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TO: Development Review Board
FROM: Scott Gustin
DATE: November 5, 2014
RE: 15-0358CA; 82 University Place

Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.

Zone: I Ward: 1

Owner/Applicant: University of Vermont

Request: Demolish Angell Hall and Cook Physical Science Building, construct new STEM building with connecting bridge to Votey Hall.

Applicable Regulations:
Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking)

Background Information:
The applicant is requesting approval for demolition of the Cook Physical Sciences building and the adjacent Angell Lecture Center. In their place, the applicant is seeking approval to construct a 193,650 sf Science, Technology, Engineering, & Math (STEM) complex. The project site is located within the University's Central Campus and within the Institutional Core Campus Overlay wherein intensified development is anticipated. The proposed building is comprised of two distinct components of up to 5 stories. The applicant requests a 4-year timeframe for construction. No project phasing has been requested. Impact fees (FY '14 rates) based on the net new building area will be assessed upon project completion.

The University of Vermont is an educational institution and, therefore, is subject to only limited zoning review per 24 VSA, Sec. 4413, *Limitations on municipal bylaws*. This application may be reviewed only with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off-street parking, loading facilities, traffic, noise, lighting, landscaping, and screening requirements.

The Design Advisory Board reviewed this application September 23, 2014. The Board unanimously recommended forwarding to the Development Review Board subject to the following conditions:

1. Bicycle parking details (numbers, types, and locations) per Article 8: Parking, Part 2: Bicycle Parking.
2. Outdoor lighting fixture cut sheets.

3. Confirmation that the height of the western section of the proposed building does not exceed that of the Health Sciences Research Facility as measured above sea level.

Application materials to address the DAB's recommendation have been provided as noted in these findings.

The Conservation Board reviewed this application on October 6, 2014. The Board unanimously recommended approval of the project, subject to standard stormwater management conditions.

Recommendation: **Certificate of appropriateness approval** as per, and subject to, the following findings and conditions:

I. Findings
Article 4: Maps & Districts
Sec. 4.4.4, Institutional District:
(a) Purpose
See Sec. 4.5.2 (d) *District Specific Regulations: UVM Central Campus.*

(b) Dimensional Standards & Density
See Sec. 4.5.2 (d) *District Specific Regulations: UVM Central Campus.*

(c) Permitted & Conditional Uses
See Sec. 4.5.2 (d) *District Specific Regulations: UVM Central Campus.*

Sec. 4.5.2, Institutional Core Campus Overlay Districts
(a) Purpose
The Institutional Core Campus Overlay Districts are intended to provide for reasonable future growth for institutions within the core of their respective campuses without further intrusion into surrounding residential neighborhoods. Increased development scale and intensity than would be found in adjacent residential areas and to provide for a variety of uses associated with higher education, health care, and cultural and research centers. The proposed construction of the STEM facility is consistent with this intent. **(Affirmative finding)**

(b) Areas Covered
The proposed demolition and new construction are located within the UVM Central Campus overlay. **(Affirmative finding)**

(d) District Specific Regulations: UVM Central Campus (ICC-UVM)
1. Transitional Buffer
None of the proposed demolition or construction is located within the transitional buffer.
(Affirmative finding)

2. Lot Coverage
The project will result in a net increase in lot coverage of ~ 13,500 sf. The applicant has been requested to provide a proposed lot coverage percentage independent of the recently approved but appealed demolition of the nearby Chittenden, Buckham, and Wills dorms and associated lot line adjustment with FAHC. If that project does not go forward, the STEM project would result in

48.53% lot coverage. This coverage is below the 65% coverage permissible in the ICC-UVM overlay. **(Affirmative finding)**

3. Setbacks
Only 15' front setbacks within the transitional buffer apply within this core campus overlay zone. As noted above, none of the proposed work is located within the transitional buffer. **(Affirmative finding)**

4. Surface Parking
No new surface parking is included in this project. **(Affirmative finding)**

5. Building Height
The classroom building is located within the ICC-UVM Height Overlay and is limited to a maximum height of 140'. As proposed, the classroom building is 70' 8". The laboratory building is located outside of the ICC-UVM Height Overlay and is limited to the height of the tallest existing structure within the core campus district as of January 1, 2008. In this case, the tallest existing structure is the Health Sciences Research Facility at 73.85' tall. The laboratory building is 72' 9" tall. As measured above mean sea level, this existing structure is 454.6', and the proposed laboratory building is 443' 1". **(Affirmative finding)**

6. Density
The non-residential density equivalent set forth in Sec. 5.2.7 (a) 2 does not apply within the ICC-UVM overlay. **(Affirmative finding)**

7. Uses
Within the ICC-UVM overlay district, post-secondary schools shall be permitted uses. The existing post-secondary school use will remain. No change in use is proposed. **(Affirmative finding)**

Article 5: Citywide General Regulations
Sec. 5.2.3, Lot Coverage Requirements
See Sec. 4.5.2.

Sec. 5.2.4, Buildable Area Calculation
This criterion does not apply to properties in the I zone. **(Not applicable)**

Sec. 5.2.5, Setbacks
See Sec. 4.5.2.

Sec. 5.2.6, Building Height Limits
See Sec. 4.5.2.

Sec. 5.2.7, Density and Intensity of Development Calculations
See Sec. 4.5.2.

Sec. 5.5.1, Nuisance Regulations
Nothing in this proposal appears to have any bearing on the city's nuisance regulations. **(Affirmative finding)**

Sec. 5.5.2, Outdoor Lighting
Building entries, walkways, and the plaza will be illuminated. A photometric plan has been submitted that depicts acceptable lighting levels throughout. Acceptable LED lighting fixture types are proposed. **(Affirmative finding)**

Sec. 5.5.3, Stormwater and Erosion Control
Post construction stormwater runoff will be collected in an existing stormwater pond that serves the north campus watershed. The Conservation Board reviewed the proposed stormwater management plan and recommended approval subject to the standard stormwater conditions. The Stormwater Administrator has reviewed the proposal as well, and final approval is expected shortly.

Similarly, the construction site erosion prevention and sediment control plan has been reviewed by the Conservation Board and the Stormwater Administrator. The Conservation Board recommended approval. Final approval is anticipated from the Stormwater Administrator. **(Affirmative finding as conditioned)**

Article 6: Development Review Standards
Part 1, Land Division Design Standards
Not applicable.

Part 2, Site Plan Design Standards
Sec. 6.2.2, Review Standards
(a) Protection of important natural features
The project site contains no significant natural features. The project site consists of grassy lawn, hardscape courtyards and walkways, and buildings. **(Affirmative finding)**

(b) Topographical alterations
Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views
Not applicable per 24 VSA, Sec. 4413.

(d) Protection of important cultural resources
Not applicable per 24 VSA, Sec. 4413.

(e) Supporting the use of alternative energy
Not applicable per 24 VSA, Sec. 4413.

(f) Brownfield sites
Not applicable per 24 VSA, Sec. 4413.

(g) Provide for nature's events
Not applicable per 24 VSA, Sec. 4413. Chapter 26: Wastewater, Stormwater, and Pollution Control is a separate city ordinance that governs stormwater and erosion control standards. As a result, the project still must comply with the standards of Chapter 26. As required, an erosion prevention and sediment control plan has been provided as has information relative to post

construction stormwater management. Review and approval by the Stormwater Administrator and Conservation Board is required. **(Affirmative finding as conditioned)**

(h) Building location and orientation
The proposed building is located within the University's Central Campus and does not directly front on any public street. Within the Central Campus, the proposed building will have two primary facades, one facing east towards the Central Campus Quadrangle and the other one facing west towards Old Mill and Williams Hall. Both facades contain clearly defined entrances readily visible from the University's interior network of walkways. **(Affirmative finding)**

(i) Vehicular access
Not applicable per 24 VSA, Sec. 4413.

(j) Pedestrian access
Not applicable per 24 VSA, Sec. 4413.

(k) Accessibility for the handicapped
Not applicable per 24 VSA, Sec. 4413. Applicable accessibility requirements under the City's building code continue to apply. **(Affirmative finding as conditioned)**

(l) Parking and circulation
No changes to parking are included in this proposal. Vehicular circulation is affected only insofar as the project includes a loading bay for deliveries. The site plan depicts several locations for bicycle parking, sheltered and otherwise. Details as to the number of bike parking spaces provided, both short term and long term, are addressed under Article 8 of these findings. **(Affirmative finding)**

(m) Landscaping and fences
A comprehensive landscaping plan has been provided. Trees will line most of the proposed walkways. Foundation plantings will accent the eastern and western building facades. Landscaping will also be planted to screen the service bay into the building. Proposed trees consist of a variety of deciduous and evergreen species. Ornamental grasses and shrubs are also proposed. **(Affirmative finding)**

(n) Public plazas and open space
A south-facing plaza between the two building sections is proposed. It will be constructed of concrete and will afford ample space for pedestrian use. It is immediately adjacent to a terraced outdoor seating space. Both will have southern exposure for maximum solar gain. **(Affirmative finding)**

(o) Outdoor lighting
See Sec. 5.5.2.

(p) Integrate infrastructure into the design
New utility lines serving the proposed construction must be buried. A partially below grade service area is proposed at the southeastern corner of the new building. This service area contains a loading dock, dumpster, and compactor. It connects to the campus' interior roadway network and is screened by new landscaping. **(Affirmative finding)**

Part 3, Architectural Design Standards
Sec. 6.3.2, Review Standards

(a) Relate development to its environment

1. Massing, Height, and Scale

The proposed building is very large at almost 200,000 sf and 5 stories. The scale of this building is tempered by the proposed massing. It is split into two distinct sections set apart from one another with a central connection. Extensive glazing is proposed on the north and south elevations and above the main entries on the east and west elevations. Uniform fenestration and partially recessed roof forms also lessen the perceived scale. The building will be set within the interior of the Central Campus and has no direct frontage on any city street. It is set behind and downhill from the iconic Old Mill, Williams Hall, and Billings Library buildings. It is also set downhill and across the green from the even larger Fletcher Allen Health Care facility. It is set far back from Colchester Avenue, behind Votey and Fleming Museum. This interior campus location substantially reduces the building's perceived scale from any public street. The proposed height is acceptable as noted in Sec. 4.5.2 (d) 5. **(Affirmative finding)**

2. Roofs and Rooflines

Not applicable per 24 VSA, Sec. 4413.

3. Building Openings

Not applicable per 24 VSA, Sec. 4413.

(b) Protection of important architectural resources

Not applicable per 24 VSA, Sec. 4413.

(c) Protection of important public views

Not applicable per 24 VSA, Sec. 4413.

(d) Provide an active and inviting street edge

Not applicable per 24 VSA, Sec. 4413.

