

Burlington Development Review Board

Department of Permitting & Inspections
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/DPI/DRB
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Brad Rabinowitz
AJ LaRosa
Springer Harris
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Brooks McArthur
Kienan Christianson
Caitlin Halpert
Sean McKenzie, (Alternate)
Ravi Venkataraman, (Alternate)



BURLINGTON DEVELOPMENT REVIEW BOARD Wednesday, March 3rd, 2021, 5:00 PM PUBLIC HEARING NOTICE

REMOTE MEETING

Zoom: <https://us02web.zoom.us/j/84346105661?pwd=dTJLb3UrcDFyNWVM5VkZqOU9FSWNVZz09>

Webinar ID: 843 4610 5661

Password: 842557

Telephone: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782

- 1. 21-0638CU; 251-253 South Union Street (RL, Ward 6S) Two Fifty Three South Union Realty LLC, Rebecca Weisman and Christopher Wright Cronin**
Change of general office use to neighborhood commercial use (health studio & medical office). No site or exterior building changes.
- 2. 21-0647CU; 428 South Winooski Ave (RM, Ward 6S) Jill Badolato**
Establish short-term rental (bed and breakfast) within existing dwelling unit.
- 3. 21-0414CA/MA; 75 Cherry Street (FD6, Ward 3C) BTC Mall Associates, LLC**
Mixed use redevelopment of the former Burlington Town Center mall site.

Plans may be viewed upon request by contacting the Department of Permitting & Inspections between the hours of 8:00 a.m. and 4:30 p.m. Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/dpi/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at (802) 540-2505.

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Department of Permitting & Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
Telephone: (802) 865-7188

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
Ted Miles, Zoning Specialist
Charlene Orton, Permitting & Inspections Administrator



TO: Development Review Board
FROM: Scott Gustin
DATE: March 3, 2021
RE: 21-0638CU; 251-253 South Union Street

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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: RL Ward: 6S

Owner/Applicant: Two Fifty Three South Union Street Realty, LLC / Rebecca Weisman and Christopher Wright Cronin

Request: Change of general office use to neighborhood commercial use (health studio and medical office). No site or exterior building changes.

Applicable Regulations:

Article 3 (Applications, Permits, & Project Reviews), Article 4 (Zoning Maps and Districts), Article 5 (Citywide General Standards), Article 8 (Parking)

Background Information:

The applicants are seeking approval to convert a preexisting nonconforming general office use into neighborhood commercial use (medical office and health studio).

Neighborhood commercial use is permissible in this location; however, it is predicated on an existing neighborhood commercial use (i.e. one neighborhood commercial may change to another). Alternatively, neighborhood commercial uses may be allowed in buildings originally constructed for commercial use. Neither is the case here.

The applicants wish to convert the entire building (~ 6,223 sf) to neighborhood commercial use. The upper size limit for neighborhood commercial uses is 4,000 sf. With that in mind, the applicants propose alternatively occupying ~ 4,000 sf neighborhood commercial space with the remainder used for a reestablished apartment and general office use. The building is currently permitted as general office space with a single upstairs apartment. The apartment has been removed and converted to general office use without zoning approval. The applicant's proposed alternative would reestablish that apartment with ~ 1,252 sf, but some office space would remain. In effect, ~ 4,000 of the building would be converted to neighborhood commercial use, ~ 1,252 sf would be converted back to an apartment, and the remaining ~ 971 sf would stay as general office space.

Previous zoning actions for this property:

- 7/12/89, Approval to install a compressor and new window
- 8/28/86, Approval to construct exterior egress stairs behind the building

- 3/10/82, Approval to install a replacement parallel sign
- 8/1/77, Approval to convert an apartment into expanded office space
- 7/11/67, Approval to convert the first floor residential space into office space

Recommendation: **Conditional use denial** as per, and subject to, the following findings.

I. Findings

Article 3: Applications, Permits, and Project Reviews

Part 5, Conditional Use & Major Impact Review:

Section 3.5.6 (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 general 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 conversion of general office space to medical office and health studio has no appreciable impacts on existing or planned public utilities, services, or facilities. The applicant is advised to check with VT DEC as to whether a state wastewater permit is needed. **(Affirmative finding if conditioned)**

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

The building is located within the residential – low density zone. The existing office use is a preexisting nonconformity and is inconsistent with the intent of the zone. The proposed conversion to a neighborhood commercial use would better align the use of the property with the intent of this residential district. **(Affirmative finding)**

- 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;*

The proposed neighborhood commercial uses include medical office and health studio. Neither is expected to generate nuisance impacts from noise, odor, dust, and the like. **(Affirmative finding)**

- 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;*

The conversion of general office space to medical office and health studio can be expected to generate an increase in traffic. General office tends to attract employees and limited clientele, whereas both medical office and health studio routinely attract clientele. While significant traffic impacts are not anticipated, a basic traffic estimate of daily and peak hour trip generation should be provided in comparison to the existing use. **(No finding possible)**

- 5. The utilization of renewable energy resources;*

No part of this application would prevent the use of wind, water, solar, or other renewable energy resources. **(Affirmative finding)**

6. *Any standards set forth in existing City bylaws and city and state ordinances;*

The proposed medical office and health studio would be affected by other city and state laws as applicable. **(Affirmative finding if conditioned)**

(b) Major Impact Review Standards
Not applicable.

(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 relative to any of 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 proposed neighborhood commercial use is not expected to produce adverse effects in need of mitigation. **(Affirmative finding)**

2. *Time limits for construction.*

No construction timeline or phasing is included in this proposal. No site or exterior building alterations are proposed. **(Affirmative finding)**

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

As a neighborhood commercial use, hours of operation are limited to 6:00 AM – 11:00 PM, seven days per week. **(Affirmative finding if conditioned)**

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

Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time. **(Affirmative finding if conditioned)**

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

Not applicable.

Article 4: Maps & Districts

Sec. 4.4.5, Residential Districts:

(a) Purpose

(1) Residential Low Density (RL)

The Residential Low Density (RL) district is intended primarily for low density residential development in the form of detached single family dwellings and duplexes. As noted above, the office use is a preexisting nonconformity. While neighborhood commercial use is not residential, it is allowed under certain circumstances. Conversion to neighborhood commercial use would align the use of the property more closely with the intent of the district. **(Affirmative finding)**

(b) Dimensional Standards and Density

Not applicable.

(c) Permitted and Conditional Uses

Neighborhood commercial use is allowed as a conditional use up to 4,000 sf. The applicant's preferred option to use all 6,223 sf as neighborhood commercial cannot be approved. The alternative of up to 4,000 sf neighborhood commercial space could be approved, but there are limitations based on the requirement of street level space as noted below. **(Affirmative finding if conditioned)**

(d) District Specific Regulations

5. Uses

Exception for Neighborhood Commercial Uses

Neighborhood commercial uses as defined in Article 13 and intended to primarily serve the nearby residential area shall be considered permitted uses in all residential districts subject to the following:

(i) *This exemption shall only apply to:*

- 1) *Historic neighborhood commercial buildings that are listed or eligible for listing on the state or national register and originally designed and constructed for such purpose(s); or,*
- 2) *A street level neighborhood commercial use as defined in Article 13 in lawful existence as of January 1, 2007.*

The building is used entirely as general office. General office is not a neighborhood commercial use per the Article 13 definition of "neighborhood commercial use." According to the Vermont historic register, the building was originally constructed as a residence. As a result, the property does not qualify for consideration of neighborhood commercial use. **(Adverse finding)**

(ii) *Neighborhood commercial uses shall be limited to a single story on the street level of any structure.*

The applicants propose use of the entire building as neighborhood commercial use. That not being possible due to the 4,000 sf limitation, they propose to use the bottom two floors for neighborhood commercial use. One is at street level (2,030 sf) and the other is below street level (1,970 sf) but accessible from the exterior due to the slope of the lot. This criterion enables neighborhood commercial use only of the street level of the structure. **(Adverse finding)**

(iii) *Neighborhood commercial uses less than 2,000 sqft shall be treated as a permitted use. Neighborhood commercial uses greater than or equal to 2,000 sqft but less than 4,000 sqft shall be treated as a conditional use. Neighborhood commercial uses occupying 4,000 sqft or more shall not be permitted.*

The requested 6,223 sf of neighborhood commercial space cannot be permitted. Up to 4,000 sf could be; however, the building layout as noted above would limit neighborhood commercial use to the 2,030 sf of street level space. Such is not the proposal. **(Adverse finding)**

- (iv) *The neighborhood commercial use shall not be counted against the property's allowable residential density.*
With the proposed conversion of one commercial use to two others, there is no impact on allowable residential density. **(Affirmative finding)**
- (v) *The sale of fuel for motor vehicles, or new or expanded gas station canopies, shall be prohibited.*
Not applicable.
- (vi) *Hours of operation shall be limited to 6:00am to 11:00pm seven days per week. Any expansion in the hours of operation of an existing neighborhood commercial use shall require conditional use review by the DRB.*
As conditioned.
- (vii) *All building height and setback requirements for the underlying residential district shall apply, and the lot coverage shall not exceed 60%.*
No site or exterior building changes are included in this proposal. **(Affirmative finding)**
- (viii) *Any exterior changes to the building(s) or changes to the site plan shall be subject to the design review requirements of Article 6.*
Not applicable.
- (ix) *To the extent that additional parking is necessary, the parking standards for Shared-Use Districts shall apply pursuant to Article 8.*
The application does not specify how much of the neighborhood commercial use will be medical office versus health studio. Medical office requires 2 spaces per 1,000 sf, and health studio requires just 1 space per 1,000 sf. The application indicates 17 parking spaces onsite. That would be sufficient in any scenario for the two uses and a reestablished apartment; however, detail is needed as to the proposed area for the proposed uses. **(Affirmative finding if conditioned)**
- (x) *The conversion of a residential use to a neighborhood commercial use within a historic neighborhood commercial building more than 50 years old and originally designed and constructed for such purpose shall be exempt from the housing replacement requirements of Article 9, Part 2.*
Not applicable.
- (xi) *Home occupations as defined and regulated under this article are not restricted by the provisions of this section.*
Not applicable.
- (xii) *Any aspect of a neighborhood commercial use in lawful existence as of January 1, 2007 not in strict conformance with any of the above standards shall be considered non-conforming and be subject to the provisions of Article 5, Part 3.*
Not applicable.

Article 5: Citywide General Regulations:
Sec. 5.3.4, Nonconforming Uses

(a) Changes and modifications

The existing general office space is a preexisting nonconforming use. With the proposed conversion of ~ 4,000 general office use to neighborhood commercial use and 1,252 sf to a residential dwelling unit, 971 sf of general office space would remain. This section prohibits any change of a nonconforming use to anything other than a fully conforming use with exceptions only as noted in subsections 1 A and B below. Unlike nonconforming signs or structures, there is no provision to allow change to a nonconforming use that reduces, but does not eliminate, the nonconformity. There is no apparent provision to keep this reduced office space. It would need to be converted to residential space or another allowable use. **(Adverse finding)**

1. Nonconforming Non-Residential Use

A. Exception for residential conversion.

Not applicable.

B. Existing Neighborhood Commercial Use.

The general office use is not an existing neighborhood commercial use. It is a preexisting nonconforming use. **(Adverse finding)**

Article 8: Parking

Sec. 8.1.8, Minimum Off-Street Parking Requirements

See Sec. 4.4.5 (d) 5 (ix).

II. Conditions of Approval

In the event that the Development Review Board finds this application approvable, the following conditions are recommended.

1. Prior to release of the zoning permit, additional information shall be submitted subject to staff review and approval. The additional information shall include:
 - a. Traffic generation estimate of daily and peak hour trip ends; and,
 - b. Specification of building floor area dedicated to medical office, health studio, and one residential dwelling unit.
2. Neighborhood commercial use (medical office and health studio) is limited to 4,000 sf or less and may only be on the street level of the building (in this case, 2,030 sf). This approval includes reestablishment of a previously permitted single dwelling unit. No other uses are included in this permit. Any remaining building space shall be used for permissible uses approved under separate zoning permit.
3. No remaining general office use is included in this permit.
4. A state wastewater permit may be required. It is the applicant's responsibility to inquire with VT DEC as to whether such permit is necessary.
5. Hours of operation are limited to 6:00 AM – 11:00 PM, seven days per week.
6. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Permitting & Inspections as well as other permit(s) as may be required, and shall meet all energy efficiency codes of the city and state as required.
7. Standard permit conditions 1-15.



MEMORANDUM

Freeman French Freeman Inc. | Architecture · Planning · Interiors

81 Maple Street · Burlington Vermont 05401

802·864·6844 · www.fffinc.com

freeman | french | freeman

To: Development Review Board

January 20, 2021

From: Alex Halpern on Behalf of Rebecca Weisman and Christopher Wright Cronin (Applicant)

Re: Appendix A - 251-253 South Union Street Zoning Permit Application

General

The applicant is in the process of purchasing the above-mentioned property as a condition of the acquisition with the Owners permission, for which the DRB's ruling will influence next steps.

Proposed Project

This request is for the DRB to permit occupancy the approximately 6,223 SF* General Commercial Use office space at 251-253 South Union St (operating as a law office with one residential apartment for the past forty-plus years) with a Neighborhood Commercial Use as health studio and medical office space.

Review of the existing conditions indicates that the entire premises are currently finished as office space and that the apartment is no longer in place. The applicant would like to occupy the premises as currently finished. If that is not possible the applicant would consider reestablishing an apartment and occupying the balance of finished space with office use to be more in alignment with the existing permits.

Based on the existing zoning permits (attached for reference) and the City's property database, approximately 4,971 SF of law office plus 1,252 SF of apartment is currently permitted as follows.

A 1967 zoning permit converted the premises from residential into a law office with two residential apartments on the second floor; and in 1977 another zoning permit converted one of the second-floor apartments into additional office space. The premises as they exist today are finished as all office space without an apartment. The second-floor apartment that should still be in existence is estimated to be approximately 1,252 SF based on subtracting the 1977 office space conversion from the 1,588 SF of current second floor finished space indicated on the City's Property Database¹.

The applicant requests the DRB to grant approval for use of the premises as described above understanding the following:

- a. In-kind replacement of a law office with a law office (General Commercial Use) would require neither a new zoning permit nor presentation to the DRB.
- b. The proposed use is similar in scale and operations to that of the law office.
- c. The long history of commercial use at this property.
- d. The existing 17 parking spaces are anticipated to provide more than adequate designated parking spaces for both employees and visitors. The parking assessment is based on the applicants' / business owners understanding of the proposed business operations. If necessary, a formal parking assessment could be prepared upon request or as a condition of the permit.
- e. The proposed use is classified as Neighborhood Commercial Use which can be permitted in RL districts whereas the General Commercial Use of a law office is no longer permitted per the current zoning ordinance.

Alternatively, should the above request be determined impermissible, the applicant requests that the DRB allow a Conditional Use of up to 4,000 SF on and accessible from the street level based on the exception in the Appendix A Use Table. That exception allows Neighborhood Commercial Uses (NCU) in an RL District provided they meet the requirements of Section 4.4.5(d)6 with subsection A.i.2) which qualifies that the exception shall only apply to a street level neighborhood commercial use as defined in Article 13 that has been in lawful existence as of January 1, 2007. The exception is also subjected to the following square foot limitations per A) iii – NCU less than 2,000 SF shall be treated as a permitted use; 2,000 SF to 4,000 SF shall be treated as a conditional use; and NCU occupying over 4,000 SF shall not be permitted.

As a variant to this alternative the applicant also requests Board consideration to occupy 4,000SF per the Use Table exception while leaving the balance of space as currently finished for general commercial office space use.

Given that the law office use was in existence as of January 1, 2007, that the proposed use is Neighborhood Commercial, and that there are numerous similar operations currently operation in the adjacent and immediate area, it seems reasonable that the proposed occupancy could meet the intent of the zoning ordinance and be allowed.

The DRB's review and consideration of above requests are greatly appreciated.

Location map and site plan:



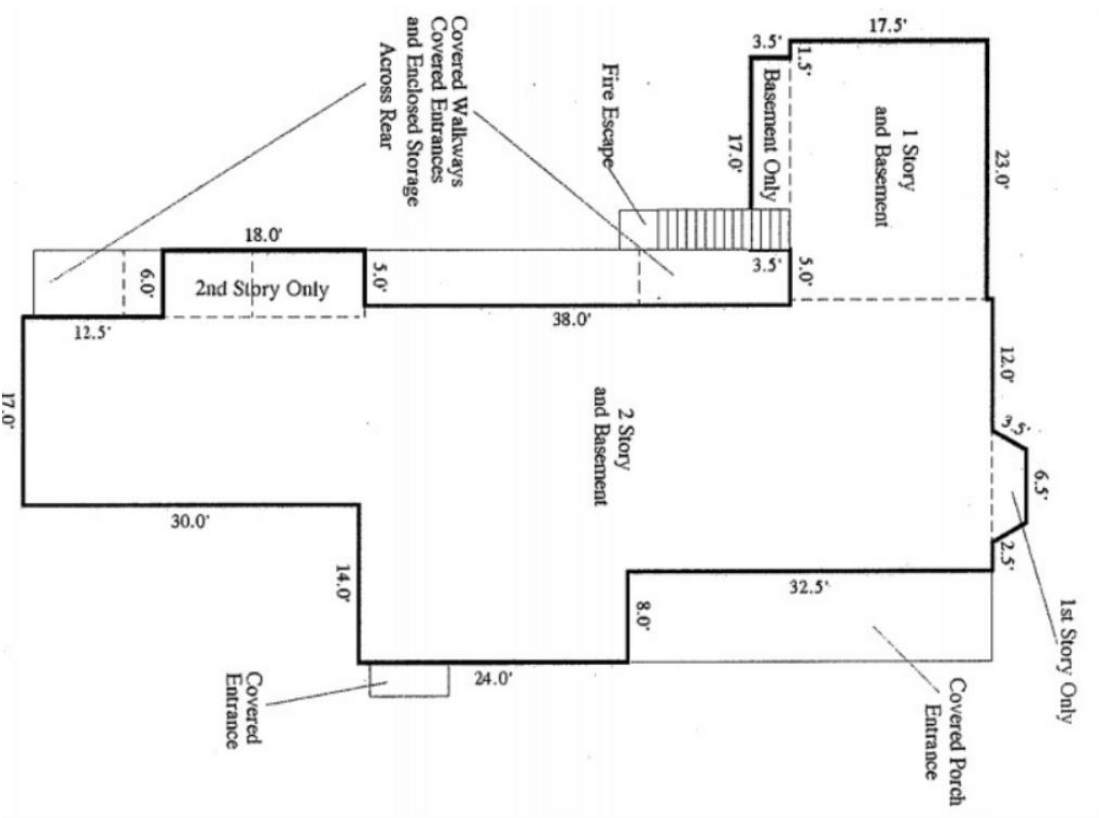


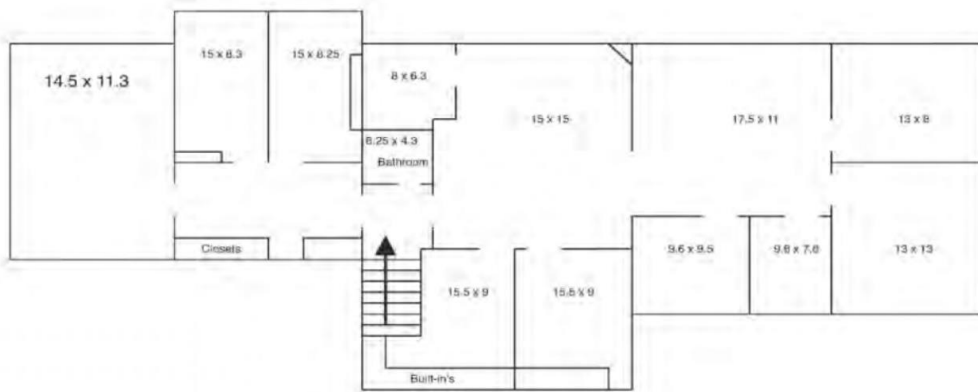
Photographs of Existing Building





Floor Plan Diagrams





Notes

* Finished Space

1. Area description from City of Burlington Property Database website 1/19/2021.

Sketched Areas			
Area	Description	Gross Area	Finished Area
FFL	1ST FLOOR	2413	2413
HST	HALF STORY	510	382.5
LFL	LOWER FL FIN	2453	1839.75
OFP	OPEN PORCH	794	0
SFL	2ND FLOOR	1588	1588
STG	STORAGE	150	0
WDK	WOOD DECK	150	0
Totals		8,058	6,223

CITY OF BURLINGTON, VERMONT

ZONING PERMIT

Pursuant to the provisions of Appendix A, Section 80-B of the Zoning Ordinances for the City of Burlington, Vermont, a zoning permit is hereby issued on

Aug. 1, 1977

To:

Pierson, Afolter and Wadhams to convert an apartment to office space at 253 South Union Street, Burlington, Vermont. 25% permissable under the ordinances.

R-6 Zone

An appeal of the Zoning Permit so issued, may be taken within fifteen (15) days from the date of issuance of this permit, and plans may be reviewed in the Zoning Administrator's Office.

The final expiration date that appeals may be taken is

Aug. 16, 1977



Raymond A. Wheel
Zoning Administrative Officer

\$1000

Permit #
780153

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

CITY OF BURLINGTON, VERMONT

Room 34, City Hall

77-42

1. Applicant/Agent JAMES SPADACCINI Phone No. 985-3830
Mailing Address BOX 155 SHELBURNE
2. Project Location 253 SOUTH UNION STREET.
3. Brief Description of Project (Attach additional sheets if necessary) TO CON
SMALL APARTMENT SPACE TO ADDITIONAL OFFICE.
APPROX. 336 SQ. FT. Zoning District (OVER) R-6
Estimated Cost \$4,000

DO NOT WRITE BELOW THIS LINE

4. Date application received as complete 8-2-77 Fee Paid N/A
5. Level of Review Required: (LI ; () II ; () III.
6. Subject to the provisions of:
- (☒) Design Review (Sec. 19) () Comments Attached
 - () Site Plan Review (Sec. 26) () Comments Attached
 - () Historic Review (Sec. 18) () Comments Attached
 - () Subdivision Approval (Chap. 28) () Comments Attached
- Note: See other side for checklist of provisions.
7. Final Action Taken at Meeting of 1/4.
- () Denied, see reasons below and/or attached
 - (☒) Approved, without Condition
 - () Approved, subject to the Conditions below

Attest:

[Signature]
Planning Director

When signed and delivered to the applicant, this Application becomes the official n of denial or a Certificate, as checked in No. 7, above.

DISCLAIMER Receipt of a Certificate of Appropriateness in no way releases the appli from the responsibility of obtaining a building permit from the Building Inspector to assure compliance with the Building Code of the City of Burlington.

FOR PLANNING DEPARTMENT USE ONLY

Checklist of Submittals (check when each item is satisfactory)

- | | |
|---|---|
| ☒ Location Map | ☐ Massing Model |
| ☐ Photographs | ☒ Site Plan |
| ☒ Building Plans, _____ sets. | ☐ Landscaping Plan |
| ☐ Other (list) | |

Requirements for Approval (Check as each item is deemed satisfactory)

	<u>REQUIRED</u> (see below)	<u>APPROVED</u>
Site:	☒ Vehicular Circulation and Access	()
	☒ Sufficient Parking	()
	☒ Pedestrian Circulation, including Handicapped Access	()
	☐ Setback and Minimum lot requirements	()
	☒ Utility demand and surface drainage	()
	☒ Landscaping and/or screening	()
	☐ Use does not create a nuisance	()
Design:	☐ Height and bulk of structure compatible	()
	☐ Architectural design and exterior materials complement neighboring structures	()
	☐ Signs	()
Historic:	☐ Alterations in keeping with architectural and/or historic integrity of building or district	()

SUBJECT TO DESIGN REVIEW AS THE PLAN IS REVISED

Additions

- | | |
|---|-------------------------------------|
| ☐ Design Review Board Meeting of _____ | ☐ Attachment |
| ☐ Historic Advisory Board Meeting of _____ | ☐ Attachment |
| ☐ Public Hearing on _____ | ☐ Attachment |
| ☐ Other _____ | ☐ Attachment |

Comments:

NO CHANGE TO EXTERIOR WHATSOEVER.

APPLICATION OF APPEAL TO ZONING BOARD OF ADJUSTMENT

NAME ELIZ. S. PEASE (Owner)

COFFRIN & PIERSON (B)
181 So. Union St

ADDRESS 253 So. Union St.

ADDRESS OF PROPERTY REFERRED TO IN APPEAL 253 So. Union St.

APPEAL FROM DECISION OF ZONING ADMINISTRATOR AS OF date
PERMISSION REQUESTED: 8 ft. - 9 ft. 10 1/2 ft. 12 ft. 15 ft.

To convert the main living unit into a law office on the first floor
and into two apartments on the second floor. An existing
apartment would remain.

2 1/2 - 2nd 12 1/2 ft. 15 ft. 18 ft. 21 ft. 24 ft. 27 ft. 30 ft. 33 ft. 36 ft. 39 ft. 42 ft. 45 ft. 48 ft. 51 ft. 54 ft. 57 ft. 60 ft. 63 ft. 66 ft. 69 ft. 72 ft. 75 ft. 78 ft. 81 ft. 84 ft. 87 ft. 90 ft. 93 ft. 96 ft. 99 ft. 102 ft. 105 ft. 108 ft. 111 ft. 114 ft. 117 ft. 120 ft. 123 ft. 126 ft. 129 ft. 132 ft. 135 ft. 138 ft. 141 ft. 144 ft. 147 ft. 150 ft. 153 ft. 156 ft. 159 ft. 162 ft. 165 ft. 168 ft. 171 ft. 174 ft. 177 ft. 180 ft. 183 ft. 186 ft. 189 ft. 192 ft. 195 ft. 198 ft. 201 ft. 204 ft. 207 ft. 210 ft. 213 ft. 216 ft. 219 ft. 222 ft. 225 ft. 228 ft. 231 ft. 234 ft. 237 ft. 240 ft. 243 ft. 246 ft. 249 ft. 252 ft. 255 ft. 258 ft. 261 ft. 264 ft. 267 ft. 270 ft. 273 ft. 276 ft. 279 ft. 282 ft. 285 ft. 288 ft. 291 ft. 294 ft. 297 ft. 300 ft. 303 ft. 306 ft. 309 ft. 312 ft. 315 ft. 318 ft. 321 ft. 324 ft. 327 ft. 330 ft. 333 ft. 336 ft. 339 ft. 342 ft. 345 ft. 348 ft. 351 ft. 354 ft. 357 ft. 360 ft. 363 ft. 366 ft. 369 ft. 372 ft. 375 ft. 378 ft. 381 ft. 384 ft. 387 ft. 390 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July 12, 1967

Mrs. Elizabeth S. Pease
253 So. Union St.
City

Dear Mrs. Pease:

The Zoning Board of Adjustment voted to grant your appeal seeking a special exception to convert the premises at 253 So. Union St. into a law office from the main living unit on the first floor and into two apartments on the second floor with the stipulations that a directional parking sign be put up and that the parking lot be paved.

This action was taken after the Public Hearing held July 11, 1967.

Very truly yours,

Raymond A. Wheel
Zoning Administrator

RAW/abr

Burlington Development Review Board

Department of Permitting & Inspections
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/DPI/DRB
Telephone: (802) 865-7188
Fax: (802) 863-0466

Brad Rabinowitz
AJ LaRosa
Springer Harris
Geoff Hand
Brooks McArthur
Kienan Christianson
Caitlin Halpert
Sean McKenzie, (Alternate)
Ravi Venkataraman, (Alternate)



BURLINGTON DEVELOPMENT REVIEW BOARD Wednesday, March 3, 2021, 5:00 PM REMOTE MEETING

Zoom: <https://us02web.zoom.us/j/84346105661?pwd=dTJLb3UrcDFyNWVM5VkZqOU9FSWNVZz09>

Webinar ID: 843 4610 5661

Password: 842557

Telephone: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782

Agenda

- I. Agenda**
- II. Communications**
- III. Minutes**
- IV. Consent**
- V. Public Hearing**
 - 1. 21-0638CU; 251-253 South Union Street (RL, Ward 6S) Two Fifty Three South Union Street Realty LLC, Rebecca Weisman and Christopher Wright Cronin**
Change of general office use to neighborhood commercial use (health studio and medical office). No site or exterior building changes. (Project Manager: Scott Gustin)
 - 2. 21-0647CU; 428 South Winooski Ave (RM, Ward 6S) Jill Badolato**
Establish short-term rental (bed and breakfast) within existing dwelling unit. (Project Manager: Ryan Morrison)
 - 3. 21-0414CA/MA; 75 Cherry Street (FD6, Ward 3C) BTC Mall Associates, LLC**
Mixed use redevelopment of the former Burlington Town Center mall site. (Project Manager: Scott Gustin and Mary O'Neil)
- VI. Certificate of Appropriateness**
 - 1. 21-0641CA; 2-14 King Street (DW-PT, Ward 3C/5S) Lake Champlain Transportation Co., Spot on the Dock**
Renovation to existing building to demo bathrooms to increase outdoor bar within existing footprint and add interior partitions to create new office and storage room. Construct new bathroom building with stairs and access ramp. (Project Manager: Ryan Morrison)
- VII. Adjournment**

Plans may be viewed upon request by contacting the Department of Permitting & Inspections between the hours of 8:00 a.m. and 4:30 p.m. Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/dpi/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at (802) 540-2505.

The programs and services of the City of Burlington are accessible to people with disabilities. Individuals who require special arrangements to participate are encouraged to contact the Zoning Division at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).

Printed on 100% Recycled Paper

Department of Permitting & Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
Telephone: (802) 865-7188

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
Ted Miles, Zoning Specialist
Charlene Orton, Permitting & Inspections Administrator



TO: Development Review Board
FROM: Ryan Morrison, Associate Planner
DATE: March 3, 2021
RE: 21-0647CU; 428 South Winooski Avenue

=====

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: RM Ward: 6S

Owner/Applicant: Jill Badolato

Request: Establish an existing single-family residence as a short-term rental (bed and breakfast) use.

Applicable Regulations:

Article 3 (Applications, Permits, & Project Reviews), Article 4 (Zoning Maps and Districts), Article 8 (Parking)

Background Information:

The applicant is requesting approval to rent out her two-bedroom single-family dwelling as a short-term rental (bed and breakfast) use while she is away from the property. No development is included.

There are no previous zoning actions for this property.

Recommendation: Consent approval as per, and subject to, the following findings and conditions.

I. Findings

Article 3: Applications, Permits, and Project Reviews

Part 5, Conditional Use & Major Impact Review:

Section 3.5.6 (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 general 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;*

Renting out the single-family home as a short-term rental (bed and breakfast) use strictly while the owner is away from the property has no appreciable impacts on existing or planned public utilities,

services, or facilities. The applicant is advised to check with VT DEC as to whether a state wastewater permit is needed. **(Affirmative finding as conditioned)**

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

The property is located within the residential – medium density zone. The neighborhood consists of a mixture of residential properties of varying unit counts. The property will still maintain the appearance of a single-family residence when occupied by guests on a short term basis rather than long term when the owner is away. City records indicate that this is the owner's primary residence. **(Affirmative finding)**

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;*

As noted above, the short term rental will continue to serve as a place for people to stay within the neighborhood, albeit on a short term basis. The short term rental is not expected to generate nuisance impacts from noise, odor, dust, and the like. **(Affirmative finding)**

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;*

Little change in traffic is expected. Rather than occupants arriving and departing, short term guests will arrive and depart within established timeframes. Additionally, the property is well within walking distance to transit stops and the downtown core. **(Affirmative finding)**

5. *The utilization of renewable energy resources;*

No part of this application would prevent the use of wind, water, solar, or other renewable energy resources. **(Affirmative finding)**

6. *Any standards set forth in existing City bylaws and city and state ordinances;*

The short term rental must adhere to the life safety standards and provide payment of applicable rooms and meals taxes as per the State of Vermont. **(Affirmative finding as conditioned)**

(b) Major Impact Review Standards
Not applicable.

(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 relative to any of 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 short term rental is not expected to produce adverse effects in need of mitigation. **(Affirmative finding)**

2. Time limits for construction.

No construction timeline or phasing is included in this proposal. **(Affirmative finding)**

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

The short term rental is offered indefinitely. It is recommended that guest check-ins be limited to 7:00 am – 10:00 pm to minimize noise, traffic, and neighborhood nuisances. **(Affirmative finding as conditioned)**

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

Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time. **(Affirmative finding as conditioned)**

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

Not applicable.

Article 4: Maps & Districts

Sec. 4.4.5, Residential Districts:

(a) Purpose

(3) Residential Medium Density (RM)

The Residential Medium Density (RM) district is intended primarily for medium density residential development in the form of single-family detached dwellings and attached multi-family apartments. The existing single-family dwelling is consistent with this intent. Utilizing the two-bedroom single-family dwelling as a short term rental use while the owner is away remains consistent with the intent of the zone. **(Affirmative finding)**

(b) Dimensional Standards and Density

Not applicable.

(c) Permitted and Conditional Uses

The “bed and breakfast” (short term rental) use is conditional in the RM zone. Owner occupancy is required, and up to 5 rooms may be let. In this case, the applicant is the owner and lives onsite. The applicant proposes to rent out the home for short term guests while away from the property. **(Affirmative finding)**

(d) District Specific Regulations

Not applicable.

Article 8: Parking

Sec. 8.1.8, Minimum Off-Street Parking Requirements

Single-family dwellings in the Neighborhood Parking District require 2 parking spaces. “Bed & Breakfast” uses require 1 parking space per rental room. The one and one-half story home contains two bedrooms – thus requiring 2 guest parking spaces. In this case, when the owner is away and the home is rented for short-term guests, the required parking count will remain unchanged. The single-width driveway is relatively deep and provides more than enough room for two tandem parking spaces. As a condition of this permit, the short term rental use should not be

operated as such when the owner is occupying the dwelling. **(Affirmative finding as conditioned)**

II. Conditions of Approval

1. The subject property must be, and remain, owner occupied as long as the bed and breakfast short term rental remains in operation.
2. The short term rental shall not be operated at any time when the owner is occupying the dwelling.
3. The short term rental must adhere to the life safety standards and provide payment of applicable rooms and meals taxes as per the State of Vermont.
4. It is recommended that guest check-ins be limited to 7:00 am – 10:00 pm to minimize noise, traffic, and neighborhood nuisance.
5. All guest parking shall be on-site and off-street.
6. A state wastewater permit may be required. It is the applicant's responsibility to inquire with VT DEC as to whether such permit is necessary.
7. Any additional B&B room, or physical alteration, will require a new zoning permit, subject to regulations in effect at the time of permit application submittal.
8. The applicant will have to ensure compliance with state regulations regarding short-term B&B type rentals, including but not limited to payment of required rooms and meals taxes and compliance with Division of Fire Safety standards and Health Department standards.
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, and shall meet all energy efficiency codes of the city and state as required.
10. Standard permit conditions 1-15.

January 25, 2021

Jill Badolato
428 S. Winooski Ave
Burlington VT 05401

Hello,

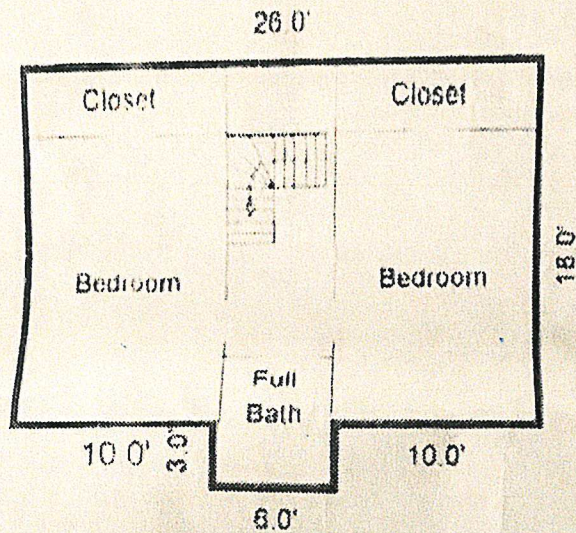
I received a letter alerting that I need a permit to Air B&B my home. This is my primary and only residence. I occasionally Air B&B my home for short term visits, most weekends in the Summer and Fall consisting of 3-5 day stays. On those occasions I stay with my boyfriend. I have a 2 bedroom, 1400 sqft house with a driveway that accommodates 3 cars. I was unaware that I needed a permit as I thought that was an active conversation in the city, and that if it is a primary home that I was ok. However, I am happy to get whatever permits are needed to comply with the city code.

I am enclosing a check as well as the floorplan of the house.

Thank you,
Jill Badolato
jillbvt@gmail.com
802-318-1311

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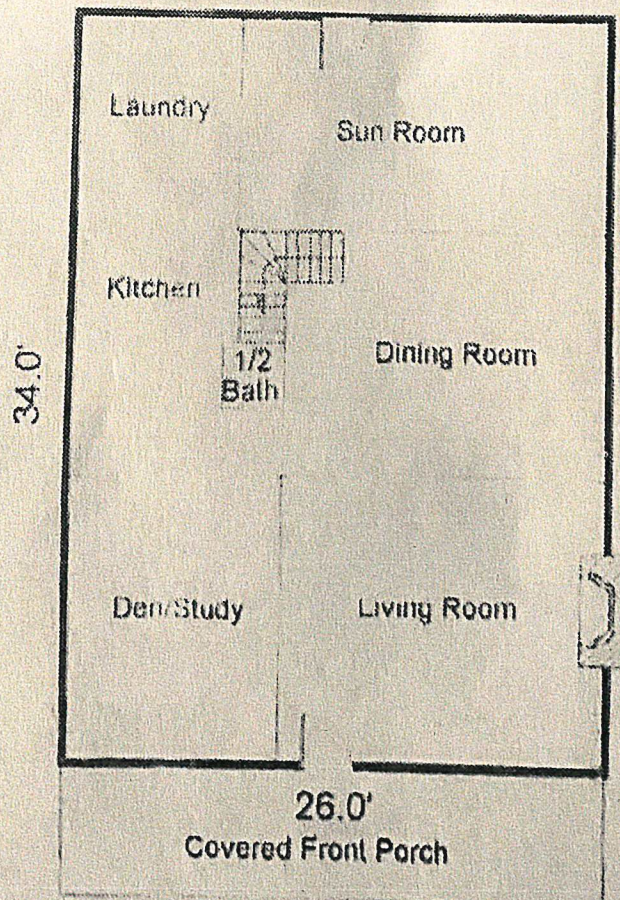




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LAKE CHAMPLAIN

N/F CITY OF BURLINGTON

N/F STATE OF VERMONT

N/F STATE OF VERMONT

KING STREET To Battery Street

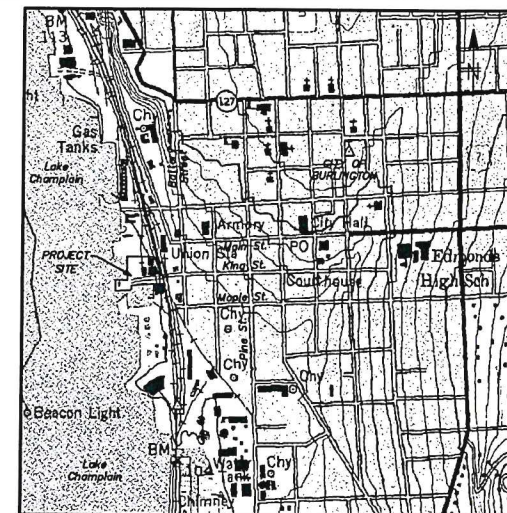
N/F CITY OF BURLINGTON

N/F CITY OF BURLINGTON

LEGEND

Note: Existing site features are generally labelled on the plans with italicized, lower case text, while upper case, block-style text generally denotes proposed features.

- PROPERTY LINE
- EASEMENT
- EXISTING EDGE OF GRAVEL
- FENCE
- EXISTING WOOD STOCKADE FENCE
- EXISTING WOOD PICKET FENCE
- EXISTING WOOD PLANK GUARDRAIL
- EXISTING RAILROAD TRACKS
- OH/UTL
- UG/E
- UG/T
- W
- FM
- CONTOUR (PROPOSED)
- DITCH OR SWALE
- CONCRETE MONUMENT
- CALCULATED SURVEY POINT
- UTILITY POLE
- LIGHT POLE
- BUILDING-MOUNTED LIGHT
- ELECTRICAL TERMINAL CABINET
- EXISTING ELECTRICAL OUTLET/FIXTURE
- STORM CATCH BASIN
- SPOT ELEVATION
- 50.3.8
- EXISTING ROOF LINE (DASHED LINES SHOW ALIGNMENT OF DRAINAGE)
- EXISTING FLAT ROOF



LOCATION MAP
N.T.S.

LOT COVERAGES

EXISTING

Buildings	= 58,976 sf
Pavement/Concrete/Wood Surfaces	= 155,699 sf
Gravel Surfaces	= 16,222 sf
Total Lot Coverage	= 231,604 sf (90.0%)
Green Area	= 25,718 sf (10.0%)
TOTAL AREA	= 257,322 sf (100.0%)

PROPOSED

Buildings	= 59,837 sf
Pavement/Concrete/Wood Surfaces	= 155,658 sf
Gravel Surfaces	= 16,102 sf
Total Lot Coverage	= 231,604 sf (90.0%)
Green Area	= 25,718 sf (10.0%)
TOTAL AREA	= 257,322 sf (100.0%)

NOTES

- THESE DRAWINGS ARE PREPARED FOR PERMITTING REVIEW ONLY.
- AS INSTRUMENTS OF SERVICE THESE DRAWINGS AND COPIES THEREOF ARE PROPERTY OF THE ENGINEER, BUERMANN ENGINEERING, LLC. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.
- IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO ENSURE THAT THESE PLANS CONTAIN THE MOST RECENT REVISIONS.
- THE CONTRACTOR SHALL BE INSURED FOR THE WORK TO BE PERFORMED, AND SHALL BE PREPARED TO PROVIDE THE OWNER WITH A CERTIFICATE OF INSURANCE PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY DIG-SAFE (888)344-7233 AT LEAST FORTY-EIGHT HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE THAT OTHER BURIED UTILITIES OR STRUCTURES, NOT SHOWN ON THESE PLANS AND/OR NOT LOCATED BY DIG-SAFE, MAY EXIST ON THIS SITE.
- BUERMANN ENGINEERING, LLC HAS NOT PERFORMED ANY ENVIRONMENTAL SITE ASSESSMENTS ON THE SUBJECT PROPERTY, AND MAKES NO CLAIMS ABOUT THE POSSIBLE PRESENCE OR ABSENCE OF HAZARDOUS MATERIALS ONSITE.
- THE PURPOSE OF THESE PLANS IS TO DEPICT EXISTING CONDITIONS AND PROPOSED SITE MODIFICATIONS FOR A PROPOSED BATHROOM PAVILION & RESTAURANT MODIFICATIONS, IN SUPPORT OF LOCAL AND STATE PERMITTING.
- BOUNDARY INFORMATION SHOWN IS APPROXIMATE, BASED UPON INFORMATION FROM THE OWNER, FIELD EVIDENCE FOUND, AND A "BASE PLAN - EXISTING CONDITIONS", DATED OCTOBER 18, 2002 BY LAND LINES SURVEYING AND MAPPING, MICHAEL R. MAGDOON, L.S. BUERMANN ENGINEERING, LLC HAS SINCE PERIODICALLY UPDATED SITE TOPOGRAPHY TO REFLECT CURRENT CONDITIONS. THE PROPERTY LINES, EASEMENTS, AND OTHER REAL PROPERTY DESCRIPTIONS PROVIDED ON THIS PLANS ARE FOR THE USE OF THE PERMITTING AUTHORITIES ONLY. THEY DO NOT DEFINE LEGAL RIGHTS OR MEET LEGAL REQUIREMENTS FOR A LAND SURVEY AS DESCRIBED IN 26 V.S.A. SECTION 2502(4), AND SHALL NOT BE USED IN LIEU OF A SURVEY AS THE BASIS OF ANY LAND TRANSFER OR ESTABLISHMENT OF ANY PROPERTY RIGHT.

PROPERTY OVERVIEW - EXISTING CONDITIONS

SPOT ON THE DOCK
KING STREET DOCK
BURLINGTON, VERMONT

Date
1/20/2021
Project Number
965
Plan Scale
1" = 40'
Sheet
1 of 3



BUERMANN ENGINEERING, LLC
7 Sanderson Road, Milton, Vermont 05468



OWNER OF RECORD

LAKE CHAMPLAIN TRANSPORTATION COMPANY
KING STREET DOCK, BURLINGTON, VERMONT 05401
DEEDS RECORDED AT BURLINGTON LAND RECORDS,
VOL. 129, PG. 394-395, DATED FEB. 2, 1948
VOL. 142, PG. 460-461, DATED FEB. 1, 1952
VOL. 235, PG. 435-444, DATED APRIL 8, 1976
TAX MAP PARCEL #049-1-078-000

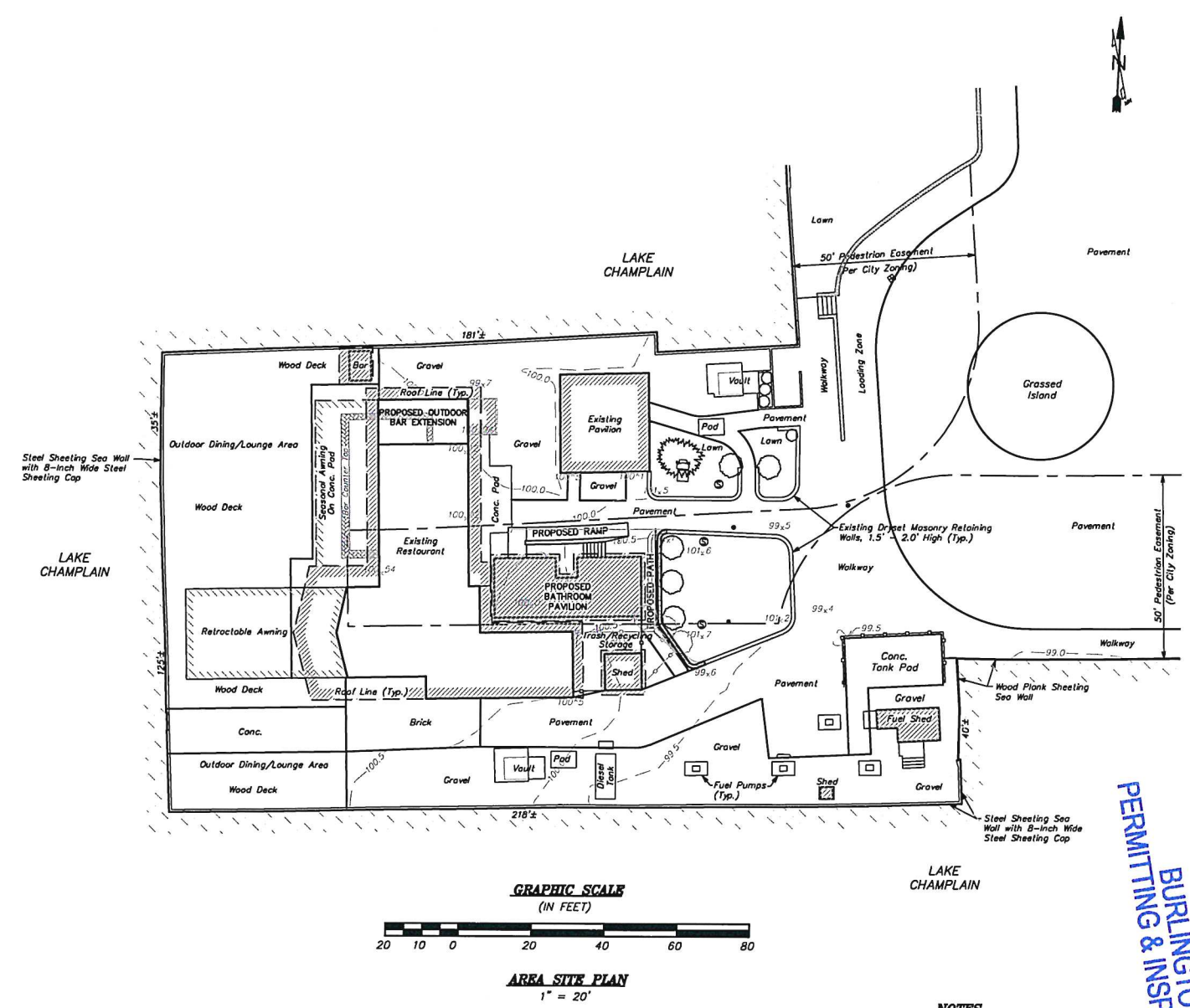
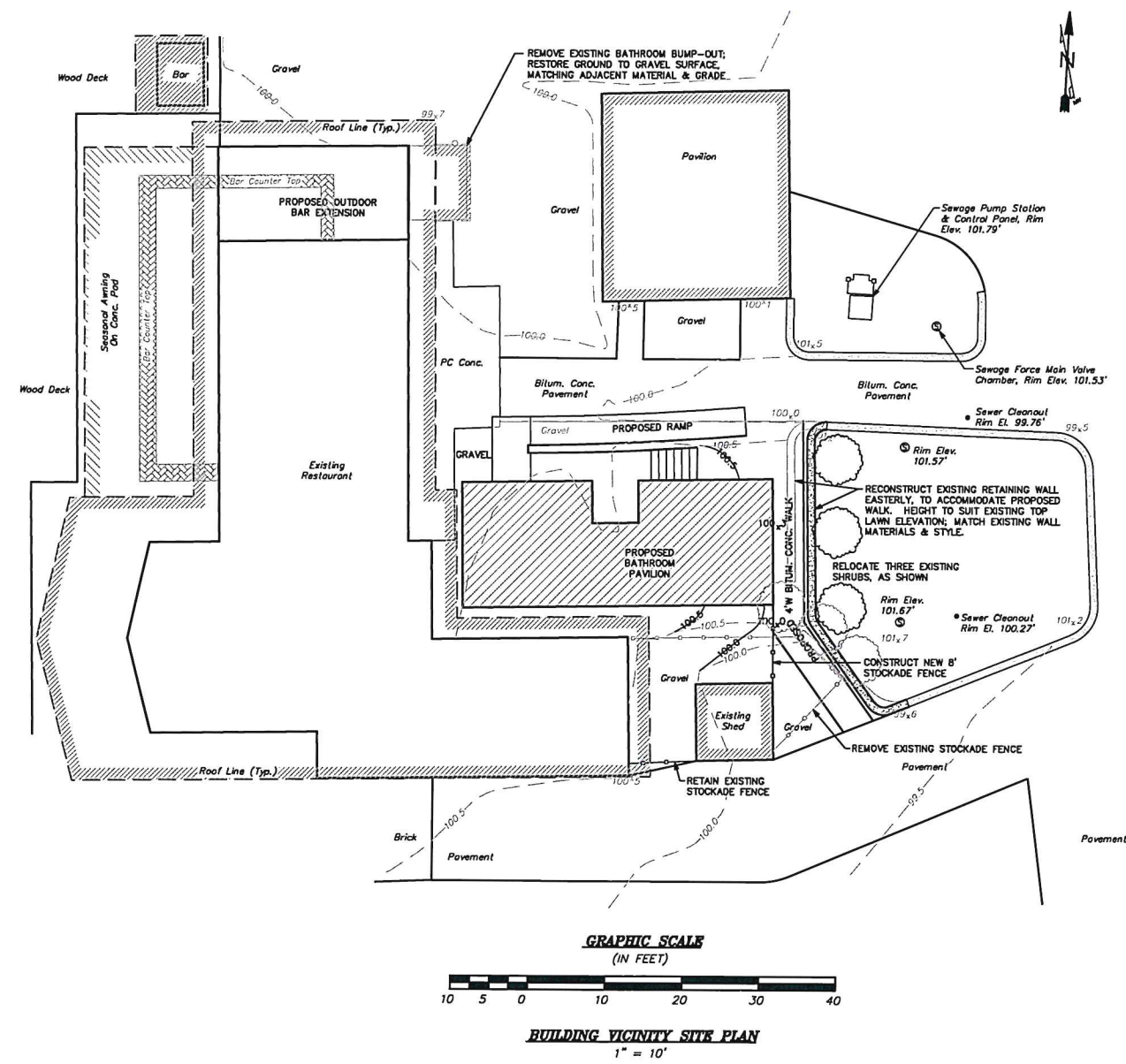
GRAPHIC SCALE (IN FEET)



NOTE: THE EASTERLY AND SOUTHERLY PERIMETER OF THIS PARKING LOT IS NOW DELINEATED BY BOULDERS.

