

Burlington Design Advisory Board

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DESIGN ADVISORY BOARD Tuesday, May 23, 2017 at 3:00 PM Conference Room 12, City Hall, Burlington, VT Agenda

Session I - 3:00pm - 3:45pm

- 1. 17-1081PD; 451 Ethan Allen Parkway (RL, Ward 7N) Tim Alles and Bill Ellis**
Final plat for 9-unit planned unit development in three buildings and associated site improvements. (Project Manager, Scott Gustin)

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Department of Planning and Zoning

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TO: Design Advisory Board
FROM: Scott Gustin
DATE: May 23, 2017
RE: 17-1081PD, 451 Ethan Allen Parkway

=====
Zone: RL Ward: 7N
Owner/Representative: Tim Alles & Bill Ellis / Jon Anderson, Esq.

Request: Final plat review for 9-unit planned unit development and associated site improvements

OVERVIEW:

The applicant is seeking final plat approval of a 9-unit planned unit development (PUD) consisting of 3 detached structures and a new private driveway. The subject property is located just north of Moore Drive. It is heavily wooded with steep slopes and wetlands and is currently undeveloped. The property is located primarily in the non-design control RL zone; however, as a PUD with three 3-unit structures it requires design review. A small portion of the site is zoned RCO which will remain undisturbed.

Preliminary plat approval was granted by the Development Review Board on March 7, 2016. That approval was appealed to Vermont Superior Court Environmental Division. The appeal was dismissed by the court on June 21, 2016. As required, final plat application has been filed within 1 year of the court action.

Preliminary plat approval was granted with the following condition related to design review:

1. Prior to final plat application, revised project plans depicting the following shall be submitted:
 - a. Porch railing details;
 - b. Utility meter screening;
 - c. Consistency between the grading plan and the building elevation drawings;
 - d. Lot coverage confirmation as based on buildable area; and,
 - e. Front yard setback calculations.

Final plat plans contain information to address the above condition. The site layout and building design remain largely unchanged from preliminary plat.

ARTICLE 6: DEVELOPMENT REVIEW STANDARDS

Part 1, Land Division Design Standards

Sec. 6.1.2, Review Standards

No subdivision proposed.

Part 2, Site Plan Design Standards

Sec. 6.2.2, Review Standards

(a) Protection of important natural features

Important natural features consist of several large trees and extensive wetlands. Sheet 2, Existing Conditions Site Plan, depicts specimen trees (>30" caliper or 100+ years old) and the wooded area generally. Clearing limits are depicted on sheet 4, Site and Utility Plan.

Much of the property contains mapped wetlands. A State of Vermont wetlands permit has been obtained for the proposed wetland and associated 50' state buffer impacts. During preliminary plat review, information was provided to address the city's wetland review criteria per Sec. 4.5.4 (d). The Conservation Board will review this final plat June 5.

(b) Topographical alterations

The property can be characterized as a wetland bordered by steep slopes. As a result, any development would involve some degree of fill and grading. The proposed development involves substantial fill and grading; however, it is concentrated at the western end of the site and will result in a final grade similar to that of neighboring properties along Ethan Allen Parkway.

Discrepancies in the grading plan versus the grades depicted on the building elevation drawings have been corrected.

(c) Protection of important public views

There are no important public views from or through the property.

(d) Protection of important cultural resources

The site has no known archaeological resources.

(e) Supporting the use of alternative energy

The residential units will be constructed to be "solar ready" for rooftop solar hot water.

(f) Brownfield sites

The property is not included in the Vermont DEC's Hazardous Sites List.

(g) Provide for nature's events

The project incorporates significant stormwater management measures. The driveway, parking areas, and walkways are proposed to be pervious materials. Maintenance of the pervious material must be assured in a written maintenance plan so that the ability for water to infiltrate is not compromised by clogging from sand and sediment. The Stormwater Administrator has been engaged in the development of the stormwater system. The final plat narrative notes a conflict between stormwater management requirements and wetland impacts. This item needs to be resolved. Review and approval by the Stormwater Administrator per Chapter 26, Wastewater, Stormwater, & Pollution Control will be required prior to final plat approval.

Significant erosion is present onsite. The project proposes to correct this erosion. An erosion prevention and sediment control plan has been submitted. It will be subject to review and approval by the Stormwater Administrator per Chapter 26, Wastewater, Stormwater, & Pollution Control.

Sheltered doorways are provided for all of the dwelling units, and there is ample room for snow removal equipment.

(h) Building location and orientation

Two of the three new buildings are located close to Ethan Allen Parkway and reflect the existing development pattern within the neighborhood. The front yard setback has been verified – the front setbacks of adjacent properties have been provided as the basis for the proposed front yard setback. All three new buildings are oriented towards the Parkway with clearly identifiable front entries.

(i) Vehicular access

A single driveway from Ethan Allen Parkway will serve the development. Driveway width is acceptable under this criterion at 18' wide. Comment from the Fire Marshal calls for 20' width. The wider width could be allowed as a private street. Seemingly, the additional width would cause further wetland encroachment. This item needs to be resolved prior to final plat approval.

The Department of Public Works has reviewed sight distances at the intersection of the project driveway and Ethan Allen Parkway. The Department found sight distances to be acceptable (300' to the north, and 190' to the south).

(j) Pedestrian access

The six dwelling units in the two front buildings will have direct access to the public sidewalk by way of new front walkways. The units in the rear building are not afforded this direct access but will be served by a new walkway running parallel to the driveway. Pedestrians using this walkway may cross the driveway and access the walkway out to the street and public sidewalk.

(k) Accessibility for the handicapped

Walkways will be accessible, but the dwellings will not be. Accessibility standards are administered by the city's building inspector. It is the applicants' responsibility to comply with all accessibility standards as may be required.

(l) Parking and circulation

Parking is provided behind and within the new townhouses. There is sufficient circulation room to maneuver vehicles so as to avoid backing out onto Ethan Allen Parkway.

(m) Landscaping and fences

A landscaping plan has been provided and consists of fairly typical residential plantings. A variety of trees and shrubs are proposed and are used as foundation and accent plantings. Relatively dense plantings are proposed at either side of the development to provide screening for neighboring properties to the north and south. No new fencing is evident.

(n) Public plazas and open space

None proposed.

(o) Outdoor lighting

Exterior lighting is limited to front entries and garage doors. A photometric plan has been submitted and depicts acceptable lighting levels (average of 0.57 footcandle). A lighting cut sheet has been provided that depicts an acceptable lighting fixture that is consistent with the photometric plan.

(p) Integrate infrastructure into the design

A dumpster pad and associated enclosure are depicted on the plans. They will be located at the northern end of the development, in a corner of the driveway. The enclosure will consist of 6' tall stockade fencing with a gate. A detail drawing has been provided.

Part 3, Architectural Design Standards

Sec. 6.3.2, Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The massing, height, and scale of the proposed buildings remain unchanged from preliminary plat. The proposed buildings consist of three separate triplex townhouses. While this configuration of units is unusual for this neighborhood, the overall massing, scale, and height of the buildings is not out of character. The units themselves appear to be relatively small, particularly when viewed from the street, and the overall mass and scale are consistent with the array of home sizes in the immediate neighborhood. Perceived building height is substantially limited by the grade which slopes away from Ethan Allen Parkway.

2. Roofs and Rooflines

The townhouses will have gable roofs with eave ends facing the street. Gable roofs are common in this residential neighborhood.

3. Building Openings

Proposed windows are double-hung 6-over-1 units and are appropriately scaled for the homes. Door styles relate to the window styles. The overall fenestration pattern is typical and appropriate for these residential units.

(b) Protection of important architectural resources

Neither the subject property nor neighboring properties contain historic resources.

(c) Protection of important public views

There are no significant public views from or through the subject property.

(d) Provide an active and inviting street edge

All of the new homes will face the street with prominent front entries. They will all include front porches and other architectural details to add visual interest. The units are slightly differentiated, particularly by way of their porches. Differing colors among the units are depicted. Building placement along Ethan Allen Parkway is consistent with the existing streetscape.

(e) Quality of materials

The townhouses will be clad in fiber cement clapboards and trim. Asphalt shingles will be used on the roofs, and clad wooden window units will be installed. These materials are of acceptable quality for this new construction. Railing details have been provided as required.

(f) Reduce energy utilization

All of the new homes must comply with the current energy efficiency standards of the city and state. They will all have ample solar access and will be plumbed for installation of optional solar hot water panels.

(g) Make advertising features complimentary to the site

No new signs are included in this proposal.

(h) Integrate infrastructure into the building design

Utility meters are depicted on the building elevations. They must be screened. Mail boxes are depicted as well. Utility lines will be buried.

(i) Make spaces safe and secure

All of the new homes must comply with the city's current egress requirements. Consideration should be given to sprinkler the units. Fire Marshal comments relative to driveway width and emergency vehicle access must be resolved prior to final plat approval.

RECOMMENDED MOTION:

Forward to the Development Review Board subject to the following conditions:

1. Resolution must be achieved between stormwater management standards, emergency vehicle access standards, and minimization of wetland impacts prior to final plat approval.

Narrative

Tim Alles and Bill Ellis ("Tim and Bill"), the Applicants, seek approval for a nine-unit planned residential development in three buildings on a 7.16-acre parcel of land (the "Parcel") located between 437 and 463 Ethan Allen Parkway in the Residential Low ("RL") density zoning district.

Tim and Bill seek to cluster nine much needed, middle-class housing units on a small portion of the Parcel, preserving the balance as green space, including a Class 2 wetland. In all, over six acres of the Parcel will remain open space, as the project impacts only about 10% of the Parcel as a whole. The project incorporates innovative technologies including the use of pervious bituminous concrete to minimize impact on the wetlands and to allow the majority of stormwater intercepted by the improvements to flow back into the underlying soils instead of running off into the wetlands on the project.

Use Regulations:

Tim and Bill believe that their project complies with the City of Burlington "Comprehensive Development Ordinance (CDO) by providing low density residential development. As Staff wrote in its sketch plan review for the project, "the size and scale of the buildings relate reasonably with existing homes in this residential neighborhood.

Conditional Use and Major Impact Review

Article 3: Applications, Permits, and Project Reviews

Part 5, Conditional Use & Major Impact Review:

Sec. 3.5.2, Applicability

(a) Conditional Use Review

1. Multi-family attached dwellings are noted in Appendix A as a Conditional Use.

(b) Major Impact Review

In the Residential-Low Density Zoning district, creation of five (5) dwelling units requires review of the project the Major Impact Review criteria.

Sec. 3.5.5, Review Criteria

(a) Conditional Use Review Standards – "Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on each of the following standards;"

1. Existing or planned public utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area;

The proposed development will be served by municipal water and sewer. As noted in the letter from Steve Roy of the City of Burlington Public Works

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Department dated February 10, 2017, sufficient capacity is available to serve this project.

2. The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;

The subject property is located near the end of Ethan Allen Parkway. It is a large undeveloped parcel of land (7+ acres) bordered by suburban development in the form of single family homes and duplexes. There is one triplex nearby. Ethan Allen Park abuts the property to the east. Rte. 127 borders the property to the north. The proposed development consists of 3 separate triplex buildings and an associated driveway and parking. While triplexes are uncommon in the neighborhood, the size and scale of the buildings relate reasonably well to existing homes in this residential neighborhood.

3. The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district.

While the project will generate noise, dust and vibrations during construction, the levels should not be any greater than those which would be expected during construction of other project of a similar nature. Once construction is complete, as a residential project little if any noise, dust, odor, heat or vibrations are expected.

4. The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies; and,

According to the 9th edition of the Institute of Traffic Engineers "Trip Generation Manual" a 9 unit project such as this is likely to generate 79 trips on an average weekday, with 8 total trips in both the a.m. and p.m. peak hour. As noted in the February 27, 2017 letter from Laura Wheelock of the City of Burlington Department of Public Works, the provided site distances of 300' to the north and 190' to the south are adequate. The speed limit on Ethan Allen Parkway is 25 mph. While there is an existing sidewalk along the western side of Ethan Allen Parkway, this project will be constructing a new concrete sidewalk along the easterly side of the street from Moore Court beyond the new access drive to the easterly end of Unit 1, thereby improving the pedestrian circulation in the area. By providing a means for pedestrians to get out of the travelled portion of the roadway, drivers, pedestrians and cyclists will be safer and have less conflicts, getting this section of the road closer to the goals of being a complete street.

5. The utilization of renewable energy resources; and
The proposed dwelling units will be solar ready. That is to say that plumbing will be installed to allow for rooftop solar water heating. Given the southeasterly exposure of the rooftops, installation of solar water heating may be feasible.

6. Any standards or factors set forth in City bylaws and City and State ordinances;
The Project complies with applicable known bylaws.

(b) Major Impact Review Standards – “Before a major impact development may receive approval, the DRB must be satisfied, based on documentation provided by appropriate city agencies, experts, interested parties and/or the applicant that the proposed development shall;

1. Not result in undue water, air or noise pollution;
By removing the existing City-owned storm sewer pipe which dumps the runoff from Ethan Allen Parkway, unchecked onto this site, and re-directing that flow through new culverts, storm manholes and a level spreader at the end of the pipe, the Ethan Allen Parkway runoff will be slowed down to allow some of the silt to settle out before flowing into the wetlands. As a residential development, air and noise pollution are not expected to be significant.

2. Have sufficient water for its needs;
The above referenced letter from Steve Roy indicates that the City of Burlington municipal water system has sufficient capacity to serve this development.

3. Not unreasonably burden the city’s present or future water supply or distribution system;
The above referenced letter from Steve Roy indicates that the City of Burlington municipal water supply has sufficient capacity to serve this development.

4. Not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;
The erosion control methods proposed for use on this project, being in accordance with the city’s stormwater requirements should reduce the chances of creating safety issues.

5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways, or other means of transportation, existing or proposed;
As noted above, by providing a means for pedestrians to get out of the travelled portion of the roadway, drivers, pedestrians and cyclists will be safer and have less conflicts.

6. Not cause an unreasonable burden on the city's ability to provide educational services;

As acknowledged by Marty Spaulding, the school department representative to the Technical Review Committee, the addition of nine new residential units will not unreasonably burden the city's school system. If the project is approved, impact fees would be paid to help offset impacts on the school system.

7. Not place an unreasonable burden on the city's ability to provide municipal services;

The addition of nine new residential units will not unreasonably burden the city's municipal services. If approved, impact fees would be paid to help offset the costs of some municipal services for this development.

8. Not have an undue adverse effect on rare, irreplaceable or significant natural areas, historic or archeological sites, nor on the scenic or natural beauty of the area or any part of the city.

There are no historic buildings onsite. No known archaeological sites are located on the property. By removing the piles of concrete sidewalk rubble which has been dumped on the property in the area of the existing storm outfall, and installing the landscaping proposed, the project will enhance the scenic and natural beauty of the property. The small size of the project, while leaving the majority of the property untouched should eliminate any undue adverse effect.

9. Not have an undue adverse effect on the city's present or future growth patterns nor on the city's fiscal ability to accommodate such growth, nor on the city's investment in public services and facilities;

The proposed development is relatively small and includes no public infrastructure except for the new sidewalk along Ethan Allen Parkway. It should have no undue adverse effect on the city's present or future growth patterns.

10. Be in substantial conformance with the city's municipal development plan and all incorporated plans;

The Project is in substantial conformance with the MDP.

11. Not have an undue adverse impact on the present or projected housing needs of the city in terms of amount, type, affordability and location; and/or

The proposed 9 new residential units and should not adversely impact the present or projected housing needs of the city. An inclusionary unit will be provided as required.

12. Not have an undue adverse impact on the present or projected park and recreation needs of the city.

Residents of the new dwelling units will likely utilize the city's park and recreation facilities. Anticipated impacts are proportionately modest. If approved, park impact fees will be paid to help offset any related impact on

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end), if conveyed to the city as an addition to the abutting Ethan Allen Park, could offset some or all of the park impact fees. Note that this conveyance was required under the 1974 Subdivision Regulations that pertained to the previous preliminary plat application that expired. Conveying the property as noted remains acceptable but is no longer required under the CDO. Land will be dedicated to the City only to offset all park impact fees.

(c) Conditions of Approval – “In addition to imposing conditions of approval necessary to satisfy the General Standards specified in (a) or (b) above, the DRB may also impose additional conditions of approval related to the following;

1. Mitigation measures, including but not limited to screening, landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area;

The landscaping proposed for the project will screen the lighting and utility meters, as well as the foundations to a level where they will be difficult to see from outside of the development and will be similar if not more than the landscaping of the surrounding properties.

2. Time limits for construction;

The schedule presented as part of the application reduces the overall build-out time frame.

3. Hours of operation and/or construction to reduce the impacts on surrounding properties;

As a residential development, there are no applicable hours of operation. During construction the applicant requests that the contractor be allowed to work 7:00 a.m. to 6:00 p.m. on weekdays and 7:00 a.m. to noon on Saturdays. No work is proposed for Sundays or holidays.

4. That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions; and,

It is understood that in the event of any future proposed enlargement or alteration, permits would be required and reviewed under the regulations then in effect.

5. Such additional reasonable performance standards, conditions and safeguards, as it may deem necessary to implement the purpose of this chapter and the zoning regulations.

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Article 4: Maps & Districts

Sec. 4.4.5, Residential Districts:

(a) Purpose

(1) Residential Low Density (RL)

The subject property is located in the RL zone. This zone is primarily intended for

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duplexes. This district typically is characterized by a compact and cohesive residential development pattern reflective of the respective neighborhood's development history.

While triplexes are included in this proposal, the scale and intensity of development is reasonably consistent with that of the neighboring residential areas.

(b) Dimensional Standards & Density

Table 4.4.5-1 – Duplex and above uses require a minimum frontage of 60' and a minimum lot area of 6,000 s.f.

This property complies as it has 270' of frontage and its area is 312,000 s.f.

Table 4.4.5-2 – the Low Density Residential Zoning District Lot allows up to 7 units per acre.

This 7.16 acre site complies by only proposing 9 units.

Table 4.4.5-3 – In the Low Density Residential Zoning District coverage is limited to a maximum of 35%. The front yard setback is based on the average of the two properties on either side of the subject property (i.e. the two neighboring properties to the north and the two to the south). The required setback is the average of these properties, plus or minus 5'. Side yard setbacks are 10% of the lot width, up to a 20' maximum. The rear yard setback is 25% of the depth, up to a 75' minimum. The maximum building height in the RL zone is limited to 35'.

As noted on the attached 8-24-16 Building Setback Computations, and the ADS plans, the project complies with these setback requirements

Sec. 4.5.4, Natural Resource Protection Overlay (NR) District

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(a) Purpose and Authority

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- Protect surface waters and wetlands from encroachment by development, and from sources of non-point pollution.
There are no surface waters on the site, and the wetland and buffer impacts have been minimized to the maximum extent practicable. The proposed stormwater treatment system, including the use of the pervious bituminous pavement access drive and parking area will all contribute to the elimination of non-point pollution
- Preserve natural lakeshore vegetative cover where reasonably possible, and the protection of native plants and vegetative cover that provide lake shoreland wildlife habitat, to the greatest extent possible;
Not applicable. There are no lake shores on the site.
- Protect the functions and values of Burlington's wetlands;
The wetland and buffer impacts have been minimized to the maximum extent practicable.
- Protect and enhance water quality near public beaches and other water-based recreation areas from sources of non-point pollution.
Not applicable. There are no beaches or water-based recreation areas on the site.

- Preserve natural features and communities, geologic features and cultural sites for education and research.
There are no known natural features, communities, geologic features or cultural sites on the project.
- Provide opportunities for public access where feasible and appropriate;
As a private residential project, the public will be discouraged from accessing the property.
- Facilitate connections and corridors for wildlife between publicly protected sites.
The proposed development impacts only that area directly adjacent to Ethan Allen Parkway, which should not be a wildlife corridor. The remainder of the property may continue to be used by wildlife to travel through as it may now.
- Ensure that the development that occurs within a Flood Hazard Area conforms to the requirements of the National Flood Insurance Program.
Not applicable. There is no development proposed within a Flood Hazard Area.
- Minimize and prevent the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding and other flood related hazards; and
Because the location of this project is such that it is approximately 20' above the flood stage for Lake Champlain, no flooding is anticipated to affect it.
- Ensure that the design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood and loss or damage to life and property; and
Not applicable. There is no development proposed within a Flood Hazard Area or other known type of hazard area.

Article 5: Citywide General Regulations

Part 2: Dimensional Standards

Sec. 5.2.3, Lot Coverage Requirements:

(a) Calculating Lot Coverage

- (1) Compute the square footage of all parts of the lot, or portion of the lot where split by a zoning district boundary, covered by all buildings including accessory structures, decks, patios, paved and unpaved walkways and parking areas, and any other paved surfaces.
- (2) Add the square footage calculated in subsection (1) above to obtain a figure for total coverage; and;
- (3) Divide the total coverage calculated in subsection (2) above by the square footage of the entire upland portion of the lot to derive the percentage of lot

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coverage. Lot area inundated by water including streams, lakes, wetlands, and other bodies of water shall not be included.

As noted on the attached lot coverage calculations dated 8-8-2016 by DuBois & King, the project complies with the maximum lot coverage.

Sec. 5.2.5, Setbacks

(a) Setbacks Required

In the Low Density Residential Zoning District coverage is limited to a maximum of 35%. The front yard setback is based on the average of the two properties on either side of the subject property (i.e. the two neighboring properties to the north and the two to the south). The required setback is the average of these properties, plus or minus 5'. Side yard setbacks are 10% of the lot width, up to a 20' maximum. The rear yard setback is 25% of the depth, up to a 75' minimum.

As noted on the attached 8-24-16 Building Setback Computations, and the ADS plans, the project complies with these setback requirements

Sec. 5.2.6, Building Height Limits

The maximum building height in the RL zone is limited to 35'.