(e) Quality of materials

Not applicable per 24 VSA, Sec. 4413.

(f) Reduce energy utilization

Not applicable per 24 VSA, Sec. 4413.

(g) Make advertising features complimentary to the site

Signs are noted on the proposed site plans; however, they are not specifically included in this application. All outdoor signs are subject to separate zoning permit review. **(Affirmative finding as conditioned)**

(h) Integrate infrastructure into the building design

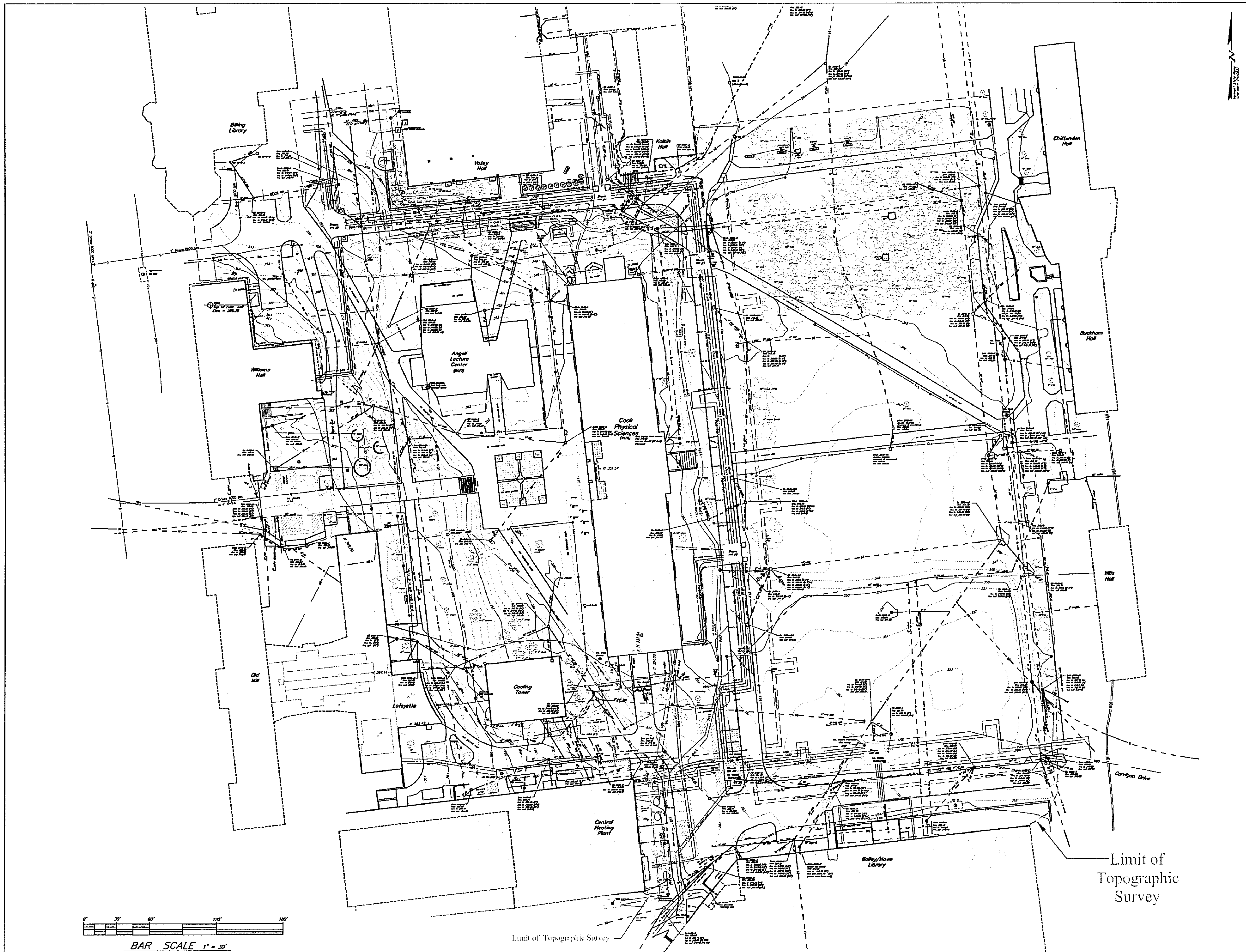
As noted previously, a dedicated service area is proposed for the loading bay, dumpster, and compactor. Building-mounted mechanical equipment will be fully enclosed within a rooftop penthouse. **(Affirmative finding)**

(i) Make spaces safe and secure
All building and life safety code, as defined by the building inspector and fire marshal, shall be implemented in the construction of this building. Building entries will be illuminated as noted above. **(Affirmative finding as conditioned)**

Article 8: Parking
Sec. 8.1.8, Minimum Off-Street Parking Requirements
This project is incorporated into the 2014-2015 Joint Institutional Parking Management Plan as approved by the Development Review Board May 19, 2014. As envisioned in the JIPMP, this development was to include retention of the Cook Physical Sciences building and construction of a smaller (100,000 sf) STEM building. As actually proposed, Cook will be demolished and the new STEM facility will be close to 200,000 sf. Insofar as parking demand is concerned, the end result is the same. **(Affirmative finding)**

Sec. 8.2.5, Bicycle Parking Requirements
The proposed development will require 10 long-term bicycle parking spaces (1 per 20,000 sf) and 116 short-term bicycle parking spaces (3 per 5,000 sf). The project plans depict the required 10 enclosed long-term bicycle parking spaces. The plan depict 49 bike racks for short-term bicycle parking. Details are lacking, but assuming 2 bikes per rack yields only 98 short term bike parking spaces. Details are needed as to the type and capacity of each bike rack to determine compliance with this criterion. **(Affirmative finding as conditioned)**

II. Conditions of Approval
1. **Prior to release of the zoning permit**, compliance with the bicycle parking requirements of Sec. 8.2.5 (both type and number of bicycle parking spaces) shall be demonstrated on the project plans, subject to staff review and approval.
2. **Prior to release of the zoning permit**, the applicant shall obtain written approval of the Erosion Prevention and Sediment Control Plan from the Stormwater Administrator.
3. **Prior to the release of the zoning permit**, the applicant shall obtain the written approval of the Stormwater Management Plan from the Stormwater Administrator.
4. **Prior to issuance of a certificate of occupancy**, the applicant must obtain written certification from the Stormwater Administrator that, among other things, the project EPSC plan as approved has been complied with and final site stabilization has occurred. This certification shall be filed with the Department of Planning & Zoning.
5. At least **7 days prior to issuance of a certificate of occupancy**, impact fees based on the net new building square footage shall be paid to the Department of Planning & Zoning.
6. This approval includes an extended construction timeline 4 years from the date of this approval.
7. All new utility lines shall be buried.
8. All outdoor signs require separate zoning permits.
9. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required.
10. Standard permit conditions 1-15.



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9/05/14 | 1" = 30'
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EXISTING CONDITIONS SITE PLAN

EX-1.0

Notes:

1. The underground utilities shown on this plan are based on limited dig safe markings and utility mapping provided by UVM. Utility locations are approximate and not warranted to be exact or complete. The Contractor shall contact Dig Safe prior to any site excavation.
2. There are existing PBX conduits located in the vicinity of this project. The Contractor shall contact UVM Telecommunications and Network Services (656-3339) prior to any work in the vicinity of the PBX conduit. The Contractor shall carefully excavate around the PBX conduit to prevent damage to the PBX infrastructure. Contractor shall be responsible for placing Owner supplied locator balls over exposed conduits prior to backfilling.
3. Elevations are based on the NAVD 88 vertical datum.
4. The Contractor shall be responsible for repairing all disturbed areas back to original condition, including but not limited to curbing, sidewalks, road, parking areas, landscaping, site lighting, electrical, and etc. All asphalt shall be sawcut prior to paving.
5. All stumps, rock, and other non-approved trench backfill material discovered during construction is the exclusive property of the Contractor and shall be removed from UVM property and disposed of in a State approved disposal location.
6. All passing sieve, proctor, and compaction testing expenses shall be paid by Owner. Testing coordination, all other required testing, and expenses for failed tests shall be the Contractor's responsibility.
7. The Contractor shall contact the Burlington Electric Department prior to any work in the vicinity of the existing electric conduits.
8. The Contractor shall comply with the City of Burlington Small Project Erosion & Sediment Control Plan and the erosion prevention and sediment control permit requirements and the procedures outlined in the Low Risk Site Handbook for Erosion Prevention and Sediment Control. The Contractor shall be responsible for installing, maintaining and removing all erosion and sediment control devices shown on the plans or details and, to the maximum extent practical, to minimize potential contamination of stormwater runoff from the construction activities.
9. Contractor shall be responsible for all "As-built" measurement and drafting requirements as outlined on the Detail Sheets. All trench excavations shall remain open until all as-built survey shots have been taken. Progress Record Drawings shall be submitted to the Engineer as indicated in the Record Drawing specifications.
10. Contractor shall coordinate location of staging areas with Owner prior to bid.
11. The Contractor shall be responsible for all construction barrier/safety fencing required for the project.
12. Definition of "Preconstruction Excavation" for these contract documents shall be:
    The site contractor shall expose utilities and obtain all necessary information, including but not limited to, invert elevation, size, depth, pipe type, joint location, etc. Contractor shall transit survey the location and elevations of the utility. Contractor shall provide the engineer with sketches indicating horizontal and vertical information of pipe or conduit type and size, cross-section information, concrete encasement information (top and bottom elevations, width, etc.), joint location, etc. of each required existing underground utility. Accuracy of horizontal location is within 1 foot, and accuracy of vertical elevation is within 0.02 ft. (1/4"). Coordinate all excavation with City, Owner, and Engineer. Preconstruction excavations shall occur prior to ordering structures and prior to utility construction to facilitate redesign and/or design confirmation.