JAN 25 2021

BURLINGTON
PERMITTING & INSPECTIONS



EROSION CONTROL MAINTENANCE

ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE. IF THERE IS NO EARTHWORK PERFORMED DURING THE PERIOD DECEMBER 15 THROUGH MARCH 15 AND ALL EXPOSED SOILS AND DRAINAGE CHANNELS HAVE BEEN AT LEAST TEMPORARILY PROTECTED, INSPECTIONS MAY BE SUSPENDED DURING THAT PERIOD, BUT THE FINAL INSPECTION RECORD FOR THE SEASON SHALL CLEARLY SHOW THE STATUS OF SITE GRADING AND STABILIZATION EFFORTS AT THE END OF THE CONSTRUCTION SEASON. INSPECTIONS ARE INTENDED TO OBSERVE EVIDENCE OF, OR THE POTENTIAL FOR, SEDIMENT LEAVING FROM DISTURBED AREAS AND MATERIAL STORAGE AREAS; AND INSTALLED SEDIMENT AND EROSION CONTROL MEASURES TO ENSURE THEY ARE OPERATING CORRECTLY. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND DISCHARGE POINTS TO ASSESS WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO RECEIVING WATERS. INSPECTION REPORTS SHOULD BE MAINTAINED OF EACH INSPECTION, AND SHOULD NOTE THE COMPONENTS AND SCOPE OF THE INSPECTION; NAMES AND QUALIFICATIONS OF PERSONNEL CONDUCTING THE INSPECTION; DATE OF THE INSPECTION; OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION CONTROL PLANS; ACTION TAKEN; AND INCIDENTS OF NONCOMPLIANCE (IF NONE, THEN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLANS SHOULD BE INCLUDED). REPORTS SHALL BE KEPT AT LEAST THREE YEARS AFTER THE SITE HAS BEEN FINALLY STABILIZED.

COMPONENT	INSPECTION GUIDELINE	INSPECTION	POSSIBLE MAINTENANCE
TEMPORARY SEEDING	WHAT TYPE OF SEED WAS USED? HOW LONG WILL THE VEGETATION BE IN PLACE BEFORE PLANTING OF PERENNIAL GRASS TAKES PLACE? WHEN WAS THE SEED PLANTED?	INTRUSION OF NOXIOUS WEEDS? COVERAGE 80-100%? MOVEMENT OF MATERIAL?	IF NOT, RESEED. EVALUATE TIME OF YEAR, PLANT AGAIN. EVALUATE SOIL CONDITIONS, EXCESS MOISTURE, OR NEED TO APPLY MORE SEED. IMPLEMENT NEED CONTROL.
DRY MULCH	DOES THE MULCH COVER 80 - 100 PERCENT OF THE BARE GROUND? IF DRY MULCH IS APPLIED, HOW IS IT HELD IN PLACE? HAS WIND REMOVED THE DRY MULCH, AND IS THIS A PROBLEM?		IF NOT, REAPPLY. NEED TO ANCHOR TO GROUND BY CRIMPING OR TACKLING.

GENERAL EROSION CONTROL PROCEDURES

1. ALL EARTH EXPOSED DURING CONSTRUCTION SHALL BE STABILIZED WITHIN SEVEN DAYS OF THE DISTURBANCE, EITHER WITH TEMPORARY OR PERMANENT SEEDING MEASURES.
2. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS HEREIN AND WITH THE "VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL".
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO NO MORE THAN TEN FEET FROM THE EDGES OF MODIFIED OR REDEVELOPED IMPERVIOUS SURFACES, AND ARE CALCULATED TO BE ABOUT 50,400 SQUARE FEET TOTAL.
4. THE GENERAL FLOW OF STORMWATER IS WESTERLY ACROSS THIS NEARLY LEVEL SITE, TO THE LAKE. THE USE OF SUBSURFACE STORMWATER STRUCTURES IS SEVERELY LIMITED BY THE SITE'S LOW ELEVATION. THE USE OF ABOVE-GROUND TEMPORARY STORMWATER CONTROLS (EG., SILT FENCE, HAY BALES) WOULD BE INEFFECTIVE ON THE EXISTING IMPERVIOUS SURFACES. THE MORE EFFECTIVE EROSION CONTROL WILL BE ACHIEVED BY EXPEDITIOUS CONSTRUCTION DURING FAVORABLE WEATHER AND NON-FLOOD CONDITIONS.
5. POTENTIAL SOIL STOCKPILE LOCATIONS ARE TO BE DETERMINED BY THE CONTRACTOR, FOR EXPEDIENTY OF CONSTRUCTION. THESE WILL LIKELY BE SMALL PILES OF TOPSOIL FOR IMMEDIATE PLACEMENT, OR EXCAVATED SURFACES FOR IMMEDIATE REMOVAL TO AN OFFSITE DISPOSAL FACILITY IN ACCORD WITH VERMONT'S SOLID WASTE RULES. STOCKPILES WILL BE COVERED WITH AN ANCHORED TARP AT THE END OF EACH WORK DAY.

TURF ESTABLISHMENT PROCEDURES

1. ROUGH GRADE THE SUBSOIL TO THE PROPER ELEVATIONS, 4-6 INCHES BELOW THE FINISHED GRADES SPECIFIED ON THE PLANS FOR THE AREA TO BE SEED. SPREAD TOPSOIL TO A UNIFORM DEPTH OF 4-6 INCHES. TOPSOIL SHALL COMPLY WITH THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION, SECTION 753.01 "TOPSOIL".
2. REMOVE STICKS, STONES AND ANY OTHER DEBRIS FROM THE TOPSOIL THAT MAY INTERFERE WITH FINE GRADING AND FUTURE MOWING OF THE AREA. THEN FINE GRADE THE TOPSOIL, TAKING CARE TO MAINTAIN 4 INCHES MINIMUM TOPSOIL DEPTH AND TO PROVIDE FOR SURFACE WATER RUNOFF IN ACCORDANCE WITH THE PLANS.
3. APPLY COMMERCIAL FERTILIZER (10-20-20) TO THE AREA, AT A RATE OF 4 POUNDS PER 100 SQUARE FEET (1,700 POUNDS PER ACRE). APPLY AGRICULTURAL LIME TO THE AREA, AT RATE OF 10 POUNDS PER 100 SQUARE FEET (2 TONS PER ACRE). HARROW OR RAKE THE TOPSOIL TO MIX THE FERTILIZER AND LIME TO A 2 INCH MINIMUM DEPTH.
4. PERMANENT SEEDING SHALL OCCUR ONLY BETWEEN APRIL 15 AND OCTOBER 15. AREAS TO BE REGULARLY MOWED SHOULD USE A MIX CONTAINING ABOUT 45 PERCENT KENTUCKY BLUEGRASS, 45 PERCENT CREEPING RED FESCUE, AND ABOUT 10 PERCENT OF RYEGRASS, APPLIED AT 45 POUNDS PER ACRE. NON-MOWED AREAS SHOULD USE A MIX CONTAINING ABOUT 65 PERCENT CREEPING RED FESCUE, 5 PERCENT REDTOP, AND ABOUT 30 PERCENT BIRDFOOT TREFOIL, APPLIED AT 30 POUNDS PER ACRE. TEMPORARY SEEDING (INCLUDING ALL SEEDING BETWEEN OCTOBER 15 AND APRIL 15) SHALL USE ANNUAL RYE APPLIED AT A RATE OF 45 POUNDS PER ACRE. BURY PERMANENT AND TEMPORARY SEEDS WITH 1/4 INCH OF TOPSOIL.
5. APPLY HAY OR STRAW MULCH EVENLY TO THE SEED. MULCH SHALL BE AIR-DRIED, AND FREE OF UNDESIRABLE SEEDS AND COARSE MATERIAL. PLACE MULCH AT A RATE OF 75-100 POUNDS PER 1,000 SQUARE FEET (2-3 BALES SPREAD 3 INCHES DEEP), OR 1.5-2.5 TONS PER ACRE (90-120 BALES SPREAD 3 INCHES DEEP). THE MULCH MAY BE ANCHORED BY THE USE OF A DISK HARROW OR SHEEPFOOT ROLLER (RUNNING PARALLEL TO THE GROUND CONTOURS), OR A TRACKED VEHICLE (RUNNING PERPENDICULAR TO THE GROUND SLOPE); ALTERNATIVELY A THIN LAYER OF TOPSOIL PLACED OVER THE MULCH AS AN ANCHOR, OR COMMERCIAL NETS, MATS OR ASPHALT TACKING PRODUCTS MAY BE ACCEPTABLE WITH THE ENGINEER'S PRIOR APPROVAL.
6. INSPECT SEEDING AND MULCHED AREAS FREQUENTLY DURING THE FIRST FOUR WEEKS AFTER SEEDING, AND REPLACE OR REANCHOR THE MULCH WHENEVER NECESSARY. CHECK SEEDING NEAR THE END OF THE FIRST GROWING SEASON TO DETERMINE WHETHER ALL AREAS HAVE BECOME FULLY ESTABLISHED. SCARIFY, FERTILIZE, LIME, AND RESEED ANY AREAS WITHOUT ADEQUATE PLANT COVER, AND REAPPLY MULCH.
7. AREAS TEMPORARILY SEEDING AND MULCHED BETWEEN OCTOBER 15 AND APRIL 15 SHALL BE RESEEDING AND MULCHED IN ACCORDANCE WITH THESE PERMANENT SEEDING PROCEDURES AFTER APRIL 15.
8. MOW AND FERTILIZE WELL-ESTABLISHED AREAS OF PERMANENT PLANTING ON A REGULAR BASIS TO MAINTAIN VIGOROUS GROWTH.

NOTES

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6. BUERMANN ENGINEERING, LLC HAS NOT PERFORMED ANY ENVIRONMENTAL SITE ASSESSMENTS ON THE SUBJECT PROPERTY, AND MAKES NO CLAIMS ABOUT THE POSSIBLE PRESENCE OR ABSENCE OF HAZARDOUS MATERIALS ON-SITE.
7. REFER TO SHEET 1 FOR ADDITIONAL NOTES AND REFERENCES.

SITE & GRADING PLAN		Date 1/20/2021
SPOT ON THE DOCK		Project Number 965
KING STREET DOCK BURLINGTON, VERMONT		Plan Scale AS SHOWN
		Sheet 2 of 3
BUERMANN ENGINEERING, LLC 7 Sanderson Road, Milton, Vermont 05468		

**525 Hercules Drive
Suite Two
Colchester, VT 05446
802.655.5020
802.622.6567
wiemannlamphere.com**

SPOT ON THE DOCK
**BATHROOM PAVILION &
RENOVATIONS**

[illegible]

DEMO FLOOR
PLAN

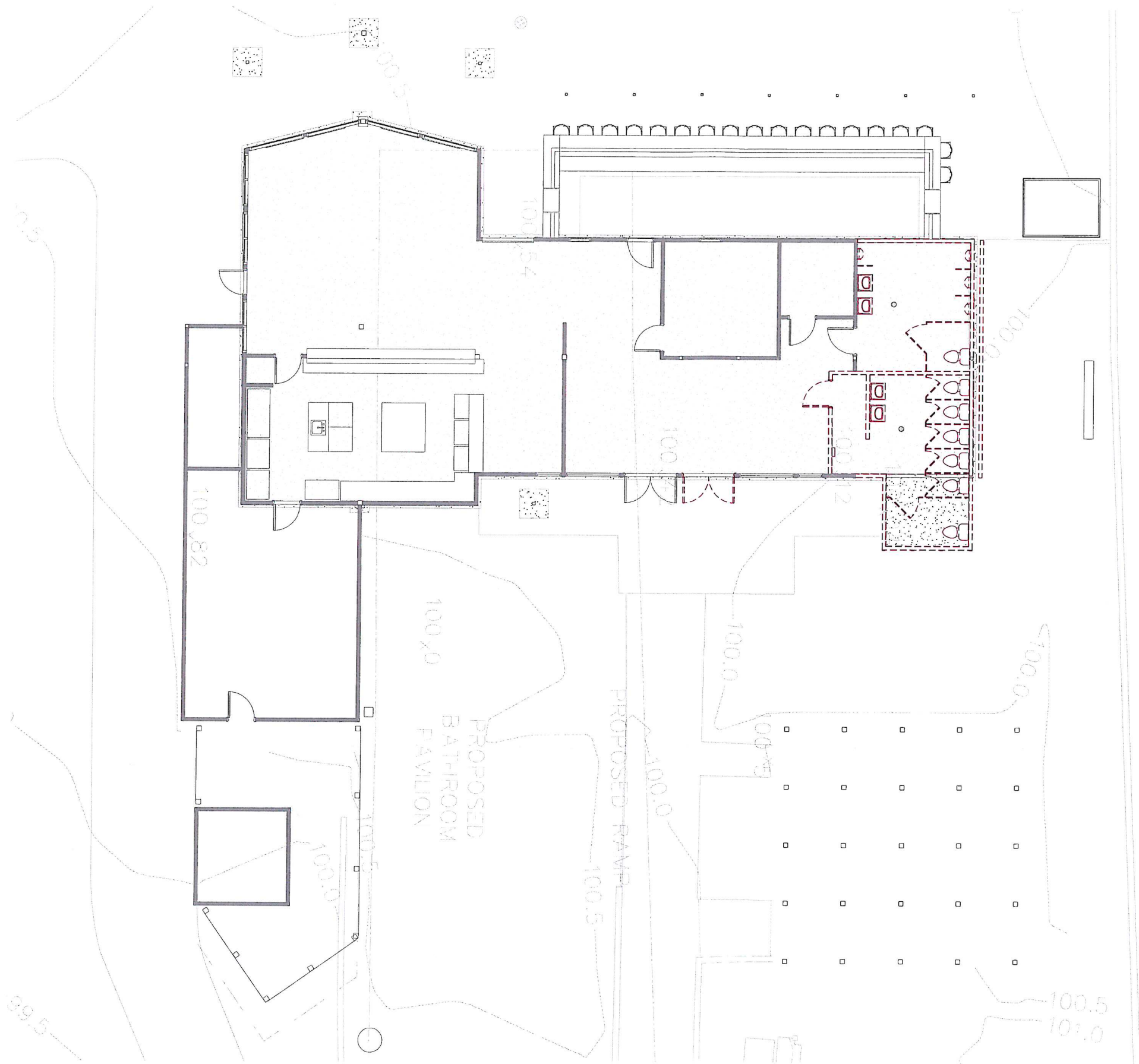
SHEET NUMBER: _____

D1.01

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1 LEVEL 1 DEMO
D1.01 3/16" = 1'-0"

PRINTED: 1/22/2021 9:51:15 AM FILENAME: C:\Users\klesroch\Documents\2020\02_SOTD_R21_SP_ARCH_klesrochc1.mt

525 Hercules Drive
Suite Two
Colchester, VT 05446
802.655.5020
802.622.6567
wiemannlamphere.com

SPOT ON THE DOCK

[illegible]

PROGRESS PRINT DATE: 1/22/2021 9:31:17 AM

	SCALE:
	3/16" = 1'-0"
	PROJECT NO:
	2020102

DRAWN BY: BH	CHECKED BY: DR
SHEET TITLE:	

EXISTING
FLOOR PLAN

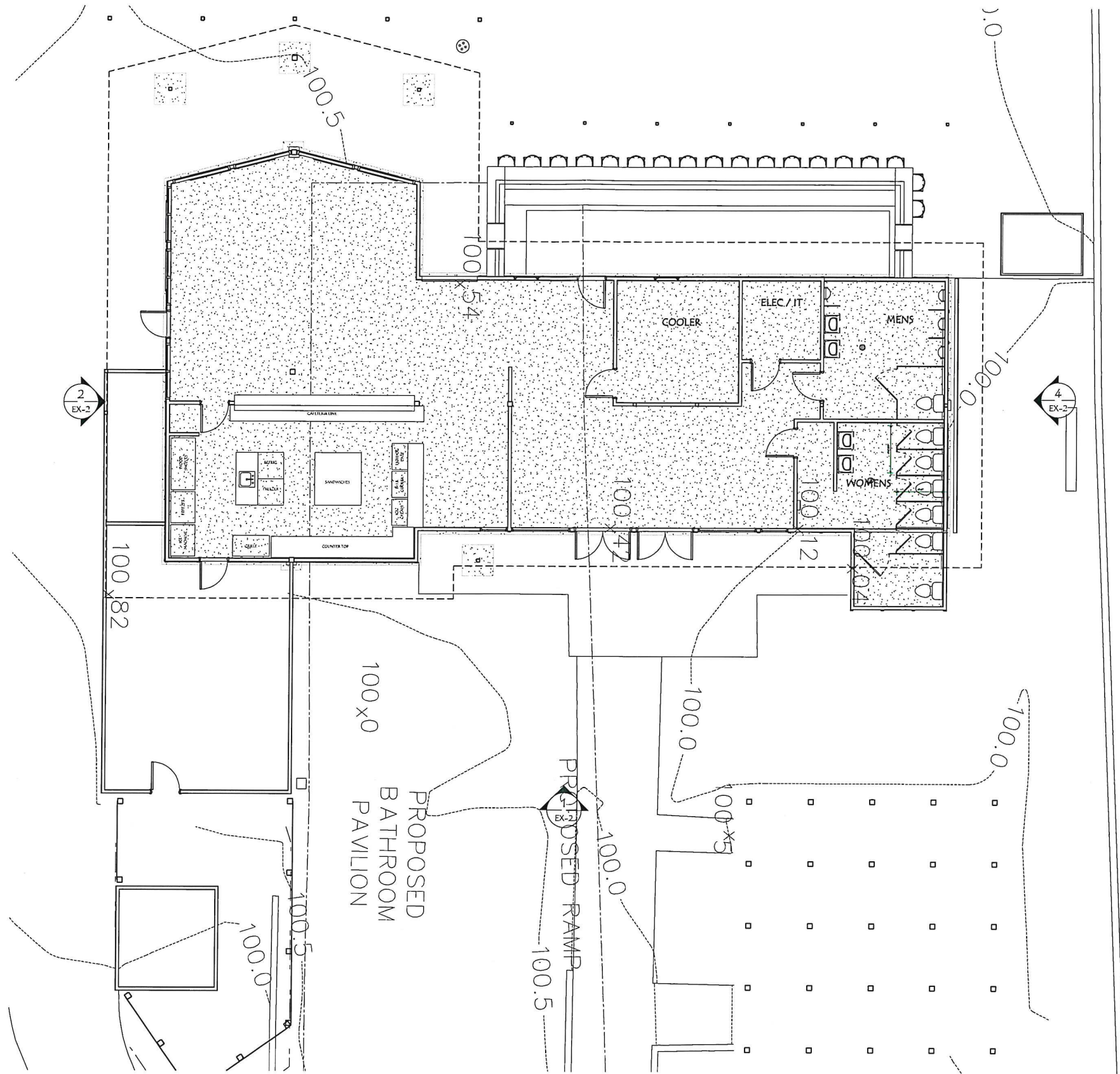
SHEET NUMBER: _____

EX-1

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1 EXISTING FLOOR PLAN - LEVEL 1
EX-1 3/16" = 1'-0"

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Wiemann
Lamphere

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Colchester, VT 05446
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802.622.6567
wiemannlamphere.com

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[illegible]

1/22/2021 9:31:20 AM

3716 = 1-0
PROJECT NO:

DRAWN BY:	CHECKED BY:
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EXISTING

REFERENCES

FX-2

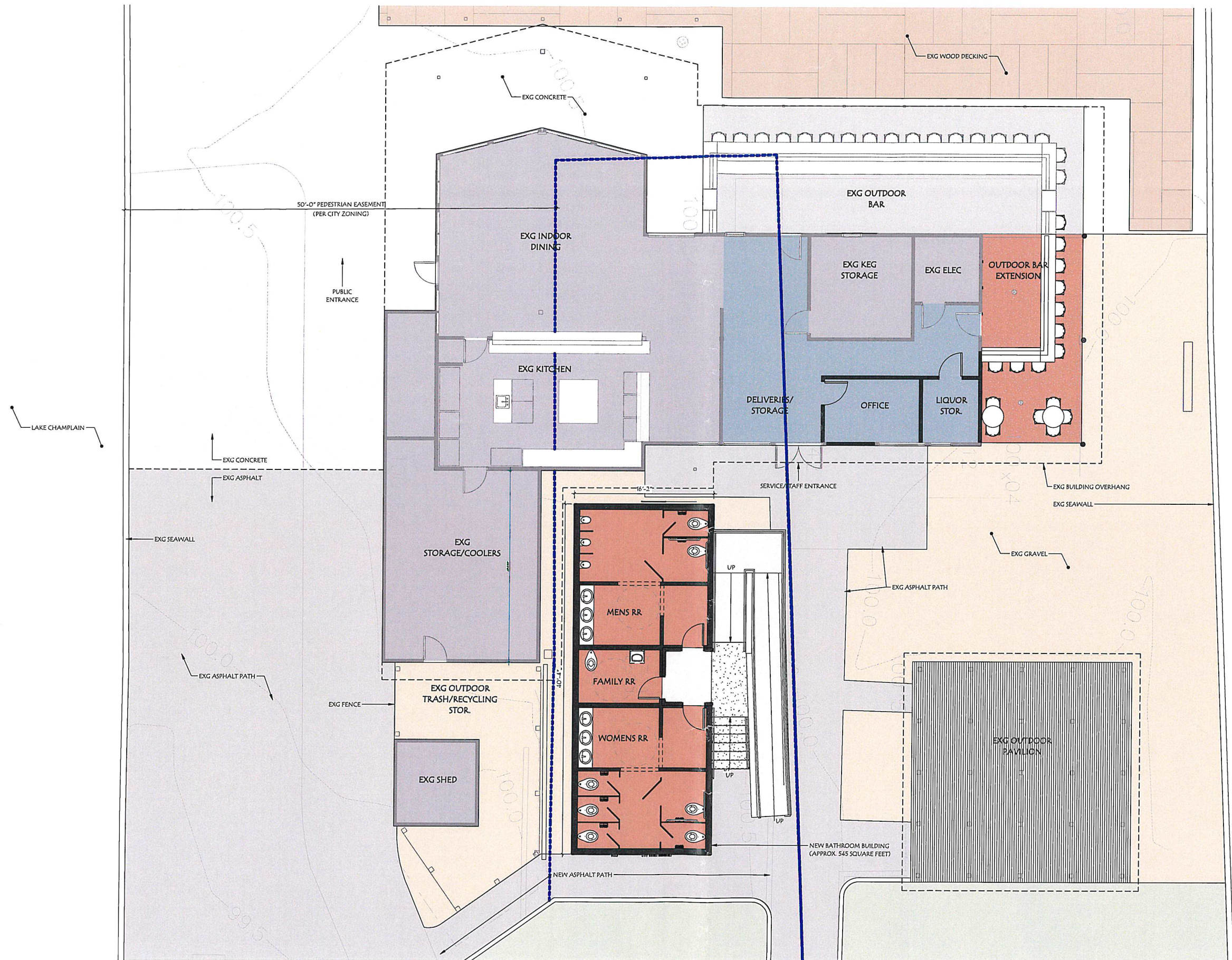


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JAN 25 2021

**BURLINGTON
FITTING & INSPECTION**



1 PROPOSED FLOOR PLAN
SD-1 3/16" = 1'-0"



PROPOSED FLOOR PLAN

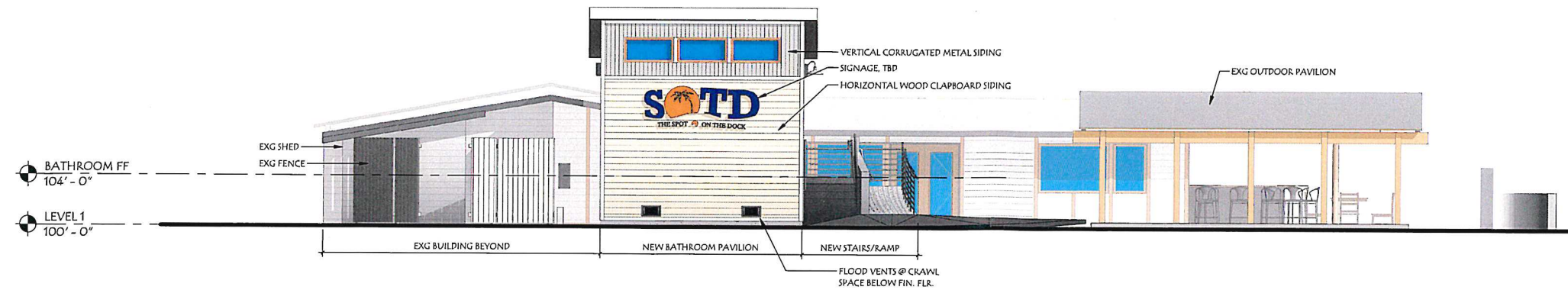
Ownership of Instruments of Service
All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including the copyright therein.

BATHROOM PAVILION & RENOVATIONS

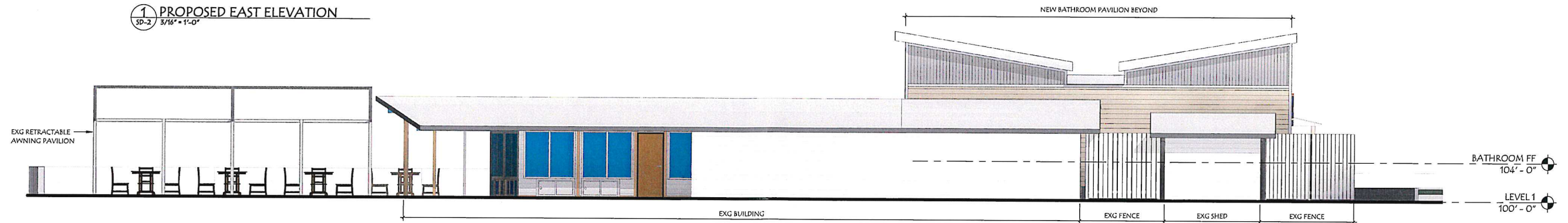
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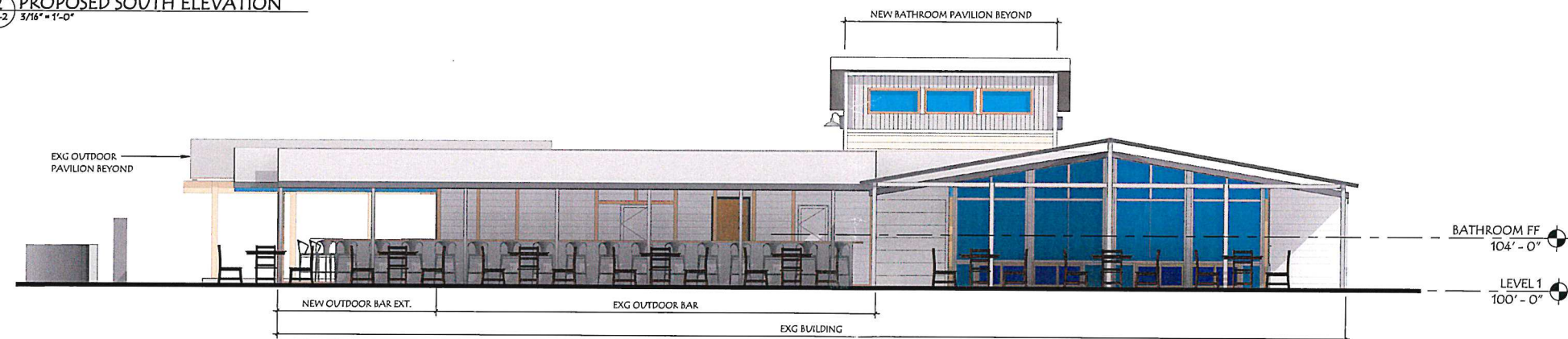
BURLINGTON
PERMITTING & INSPECTIONS



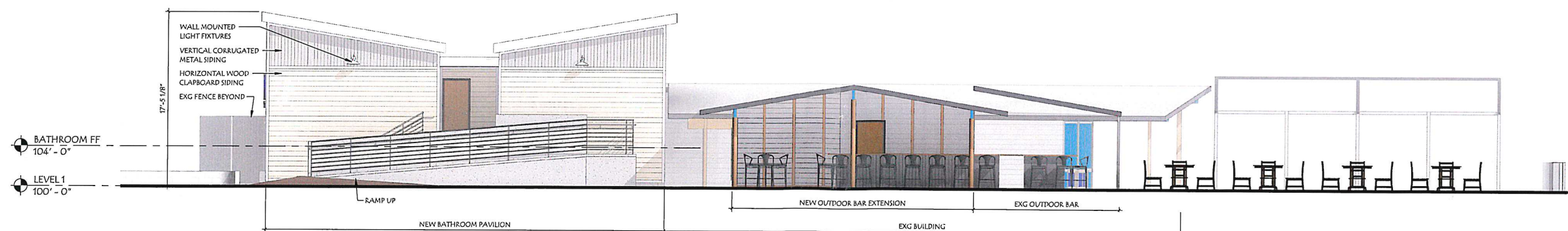
1 PROPOSED EAST ELEVATION
SD-2 3/16" = 1'-0"



2 PROPOSED SOUTH ELEVATION
SD-2 3/16" = 1'-0"

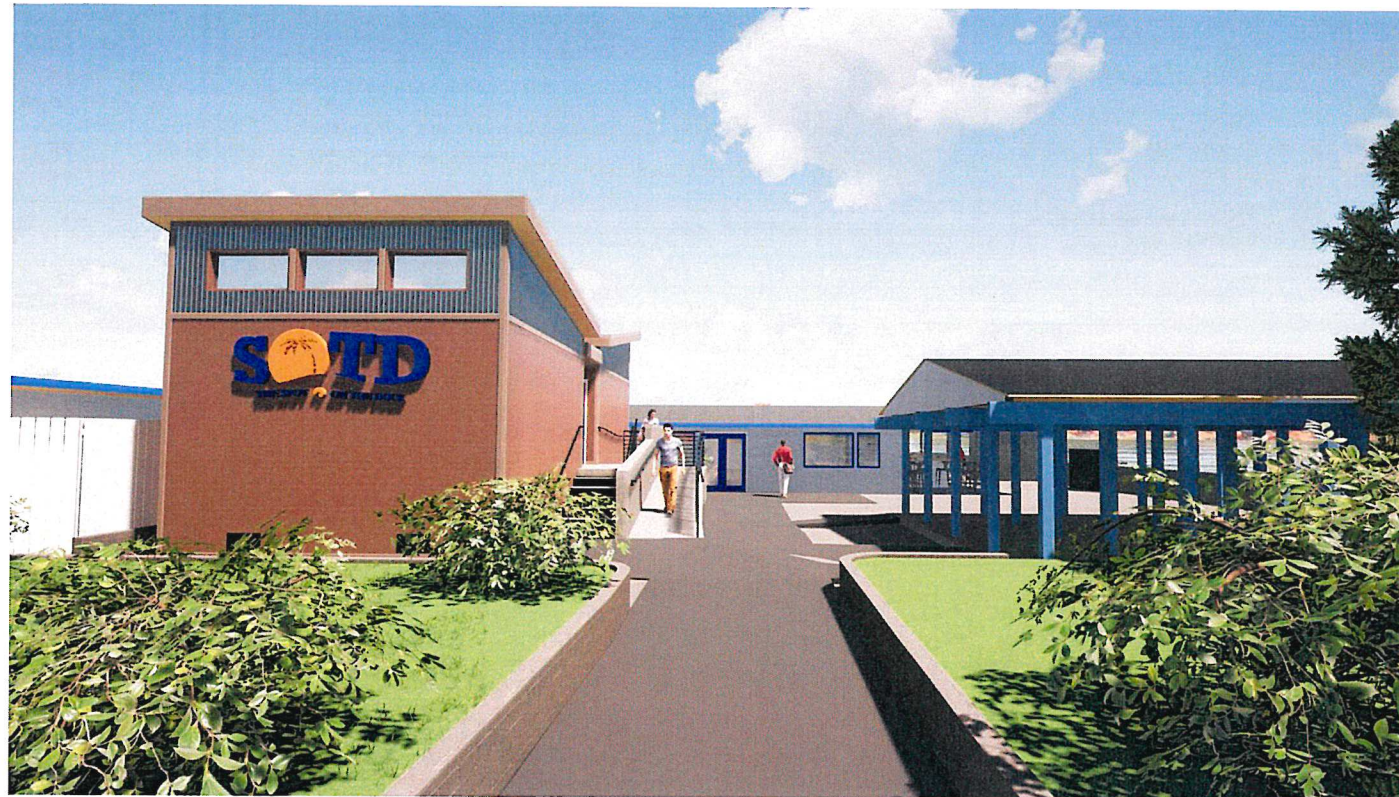


3 PROPOSED WEST ELEVATION
SD-2 3/16" = 1'-0"



4 PROPOSED NORTH ELEVATION
SD-2 3/16" = 1'-0"

Ownership of Instruments of Service
All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including the copyright therein.
SD-2 3/16" = 1'-0"



VIEW FROM EAST



VIEW FROM WEST



VIEW FROM NORTH



BIRD'S EYE VIEW FROM EAST

RECEIVED
JAN 25 2021
BURLINGTON
PERMITTING & INSPECTIONS



PHOTO 1: VIEW FROM EAST LOOKING SOUTHWEST TOWARDS RESTAURANT PUBLIC ENTRY



PHOTO 2: VIEW FROM EAST LOOKING WEST TOWARDS SERVICE/STAFF ENTRY



PHOTO 3: VIEW FROM NORTHEAST LOOKING SOUTHWEST TOWARDS EXISTING BATHROOMS TO BE DEMOLISHED & REPLACED W/ BAR EXTENSION



PHOTO 4: VIEW FROM NORTH LOOKING SOUTH TOWARDS EXISTING BUILDING & WHERE NEW BATHROOM PAVILION TO BE BUILT

BATHROOM PAVILION & RENOVATIONS

PHOTOGRAPHS OF EXISTING

RECEIVED

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JAN 25 2021

BURLINGTON
PERMITTING & INSPECTIONS



01/22/21

Dear Mr. Scott Gustin,
Permitting and Inspections
City of Burlington

Re: Spot on the Dock – Burlington, VT
COA Level II Application

Spot on the Dock is pleased to submit an application for renovations to the existing waterfront restaurant in addition to a new construction of a bathroom building to the east of the existing building. The renovations to the existing building include demolishing the existing bathrooms to create additional outdoor bar space. The new bar area is placed below the existing roof therefore within the existing footprint of the building. In addition to the expanded outdoor bar, minimal interior partitions are proposed to create an office and lockable storage.

With the removal of existing bathrooms, a new approx. 545 sf bathroom building is proposed. Any new construction in this flood zone requires the finish floor level to be at an elevation of 104'-0" min. above sea level therefore stairs and an access ramp are proposed to make up the difference from existing grade at approx. 100'-6" to new finished floor elevation. The change in elevation puts the new building roofline above the existing low profile building creating an architectural opportunity to reinforce the height and improve visibility of the restaurant from King Street.

The proposed changes to the property are intended to aid in improved access and clarity to how the restaurant currently functions. Restaurant visitors are directed to enter the restaurant from the southwest due to the extensive outdoor dining/bar area located on the west. The eastern entrance is intended for staff and deliveries therefore the new building will help screen the east entrance doors, discouraging this as a public entry point.

There are no proposed changes to parking. Site improvements include a new asphalt walk to the bathroom building with minimal grading changes and utility changes to support the proposed construction.

The proposed construction cost for the renovations to the existing building (not including new bathroom building) is \$50,000 and the current assessed value of the existing restaurant building is \$250,000. There is no record of cost for previous work done to the building but the Property Owner is confident the cumulative value of renovations to the building is below the 50% threshold therefore not requiring flood mitigation improvements to the existing building. A majority of the improvements have been made to the exterior dining/bar space and not to the building itself.



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We look forward to moving this project forward to enhance a popular outdoor dining space on Burlington's water front. Please let us know if there are any comments/questions through the review of the application.

Sincerely,

A handwritten signature in black ink, appearing to read "KD DesRoches".

Kelley DesRoches
Project Manager/Designer
Wiemann Lamphere Architects

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BURLINGTON
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Ryan Morrison

From: Medash, Kyle <Kyle.Medash@vermont.gov>
Sent: Tuesday, February 09, 2021 3:46 PM
To: Ryan Morrison
Cc: Pfeiffer, Rebecca
Subject: RE: DEC - Floodplain Notification - 2-14 King Street - Spot on the Dock remodel/new bathroom structure

[WARNING]: External Message, please be cautious.

Hi Ryan,

Thank you for checking in and sending the permit documents for review. The project is within the FEMA mapped SFHA and would be subject to compliance with Section 4.5.4 (f) of the City's Comprehensive Development Ordinance. As stated in the letter from the architect included with the application, it appears that the cost of the improvements to the existing building are not above the 50% cost threshold and is therefore not considered a substantial improvement and would not require flood mitigation measures be incorporated in the new design (of the existing building improvement).

The proposed bathroom structure would be considered a "new structure" in the SFHA. It would need to meet the requirements for all development and/or non-residential development outlined in Section 4.5.4 (f) (8) (C & E). As proposed, the Finished Floor Elevation of 104.0' is 2.0' feet above the Lake BFE of 102.0' which is sufficient. My understanding is that there will be a crawlspace under the building which is below the BFE, but flood vents will be incorporated on the east end which constitutes a wet floodproofing design. There are no details in the plan about electrical/mechanical equipment needed for the bathroom building; if there is such equipment needed for operation would also need to be elevated at least 1.0' above BFE.

The current plans need more detail particularly to determine if the flood vents are of adequate size, design, and location for the space (must be certified by an engineer), and details on the location of any mechanical or electrical equipment servicing the building. My understanding is that this project is still in the design phase and more detailed plans may be forthcoming, I welcome you to send them to me for review once they become available. Please let me know if you have any questions or would like to discuss further.

Thanks,



Kyle Medash | Western Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
450 Asa Bloomer State Office Building, 88 Merchants Row | Rutland, VT 05701-5903
802-490-6154 cell
kyle.medash@vermont.gov

Due to the coronavirus (COVID-19), the Agency of Natural Resources is taking additional safety measures to protect our employees, partners and customers. We anticipate we will be working remotely until at least March 31, 2021 and encourage you to communicate electronically or via phone to the greatest extent possible. Thank you for your patience and understanding that responses may occasionally be delayed.

From: Pfeiffer, Rebecca <Rebecca.Pfeiffer@vermont.gov>
Sent: Wednesday, January 27, 2021 4:03 PM
To: Medash, Kyle <Kyle.Medash@vermont.gov>; Ryan Morrison <rmorrison@burlingtonvt.gov>
Cc: Evans, Rob <Rob.Evans@vermont.gov>
Subject: FW: DEC - Floodplain Notification - 2-14 King Street - Spot on the Dock remodel/new bathroom structure

Hi Ryan,

I'm forwarding your application on to Kyle Medash, our Floodplain Manager covering Chittenden County now. Kyle is of the Rutland office, but should hopefully be able to give you some more attention and support than I am able to lat Kyle – Ryan is a Planner with the City of Burlington and someone that I've worked with on floodplain issues for many years now. The other person that I often work with in Burlington is Scott Gustin, who is now the Division Manager for the newly reconfigured Zoning Department down now at Pine Street. I don't know how much Scott's new position will have him involved in day to day projects, but he is a CFM and I've also worked with Scott for many years now.

All the best and happy new year!

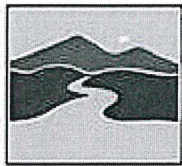
Rebecca

Due to the coronavirus (COVID-19) we are taking additional safety measures to protect our employees and customers and are now working remotely while focusing on keeping our normal business processes fully functional. Please communicate with our staff electronically or via phone to the greatest extent possible since our processing of postal mail may be slowed during this period.

Flood Hazard Area & River Corridor Permit Applications are available here: <https://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection/state-permits> or you may now submit permit applications, compliance reports and fee payments through our new online form to expedite its receipt and review: https://anronline.vermont.gov/?formtaq=WSMD_Intake.

Division staff contact information can be found online here: <https://dec.vermont.gov/watershed/contacts>.

Thank you for your patience during this challenging time.



**WATERSHED
MANAGEMENT DIVISION**
RIVERS PROGRAM

Rebecca Pfeiffer, CFM
River Corridor & Floodplain Protection Program Manager
VT NFIP Coordinator
111 West Street
Essex Junction, VT 05452
C 802-490-6157

Flood Ready Vermont: <http://floodready.vermont.gov/>

VT Flood Training: <http://floodtraining.vermont.gov/>

VT ANR Natural Resources Atlas: <http://anrmaps.vermont.gov/websites/anra/>

River Corridor & Floodplain Protection Website: <http://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection>

From: Ryan Morrison <rmorrison@burlingtonvt.gov>

Sent: Wednesday, January 27, 2021 2:25 PM

To: Pfeiffer, Rebecca <Rebecca.Pfeiffer@vermont.gov>; Evans, Rob <Rob.Evans@vermont.gov>

Subject: DEC - Floodplain Notification - 2-14 King Street - Spot on the Dock remodel/new bathroom structure

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.
Good afternoon Rebecca/Rob.

I am attaching a permit application for the above referenced project at 2-14 King Street. This is scheduled for the February 9, 2021 Design Advisory meeting, and either the February 16 or March 3, 2021 DRB meeting.

This should satisfy our mandatory DEC notification requirement... I look forward to your comments, should you have any. Let me know if you need anything else.

Thanks Rebecca!! Take care

Ryan Morrison
Associate Planner
City of Burlington
802-865-7190

"Please note that this communication and any response to it will be maintained as a public record and may be subject to disclosure under the Vermont Public Records Act."



SMART VENT® WET FLOODPROOFING PRODUCT SCHEDULE

Project Number: 2071	Date: 1-29-21
Project Name: 2071 – Spot on the Dock	Contact: Bob Hoppe
Project Address: 1 King Street	Email: bhoppe@weimannlamphere.com
Project City, State, Zip: Burlington, VT 05401	Phone:

Color Code	Qty.	Model #	Description	Finish	Flood Coverage	Air Ventilation	R.O.
FV1	4	1540-510	Dual Function SMART VENT - Single	See Paint Options	200 sq. ft.	51 sq. in.	16.25-in. x 8.25-in
	1		HurriBond™ Caulking & Adhesive				

Total Flood Coverage: 800 SF

Comments: Vents are also available in pour in place bucks. Assessment done by Bruce Beitel.