As noted on the attached 8-24-16 Building Setback Computations, and the ADS plans, the project complies with these setback requirements

Sec. 5.2.7, Density and Intensity of Development Calculations

(a) Dwelling Units per Acre;

As noted on the attached lot coverage calculations dated 8-8-2016 by DuBois & King, the 9 units proposed by the project is well under the 24 units allowed

Part 5: Performance Standards

Sec. 5.5.2, Outdoor Lighting

(d) Lighting Plan Submission Requirements:

A point by point lighting Grid Plan is attached (L&D Sheet 6). As can be seen on that plan, exterior lighting is limited to front entries and garage doors. Lighting fixture cutsheets were provided with the Preliminary Plat submittal. The sheet indicates that at the maximum spot the light level is 2.76 foot candles, at the minimum spot, the light will be 0.01 foot candles, and the average will be 0.57 foot candles.

Article 6: Development Review Standards:

Part 1, Land Division Design Standards

Sec. 6.1.2, Review Standards

(a) Protection of important natural features

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The compact nature of the proposed development preserves the majority of the property, including wildlife habitat, specimen trees and the stand of forest contiguous with Ethan Allen Park.

(b) Block size and arrangement

Not applicable.

(c) Arrangement of Lots

Not applicable.

(d) Connectivity of streets within the city street grid

Not applicable.

(e) Connectivity of sidewalks, trails, and natural systems

The public sidewalk along Ethan Allen Parkway will be extended to serve the new residential units.

Part 2, Site Plan Design Standards

Sec. 6.2.2, Review Standards

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(a) Protection of important natural features

By condensing the proposed development area important natural features consisting of several large trees and extensive wetlands are preserved to the extent practicable. L&D Sheet 2, depicts the specimen trees that were alive in 2008. L&D Sheets 1, 4 and 12 show the proposed clearing limits.

(b) Topographical alterations

The property has been characterized as a wetland bordered by steep slopes. As a result, any development would involve some degree of fill and grading. The proposed development involves substantial fill and grading; however, it is concentrated at the western end of the site and will result in a final grade similar to that of neighboring properties along Ethan Allen Parkway. A suggestion to use a retaining wall along the eastern end of the fill was considered, but rejected. The excavation required for the footing which would be required for the wall would increase the wetland impacts beyond what is shown.

(c) Protection of important public views

There are no important public views from or through the property.

(d) Protection of important cultural resources

The site has no known cultural or archaeological resources.

(e) Supporting the use of alternative energy

As noted previously, the residential units will be constructed to be "solar ready" for rooftop solar hot water.

(f) Brownfield sites

Not applicable.

(g) Provide for nature's events

See Sec. 5.5.3 for stormwater management.

(h) Building location and orientation

Two of the three new buildings are located close to Ethan Allen Parkway and reflect the existing development pattern within the neighborhood. All three new buildings are oriented towards the Parkway with clearly identifiable front entries. Sheltered doorways are provided for all of the dwelling units, and there is ample room for snow removal equipment.

(i) Vehicular access

A single 18' wide driveway from Ethan Allen Parkway will serve the development. The sight distances have been reviewed and approved by the Department of Public Works.

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(j) Pedestrian access

All of the units will be connected to the new Ethan Allen Parkway sidewalk.

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(k) Accessibility for the handicapped

The sidewalks are designed to be accessible, with ramps and detectable warning strips at both sides of the driveway. Given that this project will be constructed using private funding, and there are less than 4 units per building the Vermont Access Rules do not require units to have an accessible entrance.

(l) Parking and circulation

Parking is provided behind and within the new townhouses. There is sufficient circulation room to maneuver vehicles so as to avoid backing out onto Ethan Allen Parkway.

(m) Landscaping and fences

A landscaping plan is attached (L&D Sheet 5). The only new fencing proposed is the proposed 6' tall stockade fence dumpster enclosure.

(n) Public plazas and open space

Not applicable.

(o) Outdoor lighting

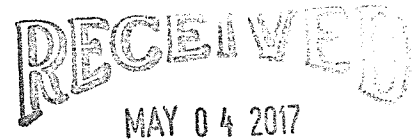
See Sec. 5.5.2.

(p) Integrate infrastructure into the design

A dumpster pad and associated enclosure are depicted on the L&D Sheet 4. The homeowners association will likely use a property maintenance company, and therefore no storage sheds are needed. Utility meters will be mounted on the ends of the buildings and will be screened by landscaping.

Part 3, Architectural Design Standards

Sec. 6.3.2, Review Standards



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PLANNING & ZONING

(a) Relate development to its environment

1. Massing, Height and Scale

The proposed buildings consist of three separate triplex townhouses. While this configuration of units is unusual for this neighborhood, the overall massing, scale, and height of the buildings is not out of character. The units themselves are relatively small, particularly when viewed from the street, and the overall mass and scale are consistent with the array of home sizes in the immediate neighborhood. Perceived building height is substantially limited by the grade which slopes away from Ethan Allen Parkway.

2. Roofs and Rooflines

The townhouses will have gable roofs with eave ends facing the street. Gable roofs are common in this residential neighborhood.

3. Building Openings

Proposed windows are double-hung 6-over-1 units and are appropriately scaled for the homes. Door styles relate to the window styles. The overall fenestration pattern is typical and appropriate for these residential units.

(b) Protection of important architectural resources

Neither the subject property nor neighboring properties contain architectural resources.

(c) Protection of important public views

There are no significant public views from or through the subject property.

(d) Provide an active and inviting street edge

All of the new homes will face the street with prominent front entries. They will all include front porches and other architectural details to add visual interest. The units are slightly differentiated, particularly by way of their porches. Differing colors among the units are depicted. Building placement along Ethan Allen Parkway is consistent with the existing streetscape.

(e) Quality of materials

The townhouses will be clad in fiber cement clapboards and trim. Asphalt shingles will be used on the roofs, and clad wooden window units will be installed. These materials are of acceptable quality for this new construction.

(f) Reduce energy utilization

All of the new homes must comply with the city's energy efficiency standards. They will all have ample solar access and will be plumbed for installation of optional solar hot water panels.

- (g) Make advertising features complimentary to the site

No new signs are included in this proposal.

- (h) Integrate infrastructure into the building design

Utility meters are depicted on the building elevations. They must be screened. Mail boxes are depicted as well. Utility lines will be buried.

- (i) Make spaces safe and secure

At the 1-14-16 Technical Review Committee meeting, Chief Simays presented a memo regarding the project. The majority of his comments / requests are building and electrical code matters for the architect to address, such as lock boxes and CO detectors. He stated that the access drive should be constructed 20' wide, believing that it would be a public road, and that the parking areas be expanded to accommodate the department's largest truck. The staff in attendance at that meeting explained that the drive would be private, and as such was limited to 18' wide by the CDO. The drive width expansion would push the limits of the fill approximately 10' further into the wetland, which would invalidate the wetlands permit.

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Article 8: Parking

Sec. 8.1.8, Minimum Off-Street Parking Requirements

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The subject property is located in the neighborhood parking district. As a result, each dwelling units requires 2 parking spaces for a total of 18. The plans include two inside spaces, as well as 2 outside spaces for each unit.

Sec. 8.2.5, Bicycle Parking Requirements

According to Table 8.2.5-1, (1) short-term bicycle space per 10 units (1) space is required, plus an additional 1 long term space per 4 units (3 spaces required). Nicole Losch has indicated that including a long term space in each individual unit's garage is acceptable. She also determined the preferred location for the short term space.

Article 9: Inclusionary and Replacement Housing

Sec. 9.1.5, Applicability

As the proposed development includes 9 new dwelling units, it is subject to the inclusionary housing provisions of this Article. At least 1 of the new dwelling units must be affordable.

Article 10: Subdivision

Preliminary Plat approval has been granted for this project. As noted in the Certificate of Appropriateness Level III Final Plat Checklist, (10) 18" x 24" copies as well as (1) 11" x 17" copy of a 1" = 50' scale, "survey for Alan Giguere" prepared by Mark Ward of Vermont Land Surveyors in 1998 are attached. Mark has since passed

his plat. We were initially told that a copy of the boundary survey of the property was available, but have now been told that those records are tied up in probate, so we have no access to them. If the project is approved, or approved with conditions, our office will prepare a new boundary survey of the property in accordance with the requirements of this Article.

Article 11: Planned Unit Development

Sec. 11.1.1, Intent

- (a) Promote the most appropriate use of land through flexibility of design and development of land;

The parcel is zoned Residential Low Density, therefore residential development should be viewed as appropriate.

- (b) Facilitate the adequate and economical provision of streets and utilities;

The proposal will provide adequate driveway access and utilities. The placement of the dwelling units close to the road results in an economical provision of utilities and associated infrastructure.

- (c) Preserve the natural and scenic qualities of open space;

Remaining open space will retain its natural and scenic qualities.

- (d) Provide for a variety of housing types;

There is no variety of housing types within the proposal, however, the triplexes will add to the diversity of housing in the area.

- (e) Provide a method of development for existing parcels which because of physical, topographical, or geological conditions could not otherwise be developed; and,

The subject property is undeveloped precisely due to its physical and topographical conditions. PUD regulations allow for flexibility in design to develop around such constraints. In order to be feasible, this project is dependent on the flexibility of the PUD process.

- (f) Achieve a high level of design qualities and amenities.

The proposed low impact design (i.e. pervious pavements) measures for stormwater management are a unique amenity and will result in improved water quality if installed and maintained properly. The development as most recently proposed has a street presence and will connect to, and extend, the city's public sidewalk network. The Design Advisory Board found the proposed buildings to be acceptable under previous review. The buildings remain unchanged but continue to be acceptable under the standards of the CDO.

Sec. 11.1.5, Approval Requirements

- (a) The minimum parcel size shall be met;

The 10,000 s.f. minimum lot size requirement has been met.

- (b) The minimum setbacks required for the district shall be met;

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DEPARTMENT OF
PLANNING & ZONING

(c) The project shall be subject to design review and site plan review of Article 3, Part 4
See Article 3 above.

(d) The project shall meet the requirements of Article 10 for subdivision review
See Article 10 above.

(e) All dimensional, density, and use requirements of the underlying zoning district shall be met as calculated across the entire property
The dimensional, density and use requirements have been met

(f) All other requirements of the underlying zoning district shall be met.
The project meets the requirements of the underlying zone.

(g) Open space or common land shall be assured and maintained in accordance with the conditions as prescribed by the DRB.
A common space maintenance agreement will be provided when the DRB conditions are known.

(h) The development plan shall specify reasonable periods within which development of each phase of the planned unit development may be started and shall be completed. Deviation from the required amount of usable open space per dwelling unit may be allowed provided such deviation shall be provided for in other sections of the planned unit development.
A projects schedule is attached.

(i) The intent as defined in Sec. 11.1.1 is met in a way not detrimental to the city's interests
The intent of Section 11.1.1 is met by the project.

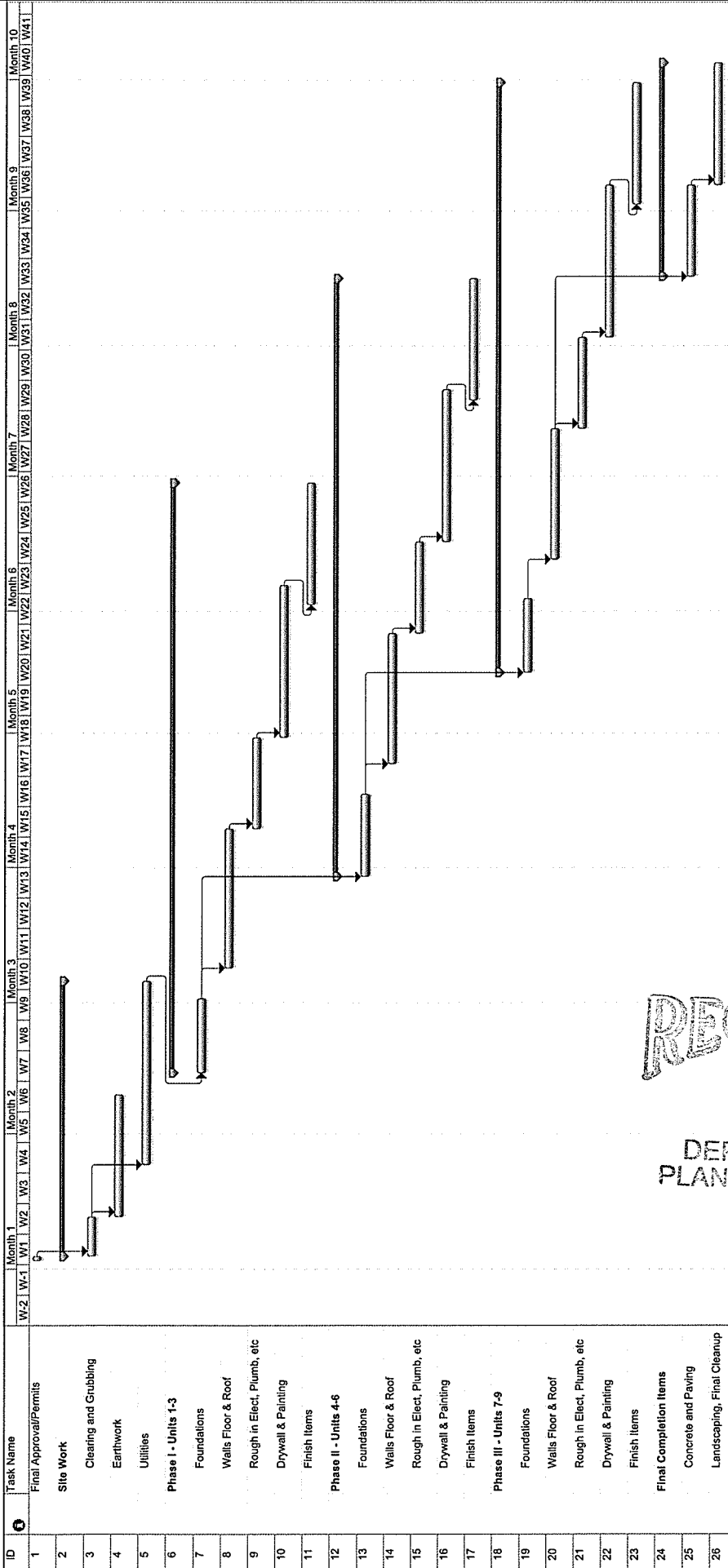
(j) The proposed development shall be consistent with the Municipal Development Plan
See Sec. 3.5.6 (b) 10.

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PLANNING & ZONING

Liahona Way

Burlington, Vermont



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PLANNING & ZONING

Ellis / Alles
07028

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8-24-16 Building Setback Computations
Reference Table 4.4.5-3 of 7-18-14 Comprehensive Development Ordinance
(table remains the same for the 3-31-16 update)

DEPARTMENT OF
PLANNING & ZONING

Front yard setback Min/Max: Avg. of 2 lots on both sides +/- 5'

The building 2 lots to left is 24' off of Ethan Allen Parkway

The building on the abutting lot to left is 23' off of Ethan Allen Parkway

The building on the abutting lot to right is 21' off of Ethan Allen Parkway

The building 2 lots to the right is 22' off of Ethan Allen Parkway

The average building setback is 22.5', meaning the minimum front yard building setback is 17.5'

Side yard setback Min: 10% of lot width, or avg. of 2 lots on both sides, Max 20'

The building 2 lots to left is 12' off of its right property line and 60' off of its left property line

The building on the abutting lot to left is 5' off of its right property line and 15' off of its left property line

The building on the abutting lot to right is 8' off of its right property line and 17' off of its left property line

The building 2 lots to the right is 8' off of its right property line and 11' off of its left property line

The property is 270' wide, the average building setback is 17', meaning the minimum side yard building setback is 17'

P:\2007\07028-2014\building setback computations.docx



May 4, 2017

Scott Gustin, AICP, CFM
Interim Zoning Administrator
Dept. of Planning & Zoning
149 Church Street
Burlington, VT 05401

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MAY 04 2017
DEPARTMENT OF
PLANNING & ZONING

Re: Liahona Way, 451 Ethan Allen Parkway
Burlington, VT

Dear Scott:

We are writing on behalf of our clients, Tim Alles and Bill Ellis, to request approval of their proposed 9 unit Planned Residential Development comprised of three buildings on a 7.16-acre parcel of land (the "Parcel") located between 437 and 463 Ethan Allen Parkway in the Residential Low ("RL") density zoning district. As you know, this project was granted Preliminary Plat approval following a public hearing held on February 16, 2016. In an email from you to me dated January 24, 2017, you stated that the application for Final should be filed prior to May 7, 2017.

The Preliminary Plat Approval contains several conditions to which Tim and Bill respond as follows:

1. This preliminary plat approval in no way grants or implies final plat approval. Final plat application shall be filed in accordance with Section 10.1.9, Final Plat Approval Process, of the CDO and per these Conditions of Approval.

No response required.

2. This preliminary plat approval in no way grants or implies approval of future development on the "reserved" 5.5 acres noted in the application.

No response required.

3. Prior to final plat application, a third party expert analysis of the property's buildable area shall be obtained. Such analysis shall be paid for by the applicants. The selected expert shall be selected by mutual agreement between the applicants and the Dept. of Planning & Zoning.

An analysis was performed in August, 2016 by Dubois & King, Inc., one of the City's prequalified consultants according to your 6-21-16 e-mail to me. A copy of this analysis is attached for your records

4. Prior to final plat application, revised project plans depicting the following shall be submitted:

a. Porch railing details;

Scott Gustin
May 4, 2017
Page 2 of 4

The railing details are shown on Sheet A2 of the attached building plans prepared by Architectural Drafting Services (ADS), revised 1-6-17.

- b. Utility meter screening;

The utility meter location is shown on Sheet A3, East Elevation of the attached ADS building plans.

- c. Consistency between the grading plan and the building elevation drawings;

Sheets A4 and A5 of the attached ADS building plans have been revised to show the same vertical difference between the grade in the front yard and the driveways as shown on Lamoureux & Dickinson (L&D) Sheet #5.

- d. Lot coverage confirmation as based on buildable area; and

See the response to Item 3 above.

- e. Front yard setback calculations.

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PLANNING & ZONING

An analysis of the front and side yard setbacks was conducted by our office in accordance with Table 4-4-5-3 of the 7-18-08 Comprehensive Development Ordinance (CDO) (which remains the same for the 4-7-17 CDO. A copy of that analysis is attached for your records.

5. Prior to final plat application, written approval from the Dept. of Public Works shall be obtained for the following items:

- a. Wastewater capacity to serve the development;

A letter dated February 10, 2017 from Steve Roy to our office regarding the allocation to this project of both water and sewer is attached.

- b. Proposed water lines, force main, and sewer pump station; and

A letter dated February 10, 2017 from Steve Roy to our office regarding the allocation to this project of both water and sewer is attached.

- c. Proposed sight distances at the intersection with Ethan Allen Parkway.

A letter dated February 27, 2017 from Laura Wheelock to our office regarding the acceptability of the project sight distances is attached.

6. Prior to final plat application, written acceptance of the single access drive and its sufficiency for emergency service vehicles shall be obtained from the Fire Marshal.

Tim and Bill have so far been unable to obtain this acceptance. Instead, the Fire Marshall requires Tim and Bill to treat their site driveway, which will be maintained by the homeowners, as a road. Tim and Bill can comply with the Fire Marshall's road construction standards only by moving the back triplex backwards further disturbing the wetlands and wetlands buffer. The

Scott Gustin
May 4, 2017
Page 3 of 4

State Wetlands permit does not allow Tim and Bill to do so and the Conservation Commission has previously requested that Tim and Bill minimize wetlands and buffer disturbance.

7. Prior to final plat application, a shortened construction timeline and more limited days/hours of construction shall be submitted.

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See Exhibit 10 hereto.

8. Prior to final plat application, submission of a project phasing schedule is recommended.

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See Exhibit 11 hereto.

9. Prior to final plat application, written approval of the inclusionary dwelling unit shall be obtained from the manager of the city's Housing Trust Fund.

Tim and Bill understand their obligation. Certain data is needed to define Tim and Bill's obligations. That data is not available at this time. Accordingly, Tim and Bill have agreed with the Manager of the City's Housing Trust Fund to supply such data and obtain written approval of their inclusionary unit plan before obtaining their building permit.

10. Prior to final plat approval, written approval of the project stormwater management system and erosion prevention and sediment control plan shall be obtained from the Conservation Board and the Stormwater Administrator.

Tim and Bill have been unable to obtain such approval from the Stormwater Administrator because the Administrator wants Tim and Bill to improve the City's stormwater system serving other properties. Currently, the City's stormwater system drains, apparently without an easement into a ravine on Tim and Bill's property. To build Tim and Bill's project, the drain must be relocated, which Tim and Bill are willing to do. They are also willing to extend and improve such drain as requested by the Stormwater Administrator even though the drain does not serve their property. But the Stormwater Administrator has insisted that Tim and Bill should also build a roadway for a truck to access the far end of the improved drainage system. This road can be built only by reducing the size of the project from nine units to eight and by further disturbing the wetland buffer area.

L&D Sheet 12A shows the approximately 4,000 sf of additional wetland buffer impact area and approximately 3,100 sf of additional wetland impacts required to satisfy the requests of the Fire Marshall and the Stormwater Director. The State Wetlands permit does not allow Tim and Bill to further disturb the wetlands and buffer and the Conservation Commission has previously requested that Tim and Bill minimize wetlands and buffer disturbance. As shown on L&D Sheet 4, in lieu of a long road down to a new manhole at the bottom of the bank, we propose to place the new storm manhole within the paved private drive as an inside drop manhole, allowing the outlet pipe to the level spreader to be constructed at a slope of 1%.