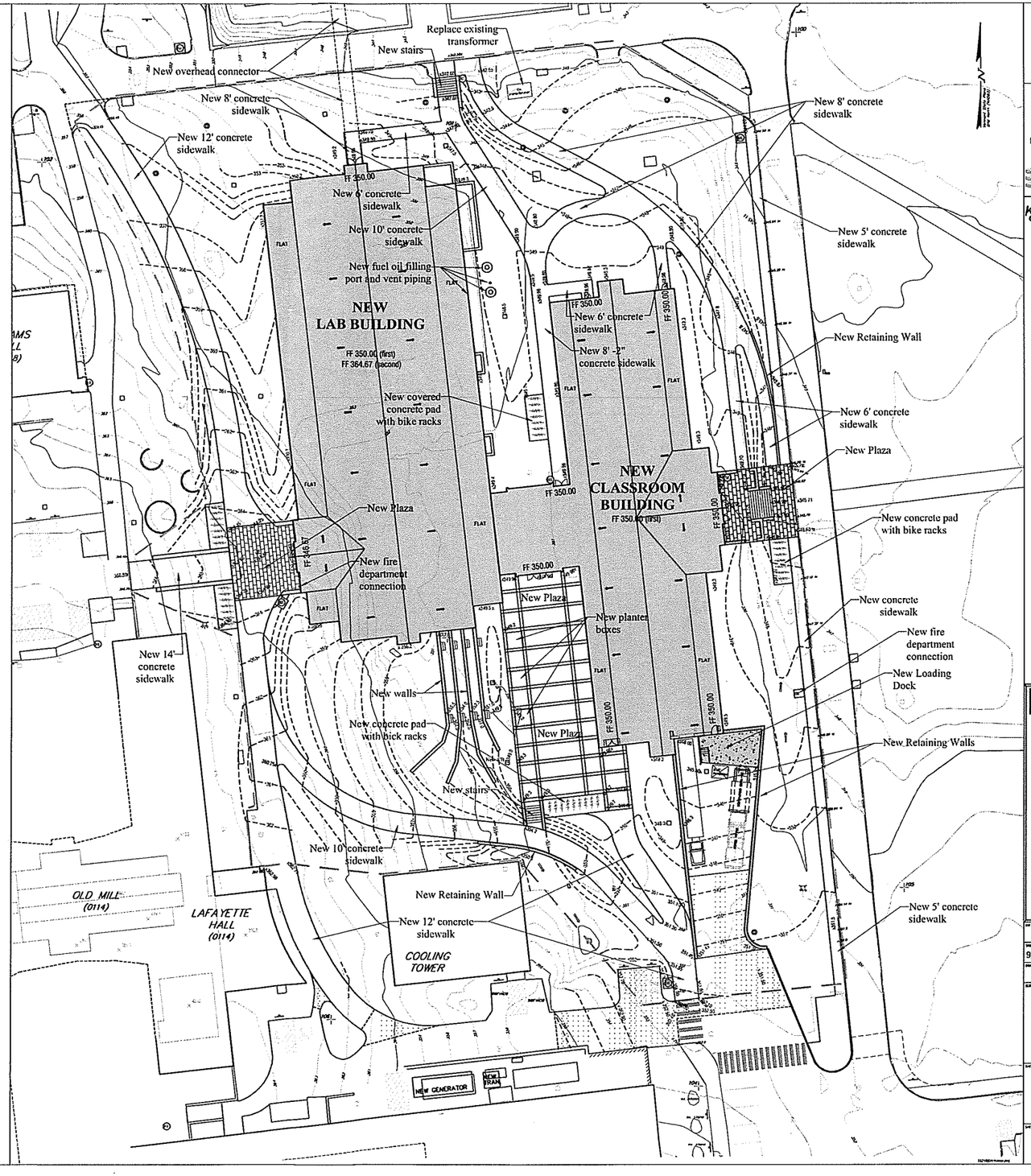
    The location of the preconstruction excavation symbols does not necessarily indicate the location of the buried utility. It is the responsibility of the Contractor to find and expose the utility.
13. Contractor shall be responsible for importing topsoil as required to complete the project. Contractor shall test topsoil for approval by the Owner and Engineer.
14. The Contractor shall be responsible for all signage and fencing necessary to providing safe vehicular and pedestrian access through or around the site during construction.
15. All storm pipes shall be PVC SDR 35 unless otherwise noted.
16. All waterline pipe shall be Class 52 ductile iron. All bends and fittings shall have cast in place thrust blocks

Legend

- Power pole
- Survey Control Point
- New hydrant
- Ex. blue phone
- Proposed blue phone
- Ex. light post
- Sign
- Inlet protection around catch basin
- Preconstruction Excavation (See Note 13)
- New Drainage Flow Direction
- Existing PBX/manhole
- Existing Water Line/Water valve
- New Water Line/Water valve
- Existing Gas Line/Gas valve
- New Gas Line/Gas valve
- Existing Sewer Line/manhole
- Existing Storm Line/Catch Basin/manhole
- New Storm Line/Catch Basin
- Existing Underground Power Line
- Existing concrete encased underground power line
- Existing Secondary Underground Power Line
- Existing Overhead Power Line
- Existing Building Control Line
- Existing Light Line
- Existing Blue Light Conduit
- Approximate property line
- Existing Tree/Vegetation Line
- Existing Contours
- New Contours
- New Concrete Curb
- New pavement
- New Structural concrete
- New Concrete walls
- Temporary Silt Fence

0' 20' 40' 80' 120'

Bar Scale 1" = 20'



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OVERALL CIVIL GRADING PLAN

C-001

Erosion Prevention and Sediment Control Notes

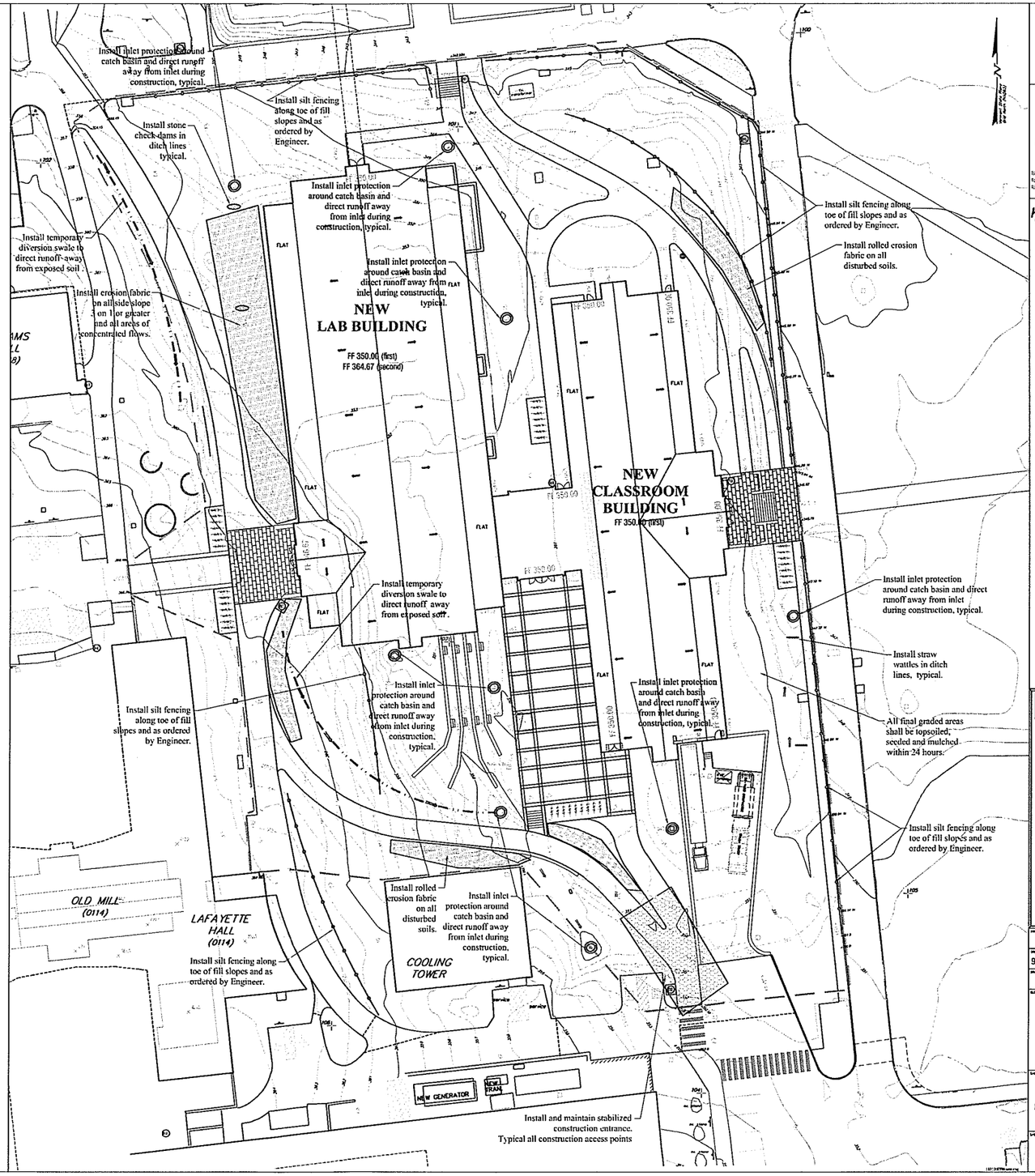
1. Contractor shall be responsible for complying with all State and Local erosion prevention and sediment control standards and permit requirements during construction.
2. The limit of disturbance shall be clearly defined by Contractor's surveyor prior to clearing. Erosion and sediment control devices shall be established to trap sediment on site.
3. Trees, woods, and grassed disturbance areas shall be cleared and grubbed after disturbance limits and sediment controls are in place. All roots, stumps and deleterious materials shall be removed from the site. The Contractor shall minimize the amount of disturbed land at any given time.
4. All erosion control shall be placed as shown on the drawings or as ordered by the Engineer. The Contractor shall maintain the erosion control measures until the Engineer is satisfied that permanent ground cover is established and that further measures are not required. It shall be the responsibility of the Contractor to employ appropriate erosion control as shown on these drawings and any other measures as necessary to trap sediment on site. Refer to permit maintenance and inspection requirements.
5. All areas of disturbance shall be permanently or temporarily stabilized as soon as possible and within 48 hours of final grading. All areas of disturbance shall be at least temporarily stabilized within 14 days of initial disturbance. Any disturbance after 14 consecutive days of exposed soil shall be stabilized daily unless the following exceptions apply:
   a. Stabilization is not required if earthwork is to continue in the area in the next 24 hours and there is no precipitation forecast in the next 24 hours.
   b. Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 3 ft. or greater (e.g. house foundation excavation, utility trenches). Stabilization measures shall include mulch and netting, erosion control matting, crushed stone, gravel, or pavement.
6. Unless specifically indicated on the plans acceptable methods of stabilization shall include:
   - Mulching – 2 tons per acre. Approximately 1" uniform thickness. Only allowed on relatively flat areas with minimum upslope watershed. Mulch must be properly anchored to prevent material from being blown away by wind (windthrow).
   - Hydroseeding* – Applied at the manufacturer's recommended application rate. Contractor shall provide evidence of proper application rate. Hydroseeding is not allowed in areas of concentrated flow.
   - Erosion control matting – ECS matting must be applied to all slopes 3:1 (H:V) or greater (unless otherwise indicated).
   - Crushed stone or crushed gravel – Typically used for temporary access roads and construction staging areas.
   - Paved surfaces (concrete, asphalt, etc.)
   - Weighted impermeable barriers and other materials as approved by the Engineer.
7. The Contractor shall use water for dust control.
8. The Contractor shall provide inlet protection around all catch basins (existing or new) that collect construction site stormwater runoff.
9. A stabilized construction entrance shall be installed and maintained at all construction access locations.
10. Any paved roads used by construction vehicles shall be swept daily or at a greater frequency if dirt or gravel is tracked from the site. The swept debris shall be immediately removed from face of curb if applicable.
11. During construction of underground utility lines the following standards must be met:
    - No more than 300 linear feet of trench may be open at one time.
    - Excavated material must be placed on the uphill side of the trench or immediately hauled to an approved and protected soil stockpile area.
12. All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization or after the measures are no longer needed, unless otherwise authorized.
13. All sediment removed from sediment control practices shall be placed in an approved soil disposal area. Contractor shall be responsible for providing a permitted off-site soil disposal for the project.
14. All areas that do not have established vegetation by October 15th must be stabilized in accordance with the Winter Stabilization requirements outlined in the Low Risk Site Handbook.
15. After permanent seeding the Contractor shall be responsible for watering, if necessary, to ensure adequate vegetative growth.
16. To ensure disturbance is limited to a maximum of 5 acres of exposed soils, the Contractor shall complete each phase before commencing the following phase.