Additional Information:

- This is a recommended assessment by Smart Vent's Plans Division. The selected wall placement of vents is to identify areas and not the specific location that the vents need to be. The exact location on an identified wall is entirely up to the design professional and structural team.
- Our Smart Vent models are certified through the International Code Council's Evaluation Service (ICC-ES) to provide 200 sq. ft. of flood protection per single engineered opening. Higher coverages are provided for stacked or multi-frame units.
- For compliancy, Smart Vent's need to be placed on at least two different walls per enclosure and the bottom of each vent must be installed within 12 inches of the highest adjacent grade, whether internal or external, immediately under each opening. The entire portion of the flood vent must be below the Base Flood Elevation (BFE).
- Use Flood Vent Sealing kits with insulated flood vents to meet 2018 energy codes.
- Online Product Catalog: <https://smartvent.com/products>

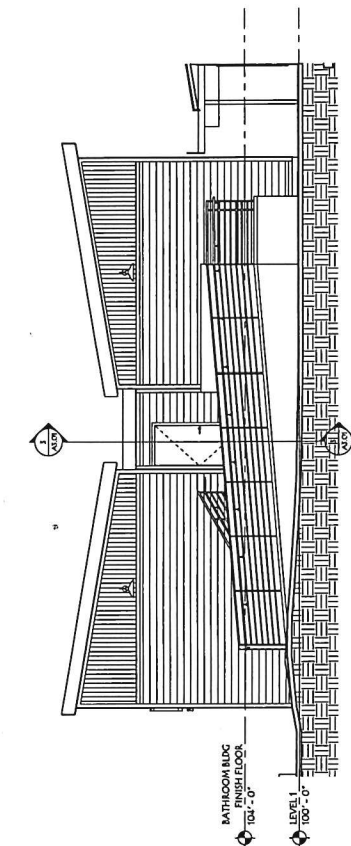
SMARTVENT.COM

430 ANDBRO DRIVE, UNIT 1, PITMAN, NJ 08071

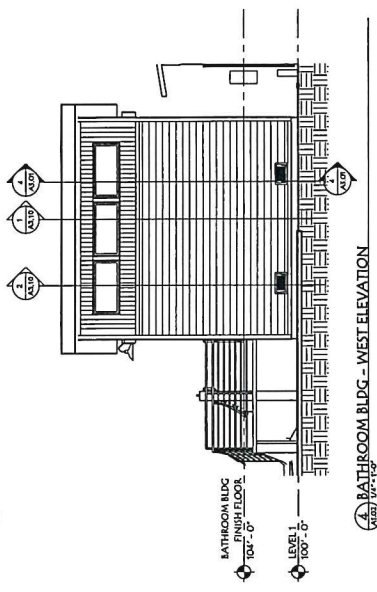
1-877-441-8368

PLANS@SMARTVENT.COM

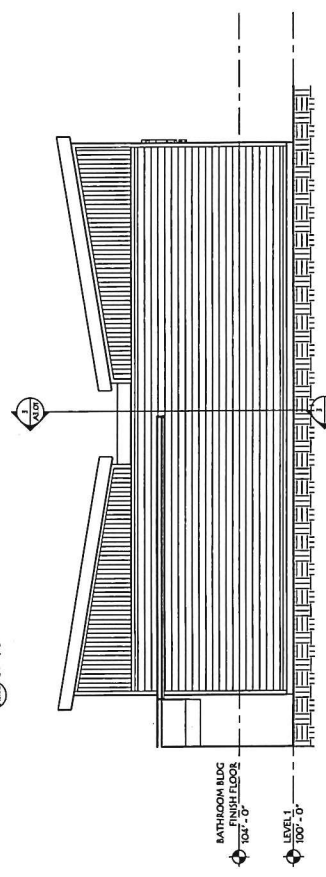




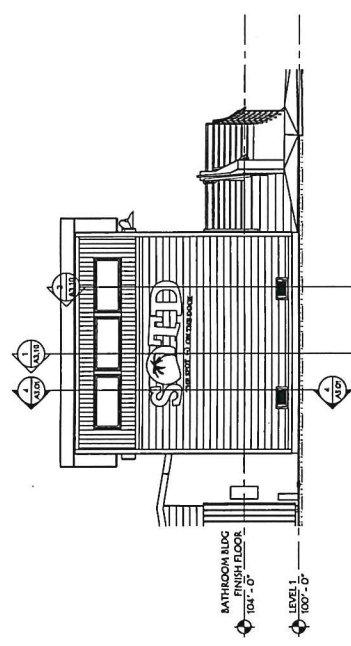
1. BATHROOM BLDG - NORTH ELEVATION
 A1.02 22/07/2021



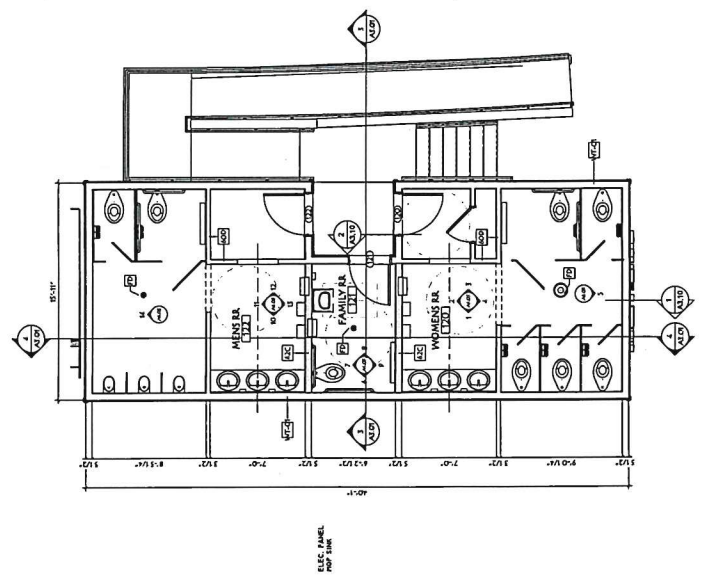
2. BATHROOM BLDG - WEST ELEVATION
 A1.02 22/07/2021



3. BATHROOM BLDG - SOUTH ELEVATION
 A1.02 22/07/2021



4. BATHROOM BLDG - EAST ELEVATION
 A1.02 22/07/2021



5. BATHROOM FF - Callout 2
 A1.02 22/07/2021

Engineered Flood Vents

SMART VENT PRODUCTS, INC.



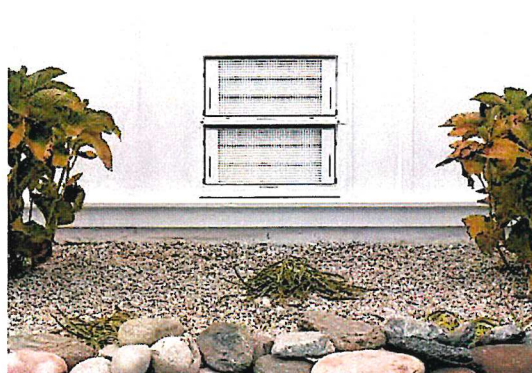
Flood vents protect enclosures by allowing automatic bi-directional water flow that equalizes hydrostatic pressure.

Applications

Crawlspaces | Full Height Enclosures | Parking Garages | Storage Facilities | Foyers



Insulated 1540-520 in Stainless Steel



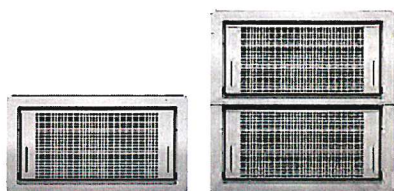
Dual-Function Stacker 1540-511 in Powder Coat White



Insulated Wood Wall 1540-570 in Stainless Steel

Dual-Function

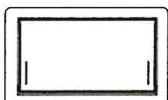
STEEL GRAY WHITE BLACK WHEAT CUSTOM



Standard Dual-Function

1540-510 + 1540-511

Automatic ventilation. A bi-metal coil opens + closes the louver as the temperature changes. Stacker models are ideal for large square footages with less openings.



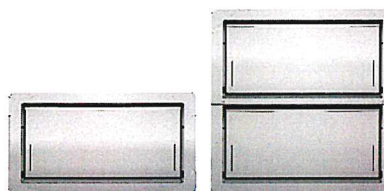
Garage Door Model

1540-524 + 1540-574

Designed for garage doors or heavily trafficked entry doors. Available in insulated or dual-function models.

Insulated

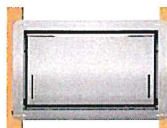
STEEL GRAY WHITE BLACK WHEAT CUSTOM



Standard Insulated

1540-520 + 1540-521

Ideal for areas requiring flood venting protection but not natural air ventilation. Stacker models are ideal for large square footages with less openings.



Insulated Wood Wall

1540-570

Designed to fit between studs spaced 16" on center. Pre-drilled slots in the four corners of the vent flange make for easy installation.

FEATURES



Stainless Steel
316L Marine Grade

15

Guaranteed
15-Year Extended Warranty



USA
American Made



Secure
Internal Floats
Keep Door Latched



Support
In-House Engineering
+ Design Assistance



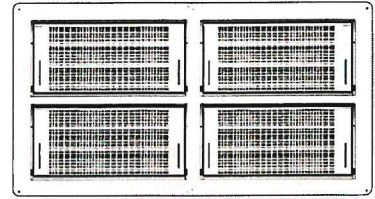
Certified
Flood Protection

MODEL	FLOOD COVERAGE	AIR VENTILATION	DIMENSIONS	ROUGH OPENING
1540-510	200 sq ft	51 sq in	16"W x 8"H x 3"D	16 1/4" x 8 1/4"
1540-511	400 sq ft	102 sq in	16"W x 16"H x 3"D	16 1/4" x 16 3/4"

MODEL	FLOOD COVERAGE	R-VALUE	DIMENSIONS	ROUGH OPENING
1540-520	200 sq ft	8.34	16"W x 8"H x 3"D	16 1/4" x 8 1/4"
1540-521	400 sq ft	8.34	16"W x 16"H x 3"D	16 1/4" x 16 3/4"
1540-570	200 sq ft	8.34	14.5"W x 8.5"H x 3"D	14 1/2" x 8 3/4"
1540-524	200 sq ft	8.34	16"W x 8"H x 3"D	16 1/4" x 8 1/4"
1540-574	200 sq ft	8.34	14.5"W x 8.5"H x 3"D	14 1/2" x 8 3/4"

Smart Vent Multi-Frames

SMART VENT PRODUCTS, INC.



Customizable one-piece frame with fewer openings for commercial applications or large square footages.

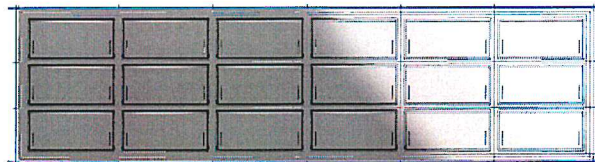


6 x 2 Insulated #1540-150602 Custom Gray

1 Flood Door

STEEL GRAY WHITE BLACK WHEAT CUSTOM

Dual Function 1540-0039 Insulated 1540-0239



6 x 3 Insulated #1540-150503 Standard Stainless Steel

2 Frame

Standard Multi-frame

1/8 inch thick angle iron for an extremely sturdy, element-resistant design.

"E" Multi-frame

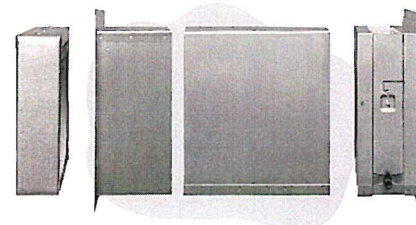
The same superior design using a lighter steel material to provide a more economical solution.

3 Configuration

MODEL	DESIGN	COVERAGE	"E"				
1540-150102	1W x 2H	400 sq ft	✓	1540-150401	4W x 1H	800 sq ft	x
1540-150103	1W x 3H	600 sq ft	✓	1540-150402	4W x 2H	1600 sq ft	x
1540-150201	2W x 1H	400 sq ft	✓	1540-150403	4W x 3H	2400 sq ft	x
1540-150202	2W x 2H	800 sq ft	✓	1540-150501	5W x 1H	1000 sq ft	x
1540-150203	2W x 3H	1200 sq ft	✓	1540-150502	5W x 2H	2000 sq ft	x
1540-150301	3W x 1H	600 sq ft	✓	1540-150503	5W x 3H	3000 sq ft	x
1540-150302	3W x 2H	1200 sq ft	✓	1540-150601	6W x 1H	1200 sq ft	x
1540-150303	3W x 3H	1800 sq ft	✓	1540-150602	6W x 2H	2400 sq ft	x
				1540-150603	6W x 3H	3600 sq ft	x

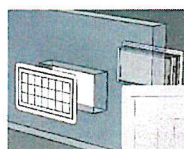


Smart Vent Accessories



SMART VENT PRODUCTS, INC.

Accessories + products that pair with Smart Vents to upgrade your energy efficiency, finish a look, meet codes or for installation.

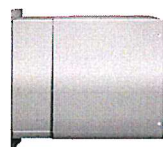


Sealing Kit Energy Saving



Finishes off interior spaces + lowers energy bills, effectively meeting 2018 Energy Codes.

SINGLE	1540-526
STACKER	1540-526-2



Trim + Sleeve Kit Standard + Wood Wall

Provides a clean, finished look on interior walls. Adjustable.

STANDARD	7" - 12.5"	1540-531-12
	10" - 15.5"	1540-531-15
WOOD WALL	4" wall depth	1540-573
	9" wall depth	1540-573-9

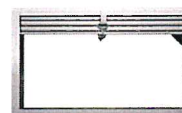


Hurribond™ 2-in-1 Adhesive



A fast curing, multi-purpose, waterproof sealant + adhesive used for installing Smart Vents.

WHITE	HB-3100
GRAY	HB-3200



Fire Damper Standard + Wood Wall

UL Certified. For use in fire-rated walls. 2 or 3-hr options available.

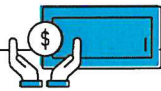
STANDARD	1540-530
WOOD WALL	1540-537



Complementary Flood Insurance Review

Our floodproofing assessment helped ensure your structure was designed to be properly protected. Now, make sure it reaps the benefits with our complementary review which will lead to a lower flood insurance premium.

— TAKE ADVANTAGE OF — These Discounts



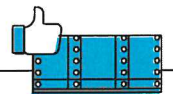
Proper Venting Discount

Flood risk can be reduced by installing flood vents that prevent foundation damage which can lead to flood insurance discounts.



Correct Rating

There are many nuances to flood insurance. We can make sure projects or properties are rated correctly + receiving the lowest premium possible.



Dry Floodproofing Credit

It can be difficult to get approved for dry floodproofing credit. Our specialists can help ensure maximum flood insurance savings with the proper credits.

— IMPORTANT FACTS — About Our Success

20 YEARS
of helping others

50%
average savings

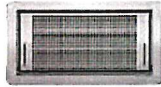
5K
insurance reviews

— ARE YOU THE — Property Owner?

CONTACT OUR EXPERTS
insurance@floodproofing.com
1 (800) 507 0865

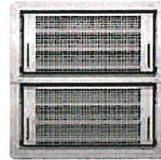
Dual Function Series

PROVIDES FLOOD PROTECTION + NATURAL AIR VENTILATION



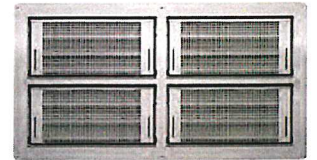
Smart Vent
1540-510

[DOWNLOAD CAD](#)



Smart Vent Stacker
1540-511

[DOWNLOAD CAD](#)

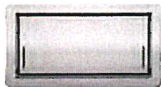


Smart Vent Multi-frame
1540-150202E (1540-0039)

[DOWNLOAD CAD](#)

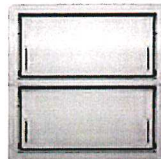
Insulated Series

ONLY PROVIDES FLOOD PROTECTION



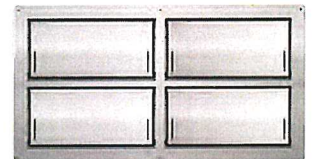
Flood Vent
1540-520

[DOWNLOAD CAD](#)



Flood Vent Stacker
1540-521

[DOWNLOAD CAD](#)



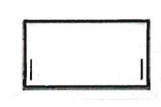
Flood Vent Multi-frame
1540-150202E (1540-0239)

[DOWNLOAD CAD](#)



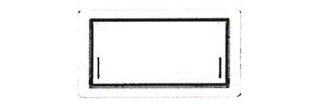
Wood Wall Model
1540-570

[DOWNLOAD CAD](#)



Overhead Garage Door
1540-524

[DOWNLOAD CAD](#)



Overhead Garage Door
1540-574

[DOWNLOAD CAD](#)

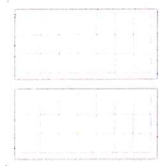
Options + Accessories

EVERYTHING YOU NEED TO COMPLETE YOUR PROJECT



Flood Vent Sealing Kit
1540-526

[DOWNLOAD CAD](#)



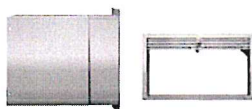
Flood Vent Sealing Kit
1540-526-2

[DOWNLOAD CAD](#)



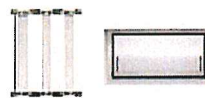
Multiframes
for commercial application

[DOWNLOAD CAD](#)



**Trim + Sleeves/
Fire Dampers**

[DOWNLOAD CAD](#)



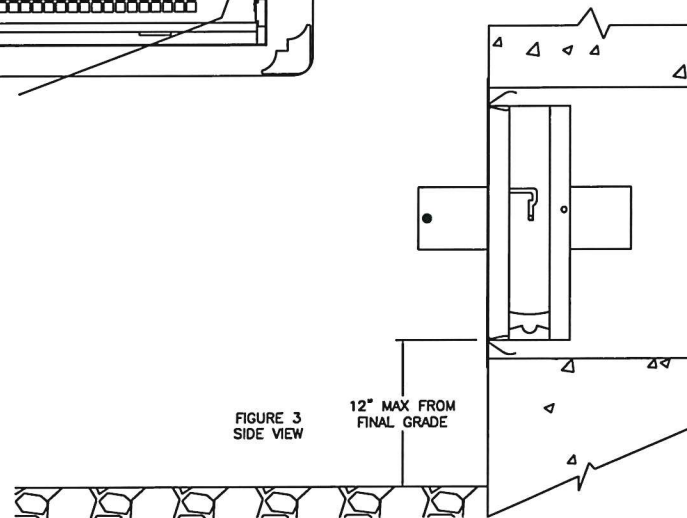
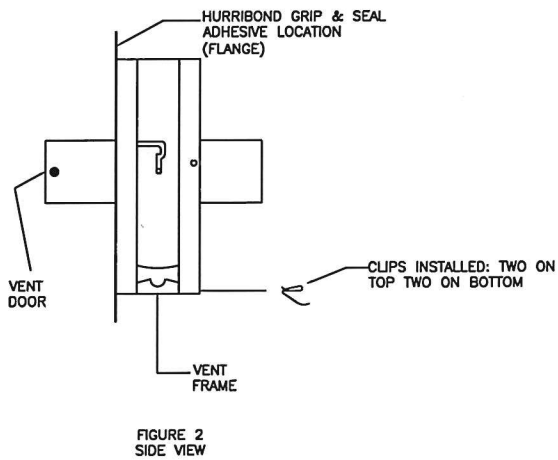
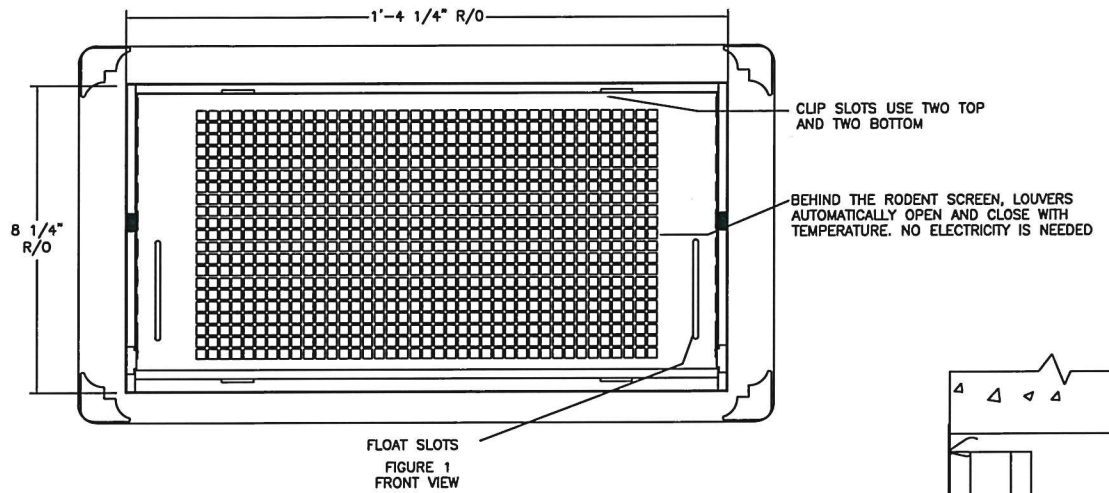
**Pour in Place
Vinyl Bucks**



HurriBond
2-in-1 Adhesive

DETAIL DIAGRAM
MODEL 1540-510

DUAL FUNCTION FLOOD AND VENTILATION VENT



SMART VENT®
877-441-8368
WWW.SMARTVENT.COM

SMART VENT Foundation Flood
430 AndBro Dr., Unit 1
Pitman NJ 08071

DUAL FUNCTION F
AND VENTILATION
MODEL 1540-5

SIZE A	DWG NO. 1540-510
DATE: 6-21-16	
SHEET 1 OF 2	



Smart VENT
877- 441- 8368
www.smartvent.com

INSTALLATION INSTRUCTIONS
& DETAILS
MODEL 1540-510
DUAL FUNCTION FLOOD AND VENTILATION VENT
REV. 6-21-16

INSTALLATION INSTRUCTIONS

1. REMOVE VENT DOOR FROM VENT FRAME. (TURN UPSIDE DOWN, ROTATE BOTTOM OF DOOR OUTWARD AND SLIDE OUT)
2. PREPARE A CLEAN 16.25" WIDE BY 8.25" HIGH ROUGH OPENING (APPROX. 1 BLOCK WIDE X 1 BLOCK HIGH) FOR EACH VENT. ENSURE THE BOTTOM OF THE ROUGH OPENING IS NO MORE THAN 12" ABOVE THE FINISHED GRADE.
3. APPLY A BEAD OF HURRIBOND GRIP & SEAL OR EQUIVALENT ADHESIVE AROUND THE BACK OF THE FLANGE ON THE VENT FRAME. (FIG. 2)
4. INSERT INSTALLATION CLIPS INTO THE TWO SLOTS ON THE TOP AND TWO SLOTS ON THE BOTTOM OF THE FRAME.
5. THE SPRING ARM OF THE CLIPS SHOULD BE ON THE OUTSIDE OF THE VENT FRAME. COMPRESS THE BOTTOM TWO CLIPS AND BEGIN SLIPPING THE FRAME INTO THE OPENING. ENSURE THAT THE BOTTOM CLIPS ARE IN THE OPENING BEFORE ALLOW THEM TO DECOMPRESS.
6. WITH THE FRAME NOW IN THE OPENING, AND THE BOTTOM SPRINGS IN PLACE, COMPRESS THE TOP SPRINGS AND PUSH THE VENT FRAME INTO THE OPENING COMPLETELY UNTIL THE FRAME IS FLUSH WITH THE WALL.
7. RE-CHECK THAT FRAME IS SQUARE AND SLOTS ARE CLEAR OF DEBRIS, AND CAULK.
8. INSTALL THE DOOR INTO FRAME BY GRASPING THE BOTTOM OF DOOR (WITH FLOAT PINS DOWN) AND FRONT (SMALL SCREEN IN FRONT). SLIDE DOOR INTO FRAME AND ROTATE UNTIL IT IS LATCHED.
9. TO OPEN THE DOOR INSERT TWO CREDIT CARDS INTO THE FLOAT SLOTS AS SHOWN IN THE DIAGRAM. THIS WILL UNLATCH THE DOOR FOR REMOVAL AND CLEANING.

DETAILED SPECIFICATIONS:

MATERIAL: STAINLESS STEEL

OPERATION FLOOD: AUTOMATIC NON-POWERED ACTIVATION AND OPERATION
VENT REMAINS CLOSED AND LOCKED UNTIL ACTIVATED

OPERATION AIR: AUTOMATIC LOUVERS FULLY OPEN AT 75 DEG. FULLY CLOSED AT 35 DEG. NO POWER REQUIRED

INSTALLATION:

SECURED W/ 4 STAINLESS STEEL INSTALLATION CLIPS INCLUDED AND AN ADHESIVE

HYDROSTATIC RELIEF: 200 SQ. FT PER VENT

VENTILATION: 51 SQ. IN. PER VENT NOTE: VAPOR BARRIER ALLOWS FOR REDUCED VENTILATION

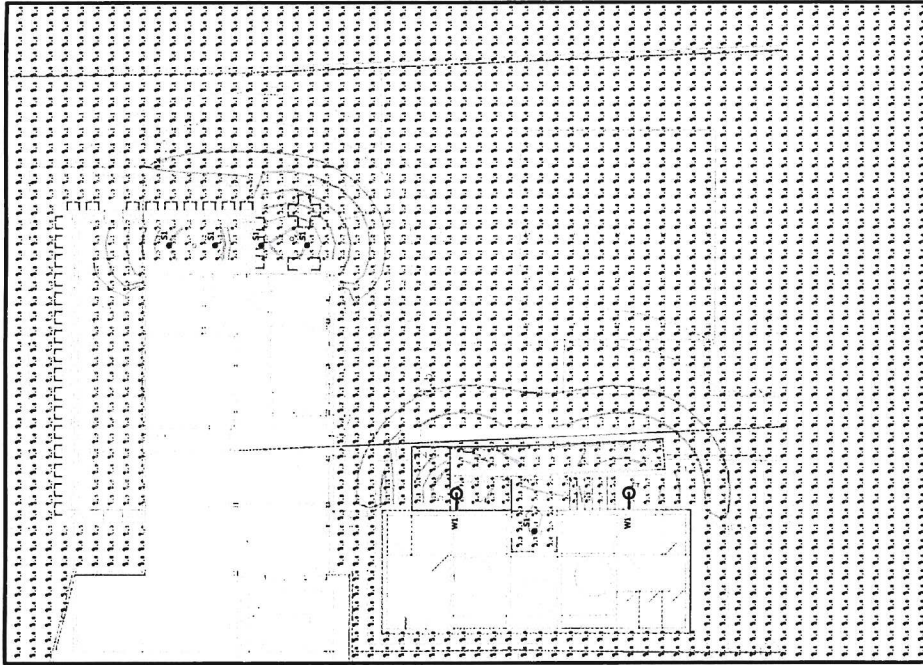
REQUIREMENTS FLOOD: MINIMUM OF 2 VENTS PER ENCLOSED AREA MOUNTED ON AT LEAST TWO DIFFERENT WALLS

COLORS: STAINLESS (STANDARD)

EXTERIOR POWDER COATED WHITE, WHEAT, GRAY, AND BLACK (AVAILABLE)

MEETS THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY:
FEMA, NFIP, ICC, & ASCE
SUPPORTIVE DOCUMENTS, TB 1-08, 44CFR 60.3(c)(5), ASCE 24-14
ICC EVALUATION # ESR-2074

SH



JOB NAME: THE SPOT ON THE DOCK - EXTERIOR
DATE: 1/19/2021
DESIGNER: APEx LIGHTING SOLUTIONS
REFLECTANCES: NONE USED
WORKSPACE: AS NOTED IN CALCULATION SUMMARY

Qty	Label	Wattage	Lumens/Lumen	LF	Description
5	SL	9.8	635	5.000	LIGHT FIXTURES (5x9.8x10.0) SURFACE MOUNTED TO CEILING
2	W1	15	1148	5.000	BANK LIGHT (5.0x15.0x15.0) SURFACE MOUNTED TO CEILING @ 130' AWAY

Calculation Summary			
Label	Avg - FC	Max - FC	Min - FC
OVERALL GRID @ GRADE	0.18	6.3	0.0
REST ROOM BANK, LANDING & STAIRS ON WALKING SURFACE	3.37	7.0	1.2
			2.81
			5.63

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SCALE: 1/16"=1'-0"
DATE: 1/19/2021
DRAWN BY: DC
SHEET: SL-1A

PROJECT TITLE: THE SPOT ON THE DOCK
DRAWING TITLE: EXTERIOR LIGHTING POINT CALCULATION

APEx LIGHTING SOLUTIONS
 THE POINT WHERE ALL ASCENDING LINES CONVERGE

CONNECTICUT
 MASSACHUSETTS
 RHODE ISLAND
 MAINE
 NEW HAMPSHIRE
 VERMONT

PHONE: 877-886-2843
 FAX: 877-886-2844
 WWW.apexlighting.com

GENERAL DISCLAIMER:
 Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to measurement techniques and field conditions such as voltage and temperature variations, reflectance, fixture and architectural elements, atmospheric effects, light distribution, etc. Differences will occur between measured values and calculated values.

NOTE TO REVIEWER:
 Total Light Loss Factor (LLF) applied at time of design is determined by applying a Luminaire Dirt Depreciation Factor (LDD) based on IES recommended values and an assumed Light Loss Factor (LLF) will result in increase of performance that may not accurately reflect actual results. Therefore, it is essential that you build all designs using correct Light Loss Factors.

LIGHTOLIER

by Signify

APEX
LIGHTING SOLUTIONS

TYPE S1

SlimSurface LED

S5R, S7R & S10R Round 5", 7" and 10"
Apertures



SlimSurface is a 5/8" thick LED surface mounted luminaire with the appearance of a recessed downlight. Easy to install into most standard j-boxes, the SlimSurface round apertures are available as a 5" 650lm, 7" 1000lm and 10" 2200lm fixture.

Project: _____
Location: _____
Cat.No: _____
Type: _____
Lamps: _____ Qty: _____
Notes: _____

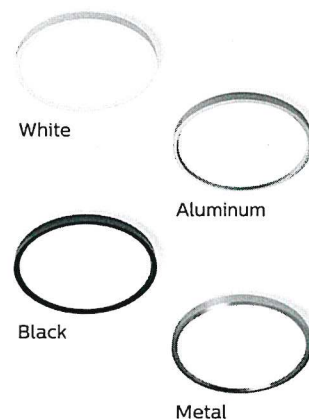
Ordering guide

example: S5R830K7AL

Series	CRI	CCT	Lumens	Finish	Dimming
S5R SlimSurface 5" Round	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	7 650lm	— White AL Aluminum BK Black W White AL Aluminum BK Black	blank ELV / Triac (120V) Z10U 0-10V (120V-277V)
S7R SlimSurface 7" Round	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	10 1000lm	— White AL Aluminum BK Black W White AL Aluminum BK Black	blank ELV / Triac (120V) Z10U 0-10V (120V-277V)
S10R SlimSurface 10" Round ²	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	22 2200lm	W White AL Aluminum BK Black MT Metallic	blank ELV / Triac (120V) Z10U 0-10V (120V-277V)

1. Configurations using 90 CRI are only available with 2700K & 3000K CCT.

2. **IMPORTANT:** SlimSurface LED 10" round installs into 4-11/16" J-box (not wet location listed).



Features

- Flange:** One piece plastic flange. Injection molded white, applied aluminum or black.
- Lens:** High transmittance lens allowing for smooth, comfortable light pattern.
- Power supply:** Integral class 2 driver. Factory wired electronic LED driver (see Electrical section for specifications)
- LED Strip:** Utilizes LEDs.
- Lifetime:** Expected lifetime 50,000 hours and backed by a 5-year warranty*
- Compliance:** Non-conductive fixture for shower light application (not applicable to metal trim model).

Dimming

Intended for ELV/Triac (120V) or 0-10V dimming (120V-277V) based on the configuration. Min 90°C supply conductors.

Electrical

Electronic power supply: RoHS compliant. Class 2 power unit. Unit tolerates sustained open and short circuit output conditions without damage.

Electrical specifications	Dimming	Input volts	Input frequency	Input current	Input Power	THD Factor	Power Factor	Minimum Operating Temp.
Slim 5" 650lm	Triac	120V	50/60Hz	0.08A	9.5W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.09A	10.1W	<20%	>0.9	-20°C
		277V	50/60Hz	0.04A	10.2W	<20%	>0.9	-20°C
Slim 7" 1000lm	Triac	120V	50/60Hz	0.13A	14.2W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.12A	14.4W	<20%	>0.9	-20°C
		277V	50/60Hz	0.06A	14.7W	<20%	>0.9	-20°C
Slim 10" 2200lm	Triac	120V	50/60Hz	0.20A	23.2W	<20%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.20A	23.2W	<10%	>0.95	-20°C
		277V	50/60Hz	0.09A	24.6W	<15%	>0.95	-20°C

For more details, please see LED-DIM-DL spec sheet.

* See Philips.com/warranties for warranty details.

Labels

cULus listed. ENERGY STAR® certified. All models are damp location rated for walls or ceilings. The 5" & 7" are suitable for ceiling mount wet locations when installed per instructions.

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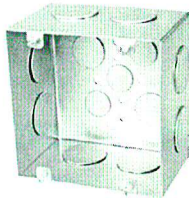


S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

Compatibility (10" Round)

Install into 4-11/16" J-box:



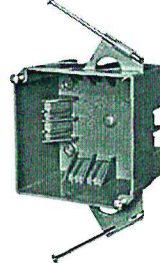
4 11/16" square (metal)
Compatible with S10R only

Compatibility (5" & 7" Round)

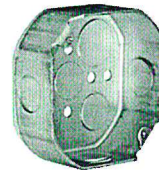
Installs into standard J-box applications for 5" & 7" models:



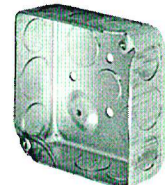
3 1/2" round (plastic)



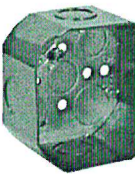
4" square (plastic)
Not compatible with S5R



4" octagonal (metal)



4" square (metal)
Not compatible with S5R

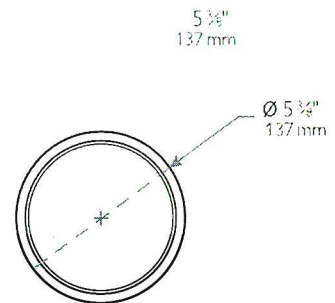
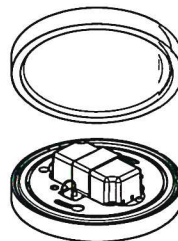
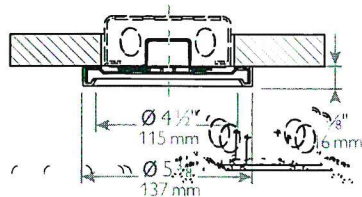


Fire rated J-b
Fire rated classific
is per the ceiling
junction box ratin

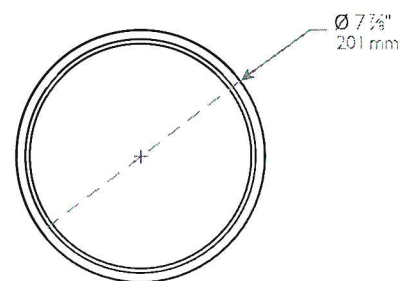
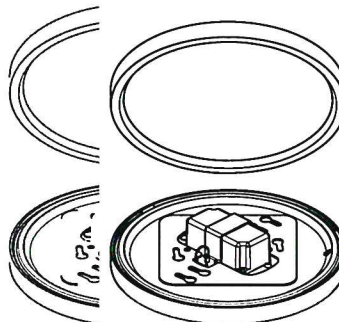
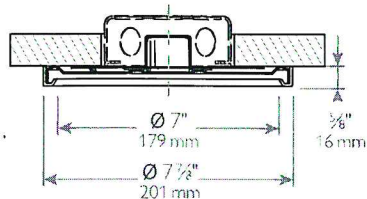
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

Dimensions

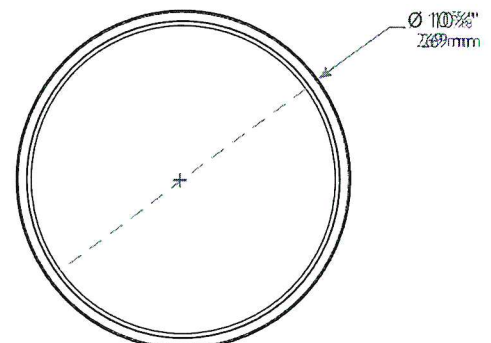
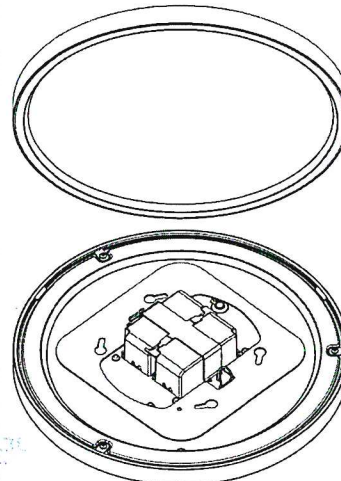
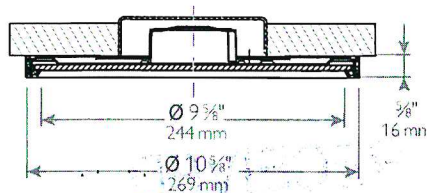
SlimSurface LED 5" downlight



SlimSurface LED 7" downlight



SlimSurface LED 10" downlight



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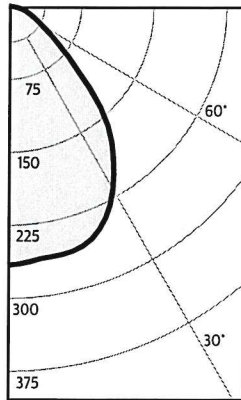
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S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S5R927K7 • 10W LED, 90 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	266	25
5	263	
10	261	
15	260	736
20	254	
25	239	110
30	217	
35	190	118
40	160	
45	118	91
50	81	
55	55	51
60	40	
65	30	31
70	23	
75	18	18
80	11	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	11	6.0'
6'	7	7.2'
7'	5	8.4'
8'	4	9.6'
9'	3	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	21.8	0.40
6'	14.2	0.26
7'	10.2	0.19
8'	8.5	0.16
9'	6.8	0.13

38"x38"x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	88
1	111	107	103	100	105	98	100	95	97	92	87	80	77	87	80	77	67
2	102	96	90	85	94	84	90	82	82	72	79	70	67	82	72	79	67
3	95	86	79	73	84	73	82	72	72	62	69	60	53	74	63	72	60
4	88	78	70	64	76	64	74	63	62	50	60	50	48	68	56	66	53
5	82	71	63	57	70	57	68	56	66	45	56	45	43	62	50	60	48
6	76	64	57	51	64	51	62	50	60	40	50	40	39	57	45	56	43
7	71	59	51	46	58	46	57	45	56	38	48	37	36	53	41	51	41
8	67	54	47	42	54	41	53	41	51	34	44	34	33	49	38	48	37
9	63	50	43	38	50	38	49	38	48	30	40	30	29	46	34	44	34
10	59	47	40	35	46	35	45	34	44	25	35	25	24	42	30	40	30

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	208	39.8%
0-40	326	62.5%
0-60	469	89.7%
0-90	522	100.0%

CRI and CCT adjustment factors

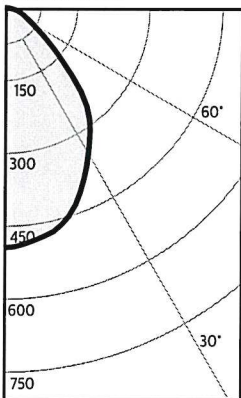
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report#: 1053GFR

Output lumens:	523lms	Efficiency:	57.4lm/w
Spacing Criterion:	1.2	CCT ³ :	2700 K
Beam Angle:	87°	CRI:	90 min
Input Watts ² :	9.1W		

S7R927K10 • 14W LED, 90 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	496	46
5	490	
10	479	
15	464	130
20	433	
25	391	180
30	348	
35	309	193
40	265	
45	197	152
50	135	
55	92	85
60	68	
65	51	52
70	40	
75	30	32
80	21	
85	9	10
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	20	5.5'
6'	14	6.6'
7'	10	7.7'
8'	8	8.8'
9'	6	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	21.8	2.89
6'	14.2	1.90
7'	10.2	1.35
8'	8.5	1.13
9'	6.8	0.90

38"x38"x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	88
1	111	107	103	100	105	98	100	95	97	92	87	80	77	87	80	77	67
2	102	96	90	85	94	84	90	82	82	72	79	71	67	82	72	79	67
3	95	86	79	73	84	73	82	72	72	62	69	60	53	74	63	72	60
4	88	78	70	64	76	64	74	63	62	50	60	50	48	68	56	66	53
5	82	71	63	57	70	57	68	56	66	45	56	45	43	62	50	60	48
6	76	65	57	51	64	51	62	50	60	40	50	40	39	57	45	56	43
7	71	59	51	46	58	46	57	45	56	38	48	37	36	53	41	51	41
8	67	55	47	42	54	42	53	41	51	34	44	34	33	49	38	48	37
9	63	51	43	38	50	38	49	38	48	30	40	30	29	46	34	44	34
10	59	47	40	35	46	35	45	34	44	25	35	25	24	42	30	40	30

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	356	40.5%
0-40	549	62.4%
0-60	786	89.3%
0-90	880	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

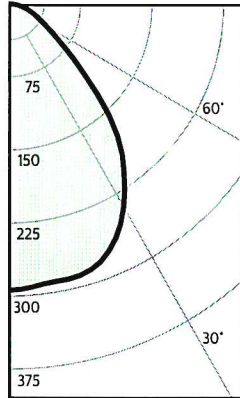
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S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S5R827K7 • 10 W LED, 80 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	294	28
5	291	
10	289	
15	288	81
20	281	
25	265	121
30	241	
35	211	131
40	178	
45	131	102
50	91	
55	62	57
60	45	
65	34	34
70	26	
75	20	21
80	13	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	12	6.0'
6'	8	7.2'
7'	6	8.4'
8'	5	9.6'
9'	4	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	24.2	2.77
6'	15.8	1.82
7'	11.3	1.30
8'	9.5	1.08
9'	7.5	0.87

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	111	107	103	100	105	105	100	95	97	92	88
	2	102	96	90	85	94	94	90	82	87	80	77
	3	95	86	79	73	84	84	82	72	79	70	67
	4	88	78	70	64	76	76	74	63	72	62	60
	5	82	71	63	57	70	70	68	56	66	56	53
	6	76	64	57	51	64	64	62	50	60	50	48
	7	71	59	51	46	58	58	57	45	56	45	43
	8	67	54	47	42	54	54	53	41	51	41	39
	9	63	50	43	38	50	50	49	38	48	37	36
10	59	47	40	35	46	46	45	34	44	34	33	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	231	39.7%
0-40	362	62.3%
0-60	521	89.6%
0-90	581	100.0%

CRI and CCT adjustment factors

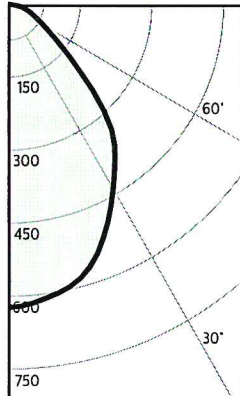
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 1054GFR

Output lumens:	581 lms	Efficacy:	62.5lm/w
Spacing Criterion:	1.2	CCT:	2700 K
Beam Angle:	87°	CRI:	80 min
Input Watts:	9.3 W		

S7R827K10 • 14 W LED, 80 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	625	59
5	618	
10	604	
15	584	164
20	546	
25	494	227
30	440	
35	390	244
40	337	
45	250	193
50	170	
55	117	108
60	85	
65	65	65
70	51	
75	39	41
80	27	
85	12	13
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	25	5.5'
6'	17	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	24.2	3.68
6'	15.8	2.42
7'	11.3	1.73
8'	9.5	1.44
9'	7.5	1.15

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	111	107	103	100	104	98	100	95	96	92	88
	2	102	96	90	85	94	84	90	82	87	80	77
	3	95	86	79	74	85	73	82	72	79	71	67
	4	88	78	70	65	77	64	74	63	72	62	60
	5	82	71	63	57	70	57	68	56	66	56	53
	6	76	65	57	51	64	51	62	51	61	50	48
	7	71	59	52	46	59	46	57	46	56	45	43
	8	67	55	47	42	54	42	53	42	52	41	39
	9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	449	40.4%
0-40	693	62.3%
0-60	994	89.3%
0-90	1113	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 964GFR

Output lumens:	1113 lms	Efficacy:	83.1lm/w
Spacing Criterion:	1.1	CCT:	2700 K
Beam Angle:	83°	CRI:	80 min
Input Watts:	13.4 W		

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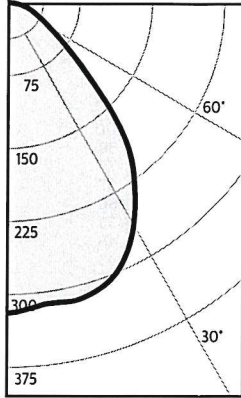
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PERMITTING & INSPECTIONS

S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S5R830K7 • 10W LED, 80 CRI, 3000 K

Candela Curves



Angle	Mean CP	Lumens
0	319	30
5	315	
10	313	
15	313	88
20	306	
25	290	131
30	264	
35	231	142
40	197	
45	146	109
50	100	
55	69	62
60	50	
65	38	37
70	29	
75	22	22
80	15	
85	6	6
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	13	6.0'
6'	9	7.2'
7'	7	8.4'
8'	5	9.6'
9'	4	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	26.2	3.06
6'	17.1	2.01
7'	12.2	1.43
8'	10.2	1.19
9'	8.1	0.96

38"x38"x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	95	97	92	88
1	111	107	103	100	105	98	100	95	97	92	88	88	88	88	88	88	88
2	102	96	90	85	94	84	90	82	87	80	77	77	77	77	77	77	77
3	95	86	79	73	84	73	82	72	79	70	67	67	67	67	67	67	67
4	88	78	70	64	76	64	74	63	72	62	60	60	60	60	60	60	60
5	82	71	63	57	70	57	68	56	66	56	53	53	53	53	53	53	53
6	76	64	57	51	64	51	62	50	60	50	48	48	48	48	48	48	48
7	71	59	51	46	58	46	57	45	56	45	43	43	43	43	43	43	43
8	67	54	47	42	54	41	53	41	51	41	39	39	39	39	39	39	39
9	63	50	43	38	50	38	49	38	48	37	36	36	36	36	36	36	36
10	59	47	40	35	46	35	45	34	44	34	33	33	33	33	33	33	33

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	249	39.7%
0-40	391	62.3%
0-60	562	89.6%
0-90	628	100.0%

CRI and CCT adjustment factors

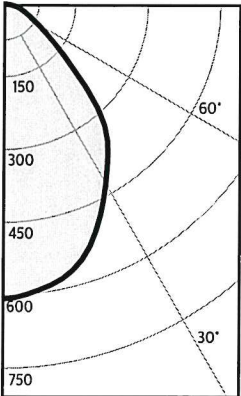
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 1055GFR

Output lumens:	628 lms	Efficacy:	69.0 lm/w
Spacing Criterion:	1.2	CCT:	3000 K
Beam Angle:	87°	CRI:	80 min
Input Watts:	9.1W		

S7R830K10 • 14W LED, 80 CRI, 3000 K

Candela Curves



Angle	Mean CP	Lumens
0	607	57
5	601	
10	588	
15	568	159
20	531	
25	480	221
30	427	
35	379	237
40	328	
45	243	187
50	165	
55	113	105
60	83	
65	63	63
70	49	
75	37	39
80	26	
85	12	13
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	24	5.5'
6'	17	6.6'
7'	12	7.7'
8'	9	8.8'
9'	7	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	26.2	3.55
6'	17.1	2.33
7'	12.2	1.66
8'	10.2	1.39
9'	8.1	1.11

38"x38"x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	95	96	92	88
1	111	107	103	100	104	98	100	95	96	92	88	88	88	88	88	88	88
2	102	96	90	85	94	84	90	82	87	80	77	77	77	77	77	77	77
3	95	86	79	73	84	73	82	72	79	70	67	67	67	67	67	67	67
4	88	78	70	64	76	64	74	63	72	62	60	60	60	60	60	60	60
5	82	71	63	57	70	57	68	56	66	56	53	53	53	53	53	53	53
6	76	65	57	51	64	51	62	51	61	50	48	48	48	48	48	48	48
7	71	59	52	46	59	46	57	46	56	45	43	43	43	43	43	43	43
8	67	55	47	42	54	42	53	42	52	41	39	39	39	39	39	39	39
9	63	51	43	38	50	38	49	38	48	37	36	36	36	36	36	36	36
10	59	47	40	35	47	35	46	35	45	35	33	33	33	33	33	33	33

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	437	40.4%
0-40	674	62.3%
0-60	966	89.4%
0-90	1081	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 961GFR

Output lumens:	1081 lms	Efficacy:	80.0 lm/w
Spacing Criterion:	1.1	CCT:	3000 K
Beam Angle:	83°	CRI:	80 min
Input Watts:	13.5W		

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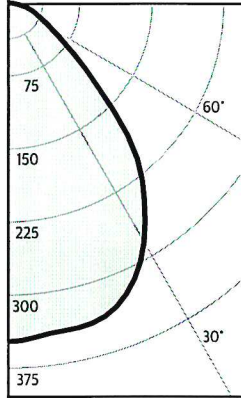
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PERMITTING & INSPECTIONS

S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S5R835K7 • 10W LED, 80 CRI, 3500 K

Candela Curves



Report#: 1056GFR

Output lumens: 685 lms
Spacing Criterion: 1.2
Beam Angle: 87°
Input Watts: 9.1W

Angle	Mean CP	Lumens
0	347	33
5	344	
10	341	
15	340	96
20	332	
25	312	143
30	283	
35	248	155
40	209	
45	154	119
50	107	
55	74	68
60	53	
65	41	41
70	31	
75	23	25
80	15	
85	5	7
90	0	

Efficacy: 75.3lm/w
CCT: 3500 K
CRI: 80 min

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	14	6.0'
6'	10	7.2'
7'	7	8.4'
8'	5	9.6'
9'	4	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	28.6	3.34
6'	18.7	2.19
7'	13.3	1.56
8'	11.2	1.30
9'	8.9	1.04

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	111	106	106	100	95	95	92	88
1	111	107	103	100	105	98	100	95	95	92	88	80	77	72	70	67	60
2	102	96	90	85	94	84	90	82	82	72	70	67	60	56	56	53	48
3	95	86	79	73	84	73	82	72	72	62	60	53	43	41	41	39	36
4	88	78	70	64	76	64	74	63	63	56	50	48	43	41	41	39	36
5	82	71	63	57	70	57	68	56	56	50	48	43	41	41	39	36	33
6	76	64	57	51	64	51	62	50	50	48	43	41	39	36	33	30	27
7	71	59	51	46	58	46	57	45	45	43	41	39	36	33	30	27	24
8	67	54	47	42	54	41	53	41	41	41	39	36	33	30	27	24	21
9	63	50	43	38	50	38	49	38	38	37	36	33	30	27	24	21	18
10	59	47	40	35	46	35	45	34	34	34	33	30	27	24	21	18	15