As required by Article 3 of the CDO, we have attached the following;

COA Level III – Zoning Permit Application

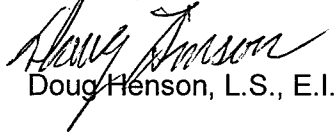
Zoning Permit Application;

Scott Gustin
May 4, 2017
Page 4 of 4

Completed Level I ,II, and III checklists;
\$ 3,810 application fee for the Level III COA (\$10 filing fee + \$200application fee and \$2
per \$1000 of estimated construction cost [\$1,800,000])
Ten (10) 24" x 36" set of the project plans
and one (1) 11" x 17" set of the project plans.

Please feel free to contact me if you have any questions.

Sincerely,



Doug Henson, L.S., E.I.

Cc Tim Alles
Bill Ellis

P:\2007\07028-2014\2017 final\cover letter.docx

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MAY 04 2017

DEPARTMENT OF
PLANNING & ZONING

Chapin Spencer
PUBLIC WORKS DIRECTOR

Norman J. Baldwin, P.E.
CITY ENGINEER



P.O. Box 849
BURLINGTON, VT
05402
(802) 863-9094 P
(802) 863-0466 F

February 10, 2017

Nick Smith, E.I.
Lamoureux & Dickinson
14 Morse Drive
Essex, VT 05452

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DEPARTMENT OF
PLANNING & ZONING

Re: Water/Sewer Capacity for Development at 451 Ethan Allen Parkway

Dear Mr. Smith,

This letter is to inform you, the State of Vermont Environmental District and other interested parties that the City of Burlington's water and wastewater facilities have sufficient capacity to handle demand associated with a 9 unit development at the above address.

Using calculated design flows from the State Environmental Protection Rules, we have reserved 4,860 gpd (gals/day) for water and 1,890 gpd for sewer. This is based on a total of 36 bedrooms at 135 gpd/bedroom for water and 9 single family units at a flat rate of 210 gpd/unit for sewer connection to a large municipal system. Sewage from this area is treated at our North Wastewater Plant on North Avenue Extension. It is important to note that this letter only addresses treatment plant and not distribution or collection system capacities.

This letter and reserved flows are good for one (1) year from the date of writing. If this letter is not filed with the proper offices, or if the proper permits are not obtained within that year, you will need to reapply. Any changes in flow estimates or property usage also requires reapplication. Please feel free to call me at 865-7258 if you have any questions.

Sincerely,

Steve Roy, P.E.
Project Engineer
Burlington Public Works



City of Burlington
Department of Public Works

Technical Services Engineering Division
645 Pine Street, Suite A
Burlington, VT 05402
P 802-863-9094 / F 802-863-0466 / TTY 802-863-0450
www.burlingtonvt.gov/DPW

*To: City of Burlington Planning & Zoning
Doug Henson – Lamoureux & Dickenson*

From: Laura K. Wheelock P.E. - Public Works Engineer, DPW

Date: February 27, 2017

Subject: 451 Ethan Allen Parkway – Sight Distances

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PLANNING & ZONING

The Department of Public Works (DPW) has reviewed the site plan provided by Lamoureux & Dickenson for available sight distances at the project driveway, plan dated 8/26/16.

Based on the plan submitted to DPW the available sight distance from the project driveway exceeds 300 feet to the north and 190 to the south. The American Association of State Highway Transportation Officials Green Book lists for streets with a speed limit of 25 MPH the minimum sight distance is 155 feet. The sight distance at the project drive exceeds these values.

Therefore DPW has no objections with the sight distances provided at this project's proposed driveway.

Should you have any questions please contact me at LWheelock@burlingtonvt.gov or 540-0397.





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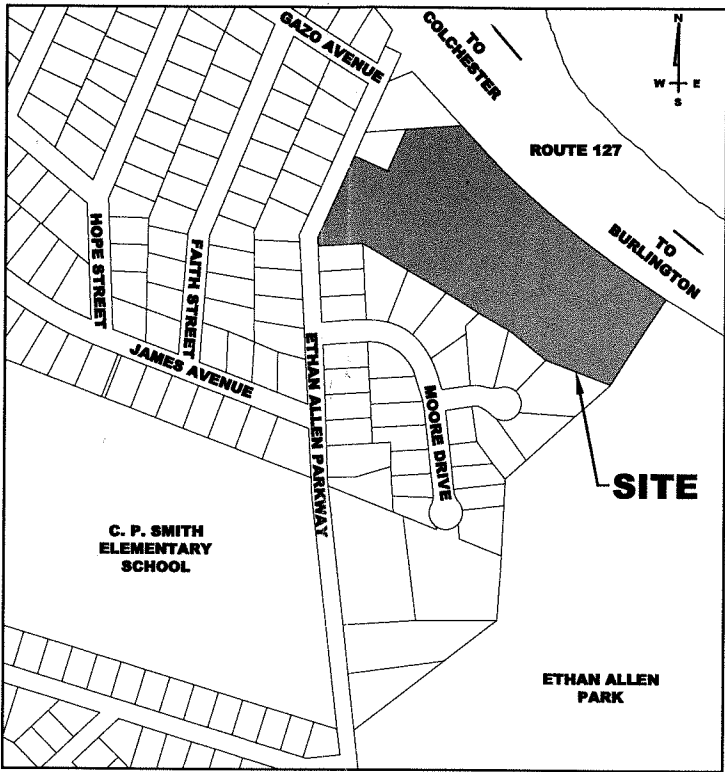
MAY 04 2017

DEPARTMENT
PLANNING & ZONING

LIAHONA WAY

A 9 UNIT NEIGHBORHOOD

ETHAN ALLEN PARKWAY
BURLINGTON, VERMONT



LOCATION PLAN

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PLANNING & ZONING

SHEET INDEX

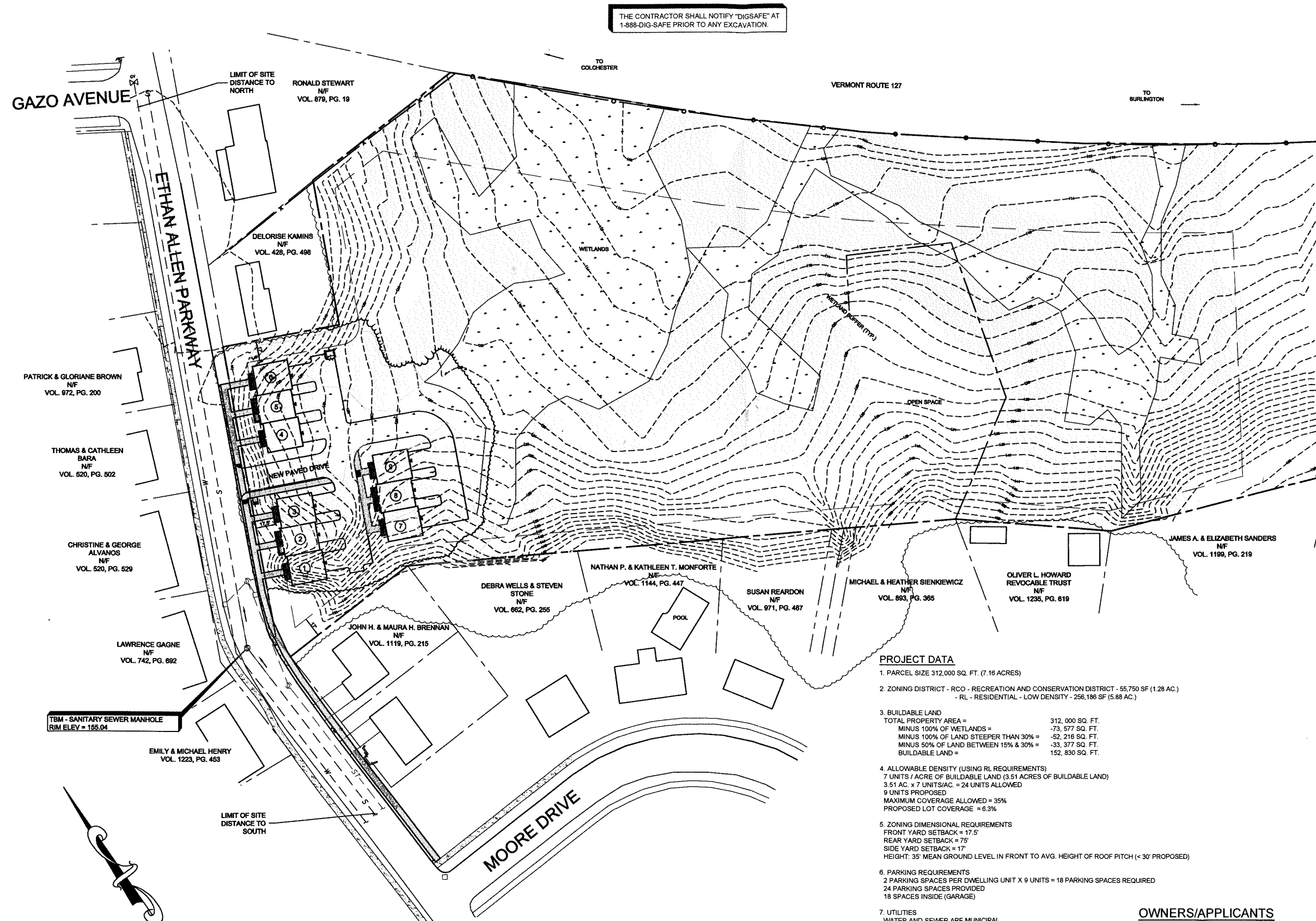
- 1 OVERALL SITE PLAN
- 2 EXISTING CONDITIONS SITE PLAN
- 3 WETLANDS PLAN
- 4 SITE AND UTILITY PLAN
- 5 LANDSCAPING AND GRADING PLAN
- 6 LIGHTING GRID PLAN
- 7 DRIVE PROFILE, TYPICALS & SPECIFICATIONS
- DETAILS AND SPECIFICATIONS
- 8 SANITARY SEWER
- 9 STORM SEWER
- 10 WATER
- 11 LANDSCAPING AND EROSION
- 12 EROSION PREVENTION & SEDIMENT CONTROL PLAN
- 12A ALTERNATE GRADING PLAN

OWNERS/APPLICANTS:

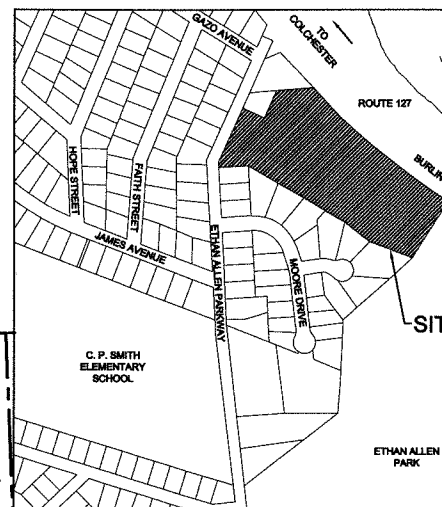
TIMOTHY G. ALLES
2139 N 250 E
PROVO, UT 84604

WILLIAM E. ELLIS
2139 N 250 E
PROVO, UT 84604

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452
Tel: 802-873-4450



THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



LOCATION PLAN

ETHAN ALLEN PARK
BURLINGTON DEPARTMENT OF
PARKS AND RECREATION

LEGEND

- PROJECT BOUNDARY
- PROPERTY LINE
- BUILDING SETBACK
- N/F NOW OR FORMERLY
- EXISTING GROUND CONTOUR
- EXISTING WATER LINE, GATE VALVE & HYD
- EXISTING SANITARY SEWER LINE & MANH
- EXISTING STORM LINE AND CATCH BASIN
- NEW TREE LINE
- NEW BUILDING MOUNTED LIGHT
- NEW WATER LINE, GATE VALVE AND HYD
- NEW SANITARY SEWER LINE AND MANHO
- PROPOSED UNIT NUMBER
- WETLAND

NOTES

- THE BOUNDARY LINE BETWEEN THE RCO AND RL ZONING DISTRICT IS APPROXIMATE ONLY AND IS BASED ON THE INFORMATION INDICATED AT THE CITY OF BURLINGTON WEB SITE AT THE FOLLOWING URL: WWW.CI.BURLINGTON.VT.US/PLANNING/ZONING/ZNMAP/092224.HTML
- THE BOUNDARIES OF THE PARCEL AND THE TOPOGRAPHIC DATA ARE BASED ON A PLAN ENTITLED "PROPOSED THREE LOT SUBDIVISION FOR ALAN GIGUERE" BY VERMONT LAND SURVEYORS, DATED 2/10/98.
- THE SOILS ON THIS PROPERTY ARE A COMBINATION OF ADAMS AND WINDSOR LOAMY SANDS AND DUANE & DEERFIELD SOILS.

PROJECT DATA

- PARCEL SIZE 312,000 SQ. FT. (7.16 ACRES)
- ZONING DISTRICT - RCO - RECREATION AND CONSERVATION DISTRICT - 55,750 SF (1.28 AC.)
- RL - RESIDENTIAL - LOW DENSITY - 256,186 SF (5.88 AC.)
- BUILDABLE LAND
TOTAL PROPERTY AREA = 312,000 SQ. FT.
MINUS 100% OF WETLANDS = -73,577 SQ. FT.
MINUS 100% OF LAND STEEPER THAN 30% = -52,216 SQ. FT.
MINUS 50% OF LAND BETWEEN 15% & 30% = -33,377 SQ. FT.
BUILDABLE LAND = 152,830 SQ. FT.
- ALLOWABLE DENSITY (USING RL REQUIREMENTS)
7 UNITS / ACRE OF BUILDABLE LAND (3.51 ACRES OF BUILDABLE LAND)
3.51 AC. x 7 UNITS/AC. = 24 UNITS ALLOWED
9 UNITS PROPOSED
MAXIMUM COVERAGE ALLOWED = 35%
PROPOSED LOT COVERAGE = 6.3%
- ZONING DIMENSIONAL REQUIREMENTS
FRONT YARD SETBACK = 17.5'
REAR YARD SETBACK = 75'
SIDE YARD SETBACK = 17'
HEIGHT: 35' MEAN GROUND LEVEL IN FRONT TO AVG. HEIGHT OF ROOF PITCH (< 30' PROPOSED)
- PARKING REQUIREMENTS
2 PARKING SPACES PER DWELLING UNIT X 9 UNITS = 18 PARKING SPACES REQUIRED
24 PARKING SPACES PROVIDED
18 SPACES INSIDE (GARAGE)
- UTILITIES
WATER AND SEWER ARE MUNICIPAL
ALL UTILITIES WILL BE UNDERGROUND
STORMWATER TO INCLUDE ON-SITE TREATMENT, DETENTION
WITH OVERFLOW INTO ADJACENT WETLANDS

OWNERS/APPLICANTS

TIM ALLES
2859 E. SNOW MOUNTAIN DR.
SANDY, UT 84093

BILL ELLIS
2139 NORTH 250 EAST ST.
PROVO, UT 84604

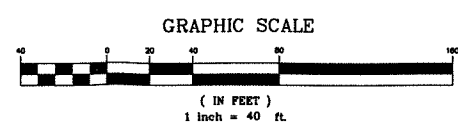
4-17-17	REVISED PROJECT DATA PER D&K 8-8-16 MEMO
1-25-16	REVISED PER TECHNICAL REVIEW NOTES
4-1-15	REVISED FOR PRELIMINARY RE-FILE TO CITY
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY
4-4-11	REVISE LAYOUT
10-29-10	REVISE LAYOUT
8-26-10	GENERAL REVISIONS PER COURT APPEAL
9-11-09	REVISED PERVIOUS CONCRETE DETAILS
7-13-09	REVISED LIGHTING AND LANDSCAPING
1-9-08	REVISED DRIVEWAY LAYOUT
10-3-07	REVISED LAYOUT
8-7-07	REVISED LAYOUT
Date	Revision

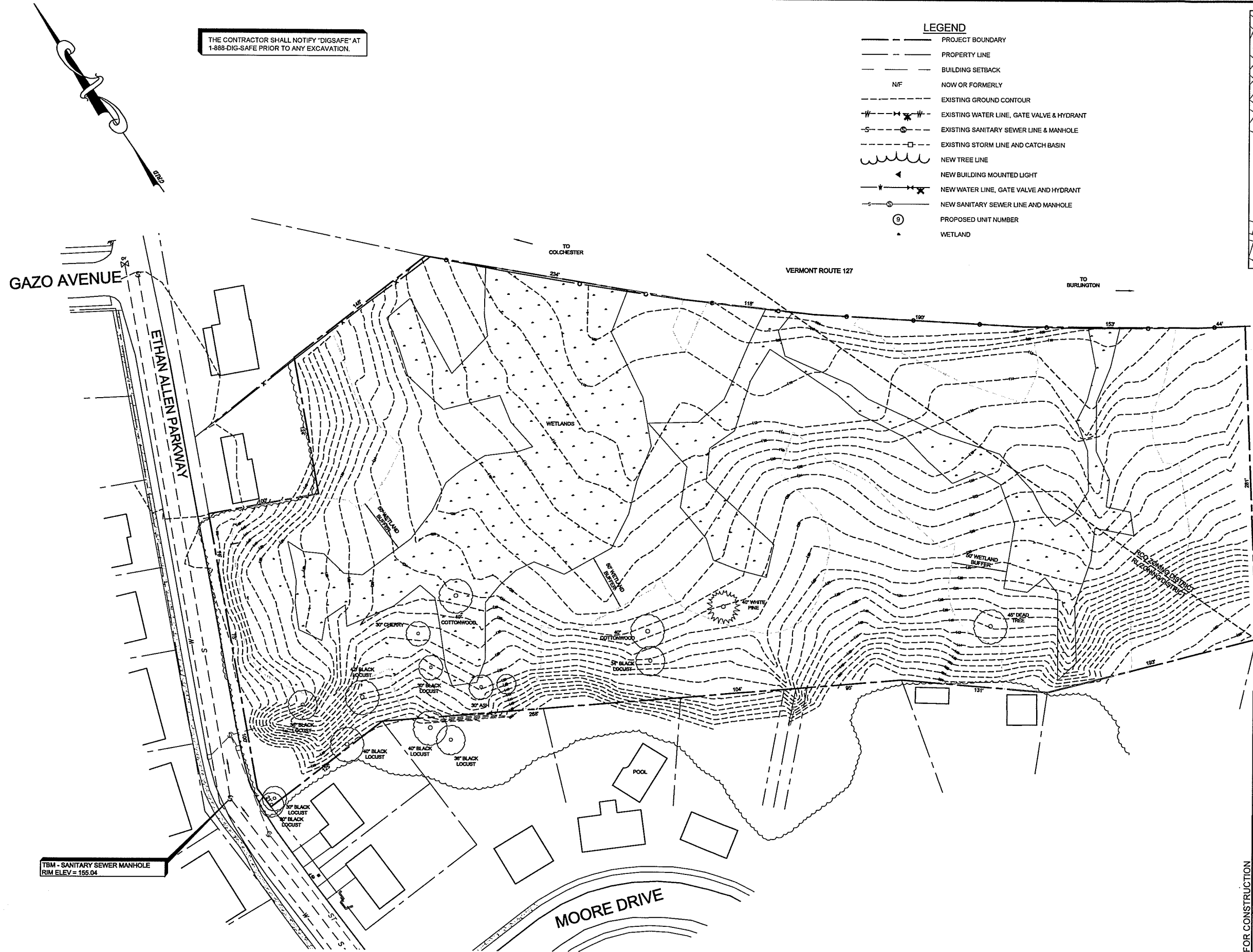
These plans shall only be used for the purpose shown below:

- Sketch/Concept
- Preliminary
- Final Local Review
- Act 250 Review
- Construction
- Record Drawing

Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont
A PLANNED RESIDENTIAL DEVELOPMENT
OVERALL SITE PLAN

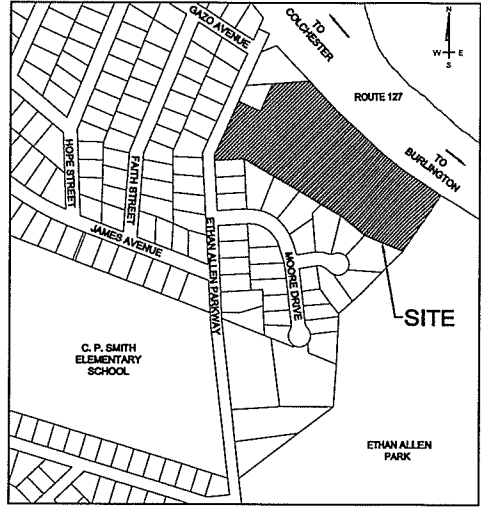
LA MOUREUX & DICKINSON
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Essex Junction, VT 05452
Tel: 802-878-4450





THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

- LEGEND**
- PROJECT BOUNDARY
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 - ⑨ PROPOSED UNIT NUMBER
 - ▲ WETLAND



LOCATION PLAN
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DEPARTMENT OF
PLANNING & ZONING

1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DLH
4-1-15	REVISED FOR PRELIMINARY RE-FILE TO CITY	DLH
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10-5-07	REVISED LAYOUT	DLH
8-7-07	REVISED LAYOUT	DLH
Date	Revision	By

These plans shall only be used for the purpose shown below:

☐ Sketch/Concept	☐ Act 250 Review
☐ Preliminary	☐ Construction
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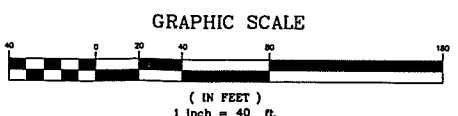
NOT FOR CONSTRUCTION