Erosion Control Legend

- Temporary straw wattle
- Inlet protection around catch basin
- Temporary diversion swale
- Temporary Silt Fence
- Temporary erosion control matting
- Temporary stabilized construction entrance

0' 20' 40' 80' 120'

Bar Scale 1" = 20'



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OVERALL CIVIL EROSION CONTROL PLAN

C-002

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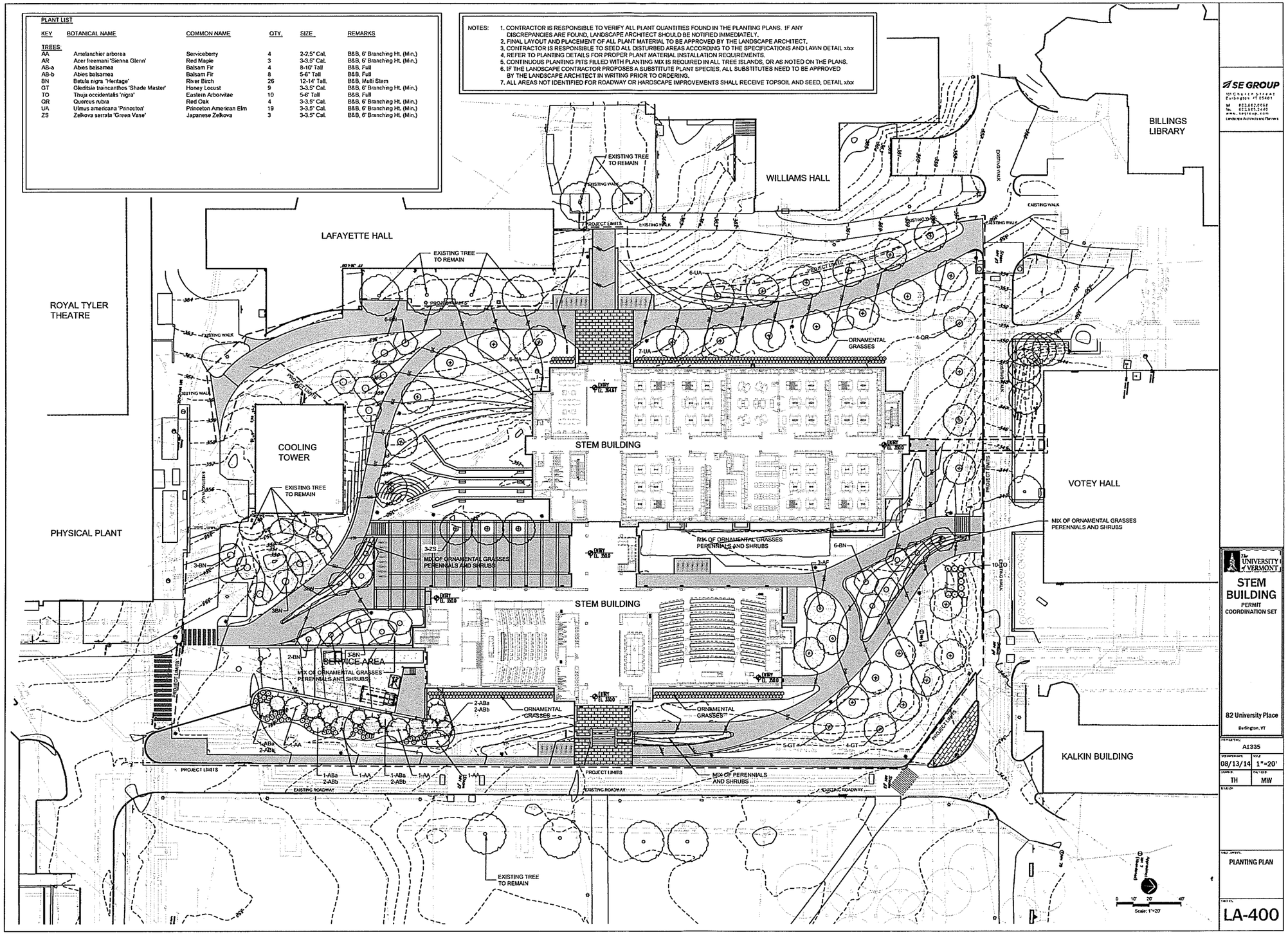
PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
TREES:					
AA	Amelanchier arborea	Serviceberry	4	2-2.5" Cal.	B&B, 6' Branching Ht. (Min.)
AR	Acer freemani 'Sienna Glenn'	Red Maple	3	3-3.5" Cal.	B&B, 6' Branching Ht. (Min.)
AB-a	Abies balsamea	Balsam Fir	4	8-10' Tall	B&B, Full
AB-b	Abies balsamea	Balsam Fir	8	5-6' Tall	B&B, Full
BN	Betula nigra 'Heritage'	River Birch	26	12-14' Tall	B&B, Multi Stem
GT	Gleditsia traincanthos 'Shade Master'	Honey Locust	9	3-3.5" Cal.	B&B, 6' Branching Ht. (Min.)
TO	Thuja occidentalis 'nigra'	Eastern Arborvitae	10	5-6' Tall	B&B, Full
QR	Quercus rubra	Red Oak	4	3-3.5" Cal.	B&B, 6' Branching Ht. (Min.)
UA	Ulmus americana 'Princeton'	Princeton American Elm	19	3-3.5" Cal.	B&B, 6' Branching Ht. (Min.)
ZS	Zelkova serrata 'Green Vase'	Japanese Zelkova	3	3-3.5" Cal.	B&B, 6' Branching Ht. (Min.)

NOTES:
1. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL PLANT QUANTITIES FOUND IN THE PLANTING PLANS. IF ANY DISCREPANCIES ARE FOUND, LANDSCAPE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY.
2. FINAL LAYOUT AND PLACEMENT OF ALL PLANT MATERIAL TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR IS RESPONSIBLE TO SEED ALL DISTURBED AREAS ACCORDING TO THE SPECIFICATIONS AND LAWN DETAIL x/xx
4. REFER TO PLANTING DETAILS FOR PROPER PLANT MATERIAL INSTALLATION REQUIREMENTS.
5. CONTINUOUS PLANTING PITS FILLED WITH PLANTING MIX IS REQUIRED IN ALL TREE ISLANDS, OR AS NOTED ON THE PLANS.
6. IF THE LANDSCAPE CONTRACTOR PROPOSES A SUBSTITUTE PLANT SPECIES, ALL SUBSTITUTES NEED TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO ORDERING.
7. ALL AREAS NOT IDENTIFIED FOR ROADWAY OR HARDSCAPE IMPROVEMENTS SHALL RECEIVE TOPSOIL AND SEED, DETAIL x/xx



SE GROUP
Landscape Architects and Planners

THE UNIVERSITY OF VERMONT

STEM BUILDING
PERMIT COORDINATION SET

82 University Place
Burlington, VT

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PLANTING PLAN

LA-400

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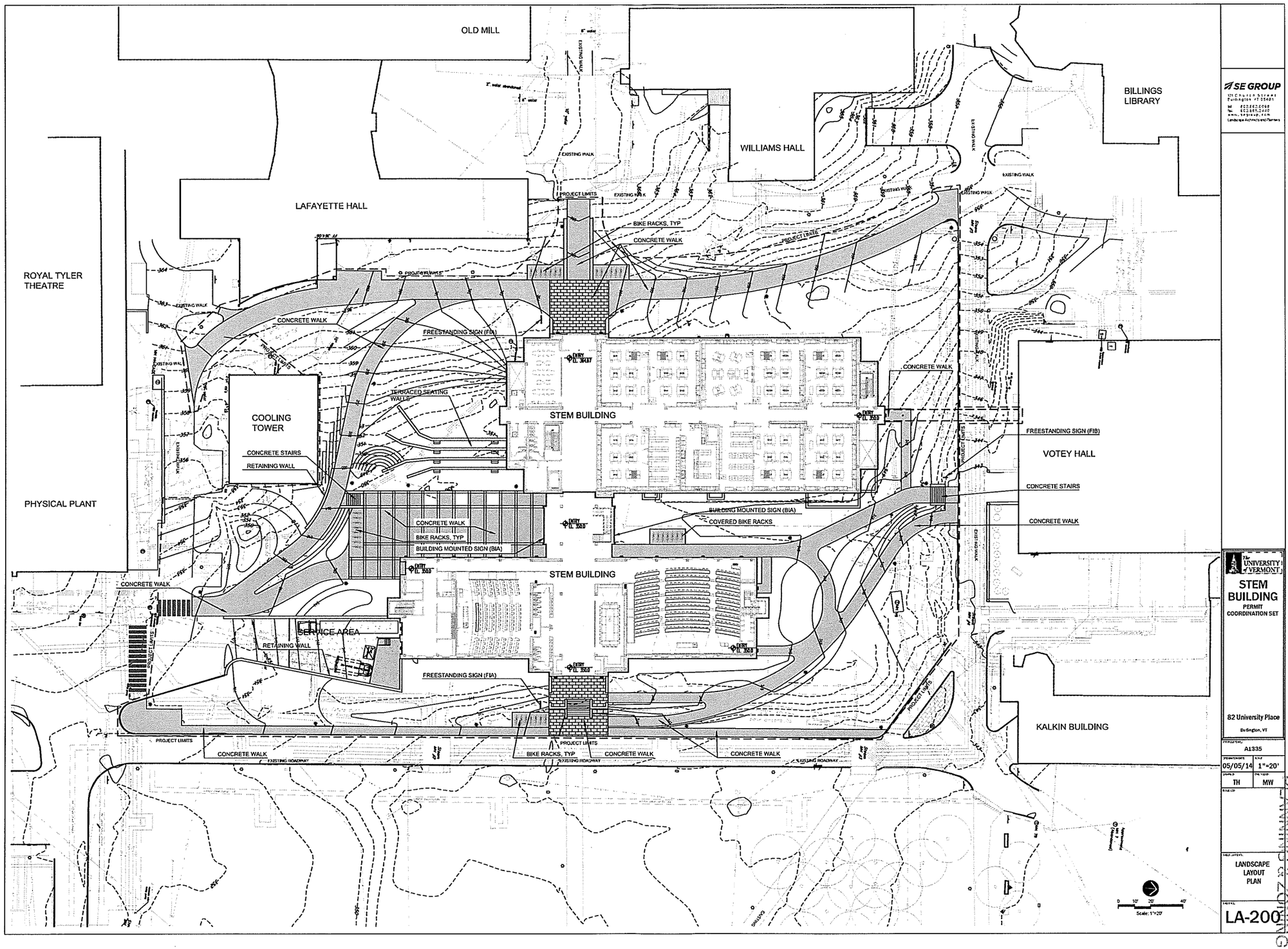