Zonal lumens & percentages

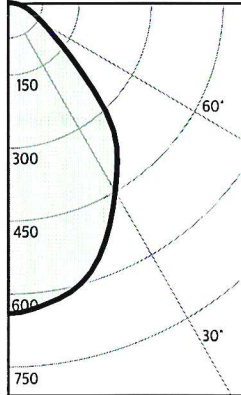
Zone	Lumens	%Luminaire
0-30	272	39.6%
0-40	426	62.2%
0-60	613	89.5%
0-90	685	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

S7R835K10 • 14W LED, 80 CRI, 3500 K

Candela Curves



Report#: 965GFR

Output lumens: 1139 lms
Spacing Criterion: 1.1
Beam Angle: 83°
Input Watts: 13.5W

Angle	Mean CP	Lumens
0	639	60
5	632	
10	618	
15	597	167
20	558	
25	505	232
30	449	
35	399	249
40	345	
45	255	197
50	174	
55	120	111
60	88	
65	67	67
70	52	
75	40	42
80	28	
85	12	13
90	0	

Efficacy: 84.4lm/w
CCT: 3500 K
CRI: 80 min

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	26	5.5'
6'	18	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	28.6	3.74
6'	18.7	2.45
7'	13.3	1.75
8'	11.2	1.46
9'	8.9	1.17

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	111	106	106	100	95	95	92	88
1	111	107	103	100	104	98	100	95	95	92	88	80	77	72	70	67	60
2	102	96	90	85	94	84	90	82	82	72	70	67	60	56	56	53	48
3	95	86	79	73	84	73	82	72	72	62	60	53	43	41	41	39	36
4	88	78	70	65	77	64	74	63	63	56	50	48	43	41	41	39	36
5	82	71	63	57	70	57	68	56	56	50	48	43	41	41	39	36	33
6	76	65	57	51	64	51	62	50	50	48	43	41	39	36	33	30	27
7	71	59	52	46	59	46	57	46	46	43	41	39	36	33	30	27	24
8	67	55	47	42	54	42	53	42	42	41	41	39	36	33	30	27	21
9	63	51	43	38	50	38	49	38	38	37	36	33	30	27	24	21	18
10	59	47	40	35	47	35	45	34	34	34	33	30	27	24	21	18	15

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	459	40.3%
0-40	708	62.2%
0-60	1016	89.2%
0-90	1139	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

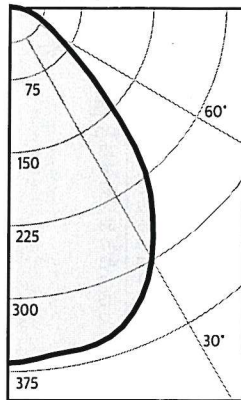
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S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S5R840K7 • 10W LED, 80CRI, 4000K

Candela Curves



Angle	Mean CP	Lumens
0	366	35
5	363	
10	360	
15	359	101
20	350	
25	329	151
30	299	
35	262	163
40	221	
45	163	126
50	113	
55	79	72
60	57	
65	44	44
70	34	
75	25	27
80	16	
85	6	7
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	15	6.0'
6'	10	7.2'
7'	7	8.4'
8'	6	9.6'
9'	5	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	30.3	3.54
6'	19.8	2.32
7'	14.1	1.66
8'	11.8	1.38
9'	9.4	1.10

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	95	97	92	88
1	111	107	103	100	105	98	100	95	97	92	88	88	88	80	87	80	77
2	102	96	90	85	94	84	90	82	87	80	77	77	77	70	79	70	67
3	95	86	79	73	84	73	82	72	79	70	67	67	67	60	72	62	60
4	88	78	70	64	76	64	74	63	72	62	60	60	60	53	66	56	53
5	82	71	63	57	70	57	68	56	66	56	53	53	53	48	60	50	48
6	76	64	57	51	64	51	62	50	60	50	48	48	48	43	56	45	43
7	71	59	51	46	58	46	57	45	56	45	43	43	43	39	51	41	39
8	67	54	47	42	54	41	53	41	51	41	39	39	39	36	48	37	36
9	63	50	43	38	50	38	49	38	48	37	36	36	36	33	44	34	33
10	59	47	40	35	46	35	45	34	44	34	33	33	33	30	40	30	30

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	286	39.5%
0-40	450	62.0%
0-60	648	89.3%
0-90	726	100.0%

CRI and CCT adjustment factors

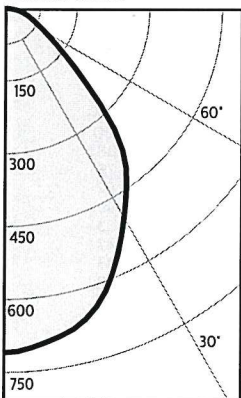
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 1057GFR

Output lumens:	726 lms	Efficacy:	79.8 lm/w
Spacing Criterion:	1.2	CCT:	4000K
Beam Angle:	87°	CRI:	80 min
Input Watts:	9.1W		

S7R840K10 • 14W LED, 90CRI, 2700K

Candela Curves



Angle	Mean CP	Lumens
0	710	66
5	702	
10	686	
15	663	186
20	620	
25	560	258
30	499	
35	443	276
40	382	
45	283	218
50	193	
55	133	122
60	97	
65	74	74
70	57	
75	44	46
80	30	
85	14	15
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	28	5.5'
6'	20	6.6'
7'	14	7.7'
8'	11	8.8'
9'	9	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	30.3	4.17
6'	19.8	2.74
7'	14.1	1.96
8'	11.8	1.63
9'	9.4	1.30

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	95	96	92	88
1	111	107	103	100	104	98	100	95	96	92	88	88	88	80	87	80	77
2	102	96	90	85	94	84	90	82	87	80	77	77	77	70	79	70	67
3	95	86	79	73	84	73	82	72	79	70	67	67	67	60	72	62	60
4	88	78	70	65	77	64	74	63	72	62	60	60	60	53	66	56	53
5	82	71	63	57	70	57	68	56	66	56	53	53	53	48	60	50	48
6	76	65	57	51	64	51	62	51	61	50	48	48	48	43	56	45	43
7	71	59	52	46	59	46	57	46	56	45	43	43	43	39	51	41	39
8	67	55	47	42	54	42	53	42	52	41	39	39	39	36	48	37	36
9	63	51	43	38	50	38	49	38	48	37	36	36	36	33	44	34	33
10	59	47	40	35	47	35	46	35	45	35	33	33	33	30	40	30	30

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	510	40.4%
0-40	786	62.3%
0-60	1127	89.3%
0-90	1262	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 963GFR

Output lumens:	1262 lms	Efficacy:	94.2 lm/w
Spacing Criterion:	1.1	CCT:	4000K
Beam Angle:	83°	CRI:	80 min
Input Watts:	13.4W		

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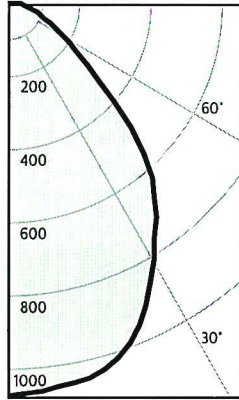
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S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S10R830K22 • 24W LED, 80 CRI, 3000 K

Candela Curves



Angle	Mean CP	Lumens
0	1027	
5	1017	97
10	1008	
15	992	279
20	947	
25	871	399
30	776	
35	685	429
40	597	
45	459	351
50	313	
55	223	204
60	161	
65	122	122
70	93	
75	70	74
80	46	
85	20	23
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	41	5.5'
6'	29	6.6'
7'	21	7.7'
8'	16	8.8'
9'	13	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	83.4	1.04
6'	54.8	0.68
7'	39.1	0.49
8'	32.6	0.41
9'	26.1	0.33

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	96	92	88	
	1	111	107	103	100	104	98	100	95	96	92	88	88	87	80	76	
	2	102	95	90	85	93	84	90	82	87	80	76	76	79	70	67	
	3	95	86	79	73	84	72	81	71	79	70	67	67	71	62	59	
	4	88	77	70	64	76	63	74	63	71	62	59	59	65	55	53	
	5	82	70	62	56	69	56	67	56	65	55	53	53	60	49	47	
	6	76	64	56	50	63	50	61	50	60	49	47	47	55	45	43	
	7	71	59	51	45	58	45	57	45	55	45	43	43	51	41	39	
	8	66	54	46	41	53	41	52	41	51	41	39	39	47	37	35	
	9	62	50	43	37	49	37	48	37	47	37	35	35	44	34	32	
10	59	47	39	34	46	34	45	34	44	34	32	32					

Zonal lumens & percentages

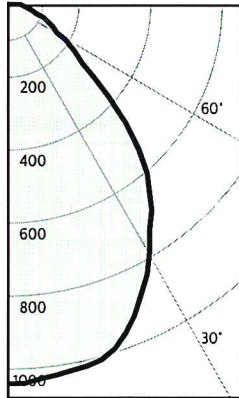
Zone	Lumens	%Luminaire
0-30	775	39.2%
0-40	1203	60.9%
0-60	1758	88.9%
0-90	1977	100.0%

Report#: S10R927K22BK

Output lumens:	1977lms	Efficacy:	84.1lm/w
Spacing Criterion:	1.1	CCT ³ :	3000 K
Beam Angle:	87°	CRI:	80 min
Input Watts ² :	23.5W		

S10R835K22 • 24W LED, 80 CRI, 3500 K

Candela Curves



Angle	Mean CP	Lumens
0	1000	
5	990	94
10	981	
15	966	271
20	922	
25	847	388
30	754	
35	664	416
40	579	
45	442	339
50	300	
55	212	195
60	153	
65	117	117
70	89	
75	67	71
80	44	
85	20	22
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	40	5.5'
6'	28	6.6'
7'	20	7.7'
8'	16	8.8'
9'	12	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	80.8	1.06
6'	53.0	0.70
7'	37.9	0.50
8'	31.6	0.41
9'	25.2	0.33

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	111	107	103	100	104	98	100	95	96	92	88
	2	102	95	90	85	94	84	90	82	87	80	76
	3	95	86	79	73	84	72	81	71	79	70	67
	4	88	77	70	64	76	64	74	63	72	62	59
	5	82	70	62	57	69	56	67	56	65	55	53
	6	76	64	56	51	63	50	62	50	60	50	47
	7	71	59	51	45	58	45	57	45	55	45	43
	8	67	54	47	41	54	41	52	41	51	41	39
	9	62	50	43	38	50	38	49	37	48	37	35
10	59	47	39	35	46	34	45	34	44	34	32	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	754	39.4%
0-40	1170	61.2%
0-60	1703	89.0%
0-90	1913	100.0%

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

2. Wattage: controlled to within 5%

3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

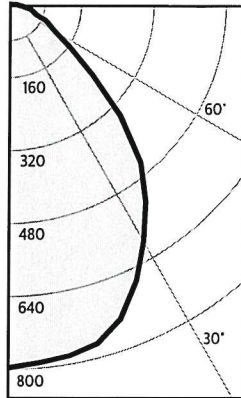
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S5R, S7R & S10R SlimSurface LED

Round 5", 7" and 10" Apertures

S10R927K22 • 23W LED, 90 CRI, 2700 K

Candela Curves



Report: S10R927K22BK

Output lumens:	1493 lms	Efficacy:	65.5 lm/w
Spacing Criterion:	1.1	CCT:	2700 K
Beam Angle:	86°	CRI:	90 min
Input Watts:	22.8 W		

Angle	Mean CP	Lumens
0	794	
5	788	
10	781	
15	769	216
20	732	
25	669	307
30	595	
35	525	328
40	453	
45	344	265
50	238	
55	162	149
60	116	
65	87	87
70	66	
75	49	52
80	32	
85	13	15
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	32	5.5'
6'	22	6.6'
7'	16	7.7'
8'	12	8.8'
9'	10	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	63.3	1.01
6'	41.5	0.66
7'	29.7	0.47
8'	24.7	0.39
9'	19.8	0.32

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	111	107	103	100	105	98	100	95	97	93	88
	2	103	96	90	85	94	84	90	82	87	80	77
	3	95	86	79	74	85	73	82	72	79	70	67
	4	88	78	70	64	77	64	74	63	72	62	60
	5	82	71	63	57	70	57	68	56	66	56	53
	6	76	65	57	51	64	51	62	50	60	50	48
	7	71	59	51	46	58	46	57	45	56	45	43
	8	67	55	47	42	54	42	53	41	52	41	39
	9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	46	35	46	35	45	35	33	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	598	40.0%
0-40	925	62.0%
0-60	1339	89.7%
0-90	1493	100.0%

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1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.





SPS-0462 REV A

CONOCO INTEGRATED LED SERIES

JOB NAME: _____

FIXTURE TYPE: _____



TYPE W1

BLE -

A

B

C

D

E

F

G

H

I

J

Order Example: BLE - G - FCC12 - 600 - G11 - 980 - NA - NA - LED16 - 2700K - DL

A - MOUNTING STYLE

C	Cord Hung
CN	Chain Hung
F	Flush Mount
G	Gooseneck
S	Stem Mount

B - SHADE SIZE**CONOCO:**

FCC10
FCC12
FCC15

C - SHADE FINISH**PORCELAIN FINISHES²:**

150	Black
250	White
350	Vintage Green
355	Jadite
455	Cherry Red
550	Yellow
650	Bronze
750	Cobalt Blue
765	Delphite Blue
850	Graphite
950	Metallic Chrome

POWDER COAT FINISHES³:

100	Black
105	Textured Black
200	White
300	Dark Green
307	Emerald Green
311	Jadite
370	Mint
380	Chartreuse
390	Teal
400	Barn Red
420	Orange
470	Watermelon
480	Blush Pink
490	Magenta
495	Sherbet Orange
500	Buttery Yellow
570	Sunflower
600	Bronze
601	Chocolate
605	Rust
615	Oil-Rubbed Bronze
700	Royal Blue
705	Navy
710	Cobalt Blue
715	Delphite Blue

C - SHADE FINISH (CONTINUED)**POWDER COAT FINISHES³:**

790	Lavender
800	Industrial Grey
805	Charcoal Granite
810	Graphite
975	Galvanized

NATURAL METALS⁴:

995	Raw Copper
996	Weathered Copper
997	Raw Brass
998	Weathered Brass
999	Oil-Rubbed Copper

D - MOUNTING

Please Note: If Flush Mount [F] is selected in Section A, please select NA

NA	Not Applicable
----	----------------

CSA LISTED CORDS:

SBK	Standard Black
SWH	Standard White
CSB	Black Cloth
CSW	White Cloth
CMG	Grey Cloth
CSR	Red Cloth
CRZ	Red Chevron Cloth
CSBB	Black & Brown Cloth
CSRW	Red & White Cloth
CSGW	Gold & White Cloth
CSBG	Black & Gold Cloth
CSBW	Black & White Cloth
CSBP	Black & Pink Cloth
CSUW	Blue & White Cloth

CHAIN MOUNT OPTIONS:

CN36	3' of Chain ¹
CN48	4' of Chain ¹
CN60	5' of Chain ¹
CN72	6' of Chain ¹

GOOSENECK OPTIONS:

G1'	G11'	G26'
G2'	G12'	G32
G3'	G13	G34'
G4	G14	G35'
G5'	G15	G36'
G6	G16'	G64'
G7	G17	G65'
G8	G22	
G9	G24	
G10	G25	

D - MOUNTING (CONTINUED)**STEM MOUNT OPTIONS:**

ST506	.5" Stem Mount, 6" ¹
ST512	.5" Stem Mount, 12" ¹
ST518	.5" Stem Mount, 18" ¹
ST524	.5" Stem Mount, 24" ¹
ST536	.5" Stem Mount, 36" ¹
ST548	.5" Stem Mount, 48" ¹
ST706	.75" Stem Mount, 6"
ST712	.75" Stem Mount, 12"
ST718	.75" Stem Mount, 18"
ST724	.75" Stem Mount, 24"
ST736	.75" Stem Mount, 36"
ST748	.75" Stem Mount, 48"

E - MOUNTING FINISH

Please Note: See Section C for Finish Options. 980-Brushed Aluminum is also available for Gooseneck and Stem mounting styles. If a Porcelain shade finish is selected, mounting will be powder coat painted-to-match. Porcelain shade finishes are not available with a Natural Metal mounting finish

(I) If Cord Hung [C], selection identifies canopy finish
(II) If Chain Hung [CN] Mounting Style, selection identifies chain and canopy finish. Natural Metals are not applicable
(III) If Stem Mount [S] Mounting Style, selection identifies stem and canopy finish
(IV) If Flush Mount [F] Mounting Style, selection identifies hex coupler and canopy finish. Natural Metals are not applicable

980	Brushed Aluminum
-----	------------------

F - CORDS⁵

NA	Not Applicable
----	----------------

Please Note: See Section D for all applicable CSA Listed Cord Options

G - MOUNTING ACCESSORY

Please Note: Mounting Accessories below are only applicable with select Mounting Styles. Please refer to product listings on our website for further detail.

NA	None/Not Applicable
HSC	Hang Straight Canopy ^{1,6}
LDBPC	LED Decorative Backing Plate Cover ⁷
LDCHX	LED Decorative Backing Plate Cover & Hex Cover ⁷

H - LIGHT SOURCE

LED11	850 Lumen, 11W LED
LED16	1250 Lumen, 16W LED
LED27	2000 Lumen, 27W LED

I - COLOR TEMPERATURE

2700K	2700K, Warm White
3000K	3000K, Neutral White
3500K	3500K, Bright White
4000K	4000K, Cool White

J - LED LENS

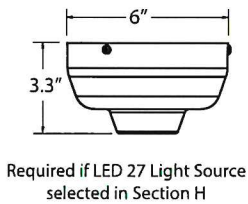
DL	Domed Lens
FL	Flat Lens

IMPORTANT: (1) Not available in Natural Metals (2) All Porcelain Enamel finished shades feature a white interior and a black outer rim (3) All Powder Coat finished shades Galvanized excluded, feature a white interior (4) Natural Metals have a longer estimated manufacturing time, please check the website for exact lead time. There are no returns accepted on Natural Metals (5) Only applicable if Chain Hung mounting style selected in Section A, select NA (6) Only applicable if Stem Mounting Style is selected in Section A (7) Not available with G36 Gooseneck option

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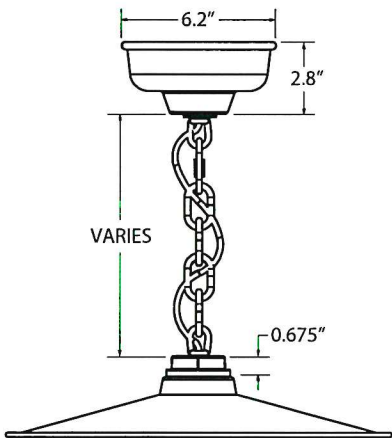
MOUNTING STYLE

HIGH LUMEN CANOPY
FOR PENDANT & FLUSH MOUNT



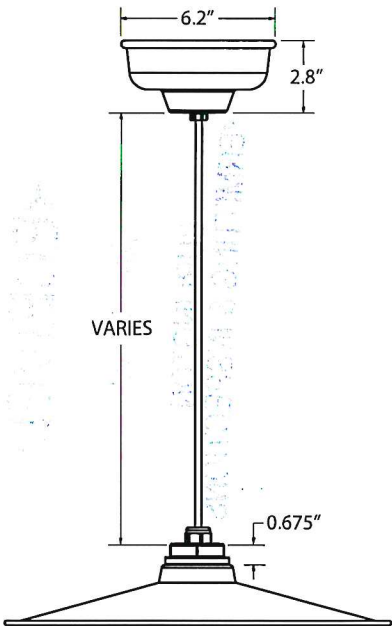
Required if LED 27 Light Source
selected in Section H

CHAIN HUNG PENDANT (CN)



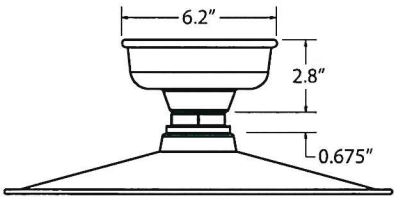
Canopy shown required if LED 11 & 16 Light Source
selected in Section J

CORD HUNG PENDANT (C)



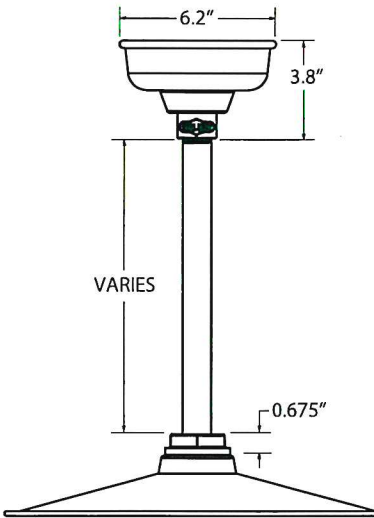
Canopy shown required if LED 11 & 16 Light Source
selected in Section J

FLUSH MOUNT (F)



Canopy shown required if LED 11 & 16 Light Source
selected in Section J

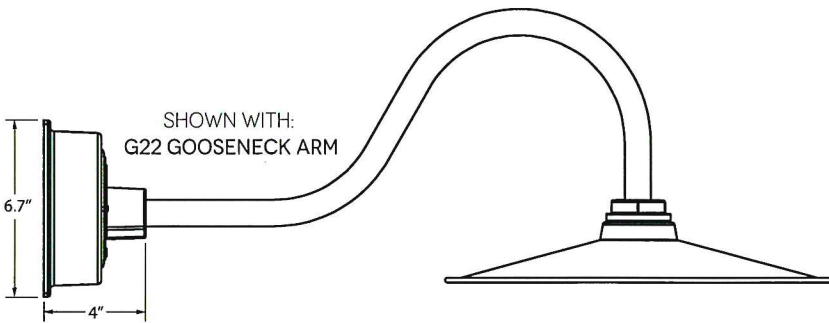
STEM MOUNT PENDANT (S)



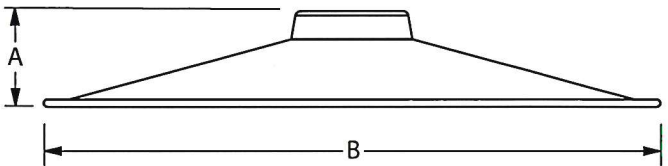
Canopy shown required if LED 11 & 16 Light Source
selected in Section J

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GOOSENECK (G)



LUMINAIRE DIMENSIONS



SHADE CODE	HEIGHT (A)	DIAMETER (B)
FCC10	1.75"	10"
FCC12	1.75"	12"
FCC15	2.25"	15"

SPECIFICATIONS**LED 11, 16, 27 LIGHT SOURCE**

LED TYPE: CREE LMH2 MODULE
 INITIAL LUMENS DELIVERED: UP TO 2000 LUMENS
 L90(6K) > 36,300 HOURS
 AVAILABLE CCT: 2700K, 3000K, 3500K, 4000K
Custom Temperatures Available upon Request
 90+ CRI
 2 STEP MACADAMS ELLIPSE
 EFFICACY: UP TO 93 LPW
High Efficacy Available upon Request, Consult Factory for Additional Information

DIMMING

LED 11 & 16
 Triac Dimming at 100-120VAC, Able to Dim down to 5%.
 Dependent on Specific Dimmer.
 0-10V & ELV Dimming Available upon Request.

LED 27
 0-10V Dimming, Able to Dim down to 10%.
 Dependent on Specific Dimmer.
 Triac & ELV Dimming Available upon Request.

TRIAC & ELV DIMMING AT 230 VAC
 Available by Request

COMPATIBLE DIMMERS
 Consult Factory for Additional Information on Dimming

LED 27 ELECTRICAL/LED DRIVER

DRIVER TYPE: LMD400 DRIVE CURRENT: 940mA
 POWER FACTOR > 0.95 EFFICIENCY: UP TO 81% TYPICAL
 INPUT VOLTAGE: 120-277 VAC (SEE DIMMING SECTION)
 CLASS 2 POWER SUPPLY

LED DRIVER LIFETIME: > 50,000 HOURS (@ 25 DEG C AMBIENT)

CONDUCTED AND RADIATED EMI
 Compliant with FCC CFR Title 47 Part 15 Class B (120 VAC), Class A (277 VAC) and EN55015 (CISPR 15) at 230 VAC

CERTIFICATIONS, LISTINGS & WARRANTY

MADE IN THE USA
 Manufactured and Hand-Crafted in Our 60,000 Square Foot Facility
 Located in Titusville, FL

CSA LISTED FOR WET LOCATIONS
 Includes All Gooseneck, Stem and Flush Mounting Styles

CSA LISTED FOR DAMP LOCATIONS
 Includes All Chain and Select Cord Hung Mounting Styles

LIMITED WARRANTY
 For Additional Information on Our Limited Warranty, Please See
 Our Terms & Conditions

OPERATING TEMPERATURE
 -30°C to 40°C

LED 11, 16 ELECTRICAL/LED DRIVER

DRIVER TYPE: LMD125
 DRIVE CURRENT: 440mA
 POWER FACTOR > 0.9
 EFFICIENCY: UP TO 81% TYPICAL
 INPUT VOLTAGE: 100-120 VAC (SEE DIMMING SECTION)
 CLASS 2 POWER SUPPLY
 LED DRIVER LIFETIME: > 50,000 HOURS (@ 25 DEG C AMBIENT)
 CONDUCTED AND RADIATED EMI
 Compliant with FCC CFR Title 47 Part 15 Class B (120 VAC), Class A (277 VAC) and EN55015 (CISPR 15) at 230 VAC

SHADE & FINISHES

POWDER COAT SHADE
 Hand-Spun from High Purity 0.050" Thick 3003-O Temper Aluminum

PORCELAIN SHADE
 Hand-Spun from 20 Gauge Sheet Metal

POWDER COAT FINISHES
 Polyester Powder Coat Finishes Are Electro-Statically Applied and Thermocured

PORCELAIN FINISHES
 Applied by Hand and Fired in a High Temperature Oven

COPPER
 Hand-Spun from High Purity .032 Thick C11000-O60 ETP Copper

BRASS
 Hand-Spun from High Purity .050" Thick C2600-O60 Brass

MOUNTING

STEM
 1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Mounting Stem. Custom Lengths Available upon Request.

GOOSENECK
 1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Gooseneck

CORD
 Cord-Hung Pendants Include 7' of Standard Cord or 5' of Cloth Cord, +/- For Socket Orientation

CHAIN
 4-Gauge Chain Complete with Quick Link for On-Site Adjustments to Chain's Length

MAX FIXTURE WEIGHT
 10 lbs

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Department of Permitting & Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
Telephone: (802) 865-7188

William Ward, Director
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
Alison Davis, Planning & Zoning Clerk
Ted Miles, Zoning Specialist
Charlene Orton, Permitting & Inspections Administrator



TO: Development Review Board
FROM: Ryan Morrison, Associate Planner
DATE: March 3, 2021
RE: 21-0641CA; 2-14 King Street

=====

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: DW-PT Ward: 3C/5S

Owner/Applicant: Lake Champlain Transportation Company / Spot on the Dock

Request: Renovation to an existing restaurant building to demo bathrooms to increase outdoor bar area within the existing footprint and add interior partitions to create new office and storage rooms; construct a new bathroom building with stairs and access ramp.

Applicable Regulations:

Article 3 (Applications, Permits, and Project Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking)

Background Information:

The applicant is seeking approval to renovate the existing restaurant building to demolish interior bathrooms to increase the outdoor bar area within the building's existing footprint and to construct new office and storage rooms. A new detached bathroom structure is also proposed in front of the restaurant, with access stairs and handicap ramp.

The property sits within the Special Flood Hazard Area. This location triggers review under the SFHA criteria of Sec. 4.5.4. Project plans have been provided to the state floodplain coordinator. Comments received from the floodplain coordinator include confirmation that the finished floor elevation of the new bathroom structure will be sufficiently elevated, that any new electrical/mechanical equipment will need to be elevated at least 1 ft above the base flood elevation, and that additional information will be needed for the flood vents at the crawlspace level. The applicants have provided updated flood vent information to staff and to the floodplain manager, which are pending approval. Any additional requirements received by the floodplain manager within the 30-day comment period will be incorporated into this permit.

This application was heard by the Design Advisory Board on February 9, 2021. The DAB recommended approval of the application as presented to the Development Review Board, with the following recommendations:

1. The applicant control rainwater on the south side of the building; and
2. Design the bathrooms so that when the doors open, toilets are not visible.

As of the preparation of this report, the applicants have not yet provided this additional information, which they intend to do.

Previous zoning actions for this property:

- 10/6/20, Approval for the construction of an accessory building with attached deck.
- 5/19/20, Approval for the construction of a shed to house a commercial ice machine.
- 8/6/19, Approval for site modifications to accommodate vehicular and pedestrian flow for the ferry basin.
- 12/4/18, Approval to relocate 2 loading ramps.
- 11/7/18, Approval for after the fact paving of gravel areas
- 10/5/17, Approval for replacement fuel tank and islands for dispensers
- 5/23/17, Approval for renovations to restaurant
- 3/7/16, Approval for replacement ticket booth
- 4/27/12, Approval for Lake Monsters Team Headquarters sign
- 6/10/11, Non-app issued for post-flood damage repairs
- 11/30/09, Approval for trussed gable roof
- 2/19/08, Approval for conversion of retail to office space
- 2/17/05, Approval for roof renovations
- 4/13/04, Approval to install ticket window
- 5/27/03, Approval for sur pac and parking lot lighting installation
- 2/21/03, Approval to replace existing restaurant building with larger restaurant building (not acted upon)
- 2/22/01, Approval for Maritime Museum sign
- 2/22/01, Approval to change use to museum
- 8/18/00, Approval to install an interpretative marker
- 5/1/00, Approval to change portion of retail space to creemee stand
- 6/3/99, Approval to amend prior approval for 5 finger docks with marine gas float
- 2/18/99, Approval to install 5 finger docks
- 10/10/95, Approval to install vertical metal siding on maintenance shed
- 10/29/93, Approval for construction of a 20' X 20' storage structure
- 4/9/92, Approval to construct HC accessible bathroom with ramp
- 5/9/91, Approval to construct new structure containing freezer and refrigeration units

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

I. Findings

Article 3: Applications, Permits, and Project Reviews

Part 3, Impact Fees:

Sec. 3.3.2, Applicability

Any new development or additions to existing buildings which result in new dwelling units or in any new non-residential buildings square footage are subject to impact fees.

Impact fees shall be calculated based on the total gross square footage of the new bathroom structure. Per the submitted plans, an estimate of the fee is:

SF of Project	545
----------------------	------------

Department	<u>Residential</u>	
	Rate	Fee
Traffic	0.751	409.30
Fire	0.203	110.64
Police	0.358	195.11
Parks	0.428	233.26
Library	0.000	0.00
Schools	0.000	0.00
Total	1.740	\$ 948.31

Affirmative finding as conditioned.

Article 4: Maps & Districts

Sec. 4.4.1, Downtown Mixed Use Districts

(a) Purpose

(2) Downtown Waterfront – Public Trust District (DW-PT)

The subject property is located in the Downtown Waterfront – Public Trust (DW-PT) District. This district is intended to enhance and diversify commercial and residential development in the downtown waterfront area, and to increase access, utilization, and enjoyment of the lakeshore by the community. The restaurant use has been in existence for many years, and is consistent with the intent of the zoning district. The new bathroom structure will be accessory to the restaurant, and due to its detached location, it may possibly be utilized by non-restaurant patrons as well. The altered interior space and outdoor bar area expansion will not alter the existing use. **Affirmative finding.**

(b) Dimensional Standards & Density

No change to existing lot coverage or setbacks will result from the expanded bar area and interior alterations to the restaurant structure. The bathroom structure will be constructed on an existing concrete surface. Within the 257,322 sf property, the new walkway will amount to a very minor increase in lot coverage. The DW-PT zone has no lot coverage limitation. The new development will locate outside of the 50 ft lakeshore setback. Lastly, the new bathroom building will be 17.5' in height, less than the 35' limit. **Affirmative finding.**

(c) Permitted & Conditional Uses

See (d) 1 (B) below.

(d) District Specific Regulations

1. Use Restrictions

A. Permitted Uses: North of Main Street

Not applicable

B. Permitted Uses: Maple to Main Street

Only the following uses are permitted within that portion of the Downtown Waterfront – Public Trust District located north of the centerline of Maple Street extended north to the centerline of Main Street extended:

(iii) Restaurants

Spot on the Dock restaurant is an existing, ongoing restaurant use on the property. No change to the use is proposed, and the detached bathroom structure is accessory to the restaurant.

Affirmative finding.

C. Other Regulations in Effect

Not applicable.

2. Public Trust Restrictions

The subject property is located within the area of the DW-PT: Maple to Main Street. The restaurant is a permitted use and will remain unchanged. **Affirmative finding.**

3. Facades and Setbacks on Side and Rear Property Lines

Not applicable.

4. Lake Champlain Waterfront Setbacks

Not applicable. The new bathroom structure will be located outside the 50 ft lakeshore setback.

5. Development Bonuses/Additional Allowances

Not applicable.

Sec. 4.5.4, Natural Resource Protection Overlay District:

Almost the entire site is located within the Special Flood Hazard Area (at or below the 102' elevation). As a result, the following criteria apply:

(f) District Specific Regulations: Special Flood Hazard Area

(7) Special Review Criteria

A. The danger to life and property...

The new building will be constructed with a crawl space at the ground level and will contain four flood vents as required for any portion of a structure below the base flood elevation to allow for floodwaters to pass. The finished floor elevation will be at 104' – two feet above the Special Flood Hazard Area. With flood vents at the crawlspace level, there should be little to no effect on flood heights or velocities. **Affirmative finding.**

B. The danger that material may be swept onto other lands...

The bathroom building will be properly anchored/secured to the ground, and thus will be in little danger of being swept away during times of flooding. **Affirmative finding.**

C. The proposed water supply and sanitation systems...

Minor changes to water and sewer systems will occur for the new bathroom building. **Affirmative finding.**

D. The susceptibility of the proposed facility and its contents to flood damage...

Given its low elevation adjacent to the lakeshore, the property has been flooded a number of times. The finished floor elevation of the bathroom building will be at 104' – two feet above the base flood elevation of 102', so the structure and contents within should be relatively safe from flood damage. **Affirmative finding.**

E. The importance of the services provided...

No new use is proposed. The restaurant use will remain. As noted above, the restaurant is consistent with the intent of this DW-PT district. **Affirmative finding.**

F. The availability of alternative locations...

As noted above, no new use is proposed. The restaurant has existed in its location for many years and there are no plans to change that. **Affirmative finding.**

G. The compatibility of the proposed use with existing development...

As previously noted, the restaurant is consistent with the intent of the DW-PT zone. **Affirmative finding.**

H. The relationship of the proposed use to the Municipal Development Plan...

No new use is proposed. The restaurant use strengthens the working waterfront and contributes to the vitality of the downtown waterfront called for in PlanBTV: Downtown and Waterfront. **Affirmative finding.**

I. The safety of access to the property...

While almost the entire property is within the Special Flood Hazard Area, access to it remains accessible from King Street during flood events. No changes in access are proposed. **Affirmative finding.**

J. The expected heights, velocity, duration, rate of rise...

The maximum regulatory flood elevation along the lakeshore is 102' above sea level. The velocity of flood waters along the lakeshore is not problematic. Water is more or less stationary as it rises and falls. The duration of flooding and the rate of its rise depend entirely on spring snowmelt and precipitation events. The lake has risen above 102' just once on record (spring 2011). Sediment transport is insubstantial. Sediment transport is associated with moving waterways such as rivers. With flood vents at the crawlspace level, the new bathroom building should not create any new impact on flood height, velocity, duration, rate of rise, or sediment transport. **Affirmative finding.**

K. Conformance with all other applicable requirements...

See Articles 3, 4, 5, 6, and 8 of these findings.

Article 5: Citywide General Regulations

Sec. 5.2.3, Lot Coverage Requirements

See Article 4 above.

Sec. 5.2.4, Buildable Area Calculation

Not applicable in the DW-PT zone.

Sec. 5.2.5, Setbacks

See Article 4 above.

Sec. 5.2.6, Building Height Limits

See Article 4 above.

Sec. 5.2.7, Density and Intensity of Development Calculations

See Article 4 above.

Sec. 5.5.1, Nuisance Regulations

Nothing in the proposal appears to constitute a nuisance under this criterion. **Affirmative finding.**

Sec. 5.5.2, Outdoor Lighting

The elevation plans show two wall-mounted light fixtures on the north wall of the new bathroom building that will provide illumination for pedestrian access. Recessed light fixtures will be installed into the ceiling for the expanded outdoor bar area. Spec sheets have been provided and they are compliant with the requirements of this section. **Affirmative finding.**

Sec. 5.5.3, Stormwater and Erosion Control

The proposed development exceeds 400 sf of ground disturbance and, therefore, requires an approved Erosion Prevention and Sediment Control plan, as well as a stormwater plan. Prior to the release of the zoning permit, those plans will have to be submitted to the Stormwater Program Manager for review and approval. **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 site contains no significant natural areas as identified in the Open Space Protection Plan. While the site is along the Lake Champlain waterfront, it (and the rest of the downtown waterfront) is not included in the Riparian and Littoral Conservation Zone. **Affirmative finding.**

(b) Topographical Alterations:

The finished elevation of the new restroom structure will be at 104' above sea level – above the 102' base flood elevation. That said, the site is basically flat and will remain so. **Affirmative finding.**

(c) Protection of Important Public Views:

There are significant public views from the project site across the lake and towards the Adirondacks. The replacement of the restroom building in front of the existing restaurant will not adversely impact these views. **Affirmative finding.**

(d) Protection of Important Cultural Resources:

The project site is located on fill soils. The site has no archaeological significance. **Affirmative finding.**

(e) Supporting the Use of Renewable Energy Resources:

No part of the application will preclude the use of wind, water, solar, geothermal or other renewable energy resource. **Affirmative finding.**

(f) Brownfield Sites:

The site is included on the Vermont DEC Hazardous Site List. Gasoline associated with an underground storage tank was the source of contamination. It appears that remediation activities have been completed. **Affirmative finding.**

(g) Provide for nature's events:

Special attention shall be accorded to stormwater runoff so that neighboring properties and/or the public stormwater drainage system are not adversely affected. All development and site disturbance shall follow applicable city and state erosion and stormwater management guidelines in accordance with the requirements of Art 5, Sec 5.5.3.

While the new restroom building will be placed on existing hard surface, the applicant will be required to submit an Erosion Prevention and Sediment Control plan and a stormwater plan to the Stormwater Program Manager for review and approval.

Design features which address the effects of rain, snow, and ice at building entrances, and to provisions for snow and ice removal or storage from circulation areas shall also be incorporated.

The expanded, open-air outdoor bar area will be sheltered from inclement weather. The restroom building will have a covered entrance as well. The site provides various snow storage areas that will not impede pedestrian or vehicular circulation. **Affirmative finding.**

(h) Building Location and Orientation:

The large property (257,332 sf in area) is developed with various buildings and the Lake Champlain Ferry docks. The proposed restroom building is set back a considerable distance from the nearest public street, so it will not negatively affect the streetscape. Placed in front of the primary restaurant structure, and just to the side of the restaurant's front door, it should not detract from an identifiable pedestrian entrance, even considering one has to be well into the property to see this entrance. **Affirmative finding.**

(i) Vehicular Access:

No change to existing vehicular access is proposed. With the exception of ferry traffic, public vehicular circulation within the property is setback significantly from the new development. **Affirmative finding.**

(j) Pedestrian Access:

No changes to existing pedestrian access to the restaurant are proposed. A new walkway on the east side of the restroom building, between the existing front walkway to the restaurant and the existing walkway along the south side of the restaurant building, will be constructed. The new restroom building will have stair and ramp access. **Affirmative finding.**

(k) Accessibility for the Handicapped:

The building inspector has jurisdiction over ADA requirements. The plans include a handicap ramp to access the new restroom building. **Affirmative finding.**

(l) Parking and Circulation:

No changes to the existing parking and circulation are proposed, nor needed. **Affirmative finding.**

(m) Landscaping and Fences

The proposal includes planting three shrubs in the existing yard space in front of the new restroom building (east). A new stockade fence will be constructed along a portion of the new path in front of the restroom building, to prevent pedestrians from accessing a small area between buildings.

Affirmative finding.

(n) Public Plazas and Open Space:

The site already offers open space in the form of lakefront walkways and green space. No changes are proposed. **Affirmative finding.**

(o) Outdoor Lighting:

Where exterior lighting is proposed the applicant shall meet the lighting performance standards as per Sec 5.5.2.

The elevation plans show two wall-mounted light fixtures on the north wall of the new restroom building that will provide illumination for pedestrian access. Recessed light fixtures will be installed into the ceiling for the outdoor bar area. **Affirmative finding.**

(p) Integrate infrastructure into the design:

Exterior storage areas, machinery and equipment installations, service and loading areas, utility meters and structures, mailboxes, and similar accessory structures shall utilize setbacks, plantings, enclosures and other mitigation or screening methods to minimize their auditory and visual impact on the public street and neighboring properties to the extent practicable.

Utility and service enclosures and screening shall be coordinated with the design of the principal building, and should be grouped in a service court away from public view. On-site utilities shall be placed underground whenever practicable. Trash and recycling bins and dumpsters shall be located, within preferably, or behind buildings, enclosed on all four (4) sides to prevent blowing trash, and screened from public view.

Any development involving the installation of machinery or equipment which emits heat, vapor, fumes, vibration, or noise shall minimize, insofar as practicable, any adverse impact on neighboring properties and the environment pursuant to the requirements of Article 5, Part 4 Performance Standards.

The plans indicate electrical service at the rear of the new restroom building, out of view from pedestrian walkways. No other new utilities or above ground infrastructure is proposed. If so, the plans will need to be revised to show locations and specs. **Affirmative finding as conditioned.**

Part 3: Architectural Design Standards

Sec. 6.3.2 Review Standards

(a) Relate development to its environment:

1. Massing, Height and Scale:

While the new restroom building will be located foremost as part of the restaurant use, the applicant has made an effort to ease any monotony that may be created. The elevation plans show the new restroom building at a height taller than the existing restaurant building. However, the front façade (east), will be broken up with two different siding types, a new sign for Spot on the Dock (which requires a separate sign permit), and windows, all in an effort to provide relief from

what could be a monotonous façade. Given that this development is located deep within a highly developed property, impacts to nearby public streets and other development will be negligible.

Affirmative finding.

2. *Roofs and Rooflines.*

The roofline over the existing restaurant bathrooms will remain unchanged after that area is converted to additional outdoor bar area. The new restroom structure will have two inward sloped roofs – one over the men’s restroom and one over the women’s restrooms. Given existing development on the property, this roof type will not create an anomaly. **Affirmative finding.**

3. *Building Openings*

The new restroom structure will have three windows on both ends (west and east façades), and a covered pedestrian entrance on the north side. Since this is a restroom, having many openings is undesirable. However, in an effort to create a more attractive front wall (east façade), the applicant proposes the windows, a new sign, and two different types of siding. Aside from the three windows on both ends and the pedestrian access, no other openings are proposed. **Affirmative finding.**

(b) Protection of Important Architectural Resources:

See Sec. 6.2.2 (d) above.

(c) Protection of Important Public Views:

See Sec. 6.2.2 (c) above.

(d) Provide an active and inviting street edge:

Building facades shall be varied along the street edge by the integration of architectural features, building materials, or physical step-backs of the façade along its length. ..This may be accomplished by incorporating fenestration patterns, bays, horizontal and vertical façade articulations, the rhythm of openings and prominent architectural features such as porches, patios, bays, articulated bases, stepping back an elevation relative to surrounding structures, and other street level details. The use of traditional façade components such as parapet caps, cornices, storefronts, awnings, canopies, transoms, kick plates, and recessed entries are highly encouraged. In areas where high volumes of pedestrian traffic are desired, the use of architectural recesses and articulations at the street level are particularly important in order to facilitate the flow of pedestrian traffic.

The proposed building is set relatively far back from the street, deep into the lot. It has no street edge. The restroom building does provide a city-facing eastern façade which, as noted above, provides various aspects that present a more attractive front. **Affirmative finding.**

(e) Quality of materials:

All development shall maximize the use of highly durable building materials that extend the life cycle of the building, and reduce maintenance, waste, and environmental impacts. Such materials are particularly important in certain highly trafficked locations such as along major streets, sidewalks, loading areas, and driveways. Efforts to incorporate the use of recycled content materials and building materials and products that are extracted and/or manufactured within the region are highly encouraged.

The proposal calls for wood clapboard siding on the majority of the restroom building, with vertical corrugated metal siding on the higher portions. The access ramp will be concrete. Specifics on the windows have not been provided, however, since this is a new construction, any commercial grade windows will more than likely be acceptable. Spec sheets for the windows and doors will need to be provided to staff for review and approval. **Affirmative finding.**

(f) Reduce energy utilization:

All new construction is required to meet the Guidelines for Energy Conservation, Section 8 of the City of Burlington Code of Ordinances. **Affirmative finding as conditioned.**

(g) Make advertising features complementary to the site:

The elevation plans show a wall sign on the front of the bathroom building. New signage must be reviewed and approved under a separate sign permit. **Affirmative finding as conditioned.**

(h) Integrate infrastructure into the building design:

See Section 6.2.2 (p), above.

(i) Make spaces secure and safe:

Spaces shall be designed to facilitate building evacuation, accessibility by fire, police or other emergency personnel and equipment, and, to the extent feasible, provide for adequate and secure visibility for persons using and observing such spaces. Building entrances/entry points shall be visible and adequately lit.

The restroom entrance is clearly visible and will be illuminated. The new construction shall conform to all building and life safety code as defined by the building inspector and the fire marshal. **Affirmative finding.**

Article 8: Parking

Table 8.1.8-1 Minimum Off-Street Parking Requirements

The property is located within the Multi-Modal Mixed Use Parking District. This recently created district removes minimum parking standards for all uses within. Therefore, the proposal triggers no additional parking requirement. **Affirmative finding.**

II. Conditions of Approval

1. **At least 7 days prior to the issuance of a certificate of occupancy**, the applicant shall pay to the City Treasurer's Office or the Dept. of Permitting and Inspections impact fees as calculated by staff based on the net new square footage of the proposed development. As submitted, estimated impact fees are:

SF of Project 545

Department	<u>Residential</u>	
	Rate	Fee
Traffic	0.751	409.30
Fire	0.203	110.64
Police	0.358	195.11
Parks	0.428	233.26
Library	0.000	0.00
Schools	0.000	0.00

Total	1.740	\$ 948.31
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2. **Prior to the release of the zoning permit, if applicable**, all exterior mechanical units and utility connections shall be identified on revised plans and screening shall be provided – for staff review and approval.
3. **Prior to the release of the zoning permit**, window and door spec sheets shall be submitted to staff for review and approval.
4. **Prior to the release of the zoning permit**, an Erosion Prevention and Sediment Control plan, including a stormwater plan, shall be submitted to the Stormwater Program Manager for review and approval.
5. **Prior to the release of the zoning permit**, the flood vents as proposed shall receive approval from the State Floodplain Coordinator.
6. New construction and/or substantial improvements to structures shall be reasonably safe from flooding and be:
 - i. Designed and adequately anchored to prevent flotation, collapse, or lateral movement during the occurrence of the base flood;
 - ii. Constructed of materials resistant to flood damage;
 - iii. Constructed by methods and practices that minimize flood damage; and
 - iv. Constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
7. All development shall be designed to minimize flood damage to the proposed development and to public facilities and utilities;
8. All development shall be designed to provide adequate surface drainage to reduce exposure to flood hazards;
9. All new construction and substantial improvements that have fully enclosed areas below the lowest floor shall:
 - i. Be solely used for parking of vehicles, storage, or building access, and such a condition shall clearly be stated on any permits; and,
 - ii. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Such designs must be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria: A minimum of two openings of two walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters;
10. All necessary permits shall be obtained from those governmental agencies from which approval is required by federal or state law.
11. All new construction and substantial improvements for nonresidential purposes shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation. Existing non-residential structures may be flood proofed where designed to be watertight to one foot or more above the base flood elevation, with walls substantially impermeable and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

A permit for a proposed building to be flood proofed shall not be issued until a registered architect or engineer has reviewed the structural design, specifications and plans and has certified that the design and methods of construction are in accordance with meeting the provisions of this subsection.

12. New signage will require a separate sign permit.
13. The Applicant/Property Owner is responsible for obtaining all necessary state and federal permits.
14. 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, and shall meet all energy efficiency codes of the city and state as required.
15. Standard permit conditions 1-15.