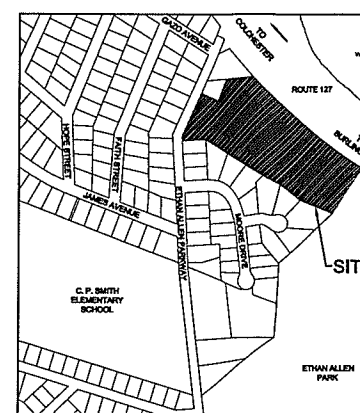
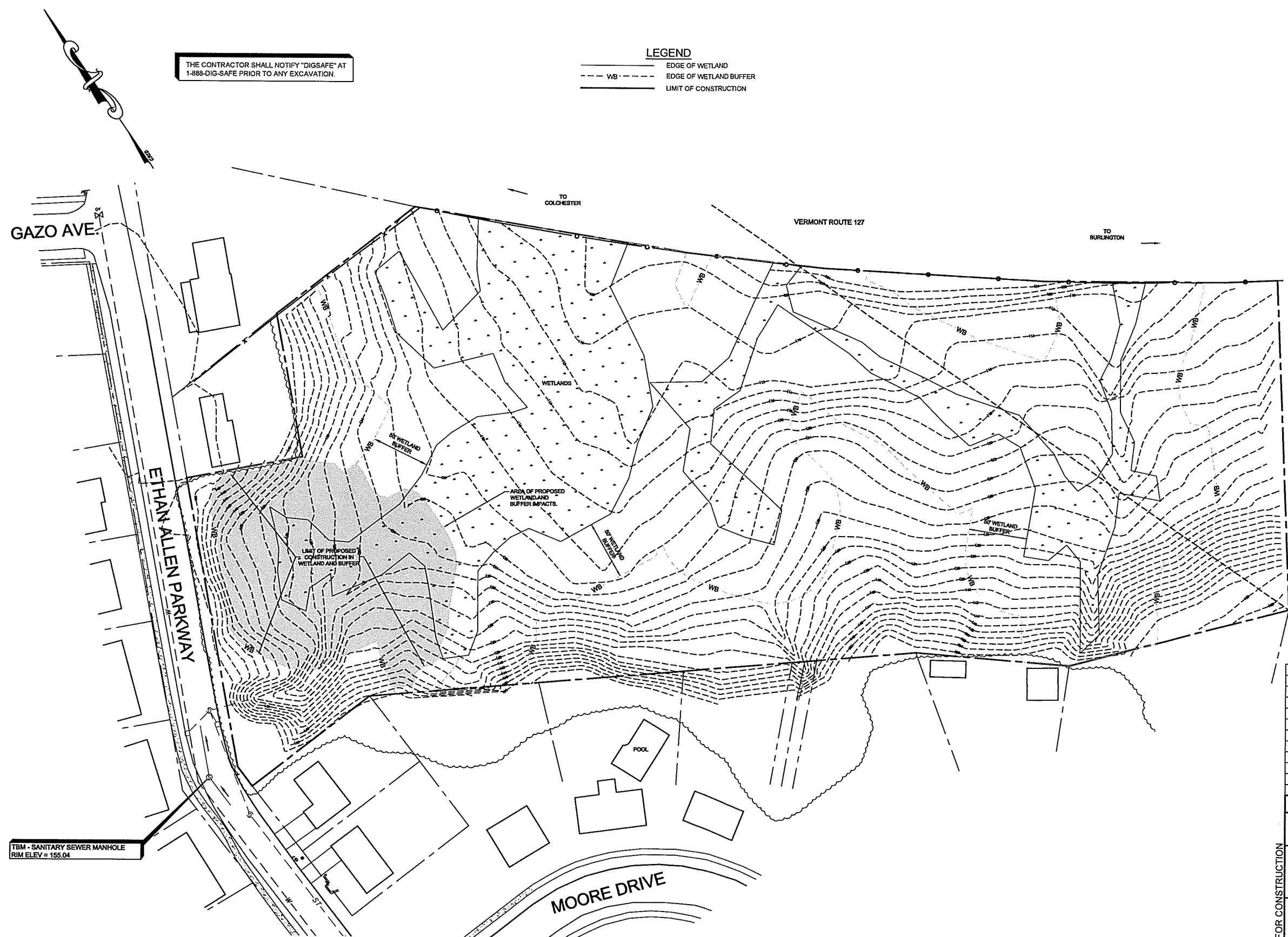
Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT
EXISTING CONDITIONS SITE PLAN

proj. no. 07028
survey Others
design DLH
drawn SEA
checked DJG
date 04/09/07
scale 1" = 40'
shl. no. 2

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452





LOCATION PLAN
N.T.S.

RECEIVED
MAY 04 2017
DEPARTMENT OF
PLANNING & ZONING

1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DI
4-1-15	REVISED FOR PRELIMINARY RE-FILING TO CITY	DI
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DI
4-4-11	REVISE LAYOUT	DI
10-29-10	REVISE LAYOUT	DI
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DI
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DI
7-13-09	REVISED LIGHTING AND LANDSCAPING	DI
1-9-08	REVISED DRIVEWAY LAYOUT	DI
10-5-07	REVISED LAYOUT	DI
8-7-07	REVISED LAYOUT	DI
Date	Revision	B

These plans shall only be used for the purpose shown below:

☐ Sketch/Concept	☐ Act 250 Review
☐ Preliminary	☐ Construction
☒ Final Local Review	☐ Record Drawing

NOT FOR CONSTRUCTION

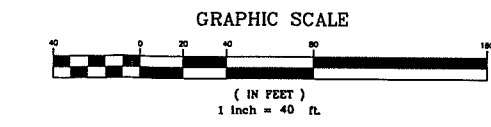
Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT

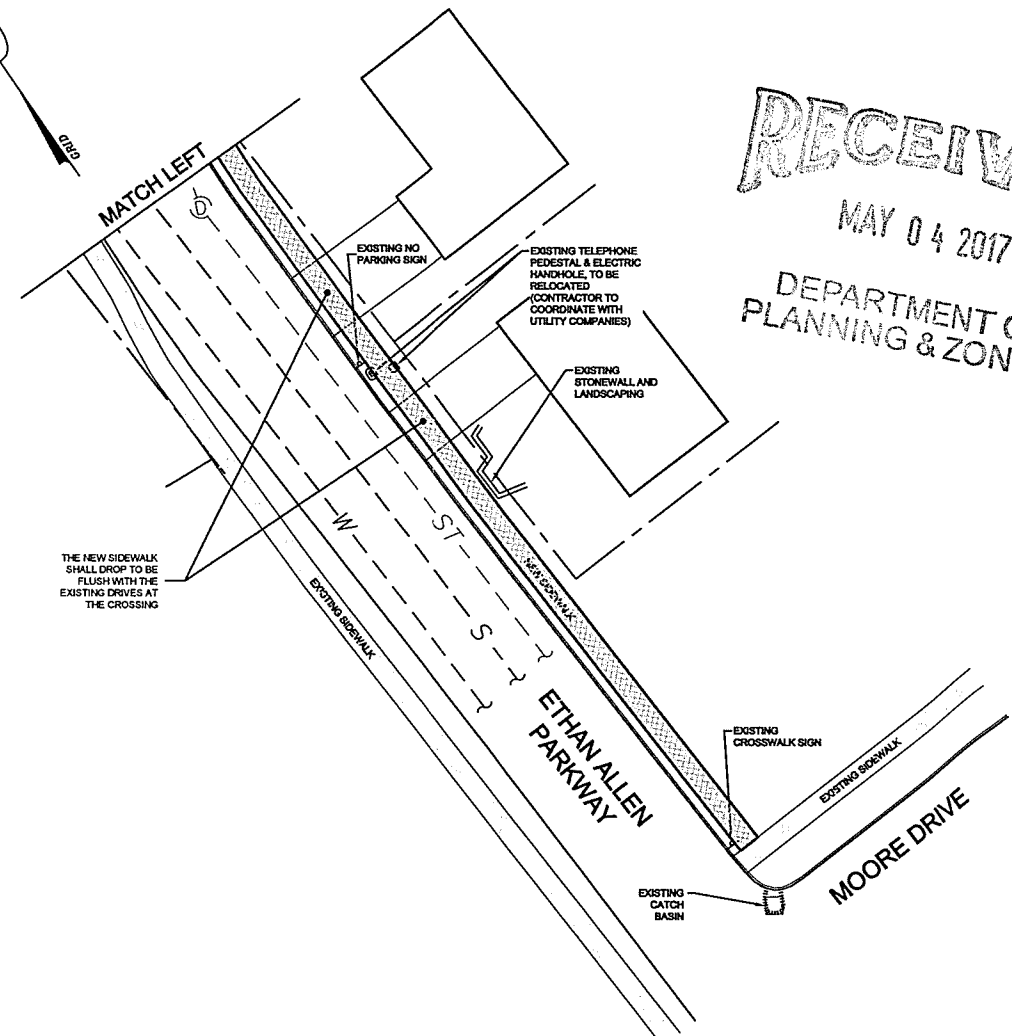
WETLANDS PLAN

proj. n.
07028
survey
Other:
design
DLH
drawn
SEA
checked
DJG
date
04/09/16
scale
1" = 40'
shd. no.

L LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452
Tel: 802.885.4400



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MAY 04 2017
DEPARTMENT OF
PLANNING & ZONING



8-26-16	REVISED PER PRELIMINARY APPROVAL COMMENTS	DLH
1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DLH
4-1-15	REVISED FOR PRELIMINARY RE-FILE TO CITY	DLH
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DLH
4-4-11	REVISE LAYOUT	DLH
10-29-10	REVISE LAYOUT	DLH
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DLH
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DLH
7-13-09	REVISED LIGHTING AND LANDSCAPING	DLH
1-9-08	REVISED DRIVEWAY LAYOUT	DLH
10-5-07	REVISED LAYOUT	DLH
8-7-07	REVISED LAYOUT	DLH
Date	Revision	By

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NOT FOR CONSTRUCTION

Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT
SITE & UTILITY PLAN

proj. no. 07028
survey Others
design DLH
drawn SEA
checked DJG
date 04/09/07
scale 1" = 20'
sht. no. 4

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452

YARD INLET DATA

YI #1	RIM ELEV = 145.8 INSTALLED ON DRYWELL 6" IN IN = 144.0 6" IN OUT = 143.5 BOTTOM = 138.5
YI #2	RIM ELEV = 145.8 INSTALLED ON DRYWELL 6" IN IN = 144.0 6" IN OUT = 143.5 BOTTOM = 138.5
YI #3	RIM ELEV = 141.2 INSTALLED ON DRYWELL 6" IN IN = 138.9 BOTTOM = 133.9

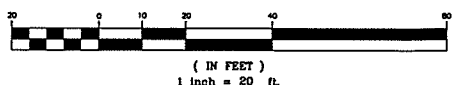
SEE DETAIL ON SHEET 8

NOTES:

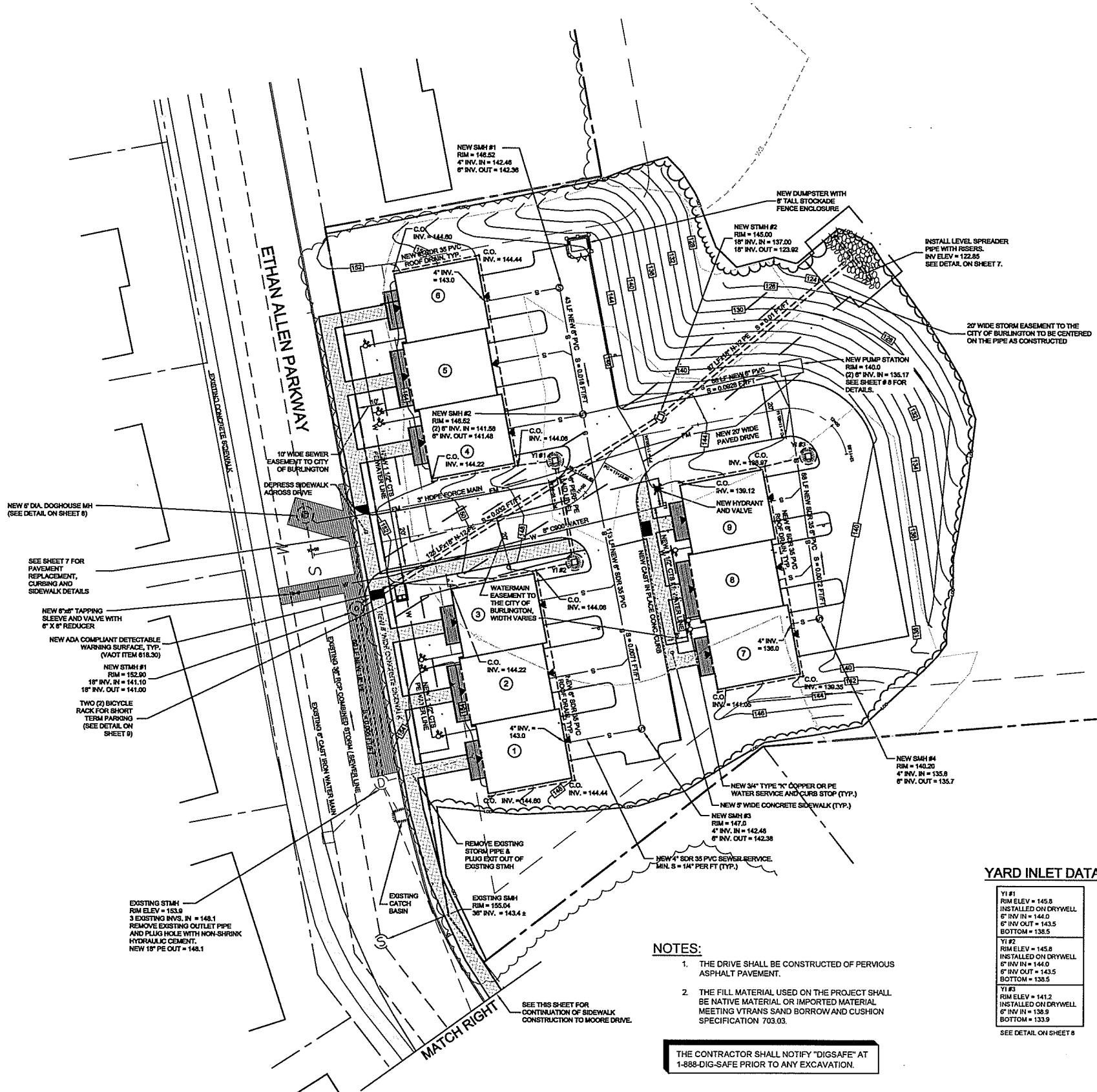
1. THE DRIVE SHALL BE CONSTRUCTED OF PERVIOUS ASPHALT PAVEMENT.
2. THE FILL MATERIAL USED ON THE PROJECT SHALL BE NATIVE MATERIAL OR IMPORTED MATERIAL MEETING VTTRANS SAND BORROW AND CUSHION SPECIFICATION 703.03.

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

GRAPHIC SCALE



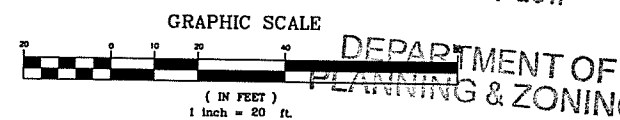
LEGEND	
---	PROJECT BOUNDARY
---	PROPERTY LINE
---	BUILDING SETBACK
N/F	NOW OR FORMERLY
---	EXISTING GROUND CONTOUR
---X---	EXISTING WATER LINE, GATE VALVE & HYDRANT
---S---	EXISTING SANITARY SEWER LINE & MANHOLE
---□---	EXISTING STORM LINE AND CATCH BASIN
---	NEW EASEMENT
---	NEW TREE LINE
---	NEW BUILDING MOUNTED LIGHT
---X---	NEW WATER LINE, GATE VALVE AND HYDRANT
---S---	NEW SANITARY SEWER LINE AND MANHOLE
---□---	NEW STORM LINE AND DRY WELL
⑨	PROPOSED UNIT NUMBER



NO
PARKING
FIRE LANE
VEHICLES
TOWED AT
OWNERS
EXPENSE

NO
PARKING
FIRE LANE
VEHICLES
TOWED AT
OWNERS
EXPENSE

LEGEND	
---	PROJECT BOUNDARY
---	PROPERTY LINE
---	SIDELINE OF EASEMENT
---	BUILDING SETBACK
N/F	NOW OR FORMERLY
---	EXISTING GROUND CONTOUR
---	EXISTING WATER LINE, GATE VALVE & HYDRANT
---	EXISTING SANITARY SEWER LINE & MANHOLE
---	EXISTING STORM LINE AND CATCH BASIN
---	NEW TREE LINE
---	NEW WATER LINE, GATE VALVE AND HYDRANT
---	NEW SANITARY SEWER LINE AND MANHOLE
---	NEW STORM LINE AND CATCH BASIN
9	PROPOSED UNIT NUMBER
GFE	GARAGE FLOOR ELEVATION
138	PROPOSED FINISH GRADE CONTOUR
X 144.60	PROPOSED FINISH SPOT GRADE
(151.6 X)	EXISTING SPOT GRADE



PLANTING SCHEDULE

Key	Botanical Name	Common Name	Size	Quantity	Remarks
Trees					
AF	<i>Acer x freemanii</i> 'Autumn Blaze'	Freeman Maple	2 1/2" to 3" Cal.	3	B&B, Minimum 6 foot branching height
AG	<i>Amelanchier x grandiflora</i>	Apple-Sorberry	1 3/4" to 2" Cal.	7	B&B, Minimum 6 foot branching height
PN	<i>Pinus nigra</i>	Austrian Pine	5' to 6' Height	3	B&B
FR	<i>Prunus sargentii</i>	Sargent Cherry	2" to 2 1/2" Cal.	5	B&B
PS	<i>Pinus sylvestris</i>	Scots Pine	5' to 6' Height	1	B&B
SD	<i>Sorbus decora</i>	Showy Mountainash	1 3/4" to 2" Cal.	6	B&B, Minimum 6 foot branching height
TO	<i>Thuja occidentalis</i>	Arborvitae	5' to 6' Height	10	B&B
Shrubs					
AM	<i>Arundo melanocarpa</i> 'Autumn Magic'	Black Chokeberry	24" to 30" Height	24	B&B or Container
CS	<i>Cornus sericea</i>	Red Osier Dogwood	24" to 30" Height	9	B&B or Container
IV(0)	<i>Ilex verticillata</i> 'Winter Red'	Winterberry (female)	24" to 30" Height	14	B&B or Container
IV(m)	<i>Ilex verticillata</i> 'Southern Gentleman'	Winterberry (male)	24" to 30" Height	2	B&B or Container
PAI	<i>Prunella maritima</i>	Beach Plum	24" to 30" Height	15	B&B or Container
SI	<i>Spiraea japonica</i>	Japanese Spiraea	24" to 30" Height	15	B&B or Container
TM	<i>Taxus x media</i>	Yew	24" to 30" Height	18	B&B or Container

4-28-17	UPDATE PLANTING SCHEDULE	B
4-17-17	REVISED PER PRELIMINARY APPROVAL COMMENTS	D
1-25-16	REVISED PER TECHNICAL REVIEW NOTES	D
4-1-15	REVISED FOR PRELIMINARY RE-FILING TO CITY	D
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	D
4-4-11	REVISE LAYOUT	D
10-29-10	REVISE LAYOUT	D
8-26-10	GENERAL REVISIONS PER COURT APPEAL	D
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	D
7-13-09	REVISED LIGHTING AND LANDSCAPING	D
1-9-08	REVISED DRIVEWAY LAYOUT	D
10-5-07	REVISED LAYOUT	D
8-7-07	REVISED LAYOUT	D
Date	Revision	B

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☐ Preliminary	☐ Construction
☒ Final Local Review	☐ Record Drawing

NOT FOR CONSTRUCTION

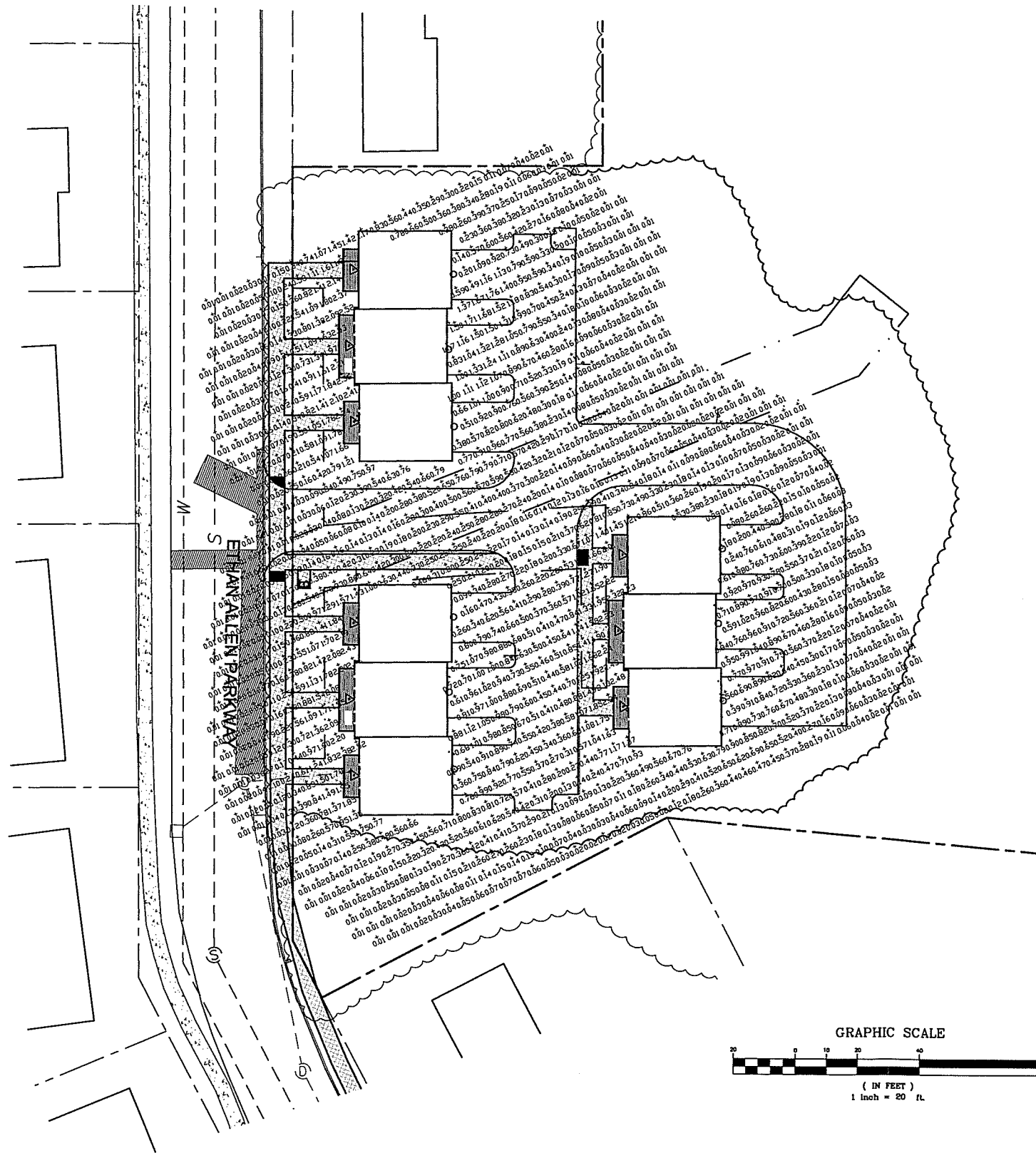
Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT

LANDSCAPING & GRADING PLAN

proj. no.
07028
survey
Others
design
DLH
drawn
SEA
checked
DJG
date
04/09/17
scale
1" = 20'
sheet no.

