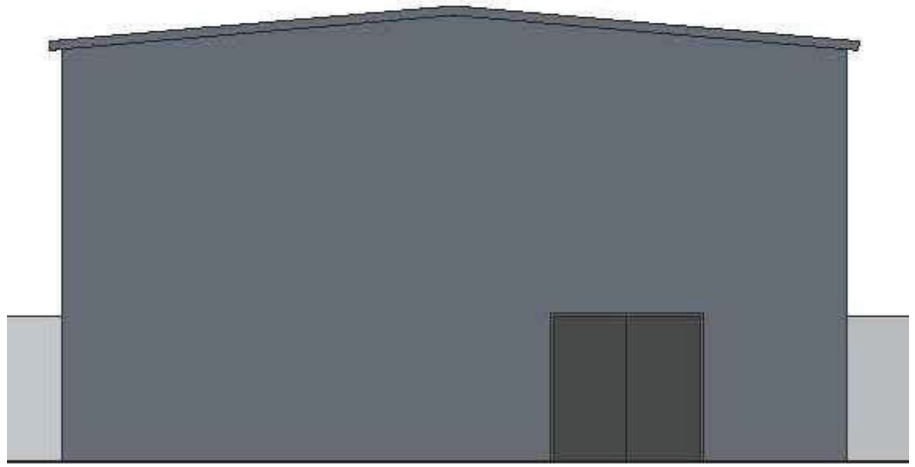
DETAILS

EVERSOURCE ENERGY

NEW HAMPSHIRE

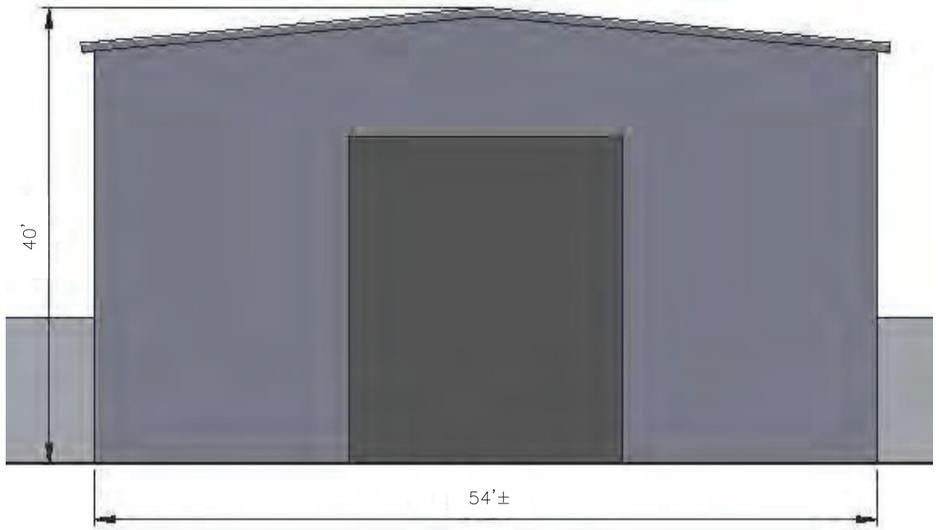
TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE:	82566-01 COVER & DETAILS.DWG
IMAGE:	
DRAWING NO.	074899015



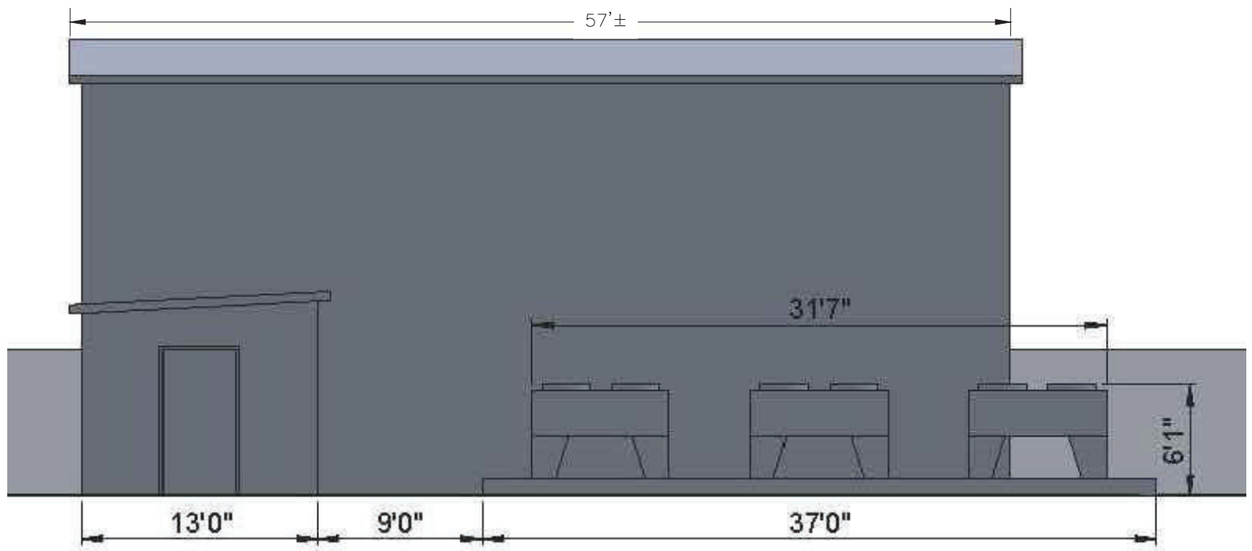
NORTH ELEVATION

PROPOSED ELECTRICAL ENCLOSURE — NOT TO SCALE



SOUTH ELEVATION

PROPOSED ELECTRICAL ENCLOSURE — NOT TO SCALE



EAST ELEVATION

PROPOSED ELECTRICAL ENCLOSURE — NOT TO SCALE

NOTES

1. THESE ELEVATIONS ARE FOR PRELIMINARY DISCUSSION PURPOSES ONLY AND ARE NOT SUITABLE FOR CONSTRUCTION.
2. FINAL DESIGN INCLUDING LAYOUT, COLOR AND MATERIALS MAY CHANGE FROM WHAT IS SHOWN ON THIS PLAN.

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com
TFM Proj: 82566-01

CONTRACT SERVICES

REV	DESCRIPTION	ENG/PE#	DATE	DRN	CHKD	APPR

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

PRELIMINARY ARCHITECTURAL ELEVATIONS

EVERSOURCE ENERGY

NEW HAMPSHIRE

TAX MAP 233 LOT 2
115 PARK AVENUE
KEENE, NH 03431
NORTH KEENE SUBSTATION

T	#
DRAWN	JB
ENGINEER	JB
CHECKED	NG
APPROVED	NG
DATE	11/12/21
SCALE	AS NOTED
FILE: 82566-01 COVER & DETAILS.DWG	
IMAGE:	
DRAWING NO.	074899016

EVERSOURCE VER: 04/2015

11/12/2021 10:16 AM - JBelanger - F:\TFM Projects\82566 Eversource- Keene, NH\82566-01 Eversource - North Keene Substation\82566-01_C3D\PRODUCTION\82566-01 Cover & Details.dwg - ARCHITECTURAL

CONSERVATION COMMISSION

2022 Meeting Schedule

All meetings are on the 3rd Monday of each month at 4:30PM
in Council Chambers, 2nd fl, City Hall

Site Visit, if needed, at 3:30PM

TUESDAY, January 18 (Monday Holiday)

TUESDAY, February 22 (Monday Holiday)

March 21

April 18

May 16

June 20

July 18

August 15

September 19

October 17

November 21

December 19

Meeting dates & times are subject to change