Department of Permitting and Inspections

Zoning Division
645 Pine Street
Burlington, VT 05401
<http://www.burlingtonvt.gov/PZ/>
Telephone: (802) 865-7188
(802) 865-7195 (FAX)

William Ward, Director
Theodore Miles, Code Compliance Officer
Charlene Orton, Permitting and Inspections Administrator
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Permit Technician
Alison Davis, Zoning Clerk



MEMORANDUM

To: Development Review Board
From: Mary O'Neil, AICP, Principal Planner
Date: Wednesday, March 3, 2021
RE: 75 Cherry Street; ZP21-0414CA

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.

File: 21-0414CA; Amendment to ZP17-0662CA/MA

Location: 75 Cherry Street (Burlington City Place)

Zone: FD6 **Ward:** 3C

Parking District: Multi-Modal Mixed Use

Date application accepted: October 19, 2020 (incomplete); deemed complete January 4, 2021.

Applicant/ Owner: BTC Mall Associates

Request: Amendment to ZP17-0662CA/MA; redevelopment of the former Burlington Town Center Mall site into 700,000 sf mixed use. 426 residential units, restaurant, retail, community space, co-working and meeting space. Includes 422 parking spaces in structured garage.



Background:

75 Cherry Street

- **Zoning Permit 21-0354AP**; Appeal of Zoning Administrator Determination regarding relinquishing 17-0662CA/MA. Appeal public hearing scheduled for February 16, 2021.
- **Zoning Permit 20-0522CA**; Amend ZP 17-0662CA/MA phasing schedule. Application withdrawn January 2021.
- **Zoning Permit 18-0996CA**; fenestration changes above the podium. Minor changes to accent materials changing metal panel between the windows, on selected corners, and partial facades to limestone finish precast panel. Elevations include approved cable railings. Original Permit ZP17-0662CA/MA. May 2018.
- **Zoning Permit 18-0768CA**; 7th and 12th floor amenity space; change to project phasing. April 2018.
- **Zoning Permit 18-0648CA**; amendment to 17-0662CA/MA; addition of 16 residential units on the east and west elevations at level 2,3, and 4 reflected in exterior revisions and floorplans. Elimination of awnings at retail. Parking layout revision. February 2018.
- **Zoning Permit 18-0538CA**; Exterior Boiler Flue. December 2017.
- **Zoning Permit 18-0225CA**; install roof top unit to support existing retail. August 2017.
- **Zoning Permit 17-0662CA/MA**; mixed use redevelopment of the existing Burlington Town Center mall site and associated lot line adjustments. March 2017; adjudicated, Stipulation Agreement issued July 17, 2017.
- **Zoning Permit 12-0391CA**; convert asphalt turnaround area to grass and landscaping on Cherry Street side of property. September 2011.
- **Zoning Permit 79-120**; pathways within the urban renewal area and drive into parking area on parcel 10 as marked to be paved. (Cherry Street circular drive.) April 1979.

49 Church Street (interior of assembled parcels prior to boundary line adjustment, excluding Church St. frontage)

- **Non-applicability of Zoning Permit Requirements 10-0992NA**; interior fit up for salon. May 2010.
- **Zoning Permit 10-0495CA**; install new rooftop HVAC system for Baby Gap store. November 2009.
- **Zoning Permit 10-0191CA**; install 34 x 34 in wide and 32 high 5 ton AC system on roof of Mall and connect to existing duct work. September 2009.
- **Zoning Permit 07-126SN**; Four replacement parallel signs for Burlington Town Center (Bank St. and Church St. facades and 3 new freestanding signs (Church St.) Parallel Church St. signs to be lit with new reverse channel illumination; freestanding signs to be externally illuminated. No illumination proposed for Bank St. parallel signs. August 2006.
- **Zoning Permit 04-087**; install metal panels to match Old Navy storefront, patch and paint to match. August 2003.

- **Zoning Permit 03-268**; install non-illuminated canvas shed awning on Bank St. façade of Pottery Barn. December 31, 2002.
- **Zoning Permit 03-108**; installation of concrete landing and stairs with handrails at service entry for Burlington Town Center (Pottery Barn) on Bank Street. September 2002.
- **Zoning Permit 02-360**; installation of two black canvas awnings on Bank Street for J. Crew Store. March 2002.
- **Zoning Permit 02-361**; installation of projecting sign on Bank Street for J. Crew Store. March 2002.
- **Zoning Permit 02-328**; installation of two rooftop fan units for Empire Express restaurant. February 2002.
- **Zoning Permit 02-232**; installation of 2 parallel signs on Cherry Street at Gap elevation. Installation of 2 parallel signs on Cherry Street at Filene's elevation. November 2001.
- **Zoning Permit 01-488**; parallel sign for J. Crew store, frontage on Bank Street. June 2001.
- **Zoning Permit 01-483**; amend previously approved façade improvements for the Bank Street storefront portion of the existing Burlington Town Center retail mall. Tenant to be J. Crew. June 2001.
- **Zoning Permit 01-445**; renovations to the Bank Street façade of the mall. May 2001.
- **Zoning Permit 01-404**; amend previously approved façade changes for the Cherry Street and Church Street facades of the existing retail mall. April 2001.
- **Zoning Permit 00-494**; renovations to the Cherry, Bank and Church Street frontages of the existing mall. April 2000.
- **Non-applicability of Zoning Permit Requirements**; interior change of use of 600 sq. ft. to nail salon. September 1996.
- **Non-applicability of Zoning Permit Requirements**; interior continued use of 30,000 sq. ft. for offices. June 1995.
- **Zoning Permit 93-226**; fenestration renovations to Cherry Street façade of mall for the Gap. Includes combining two windows into one and the installation of a service door. November 1992.
- **Zoning Permit 92-160**; change of use within Burlington Square Mall from bank offices to fitness center, 16,110 sq. ft. October 1991.
- **Zoning Permit 87-119**; place 8 signs for Burlington Square on various facades of structures. December 1987.
- **Zoning Permit 84-331 / COA 84-067**; construction addition to Radisson Hotel (64 new rooms, net 57 rooms) with 467 space parking garage, new 68,000 sq. ft. department store on Bank Street (Porteous), 48,000 sq. ft. addition to Burlington Square Mall. July 1984.
- **Zoning Permit 81-821**; open access between Burlington Square Mall and Woolworths at lower level of mall. December 1981.

- **Zoning Permit 81-814**; remove staircase off atrium to plaza level. December 1981.
- **Determination of Non-Applicability**; new retail store – The Limited. September 1981.
- **Determination of Non-Applicability**; wall finishes, suspended ceilings, lighting, finish flooring & store fixtures. August 1981.
- **Zoning Permit 81-578**; erect five flagpoles and one kiosk at the entrance to the mall as per 4443 (c) approval of the Board of Aldermen on 6.15.1981. June 1981.
- **Zoning Permit 81-20**; (current use; vacant land); pave pathway currently used by (illegible) between Cherry and Pearl Street to ?; erect fence with gates along the northerly and southerly boundaries. October 1980.
- **Zoning Permit 81-190**; removal of existing stairs southeast corner of mall atrium. September 1980.
- **Zoning Permit 81-171**; construct a fountain in previously approved project (scope of services). September 1980.
- **Zoning Permit 80-900**; bring plaza beneath VFSL out flush with building for offices, west elevation.
- **Zoning Permit 80-755**; construct stairway connection between McDonalds and Proposed Burlington Square Expansion. March 1980.
- **Zoning Permit 595**; Church Street entrance of Burlington Square and add approx. 30,000 sq. ft. of retail and common area space extending from Church Street to easterly boundary parcel 3. May 1979.
- **Zoning Permit 80-710**; remove stairs northwest corner of atrium from atrium floor to balcony. January 1980.
- **Zoning Permit 79-92**; entrance to Burlington Square shopping mall and open plaza. April 1979.
- **Zoning Permit 79-17**; Church Street entrance of Burlington Square and add approx. 30,000 sq. ft. of retail and common area extending from Church Street to westerly boundary of parcel 3. May 1979.
- **Zoning Permit 79-150**; install a separate entrance to the restaurant with awning at the westerly end of Burlington Square to permit evening hours independently of hours of Burlington Square Mall. May 1979.
- **Zoning Permit 78-243**; retail fruits/vegetables/juices sold from movable cart in mall atrium. December 1978.
- **Zoning Permit 78-810**; Top of the Square Inc. to erect a 60' x 60' tent and a dressing tent on the Plaza level of the Burlington Square Mall, to be used for an assembly occupancy. May 1978.
- **Amended Certificate of Appropriateness, application #75-16**; change in design of car drive-in drop off point between Vermont Federal Savings and Loan Office building and parking garage. Specifically, double curb cut, larger turnaround to accommodate 12 cars instead of 5, landscaped island with stairwell leading to concourse level incorporated within island. March 1975.

- **Certificate of Appropriateness;** construction of a below grade retail mall with open plaza above as shown on the plans dated November 20, 1972 and revised on October 26, 1973 and prepared by the office of Mies Van der Rohe and Freeman, French, Freeman. March 1974.

Overview: BTC Associates seek to amend the original redevelopment plan (17-0662CA/MA, as amended) that will result in:

- Overall reduction in square footage of approximately 25%. This is accompanied by a 50' reduction in building height.
- Replacement of office use with additional residential units.
- Increase in square footage of housing, and an accompanying increase in the number of residential units- both market rate and inclusionary. (426 total; 85 IZ).
- Eliminate the hotel use.

As this project is within Form District 6, a majority of the review is administrative. The applicants have provided the required Checklists for staff to review for compliance.

The **Design Advisory Board** reviewed the application at the January 26, 2021 meeting. In accordance with the Form Based Code, this review was limited to:

1. A recommendation relative to the request for additional height above that allowed by administrative authority;
2. A recommendation relative to review of proposed composite building materials; and
3. A recommendation relative to any request for DRB Alternative Compliance.

The limited project review received a recommendation for **approval** from the Design Advisory Board January 26, 2021.

The **Conservation Board** reviewed the amendment February 1, 2021, and recommended approval of the application as designed with the condition that covered short term bike parking be added to the extent feasible.

Recommended motion: Certificate of Appropriateness Approval, per the following Findings and Conditions:

I. Findings

Article 2: Administrative Mechanisms

Section 2.7.8 Withhold Permit

Per this standard, the applicant is required to remedy all violations and close out all zoning permits issued after July 13, 1989 prior to issuance of a Final Certificate of Occupancy for this permit. See attached list for guidance on open permits/violations. **Affirmative finding as conditioned.**

Article 3: Applications, Permits and Project Reviews

Section 3.2.1 Pre-Application Conferences

(d) Pre-application Neighborhood Meeting

A Pre-Application Public Neighborhood Meeting shall be required for all development involving the construction of five (5) or more dwelling units and/or ten thousand (10,000) s.f. or more of gross floor area of non-residential development in order to allow neighbors to become aware of potential development projects at an early stage of a development's conceptual design and for applicants to take into consideration neighborhood comments and concerns. Procedures and requirements regarding matters including but not limited to scheduling, location, public notice, and documentation shall be set forth by the department of planning and zoning.

Two well attended public meetings coordinated through CEDO were held on January 30, 2020, to update the public on the project status and solicit comment. An additional public meeting was held on February 27, 2020, following written notification of abutters. On October 7, 2020, the applicant team presented to the Wards 2 and 3 NPA after implementing some program changes and minor changes to the exterior enclosure. Attendance records and public meeting certifications are attachments 6h-1 and 6h-2 (p. 458, narrative). **Affirmative finding.**

Part 3: Impact Fees

Any new development or additions to existing buildings which result in new dwelling units or in new nonresidential buildings square footage are subject to impact fees as is any change of use which results in an added impact.

Impact Fees will be recalculated for the gross new area, with credit given for existing area. The applicant shall confirm existing area (for a credit) and proposed area/uses for staff calculation of required Impact Fees. Projects containing newly constructed units that are affordable for households as described within this section are eligible for a waiver of impact fees for that portion of the project. The applicant is encouraged to consult with the Housing Trust Fund Manager to identify area and potential waiver allowance. **Affirmative finding as conditioned.**

Section 3.3.8 Time and Place of Payment

Impact fees must be paid to the city's chief administrative officer/city treasurer according to the following schedule:

- (a) New Buildings: Impact fees must be paid at least seven (7) days prior to occupancy of a new building or any portion thereof.*

Affirmative finding as conditioned.

Part 5: Major Impact

This section is included to reflect variations from the original approval created by the changes in programming and unit count.

(b) Major Impact Review Standards

- 1. Not result in undue water, air, or noise pollution;*

The project will manage stormwater runoff via filtering through a green roof, streetscape stormwater treatment features (pervious pavers and vegetated filtration planters) and attenuated storage in below grade holding tanks. See Sec. 6.0 (p. 51, narrative) of the project submission documents and CDO Section 5.5.3 for further discussion of stormwater management. Final approval of the system design by the City's Stormwater Program will be required. See analysis of noise p. 446-447 and dust p. 457, narrative. **Affirmative finding as conditioned.**

2. Have sufficient water available for its needs;

At the time of this report preparation, studies have been shared with Burlington's Department of Water Resources reflecting the revised conditions. A January 13, 2021 email from Steven Roy, City Water Resources Department, confirmed the continued validity of an allocation letter issued in March 2020 with a three year life. Final approval of the system design by the City's Water Resources Division will be required. **Affirmative finding as conditioned.**

3. Not unreasonably burden the city's present or future water supply or distribution system;

The project site has existing waterline to the north and south with a new municipal waterline proposed in the new section of Saint Paul Street to the east. The new line will improve the downtown distribution system connectivity. Final approval of the system design by the City's Water Resources Division will be required. **Affirmative finding as conditioned.**

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; See Sec. 5.5.3.

5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;

The reconnection of St. Paul Street and Pine Street between Cherry and Bank will restore the original grid network in the downtown; providing an increase in circulation paths around the project site. This is within the downtown, where exists a dense network of sidewalks, paths, bicycle corridors and a street web that accommodate many opportunities for passage.

Additionally, the Downtown Transit Center is immediately adjacent to the project site, completing the link to mass transit. Reference is made to the submitted Traffic Impact Study, p. 56-444, narrative.) The Department of Public Works in a letter dated February 21, 2017 from Norman J. Baldwin, City Engineer/Ass't Director of DPW and Laura K. Wheelock, P.E. Public Works Engineer to the City of Burlington Planning & Zoning and to Don Sinex, BTC/Devonwood, indicated that it had reviewed the applicant's traffic impact study and found that the impacts from this development can be absorbed by the city's street network, and that impact on levels of service, queue length and overall delay at several key intersections are minor or moderate. This study was revised to reflect the changed programming within this application, and interstitial modeling that was performed February and October 2020. The March 2020 development plan was anticipated to generate 331 new trips during the weekday morning peak hour and 508 new trips during the weekday evening peak hour. The current redevelopment plan is anticipated to generate 229 new trips during the weekday morning peak hour and 383 new trips during the weekday evening peak hour. With the modification to the development plan, the current development plan is anticipated to reduce the new trips by 102 trips during the weekday morning peak hour and 125 trips during the weekday evening peak hour for all movements (entering and exiting). A 2.19.2021 email from Norman Baldwin and Laura Wheelock (DPW) indicated they are working with Clough Harbour & Associates in review of the revised traffic impact study. DPW acceptance of the revised TIS will be required.

Final approval of the street and streetscape design by the City's Public Works Department will be required. Impact fees will be paid. **Affirmative finding as conditioned.**

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

See Section 6.6 (p. 53) in submission narrative for enhanced discussion. An estimated number of school age children in this development remains at 18. This represents less than ½ % of the current enrollment and should not cause an unreasonable burden on the City's ability to provide educational services. Communication from Burlington School District confirmed an ability to provide services to the anticipated new student count from this development. (Original letter dated February 14, 2017.) Impact fees will be paid to help offset impacts on the school system.

Affirmative finding as conditioned.

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

All affected City Departments (Parks & Recreation, Fire, Police, Electric, CEDO, Planning & Zoning, School, and Public Works) were involved in the review of this project and have participated in the original interdepartmental Technical Review (January 14, 2016). Ability to serve letters were required to assure departmental satisfaction of the plan. Assurance of services were received from Burlington Electric Department, Burlington Telecom, Parks and Recreation, Burlington School Department, the fire marshal's office, Burlington Police Department and Vermont Gas. Affected city departments have been informed of the amended project application and have been provided opportunity to comment as reflected in these findings. Any new impacts on city services will be offset through the payment of required Impact Fees. **Affirmative finding as conditioned.**

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

The project site is a city block that was razed and reconfigured during Burlington's 1960's Urban Development plan. It was at that time that the segments of St. Paul and Pine Streets were eliminated in favor of a larger redevelopment site. The site is significantly disturbed and all original buildings removed earlier.

Although the south side of Bank Street is within the Church Street Historic District and includes historic structures, the development parcel itself was assessed in 2003 and 2008 during preparation of the Church Street Historic District nomination and was deemed ineligible for listing on the National Register of Historic Places. The existing retail mall has no historic significance.

The project area remains within an existing streetscape that includes large, multistory newer construction (100 Bank Street on the west, 150 Bank and 76 St. Paul (Keybank) on the east/southeast.) Development at 75 Cherry Street will restore sections of Pine and St. Paul Street (original circulation prior to Urban Renewal), returning the travel pattern consistent with its earlier configuration. There will be no shadow impacts on the south side of Bank Street from the proposed development. Existing historic structures along Bank Street, which have faced modern infill for 40+ years will remain undisturbed, unaltered and intact. New development will enhance the streetscape, providing a more enjoyable pedestrian experience; restore original traffic circulation patterns and replace non-historic development that has deadened the street wall on Bank Street. The project proposes no undue adverse effect on rare, irreplaceable or significant natural areas, historic or archaeological sites, or scenic or natural beauty of the area.

Affirmative finding.

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 redevelopment is located within the city's downtown core; an area targeted for high intensity mixed use development. The project is consistent with many of the goals identified in *PlanBTV* and the Municipal Development Plan relative to concentrated growth in the urban core. City infrastructure improvements to support the project are linked to Tax Increment Financing (TIF), approved by the voters November 8, 2016. Impact Fees will be assessed to address additional related impacts of the redevelopment. **Affirmative finding as conditioned.**

10. Be in substantial conformance with the city's municipal development plan;

See Section 6.10, p. 53 for the applicant's response. An entire section of *PlanBTV* is dedicated to the redevelopment of the downtown mall and potential improvements. The plan calls for creation of additional downtown housing, reconnecting the street grid (cut off during urban renewal), new strategic infill, and improved street life particularly along Cherry Street and Bank Street. The proposed redevelopment addresses each of these targeted items. A major component of the project is to provide a significant number of new housing units. The project as currently planned contains a total of 426 units. There are 7 3-bedroom apartments, 88 2-bedroom apartments, 223 1-bedroom apartments, and 108 studio apartments out of which 85 units (24 2BRs, 24 1BRs, and 7 studios) will be permanently affordable.

While the project will add some retail jobs, the Pine Street and St. Paul Street are to be reconnected. The project remains a comprehensive redevelopment of an entire city block; re-framed by Pine and St. Paul Streets. The redevelopment introduces a mix of uses and streetscape improvements on all four street frontages.

Additionally, the proposal complements the Municipal Development Plan, as revised as *planBTV, 2019 Update* in these specific areas:

- Encourage infill and redevelopment within the Downtown Core (*Burlington as a dynamic city*, Section 8.2)
- Examine opportunities for higher-density, mixed use development along major multi-modal corridors (*Burlington as a dynamic city*, Section 8.5)
- Expand Stormwater Management measures in new and existing development (*Burlington as a distinctive city*, Section 1.3)
- Green and High Performing buildings (*Burlington as a dynamic city*, Section 6.4)
- Ensure all public buildings, facilities, streets and pathways meet and exceed requirements for accessibility (*Burlington as an inclusive city*, Section 13.2)
- Restore, fill critical missing gaps in city street network (*Burlington as a connected city*, Section 17.10.)

Affirmative finding.

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;

PlanBTV: Downtown & Waterfront calls for more housing downtown generally and specifically within the mall property. The submitted redevelopment application identifies a total of 426 housing units broken down as follows:

- 7 three bedroom units
- 88 two bedroom units
- 223 One bedroom units
- 108 studio units

Of the total, 85 units (24 2- bedroom, 24 1- bedroom, and 7 studios) will be permanently affordable. This constitutes more than 20% IZ. Satisfaction of the requirements of Article 9 will be required via a letter of Compliance from the city's Housing Trust Fund Manager.

Affirmative finding as conditioned.

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 and even employees within the new commercial spaces will likely utilize the city's park and recreation facilities. Park impact fees will be paid to help offset any related impact on park needs. An ability to serve letter was previously obtained from the Department of Parks and Recreation. **Affirmative finding.**

Section 3.5.6 (c)

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 relative to any of 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.

A dust mitigation plan for construction work was approved in the original permit. Construction would involve equipment typical of mixed-use development in the area, and would not occur during the hours of 9:00 pm and 7:00 am which is prohibited by the Burlington Noise Code (Section 21-13.)

Vehicles and headlights within the parking area are screened from public view with building façade elements consistent with the scale and materials of the overall development.

Waste Management is outlined in the application (Narrative, p. 451); defined at the north residential building within a loading dock on Pine Street. For the south building, trash, recycling and compost will be collected by each tenant and transported to the loading dock on Bank Street.

Standard mechanical equipment and meters will be located on the building roofs and within loading dock area and would be fully enclosed which would substantially reduce any noise or visual impact to the community.

While the development is anticipated to increase traffic volumes (see Traffic Impact Study, p56-444 of project narrative), the increase in noise is anticipated to be negligible for traffic sources. See p. 447 for Noise Impact assessment.

VHB's noise assessment concluded that the proposed development would not result in adverse noise impact according to Burlington's Noise Code as it relates to stationary sources.

Affirmative finding.

2. Time limits for construction.

Construction and occupancy are anticipated to occur in **four phases**.

From p. 445 of the application narrative, Phased occupancy based on the following:

Construction Start – September 15, 2021

North Building/West - **Phase 1/TCO 1 (20 mos.) May 15, 2023**

Construct Western portion of the North Building (west of elevator core)

Basement level- Mech./Utilities/Storage ; Parking Level P1

Western ½ of P2 Garage, North of Garage Break line

Residential floors L1-8, Residential loading dock, Roof Top Mech.

Retail – Western phase areas facing Cherry Street

North Building/East - **Phase 2 /TCO 2 (+18 mos.) Nov. 15, 2024**

Construct Eastern half of the North Building (east of elevator core)

Residential Floors L1- 8, Residential loading dock, Roof Top Mech.

Finish Garage levels P2 & P3

Retail – Eastern phase areas facing Cherry Street

South Building - **Phase 3/TCO 3 (+18 mos.) May 15, 2026**

Retail on Bank, Residential Lobby, Loading Dock.

Parking Garage – Remaining bays of Garage, South of Garage break line

Level 1 – Office/Meeting space/Community Space/ Amenity

South Building - **Phase 4/ TCO 4 (+6 mos.) Nov. 15, 2026**

Complete Residential fit up L2 to L8

Restaurant and Observation Deck on L9 ; Roof Top Mech.

New St. Paul and New Pine Ground Level Spaces.

Any phasing schedule is at the discretion of the DRB. **Affirmative finding as conditioned.**

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

The applicant was approved for an aggressive program with construction proposed to occur 7 days/week. Per that approval:

- Proposed normal work hours
 - ◆ M-F 7:00 am – 7:00 pm
 - ◆ Saturday 7:00 am – 4:00 pm.
- Proposed extended work hours
 - ◆ (4) 24- hour periods per month throughout the duration of the project utilized for long-duration (concrete finishing), large equipment hoisting (MEP) or other items that require longer than normal work hours.
 - ◆ Relieves daytime impacts during holidays, peak tourist and/or event periods.

Monday through Friday construction shall be limited to 7am to 7pm.

Saturday construction, including exterior work, from 7am-4pm is acceptable in order to help shorten the overall construction period, and up to 4 24-hr periods per month is acceptable after consultation with DPW and CEDO to minimize disruption of downtown residents, events and businesses. No construction activity shall occur on Sundays.

As part of that approval, the applicant presented to staff a plan for use of shuttles and remote parking by no less than 50% of construction workers as presented during the original Public Hearing to minimize impact on downtown parking resources.

None of the proposed uses (retail, restaurant, community space and residential) are conditional. Therefore, limitations of days and hours of operation are not warranted. **Affirmative finding.**

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

Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time. **Affirmative finding as conditioned.**
and,

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

This remains at the discretion of the DRB, and results in conditions imposed.

Article 5: Citywide General Regulations

Section 5.2.3 Lot Coverage Requirements

This is covered in the Checklists.

Section. 5.2.4 Buildable Area Calculation

Not applicable in the FD6 Zoning District.

Section 5.2.5 Setbacks

(a) Setbacks Required

This is covered in the Checklists.

Section 5.2.6 Building Height Limits

(a) Height Measurement

The parcel is within the Special Height Area FD6A, with a by-right height of 6 stories or 65', or DRB review of height up to 14 stories or 160'. The applicants are requesting additional height above the by-right amount, subject to DRB review under Section 14.6.4 (f), below. Proposed building heights are: Cherry St grade to penthouse 123'; St Paul Street, grade to penthouse 124'; Pine Street grade to penthouse 129'; Bank Street grade to penhouse 143'. See Section 14.34 (d) below for measurements to the roof decks. This amendment reduces

the height of the building originally approved March 17, 2017. All height measurements are substantially below the 160' maximum height. **Affirmative finding as conditioned.**

(b) Exceptions to Height Limits

Ornamental and symbolic architectural features, including towers, spires, cupolas, belfries and domes; greenhouses, garden sheds, gazebos, rooftop gardens, terraces, and similar features; and fully enclosed stair towers, elevator towers and mechanical rooms, where such features are not used for human occupancy or commercial identification, are exempt from specific height limitations but shall be subject to the design review provisions of Art. 3 and 6. Such features and structures shall be designed and clad in a manner consistent and complementary with the overall architecture of the building.

Mechanical penthouses are proposed; however they do not exceed allowable building heights. **Not applicable.**

1. *Exposed mechanical equipment shall be allowed to encroach beyond the maximum building height by no more than 15-feet provided that portion exceeding the height limit does not exceed 20% of the roof area.*

Exposed mechanical equipment shall be fully screened on all sides to the full height of the equipment, and positioned on the roof to be unseen from view at the street level. Screening may consist of parapets, screens, latticework, louvered panels, and/or other similar methods. Such features and structures shall be designed and clad in a manner consistent and complementary with the overall architecture of the building

Where mechanical equipment is incorporated into and hidden within the roof structure, or a mechanical penthouse setback a minimum of 10-ft from the roof edge, no such area limit shall apply and the structure shall be considered pursuant with 4 above.

All height measurements, including the penthouse and mechanical equipment, fall below the maximum allowable building height for the Special Height district.

Rooftop equipment is fully enclosed within a mechanical penthouse. As required, the penthouse observes a 10' setback from the roof edge. **Affirmative finding.**

2. *All forms of communications equipment including satellite dish antennae shall not be exempt from height limitations except as provided in Sec 5.4.7 of this Article. **Not applicable.***
3. *The administrative officer may allow for up to a 5% variation in the maximum building height to account for grade changes across the site. In no event however, shall such additional height enable the creation of an additional story beyond the maximum permitted.*

No additional allowance is required. **Affirmative finding.**

Section 5.2.7, Density and Intensity of Development Calculations

The proposed FAR for Adjusted Parcel 2 is: $703,206 / 109,779 = 6.41$ PROPOSED FAR. The Form Based Code (Downtown Code) does not have specific FAR requirements but the project complies with the building bulk requirements of 14.3.4-D and is covered in the Checklists.

Section 5.4.8 Historic Buildings and Districts

75 Cherry Street / Burlington Town Center Mall was evaluated during the preparation of the Church Street Historic District nomination to the National Register of Historic Places in 2003 and 2008. It was confirmed that the property is not eligible for the National Register, and has been deemed non-contributing to the nomination. The project development therefore does not meet applicability standards of this section. **Not applicable.**

Section 5.5.1 Nuisance Regulations

No part of the application indicates that nuisance impacts may result. No industrial or other commercial uses typically associated with heat, glare, emissions, or noise are included in the application. The application materials include an evaluation of potential noise impacts relative to Burlington's noise ordinance. Parking areas, trash/recycling facilities, and loading docks will be internal to the proposed building, thereby limiting outdoor noise. Mechanical equipment will be located on the rooftops within fully enclosed penthouses. Noise from mechanical units will, therefore, be substantially less than ground mounted and/or unenclosed mechanical units.

Affirmative finding.

Section 5.5.2 Outdoor Lighting

New outdoor lighting is included in this proposal. New pole-mounted lights are proposed within the public street rights-of-way. A fixture cutsheet has been provided, and illumination levels are depicted in a photometric plan for the site. Revised lighting/photometrics have been provided and reviewed by Burlington Electric Department to assure compliance with their central business district lighting standards. A response from Andrew Ellison, BED on 2.18.2021 indicated as long as the street/sidewalk layout remains the same, the photometrics would still be valid. If there are any changes to the alignment of the streets/sidewalks, the photometrics would need to be recalculated. Other lighting includes building entryway lighting and under-canopy lighting. Cutsheets were previously provided for both fixtures. The current photometric plan depicts acceptable illumination levels at all building entries. Parking garage lighting has adjusted downward to meet the requirements of IESNA 8-18, *Recommended Maintained Illuminance of Parking Garages*. The 2018 standard emphasizes energy conservation and references "lighting controls that sense activity." Such controls would be an energy conservation measure and would control unwanted illumination into the neighborhood and decrease skyglow. An acceptable LED fixture is proposed. The light source(s) of interior lighting within the parking garage should be shielded from view from street-level public vantage points. **Affirmative finding as conditioned.**

Section 5.5.3 Stormwater and Erosion Control

A comprehensive stormwater management plan was included and approved within the original permit. Presently, there is virtually no onsite stormwater management. Runoff flows without attenuation into the city's receiving sewers. As proposed, the ~3.5-acre project site will be overhauled to capture and attenuate stormwater flows to green meadow conditions prior to discharge into the city system. Doing so will be of significant benefit to the city's receiving system. The proposal includes large underground cisterns to capture most of the flows and sand filters to treat stormwater prior to discharge at a controlled rate into the city system. Green roofs are also included. They, too, will capture and control release of stormwater with the added benefit of evapotranspiration. On the ground, areas of pervious pavement, in combination with

oversized soil chambers for new street trees, will also capture and attenuate stormwater. Engineering Ventures representative Kevin Worden presented that not much has changed since that initial approval.

A complete, updated Stormwater Management Plan Package has been compiled (2.16.2021) and is comprised of:

- a. An updated Drainage Analysis Report with narrative description, calculations and hydrologic modeling.
- b. Civil Plan Set, dated 02/16/2021
- c. Stormwater Operations and Maintenance Plan
- d. Stormwater Operations and Maintenance Manual
- e. Specification sections relevant to stormwater infrastructure work.

Final approval by the city's stormwater program is required.

A detailed construction site erosion prevention and sediment control (EPSC) plan is included in the project plans. It includes a variety of standard EPSC practices. The 2017 approval included a comprehensive Contractor Dust Mitigation and Control Measures plan to limit offsite impacts associated with construction and earth disturbance. That remains in effect. As with stormwater management, the EPSC plan is subject to final approval by the city's stormwater program.

Affirmative finding as conditioned.

Article 8: Parking

Part 1 General Requirements

Section 8.1.3 Parking Districts

c) Multi-Modal Mixed Use

Zoning Amendment 20-04 created the *Multi Modal Mixed Use Parking District*, which eliminated minimum parking standards in FD6. A Judgment Order issued by Vermont Superior Court, Environmental Division July 17, 2017 mandated that 200 additional parking spaces at the cellar level would be provided for this redevelopment; this requirement remains with the permit as amended.

Section 8.1.6 Affordable Housing and Historic Buildings Exemption

The project will provide an estimated 85 perpetually affordable housing units. As with the other uses, there are no minimum parking requirements for affordable units.

Section 8.1.8 Minimum Off-Street Parking Requirements

Table 8.1.8-1 Minimum Parking Requirements

There are no minimum parking requirements for residential, restaurant, community center, or office in the MMMU Parking District. A Transportation Demand Management Plan is a requirement, see Section 8.1.16, below. The permit retains the obligation to provide 200 parking spaces, as determined by the Judgment Order of 2017. **Affirmative finding as conditioned.**

Section 8.1.9 Maximum Off-site Spaces

Maximum parking standards for the MMMUPD are equal to 100% of the required minimum parking under the Shared Use Parking District.

An analysis of what the parking requirements are under the Shared Use Parking District are as follows:

Use	Shared Use req/t	Area / Units	Total
Residential	1/unit - IZ	426-85 (IZ)	341
Restaurant	3/1,000	4250 sf	13
Retail	2/1,000	41,300 sf	87
Community Center	2.5/1,000	3,150 sf	8
Office/co-working	2/1,000	9,084	18
Total max parking			467
Total Parking proposed			422

The proposed parking count does not exceed the Maximum Off-site space limitation.

Affirmative finding.

(a) Exemptions

No exemptions are sought. **Not applicable.**

Section 8.1.10 Off-Street Loading Requirements

Does not apply to the Multi Modal Mixed Use Parking District. **Not applicable.**

Section 8.1.11 Parking Dimensional Requirements

Parking decks and dimensions largely follow the 2017 approved plan. Parking spaces and aisle width are compliant with the revised parking dimensions of ZA20-04.

(Standard 90° space, 9 x 18, 8 ½ x 18 residential use; compact 8 x 16, two-way aisle width 23’);

Affirmative finding.

Section 8.1.12 Limitations, Location, Use of Parking Facilities

Not applicable.

Section 8.1.13, Parking for Disabled Persons

Handicap parking is provided on P1 and P2. Compliance with ADA standards is under the jurisdiction of the building inspector. **Affirmative finding as conditioned.**

Section 8.1.14 Stacked and Tandem Parking Restrictions

Tandem parking was previously approved for this redevelopment. Tandem spaces are allowed per-unit for the residences and for dedicated employee parking. **Affirmative finding.**

Section 8.1.15 Parking Waivers and Parking Management Plans

No waivers are sought. See Section 8.1.6, below for Transportation Demand Management.

Section 8.1.16 Transportation Demand Management

(b) Applicability: *A Transportation Demand Management Program shall be required for all projects located in the Multimodal Mixed Use Parking District (see Sec. 8.1.3(c)), and involving any one or more of the following:*

Dwelling Units	Creation of ten (10) or more dwelling units
Non-residential or Mixed Use Development	A building footprint of eight thousand (8,000) s.f. or more; or, the creation of fifteen thousand (15,000) s.f. or more of gross floor area.

As part of the Multi Modal Mixed Use Parking District, and qualifying under the applicability standards listed above, a TDM is required.

The applicant outlines the TDM on p. 456 of the narrative:

(b) Transportation Demand Management (TDM) Program:

A TDM Program shall include each of the following elements at a minimum:

a. Outreach and Education:

The applicants propose:

- a. assigning a Transportation Coordinator from building management staff who will manage defined activities and represent tenants in a Transportation Management Association to accomplish the following:
 - i. Ensure tenants understand parking, permitting, and options of the TDM.
 - ii. Organize and hold an annual meeting for tenants, residents and staff to present TDM strategies and encourage use and participation.
 - iii. Electronically distribute a travel and transportation survey to tenants, residents and staff annually.
 - iv. Report TDM offerings.

b. TDM Strategies

In addition to compliance with the on-site Bicycle Parking requirements found in Article 8, Part 2, the following TDM strategies shall also be included at a minimum for a period of 10 years from receipt of a Certificate of Occupancy as follows:

- i. *GMT Transit passes shall be provided to all tenants and employees for free for the first year of occupancy or employment, and at a minimum discount of 50% for every year thereafter; and,*
- ii. *A car share membership shall be offered to all tenants and employees for free for the first two years of occupancy or employment, and at a minimum discount of 50% for every year thereafter; or,*
- iii. *In lieu of i and ii above, maintain an ongoing and active membership in a Transportation Management Association (TMA) that offers equivalent TDM strategies or better.*

The applicant will meet the GMT transit pass requirement, and a “Share a Little” membership to CarShare Vermont (or an alternate provider should one be available) and provide 5 parking spaces in the building’s parking structure for a car-share provider. As of this date (2.24.2021), CarShare has not been contacted about this application; the applicants will need to engage this provider or another similar agency to meet standard b) ii, above.

c. Parking Management:

Where on-site or off-site parking is also made available:

- i. *Conduct parking utilization studies at least annually for a period of 10 years from receipt of a Certificate of Occupancy;*

The applicant proposes annual reporting for 10 years after occupancy of Phase 3, which includes completion of the parking facilities.

- ii. *With the exception of permanently affordable housing units, the cost of parking shall be un-bundled from all residential and non-residential leases and deeds and made available at a market rate;*

The cost of parking will not be included in the rent charged for any apartment.

- iii. *Where parking spaces are made available to off-site users, parking spaces may be made available by a renewable lease, provided the term of any lease does not exceed one (1) year;*

Previous agreements will be upheld in the terms of parking made available to tenants of the abutting structure at 100 Bank Street. Any additional leases shall be bound by this standard. and,

- iv. *Priority parking spaces - located in closest proximity to a primary building entrance and/or public street frontage - shall be made available for each of the following:*
 - 1. *Handicapped spaces;*
 - 2. *Bicycles, scooters, and motorcycles spaces;*
 - 3. *Car-share: where 1 space must be offered for every 20 residential units, not to exceed a total of 5 spaces, subject to an agreement with a car-share provider;* and,
 - 4. *Carpool and/or Vanpool vehicles: where more than 20 spaces are available for non-residential uses. In such cases, 5 spaces or 5% of the parking spaces on site, whichever is less, must be reserved for carpool/vanpool use before 9:00 AM on weekdays.*

The garage is accessible from the building as well as from public streets. All requirements for the provision of handicap parking are assured, as are short and long term bicycle parking. Motorcycle parking is provided. 5 CarShare spaces will be located near street or building entrances in coordination with the CarShare provider. It is possible to accommodate up to 5 Vanpool spaces for use before 9:00 am on weekdays.

d. *TDM Agreement:*

Each TDM Plan shall include a signed commitment to and acknowledgement of each of the following on a form provided by the Administrative Officer:

- i. *Commitment to ongoing implementation of the TDM requirements as set forth above;*
- ii. *Acknowledgement that the project has no claim to the ongoing availability of nearby on-street public parking, and that, as is the case with other on-street public parking, the City retains the right to charge for or remove such on-street parking at any time;*
- iii. *Acknowledgement that failure to maintain transportation demand management as required above is a violation of this ordinance, and understanding that, pursuant to Sec. 2.7.8 of this ordinance, no zoning permit or certificate of occupancy may be granted until any such violation has been remedied; and,*

- iv. *Commitment to notify any subsequent owners and tenants in writing of their obligations under this section as part of any purchase and sale and/or lease agreements.*

The applicant will be required to formally commit to implementation of the TDM requirements.

Review and Enforcement: The Administrative Officer shall be responsible for determining compliance with the TDM Program requirements as set forth above, and ongoing implementation shall be included as a condition of any discretionary or administrative permit required for development subject to the conditions of this Section.

Failure to maintain a TDM Program as required above shall be a violation of this ordinance, and pursuant to Sec. 2.7.8 of this ordinance no zoning permit or certificate of occupancy may be granted without a TDM Program in effect.

The TDM will be adopted as a condition of the permit.

Affirmative finding as conditioned.

Part 2: Bicycle Parking

Total required and proposed bicycle parking is 339. This is subdivided into 273 long term spaces and 66 short term spaces. See table below. The long-term spaces are located on the at grade level of car parking, adjacent to the Pine Street parking pedestrian access and includes shower and changing facilities. Short term spaces are located at streetscape, adjacent to major entry points and supplemented with spaces at entry niches within the subject lot and bike racks inside the parking structure. See LA-200 Layout Plan. Locations of short-term spaces will be coordinated with DPW and the Great Streets initiative.

Bike Parking- Long Term

Residential bedrooms	525	0.5	bedroom	263
Office & Meeting Space	9500	.0002	GSF	2
Community Space	3150	0.00005	sf	1
Retail	41,300	0.00008333	sf	3
Restaurant Seating	4250	0.001	sf	4
				273

Bike Parking- Showers	Nonres. Spaces	Required Showers
Requirement based on table 8.2.8-1, # nonresidential bike parking spaces =	9	2

Bike Parking- Short Term

Residential Units	426	0.1	Units	43
Office & Meeting Space	9500	.0001	GSF	1
Community Space	3150	0.0001	sf	1
Retail	41,300	0.0005	sf	21
Restaurant Seating	4250	0.002	sf	9
Total Short Term Bike Spaces (to be on streetscape and in vestibules)				75

The Conservation Board recommended approval, with the condition that covered short term bike parking be added to the extent feasible. Some short term (covered) spaces are already planned at bike racks within the parking structure.

Affirmative finding.

Article 9: Inclusionary and Replacement Housing

Section 9.1.5 Applicability

As the proposed development includes more than 5 new dwelling units, it is subject to the inclusionary housing provisions of this Article. In this case, a total of 426 residential units is proposed. Typically, 15% of housing units must be inclusionary, but this number may vary depending on price points of the market-rate units. This application proposes 85 inclusionary units (20% of the total) to be integrated throughout the residential portion of the development. Final written approval of the inclusionary housing approval from the manager of the city's Housing Trust Fund is required. **Affirmative finding as conditioned.**

Section 9.1.17 Review of Proposal for Phasing

The application contains a phasing schedule (p. 445, narrative) that articulates 4 distinct phases. Residential construction and fit-up span phases 1, 2 and 4. The inclusionary units are interspersed throughout the residential components of the development. Per this criterion, the inclusionary units must be made available for occupancy on a schedule concurrent with the market-rate units. **Affirmative finding as conditioned.**

Section 9.1.18 Timeline for Availability/Phasing of Inclusionary Units for Issuance of Certificate of Occupancy

See Sec. 9.1.17 above.

Article 10: Subdivision

Section 10.1.15 Lot Line Adjustments

Boundary line adjustments were approved in the original March 2017 permit. The plot plan has been recorded in the City Land Records and is final.

Section 10.1.10 Performance Bond and Guarantee of Completion

As was previously approved, new public improvements (city streets and related infrastructure) are included in this project, this criterion for a performance guarantee remains in effect.

Affirmative finding as conditioned.

Section 10.1.12 Dedication of Public Streets

As new public streets are included in this project, procedures for acceptance outlined in this section remain in effect. **Affirmative finding as conditioned.**

Article 14: Form Based Code

Article 14 Downtown Code

Section 14.3.4-D Building Form (Form District 6)

14.3.4-D- BUILDING FORM

BUILDING HEIGHT

A

Principal
Buildings

Subject to Administrative Review:

- 3 Stories min.
- 4 Stories max., not to exceed 45-feet within 20-feet of the Frontage Line on the Church Street Marketplace¹; otherwise,
- 6 Stories max., not to exceed 65-feet

Subject to DRB Review per Sec. 14.6.4 f:

- 10 Stories max., not to exceed 105-feet; or,
- 14 Stories max, not to exceed 160-feet ²

² Subject to Regulating Plan Special Requirements Map 2 – Specific Height Areas (See Sec. 14.2.6), a Building with a Principal Frontage in the area identified as “A” may be increased to a maximum of 14 Stories not to exceed 160-feet.

The subject parcel is within the area identified as “A” on Map 2 – *Specific Height Areas* and is therefore eligible to request building height up to 160’ with DRB review.

The North residential building has a building height of ±107’2” to the top of the roof deck of the highest occupied level from Cherry Street average grade; ±122’2” to roof deck of mechanical penthouse.

The South residential building is ±127’10” from Bank Street average grade to the restaurant/observation deck roof, and ±142’10” to the mechanical penthouse roof. All heights are below the 160’ maximum allowable.

Section 14.6.4 Building Height

(f) Design and Public Space Standards Required for Additional Building Height

i. Design Standards: The maximum building height and mass is permitted By Right by the underlying Form District, as may be modified by the chosen Building Type and Frontage Type. However, there are a number of ways that building shape, articulations, and choice of materials can be used to reduce the perceived height and mass of taller buildings, and ensure a high quality of design that complements the character of the Downtown and Waterfront area. After consultation with the Design Advisory Board and a Public Hearing, the Development Review Board shall evaluate any proposal seeking additional Building height under each of the following additional design standards, and find affirmatively that:

- a. The proposed building presents a design that emphasizes slender, vertically-oriented proportions to assure a rich visually interesting experience as viewed within the context of the downtown skyline; reinforces opportunities for establishing points of reference for visual orientation; and provides visual interest and human scale at the pedestrian level through the use of a variety of scales, materials, fenestration, massing, or other architectural design techniques;*

The building volume of the north residential building steps back at the 5th floor and is vertically accentuated with changes in the building plane, arrangement of windows, and introduction of varying primary materials. The roofline is accentuated with a bold cornice projection on different planes, breaking the massing up into readable building volumes. The cornice both caps the massing, and leads the eye down the street supporting and strengthening the street plane.



The pedestrian level is enhanced with broad glazing to welcome and warm the streetfront energizing the pedestrian experience; strong material interplay delineates both building volume and division of segregate spaces. Vertical masonry piers draw the eye upward linking the lower pedestal to the upper, recessed stories.



The southern residential building has a defined and welcoming street presence, with a first and second story height that both strengthen the street wall as they mime the building heights of the existing buildings across Bank Street. The changing grade allows for the minimum 33' height to

enforce that street wall. The massing steps back above this floor, with a more uniform material palette that continues the vertical pier element seen in the northern building. The feeling is light and buoyant; a silvery silhouette on a largely glass pedestal. Both building volumes establish points of reference for visual orientation; and provide optical interest and human scale at the pedestrian level through the use of step backs, horizontal and vertical variation, selection of materials, and other architectural design techniques to reinforce the street wall and reduce the perceived height and mass of upper stories from the street level.

and,

- b. *Upper story proportions of the building are oriented and tapered and/or separated into separate masses in order to retain sky view between individual building elements from the public thoroughfare.*

The north and south buildings are clearly divided into separate volumes, allowing sky views between building elements. The upper stories are stepped back on both the north and south buildings.



The DRB may condition approval of additional building height by reducing the By-Right building mass by no more than 10% of the total floor area of the new floors enabled by granting the additional building height. In no case shall the maximum By-Right building height be reduced.

The plan, as submitted, does not introduce such height that would suggest a necessary concomitant reduction in building mass. This amendment reduces the originally approved building height by 50’.

Affirmative finding upon concurrence by the DRB.

ii. Active Public Space and Restrooms

A minimum of 20 sf/1,000 sf of the gross floor area above 85 feet shall be dedicated to active and publicly accessible upper story rooftops and terraces, and/or street-level public restrooms as follows:

- a. Upper story rooftops and terraces must incorporate active public use such as outdoor dining with seating or other uses and activities that invite use by the public, and be located above the 7th floor. At least 25% of the space must be accessible to the general public during all regular business hours without expectation of payment or purchase.



A public observation deck is located on the 9th floor of the Bank Street (South) building consisting of an enclosed lobby and an exterior deck. Public access is via the Bank Street entry point. Public, gender-neutral toilet facilities are provided adjacent to the interior lobby.

- b. Public restroom may count towards the public space requirement above at a ratio of 10:1. Public restrooms must be located on the ground floor, have a minimum size of 50 sq. ft., be signed from the public street, be actively monitored and maintained, and be open to the public during all regular business hours. Placement of a public restroom in partnership with the City within an adjacent public space or the public ROW may be acceptable with the concurrence of the respective responsible City department and provided actual development costs and projected 20 year maintenance costs are paid by the applicant.

See above. **Affirmative finding.**

Section 14.4.13 Urban Design Standards

d) Building Materials

The following requirements regarding the selection and use of Building materials is intended to improve the physical quality and durability of buildings, enhance the pedestrian experience, and maintain the character of the downtown area.

- i. **Primary Materials:** not less than 80 percent of each street facing Façade shall be constructed of one or more Primary Materials comprised of tested and proved, high quality, durable, and natural products. For Facades over 100 square feet, more than one Primary Material shall be used. Changes between Primary Materials must occur only at inside corners. The following are considered acceptable Primary Materials:
 - A. Brick and tile masonry
 - B. Native stone;
 - C. Wood – panels, clapboard or shingles;
 - D. Glass curtain wall and
 - E. Cementitious siding.

vi. *Alternate Materials*

Alternate materials, including high quality synthetic materials may be approved by the Planning Director after seeking input from the Design Advisory Board. New materials must be considered equivalent or better than the materials listed above and must demonstrate successful, high quality local installation. Regionally available materials are preferred.