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Burlington, VT 05401
Tel: 802.255.1234



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CALCULATION SUMMARY						
# PTS	SPACING	AVE	MAX	MIN	MAX/MIN	AVE/MIN
1601	5'	0.57	2.76	0.01	549.46	114.27

ELLIS/ALLES (07028) LUMINAIRE SCHEDULE						
TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	QTY
RND	△	RAB LIGHTING, 1 (1) "RNDL" WBLED18 (ROUND WALL MOUNT) / BLEDR18 (42" ROUND B	(3)	1240	1.00	9
RND2	○	RAB LIGHTING, 1 (1) "RNDL" WBLED18 (ROUND WALL MOUNT) / BLEDR18 (42" ROUND B	(3)	1240	1.00	9

△ LIGHTING SPOT LEVEL (IN FOOT CANDLES)

1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DI
4-1-15	REVISED FOR PRELIMINARY RE-FILING TO CITY	DI
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DI
4-4-11	REVISE LAYOUT	DI
10-29-10	REVISE LAYOUT	DI
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DI
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DI
7-13-09	REVISED LIGHTING AND LANDSCAPING	DI
1-9-08	REVISED DRIVEWAY LAYOUT	DI
10-5-07	REVISED LAYOUT	DI
8-7-07	REVISED LAYOUT	DI
Date	Revision	DI

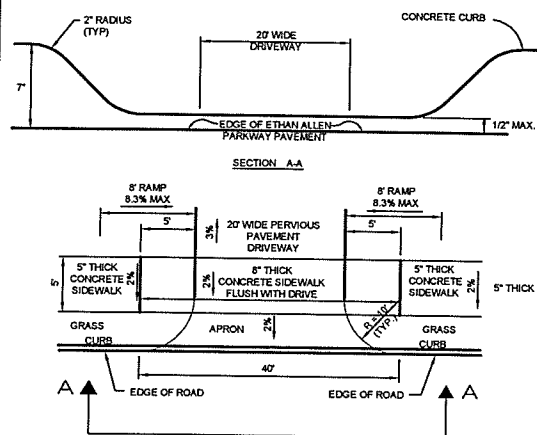
These plans shall only be used for the purpose shown below:
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☐ Preliminary
☒ Final Local Review
☐ Act 250 Review
☐ Construction
☐ Record Drawing

Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont
A PLANNED RESIDENTIAL DEVELOPMENT

LIGHTING GRID PLAN

LD LAMOREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452
Tel: 802-878-4450

proj. n.
07028
survey
Other
design
DLH
drawn
SEA
check
DJG
date
04/09/
scale
1" = 2'
shl. no

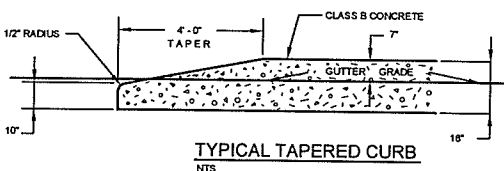


DRIVEWAY NOTES

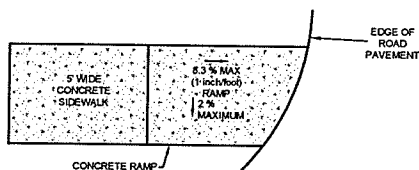
1. THE NEW PERVIOUS PAVEMENT APRON SHALL BE CONSTRUCTED WITH THE SAME CROSS-SECTION AS THE REMAINDER OF THE DRIVEWAY.
2. 8" THICK SIDEWALK EXTENDS 5' BEYOND BOTH SIDES OF THE DRIVEWAY

DRIVEWAY APRON & CURB CUT WITH GRASS STRIP

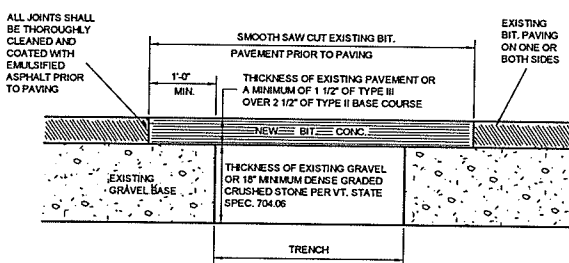
NTS



TYPICAL TAPERED CURB
NTS

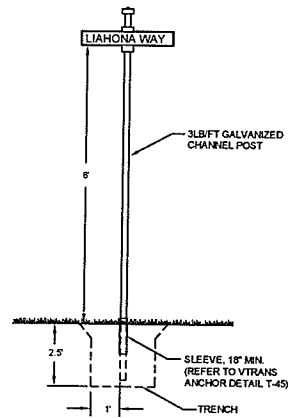


TYPICAL SIDEWALK RAMP DETAIL
NTS



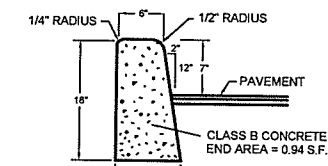
REPLACEMENT OF EXISTING BITUMINOUS PAVEMENT
NTS

GRADATION REQUIREMENTS		
MATERIAL	SIEVE SIZE	PERCENT (%) PASSING
SAND BORROW AND CUSHION VT SPEC 703.03	2"	100 %
	1 1/2"	90-100 %
	1/2"	70-100 %
	#4	60-100 %
	#100	0-20 %
PEASTONE - VT SPEC 704.11	#200	0-5 %
DRAINAGE AGGREGATE VT SPEC 704.16A FINE	3/4"	100 %
	3/8"	90 TO 100 %
	#4	0-5 %
	#8	0-5 %
CRUSHED GRAVEL FOR SUBBASE VT SPEC 704.05A FINE	2"	100 %
	1 1/2"	90-100 %
	#4	30-60 %
	#100	0-12 %
	#200	0-6 %
DENSE GRADED CRUSHED STONE VT SPEC 704.06	3 1/2"	100 %
	3"	90-100 %
	1 1/2"	75-100 %
	#4	30-60 %
	#200	15-40 %



STREET NAME SIGN

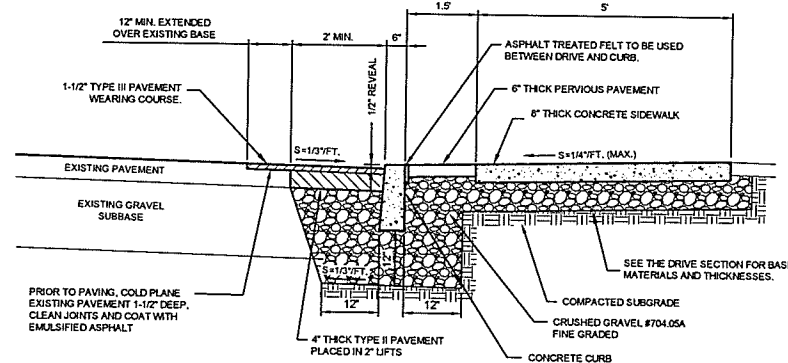
NTS



CONCRETE CURB

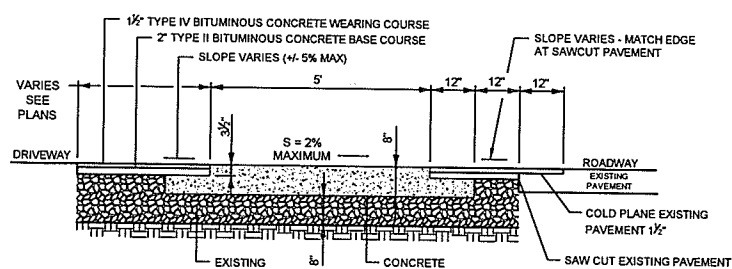
NTS

- NOTES:
- 1) CURBING SHALL BE CONSTRUCTED IN 10' SECTIONS WITH 1/8" JOINT BETWEEN SECTIONS.
 - 2) CURBING EXPANSION JOINTS SHALL BE CONSTRUCTED EVERY 20' AND SHALL BE CONSTRUCTED OF MATERIAL CONFORMING TO AASHTO DESIGNATION M-153 (1/2" SPONGE RUBBER OR CORK).
 - 3) ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS. SHALL BE AIR ENTRAINMENT AT NOT LESS THAN 5% AND NOT MORE THAN 7%, AND SHALL HAVE MINIMUM 20% FLY ASH CONTENT.

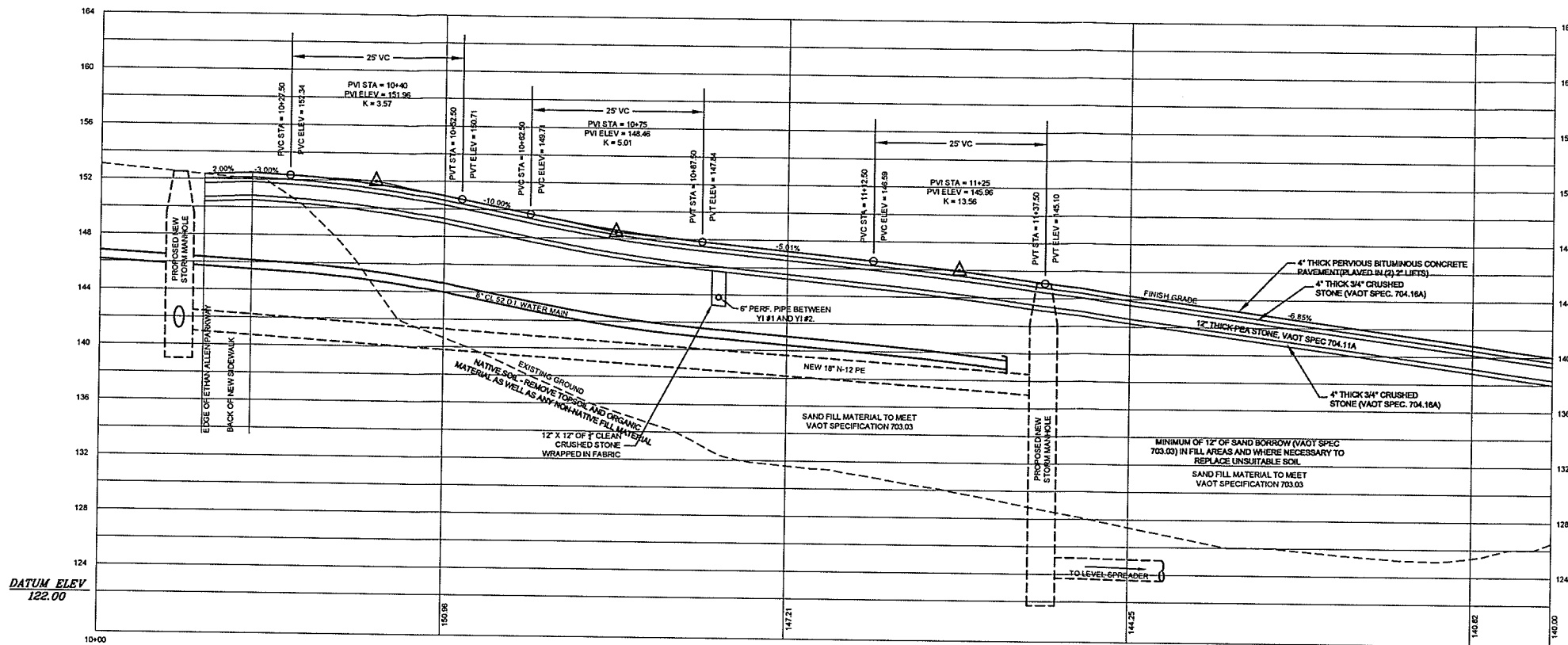


NEW CONCRETE CURB & SIDEWALK WITH DEPRESSED CONCRETE CURB AT ENTRANCE

NTS



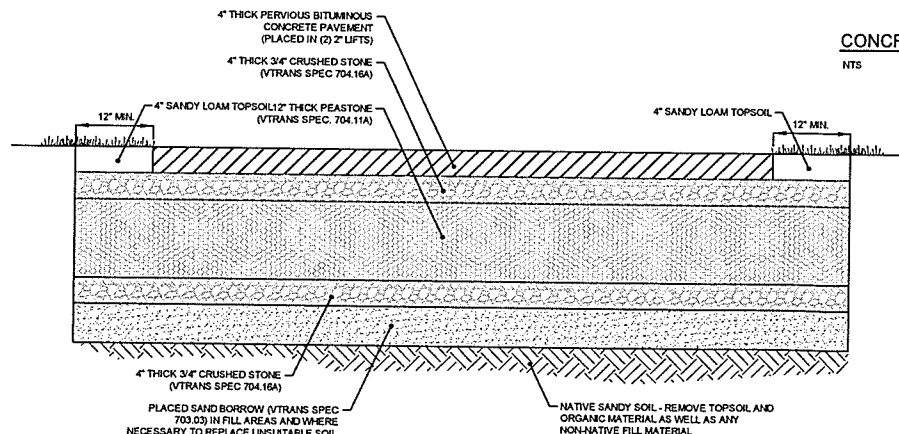
TYPICAL 8" THICK CONCRETE SIDEWALK ACROSS DRIVEWAYS
NTS



DRIVE PROFILE

SCALE: H: 1" = 10', V: 1" = 5'

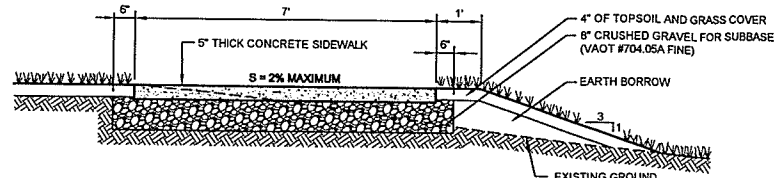
PERVIOUS PAVEMENT COMPOSITION	
SIEVE SIZE	% BY WEIGHT PASSING SQUARE SIEVES
3/4"	100
1/2"	85-100
3/8"	55-75
4"	10-25
8"	5-10
200"	2-4
TOTAL AGGREGATE	92-94.5
BITUMEN % OF TOTAL MIX	5.5 - 6



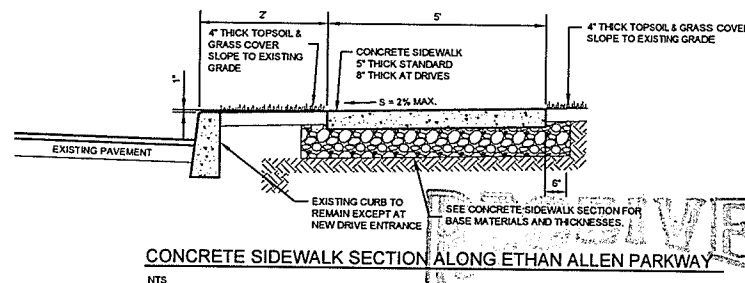
- NOTES:
1. SEE WRITTEN TECHNICAL SPECIFICATIONS FOR ADDITIONAL MATERIAL AND INSTALLATION REQUIREMENTS.
 2. AFTER STRIPPING THE TOPSOIL, ORGANIC MATERIAL, AND NON-NATIVE SOIL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO INSPECT THE SUBGRADE SOILS (PRIOR TO PLACEMENT OF ANY SELECT MATERIALS, INCLUDING SAND BORROW).
 3. PRIOR TO PLACING THE LOWER COURSE OF 3/4" CRUSHED STONE, THE CONTRACTOR SHALL PROVIDE A TANDEM AXLE DUMP TRUCK TO PERFORM A TRUCK TEST. THE PURPOSE OF THIS TEST IS TO VISUALLY IDENTIFY ANY INCONSISTENCIES IN THE DENSITY OR QUALITY OF THE UNDERLYING SOILS PRIOR TO PLACEMENT OF SELECT MATERIALS. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SAND BORROW.

TYPICAL PERVIOUS DRIVE / PARKING AREA CROSS SECTION

NTS



CONCRETE SIDEWALK SECTION
NTS



CONCRETE SIDEWALK SECTION ALONG ETHAN ALLEN PARKWAY
NTS

DEPARTMENT OF PLANNING & ZONING

Date	Revision	By
4-14-17	REVISED POROUS PAVEMENT DETAIL PER CITY	NDS
6-17-16	REVISED PER PRELIMINARY PLAN APPROVAL	DLH
1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DLH
4-1-15	REVISED FOR PRELIMINARY RE-FILING TO CITY	DLH
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DLH
4-4-11	REVISE LAYOUT	DLH
10-29-10	REVISE LAYOUT	DLH
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DLH
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DLH
7-13-09	REVISED LIGHTING AND LANDSCAPING	DLH
1-9-08	REVISED DRIVEWAY LAYOUT	DLH
10-5-07	REVISED LAYOUT	DLH
8-7-07	REVISED LAYOUT	DLH

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☐ Preliminary	☐ Construction
☐ Final Local Review	☐ Record Drawing

NOT FOR CONSTRUCTION

Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT

DRIVE PROFILE, TYPICALS
AND SPECIFICATIONS

proj. no. 07028
survey
Others
design
DLH
drawn
SEA
checked
DJG
date
04/09/07
scale
N.T.S.
sh. no. 7

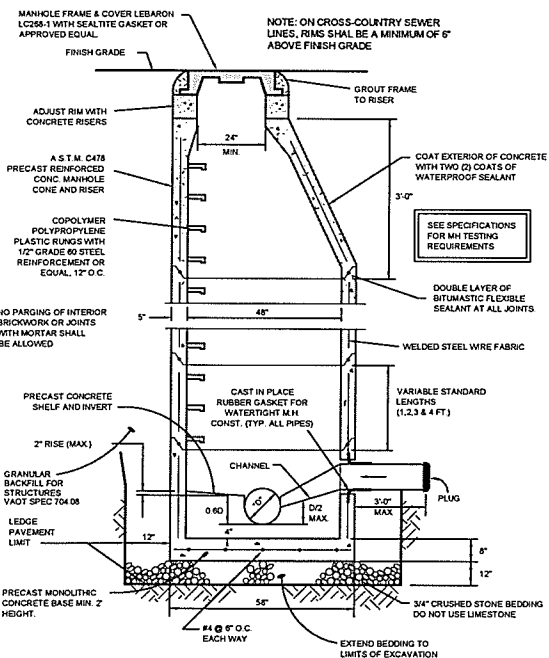
LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452
Tel. 802.876.1150

GENERAL CONSTRUCTION NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2006, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2003 EDITION), THE BURLINGTON ZONING ORDINANCE REQUIREMENTS AND THESE PLANS.
- THE CONTRACTOR SHALL CONTACT ALL UTILITIES BEFORE EXCAVATION TO VERIFY THE LOCATION OF ANY UNDERGROUND LINES. THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-344-7233 (1-888-DIG-SAFE) & THE CITY OF BURLINGTON AT (802)855-5630 PRIOR TO ANY EXCAVATION.
- UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. THE CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH UTILITY OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING SURFACES, SOLS, VEGETATION, PAVEMENT AND STRUCTURES NECESSARY TO CONSTRUCT THIS PROJECT UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL, DEBRIS AND TRASH FROM THE SITE UPON COMPLETION OF CONSTRUCTION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A HAZARD OR A SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER, APPLY CALCIUM CHLORIDE OR SWEEP ASPHALT ROADS WITH A POWER BROOM AS DUST CONTROL.
- ANY SURFACES, LINES, OR STRUCTURES WHICH HAVE BEEN DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THE CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS.
- CONSTRUCTION OBSERVATION AND CERTIFICATION IS OFTEN REQUIRED AS A CONDITION OF STATE AND LOCAL PERMITS. IT IS RECOMMENDED THAT CONSTRUCTION OF THE IMPROVEMENTS DETAILED ON THESE PLANS BE OBSERVED BY LAMOREUX & DICKINSON CONSULTING ENGINEERS INC. (L&D) TO DETERMINE IF THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. L&D WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT MAY ARISE FROM FAILURE TO FOLLOW THESE PLANS AND SPECIFICATIONS AND THE DESIGN INTENT THAT THEY CONVEY. ANY CHANGES MADE IN THE PLANS AND SPECIFICATIONS OR IN THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS WITHOUT L&D'S PRIOR KNOWLEDGE AND CONSENT, AND/OR FAILURE TO SCHEDULE OBSERVATION OF THE WORK AND TESTING IN PROGRESS.
- FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY A MINIMUM OF ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTINUOUS TWO-WAY TRAFFIC WILL BE REQUIRED AT NIGHT, DURING PEAK HOURS, AND WHENEVER POSSIBLE DURING ACTUAL CONSTRUCTION ACTIVITIES. TEMPORARY CONSTRUCTION SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE ERRECTED BY THE CONTRACTOR IN ACCORDANCE WITH STATE AND CITY STANDARDS.
- TO ASSURE COMPLIANCE WITH THE PLAN(S), THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS IN ADVANCE OF STARTING ANY WORK, BEGINNING INSTALLATION OF ANY UTILITIES, BRINGING IN ANY NEW GRAVEL FOR THE NEW PAVED AREAS, PAVING, AND FINAL INSPECTION.
- TOPSOIL SHALL BE STOCKPILED, SEED, AND MULCHED UNTIL REUSED. SILT FENCE SHALL BE PLACED AND STAKED CONTINUOUSLY AROUND THE DOWNSLOPE PERIMETER OF THE TOPSOIL PILES.
- HEALTHY EXISTING TREES AS SHOWN ON THE SITE PLAN TO BE SAVED SHALL BE PROTECTED BY THE CONTRACTOR.
- OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND SILT FENCE SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER.
- AT COMPLETION OF GRADING, SLOPES, DITCHES, AND ALL DISTURBED AREAS SHALL BE SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
- ALL FILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR, UNLESS OTHERWISE SPECIFIED.