SE GROUP
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The University of Vermont

STEM BUILDING
PERMIT COORDINATION SET

82 University Place
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05/05/14 | 1"=20'

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LANDSCAPE LAYOUT PLAN

LA-200

FIXTURE AND POLE SPECIFICATIONS

✱ Fixture A:		✱ Fixture R:	
Manufacturer:	Lumec	Manufacturer:	Lumec
Fixture:	L70	Fixture:	L70
Configuration:	1	Configuration:	1
Optics:	SE3	Optics:	Type III
Lamp:	40watt LED 4,100K	Lamp:	50watt LED Retrofit Lamp
Lens:	PC-FC	These are existing light fixtures being reused	
Color:	GN8TX	Fixture EX:	
Options:	–	Existing light fixtures	
Pole:	AM6F-10		
Adapter:	SFO		
▬ Fixture B:		● Fixture C:	
Manufacturer:	Bega	Manufacturer:	BK Lighting
Fixture:	Wall Light-2380	Fixture:	Versa Start
Configuration:	1	Configuration:	Recessed Ceiling (18')
Lamp:	12watt LED	Lamp:	8watt LED 3,100K

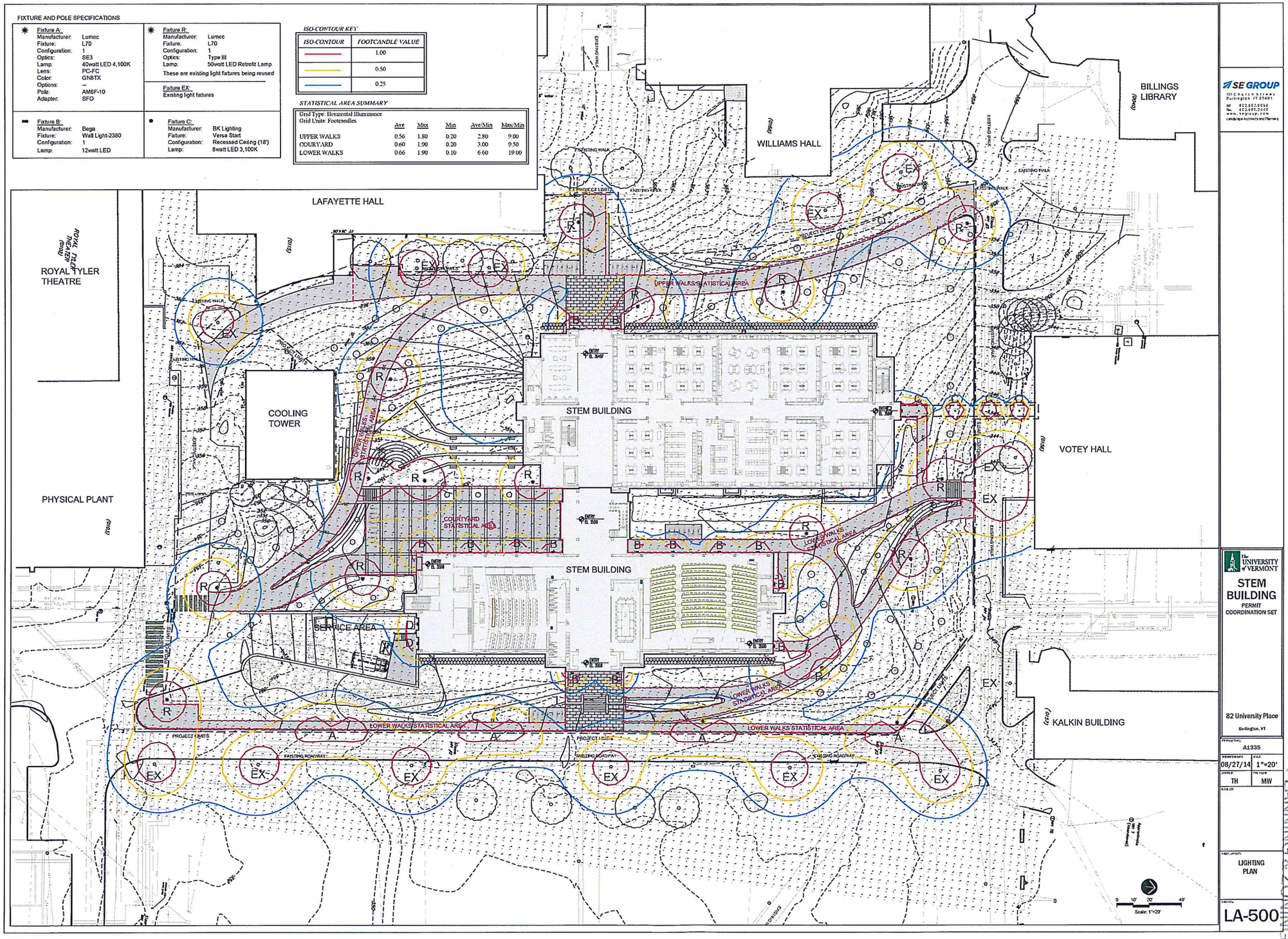
ISO-CONTOUR KEY

ISO-CONTOUR	FOOTCANDLE VALUE
	1.00
	0.50
	0.25

STATISTICAL AREA SUMMARY

Grid Type: Horizontal Illuminance
Grid Units: Footcandles

	Ave	Max	Min	Ave/Min	Max/Min
UPPER WALKS	0.56	1.80	0.20	2.80	9.00
COURTYARD	0.60	1.90	0.20	3.00	9.50
LOWER WALKS	0.66	1.90	0.10	6.60	19.00