Several materials are under consideration for the stone look panels, including ceramic products, sintered stone, and manufactured stone such as Arriscraft. As composites, they require review and recommendation by the Design Advisory Board.

Sintered stone itself is widely used in development and redevelopment projects. The applicant team provided samples to the DAB who, in turn, supported their use and recommended approval at their January 26, 2021 meeting. **Affirmative finding.**

Section 14.7.3-Variation from the Form: Administrative Relief, DRB Alternative Compliance and Variances.

(b) Alternative Compliance Granted by the Development Review Board. Additional relief from the prescribed standards may be granted by the DRB as provided below.

*i. DRB Alternative Compliance: Relief from any non-numerical standard, and any numerical standard by no more than 20% of such requirement or an additional 10% beyond any Administrative Relief permitted above, **may be granted by the Development Review Board** after review and recommendation by the Design Advisory Board and a Public Hearing. Decisions by the DRB regarding any Alternative Compliance granted shall be made in writing and upon affirmative findings that:*

- A. The relief sought is necessary in order to accommodate unique site and/or Building circumstances or opportunities;*
- B. The relief if granted is the minimum necessary to achieve the desired result;*
- C. The property will otherwise be developed consistent with the purpose of this ordinance the intent of the Form District, the intent and purpose of the section that the relief is being sought, and all other applicable standards;*
- D. The relief, if granted will not impose an undue adverse burden on existing or future development of adjacent properties; and*
- E. The relief if granted will yield a result equal to or better than strict compliance with the standard being relieved.*

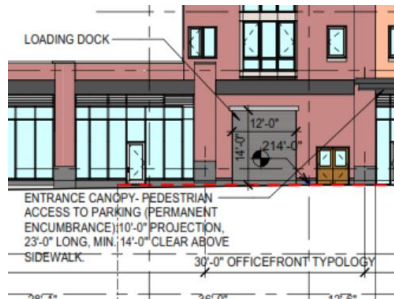
Alternative Compliance review was held for two standards at the January 26, 2021 DAB meeting.

Section 14.6.7 Parking and Circulation

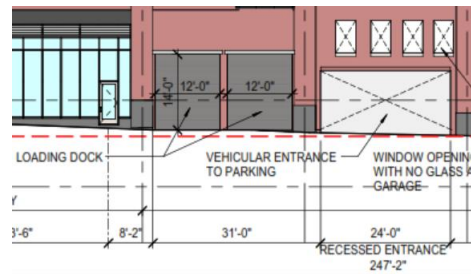
(c) General Parking, Loading, Service and Driveway Standards

iv. Loading and service areas, overhead doors, and other service entries shall not be located on a primary Frontage or Façade where a rear Alley or secondary Frontage is available; and shall be screened from view by a Building or a Streetscreen. Where no alternative to a Primary Frontage or Façade is available, loading and service doors shall not exceed 12 feet in width and 16 feet clear height.

The Bank Street loading dock was previously approved under 17-0662CA/MA as two openings, each 20'6" wide. The Bank Street loading dock may therefore be permitted up to that width.



St. Paul Street loading dock



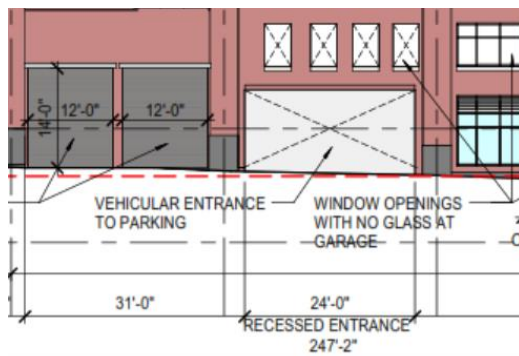
Pine Street loading dock

The applicants have asserted they **no longer have a need** for any Alternative Compliance relative to the proposed loading docks on St Paul and Pine Streets. Not applicable.

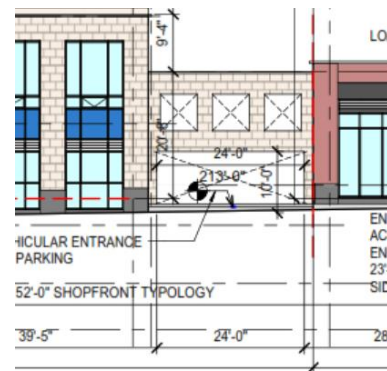
(e) Parking Structures and Garages

- ii. *Façade openings shall be combined for ingress/egress, and shall not exceed 24 feet in width and 16 feet in clear height at the Frontage. Only one such opening per street Frontage may be permitted. Façade openings may be separated for ingress/egress where they access different Frontages.*

Although the plan set illustrates parking entries to be 24' in width, the applicant acknowledges that it may not be functionally possible. The two newly established streets (St. Paul, Pine) are quite narrow, and the Parking flow study for parking volumes in conjunction with the traffic study test the width limitation. A 20% maximum relief would offer an additional 4.8' width allowance or a maximum of **28' 9 19/32"**.



Pine Street parking access, detail.



St. Paul Street parking access, detail

The Design Advisory Board acknowledged the challenge of creating a two-way vehicular opening that would accommodate a segregated pedestrian walkway, a parking booth and mechanical entry arm within the confines of the 24' limitation, and have supported the requested relief. **Affirmative finding upon concurrence of the DRB.**

II. Conditions of Approval

1. **Prior to release of the zoning permit**, the stormwater management plan and the erosion prevention and sediment control plan shall receive final written approval by the city's stormwater program.
2. Any changes to the originally approved street lighting plan will require written confirmation of the continued acceptability of the street lighting by Burlington Electric Department **prior to issuance of the zoning permit**.
3. Final acceptance by DPW of the Traffic Impact Study, as revised, shall be required **prior to release of the zoning permit**.
4. Changes within this amendment proposed for the parcels intended to be accepted as public rights-of-way must be accepted by the Department of Public Works **prior to release of the zoning permit**. This shall include the location of identified "areaways."
5. Written approval shall be received from the Water Resources Division **prior to release of the zoning permit** that this applicant has adequately addressed changed conditions relative to the increase in the number of residential units and the changed programming of the building. Reference is made to the communication of February 19, 2021 outlining specific concerns.
6. Impact fees must be paid **at least seven (7) days prior to issuance of a certificate of occupancy** of a new building or phase. Impact Fees will be calculated for the gross new area, with credit given for existing area. The applicant shall confirm those uses/areas for staff to calculate appropriate fees. Impact fees may be paid by project phase.
7. **Prior to issuance of a certificate of occupancy**, written approval of the inclusionary housing proposal by the manager of the city's Housing Trust Fund shall be obtained.
8. **Prior to issuance of the final certificate of occupancy**, any zoning permits for the property not yet closed out with final certificates of occupancy must be closed out, superseded or relinquished as needed.
9. Following the phased construction schedule, the permit shall be valid until **December 1, 2026**. This approval incorporates the 4-phase "Construction Phasing" schedule included in the application. Certificates of occupancy may be obtained for each separate phase as the project is under construction.
10. The applicant has been previously approved for extended construction hours. Unless specifically altered by the DRB, construction hours will be limited Monday-Friday 7:00 am – 7:00 pm, and Saturday work hours 7:00 am-4:00 pm. No construction shall occur on Sundays. Four limited 24-hour construction periods have previously been approved by the Board.
11. Per the requirements of Sec. 10.1.10, Performance Bond and Guarantee of Completion, a performance guarantee for all new public improvements shall be provided, subject to review and approval by the City Attorney.
12. As new public streets are included in this project, procedures for acceptance outlined in Sec. 10.1.12, Dedication of Public Streets, must be followed

13. Any and all construction within the public street right-of-way is subject to encumbrance permitting with the Department of Public Works and the City Council.
14. The Transportation Demand Management Plan, as submitted by the applicants, is hereby adopted and included as a condition of approval. The applicants are obligated under the standards defined in Section 8.1.16 (b) for implementation of the standards and requirements of the Plan. Failure to maintain transportation demand management as required above is a violation of this ordinance, and understanding that, pursuant to Sec. 2.7.8 of this ordinance, no zoning permit or certificate of occupancy may be granted until any such violation has been remedied.
15. Per Section 8.1.16 (c) iii and adoption of the TDM Plan, parking spaces may be made available by a renewable lease, provided the term of any lease does not exceed one (1) year.
16. Upon concurrence of the DRB, upon to a 20% maximum relief in parking opening for ingress/egress would offer an additional 4.8' width allowance or a maximum of 28' 9 ¹⁹/₃₂" in garage opening width.
17. A State of Vermont wastewater permit is required.
18. It is the applicant's responsibility to comply with all applicable ADA requirements.
19. All new construction is required to meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.
20. Any outdoor signage will require a separate sign permit.
21. Standard Permit Conditions 1-15.

NOTE: These are staff comments only. The Development Review Board, who may approve, table, modify, or deny projects, makes decisions.

CITYPLACE BURLINGTON



ZONING SUBMISSION

15 January 2021

75 Cherry Street- Amended

These are updates to original narrative submitted for ZP# 17-0662CA/MA on 12/15/2016, finalized for original permit on 2/16/17



Contents

Note: This Table of Contents is intended to mimic the format of the original narrative submission. Items in red are not included in this narrative, refer to the indicated document. This document is produced primarily for use in .pdf electronic format; section numbering below corresponds to the “bookmarks” in the pdf file.

1. Application Summary
 - a. Owner, Submission Criteria
 - b. Deconstruction
 - c. Construction Schedule
2. Summary Narrative
3. Existing Conditions Documentation
4. Specifications/ Products
 - a. Exterior Masonry Materials Images
 - b. Glazing cutsheets
 - c. Accent Materials
 - d. Lighting fixtures (building mounted)
 - e. Lighting fixtures (street)- *See drawings, Sheet AL004*
5. Development Analysis
6. Major Impact Narrative
 - a. Traffic Study
 - b. Phasing Schedule
 - c. Noise Impact Study
 - d. Air Quality Assessment
 - e. Waste Management Plan
 - f. Transportation Demand Management Plan
 - g.
 - h. Public Meeting Attendance Rosters and certifications- Feb. 27 & Oct 8, 2020
7. Major Impact Interdepartmental Checklist
8. List of Drawings- *See second sheet of drawing submission*
9. Figures and Attachments
 - a. LEED Precertification
 1. Project Registration
 2. Precertification Report from USGBC
 3. LEED Checklist
 - b. Not Used. *Was “Construction Materials Photos”, see “3” above instead.*
10. Form Based Code Checklists

1.1. Zoning Applications Required

- COA Level II
- Major Impact
- Form District Checklists

1.2. Owner

BTC Mall Associates, LLC
101 Cherry Street, Suite 440
Burlington, VT 05401
802-658-2545 or 917-923-8578
wfellows@devonwoodinvestors.com

1.3. Design Team

Architect:	Freeman French Freeman, Inc.
Civil Engineer:	Engineering Ventures, PC
Traffic, Noise, Pollution:	VHB
Landscape Architects:	SE Group

1.4 Neighborhood Meetings

Two well attended public meetings coordinated through CEDO were held on January 30, 2020, to update the public on the project status and solicit comment. An additional public meeting was held on February 27, 2020, following written notification of abutters. On October 7, 2020, we presented to the Wards 2 and 3 NPA after implementing some program changes and minor changes to the exterior enclosure. Attendance records and public meeting certifications are attachments **6h-1** and **6h-2** to this document.

The meetings described above are follow-ups to the extensive public process used in advance of the original submission. See the original permit narrative (submitted 12/15/16, finalized for original permit on 2/16/17, most recently revised 1/25/18) for records of the original public process, which included at least one visit to each NPA and numerous additional public meetings. The community space, public roof access, and the return of the public streets represented by the new blocks of Pine and St Paul streets were all results of the previous public process which remain an important part of this amended application.

2.1 Project Description, Intent of Amendment.

This amendment describes updates to the CityPlace project which can be summarized as follows:

- Overall reduction in square footage of approximately 25%. This is accompanied by reductions in building height as described on attached plans.
- Replacement of Office use with additional residential units.
- Increase in square footage of housing, and an accompanying increase in the number of residential units- both market rate and inclusionary.

The project remains a mixed-use development including residential, retail, and parking uses, all of which are permitted uses under CDO 14.3.4.

Our approach to this amendment is to describe compliance with zoning regulations primarily via the Form District Checklists and the drawing submission. This narrative supplements that documentation for issues not easily addressed in the drawings or checklists.

2.2 Deconstruction and Enabling Scope of Work

This amendment includes documentation of related work on parcels adjacent to the subject property, known as 75 Cherry Street. 2 adjacent 60' wide parcels, intended to become the future rights-of-way for new blocks of St Paul and Pine Streets are included in the application. Also included is work related to clearing the St Paul right-of way, including:

- Additional demolition at the St Paul street end of the existing to remain mall. The proposed eastern limit of the St Paul Street right of way is at the face of the existing concrete planters and foundation wall of the LLBean Building (101 Cherry Street). Currently, the remaining portion of the existing CityPlace Mall extends to just west of existing column line 13, occupying nearly the full width of the sidewalk on the eastern side of the proposed new block of St Paul Street. North of the mall and adjacent to the planters, mechanical equipment serving the LLBean building and remaining portion of the mall must also be relocated in order to clear the proposed St Paul Street right of way. This equipment would be moved to the rooftop of the Church Street mall parcel, as shown on sheets AD-100, AE-100, and AE-101.

2.3 LOT COVERAGE, SQUARE FOOTAGES, PROGRAM, AND F.A.R.

Uses: Adjusted Parcel 2 is the lot bounded by Cherry, St. Paul, Bank, and Pine Streets exclusive of 100 Bank Street at the corner of Bank and Pine Streets. Square footage of Parcel 2 is 109,779. The total proposed square footage the subject parcel is 703,200, divided as follows:

CityPlace Program Summary

10/15/2020

Program Function	Approx. Quantities	Gross Sq Ft	Notes
Residential	426 Units	357,524	20% of units inclusionary = 85 Units, see also Form District Checklist 14-3
Residential Amenity		10,775	Old project had 289 units, including 58 inclusionary units
Residential storage		10,798	
Retail	8 Spaces	41,300	Retail spaces might include restaurants
Coworking & Meeting Center		9,084	
Parking -cars	422 spaces	163,600	422 spaces provided; Zoning requires no parking and caps at 468 spaces
Parking - bikes	273 spaces	2,950	273 Long term spaces, 2 shower stalls; 66 add'l short term not in bldg GSF
Community space		3,150	
Restaurant		4,250	Top Level of South Building
<i>subtotal</i>		603,431	
Support Spaces		99,775	Mechanical, circulation, loading docks, stairs, etc.
TOTAL Building gross square footage		703,206	

The proposed FAR for Adjusted Parcel 2 is: $703,206 / 109,779 = 6.41$ **PROPOSED FAR**; The new form based code chapter does not have specific FAR requirements but the project complies with the building bulk requirements of 14.3.4-D as described in the table below.

Building Height and Setbacks: Maximum building height per zoning section 14.3.4(D)1 is 160'-0". Proposed building heights comply with requirements, see elevation and sections in the drawings. Setbacks at street level are not required and not provided. Step-backs are required and provided as described below, on the drawings, and in the attached checklists. The South building mechanical penthouse remains well below the height limit, but, as allowed per Zoning Section 5.2.6(b), is not counted towards the building height. It is below the 15' allowable penthouse height and set back 10'-0" from the street facing walls of the level below.

Pervious Area: Minimum required pervious area per zoning section 14.3.4(c)1 is 10%, or 10,978 square feet. Proposed pervious area to be 11,000 square feet, or 10.02%. These "green" roofs will be located at Level 1 (parking roof) and Level 9 (residential building roof) of the North Building and at Level 2 (Level 1 roof at step-back) of the South Building. Cutsheets for the basis of design green roof system are in part 4.

Floorplate Compliance (14.3.4.D)

FLOOR*	Area (sf)	LOT COVERAGE, percent	
		Actual	Allowable
GROUND N + S (1)	108,119	98.49%	100%
1 N+S (2)	59,875	54.44%	80%
2-3 N+S (3-4), each	57,767	52.62%	80%
4-8 N+S (5-7), each	51,348	46.77%	80%
8 N+S (9)	51,348	46.77%	55%
9 N+S (10)	19,506	17.77%	55%
S PH (11/ PH per 5.2.6.b4)	7,071	6.44%	55%
* Floors are listed with labels used in drawings (and zoning floor levels in parentheses)			

2.4 Urban Design Standards: 14.4.

2.4 Urban Design Standards: 14.4.

Step backs are provided within 60'-0" of grade level at all portions of the development, see Elevation and Section drawings.

Projecting bay windows, recessed entryways, spandrel panels, and brick piers, and the angled and faceted façade of the South Building offer multiple surface relief and articulation of the facades of 4" or more at each facade. Primary material choices include brick, limestone, stone look panels, and glass. Several materials are under consideration for the stone look panels, including ceramic products, sintered stone, and manufactured stone such as Arriscraft. Material changes are provided at upper story setbacks and the north and south buildings are articulated as unique structures. Accent materials include metal and glass railings, metal cornices, metal panel spandrels, and a granite wet course. The distribution and percentages of materials for each street-facing façade are shown on the elevation drawings. The intent is to use a similar material mix and aesthetic on the inward-facing façades.

The lower stories, consisting of retail, parking, and residential uses, are visually differentiated from upper stories through material changes and step backs. The upper stories are also differentiated with material changes and setbacks.

Multiple pedestrian access points are provided to buildings on all sides of the development and are set back at least 4'-0" from the main façade. The entry setbacks continue to the upper stories to create vertical expression and are further expressed through canopies and signage.

2.5-2.6. *The information from these sections of the narrative has been incorporated into the attached form district checklists.*

2.8 Parking: Zoning Section 14.6.7 and Section 8

The development commits to participate in the Downtown Parking and Transportation Management District or other demand management programs as stipulated in the recent revisions to Section 8. This revision now requires zero parking space to be provided for the development; however, 422 spaces are proposed. The Section 8 revision stipulates a maximum of approximately 467 spaces, as calculated below. Parking is provided at the basement, ground level, and an interstitial level between the Ground and First floors. Vehicular parking access is provided on both Pine and St Paul Streets. Pedestrian access to parking area is provided at St. Paul Street for the public and guests, from inside the north and south buildings at all levels for tenants, and via both main lobbies. Vehicles and headlights within the parking area are screened from public view with building façade elements consistent with the scale and materials of the overall development. More than half of the parking is provided below grade. Long term bicycle parking is provided at the ground level, along Pine Street, with additional spaces for residents located in the basement and accessible from the parking garage or the main North Residential lobby.

An off-street loading area is proposed on Bank Street, with loading areas to serve the North residences being provided on Pine and St Paul streets.

Electric Vehicle Charging Stations are a component of the proposed parking use. See LEED checklist for more information.

Maximum allowed (CARS) per amended Ch. 8, 8.1.9-1

Program Elements		Parking Requirement		# of required spaces
		Qty	Per ____	
Residential Unit Counts (was 357 units)	426	1	Unit	426
Minus spaces not required for Inclusionary	85	1	Unit	-85
Retail Sq Ft* (was 45,200)	41,311	2	1,000 GSF	83
Office Space	3,000	2		6
Community Space	3,149	2.5	1,000 GSF	8
Mtg Center (was 12k sf)	6,084	2	1,000 GSF	12
Restaurant Sq Ft	6,000	3	1,000 GSF	18
MAXIMUM PARKING ALLOWED by Charts				467.4625

Proposed/ Parking Spaces Provided

Level	Striped Spaces
Basement/ P1	214
P2	109
P3	99
TOTAL	422

Bicycle Parking Requirements

Total required and proposed bicycle parking is 339. This is subdivided into 273 long term spaces and 66 short term spaces. See table below. The long-term spaces are located on the at grade level of car parking, adjacent to the Pine Street parking pedestrian access and includes shower and changing facilities. Short term spaces are located at streetscape, adjacent to major entry points and supplemented with spaces at entry niches within the subject lot and bike racks inside the parking structure. See LA-200 Layout Plan. Locations of short-term spaces will be coordinated with DPW and the Great Streets initiative.

Bike Parking- Long Term

Residential bedrooms	525	0.5	bedroom	263
Office & Meeting Space	9500	.0002	GSF	2
Community Space	3150	0.00005	sf	1
Retail	41,300	0.00008333	sf	3
Restaurant Seating	4250	0.001	sf	4
				273

Bike Parking- Showers	Nonres. Spaces	Required Showers
Requirement based on table 8.2.8-1, # nonresidential bike parking spaces =	9	2

Bike Parking- Short Term

Residential Units	426	0.1	Units	43
Office & Meeting Space	9500	.0001	GSF	1
Community Space	3150	0.0001	sf	1
Retail	41,300	0.0005	sf	21
Restaurant Seating	4250	0.002	sf	9
Total Short Term Bike Spaces (to be on streetscape and in vestibules)				75

2.9 Public Amenity:

A public observation deck is located on the 9th floor of the Bank Street (South) building consisting of an enclosed lobby and an exterior deck. Public access is via the Bank Street Hotel entry point. Public, gender-neutral toilet facilities are provided adjacent to the interior lobby.

2.10 Signs: See Zoning Section 7.

Signs shall be submitted for review under a separate permit application. Any signs shown in the drawings or renderings are generic in nature and do not necessarily represent actual signage to be proposed.

2.11 Green Building: Zoning Section 14.4.3

This project is required to meet a LEED Gold Standard as part of the Form Based Code. The project is pursuing certification under the “LEED v4 for New Construction and Major Renovations” rating system.

See FIGURE 2-A for a Summary LEED Checklist per Zoning Section 14.4.3. This checklist illustrates the most straightforward path to the 60 points required for certification at the Gold level. It is of a schematic nature at this time and is subject to change based on design adjustments over the course of the project and may take a significantly different path to certification.

The project team has achieved LEED Precertification for the previous iteration of the project and we intend to follow a similar approach and use the same registration and precertification for the amended project. *We have received affirmation from the US Green Building Council that the revised project may still fall under the current LEED registration, and the revisions have not changed our approach.* The precertification worksheet requires specific details about the project to be provided to the LEED certification body, such as mechanical equipment schedules, plumbing fixture data, and other details which will not be determined until the design has progressed substantially, although the LEED checklist provided with this application indicates the level of performance we intend to pursue. The registration, precertification checklist, and precertification review by USGBC are attached.

We note that the LEED process is rigorous and that our team’s experience indicates that for a project of this size and complexity, it generally takes a year following final completion of the project to submit the extensive documentation required for formal review by GBCI, the official certifying body for LEED.

While precertification has provided written feedback from the reviewing body early in the design process, we anticipate final certification will occur in the spring of 2027, based on the proposed schedule's final completion in November, 2026.

Freeman French Freeman will coordinate the LEED submission and has successfully facilitated the LEED certification of 18 projects, 6 of them at the Gold level and 2 at the Platinum level. Among them are the Waterbury State Office Complex (LEED Platinum), Community Health Centers of Burlington (LEED Certified); UVM University Heights (LEED Gold); UVM Jeffords Hall (LEED Gold). FFF has several additional projects with LEED certification pending.

2.12 **Stormwater Management:** Zoning Section 14.6.9

The existing site is composed almost entirely of impervious areas. Runoff from the existing site discharges directly and without treatment or attenuation to the combined sewer system. The runoff from the site is treated at the Burlington Main Municipal Wastewater Treatment plant. Each year, for most storms runoff from the existing site is fully treated at the wastewater treatment plant. However, several times each year during larger storm events, the Main Municipal Wastewater Treatment plant is hydraulically overloaded. Therefore, there are opportunities to implement improved runoff reduction practices for the site in accordance with Section 14.6.9 of the Form District Regulations. The following opportunities are considered:

- Separating stormwater flows from sanitary sewer flows to allow onsite attenuation. Onsite, rainwater will be collected through a system that is separate from the sanitary sewer system. Prior to leaving the site, rainwater will be stored and attenuated in 3 large underground water cisterns. These subsurface tanks will reduce the runoff from the site for all storms when compared to current conditions. The rate of runoff will be reduced so that during a 1-year 24- hour storm the peak stormwater rate flows from the site at a rate less than the peak runoff rate from a meadow in good condition. Smart flow meter technology will be integrated for DPW's use to provide effective flow rates optimized to the main wastewater treatment plants needs across a variety of storms hydrographs.
- Stormwater Reuse through a greywater toilet or irrigation system is not appropriate to implement for this site. This site is a mixed-use development containing retail and residential bathrooms, medical office uses, and daycare facilities where a greywater reuse system is not feasible due to the future flexibility of uses in the building. Also, Vermont's climate does not require the use of irrigation systems.
- Green Roofs will be provided on a minimum of 10% of the proposed building, designed to capture and attenuate the first 1" of rainfall. The location of the green roofs will take into account solar shading from other portions of this project, as our shading studies show that not all areas of the project roofs will receive the required 4 hours per day of direct sunshine required for a viable vegetated roof.
- All of the sidewalks surrounding the site will have some pervious paver areas, street trees and landscaping that will reduce the runoff of stormwater through infiltration and

evapotranspiration. Streetscape on Pine and St Paul streets is being designed by Engineering Ventures (Civil) and SE Group (Landscape) according to Great Streets standards. Our team is coordinating with the City's design consultant, Stantec,

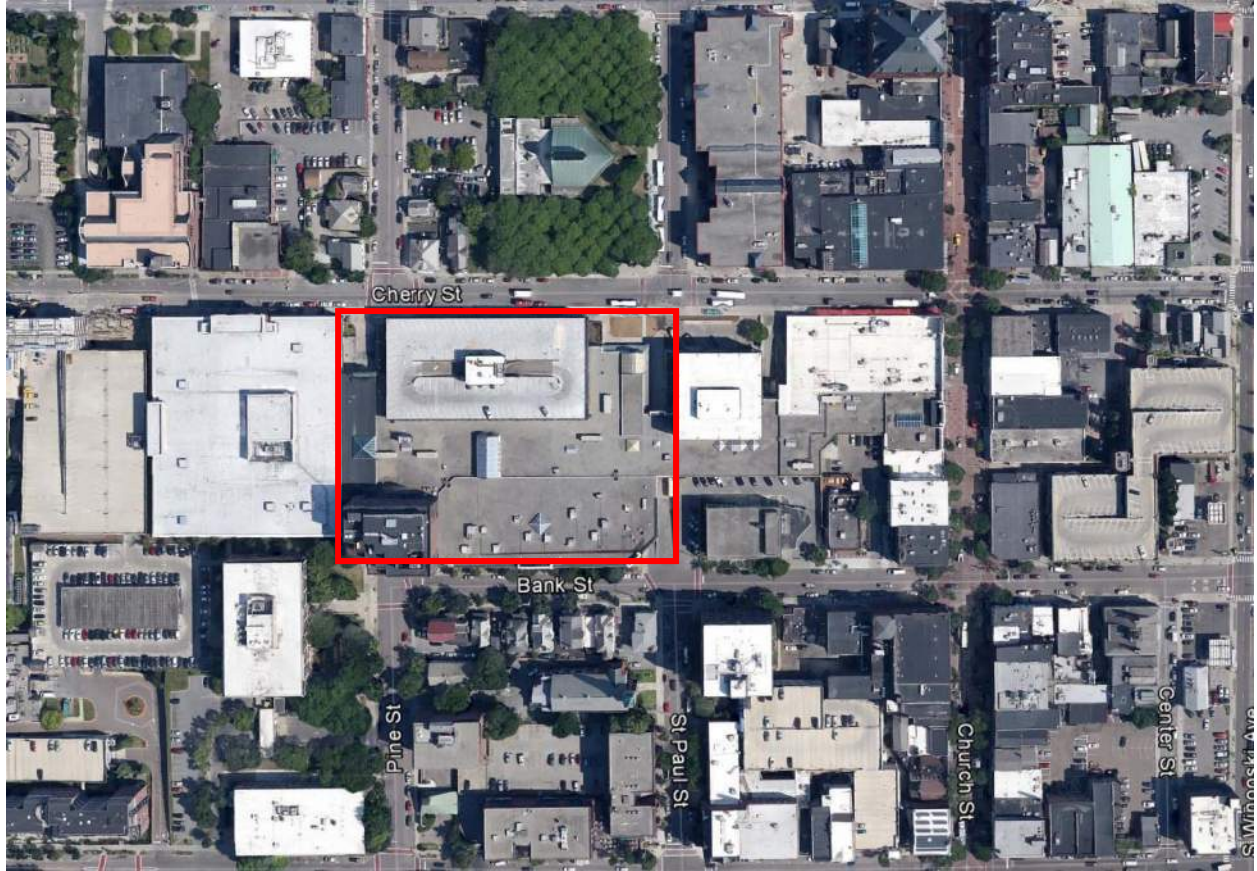
- The appropriateness of infiltrating stormwater requires the evaluation of subsurface conditions. Prior to implementing stormwater infiltration measures, the following items must be evaluated during construction because a building currently occupies the site: existing soil contamination; structural bearing capacity of saturated soils; water infiltration into basements and subsurface structures including buildings that surround the site; existing and proposed depth to ledge rock; existing and proposed groundwater elevations; and the ability to maintain effective pretreatment facilities where needed.

See Drawings C106 and C305 for Erosion Prevention Sediment Control Plan, Details and Notes.

2.13 **Outdoor Lighting:** Zoning Sections 14.6.10, 5.5.2

The intent of exterior lighting is to minimize light pollution while providing safe and inviting streetscapes for pedestrians and retail activities. Sidewalk lighting for pedestrians will be wall-mounted downlights mounted at brick piers at either side of the main entries. Additional lighting at main entry points to the development will be by canopy-mounted downlights. See attachments to this document and AL-3 Photometric Plans, as prepared by Burlington Electric Department in accordance with Great Streets and BED standards.

3.0 EXISTING CONDITIONS PHOTOGRAPHS



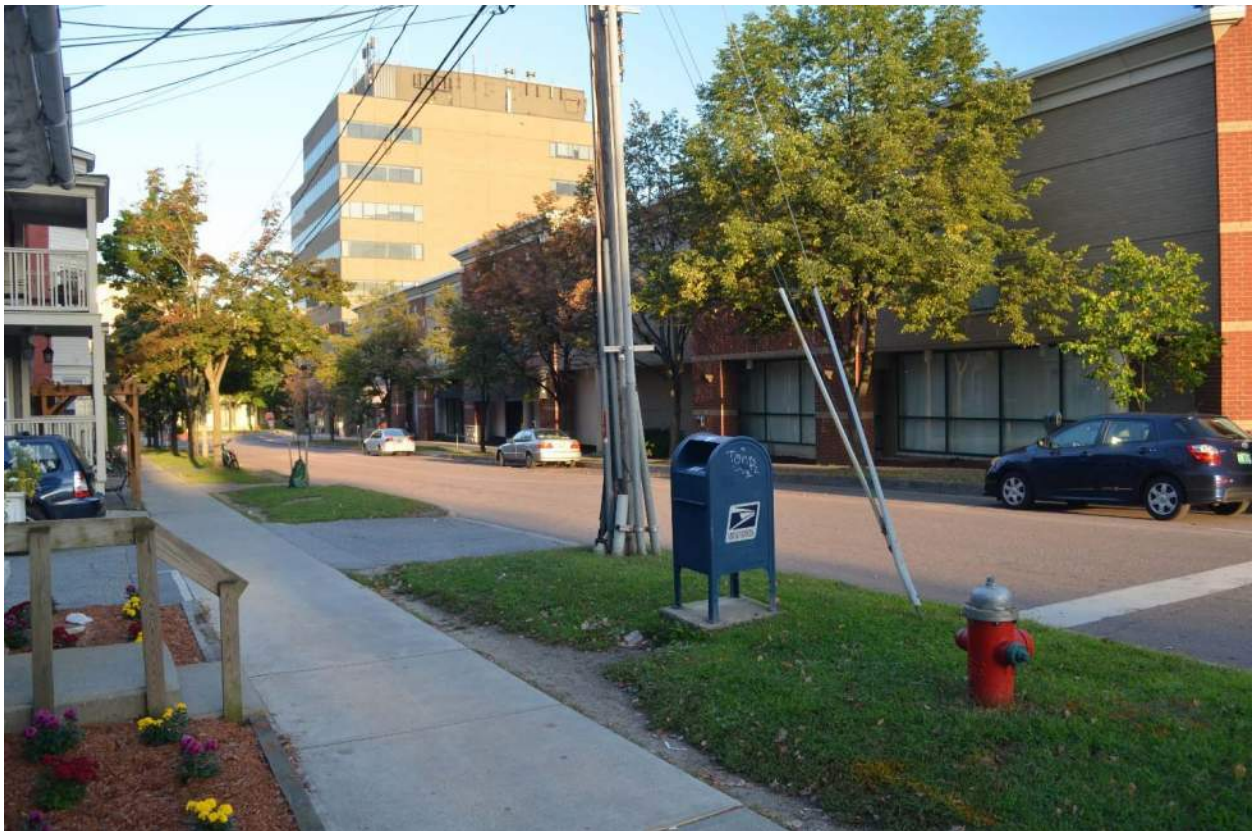
3.1 AERIAL VIEW OF DEVELOPMENT SITE - Predevelopment condition



3.2- AERIAL VIEW- CURRENT CONDITION AT TIME OF AMENDED APPLICATION



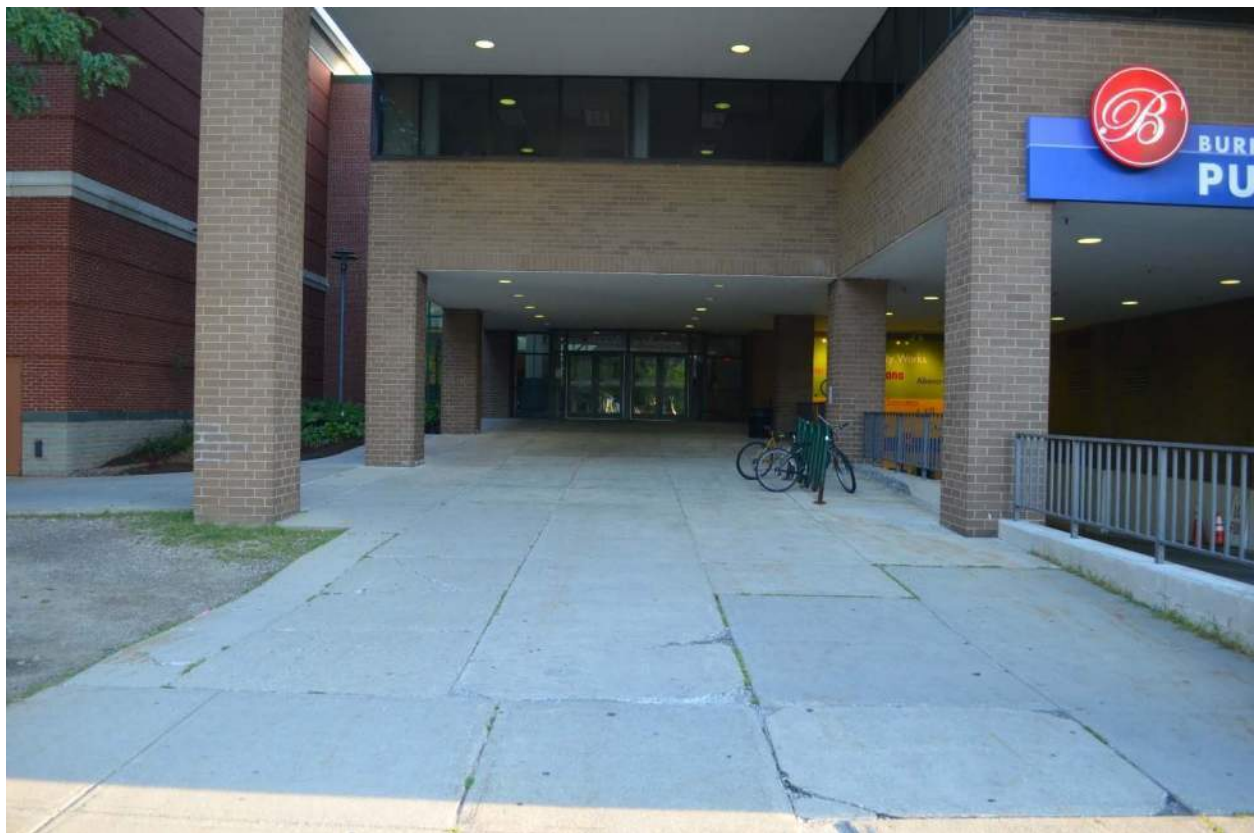
3.2 BANK STREET - LOOKING WEST



3.2 BANK STREET - LOOKING NORTHWEST



3.3 CORNER OF BANK STREET AND PINE STREET – LOOKING NORTHEAST



3.4 PINE STREET AT BANK STREET – LOOKING NORTH



3.5 CHERRY STREET – LOOKING SOUTHWEST



3.6 CHERRY STREET - LOOKING WEST



3.7 CHERRY STREET - LOOKING SOUTHEAST



3.8 PINE STREET AT CHERRY STREET - LOOKING SOUTH



3.9 CHERRY STREET – LOOKING EAST



3.10 CHURCH STREET – LOOKING SOUTHWEST

BRICK-FACED PANEL (RED COLOR)

Image:



BRICK-FACED PANEL (BUFF COLOR)

Image:



STONE & STONE-LOOK PANELS

Image:

Final selection will be made from a range of materials, similar to those shown below and on the following pages. Stone look panels may be ceramic, sintered stone, or manufactured stone such as Arriscraft. We are currently proposing to use full bed, genuine stone material for the "podium" levels and a lighter weight material starting at the first step-back at the South building. The intent is to work with manufactures to ensure the stone look panels are compatible with the natural stone podium.

Limestone visual sintered stone



Limestone visual sintered stone



Limestone visual sintered stone



Natural Adair Limestone, Fleuri Cut

Additional Stone Materials

Rainbow Quartzite natural stone



Vermont Stone Art Salem Limestone, dark
end of color range

Vermont Stone Art Salem Limestone, light
end of color range

STONE WATER COURSE

Woodbury Gray Granite

This material is proposed for the watercourse at the full perimeter of the building and will generally be used below window sills and rarely more than 24" above sidewalk grade. Curb Stock material in 12" heights and lengths up to 8'-0" is proposed. This material is extremely durable and resistant to damage from impacts and sidewalk salting and plowing operations.

Image:



FIGURE 4-C-2

RETAIL GLASS

Manufacturer: PPG Starphire Ultra-Clear Glass ½" thickness

Website: [http://www.ppgideascape.com/getmedia/798287cc-3f49-46b8-b328-9fac88a41a7c/17054_PGAG-Starphire-Vision-\(7073\).pdf.aspx](http://www.ppgideascape.com/getmedia/798287cc-3f49-46b8-b328-9fac88a41a7c/17054_PGAG-Starphire-Vision-(7073).pdf.aspx)

This product at ½" thickness will provide 90% VLT and 8% VLR, exceeding zoning ordinance requirements. Optional upgrade for retailers. Base scope will use Solarban 60 or 70 for all glazing in the project.

Image:



PPG Monolithic Glass Comparisons

Table of Performance Values ¹												
Glass Thickness		Transmittance ²			Reflectance ²		(BTU/hr•ft ² •F) NFRC U-Value ⁴		U-Value ⁵ EN 673 (W/m ² •K)	Shading Coefficient ⁶	Solar Heat Gain Coefficient ⁷	Light to Solar Gain (LSG) ⁸
Inches	mm	Ultra- violet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Night time	Summer Day time				
Uncoated												
STARPHIRE® Glass												
1/8	3	89	91	90	8	8	1.04	0.94	5.8	1.04	0.91	1.00
5/32	4	88	91	90	8	8	1.04	0.94	5.8	1.04	0.91	1.00
3/16	5	88	91	90	8	8	1.03	0.93	5.8	1.04	0.90	1.01
1/4	6	87	91	89	8	8	1.02	0.93	5.8	1.03	0.90	1.01
5/16	8	86	91	88	8	8	1.01	0.92	5.7	1.02	0.89	1.02
3/8	10	85	91	87	8	8	1.00	0.91	5.6	1.02	0.89	1.02
1/2	12	83	90	86	8	8	0.98	0.89	5.5	1.01	0.88	1.02
5/8	16	81	90	84	8	7	0.97	0.88	5.4	1.00	0.87	1.03
3/4	19	80	90	83	8	7	0.95	0.86	5.3	0.99	0.86	1.05
1	25	77	89	80	8	7	0.92	0.84	5.2	0.97	0.84	1.06



Thickness (inches)	Transmittance Visible %	Exterior Visible Reflectance %	Interior Visible Reflectance %	U-Value (Winter Nighttime) (Btu/hr-ft ² -°F)	Solar Heat Gain Coefficient (SHGC)	Light To Solar Gain (LSG)	Thermal Stress Risk
Solarban® 60 on Clear 6mm (2) Air (10%) / Argon (90%) Mix 1/2" (12.7mm) Clear 6mm							
1"	70	11	12	0.24	0.39	1.79	Med

Specifications

Insulating Unit Construction

Solarban® 60 on Clear 6mm (2) | Air (10%) / Argon (90%) Mix 1/2" (12.7mm) | Clear 6mm

Indoor Lite: Clear 6mm

Outdoor Lite: Clear with a second surface Solarban® 60

PPG Approved Manufacturers/Where to Buy PPG Products: PPG Certified Network (CFP, CLP, CCWF) OR PPG Qualified Supplier (QSP)

Certification: PPG lite(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)

Solarban® 60: Solarban® 60 glass is a mid-range MSVD solar control low-e glass. Though the coating is transparent (on clear or Starphire® Ultra-Clear glass), it can also be paired with, or applied directly on most PPG tinted glasses in an insulating glass unit.

The results represent Center-of-Glass performance data based on NFRC 100 Environmental Design Conditions utilizing the LBNL Window 7.3 software program. Performance data is based on representative samples of factory production. Actual values may vary slightly due to variations in the production process. This data is to be used for comparison purposes and should not be considered a contract. It is the recipient's responsibility to ensure the manufacturability of the above glazing configurations as well as evaluating appropriate design considerations such as wind and snow load analysis, thermal stress analysis, and local building code compliance. Vitro recommends that a full size mock-up be reviewed under the specific job-site conditions and retain the mock-up as a basis of acceptable product.

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Thickness (inches)	Transmittance Visible %	Exterior Visible Reflectance %	Interior Visible Reflectance %	U-Value (Winter Nighttime) (Btu/hr-ft ² -°F)	Solar Heat Gain Coefficient (SHGC)	Light to Solar Gain (LSG)	Thermal Stress Risk
Solarban® 60 on Starphire® 6mm (2) Air (10%) / Argon (90%) Mix 1/2" (12.7mm) Starphire® 6mm							
1"	74	11	12	0.24	0.41	1.80	Low

Specifications

Insulating Unit Construction

Solarban® 60 on Starphire® 6mm (2) | Air (10%) / Argon (90%) Mix 1/2" (12.7mm) | Starphire® 6mm

Indoor Lite: Starphire® 6mm

Outdoor Lite: Starphire® with a second surface Solarban® 60

PPG Approved Manufacturers/Where to Buy PPG Products: PPG Certified Network (CFP, CLP, CCWF)

Certification: PPG lite(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)

Solarban® 60: Solarban® 60 glass is a mid-range MSVD solar control low-e glass. Though the coating is transparent (on clear or Starphire® Ultra-Clear glass), it can also be paired with, or applied directly on most PPG tinted glasses in an insulating glass unit.

Starphire®: Starphire® Ultra-Clear glass is a unique low-iron glass, the clearest float glass available, delivering high light transmittance and true-color fidelity.

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FIG. 4-C-3



Thickness (inches)	Transmittance Visible %	Exterior Visible Reflectance %	Interior Visible Reflectance %	U-Value (Winter Nighttime) (Btu/hr·ft ² ·°F)	Solar Heat Gain Coefficient (SHGC)	Light To Solar Gain (LSG)	Thermal Stress Risk
Solarban® 70XL * 6mm (2) Air (10%) / Argon (90%) Mix 1/2" (12.7mm) Clear 6mm							
1 "	64	12	13	0.24	0.27	2.37	Low

Specifications

Insulating Unit Construction

Solarban® 70XL * 6mm (2) | Air (10%) / Argon (90%) Mix 1/2" (12.7mm) | Clear 6mm

Indoor Lite: Clear 6mm

Outdoor Lite: with a second surface Solarban® 70XL

PPG Approved Manufacturers/Where to Buy PPG Products: PPG Certified Network (CFP, CLP, CCWF)

Certification: PPG lite(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)

Note(*): Solarban 70XL for annealed applications is applied to Starphire® glass; heat treated applications will require either clear or Starphire glass depending on the manufacturing process. For international markets, Solarban 70XL is only available on clear glass and must always be heat treated.

Solarban® 70XL: Solarban® 70XL glass is a high performing MSVD solar control low-e glass. Though the coating is transparent (on clear or Starphire® Ultra-Clear glass), it can also be paired with, or applied directly on most PPG tinted glasses in an insulating glass unit.

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Thickness (inches)	Transmittance Visible %	Exterior Visible Reflectance %	Interior Visible Reflectance %	U-Value (Winter Nighttime) (Btu/hr·ft²·°F)	Solar Heat Gain Coefficient (SHGC)	Light To Solar Gain (LSG)	Thermal Stress Risk
Solarban® 70XL * 6mm (2) Air (10%) / Argon (90%) Mix 1/2" (12.7mm) Starphire® 6mm							
1"	66	12	13	0.24	0.27	2.44	Low

Specifications

Insulating Unit Construction

Solarban® 70XL * 6mm (2) | Air (10%) / Argon (90%) Mix 1/2" (12.7mm) | Starphire® 6mm

Indoor Lite: Starphire® 6mm

Outdoor Lite: with a second surface Solarban® 70XL

PPG Approved Manufacturers/Where to Buy PPG Products: PPG Certified Network (CFP, CLP, CCWF)

Certification: PPG lite(s) are Cradle to Cradle certified by McDonough Braungart Design Chemistry, LLC (MBDC www.mbdc.com)

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 Glass colors represented are approximate.