SANITARY SPECIFICATIONS

- SANITARY SEWER PIPES SHALL BE OF THE SIZE AND TYPE INDICATED ON THE PLANS. PVC PIPE SHALL BE SDR 35 CONFORMING TO ASTM D-3034, ASTM F-477, CORRUGATED METAL PIPE SHALL CONFORM TO AASHTO M-190 FOR ACCOMP PIPE AND AASHTO M-246 TYPE B FOR POLYMER COATED STEEL PIPE. CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO AASHTO M294, TYPE S (SMOOTH LINED).
- ALL NEW GRAVITY SANITARY SEWER MAINS SHALL BE LEAK TESTED BY A LOW PRESSURE AIR TEST AND DEFLECTION TESTED. THE LOW PRESSURE AIR TEST WILL BE USED TO SIMULATE INFILTRATION OR EXFILTRATION INTO OR OUT OF ALL GRAVITY SANITARY SEWERS. ALL TESTING WILL BE CONDUCTED UNDER THE SUPERVISION OF THE ENGINEER. AIR TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM C828-80. THE MINIMUM ALLOWED TIME FOR A PRESSURE DROP FROM 3.5 PSI TO 2.5 PSI SHALL BE 12 MINUTES PER 100 FEET OF 8" SEWER. AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS, THE DEFLECTION TEST MAY BE PERFORMED. NO PIPE SHALL EXCEED A DEFLECTION OF FIVE PERCENT (5%) IF THE DEFLECTION TEST IS RUN USING A RIGID BALL OR MANDEREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. ALL MANHOLE AND PIPELINE MATERIALS, METHODS AND TESTING SHALL BE IN ACCORDANCE WITH CITY AND STATE STANDARDS AND THESE PLANS.
- ALL SANITARY SEWER MANHOLES SHALL BE TESTED PRIOR TO CONSTRUCTION OF THE INVERT BY THE VACUUM TEST METHOD DESCRIBED IN THE TECHNICAL SPECIFICATIONS. FOR MANHOLES UP TO 10' DEEP THE MINIMUM ALLOWED TIME FOR A VACUUM DROP FROM 10" TO 6" OF MERCURY SHALL BE 2 MINUTES. FOR MANHOLES GREATER THAN 10' DEEP THE MINIMUM ALLOWED TIME SHALL BE 2 MINUTES AND 30 SECONDS.



SANITARY SEWER SERVICE CONNECTION

N.T.S.

SEE SEWER MANHOLE DETAIL ON THIS SHEET FOR REMAINING MANHOLE REQUIREMENTS.

NEW 3" HOPE PIPE IN PROVIDE TROUGH TO TRANSITION FROM NEW 3" PIPE TO 36" PIPE

REMOVE TOP HALF OF EXISTING PIPE

WATER TIGHT INTEGRAL PIPE SEALING STRIP, TYP.

EXISTING 36" RCP SEWER MAIN

SEAL BETWEEN PIPE AND DOGHOUSE WITH WATERPROOF MORTAR, WELL WORKED

CAST IN PLACE TROUGH SLOPE TO MATCH EXISTING PIPE SLOPE

MONOLITHIC BASE, SEPARATE FROM DOGHOUSE BASE RISER

WATER TIGHT INTEGRAL SEAL AND WATERPROOF MORTAR, WELL WORKED BETWEEN PIPE AND DOGHOUSE OPENING

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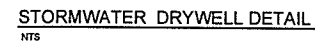
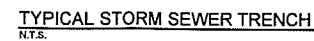
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These plans shall only be used for the purpose shown below:

☐ Sketch/Concept	☐ Act 250 Review
☐ Preliminary	☐ Construction
☒ Final Local Review	☐ Record Drawing

 LAMOUREUX & DICKINSON Consulting Engineers, Inc. 14 Morse Drive Essex Junction, VT 05452	scale
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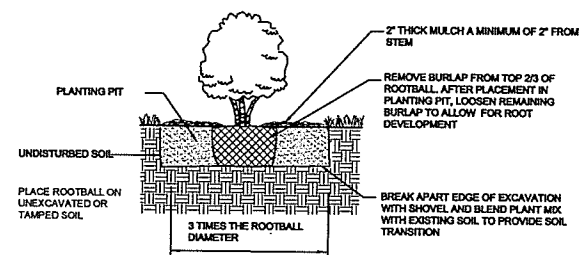
TREE AND SHRUB PLANTINGS

1. ALL PLANT MATERIALS SHALL CONFORM TO THE INTERNATIONAL SOCIETY OF ARBORCULTURE, PRINCIPALS AND PRACTICES OF PLANTING TREES AND SHRUBS, AND THE MOST RECENT VERSION OF THE AMERICAN STANDARD FOR NURSERY STOCK - ANSI Z30.1.
2. CONTRACTOR SHALL STAKE ALL PLANT LOCATIONS AND THE ENGINEER SHALL APPROVE PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL PROTECT LANDSCAPE PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS. PLANTS THAT ARE TO BE TEMPORARILY STORED ON SITE UNTIL READY FOR INSTALLATION SHALL BE KEPT SHADDED AND PROTECTED WITH SOIL, BARK MULCH OR OTHER ACCEPTABLE MATERIAL AND REGULARLY WATERED.
4. DURING INSTALLATION OF LANDSCAPE PLANTINGS, CONTRACTOR SHALL DETERMINE WHERE EXISTING UNDERGROUND UTILITIES ARE LOCATED TO AVOID INTERFERENCE.
5. STREET TREES TO ARRIVE FROM NURSERY WITH 6 FEET/2 METERS BETWEEN THE FINISHED GRADE AND THE FIRST TREE BRANCH.
6. DO NOT PRUNE THE TREES OR SHRUBS AT PLANTING. PRUNE ONLY DEAD OR CRUSHED ROOTS AND DEAD OR INJURED BRANCHES.
7. TREES SHALL HAVE A MINIMUM 50% LIVE CROWN RATIO.
8. EACH TREE AND SHRUB MUST BE PLANTED SUCH THAT THE ROOT FLARE AND MAIN ORDER ROOTS ARE VISIBLE AT THE TOP OF THE ROOT BALL WHERE THE MAIN ORDER ROOTS ARE NOT VISIBLE, EXCESS SOIL SHALL BE REMOVED TO LOCATE THEM. PLANT TREES AND SHRUBS SO THAT THE MAIN ORDER ROOTS ARE AT FINISHED GRADE. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL OR MULCH.
9. EXAMINE ENTIRE TREE AND SHRUB AND REMOVE ALL NURSERY TAGS, TREE WRAP, ROPE, STRING AND SURVEYOR TAPE PRIOR TO PLANTING TO PREVENT GIRDLING.
10. FOR ALL TREES AND SHRUBS:
CUT AND REMOVE ALL WIRE MESH BASKET, CUT AND REMOVE ROPE AND BURLAP WRAP FROM TOP 2/3 OF ROOTBALL. CUT AND REMOVE ALL WIRE MESH BASKET, CUT AND REMOVE ROPE AND BURLAP WRAP FROM TOP 2/3 OF ROOTBALL. AFTER PLACEMENT IN PLANTING PIT, LOOSEN REMAINING BURLAP TO ALLOW FOR ROOT DEVELOPMENT. IF THE TREE OR SHRUB HAS SYNTHETIC OR TREATED BURLAP, REMOVE IT ENTIRELY AFTER PLACING ROOT BALL IN PLANTING PIT.
11. BREAK APART EDGE OF EXCAVATION WITH SHOVEL AND BLEND PLANT MIX WITH EXISTING SOIL TO PROVIDE SOIL TRANSITION.
12. TREE PIT AREA SHALL HAVE A MINIMUM DEPTH OF 36". SHRUB PLANTING PIT SHALL HAVE A 24" MINIMUM DEPTH. THE TREE PIT AREA SHALL HAVE THE PLANT MIX SPECIFIED BELOW.
13. STAKING REQUIRED ONLY IN SITUATIONS WHERE TREES WILL BE SUBJECTED TO WINDY CONDITIONS AS DETERMINED BY THE ENGINEER. STAKES SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF THE WARRANTY PERIOD.
14. PLANT MIX SHALL CONSIST OF THE FOLLOWING RATIO: 1/3 PART COMPOST, 2/3 PARTS TOPSOIL. PLANT MIX TO BE OBTAINED AND APPROVED FOR QUALITY BY ENGINEER PRIOR TO INSTALLATION. THE CORRECT GRADE OF COMPOST IS AVAILABLE FROM, BUT NOT LIMITED TO, THE FOLLOWING MANUFACTURERS: INTERVALE COMPOST PRODUCTS, VERMONT NATURAL PRODUCTS AND VERMONT COMPOST COMPANY.
15. FOLLOWING PLANTING, FERTILIZER AND MYCORRHIZAL FUNGI SHALL BE APPLIED TO TREES AND SHRUBS.
16. ONCE ALL LANDSCAPE PLANTINGS HAVE BEEN INSTALLED, PLACE A LIGHT LAYER OF HEMLOCK OR PINE BARK MULCH, MAXIMUM OF 2" THICK, ON PLANTING BEDS. NO DYED MULCH WILL BE ACCEPTED.
17. WATER ALL TREES AND SHRUBS THOROUGHLY ONCE PLANTED TO PULL SOILS AGAINST ROOT BALL AND SETTLE AIR POCKETS. ADDITIONAL SOIL MAY BE NEEDED. WATER REGULARLY TO ENSURE COMPLETE COMPACTION. RE-SETTLED PLANTS TO PROPER GRADE AND POSITION. RESTORE ADJACENT WATERED MATERIAL AND REMOVE DEAD MATERIAL. THERE SHALL BE NO WATERING BERM INSTALLED AROUND PLANTS.
18. CORRECT WORK AS SOON AS POSSIBLE AFTER DEFICIENCIES BECOME APPARENT AND WEATHER PERMITS.
19. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL LANDSCAPE PLANTINGS AND SHALL INCLUDE PRUNING, CULTIVATING, WEEDING, WATERING, AND APPLICATION OF APPROPRIATE INSECTICIDES AND FUNGICIDES NECESSARY TO MAINTAIN PLANTS FREE OF INSECTS AND DISEASE DURING CONSTRUCTION AND WARRANTY AND UNTIL ACCEPTANCE. CONTRACTOR SHALL WATER ALL PLANTINGS DAILY.
20. ALL LANDSCAPE PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER PLANTING.

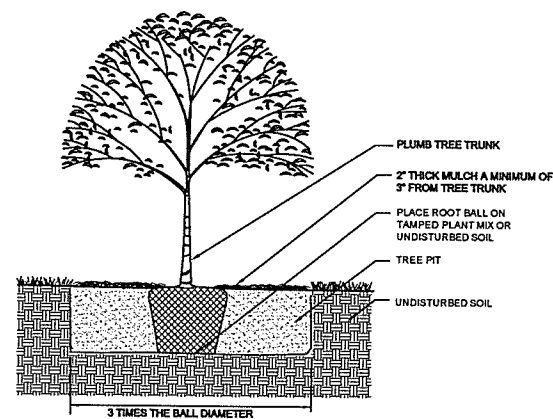
ALL DISTURBED AREAS THAT DO NOT HAVE AN IMPERVIOUS SURFACE (PAVEMENT, SIDEWALKS, ROOFS) SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO OCTOBER 1. ANY WORK PERFORMED AFTER SEPTEMBER 15 OF EACH YEAR SHALL BE STABILIZED WITH MULCH SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS. THE SEEDING SHALL BE IN SOIL AND THE APPLICATION OF SEED, FERTILIZER, LIME (WHERE APPLICABLE), AND MULCH SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1. A MINIMUM OF 4" OF APPROVED TOPSOIL SHALL BE PLACED IN ALL AREAS. PLACEMENT OF TOPSOIL SHALL NOT BE DONE WHEN THE GROUND OR TOPSOIL IS FROZEN, EXCESSIVELY WET, OR OTHERWISE IN A CONDITION DETRIMENTAL TO THE WORK. FOLLOWING PLACEMENT OF TOPSOIL, THE SURFACE SHALL BE RAKED, ALL STONES, LUMPS, ROOTS, OR OTHER OBSTRUCTIONAL MATERIAL SHALL BE REMOVED.
2. SEED MIXTURES SHALL CONFORM TO THE SEED MIX TABLES SHOWN ON THIS SHEET AND BE SPREAD UNIFORMLY IN ALL AREAS INDICATED ON THE PLANS AT THE SPECIFIED RATE. FOR SEEDING BETWEEN SEPTEMBER 1 AND OCTOBER 1, WINTER RYE SHALL BE OVERSEED AT AN APPLICATION RATE OF 100 POUNDS PER ACRE.
3. FERTILIZER SHALL CONFORM TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS AND BE APPLIED ONLY AFTER PERFORMING A SOIL TEST AND BE APPLIED BASED UPON SOIL DEFICIENCIES. LIME SHALL ONLY BE APPLIED AS NEEDED BASED UPON A SOIL pH TEST.
4. WITHIN 24 HOURS OF APPLICATION OF SEED, FERTILIZER AND LIME, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A MINIMUM RATE OF 2 TONS PER ACRE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A FULL GROWTH OF GRASS IN ALL DISTURBED AREAS TO BE RE-VEGETATED. VEGETATION GROWTH SHALL BE PERMANENT AND SUFFICIENT TO PREVENT EROSION OF THE UNDERLYING SOIL UNDER ALL CONDITIONS OF PRECIPITATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND CARING FOR SEEDING, MULCHED, AND AREAS OF ESTABLISHED VEGETATION UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER.

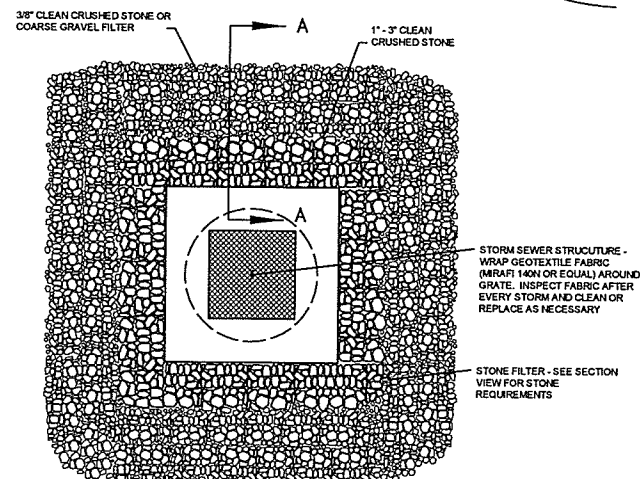
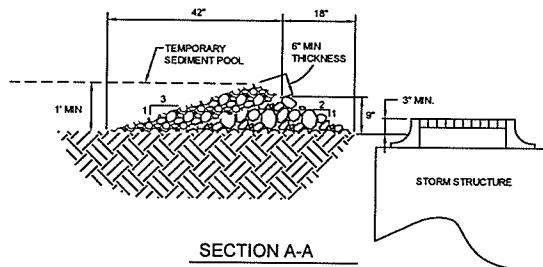
URBAN MIX GRASS SEED		
% BY WEIGHT	LBS. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREEPING RED FESCUE
31.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120 # LIVE SEED PER ACRE	



SHRUB PLANTING DETAIL



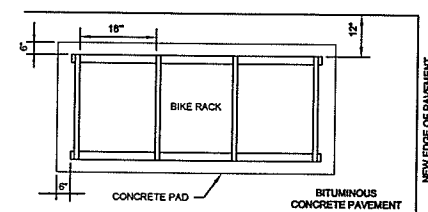
STREET TREE PLANTING DETAIL



PLAN VIEW

- NOTES:**
1. INLET PROTECTION TO BE PROVIDED AT ALL CATCHBASINS OR YARD INLETS.
 2. THE STONE FILTER SHALL BE INSPECTED FOLLOWING EACH STORM. ACCUMULATED SEDIMENTS SHALL BE REMOVED AND THE STONE REPLACED AS NECESSARY.
 3. THE LIMITS OF THE STONE AROUND THE INLET MAY BE MODIFIED BY THE ENGINEER DEPENDING ON THE TOPOGRAPHY DIRECTING RUNOFF TO THE CATCH-BASIN.

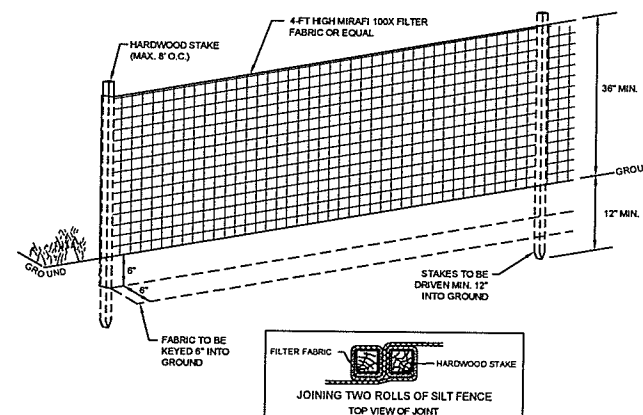
SECTION



PLAN

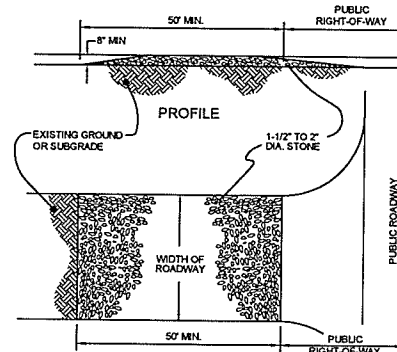
- NOTES:
- PLAN**
NTB
1. BIKE RACK SHALL BE POWDER COATED STAINLESS STEEL. INSTALL BIKE RACK ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 2. BIKE RACKS SHALL BE POWDER COATED BLACK AND INCLUDE 4 OR 6 RACKS, AS INDICATED ON PLANS.
 3. SEE PLAN FOR LOCATION AND LAYOUT.

BIKE RACK DETAIL



- NOTES**
- 1) USE ONLY MANUAL METHODS OF INSTALLATION AND CLEANING WITHIN WETLAND AND BUFFER ZONE.
 - 2) PRIOR TO BEGINNING OF CONSTRUCTION OR EARTHMOVING, THE CONTRACTOR SHALL INSTALL A CONTINUOUS SILT FENCE AT THE LIMIT OF DISTURBANCE SHOWN ON THE SITE PLAN.
 - 3) FROZEN MATERIAL SHALL NOT BE USED TO KEY IN THE BOTTOM OF THE SILT FENCE. IF NECESSARY, GRADUAL BORROW SHALL BE USED BY THE CONTRACTOR TO KEY IN THE SILT FENCE RATHER THAN FROZEN MATERIAL.
 - 4) THE CONTRACTOR SHALL INSTALL SILT FENCE AROUND THE PERIMETER OF TOPSOIL STOCKPILES AND AT OTHER LOCATIONS AS NEEDED.

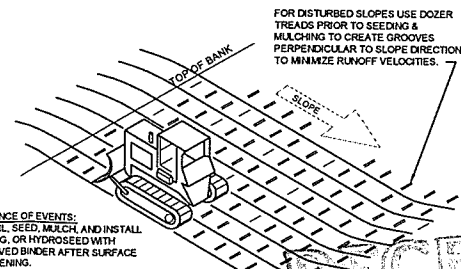
TEMPORARY SILT FENCE



PLAN

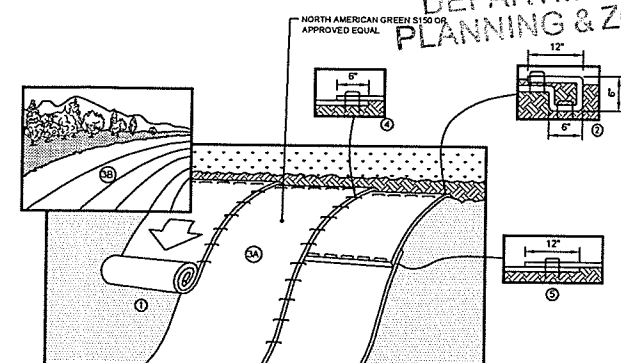
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH CRUSHED GRANULAR STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT TRACKED, SPILLED, OR WASHED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
2. THE USE OF CALCIUM CHLORIDE OR WATER MAY BE NECESSARY TO CONTROL DUST DURING THE SUMMER.
3. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.