SE GROUP
Landscape Architects and Planners

The University of Vermont

STEM BUILDING
PERMIT COORDINATION SET

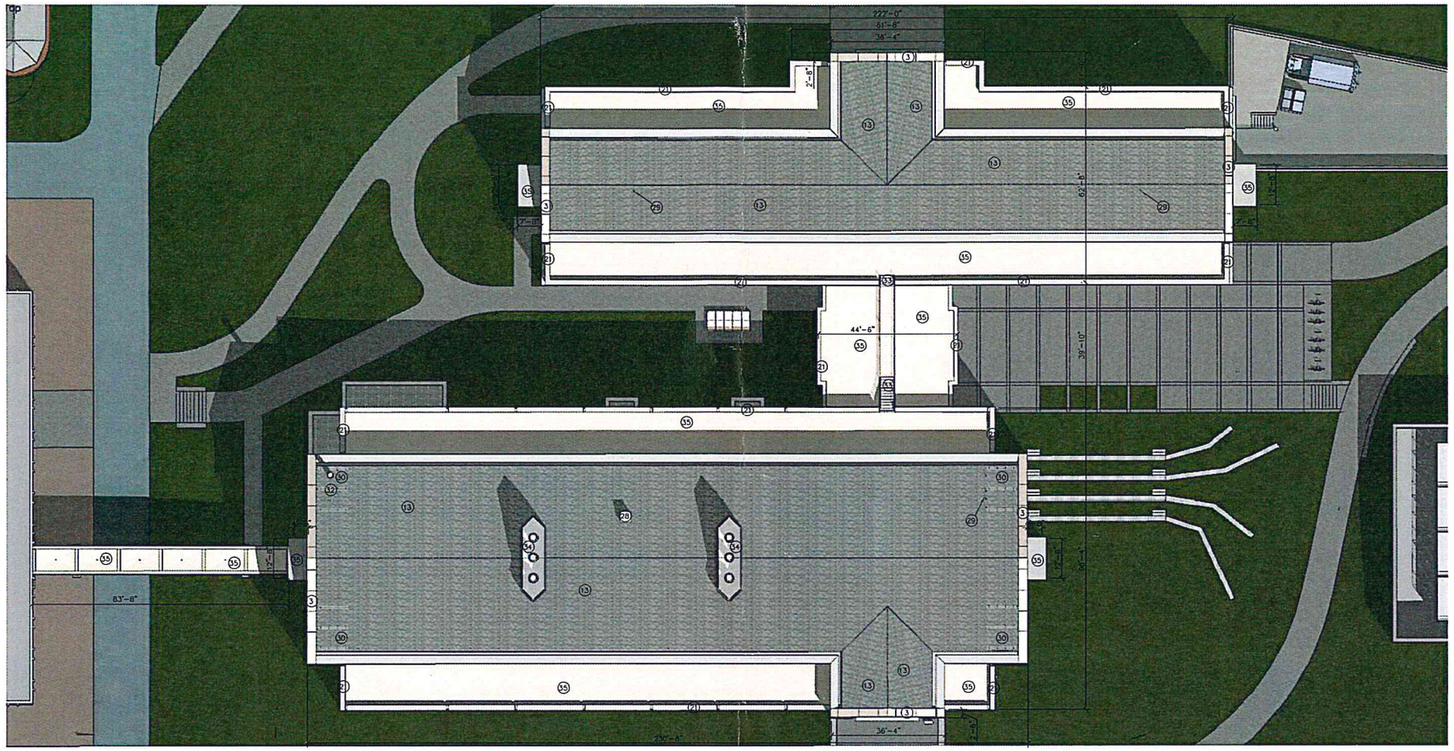
82 University Place
Burlington, VT

PROJECT NO.	A1335
DRAWING DATE	SCALE: 1"=20'
08/27/14	
DRAWN BY: TH	CHECKED BY: MW

LIGHTING PLAN

SHEET NO. LA-500

RECEIVED
SEP 09 2014
DEPARTMENT OF PLANNING & ZONING



KEY NOTES

1. VENEER BRICK, RUNNING BOND
2. ALUMINUM COMPOSITE METAL
3. CAST STONE
4. CAST STONE LINTEL
5. CAST STONE SILL
6. GRANITE BASE
7. INSULATED METAL PANEL
8. PAINTED METAL LINTEL
9. ALUMINUM WINDOW (W/INTERGRATED SILL)
10. STOREFRONT SYSTEM
11. CURTAIN WALL SYSTEM
12. INSULATED METAL PANEL
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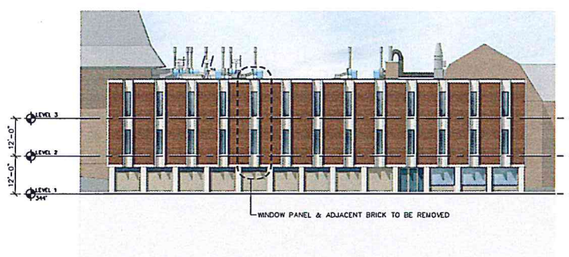
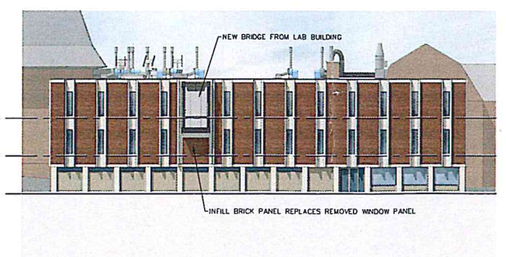
24. STROBE & HORN
25. FDC
26. HOSE BIB
27. SCUPPER
28. ELEVATOR VENT
29. PLUMBING VENT(S)
30. SNOW GUARD
31. BIKE LOCKERS
32. EMERGENCY GENERATOR EXHAUST
33. ROOF TOP EGRESS STAIRWAY
34. STACK ENCLOSURE
35. MEMBRANE ROOF
36. PAINTED METAL DOOR
37. KNOX BOX
38. GAS METER

1 STEM COMPLEX ROOF PLAN
1"=16'-0"



2 VOTEY BEFORE BRIDGE ADDITION
1"=16'-0"



3 VOTEY AFTER BRIDGE ADDITION
1"=16'-0"

4 VOTEY BEFORE BRIDGE ADDITION
N/A

5 VOTEY AFTER BRIDGE ADDITION
N/A

SCALE: 1/16" = 1'-0"

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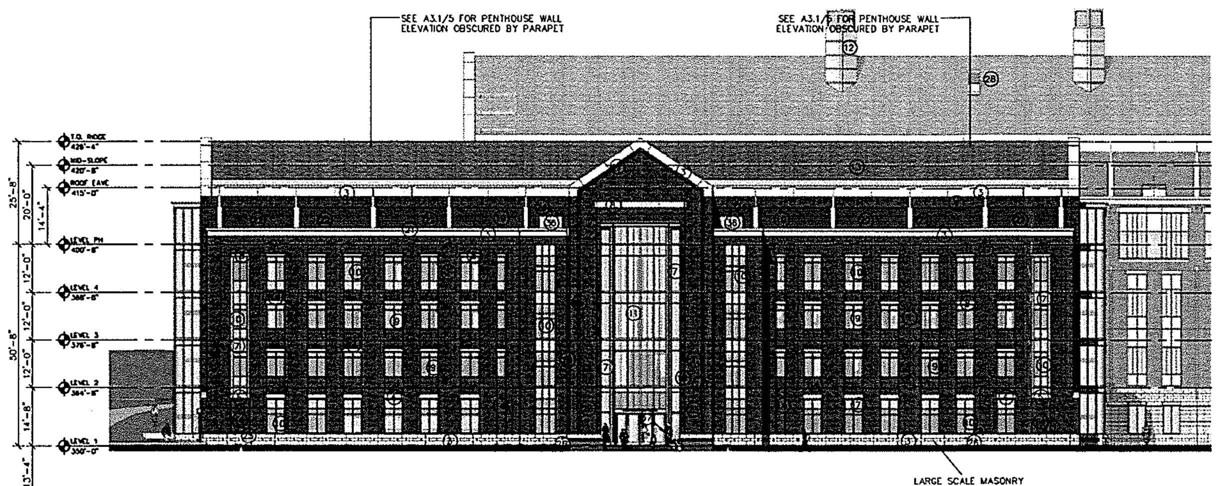
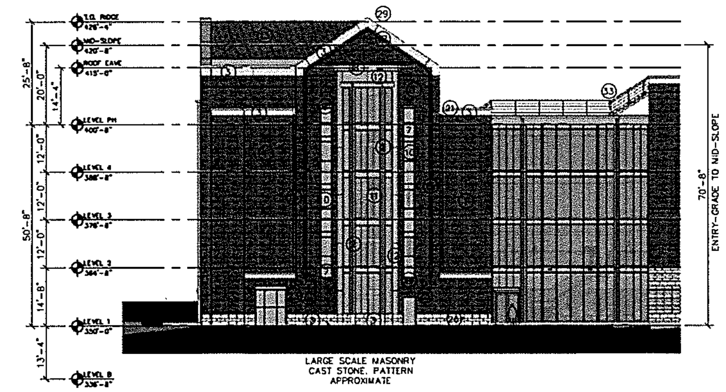
The UNIVERSITY of VERMONT
STEM
Burlington, VT

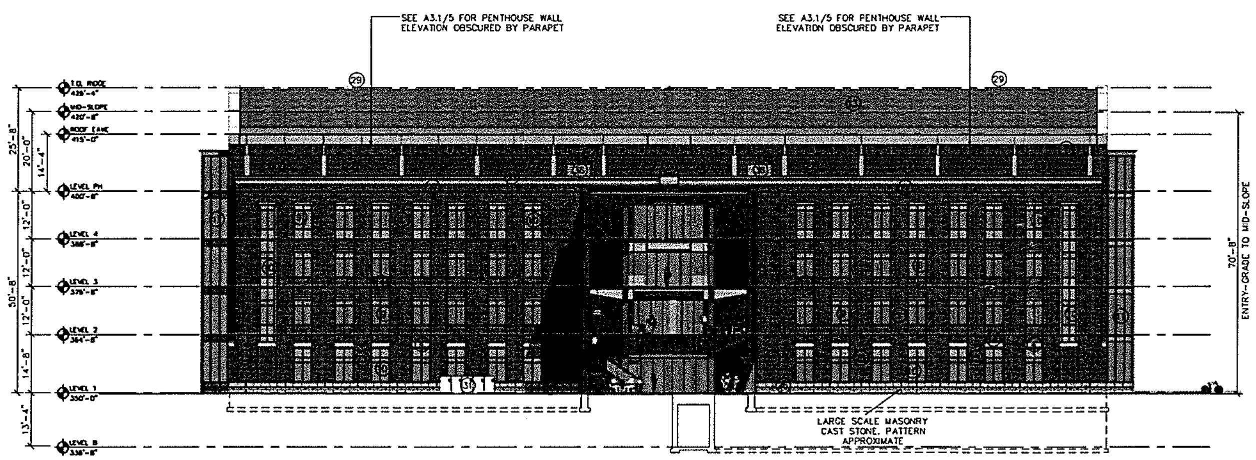
fff PROJECT NO.: A1335
ORIGINATION DATE: 09/08/14
SCALE:
DRAWN BY: PH
CHECKED BY: ELLENZWEIG
ISSUE LOG: ZONING SUBMISSION
SHEET CONTENTS: ROOF PLAN
SHEET NO.: A1.6



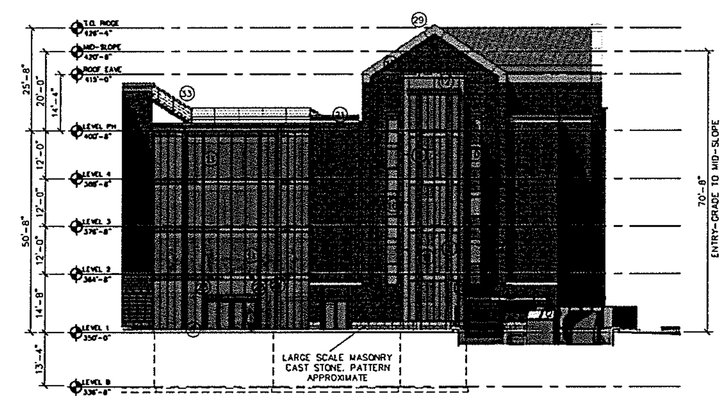
1 EAST ELEVATION
1/16" = 1'-0"



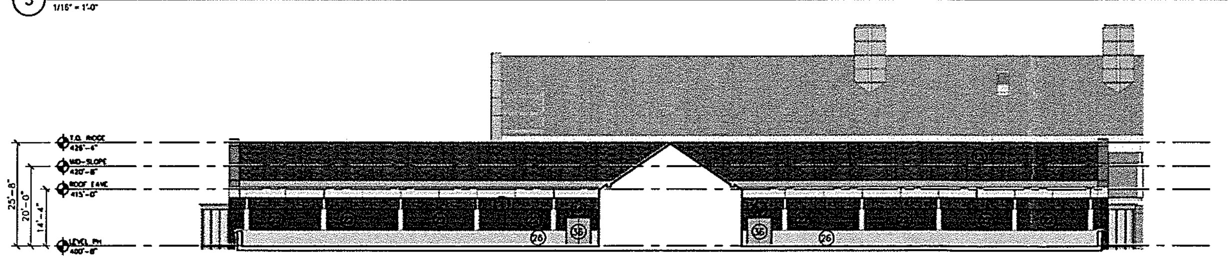
2 NORTH ELEVATION
1/16" = 1'-0"



3 WEST ELEVATION
1/16" = 1'-0"



4 SOUTH ELEVATION
1/16" = 1'-0"



5 WEST ELEVATION - PENTHOUSE (EAST SIM.)
1/16" = 1'-0"

KEY NOTES

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25. FDC
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31. BIKE LOCKERS
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33. ROOF TOP EGRESS STAIRWAY
34. STACK ENCLOSURE
35. MEMBRANE ROOF
36. PAINTED METAL DOOR
37. KNOX BOX
38. GAS METER

0 8' 16' 32'
SCALE: 1/16" = 1'-0"