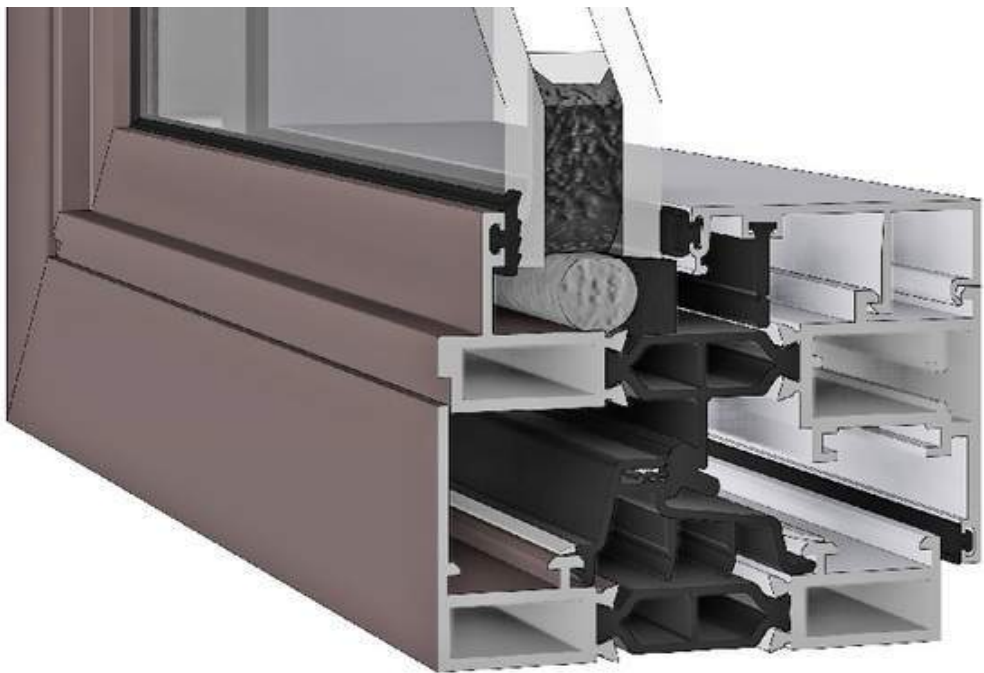
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ALUMINUM WINDOWS UPPER FLOOR

Manufacturer: Peerless Architectural Windows & Doors

Website: <https://www.peerlessproducts.com/Products/Peerless-Windows/Casement>

Image:



GLASS FOR WINDOWS (Most openings above retail)

GLASS PERFORMANCE



IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	
	TRANSMIT- TANCE	EXTERNAL REFLECTANCE	INTERNAL REFLECTANCE	UV	ISO	HEAT GAIN COEFFICIENT	AIR FILL IP / SI	ARGON FILL IP / SI
Single-pane, Clear	90%	8%	8%	0.71	0.84	0.86	1.04 / 5.91	—
Double-pane, Clear	82%	15%	15%	0.58	0.75	0.78	0.48 / 2.73	—
Ordinary low-e	76%	17%	17%	0.50	0.68	0.72	0.34 / 1.93	0.30 / 1.70
LoE ³ -366	65%	11%	12%	0.05	0.43	0.27	0.29 / 1.65	0.24 / 1.36

FIGURE 4-E

ALUMINUM PANELS

Manufacturer: Kawneer to Match Window System

Website: http://www.kawneer.com/kawneer/north_america/en/product.asp?prod_id=4495

Image:

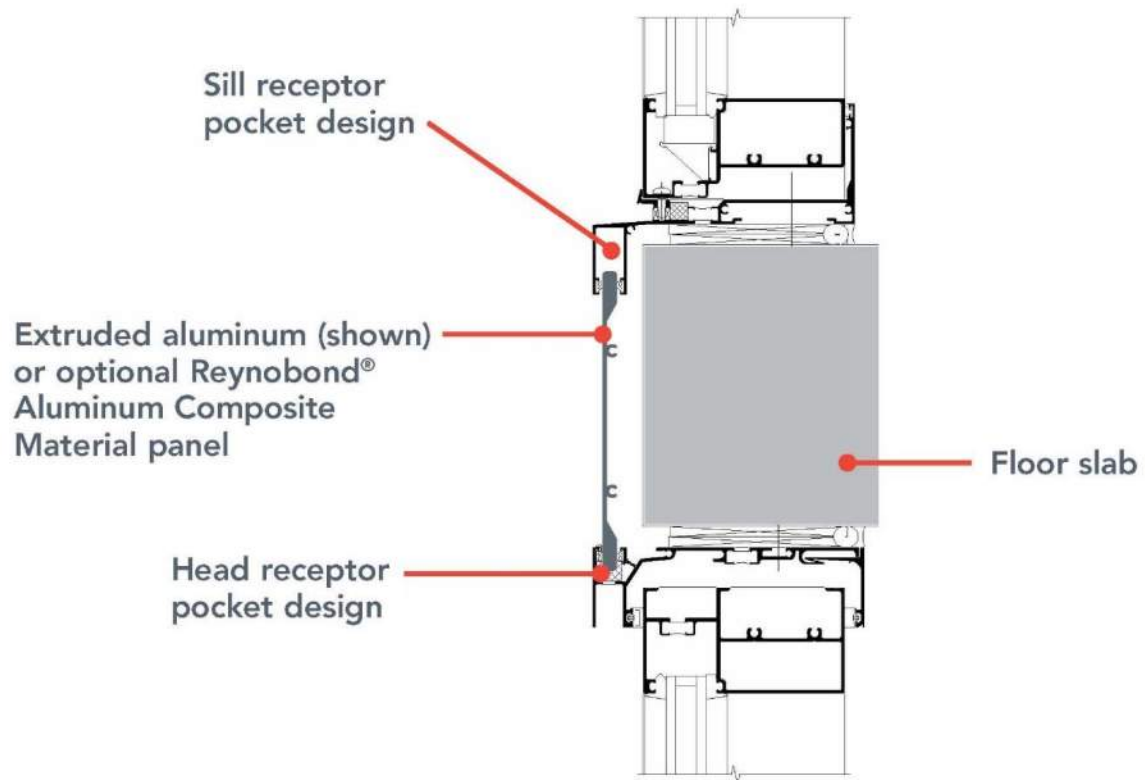


FIGURE 4-F

PAINTED METAL AND STAINLESS STEEL CABLE RAILING

Manufacturer: Wagner

Website: <http://www.wagnercompanies.com/products-services/railing-systems-and-components/cable-railing/>

Image:



Coloured body porcelain tiles . Rectified monocaliber Gres porcellanato colorato in massa . Rettificato monocalibro

Gres córpo colorá d'ens la massa . Rectifié mono-calibre / Durchgefärbtes Feinsteinzeug . Geschliffen Einzelgrös

Gres porcelánico colorado en masa . Rectificado monocalibre / Керамический гранит окрашенный в массу . Ретифицированный в одном калибре

**Outdoor paving .** Pavimenti da esterno**Destinations of use .** Destinazioni d'uso**HEAVY TRAFFIC**
CALPESTIO PESANTEHEAVY COMMERCIAL AREAS (malls, airports, places of worship, schools, museums, squares, hospitals, etc.)
COMMERCIAL USANZI (mall, aeroporti, luoghi di culto, scuole, musei, piazze, ospedali etc.)**LASTRA 20E**

For further details on the 20 mm product, relevant trims and the installation systems, in particular for recommendations, restrictions of use, and precautions during installation, please refer to the LASTRA 20mm section on the Atlas Concorde website or to the LASTRA 20mm catalogue. / Per dettagli sul prodotto e sui relativi pezzi speciali in 20 mm di spessore, per i sistemi di posa ed, in particolare, per raccomandazioni, accorgimenti, limitazioni di utilizzo e precauzioni in fase di posa, si raccomanda di prendere visione del catalogo LASTRA 20mm e della sezione LASTRA 20mm del sito Atlas Concorde. / Pour de plus amples détails sur les produits et les pièces spéciales de 20 mm d'épaisseur et sur leurs systèmes de pose, et en particulier, pour les recommandations, mises à jour, limitations d'usage et précautions en phase de pose, veuillez prendre connaissance du catalogue LASTRA 20mm et du site Atlas Concorde LASTRA 20mm. / Für details zum produkt und formteile mit 20 mm stärke und entsprechende verlegesysteme, insbesondere hinsichtlich hinweise und anmerkungen, nutzungseinschränkungen und vorsichtsmassnahmen während der verlegung, wird die einsicht des katalogs lastra 20mm und der website atlas concorde lastra 20mm empfohlen. / Para más detalles sobre el producto y sus piezas especiales de 20 mm de espesor, para los sistemas de colocación y, en especial, para recomendaciones, límites de uso y precauciones en fase de colocación, aconsejamos consultar el catálogo LASTRA 20mm y la sección LASTRA 20mm del sitio Atlas Concorde. / Подробнее о плитках специальных элементах толщиной 20 мм, о системах монтажа, об ограничениях в применении, о мерах предосторожности при укладке можно узнать в каталоге LASTRA 20mm и в разделе LASTRA 20mm на сайте Atlas Concorde.

Public Roof Terrace Pavers: mix of 3 colors from range below, 18x36"



Residential Roof Terrace Pavers, 12x48"



30x120 60x60 OUTDOOR Paving ± 20 mm



Etic Rovero Venice LASTRA 20mm
30x120 cm - 11 1/4" x 47 1/4"



Etic Noco Hickory LASTRA 20mm
30x120 cm - 11 1/4" x 47 1/4"



Etic Quercia Antigua LASTRA 20mm
30x120 cm - 11 1/4" x 47 1/4"



Etic Eucalipto Smoked LASTRA 20mm
30x120 cm - 11 1/4" x 47 1/4"



Etic Rovero Venice LASTRA 20mm
60x60 cm - 23 1/4" x 23 1/4"

Installation tips / Suggerimenti di posa

LASTRA 20mm

For further details on the 20 mm product, relevant tiles and the installation system, in particular for recommendations, restrictions of use, and precautions during installation, please refer to the LASTRA 20mm section on the Atlas Concorde website or to the LASTRA 20mm catalogues. / Per dettagli sul prodotto e sui relativi pezzi speciali in 20 mm di spessore, per i sistemi di posa ed, in particolare, per raccomandazioni, accorgimenti, limitazioni di utilizzo e precauzioni in fase di posa, si raccomanda di prendere visione del catalogo LASTRA 20mm e della sezione LASTRA 20mm del sito Atlas Concorde. / Pour de plus amples détails sur les produits et les pièces spéciales de 20 mm d'épaisseur et sur leurs systèmes de pose, et en particulier, pour les recommandations, mises à jour, limitations d'usage et précautions en phase de pose, veuillez consulter les catalogues LASTRA 20mm et du site Atlas Concorde LASTRA 20mm. / Für details zum produkt und besonders mit 20 mm stärke und entsprechende anlagenplanung, installationstechnisch details lesen sie den katalogen, anlagenplanungstechnisch details lesen sie den katalogen LASTRA 20mm und der website atlas concorde lastra 20mm anlagenplanung. / Para más detalles sobre el producto y sus piezas especiales de 20 mm de espesor, por favor consulte el catálogo LASTRA 20mm y la sección LASTRA 20mm del sitio Atlas Concorde. / Για περισσότερα σχετικά στοιχεία και 20mm εκτός πάχους, παρακαλούμε να ανατρέξετε στον κατάλογο LASTRA 20mm και στην ενότητα LASTRA 20mm του ιστότοπου Atlas Concorde.



Eucalpto Smoked

V3



Quercia Antique

V3



Noce Hickory

V3



Rovere Venice

V3

Colour-shading / Stonalizzazione



V1

Uniform appearance
Aspetto uniforme / Aspect uniforme
Gleichmäßiges Erscheinungsbild
Aspetto uniforme / Одинаковый вид



V2

Slight variation
Variazione minima / Variation minimale
Leichte Abweichung / Variación mínima
Минимальная Гетерогенность



V3

Moderate variation
Variazione moderata / Variation Modérée
Mäßige Abweichung / Variación moderada
Умеренная Гетерогенность



V4

Substantial variation
Variazione sostanziale / Variation substantielle
Grundlegende Abweichung / Variación sustancial
Значительная Гетерогенность

Destinations of use / Destinazioni d'uso

GRIP & LASTRA 20MM SURFACE



HEAVY TRAFFIC . CALPESTIO PESANTE

HEAVY COMMERCIAL AREAS (malls, airports, places of worship, schools, museums, squares, hospitals, etc.) / COMMERCIALI PESANTI (mall, aeroporti, luoghi di culto, scuole, musei, piazze, ospedali etc.)

MATTE & POLISHED SURFACE



MEDIUM TRAFFIC . CALPESTIO MEDIO

MODERATE COMMERCIAL AREAS (restaurants, offices, public restrooms, public offices, hotels, business lounges, etc. save for obligated pathways) / COMMERCIALI MEDIA (ristoranti, uffici, negozi, bagni pubblici, uffici pubblici, hotel, business lounge, etc. a esclusione di percorsi obbligati)

LASTRA 20E _ INFORMATION ABOUT INSTALLATION METHODS

RECOMMENDATIONS FOR RAISED INSTALLATION*

THE RAISED SYSTEM FOR OUTDOOR APPLICATION BY ATLAS CONCORDE USES LASTRA 20mm IN COMBINATION WITH THREE DIFFERENT POLYPROPYLENE SUPPORTS: FIXED, ADJUSTABLE AND SELF-LEVELLING.

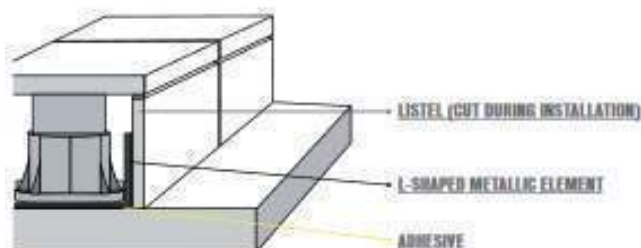
THE FIXED SUPPORT,
of 12mm, 15mm or 20mm height,
represents the quickest and most cost effective solution.

THE ADJUSTABLE SUPPORT,
with variable height ranging from 25mm to 100mm
allows to level floors at different raises even after installation.

THE SELF-LEVELLING SUPPORT,
from 37.5mm to 100mm, allows for the compensation
of uneven levels and inclinations up to 5%.

TECHNICAL FEATURES OF SUPPORTS
Supports manufactured in totally recyclable material
Resistant to acids and bases
Resistant to adverse weather conditions
Resistant to temperatures ranging from -30°C to +120°C

In order to improve the aesthetics of the lateral terminals of raised floors, it is possible to use a listel, cut during installation, fixed using an L-shaped metallic element.



SUPPORTS



FIXED
HEIGHT: from 12mm to 20mm



ADJUSTABLE
HEIGHT: from 25mm to 100mm



SELF-LEVELLING
HEIGHT: from 37.5mm to 100mm;
compensates for inclinations up to 5%



*Recommendations on raised installation at:
<http://www.atlasconcorde.it/en/area-tecnica/lastra-20/>

SIZE 60x60 – 20mm THICKNESS

For the raised installation of 60x60 slabs in 20mm thickness a maximum raise of the foot plan of 10cm is recommended.

It is possible to install 60x60 slabs in 20mm thickness at a greater raise than 10cm via the application of a double glass fibre net or a galvanised steel sheet to the back of the tile, this allows for raises up to 30cm.

SIZE 45x90 – 20mm THICKNESS

The 45x90 size in 20mm thickness is suitable for installation onto cement footing, gravel, sand, grass or supports up to a maximum raise of 2cm and using 6 supports per slab in order to uniformly distribute loads on the foot plan. For raises ranging from 2 to 30cm it is necessary to apply a double fibre net or a galvanised steel sheet to the back of the tile.

SIZE	UP TO ¾" (2cm)	FROM ¾" (2cm) TO 4" (10cm)	FROM 4" (10cm) TO 12" (30cm)
24"x24" - 60x60cm (Nominal) 4 supports per slab 	4 SUPPORTS (3.4 pcs/m²)	4 SUPPORTS (3.4 pcs/m²)	4 SUPPORTS (3.4 pcs/m²) DOUBLE GLASS-FIBRE NET OR GALVANISED STEEL SHEET
18"x36" - 45x90cm (Nominal) 6 supports per slab 	6 SUPPORTS (6.0 pcs/m²)	6 SUPPORTS (6.0 pcs/m²) DOUBLE GLASS-FIBRE NET OR GALVANISED STEEL SHEET	6 SUPPORTS (6.0 pcs/m²) DOUBLE GLASS-FIBRE NET OR GALVANISED STEEL SHEET
12"x48" - 30x120cm (Nominal) 6 supports per slab 	6 SUPPORTS (6.0 pcs/m²)	6 SUPPORTS (6.0 pcs/m²) DOUBLE GLASS-FIBRE NET OR GALVANISED STEEL SHEET	6 SUPPORTS (6.0 pcs/m²) DOUBLE GLASS-FIBRE NET OR GALVANISED STEEL SHEET

NORTH AMERICA AND OCEANIA MARKET SPECIFICATION

Size 24"x24" - 60x60cm in ¾" - 20mm thickness

For the raised installation of 24"x24" - 60x60 slabs in ¾" - 20mm thickness, a maximum raise of the foot plan of ¾" - 2cm is recommended.

Sizes 18"x36" - 45x90cm in ¾" - 20mm thickness

The 18"x36" - 45x90cm size in ¾" - 20mm thickness is suitable for installation onto footing, gravel, sand, grass or onto supports at a maximum raised of ¾" - 2cm and using 6 supports per slab in order to uniformly distribute the load.

SIZE	UP TO ¾" (2cm)	ABOVE ¾" (2cm)
24"x24" - 60x60cm (Nominal) 4 supports per slab 	4 SUPPORTS (0.32 pcs/sq ft)	PLEASE CONTACT YOUR ATLAS CONCORDE SALES REPRESENTATIVE
18"x36" - 45x90cm (Nominal) 6 supports per slab 	6 SUPPORTS (0.56 pcs/sq ft)	
12"x48" - 30x120cm (Nominal) 6 supports per slab 	6 SUPPORTS (0.65 pcs/sq ft)	

Areaway Grating

Manufacturer: Ohio Gratings

Product: Wheels n' Heels Metro, Galvanized w/ "OnGrip"

Website: www.ohiogratings.com

Note: Product has been reviewed and approved by DPW.
Product is vehicular traffic rated.



SOLAR PANELS

Manufacturer: Solar City

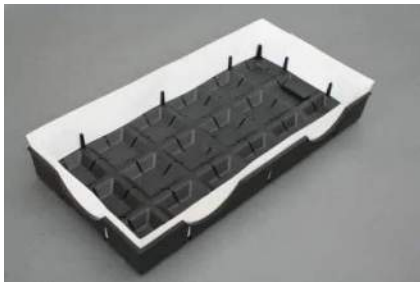
Website: <http://www.solarcity.com/>

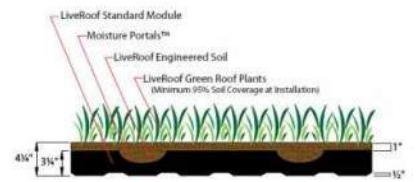
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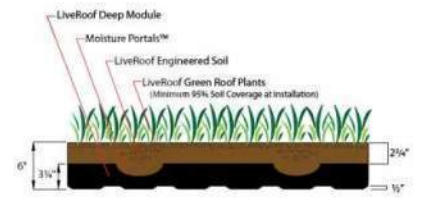


LiveRoof®

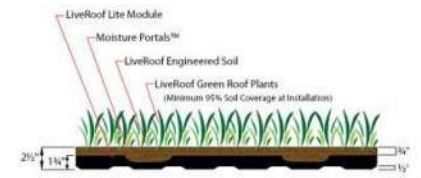
Dedicated to Your Success



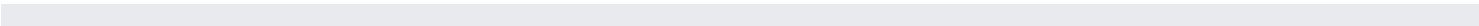




one should avoid plants with woody root systems such as shrubs, as they can damage waterproofing



one should avoid woody plants, such as shrubs, that have woody root systems which might damage waterproofing



Construction:

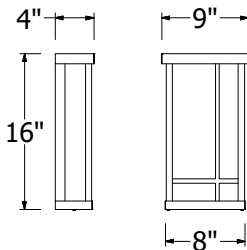
- Steel housing and chassis
- Diffuser is .080" thick white textured polycarbonate or optional white smooth polycarbonate
- Optional alabaster lenses are .080" thick acrylic

Light Source:

- LED
- Dimming either 0 - 10v (DIM) or Triac (DIMLD)

Notes:

- Center lockup – hardware included
- Optional bottom lens available
- Closed top eliminates upward light pollution
- Optional photocell (option 21) – specify voltage
- UL and CUL listed **WET** location
- LED Components
 - Replaceable Module
 - CRI > 80
 - Universal 120/277 volt standard
 - 5-Year Warranty on LED Components



Type:	
Job Name:	



WALL

CEILING

PENDANT

OUTDOOR

ORDERING INFORMATION**Example: SALW-16-LED-U-15ACW-2-Z3-WTP**

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Model	Cage	Voltage	Lamping	Kelvin	Finish	Diffuser	Options
SALW-16-LED		U 120 - 277	13w 1,484 lm (Dim) 21w 2,450 lm (Dim) 15ACw 1,724 lm (DimLD)	2 3000K 4 4000K Optional 3 3500K	B1 Satin Black W2 Gloss White Z1 Satin Bronze Z3 Text Bronze Optional (See Price List) W1 Yolk W3 Text White B2 Text Black T4 Shimmer Gray M13 Anod Silver T6 Pewter W13 Pearl Beige M16 Antique Brass	WTP White Textured Polycarbonate Optional Lens Material (See Price List) AHA Amber Honey Alabaster BAA Beige Alabaster OAA Opal Alabaster WSP White Smooth Polycarbonate	DIM LED dimming driver (0 - 10v) <i>(Included with On Board Driver only)</i> DIMLD Line Voltage /TRIAC/ELV/120v See Resource Page <i>(Included with Driverless Engine only)</i> 42 Aluminum Construction 16 Bottom Lens 21 Photocell - <i>See Notes</i> -01 120 volt -02 208-277 volt



LUX

Exterior Sconce

South Building drop-off sconce

9777 Reavis Park Drive
St. Louis, MO 63123
800.331.2425 or 314.631.6000

sales@lighting.com www.lighting.com

GENERAL SPECIFICATION

LED: High efficiency high-power LEDs. Universal 120-277V input voltage.

LED Dimming: Standard 1% 0-10V dimming.

Body: Cast aluminum.

Diffuser: UL-94 HB Flame Class rated.

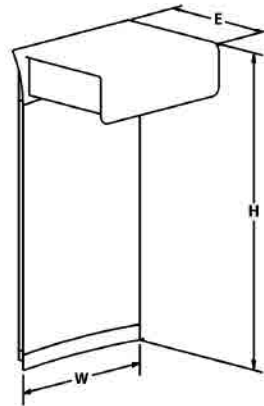
Standard Finishes: Highly durable oven cured no VOC premium powder coat.

Surge Protection: External surge protector provided as standard.

Mounting: Driver mounted in 4" square by 2 1/8" deep junction box.

Steel City #52171 or equivalent (supplied by others). HO lamping options require remote driver enclosure (supplied). Must be mounted in a controlled environment with an area temperature range of 32°-100°F.

Modified: Contact factory for modified lumen packages.



SAMPLE CATALOG NUMBER: GL-6615-					B-	R3-	PA-	A
MODEL NO.					LAMPING	OPTIC	FINISH	OPTION(S)
GL-6615	W	in	5"	mm 127	A. 1LED30	R2. 20deg	Standard: Powder Coat BLK-Black BL-Blue GR-Gray LG-Light Gray BE-Beige PAB-Antique Brass PA-Painted Aluminum PTC-Painted Copper WH-White DBZ-Dark Bronze NSN-New Satin Nickel BRN-Brown RD-Red CH-Champagne RG-Reed Green SG-Sungold GM-Gun Metal POR-Oil Rubbed Bronze Textured Powder TLV-Light Verdigris TWH-Textured White TBL-Textured Black TS-Textured Silver TBN-Terra Brown TBZ-Textured Bronze Premium: SA-Satin Aluminum	A. No Options EL. Emergency LED Remote mount up to 10' from lamping in controlled environment with an area temperature range of 32°-131°F. LED only. Specify 120 or 277 voltage.
	4lbs	H	in	6"	B. 1LED35	R3. 30deg		
	1.8kg	E	in	4"	C. 1LED40	R5. 50deg		
GL-6616	W	in	5"	mm 127	D. 1LED30HO			
	6lbs	H	in	12"	E. 1LED35HO			
	2.7kg	E	in	4"	F. 1LED40HO			
GL-6617	W	in	5"	mm 127	A. 1LED30			
	7lbs	H	in	18"	B. 1LED35			
	3.2kg	E	in	4"	C. 1LED40			
GL-6618	W	in	5"	mm 127	D. 1LED30HO			
	8lbs	H	in	24"	E. 1LED35HO			
	3.6kg	E	in	4"	F. 1LED40HO			
GL-6619	W	in	5"	mm 127	A. 1LED30			
	9lbs	H	in	36"	B. 1LED35			
	4kg	E	in	4"	C. 1LED40			
					D. 1LED30HO			
					E. 1LED35HO			
					F. 1LED40HO			

All dimensions are nominal.

Light Source Definition

CODE	LED	Wattage	CRI	Rated Life Hrs	Source Lumens	Kelvin
A	1LED30	13W	+80	50000	1270	3000
B	1LED35	13W	+80	50000	1270	3500
C	1LED40	13W	+80	50000	1270	4000
D	1LED30HO	19W	+80	50000	1814	3000
E	1LED35HO	19W	+80	50000	1814	3500
F	1LED40HO	19W	+80	50000	1814	4000

570 LANTERN

South Building roof-deck restaurant sconce

LED

TYPE

PROJECT: _____

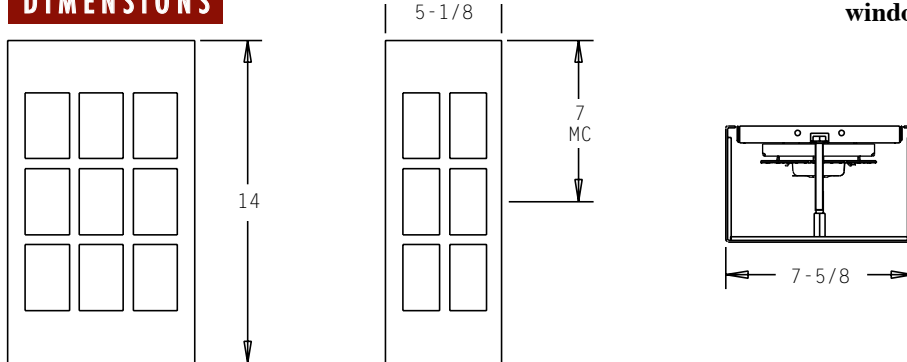
LOCATION: _____

FEATURES

- Traditional lantern is ideal for retail establishments and multi-family complexes.
- 16 gauge electro galvanized metal fascia will provide years of vandal proof operation.
- Fully enclosed and gasketed electrical compartment.
- Open top and bottom increases efficiency for higher light levels.
- No visible fasteners.
- Standard 0-10V dimming driver.
- Manufactured in the U.S.A.
- Wet location approved.
- **Available with different configurations or no windows. Consult factory.**

Indoor companion fixture available. See product 472.

DIMENSIONS



MC = Mounting Center
A 4" octagonal junction box should be used for installation.

ORDERING INFORMATION / OPTIONS EXAMPLE: 570-1LED19-BRZ

570

MODEL

570 - Lantern

LAMP

- 1LED9** - (1) 9W LED Module (1100 Lumens)
- 1LED14** - (1) 14W LED Module (1550 Lumens)
- 1LED19** - (1) 19W LED Module (2000 Lumens)

Consult factory for other available lamps and LED Wattages.

HOUSING FINISH

- WHT** - White
- BLK** - Black
- SAL** - Silver
- BRZ** - Bronze

Consult factory for other finishes.

OPTIONS

- TP** - Tamperproof Nuts
- 30K** - 3000 Kelvin Temperature
- 35K** - 3500 Kelvin Temperature
- 40K** - 4000 Kelvin Temperature



PHONE: 509.924.0243 • FAX: 509.924.2607 • www.indessa.com

Indessa Lighting reserves the right to make design revisions without prior notice.





Recessed wall-mounted
down-lighting
(roof top areas)

Wall, Step, Path Light **EL807** 120 / 277 Volt Die-Cast Aluminum LED

revision 5/21/14 • kl_el807_spec.pdf

Type:
Job:
Fixture Catalog number:

Fixture Mode Finish

Approvals:

Date:
Page: 1 of 1

Specifications

Housing: Die-cast low copper alloy (<0.6% Cu) aluminum with clear anodized finish. Two 1/2" NPT in sides. Housing mounts into concrete, brick, or masonry (non-combustible materials). Internal splice area provided behind lamp plate.

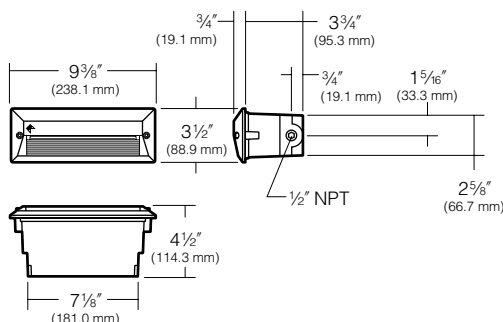
Lens Frame: Die-cast aluminum, with silicone gasket, attaches to housing with two captive 10-32 stainless steel, hex socket cap screws.

Lens: Tempered prismatic glass with silicone gasket, concealed above lens frame opening.

Finish: On lens frame only, Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black (**BL**), Dark Bronze (**DB**), and Verde Green (**GR**).

Optical System: A total of 3 or 9 LED emitters are configured together as a module. Available in 3000K, 4200K, 5100K and 580nm (amber).

Driver: Universal Voltage from 120 to 277V with a ±10% tolerance. -40° F. starting temperature. All drivers are Underwriters Laboratories recognized.



ORDERING INFORMATION

Fixture	Source
☐ EL807 / 3L2KUV¹	3.6W, 3 LED's, 580nm
☐ EL807 / 3L3KUV¹	3.6W, 3 LED's, 3000K
☐ EL807 / 3L4KUV¹	3.6W, 3 LED's, 4200K
☐ EL807 / 3L5KUV¹	3.6W, 3 LED's, 5100K

Fixture	Source
☐ EL807 / 9L2KUV¹	10.8W, 9 LED's, 580nm
☐ EL807 / 9L3KUV¹	10.8W, 9 LED's, 3000K
☐ EL807 / 9L4KUV¹	10.8W, 9 LED's, 4200K
☐ EL807 / 9L5KUV¹	10.8W, 9 LED's, 5100K

¹ Universal Voltage from 120 to 277V with a ±10% tolerance.
For 3.6W, Max Amps. are .030 for 120V, .020 for 208V, .015 for 240V, .013 for 277V. For 10.8W, Max Amps. are .090 for 120V, .050 for 208V, .045 for 240V, .040 for 277V..

Finish

- ☐ **BL** - Black
- ☐ **DB** - Dark Bronze
- ☐ **GR** - Verde Green

Listings and Ratings

UL cUL 1598 ¹	IP66 Rated	25C Ambient
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¹Suitable for wet locations
KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

5.0 DEVELOPMENT ANALYSIS

5.1 Days and Hours of Operation

Component	Days	Hours	Notes
Retail	7days/ wk	8am-9pm	All retail is street accessed and hours may vary with retailers, e.g. a coffee shop may open earlier.
Office/ Meeting	7days/ wk	8am-11pm	Office 8am-5pm; Meeting space may be open later for special events
Residential	7days/ wk	24/7/365	
Parking	7days/ wk	24/7/365	

Restaurant and amenity hours TBD

5.2 Number of Employees

The number of employees of the facility (maintenance, concierge, plant operations, etc) is estimated to be less than 20. The number of retail and restaurant employees cannot be estimated at this time.

5.3 Traffic Generation Analysis

See attached **traffic study** with updates for the current program.

5.4 Phasing Schedule

See attached updated **schedule**.

5.5 Noise

The proposed project would not result in adverse noise impact as it relates to the Burlington Noise Code (Section 21-13). The project would not be expected to include specific noise generating activities which are prohibited according to the Noise Code.

The development will include retail and office uses similar in nature and character to existing uses on the site and on abutting parcels typical of the downtown. Parking, loading docks, and trash and recycling facilities are partially enclosed within the building which would improve current conditions. The outdoor fifth floor tenant park will only be accessible to the office tenants and the pre-kindergarten program during normal business hours. Standard mechanical equipment will be located on the building roofs and would be enclosed which would substantially reduce noise to the community.

See attached **updated noise study**.

5.6 Archaeological impacts

The development is located entirely within a site previously distributed during the urban renewal projects that resulted in excavation, disturbance and removal of soils to a depth below anticipated features of archeological significance. Based on this and a review with Planning and Zoning Staff and archeological professionals, it has been determined that the site does not require any further study.

6.0 MAJOR IMPACT NARRATIVE pursuant to Zoning Section 3.5.6(b):

As part of the redesign efforts and the rollout of the revised project, all city departments were invited to a meeting held at the Department of Public Works building on January 9, 2020, to understand how changes to the project might impact the services they provide.

6.1 The project will not result in undue water, air or noise pollution. Currently, most or all of the stormwater runoff from the site is discharged untreated to the City of Burlington combined sewer and stormwater collection system which is conveyed to the Main Wastewater Treatment Plant for treatment. The proposed project will manage stormwater runoff via filtering through a green roof (for a portion of the project roof), streetscape stormwater treatment features (such as pervious pavers and vegetated filtration planters) and attenuated storage in below grade stormwater cisterns prior to discharge to the municipal system, thus improving the quality and reducing rate of stormwater discharge from the project site. Sanitary sewage from the project will be discharged to the municipal system and conveyed to the Main Wastewater Treatment Plant for treatment. Coordination with the Burlington Department of Public Works is ongoing to configure discharge locations around the project based on municipal capacity. Proposed mechanical equipment and additional parking within the project will not result in undue additional air pollution.

Refer to Section 5.5 “Development Analysis” above and the **attached** noise study.

Also refer to the **attached** Contractor Dust Mitigation Control Measures.

6.2 The domestic water demand for the project as detailed in this submission is 94,652 gpd, a reduction when compared to the previous version of the project. Coordination with the Burlington Department of Public Works has indicated that there is sufficient reserved water supply available for this project. In addition, adequate flow and pressure for fire suppression is available, and at the time of submission, we believe the reduction in height will alleviate the booster pump requirement of the former 14-story design.

6.3 The project site is bounded by municipal waterlines to the north and south and a new municipal waterline is proposed in the new section of Saint Paul Street to the east. This new line will improve the downtown distribution system connectivity. The proposed project does not unreasonably burden the city’s present or future water supply or distribution system.

6.4 The existing site is essentially 100% covered with impervious surface (building, concrete and asphalt). The proposed site is similarly covered with impervious surface with the addition of a green roof, plantings, and pervious pavers around the perimeter of the site. Neither existing nor proposed site conditions will cause unreasonable soil erosion or reduce capacity of the land to hold water. During construction, standard urban erosion control measures will be administered including perimeter silt fencing where appropriate, inlet protection, stone construction entrances, temporary sedimentation basins, filtered de-watering and street sweeping as necessary. In general, the majority of the site will be excavated below surrounding grades by several feet during foundation work and, once grades met, stabilized with crushed stone and eventually concrete. Due to the downtown location, there will be minimal soil stockpiling for extended durations.

6.5 The CityPlace Burlington project is not expected to generate unreasonable congestion or unsafe conditions within Burlington’s transportation system. As demonstrated in the project’s **Traffic Impact Study**, the City of Burlington’s existing grid street network, transit facilities, sidewalk network, and bicycle facilities can adequately accommodate the additional trips generated by the proposed Burlington Town Center project. The project is located in the downtown core of Burlington, surrounded by a dense network of sidewalks and bicycle amenities and directly across the street from recently completed Green Mountain Transit Downtown Transit Center. The proximity and availability of these amenities will result in a significant number of site-generated trips occurring by non-automobile mode (e.g., by foot, by bicycle, and by bus).

The density and mix of uses proposed for the project will likely result in some trips occurring entirely with the CityPlace project (e.g., apartment to office to restaurant), and thus not impacting the adjacent street network. An important aspect of the project is the proposed construction of Pine Street and St. Paul Street between Bank Street and Cherry Street to restore the City's street grid in this area. In addition to improving overall downtown connectivity, the new blocks of Pine Street and St. Paul Street will enhance bus accessibility from the Downtown Transit Center and create new routes for existing cross-town trips, thereby reducing overall delay on parallel north-south streets including Battery Street and South Winooski Avenue.

6.6 The Burlington School District 2019 Annual Report listed total enrollment of 3,565. A letter from the Burlington School Department dated February 5, 2004 regarding proposed housing at the nearby Battery and Cherry Street developments estimated 0.127 school age students per 2-bedroom unit based on a 1990 Cannon Associates report. A 2007 report from VHFA titled Housing and Vermont School Enrollment estimated 0.69 Children per "attached" 3 bedroom unit, 0.13 school aged children per "attached" 2-bedroom unit, and 0.18 school aged children per 2-bedroom unit in buildings with 2-4 units. Based on these documents, a value of 0.15 school aged children per 2-bedroom unit and 0.69 per 3-bedroom unit is assumed for this development. There are 426 units of housing proposed for this development with a mix of 7 3-bedroom apartments, 88 2-bedroom apartments, 223 1-bedroom apartments, and 108 studio apartments. Assuming no school age children in the studios and 1-bedroom units, an estimated number of school age children in this development is 18.03. This represents less than ½% of the current enrollment and should not cause an unreasonable burden on the city's ability to provide education services.

6.7 Not place an unreasonable burden on the city's ability to provide municipal services; A technical review meeting was convened with municipal departments on January 14, 2016 to review the project and the city's ability to provided municipal services. Based on input at the meeting there was not indicated that the project would place an unreasonable burden on the city's ability to provide municipal services. Coordination with municipal departments has been ongoing since the initial permit submission and additional meetings have been held with Public Works and other departments after the redesign effort was unveiled in early 2020 to address technical review comments; a meeting to review the redesigned building held on January 9, 2020 also did not indicate any unreasonable burden on city services. Ability to service letters will be requested from municipal departments as necessary.

6.8 The project will not have an undue adverse effect on the features noted above. There are no irreplaceable or significant natural areas located on the project site. The existing structures proposed to be demolished for the project were constructed during the period of urban renewal and are all less than 50 years old and not considered historic. As noted in Section 5.6 Archeological Impacts above, the site was previously disturbed during the urban renewal redevelopment and no significant archeological features are anticipated to have survived. The project will be visible from locations throughout the city; however, the size, massing and materials will meet the Form Based Code regulations and not have an undue adverse effect on the scenic or natural beauty of the area or any part of the city, and the lower height in this amended application only reduces the impacts.

6.9 The project will not have an undue adverse effect on the city's growth, fiscal capability or public services and facilities. The project meets many of the initiatives identified in PlanBTV and the city municipal development plan in support of appropriate growth in the city and increased tax base revenue to support public services and facilities.

6.10 The project is in substantial conformance with the city's Municipal Development Plan adopted March 31, 2014, PlanBTV Downtown and Waterfront plan adopted June 10, 2013, the Housing Action Plan, the Great Streets Initiative, the Climate Action Plan and the Legacy Action Plan and the 2013 College Street Stormwater Shed Retrofits Green Infrastructure Plan. Specific Plan BTV themes supported by this project include:

- Building a vibrant economy: What was once an enclosed, inward looking shopping mall will be transformed into a new development that still includes retail, but better aligns the amount of retail with the trend of declining demand for brick and mortar retail. It is anticipated that some of the retail will be services targeted towards downtown residents- including the new residences in this project. The presence of 426 new apartments will also provide new customers for existing downtown businesses and help with the housing crunch that has made hiring a challenge for local businesses.
- Addressing a Changing Climate: The project is being designed to exceed Vermont's already progressive 2020 Commercial Building Energy Standards, and is registered for LEED, with a completed preliminary review showing that it is on track for certification at the Gold level. The project includes vegetated and light-colored membrane roofs to address the urban heat island effect, and the vegetated roofs are also a component of a multifaceted plan to manage stormwater- an important consideration given that climate change has already brought more intense rainfall events to Vermont. The building is also designed for the incorporation of photovoltaic panels to offset its electrical energy use, and is located next to Vermont's largest transit hub, making it the most accessible location in the state without a personal vehicle.
- The Housing Nut: The project has evolved to incorporate even more housing, helping to address issues of high demand and low supply, particularly in the downtown core.
- Getting around Town: The disconnect in the network of north-south streets caused by the old mall superblock is noted as a problem multiple times in the PlanBTV document, including a text box on Page 70 and extensive discussion on page 108 (of the original June 10, 2013 document). The project restores the missing sections of Bank and St Paul street, essentially doubling the number of north-south routes downtown, for all transportation modalities. The new streets and the sections of Bank and Cherry Streets abutting the project have been designed to Great Streets standards, in close coordination with the Department of Public works and their Downtown Great Streets design consultant. Wider sidewalks, ample bike parking, and the location next to the downtown transit center all enhance transportation options for CityPlace residents and all citizens of and visitors to Burlington.
- Park It Burlington: The project will include 422 parking spaces and will use parking demand management strategies to optimize parking usage and provide transportation alternatives to residents.
- The Green Machine: Stormwater management strategies have been developed with and approved by the stormwater team at the department of Public Works and will substantially reduce stormwater impacts of this site on the city's infrastructure, by absorbing some stormwater with the green roof and pervious portions of streetscape and retaining and delaying discharge to the stormwater system, including combined sections, until it can accommodate the runoff. The project will also implement Silva cells to allow street trees more space for root development, and larger tree grates to allow more rainwater to infiltrate to the roots.

6.11 A major component of the project is to provide a significant number of new housing units. The project as currently planned contains a total of 426 units. There are 7 3-bedroom apartments, 88 2-bedroom apartments, 223 1-bedroom apartments, and 108 studio apartments out of which 85 units (24 2BRs, 24 1BRs, & 7 studios) will be permanently affordable. According to the 2019 Census ACS data, Burlington has a 2.18% rental vacancy rate, well below the national average of 5.97%. While the project will add some retail jobs, the

re-imagined project is strongly focused on housing and the 426 units will likely house upwards of 850 people, and mark a significant increase in the population and availability of housing in our downtown core, more than offsetting the increase in housing due to job creation. There is a particularly high demand for housing within the City of Burlington, and PlanBTV notes that downtown housing is in particularly short supply (p.60) and has impacted the ability of local business to attract an educated workforce. The PlanBTV report cites the mall site as one of two “ideal locations” for new downtown housing (p.62). In focusing on the mall, the report states, “With underdeveloped air space above the mall, and a relatively high and flat area of the City that has little impact on prominent views, this quadrant of downtown is well suited for larger residential structures” (p. 108). In short, a primary goal of this project is to provide housing in a location that has been identified by citizens and planners as having a high demand for housing and a high potential for redevelopment.

6.12 The project helps to fulfill several goals of Burlington’s PlanBTV Downtown and Waterfront Document that are outlined by facilitating the re-opening of portions of St. Paul and Pine Streets that were subsumed into the urban renewal “superblock”, the project facilitates the movement through downtown, removing barriers to north-south travel, and providing new “complete streets” that include wide sidewalks, street trees, and street furniture, and support for multiple modes of transportation while focusing on a pedestrian experience. The project will help enliven the area just north of City Hall Park and improve the experience of Cherry Street. By enhancing the street life in the area around the mall, the project will enhance the connection between Church Street and Waterfront Park. The project will also include a rooftop observatory, green roof spaces, and street-level outdoor spaces that could provide additional space for popular events such as the Discover Jazz Festival. A day care facility planned for the site will help meet a clear need for childcare. The increased density of the project will bring more residents and office workers to downtown areas that are well served by existing parks facilities- but at the same time, the project will give back street space to the public and enhance the aesthetics and experience of existing streets.

7.0 MAJOR IMPACT REVIEW INTERDEPARTMENTAL CHECKLIST

Request for impact review letters will be sent to each department below:

- Department of Public Works for written input on municipal water and sewer needs, stormwater management, erosion control, and traffic impacts.
- Department of Parks and Recreation for written input on park and recreation needs.
- School Department for written input on educational impacts.
- Fire Department for written input on anticipated fire and emergency response impacts.
- Police Department for written input on anticipated police service impact.

8.0 DRAWING LIST

The drawing list can be found on the second page of the drawing submission (Sheet A000.1)

TRAFFIC IMPACT STUDY

CityPlace Burlington Traffic Impact Study

Burlington, VT

PREPARED FOR

BTC Mall Associates, LLC
101 Cherry Street, Suite 440
Burlington, VT 05401
212.203.2018

PREPARED BY



VHB
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MARCH 2020

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1

Introduction and Existing Conditions

VHB has completed a Traffic Impact Study (TIS) for the proposed redevelopment of the Burlington Town Center Mall between St. Paul Street and Pine Street into a mixed-use Burlington CityPlace that includes parking, residential, a hotel, restaurant, and retail uses.

1.1 Project Overview

BTC Mall Associates, LLC proposes to develop a multi-use project (Burlington CityPlace) within the Downtown Mixed-Use Core Overlay (DMUC) District on the project site presently occupied by Burlington Town Center Mall at 49 Church Street. The site is currently spread across six parcels of land, and will be reconfigured into five, two of which will be turned over to the City of Burlington for use as new public through-street extensions of Pine Street and St. Paul's Street, between Cherry and Bank Streets.

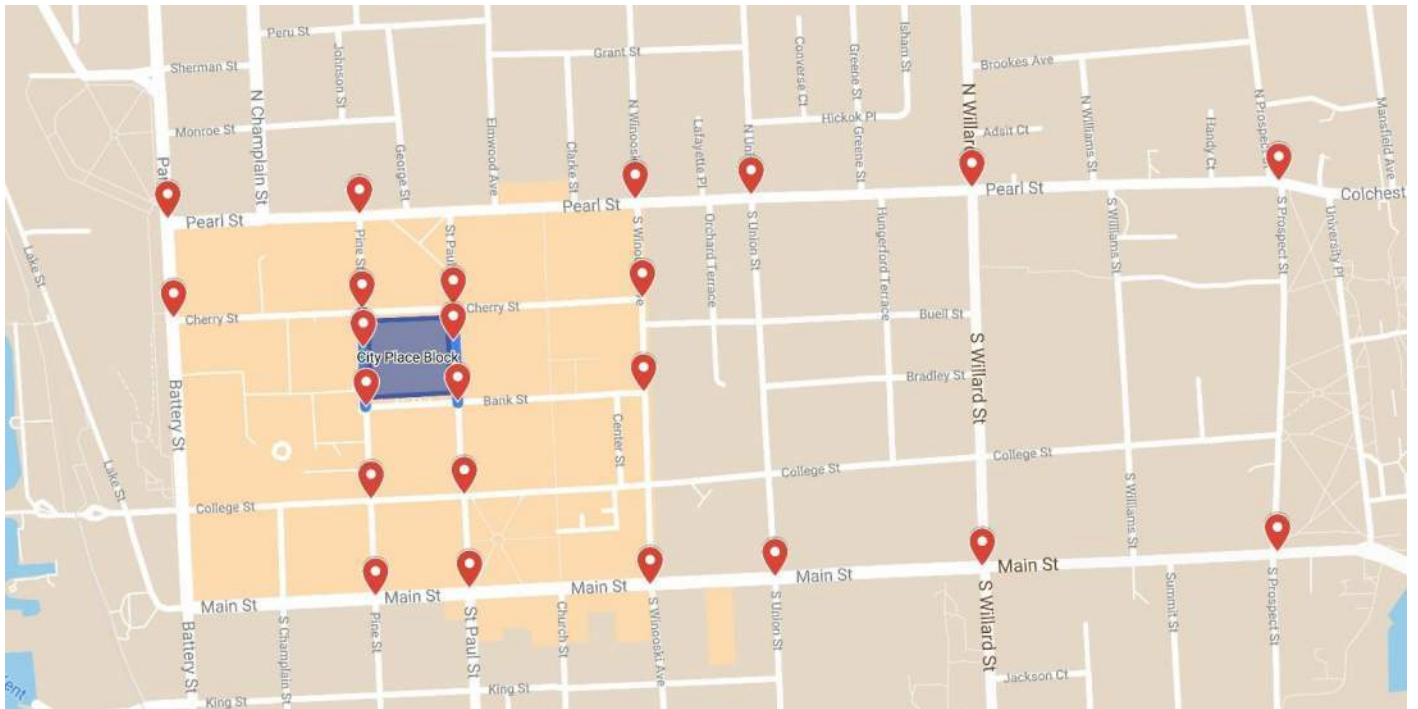
This Traffic Impact Study includes the following elements:

- A description of the existing transportation network in the vicinity of the site;
- A summary of the crash data within the study area;
- A description of the proposed development program;
- A trip generation estimate for the proposed development program;
- An evaluation of traffic operations at 23 intersections within the study area; and
- Conclusions and recommendations to support the project.

This report was developed to address the following Major Impact Review Standard, as outlined in the City of Burlington's Comprehensive Development Ordinance (Section 3.5.6(b)):

Criteria #5: The proposed development shall not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed.

As part of this study, a total of 23 intersections were evaluated and summarized in terms of level of service (LOS) and delay in order to estimate how the proposed project impacts the local street network. Additional reviews and evaluations are contained within this report which summarize the existing and proposed project area as it relates to traffic and safety impacts. The general project area and traffic study intersections are shown below in Figure 1.

Figure 1: Project Location and Study Intersections

1.2 Existing Conditions

The project site is bounded by Cherry Street to the north, St. Paul Street to the east, Bank Street to the south, and Pine Street to the west. The existing Burlington Town Center and CityPlace malls consisted of approximately 170,000 square feet of commercial space on two floors, comprised of national, regional, and local retailers. The proposed project will involve a redevelopment of a portion of the existing mall between St. Paul Street and Pine Street, with the existing mall stores between St. Paul Street and Church Street remaining largely unchanged.

The downtown intersections being evaluated for this project were identified based on input from City staff and generally include the known major intersections, as well as all intersections in the immediate vicinity of the redevelopment. **Table 1** provides a summary of the intersection control type and lane configurations at the 23 intersections being evaluated as part of this project.