STABILIZED CONSTRUCTION EXIT



SEQUENCE OF EVENTS:
TOPSOIL, SEED, MULCH, AND INSTALL
MATTING, OR HYDROSEED WITH
APPROVED BINDER AFTER SURFACE
ROUGHENING.

SLOPE GRADING



1. EROSION MATTING WILL BE USED ON SLOPES STEEPER THAN 3:1 V OR AS SHOWN ON THE PLANS.
2. PREPARE SOIL BEFORE INSTALLING MATTING, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. SOIL SURFACE SHALL BE GRADED SMOOTH WITH WITHOUT ROOTS, STONES OR OTHER PROTRUSIONS THAT WILL PREVENT THE MATTING FROM BEING APPLIED IN FULL CONTACT WITH THE SOIL SURFACE.
3. BEGIN AT THE TOP OF THE SLOPE BY EXTENDING THE MATTING IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF MATTING EXCEEDING BEYOND THE TOP OF THE SLOPE. SECURELY ANCHOR THE MATTING WITH A ROW OF STAPLE/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF MATTING OVER SEED OR OVER SEED AND COMPACTED SOIL. SECURE THE COMPACTED SOIL WITH A ROW OF STAPLE/STAKES SPACED APPROXIMATELY 12" PART ACROSS THE WIDTH OF THE MATTING.
4. ROLL THE MATTING (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. INSURE THAT THE APPROPRIATE SIDE OF THE MATTING IS AGAINST THE SOIL SURFACE. ALL MATTING MUST BE SECURELY FASTENED TO SOIL SURFACE PLACING STAPLE/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE MANUFACTURERS STAPLE PATTERN. STAPLES OR STAPLE/STAKES MUST BE PLACED IN THE MATTING AT THE TOP OF THE SLOPE. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE MATTING.
5. THE EDGES OF PARALLEL MATTING MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP DEPENDING ON MATTING TYPE.
6. CONSECUTIVE MATTING SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) - WITH THE UPPER MATTING PLACED OVER THE TOP OF THE LOWER MATTING WITH AN APPROXIMATE 12" OVERLAP. STAPLING THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE MATTING WIDTH.

EROSION MATTING FOR SLOPES

1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DLH
4-1-15	REVISED FOR PRELIMINARY RE-FILING TO CITY	DLH
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DLH
4-4-11	REVISE LAYOUT	DLH
10-29-10	REVISE LAYOUT	DLH
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DLH
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DLH
7-13-09	REVISED LIGHTING AND LANDSCAPING	DLH
1-9-08	REVISED DRIVEWAY LAYOUT	DLH
10-5-07	REVISED LAYOUT	DLH
8-7-07	REVISED LAYOUT	DLH
Date	Revision	By

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- | | |
|--|---|
| ☐ Sketch/Concept | ☐ Act 250 Review |
| ☐ Preliminary | ☐ Construction |
| ☒ Final Local Review | ☐ Record Drawing |

Lands of

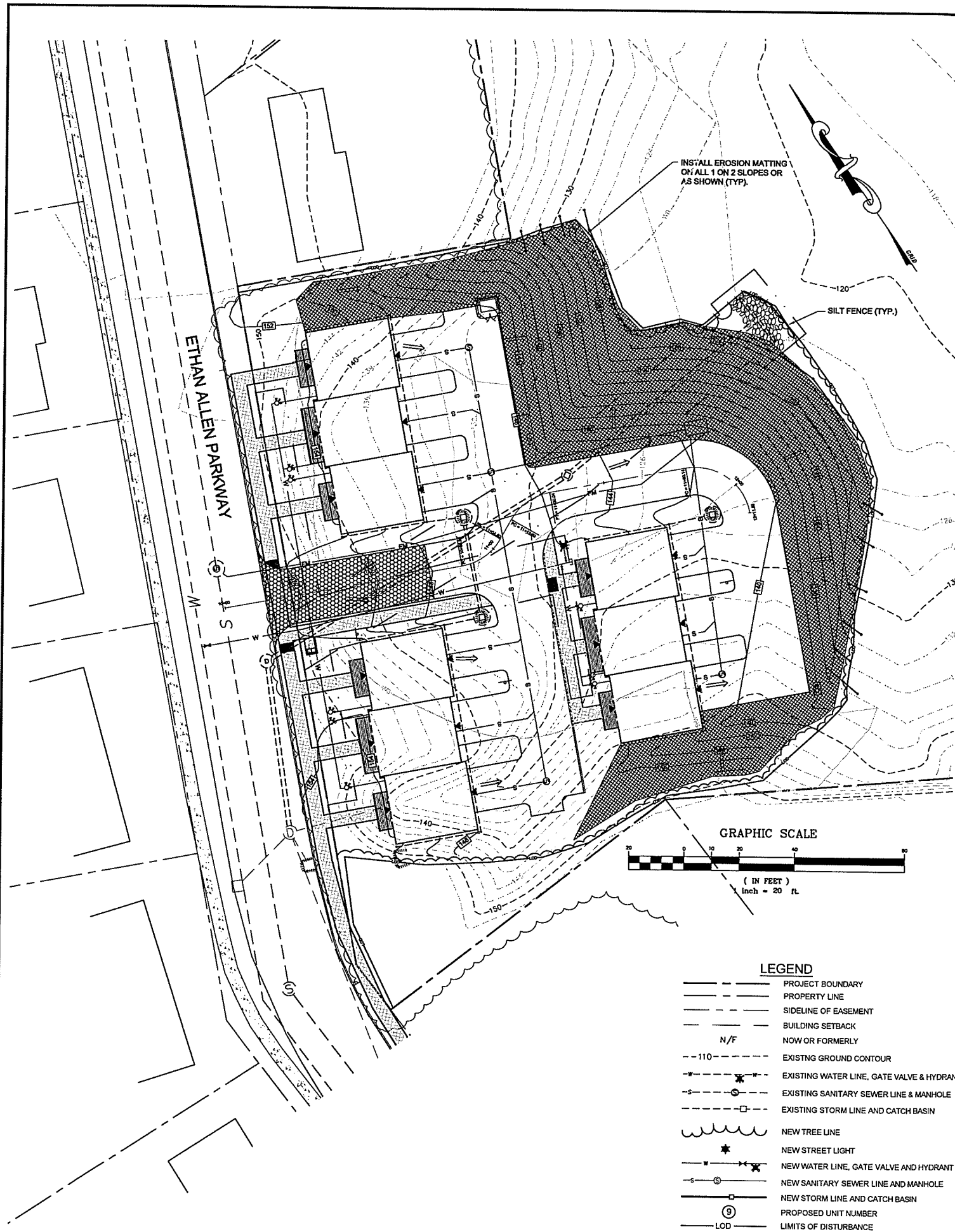
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

**A PLANNED RESIDENTIAL DEVELOPMENT
LANDSCAPING & EROSION
DETAILS AND
SPECIFICATIONS**

NOT FOR CONSTRUCTION

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive

proj. no.	07028
survey	Others
design	DLH
drawn	SEA
checked	DJG
date	04/09/07
scale	N.T.S.
sht. no.	



1. EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INCLUDES A 9 UNIT RESIDENTIAL PUD, ACCESS DRIVE, SIDEWALKS, DRAINAGE, OTHER RELATED ITEMS. THE AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA.

THE TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.25 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA ALONG ETHAN ALLEN PARKWAY IN THE CITY OF BURLINGTON SLOPES STEEPLY AWAY FROM THE ROAD. THE PROJECT WILL INVOLVE SUBSTANTIAL GRADE CHANGES.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THERE IS NO WATER SOURCE ON THE PROJECT SITE, ALTHOUGH THERE ARE WETLANDS.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF WOODLAND. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY INSTALLATION OF THE NEW IMPROVEMENTS.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOILS ON THE PROPOSED DEVELOPMENT PORTION OF THE SITE ARE WINDSOR LOAMY SAND, 30% TO 60% SLOPES, (K¹ FACTOR OF 0.17). THE SOILS ARE CONSIDERED TO HAVE A LOW EROSION POTENTIAL.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:

0.0 - 0.23 = LOW EROSION POTENTIAL
0.24 - 0.36 = MODERATE EROSION POTENTIAL
0.37 - HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NONE
PRIME AGRICULTURAL LAND: THE WINDSOR LOAMY SAND SOILS ARE CONSIDERED STATEWIDE.
THREATENED AND ENDANGERED SPECIES: YES, NORTHERN LONG-EARED BAT.
WATER RESOURCE: NONE
WETLANDS: YES

1.3 RISK EVALUATION

SINCE IT DISTURBS LESS THAN 1 ACRE, THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

1.4.2 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCES SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.3 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

INLET PROTECTION WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.4 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

1.4.5 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL OF CONCENTRATED FLOW IN CHANNELS. NO CHECK STRUCTURES ARE PROPOSED.

1.4.6 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

1.4.7 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.8 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.9 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH. NO SLOPES GREATER THAN 1:3 ARE ANTICIPATED.

1.4.10 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

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PLANNING & ZONING

1-25-16	REVISED PER TECHNICAL REVIEW NOTES	DLH
5-24-11	ADD EASEMENT AND CONVEYANCE TO CITY	DLH
4-4-11	REVISE LAYOUT	DLH
10-29-10	REVISE LAYOUT	DLH
8-26-10	GENERAL REVISIONS PER COURT APPEAL	DLH
9-11-09	REVISED PERVIOUS CONCRETE DETAILS	DLH
7-13-09	REVISED LIGHTING AND LANDSCAPING	DLH
1-9-08	REVISED DRIVEWAY LAYOUT	DLH
10-5-07	REVISED LAYOUT	DLH
8-7-07	REVISED LAYOUT	DLH
Date	Revision	By

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☐ Preliminary	☐ Construction
☐ Final Local Review	☐ Record Drawing

Lands of
Tim Alles & Bill Ellis
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT

EROSION PREVENTION & SEDIMENT CONTROL PLAN

proj. no. 07028
survey Others
design DLH
drawn SEA
checked DJG
date 04/09/07
scale 1" = 20'
shl. no. 10

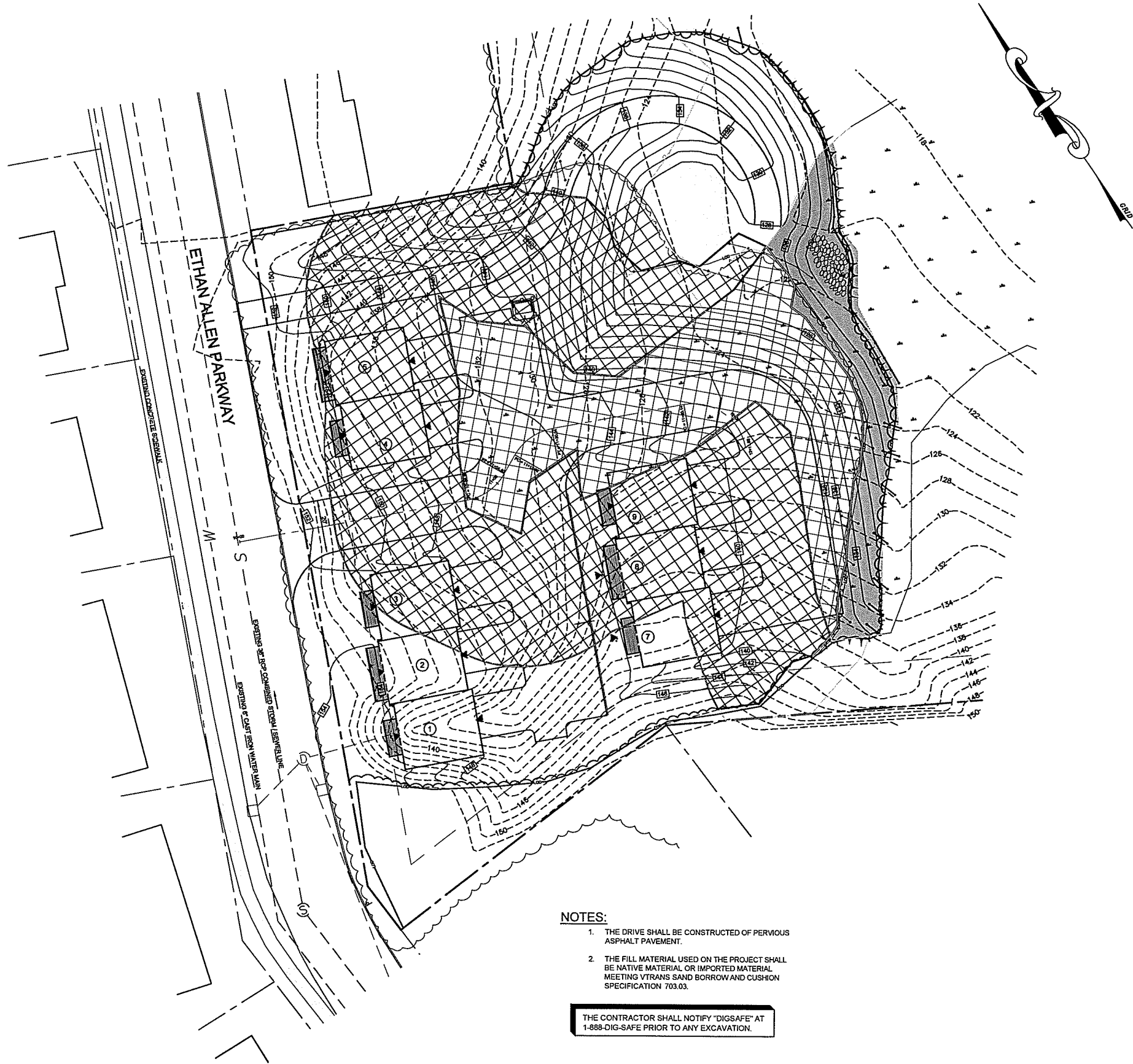
LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05432