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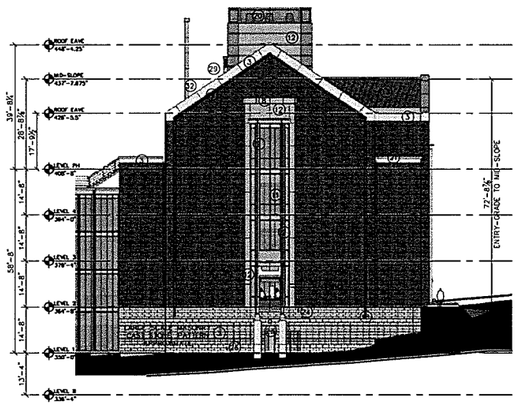
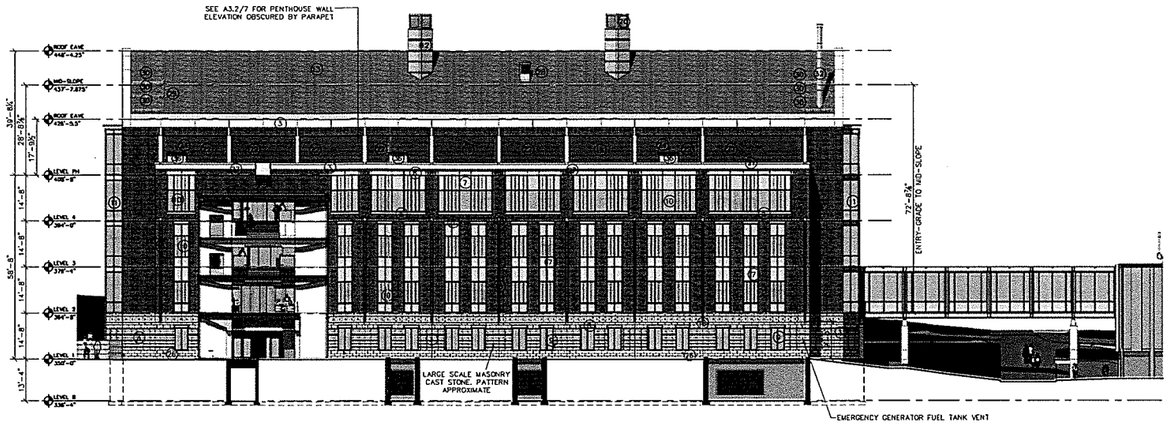
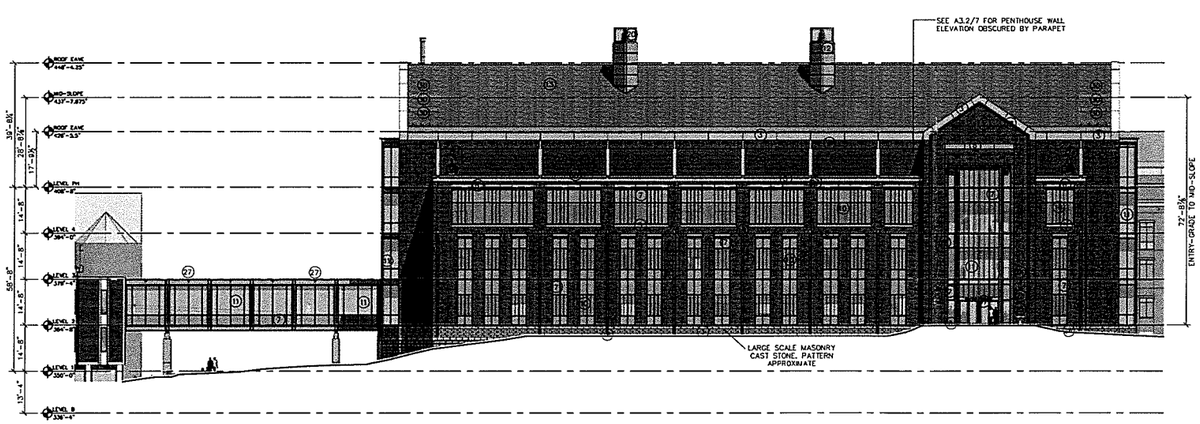
FFF PROJECT NO.: A1335	
ORIGINATION DATE: 09/08/14	SCALE: 1/16"
DRAWN BY: PH	CHECKED BY: ELLENZWEIG
ISSUE LOG: ZONING SUBMISSION	
SHEET CONTENTS: CLASSROOM BLDG EXTERIOR ELEVATIONS	
SHEET NO.: A3.1	



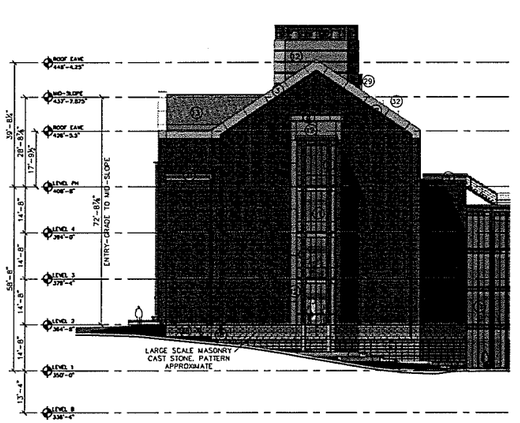
1 NORTH ELEVATION
1/16" = 1'-0"



2 EAST ELEVATION
1/16" = 1'-0"



3 WEST ELEVATION
1/16" = 1'-0"



4 SOUTH ELEVATION
1/16" = 1'-0"

KEY NOTES

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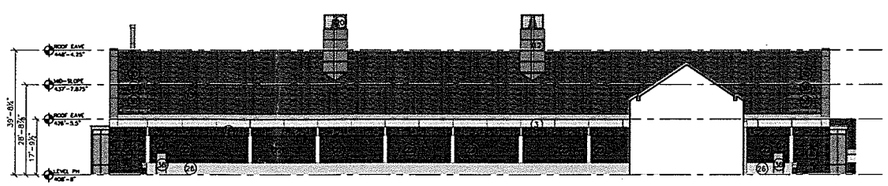
38. GAS METER



5 WEST ELEVATION - PENTHOUSE (EAST SIM.)
1/16" = 1'-0"

0 8' 16' 32'
SCALE: 1/16" = 1'-0"

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The UNIVERSITY of VERMONT
STEM