LEGEND

---	PROJECT BOUNDARY
---	PROPERTY LINE
---	SIDELINE OF EASEMENT
---	BUILDING SETBACK
N/F	NOW OR FORMERLY
-- 110 --	EXISTING GROUND CONTOUR
---*	EXISTING WATER LINE, GATE VALVE & HYDRANT
---S---	EXISTING SANITARY SEWER LINE & MANHOLE
---□---	EXISTING STORM LINE AND CATCH BASIN
~~~~~	NEW TREE LINE
---*	NEW STREET LIGHT
---*	NEW WATER LINE, GATE VALVE AND HYDRANT
---S---	NEW SANITARY SEWER LINE AND MANHOLE
---□---	NEW STORM LINE AND CATCH BASIN
⑨	PROPOSED UNIT NUMBER
---	LOD
---	LIMITS OF DISTURBANCE

EPSC LEGEND

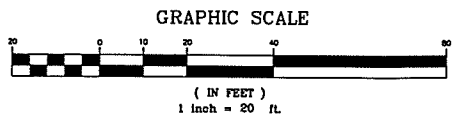
	STABILIZED CONSTRUCTION EXIT
	EROSION MATTING
	SILT FENCE
	STONE INLET PROTECTION
	STORMWATER FLOW DIRECTION



- LEGEND**
- PROJECT BOUNDARY
  - PROPERTY LINE
  - BUILDING SETBACK
  - N/F NOW OR FORMERLY
  - EXISTING GROUND CONTOUR
  - EXISTING WATER LINE, GATE VALVE & HYDRANT
  - EXISTING SANITARY SEWER LINE & MANHOLE
  - EXISTING STORM LINE AND CATCH BASIN
  - NEW EASEMENT
  - NEW TREE LINE
  - NEW BUILDING MOUNTED LIGHT
  - NEW WATER LINE, GATE VALVE AND HYDRANT
  - NEW SANITARY SEWER LINE AND MANHOLE
  - NEW STORM LINE AND DRY WELL
  - PROPOSED UNIT NUMBER
- BUFFER IMPACT WITHOUT LOWER ACCESS ROAD
  - WETLAND IMPACT WITHOUT LOWER ACCESS ROAD
  - BUFFER IMPACT WITH LOWER ACCESS ROAD
  - WETLAND IMPACT WITH LOWER ACCESS ROAD

- NOTES:**
1. THE DRIVE SHALL BE CONSTRUCTED OF PERVIOUS ASPHALT PAVEMENT.
  2. THE FILL MATERIAL USED ON THE PROJECT SHALL BE NATIVE MATERIAL OR IMPORTED MATERIAL MEETING VTRANS SAND BORROW AND CUSHION SPECIFICATION 703.03.

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



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<input type="checkbox"/> Preliminary	<input type="checkbox"/> Construction
<input checked="" type="checkbox"/> Final Local Review	<input type="checkbox"/> Record Drawing

proj. 107028-2014dwg07028-12A.dwg, 4/25/2017 2:21:11 PM, 12.2.1198

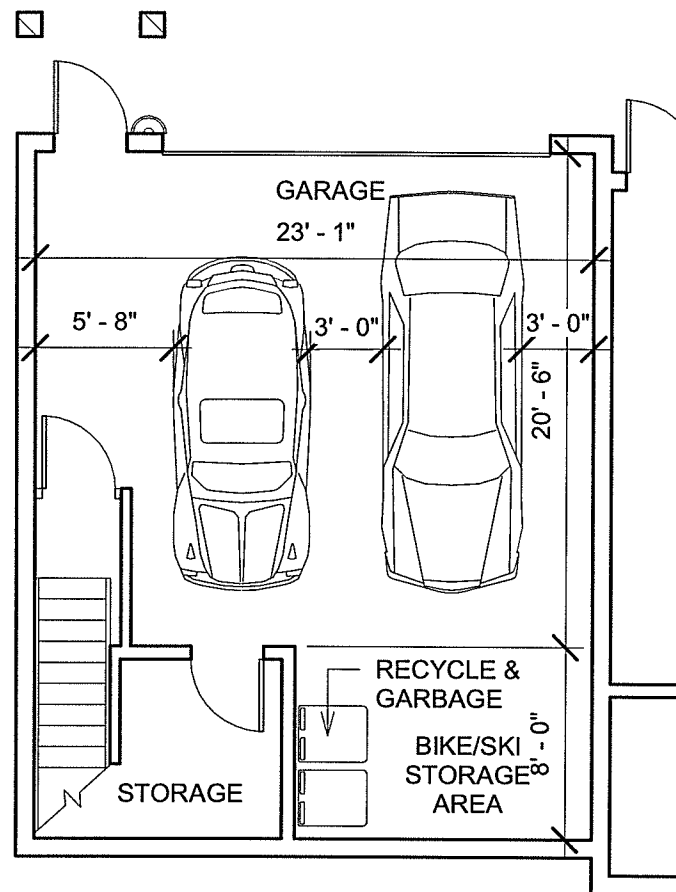
Lands of  
**Tim Alles & Bill Ellis**  
Ethan Allen Parkway, Burlington, Vermont

A PLANNED RESIDENTIAL DEVELOPMENT

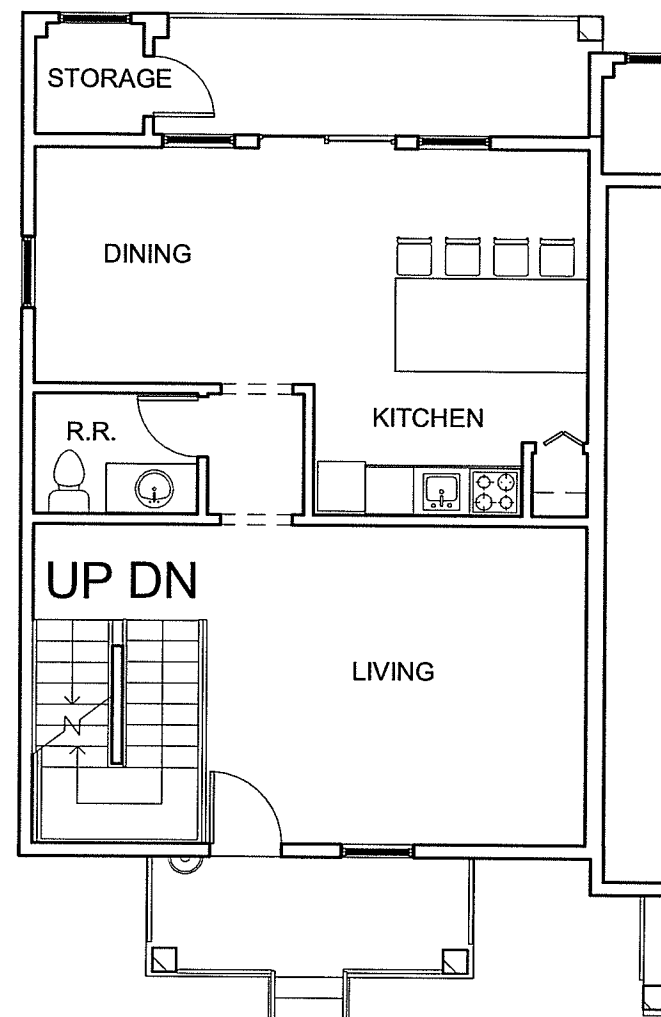
**ALTERNATE  
GRADING PLAN**

scale 1" = 20'

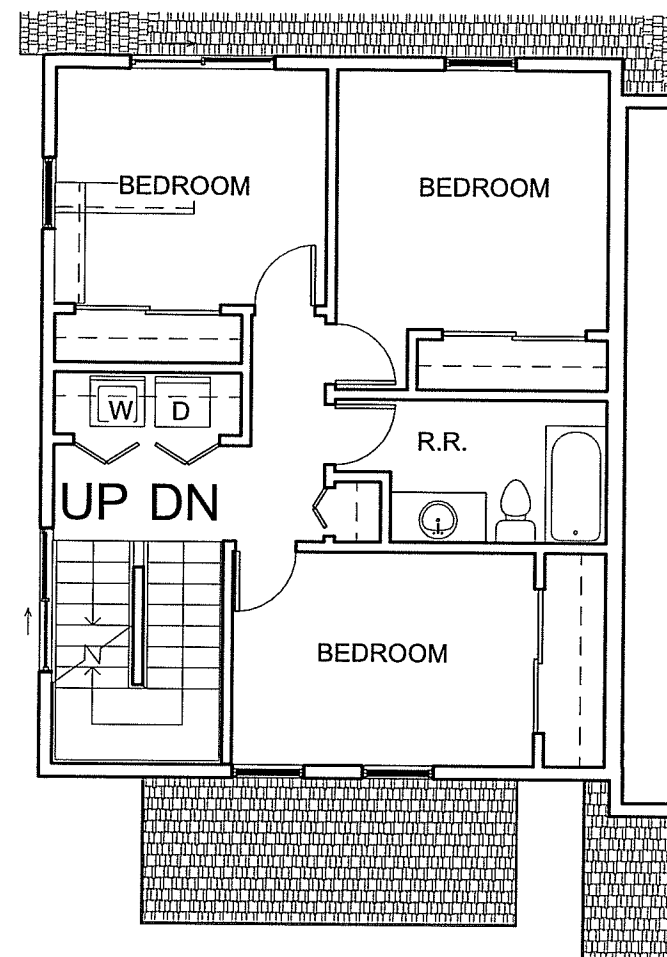
**LA MOUREUX & DICKINSON**  
Consulting Engineers, Inc.  
14 Morse Drive  
Burlington, Vermont 05401  
Tel: 802.255.1234  
Fax: 802.255.1235  
www.lamoureux-dickinson.com



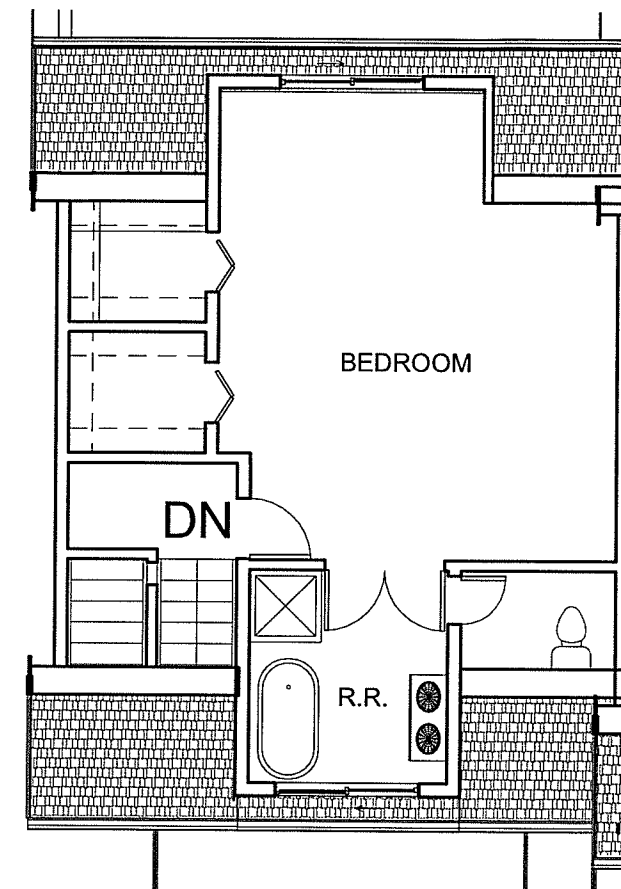
① Basement  
1/8" = 1'-0"



② Main Floor  
1/8" = 1'-0"



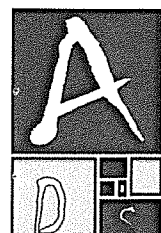
③ First Floor  
1/8" = 1'-0"



④ Second Floor  
1/8" = 1'-0"

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Architectural Drafting  
Services inc.

T 813.649.8078  
F 813.649.8085

10946 Cross Creek Blvd. #308  
Tampa, FL 33647

ELLIS/ALLES  
LIAHONA WAY

No.	Description	Date

## PLANS

Project number

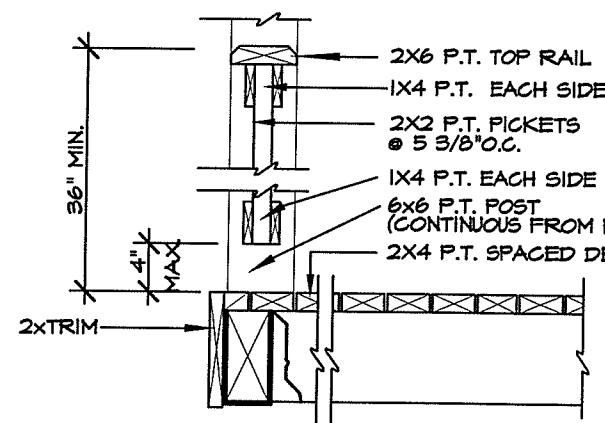
Date 5/17/2011

Drawn by Author

A1



① North  
1/8" = 1'-0"



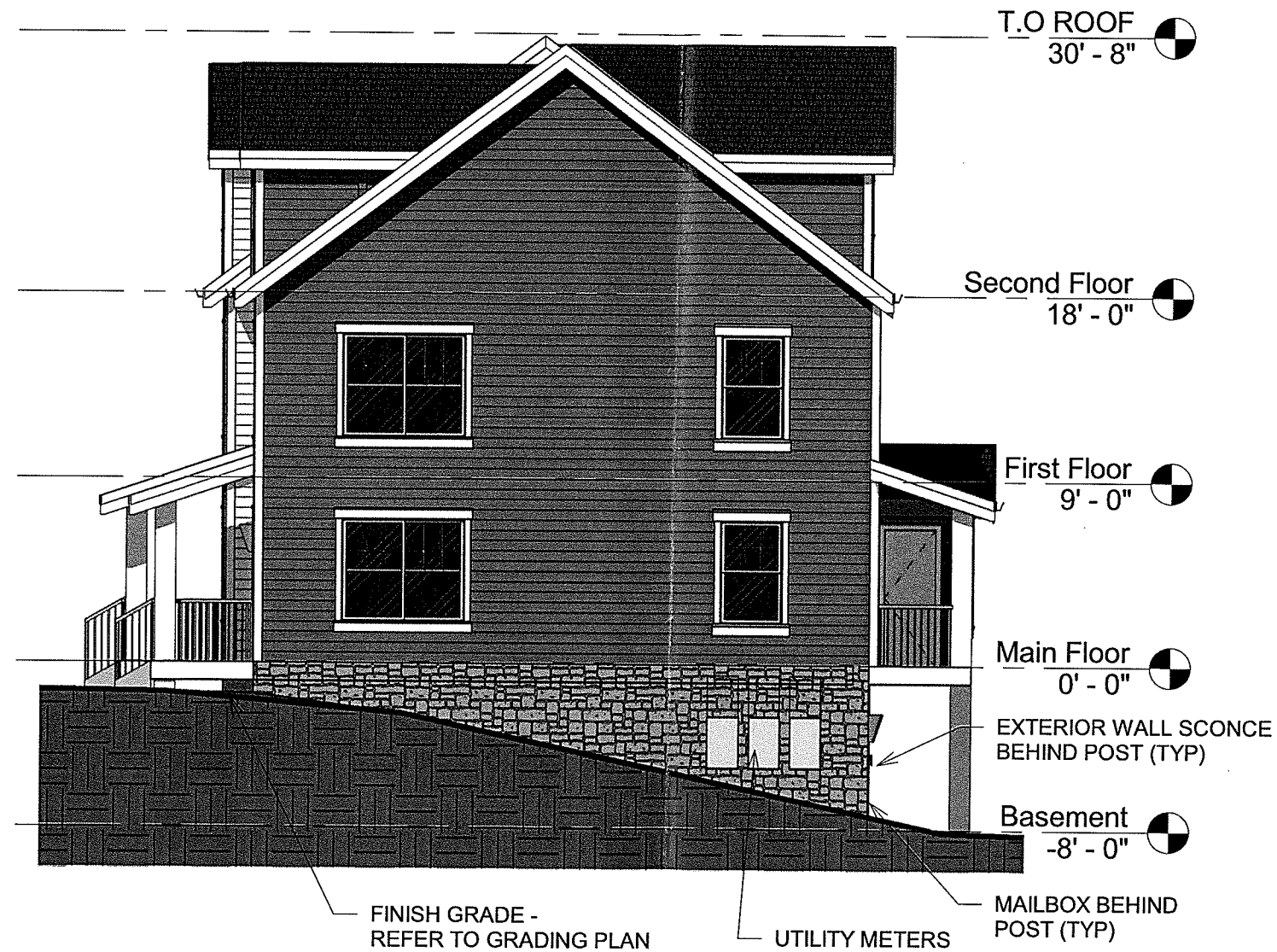
② Railing Detail  
3/4" = 1'-0"

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MAY 04 2017  
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PLANNING & ZONING

No.	Description	Date

NORTH ELEVATION

Project number	
Date	5/17/2011
Drawn by	



① East  
1/8" = 1'-0"

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F 813.649.8085

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Tampa, FL 33617

ELLIS/ALLES  
LIAHONA WAY

No.	Description	Date

EAST ELEVATION

Project number

Date 5/17/2011

Drawn by

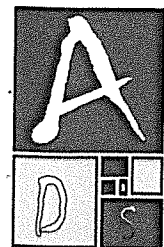
A3





① South  
1/8" = 1'-0"

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MAY 04 2017  
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PLANNING & ZONING



Architectural Drafting  
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10946 Cross Creek Blvd. #308  
Tampa, FL 33647

ELLIS/ALLES  
LIAHONA WAY

No.	Description	Date

## SOUTH ELEVATION

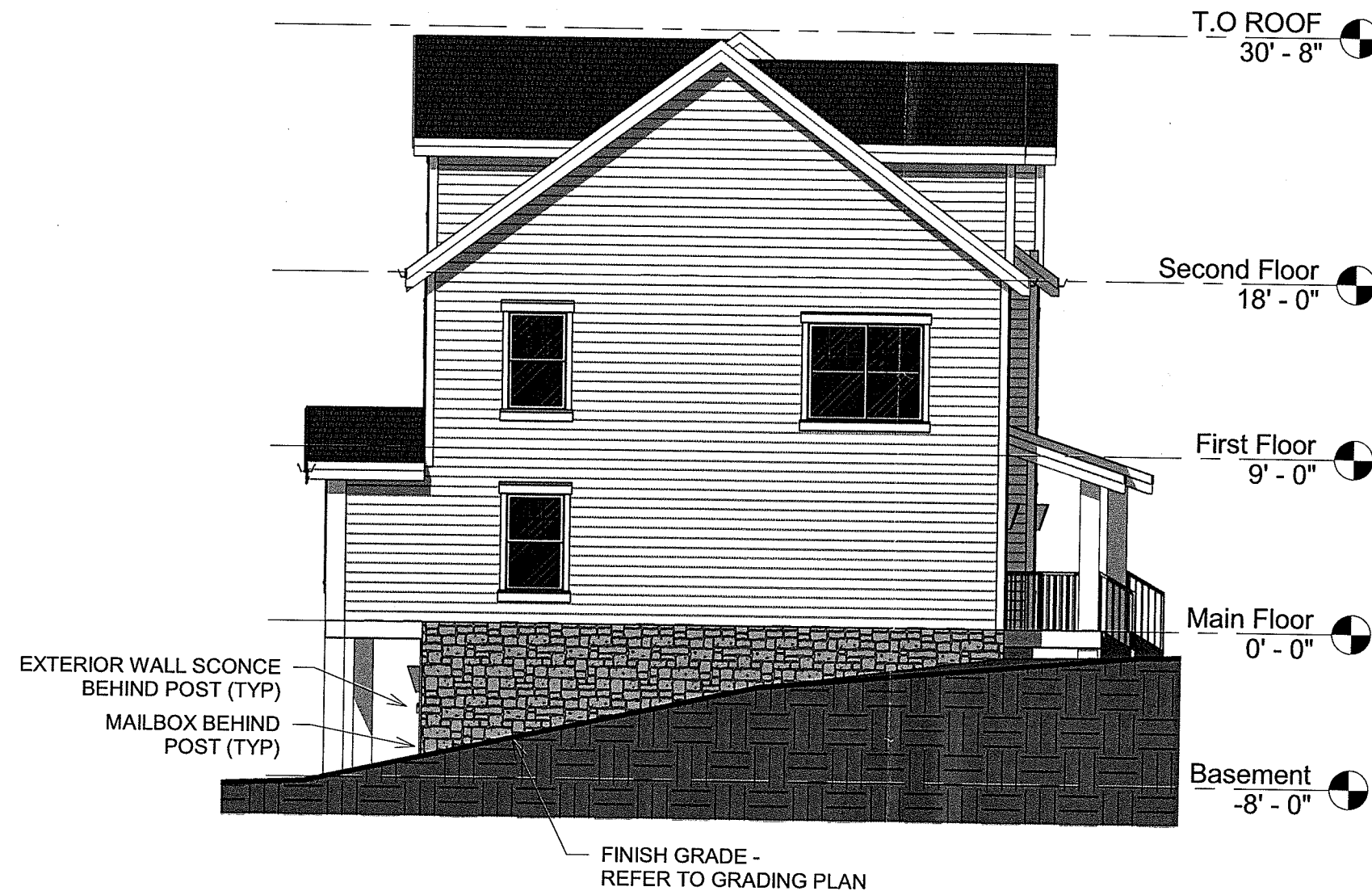
Project number

Date 5/17/2011

Drawn by KRE

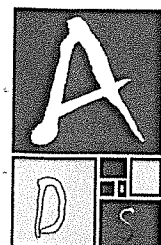
Checked by KRE

A4



① West  
1/8" = 1'-0"

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No.	Description	Date

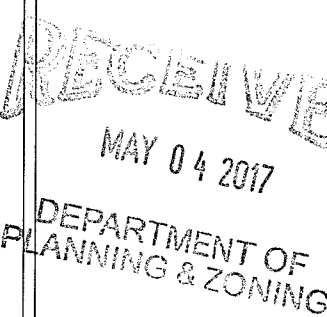
WEST ELEVATION

Project number

Date 5/17/2011

Drawn by

A5

[illegible]

ELLIS/ALLES  
LIAHONA WAY  
SECTIONS

Project number _____  
Date _____ 5  
Drawn by _____  
Checked by _____



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**NOTES:**

1. FOR # 450 - 488 ETHAN ALLEN PARKWAY SEE PLAN OF HOWE FARM ESTATES PHASE 2 BY L.H. WILLIS. DATED APRIL 1969, RECORDED IN VOLUME 194 PAGE 183.
2. # 463 ETHAN ALLEN PARKWAY SEE PLAN FOR CHARLES SEQUIN BY WARREN ROBINSTEN. DATED AUGUST 1975, RECORDED ON SLIDE 96.
3. FOR THE NORTHERN CONNECTOR (ROUTE 127) SEE SHEET 38-41 OF 48 OF THE HIGHWAY RIGHT OF WAY PLAN PROJECT M5000(3) SECTION 1. DATED JANUARY 22, 1982, FOUND IN FILE BOX F-2.
4. CURRENT OWNER OF PARCEL SHOWN IS SUE M. MOORE. DECREE OF DISTRIBUTION DEED VOLUME 306 PAGE 17.
5. FOR LOTS ON MOORE DRIVE & MOORE COURT SEE A PLAN FOR BERNARD MOORE BY HARVELL & TARTE. DATED JANUARY 1963, RECORDED IN VOLUME 163 PAGE 255.
6. WETLANDS WERE DELINEATED BY PINKHAM ENGINEERING ASSOCIATES, INC. ON AUGUST 19, 1998 AND ON OCTOBER 21, 1998. THE WETLANDS ARE DESIGNATED AS CLASS TWO WETLANDS UNDER THE VERMONT WETLAND RULES.

**SURVEY  
FOR  
ALAN GIGUERE**

ETHAN ALLEN DRIVE  
BURLINGTON, VERMONT

**VERMONT LAND SURVEYORS**

4050 WILLISTON ROAD  
SO. BURLINGTON, VERMONT 05403  
802-862-5661

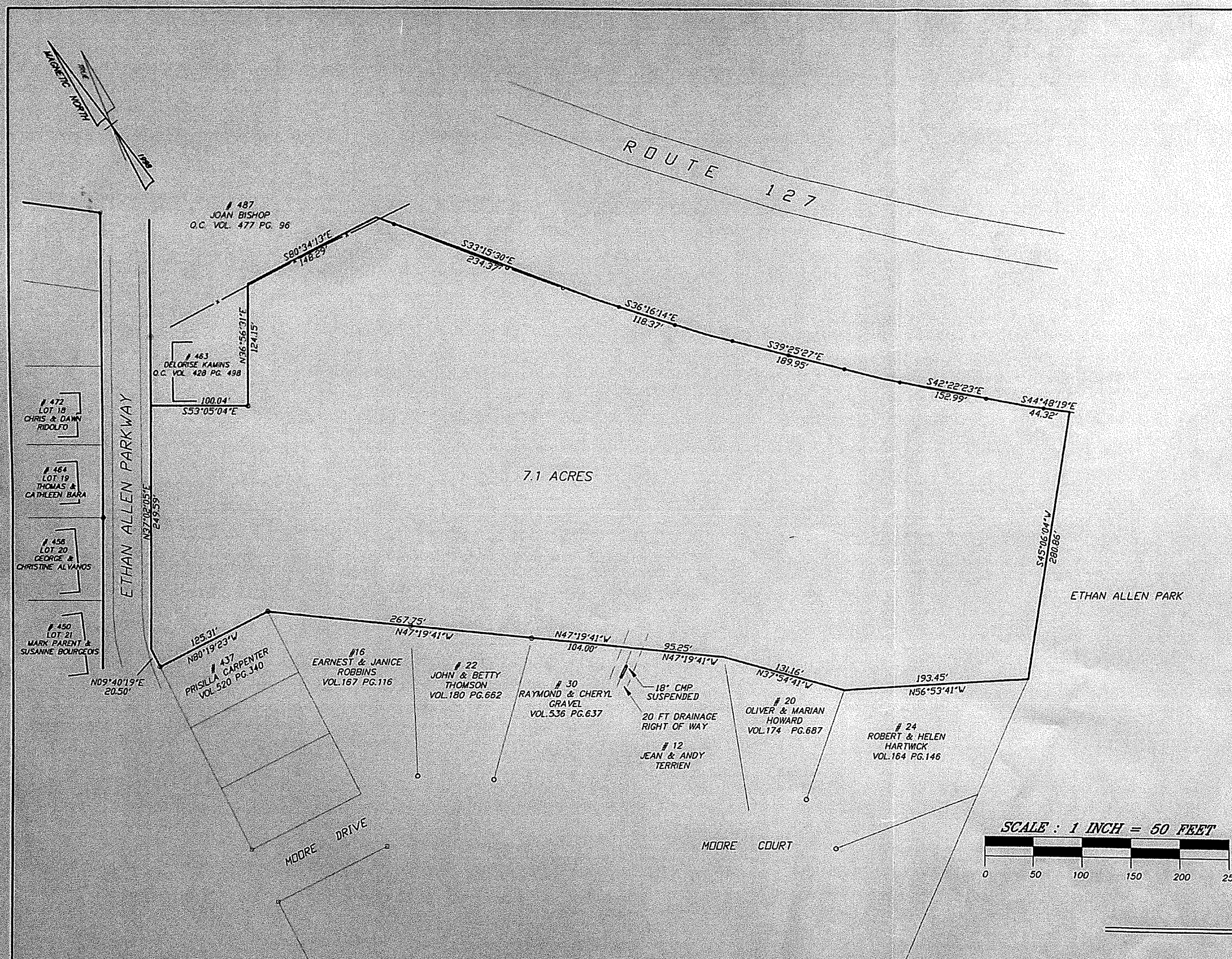
DATE FEBRUARY 10, 1998

SURVEYED M.W. & B.H.

DRAWN MARK V. WARD

CHECKED MARK V. WARD

PROJECT  
9910





## Burlington Design Advisory Board

149 Church Street, City Hall Burlington, VT 05401

<http://www.burlingtonvt.gov/PZ/Boards/Design-Advisory-Board/>

Telephone: (802) 865-7188  
(802) 865-7195 (FAX)

*Matt Bushey, Chair  
Ron Wanamaker, Vice Chair  
Sean McKenzie  
Tom Cullins  
Steve Offenhartz  
Jeremy Gates, Alternate  
Phil Hammerslough, Alternate*



### **Minutes Burlington Design Advisory Board Tuesday, May 23, 2017 3:00 pm, Conference Room 12**

**Present:** Matt Bushey (Chair), Steve Offenhartz, Sean McKenzie, Tom Cullins

**Absent:** Ron Wanamaker, Jeremy Gates (alternate), Phil Hammerslough (alternate)

**Staff present:** Scott Gustin

#### **Session I - 3:00pm 3:30pm**

##### **1. 17-1081PD; 451 Ethan Allen Parkway (RL, Ward 7N) Ellis & Alles**

Final plat for 9-unit planned unit development in three buildings and associated site improvements

Motion by Tom Cullins: I move we recommend approval of the architectural design subject to Conservation Board and Stormwater Program review.

2nd – Matt Bushey

Vote 4-0, motion carries.