82 University Place
Burlington, VT

fff PROJECT NO.	A1335
DRAWING DATE	09/08/14
SCALE	1/16"
DRAWN BY	PH
CHECKED BY	ELLENZWEIG

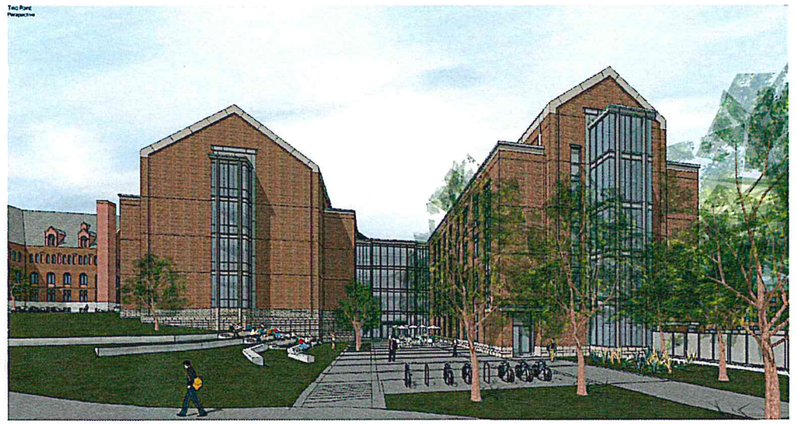
ISSUE LOG
ZONING SUBMISSION

SHEET CONTENTS
LAB BLDG EXTERIOR ELEVATIONS

SHEET NO.
A3.2

RECEIVED
SEP 09 2014
DEPARTMENT OF PLANNING & ZONING

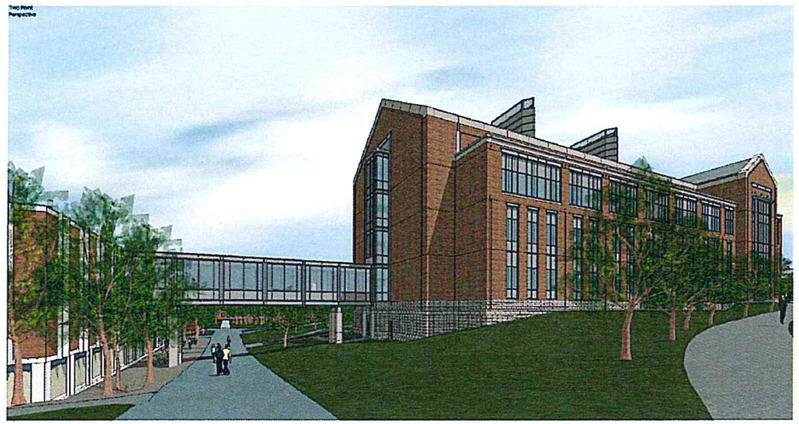
1 STEM COMPLEX - LOOKING SOUTHWEST
NTS



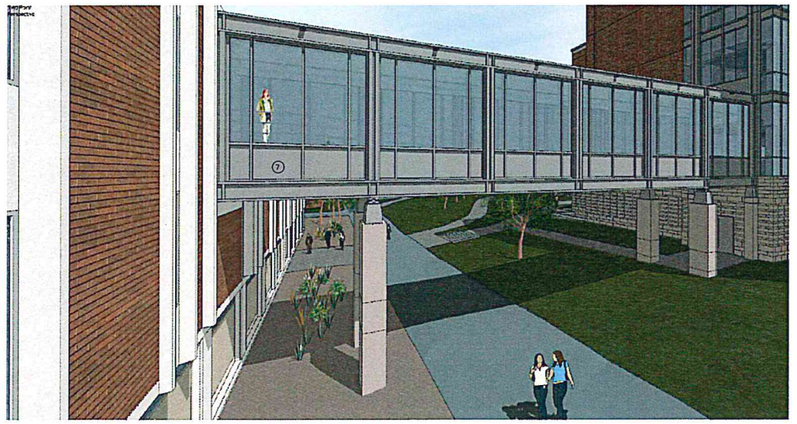
2 STEM COMPLEX - LOOKING NORTH
NTS

3 STEM COMPLEX - LOOKING NORTHEAST
NTS

4 STEM COMPLEX - LOOKING EAST
NTS



5 STEM COMPLEX - LOOKING SOUTHEAST
NTS



6 STEM COMPLEX - THE BRIDGE
NTS

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Burlington, VT

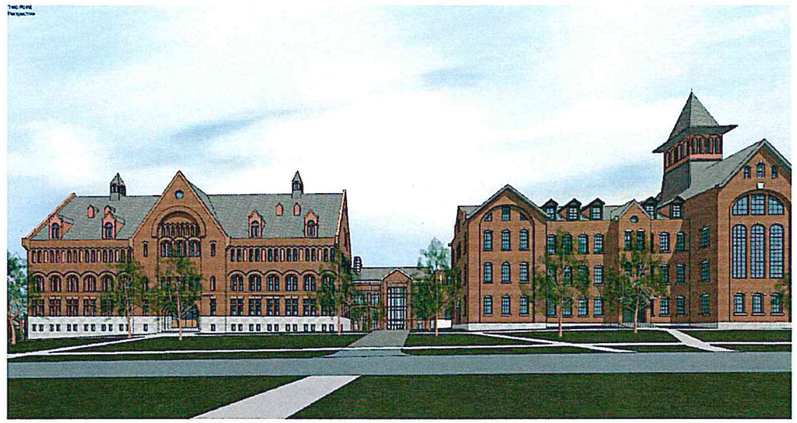
FFF PROJECT NO: A1335

ORIGINATION DATE:	SCALE:
09/08/14	NTS
DRAWN BY: PH	CHECKED BY: ELLENZWEIG

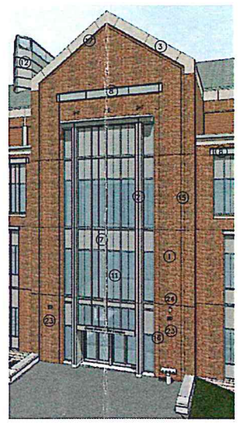
ISSUE LOG
ZONING SUBMISSION

SHEET CONTENTS:
PERSPECTIVE VIEWS

SHEET NO:
A3.3

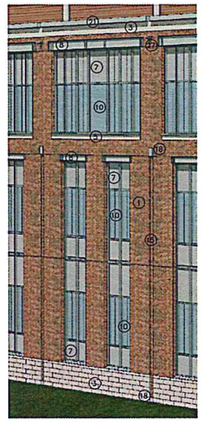


1 VIEW OF STEM COMPLEX FROM UNIVERSITY PLACE
N/A

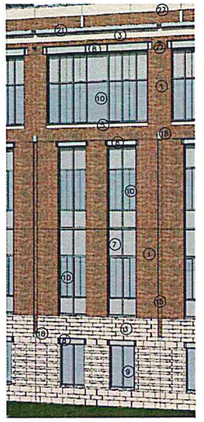


2 LAB BLDG ENTRY GABLE
N/A

3 LAB BLDG ENTRY
N/A

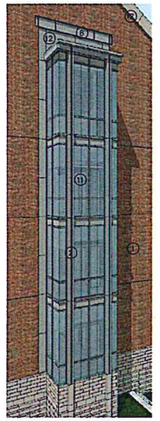


3 LAB BLDG WEST BAY
N/A



4 LAB BLDG EAST BAY
N/A

5 SITE SECTION - LOOKING NORTH
N/A



6 LAB BLDG END BAY
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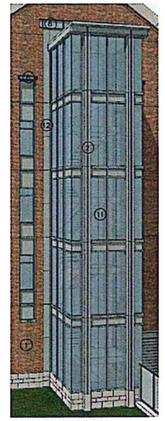
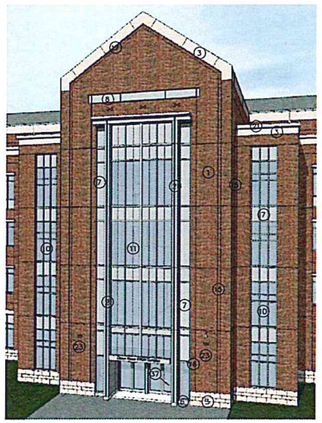
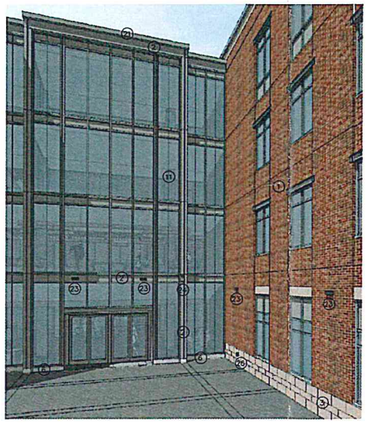


7 CLASS BLDG STAIR BAY
N/A

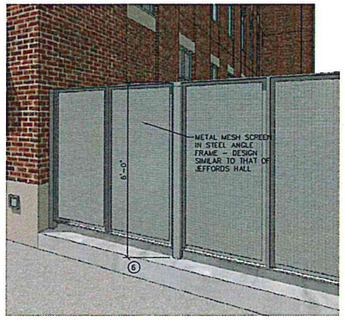


8 CLASS BLDG ENTRY GABLE
N/A

9 CLASS BLDG WINDOW BAYS
N/A



10 THE CONNECTOR
N/A



11 5 SECURE BIKE LOCKERS (10 BICYCLES)
N/A

12 METAL PANEL SCREEN @ SERVICE AREA
N/A

KEY NOTES

1. VENEER BRICK, RUNNING BOND
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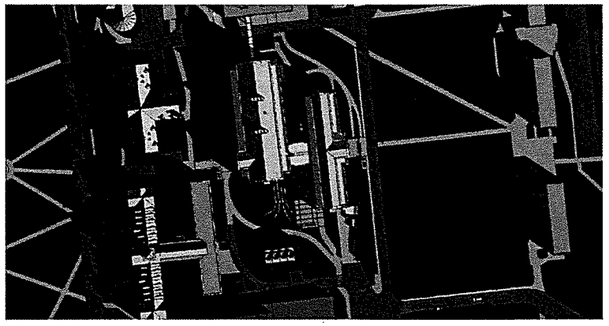
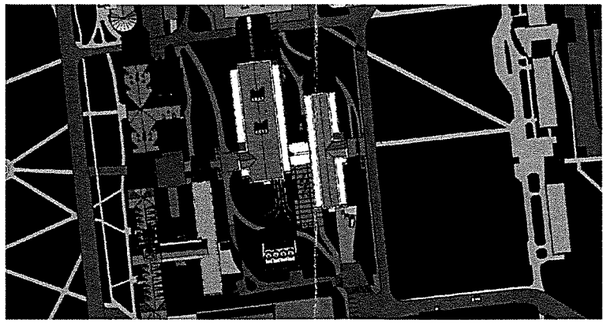
802.864.5744 · www.fffvt.com
Architecture · Planning · Interiors
ELLENZWEIG
architecture · planning

The University of Vermont
STEM
Burlington, VT

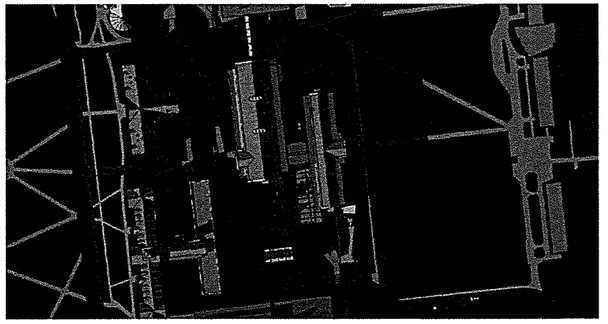
FFF PROJECT NO.: A1335
ORIGINATION DATE: 09/08/14
SCALE:
DRAWN BY: PH
CHECKED BY: ELLENZWEIG
ISSUE LOG: ZONING SUBMISSION
SHEET CONTENTS: SITE & DETAIL VIEWS
8/27/14
SHEET NO.: A3.4



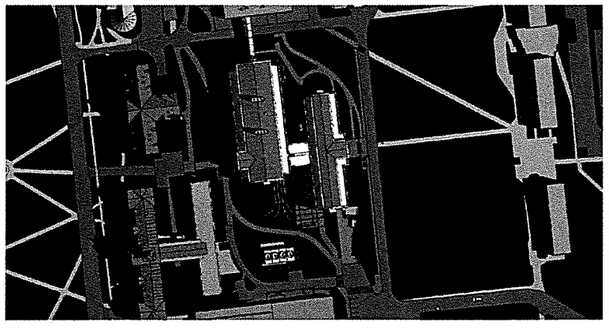
1 EXQUINOX - 9:00AM
N/A



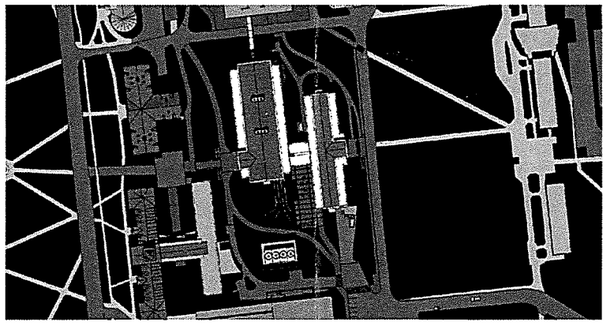
2 EXQUINOX - 12:00 PM
N/A



3 EXQUINOX - 4:00PM
N/A



4 SUMMER SOLSTICE - 9:00AM
N/A



5 SUMMER SOLSTICE - 12:00 PM
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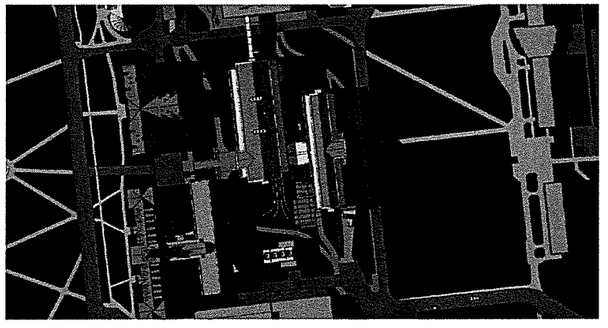
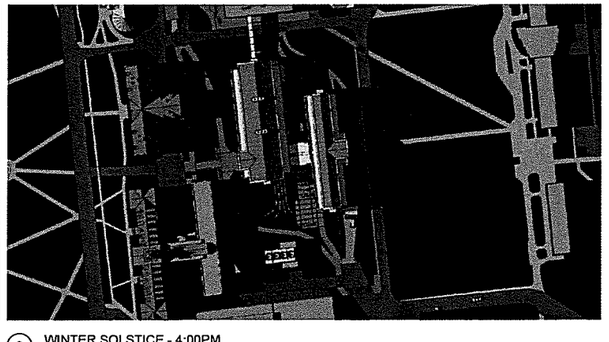


6 SUMMER SOLSTICE - 4:00PM
N/A

7 WINTER SOLSTICE - 9:00AM
N/A

8 WINTER SOLSTICE - 12:00 PM
N/A



9 WINTER SOLSTICE - 4:00PM
N/A

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The UNIVERSITY of VERMONT

STEM

Burlington, VT

FFF PROJECT NO: A1335

ORIGINATION DATE: 09/08/14

SCALE:

DRAWN BY: FH

CHECKED BY: ELLENZWEIG

ISSUE LOG
ZONING SUBMISSION

SHEET CONTENTS:
SOLAR STUDIES

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