Table 1: Study Intersection Summary

Intersection	Control Type	Stop Control Approach	Approach Lane Configuration
1. Pine / 67 Cherry St Garage / CPB Garage		East & Westbound	Single lane approaches
2. St. Paul Street / Parking Garage		Westbound	Single lane approaches
3. Pine Street / Bank Street / Parking Garage		West & Southbound	Single lane approaches
4. Pine Street / Cherry Street		Southbound	Single lane approaches
5. Pearl Street / Battery Street / Park Street			EB: 1 left, 1 right NB: 1 through, 1 right
6. Pearl Street / Pine Street			Single lane approaches
7. Pearl Street / Winooski Avenue			EB: 1 through, 1 right WB: 1 through, 1 left NB: 1 left, 1 right SB: 1 through, 1 through/right, 1 left
8. Pearl Street / Union Street			EB: 1 through, 1 left NB: 1 through/right, 1 left
9. Pearl Street / Willard Street			Single lane approaches
10. Pearl St / Prospect St / Colchester Ave			WB: 1 through, 1 left NB: 1 through, 1 left, 1 right
11. College Street / Pine Street		All-way stop	Single lane approaches
12. College Street / St. Paul Street		All-way stop	Single lane approaches
13. Main Street / Pine Street			Single lane approaches
14. Main Street / St. Paul Street			Single lane approaches
15. Main Street / S. Winooski Avenue			EB: 1 through/right, 1 left WB: 1 through, 1 left, 1 right SB: 1 through, 1 right, 1 left
16. Main Street / S. Union Street			EB: 1 through, 1 left NB: 1 through/left, 1 right
17. Main Street / S. Willard Street			EB: 1 through/right, 1 left WB 1 through/right, 1 left
18. Main Street / S. Prospect Street			EB: 1 through, 1 through/right WB: 1 through, 1 left, 1 right NB: 1 through, 1 right SB: 1 through/right, 2 left
19. S. Winooski Aveue / Cherry Street			EB: 1 through/right, 1 left WB 1 through/right, 1 left
20. S. Winooski Aveue / Bank Street			EB: 1 right/left NB: 1 through/left, 1 through SB: 1 through, 2 through/left
21. St. Paul Street / Bank Street		All-way stop	Single lane approaches
22. Battery Street / Cherry Street			WB: 1 right/left NB: 1 through/right, 1 through SB: 1 through/left
23. St. Paul Street / Cherry Street			Single lane approaches

1.3 Crash Summary

VTrans evaluates reported crash data and identifies High Crash Location (HCL) intersections and sections that have a minimum of five reported crashes in five years and have an actual-to-critical ratio greater than 1.0. The actual-to-critical ratio compares the actual crash rate at a given location to a critical crash rate calculated for similar facilities statewide. A review of VTrans' most recent HCL Report (2012 – 2016)¹ revealed that nine intersections and three sections within the study area are HCLs. These HCLs are summarized in **Table 2**.

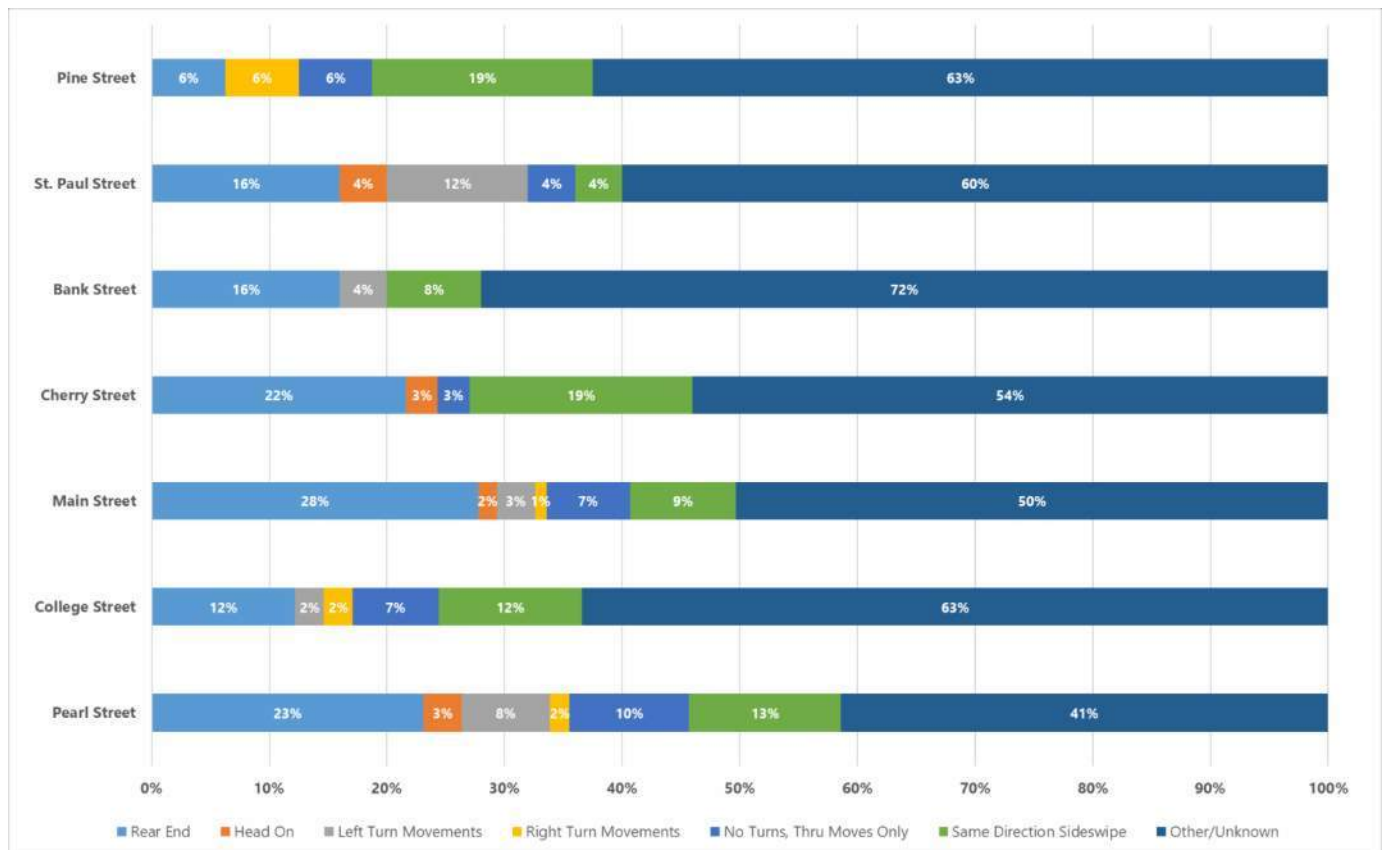
Table 2: High Crash Locations within Project Area

Rank	Location	Mileage	AADT	Crashes	Fatalities	Injuries	PDO Crashes	Actual / Critical Ratio
Intersections								
1	Main Street and S Winooski Ave	0.990 - 1.010	17860	98	0	11	90	3.347
11	Main Street and S Prospect Ave	0.220 - 0.240	25940	72	0	9	65	1.958
14	Main Street and S Willard Street	2.110 - 2.130	21400	65	0	9	58	1.910
20	Pearl Street and N/S Union Street	0.000 - 0.010	5300	19	0	5	15	1.712
24	Main Street and St. Paul Street	0.250 - 0.270	15225	39	0	7	32	1.648
25	Pearl Street/Colchester Ave and N/S Prospect Ave	0.930 - 0.940	17450	43	0	12	34	1.640
38	Pearl Street and N/S Winooski Ave	1.310 - 1.330	17100	61	0	13	51	1.452
47	Pearl Street and N/S Willard Street	2.420 - 2.440	16780	57	0	13	47	1.379
52	Main Street and S Union Street	0.520 - 0.540	16410	37	0	9	30	1.355
Sections								
21	Pearl Street	0.000 - 0.300	8040	88	0	7	82	3.445
172	Pine Street	1.100 - 1.400	8450	49	0	10	40	1.841
277	S Winooski Avenue	0.600 - 0.900	3447	25	0	2	23	1.558

In addition to reviewing the 2012-2016 VTrans HCL report, the latest reported crash data (2014 – 2019) for the study area was reviewed via the online VTrans Public Crash Data Query Tool.² Figure 2 below summarizes reported crashes by type along the corridors included in this study.

¹ High Crash Locations Report: Intersections and Sections (2012 – 2016), Vermont Agency of Transportation, 2017.

² VTrans Public Crash Data Query Tool. <http://apps.vtrans.vermont.gov/CrashPublicQueryTool/home/index>

Figure 2: Study Corridor Crashes by Type (2014-2019)

The following are observations based on a review of reported crash data in the vicinity of the project.

- Of the project corridors, Main Street had the most crashes (310) with Pearl Street having the second most (180). Main Street has much higher volumes and a number of large signalized intersections, include the one at South Winooski Ave which is the highest ranked HCL in the State.
- Across all of the study intersections, the most common crash types at these intersections are rear ends and sideswipe crashes. This is common in urban areas due to abrupt stopping traffic turning into the numerous driveways and side roads in downtown Burlington.
- Across all study area intersections, 76% of crashes occurred during the day and over 50% occurred on dry road conditions.
- Of the 641 intersections between 2014 and 2019, 9 involved pedestrians and 15 involved bicycles. Most of these crashes resulted in injury. In recent years, bicycle traffic has increased across the City and there have since been efforts to bolster bicycle infrastructure throughout Burlington.



Project Trip Generation

Site generated trips for CityPlace were calculated using ITE Trip Generation Manual standards. These trips were distributed onto the roadway network based on existing and anticipated traffic patterns and were analyzed under opening (2021) and future year (2026) conditions. This chapter outlines the trip generation, distribution, and analysis processes

2.1 Trip Generation

The proposed redevelopment program consists of constructing a mixed-use CityPlace that includes parking, residential units, retail spaces, a restaurant, and a hotel. Primary vehicular access and egress is provided to the internal parking garage via mid-block access points on the newly constructed St. Paul and Pine Streets. The project is located in the downtown core, surrounded by a dense network of sidewalks and bicycle facilities and directly across the street from the recently completed Green Mountain Transit (GMT) Downtown Transit Center. The proposed layout of the project is shown in **Figure 3** on the following page.

The proposed redevelopment of Burlington CityPlace includes the following general components:

- Residential – 350 apartment units
- Retail – 45,900 square feet
- Restaurant – 8,100 square feet
- Hotel – 200 rooms

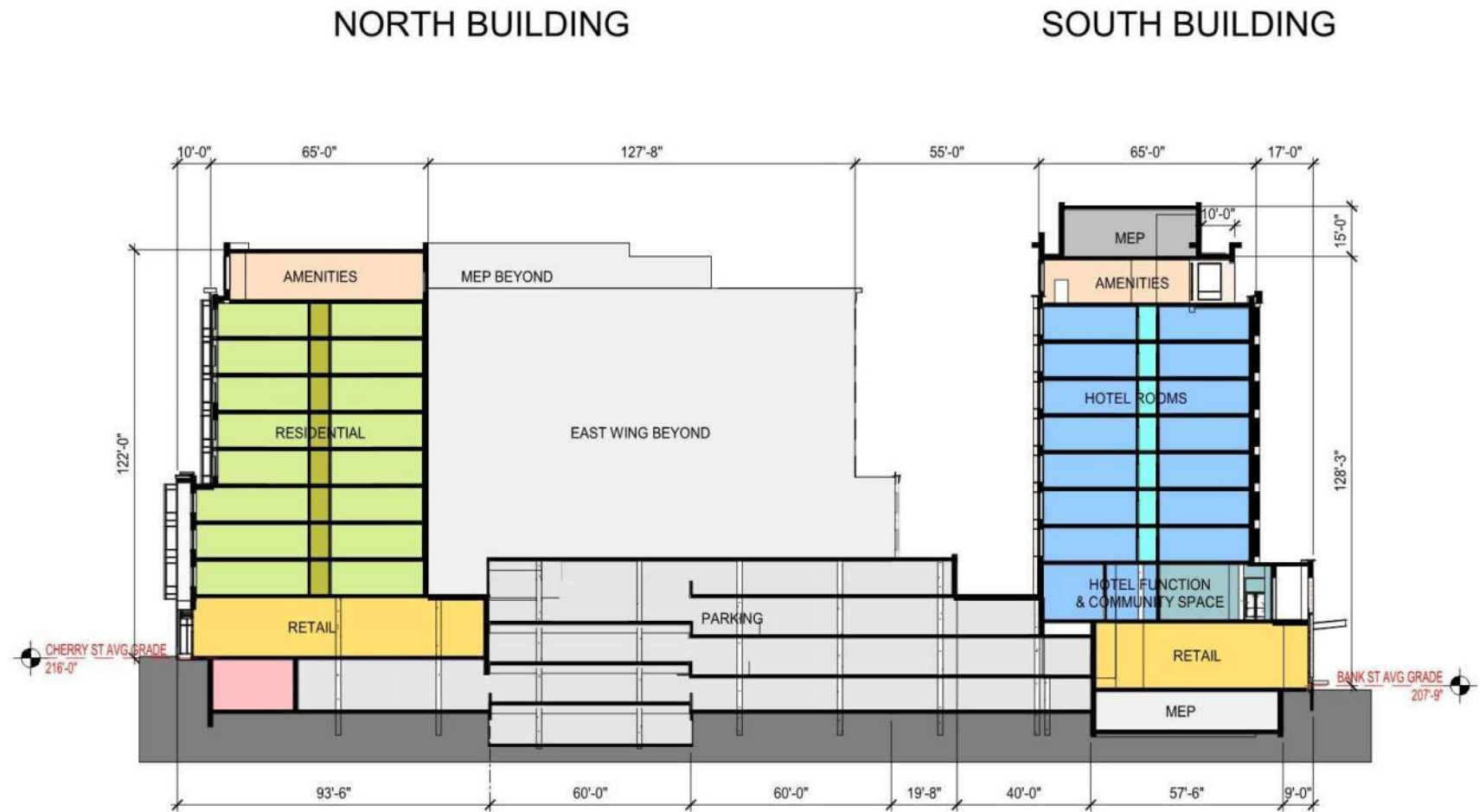
Parking will be provided in a four-story garage accessible from Pine Street and St. Paul Street. The garage will not be standalone structure but will be wrapped by retail and residential uses. A total of 550 parking spaces will be provided on site. Indoor bike parking will also be provided in the parking garage, as well.

Trip generation estimates for the proposed development program were calculated using rates published by the Institute of Transportation Engineers (ITE) in Trip Generation.³ The land use codes (LUCs) assumed for this project include Multi-Family Housing (High-Rise) (*LUC 222*), High-Turnover (Sit-Down) Restaurant (*LUC 932*), Hotel (*LUC 310*), and Shopping Center (*LUC 820*).

Table 3 summarizes the trip generation estimates for the proposed development during the weekday morning and weekday evening peak hours. Calculations supporting the proposed trip generation estimates are provided in the Appendix.

³ Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Figure 3: Proposed Site Layout (Source: *Freeman French Freeman, 2020*)



PR-300
N-S SECTION
LOOKING EAST
SCHEMATIC DESIGN

Table 3: Peak Hour Site Trip Generation Estimate

	Total Peak Hour Site Generated Trips				Net New Vehicle Trips
	Total New Trips	Transit	Bike & Pedestrian	Internal Capture	
Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)
Weekday Morning		5%	25%	13%	
Enter	154	7	33	21	93
Exit	<u>177</u>	<u>8</u>	<u>39</u>	<u>21</u>	109
Total	331	15	72	42	202
Weekday Evening		5%	25%	33%	
Enter	276	10	48	83	135
Exit	<u>232</u>	<u>7</u>	<u>37</u>	<u>83</u>	105
Total	508	17	85	166	240

Given CityPlace's location in downtown Burlington, with its interconnected network of sidewalks and bicycle facilities, and the site's proximity to the new GMT Downtown Transit Center, it is reasonable to assume that a portion of the person-trips generated by the proposed project will occur by foot, by bicycle, or by bus.

The modal splits utilized in this trip generation estimate were based on US Census Journey to Work and American Community Survey Data for Burlington and incorporate a 25% bike/walk mode share and a 5% transit mode share.

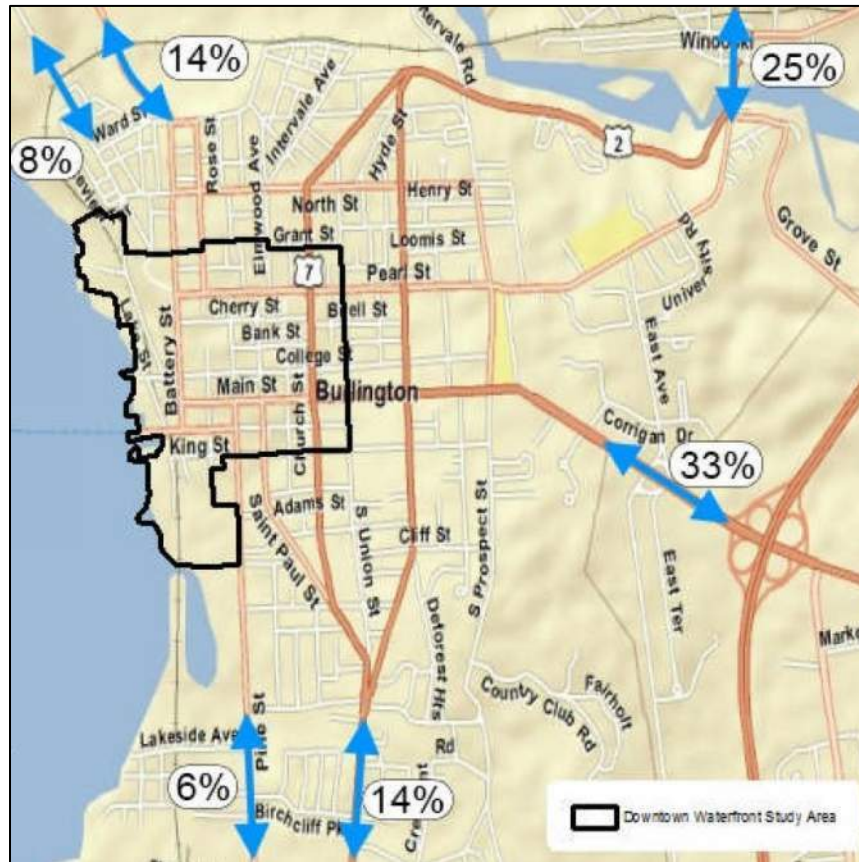
Mixed use developments such as the Burlington CityPlace project generate *internal capture* trips which are defined as trips having multiple destinations within a given project site (for example, a resident of the Burlington CityPlace picks up a coffee and stops at a retail establishment before departing for work would represent three individual trips, two of which were internally captured within the project site). The level of shared trips/internal capture for this project (13% of AM trips and 33% of PM trips) was determined based on information published by the Transportation Research Board (TRB) in *NCHRP Report 684*.⁴

2.2 Trip Distribution

The directional distribution of site-generated traffic was developed based on the Chittenden County Regional Planning Commission's regional travel demand model as summarized within the PlanBTV Transportation Study Final Report⁵. The data presented was then adjusted to account for the existing travel patterns within Burlington and the surrounding area.

⁴ "Enhancing Internal Trip Capture Estimation for Mixed-Use Developments", Transportation Research Board, Washington D.C., 2011.

⁵ PlanBTV Transportation Study: Final Report, RSG, Inc., October 2011.

Figure 4: Source of External Trips Destined for Downtown Burlington (source: *Plan BTV Transportation Study, RSG, 2011*)

A more detailed figure showing weekday AM and PM peak hour trip generation on the adjacent street network can be found in the Appendix.



Future Conditions

Existing traffic volumes were increased to future opening (2021) and future (2026) conditions. Traffic associated with seven approved projects was added to future background traffic growth in the area including any diversions associated with Champlain Parkway. The conditions with and without the proposed project were determined. The capacity analysis was completed using Highway Capacity Manual standards and results are presented in terms of Level of Service, volume to capacity ratio, and delay per vehicle.

3.1 Traffic Networks

The weekday AM and weekday PM peak periods were selected for analysis purposes as they represent the peak conditions for the both the site-generated traffic and the adjacent street system. Turning movement count data at the 23 study intersections was obtained from the Traffic Impact Study completed for the Burlington CityPlace phase 1 project that was reviewed by the City and approved in 2017. Those volumes had included recent counts conducted by VHB, the Chittenden County Regional Planning Commission, and VTrans adjusted to a common 2021 Design Hourly Volume (DHV) condition. It should be noted that Macy's was operational when traffic counts were conducted and to be conservative, these were left in the baseline data. To evaluate the impact of the proposed development within the study area, AM and PM peak hour traffic volumes were projected to the opening year (2021) and a 5-year forecast horizon (2026). Copies of the traffic volume count data are provided in the Appendix.

3.2 Background Growth

Traffic growth is a function of expected land development in the region. To predict a rate at which traffic can be expected to grow during the forecast period, historical traffic growth was examined. The regression analysis chart in the 2018 VTrans Redbook⁶ for the urban street group suggests that traffic is anticipated to grow by a factor of 1.03 between 2021 and 2026. Any background growth factors were taken directly from the tables in the 2018 Redbook.

Conversations with the City of Burlington Traffic Engineering Peer Reviewer revealed that there were projects currently under consideration in the vicinity of the development whose traffic should be considered in the No Build and Build analyses. The developments are the Cambrian Rise project on North Avenue, a housing development on Fletcher Place, Burlington CityPlace phase 1, the new YMCA, and the Cambria Hotel which is replacing the previous YMCA. Trip generation estimates came from the traffic studies which were submitted to the City for each of these projects, except for the Fletcher Place housing development. The trips generated by this project were estimated using the ITE Trip Generation Manual.

As requested by the City's Department of Public Works, traffic volumes were adjusted to account for the effects of the Champlain Parkway. Traffic volume projections from the *Southern Connector/Champlain Parkway MEGC-M5000(1)* study prepared by CHA were used to establish the necessary traffic volume adjustments in the 2021 and 2026 No Build and Build scenarios.⁷

⁶ Continuous Traffic Counter Report (The Redbook), Vermont Agency of Transportation, 2019.

⁷ Volumes from the 2009 Champlain Parkway Final Supplemental Environmental Impact Statement scenario, "2028 PM Peak Hour Traffic Volumes C-1 Section & C-2 Section Only" were used under the Champlain Parkway No Build and Build conditions.

3.3 No Build and Build Traffic Networks

The 2021 and 2026 No Build traffic volumes were developed by applying growth factors from the VTrans regression analysis chart for urban roadways to DHV-adjusted peak hour traffic volumes. These volumes include the background traffic growth, the permitted development trips specified in Section 1.4, and the site generated trips calculated in the previously permitted Burlington CityPlace Phase 1 traffic study⁸. The 2021 and 2026 No Build weekday AM and weekday PM peak hour volumes are shown in **Figure 5** and **Figure 6**.

Based on the expected trip distribution methodology summarized previously, the site-generated trips were added to the 2021 and 2026 No Build peak hour traffic volumes to establish the 2021 and 2026 Build networks for the proposed CityPlace. As with the No Build scenario, these volumes include background traffic growth, permitted development trips, with the exception of the previously permitted Burlington CityPlace Phase 1. These Build networks are shown in **Figure 7** and **Figure 8**. For additional clarification, the following lists describe all of the developments included in the No Build and Build scenarios.

No Build

- Previously Permitted Burlington CityPlace (Phase 1)
- Champlain Parkway
- Cambrian Rise
- Cambria Hotel
- Fletcher Place Housing Development
- Hotel Champlain
- YMCA

Build

- Current CityPlace Building Program
- Champlain Parkway
- Cambrian Rise
- Cambria Hotel
- Fletcher Place Housing Development
- Hotel Champlain
- YMCA

⁸ Burlington Town Center Traffic Impact Study, VHB. 23 January 2017.

Figure 5: 2021 No Build Peak Hour Traffic Volumes

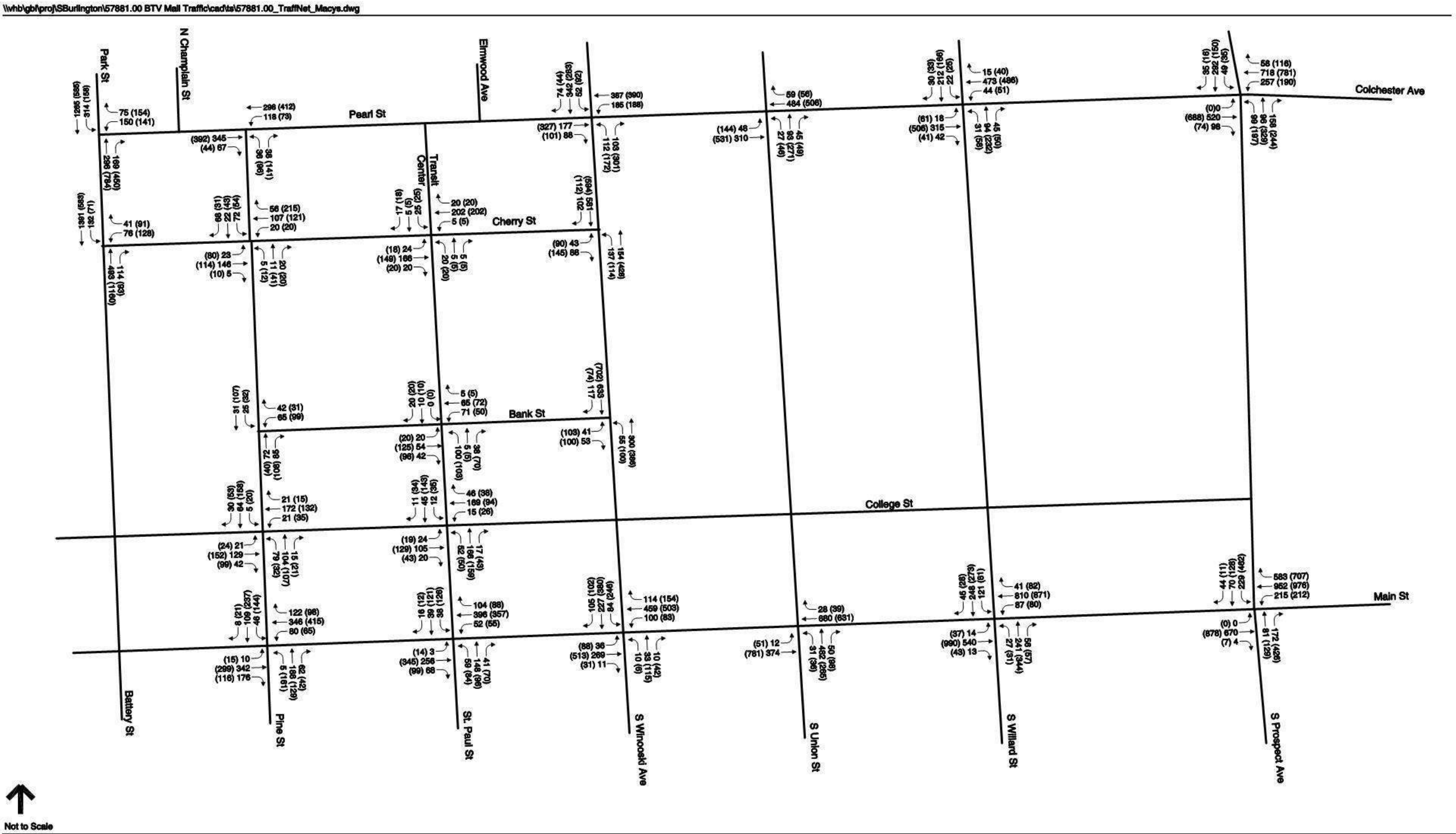


Figure 5
2021 No Build Traffic Volumes

CityPlace Burlington

Figure 6: 2026 No Build Peak Hour Traffic Volumes

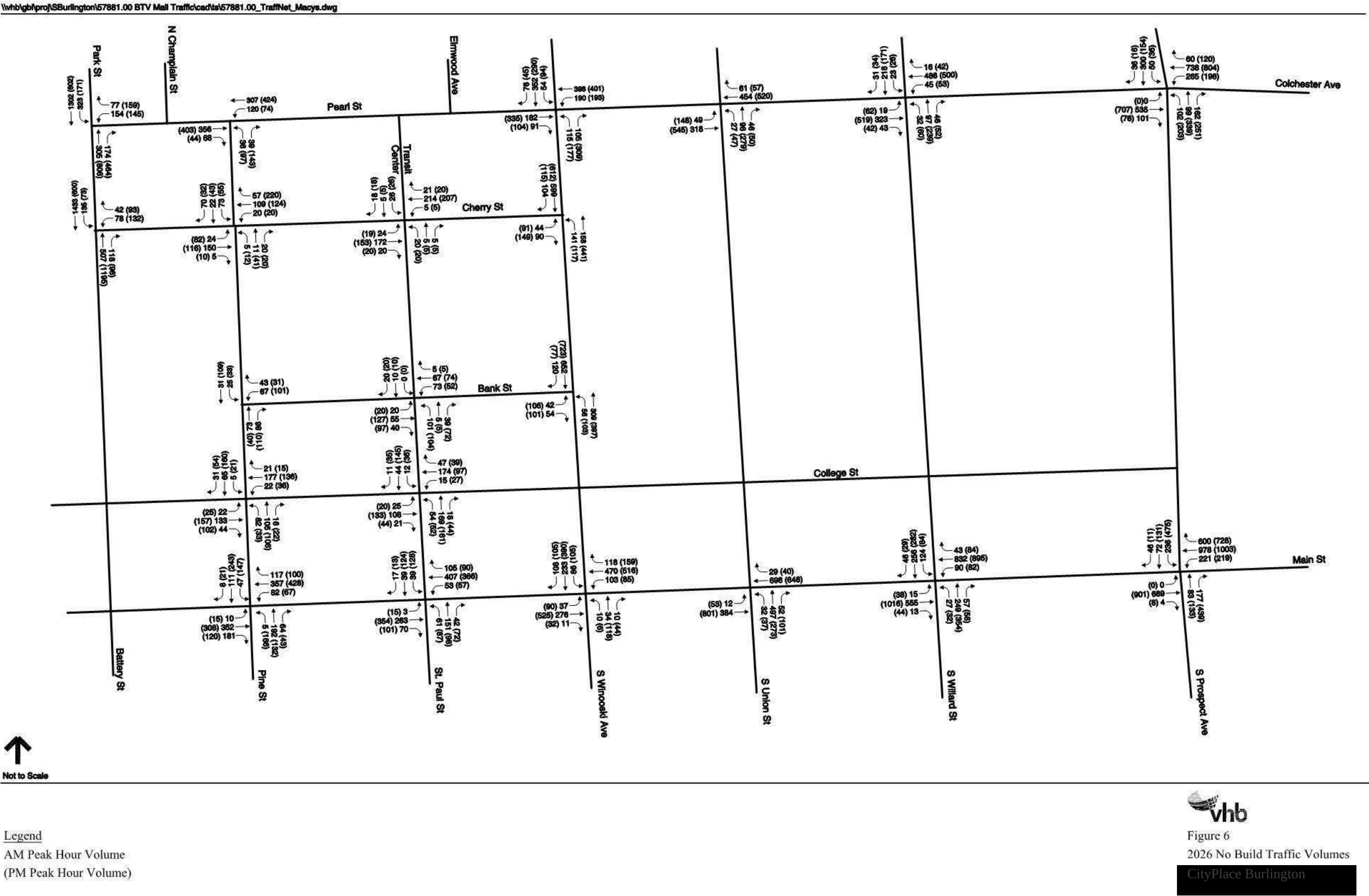


Figure 7: 2021 Build Peak Hour Traffic Volumes

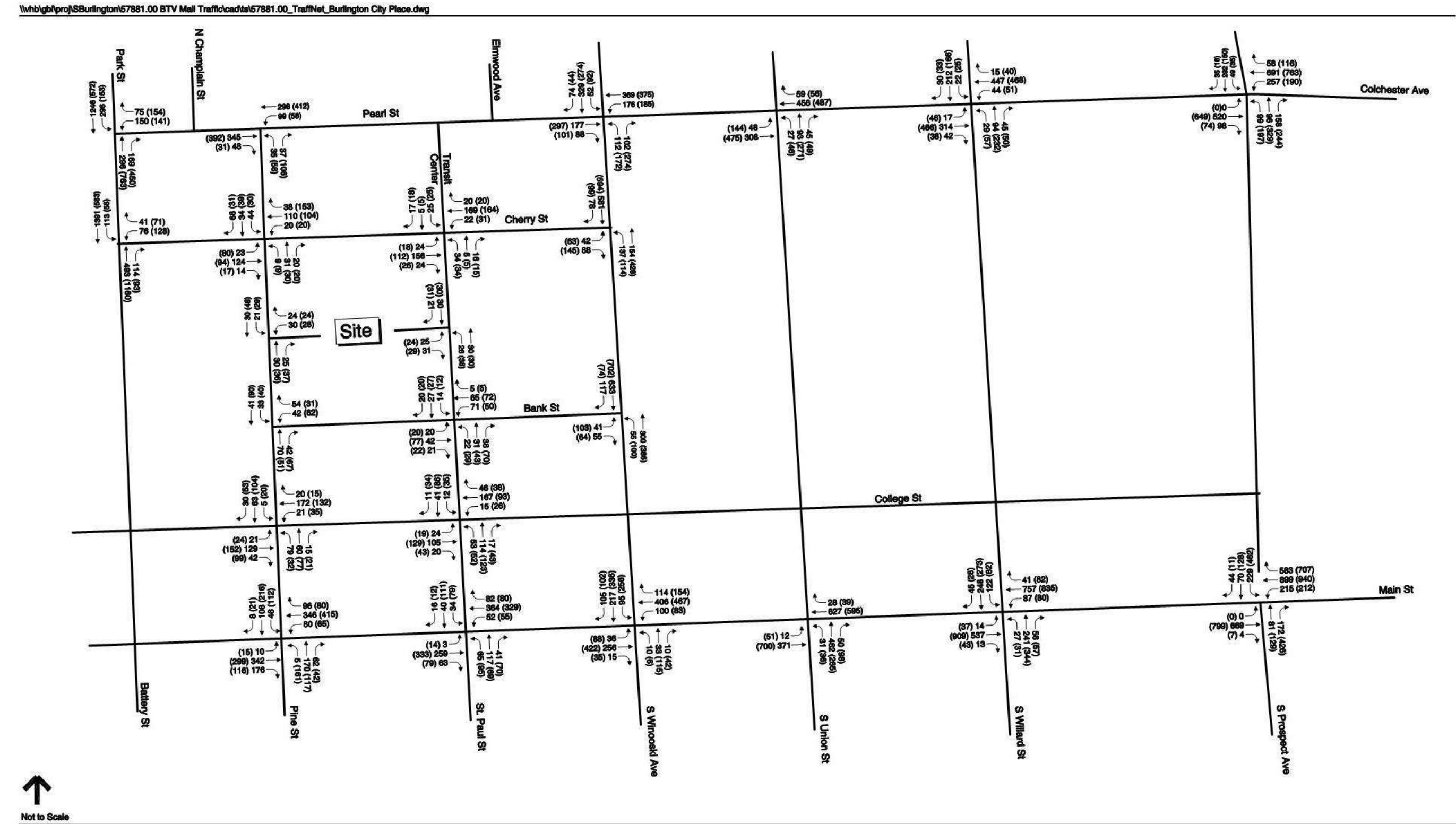


Figure 7
2021 Build Traffic Volumes
CityPlace Burlington

Figure 8: 2026 Build Peak Hour Traffic Volumes

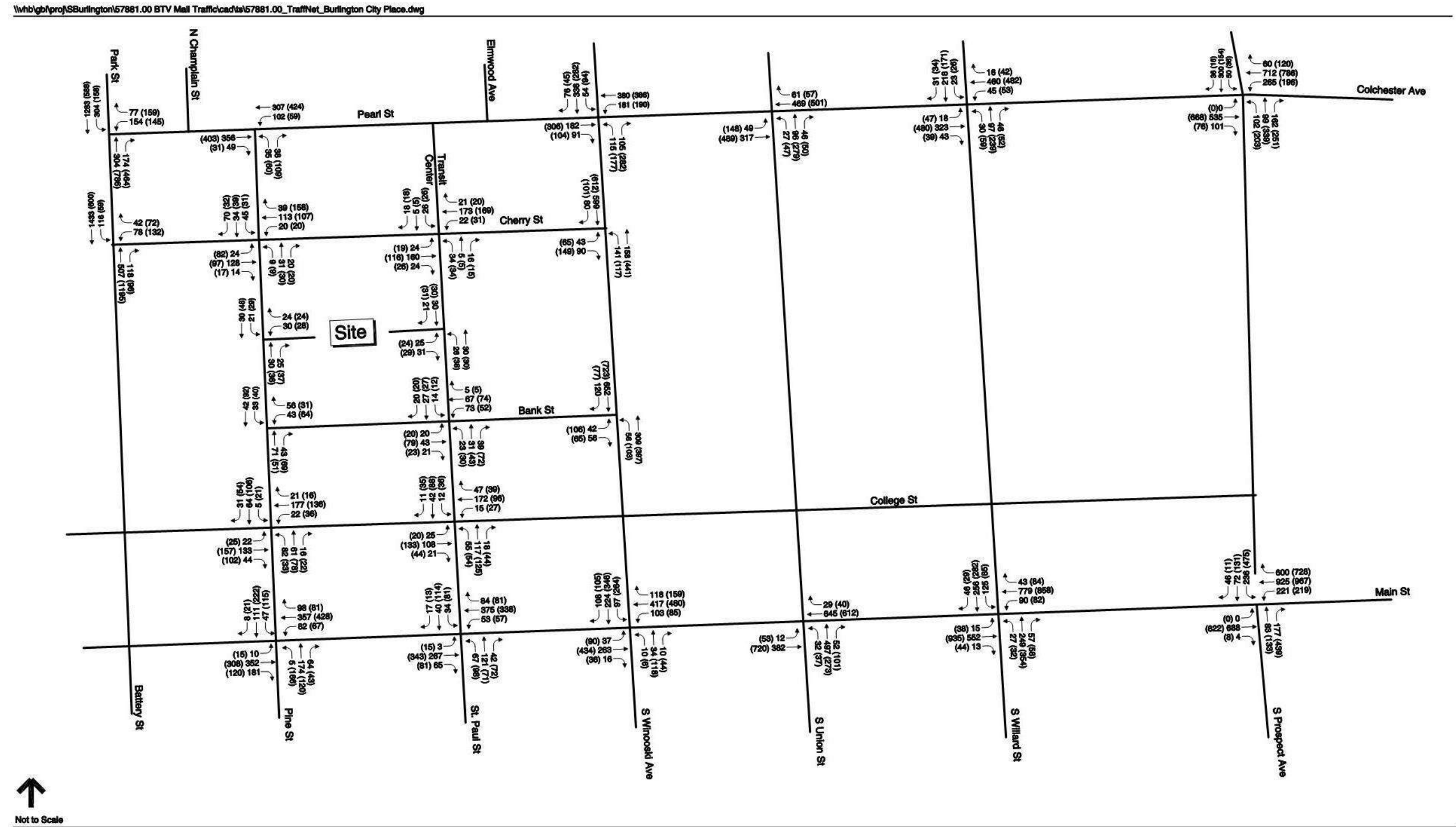


Figure 8
2026 Build Traffic Volumes
CityPlace Burlington

3.4 Traffic Analyses

Intersection capacity analyses were performed for all of the study area intersections. Levels of service (LOS) were calculated based on the criteria published in the *2000 Highway Capacity Manual*.⁹ Level of service is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing generally free flowing operating conditions and LOS F representing generally congested conditions. Copies of the LOS calculations are provided in the Appendix.

3.4.1 Signalized Intersections

Table 4 and **Table 5** summarize the operational analysis at the *signalized* study area intersections during the 2021 and 2026 weekday morning and evening peak hours under No Build and Build conditions. All scenarios include the new Pine Street and St. Paul Street blocks between Cherry and Bank Streets. The future configuration of the four-way intersection of Cherry Street and St. Paul Street will include signal heads for the new northbound approach. These signals shall be completed in coordination with the City and BTC Mall Associates, LLC.

As shown in the two tables, all signalized intersections are anticipated to improve operationally from No Build to Build. This is due to the removal of the previously permitted Burlington CityPlace to be replaced by the currently proposed project in the Build scenario. Of the 16 signalized intersections, four are shown to improve by an entire LOS ranking. Nearly all are shown to improve at LOS D or better. The two intersections which do not are the Prospect Street at Colchester Avenue and Pearl Street (remain at LOS F in AM and PM peak hours) and Prospect Street at Main Street (remains at LOS E in PM peak hour). These levels of service occur in both No Build and Build conditions. The intersection of South Willard Street and Main Street operates at LOS E in the 2026 PM peak hour under No Build conditions but improves to an acceptable LOS D in the Build condition.

3.4.2 Unsignalized Intersections

Table 6 and **Table 7** summarize the operational analysis at the *unsignalized* study area intersections during the 2021 and 2026 weekday morning and evening peak hours under No Build and Build conditions.

As with the signalized intersections, all approaches are expected to have improved operations from No Build to Build. In both No Build and Build scenarios, all intersection approaches are expected to operate at LOS B or better.

⁹ *Highway Capacity Manual*, Federal Highway Administration, Transportation Research Board, 2000.

Table 4: Signalized Intersection Capacity Analysis Summary – 2021

Intersection	Peak Hour	2021 No Build			2021 Build		
		v/c*	Delay**	LOS***	v/c	Delay	LOS
Battery St/Park St at Pearl St	Weekday AM	0.77	13.0	B	0.75	12.4	B
	Weekday PM	0.60	10.6	B	0.59	10.4	B
Pine St at Pearl St	Weekday AM	0.50	21.6	C	0.45	18.2	B
	Weekday PM	0.56	17.0	B	0.46	15.0	B
N/S Winooski Ave at Pearl St	Weekday AM	0.46	11.7	B	0.44	11.5	B
	Weekday PM	0.53	12.2	B	0.51	11.8	B
N/S Union St at Pearl St	Weekday AM	0.48	14.8	B	0.46	14.4	B
	Weekday PM	0.64	17.9	B	0.63	16.6	B
N/S Willard St at Pearl St	Weekday AM	0.55	15.1	B	0.53	14.6	B
	Weekday PM	0.86	41.7	D	0.74	21.3	C
N/S Prospect St at Pearl St/Colchester Ave	Weekday AM	1.04	88.0	F	1.03	85.8	F
	Weekday PM	1.19	142.6	F	1.15	128.0	F
Pine St at Main St	Weekday AM	0.46	28.2	C	0.45	27.8	C
	Weekday PM	0.67	29.7	C	0.59	29.7	C
Saint Paul St at Main St	Weekday AM	0.50	13.8	B	0.44	13.0	B
	Weekday PM	0.47	13.8	B	0.41	13.3	B
S Winooski Ave at Main St	Weekday AM	0.59	29.4	C	0.54	22.6	C
	Weekday PM	0.78	43.2	D	0.75	33.6	C
S Union St at Main St	Weekday AM	0.81	20.4	C	0.78	18.9	B
	Weekday PM	0.75	16.6	B	0.71	15.2	B
S Willard St at Main St	Weekday AM	0.94	31.5	C	0.91	30.5	C
	Weekday PM	1.03	50.1	D	0.98	39.3	D
S Prospect St at Main St	Weekday AM	0.91	27.9	C	0.87	26.4	C
	Weekday PM	1.07	72.8	E	1.03	72.4	E
S Winooski Ave at Cherry St	Weekday AM	0.32	6.5	A	0.31	6.4	A
	Weekday PM	0.42	8.1	A	0.40	7.6	A
S Winooski Ave at Bank St	Weekday AM	0.34	5.3	A	0.34	5.3	A
	Weekday PM	0.40	7.4	A	0.40	7.1	A
Battery St at Cherry St	Weekday AM	0.82	12.3	B	0.79	10.9	B
	Weekday PM	0.68	10.8	B	0.67	10.2	B
St Paul St at Cherry St	Weekday AM	0.27	9.4	A	0.26	9.4	A
	Weekday PM	0.26	9.3	A	0.27	9.1	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 5: Signalized Intersection Capacity Analyses Summary - 2026

Intersection	Peak Hour	2026 No Build			2026 Build		
		v/c	Delay	LOS	v/c	Delay	LOS
Battery St/Park St at Pearl St	Weekday AM	0.80	13.8	B	0.78	13.2	B
	Weekday PM	0.62	10.8	B	0.61	10.7	B
Pine St at Pearl St	Weekday AM	0.52	22.7	C	0.47	19.2	B
	Weekday PM	0.57	17.4	B	0.48	15.5	B
N/S Winooski Ave at Pearl St	Weekday AM	0.47	11.9	B	0.46	11.7	B
	Weekday PM	0.54	12.3	B	0.53	12.0	B
N/S Union St at Pearl St	Weekday AM	0.49	15.2	B	0.47	14.7	B
	Weekday PM	0.66	16.8	B	0.66	17.4	B
N/S Willard St at Pearl St	Weekday AM	0.57	15.4	B	0.55	15.0	B
	Weekday PM	0.90	51.9	D	0.78	25.1	C
N/S Prospect St at Pearl St/Colchester Ave	Weekday AM	1.07	97.3	F	1.06	94.8	F
	Weekday PM	1.22	156.3	F	1.19	141.5	F
Pine St at Main St	Weekday AM	0.47	27.1	C	0.46	27.6	C
	Weekday PM	0.69	28.2	C	0.62	29.9	C
Saint Paul St at Main St	Weekday AM	0.51	13.9	B	0.45	13.2	B
	Weekday PM	0.48	14.0	B	0.42	13.4	B
S Winooski Ave at Main St	Weekday AM	0.61	31.9	C	0.56	24.0	C
	Weekday PM	0.80	47.5	D	0.78	37.1	D
S Union St at Main St	Weekday AM	0.83	21.8	C	0.80	20.1	C
	Weekday PM	0.77	17.4	B	0.73	15.9	B
S Willard St at Main St	Weekday AM	0.98	35.4	D	0.94	34.0	C
	Weekday PM	1.07	58.4	E	1.02	45.9	D
S Prospect St at Main St	Weekday AM	0.94	29.7	C	0.90	27.7	C
	Weekday PM	1.10	79.5	E	1.07	77.6	E
S Winooski Ave at Cherry St	Weekday AM	0.33	6.5	A	0.32	6.5	A
	Weekday PM	0.45	8.3	A	0.42	7.8	A
S Winooski Ave at Bank St	Weekday AM	0.35	5.3	A	0.35	5.3	A
	Weekday PM	0.42	7.5	A	0.41	7.2	A
Battery St at Cherry St	Weekday AM	0.84	14.6	B	0.82	12.4	B
	Weekday PM	0.71	11.4	B	0.69	10.6	B
St Paul St at Cherry St	Weekday AM	0.27	9.5	A	0.27	9.4	A
	Weekday PM	0.26	9.4	A	0.28	9.1	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 6: Unsignalized Intersection Capacity Analysis Summary - AM Peak Hour

Intersection / Movement	2021 AM No Build			2021 AM Build			2026 AM No Build			2026 AM Build		
	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Pine Street at Macy's/CPB Garages												
EB movements from Macy's Garage	DOES NOT EXIST IN NO BUILD			-	-	-	DOES NOT EXIST IN NO BUILD			-	-	-
WB movements from CPB Garage				0.06	9.1	A				0.06	9.1	A
NB movements from Pine St				0.03	0.0	-				0.03	0.0	-
SB movements from Pine St				0.01	3.1	A				0.01	3.1	A
St. Paul Street at CPB Garage												
EB movements from Garage	DOES NOT EXIST IN NO BUILD			0.06	9.0	A	DOES NOT EXIST IN NO BUILD			0.06	9.0	A
NB movements from St. Paul St				0.02	3.3	A				0.02	3.5	A
SB movements from St. Paul St				0.03	0	-				0.03	0.0	-
Bank St at Pine St												
WB movements from Bank St	0.13	7.9	A	0.11	7.7	A	0.13	7.9	A	0.12	7.7	A
NB movements from Pine St	0.17	7.7	A	0.12	7.6	A	0.17	7.7	A	0.13	7.6	A
SB movements from Garage	0.07	7.7	A	0.09	7.8	A	0.07	7.8	A	0.09	7.8	A
Cherry St at Pine St												
EB movements from Cherry St	0.22	9.0	A	0.21	8.8	A	0.23	9.1	A	0.21	8.9	A
WB movements from Cherry St	0.23	8.8	A	0.21	8.7	A	0.23	8.8	A	0.22	8.8	A
NB movements from Pine St	0.05	7.9	A	0.08	8.1	A	0.05	7.9	A	0.08	8.2	A
SB movements from Pine St	0.21	8.9	A	0.19	8.6	A	0.21	8.9	A	0.19	8.7	A
College St at Pine St												
EB movements from College St	0.26	9.6	A	0.25	9.4	A	0.27	9.8	A	0.27	9.5	A
WB movements from College St	0.29	10.0	A	0.28	9.7	A	0.30	10.2	B	0.30	9.9	A
NB movements from Pine St	0.28	10.1	B	0.22	9.5	A	0.29	10.3	B	0.23	9.7	A
SB movements from Pine St	0.14	8.9	A	0.14	8.8	A	0.14	9.0	A	0.14	8.9	A
College St at St. Paul St												
EB movements from College St	0.21	9.3	A	0.20	9.0	A	0.21	9.4	A	0.21	9.1	A
WB movements from College St	0.31	10.0	A	0.30	9.6	A	0.32	10.1	B	0.31	9.7	A
NB movements from St. Paul St	0.33	10.4	B	0.25	9.6	A	0.34	10.5	B	0.26	9.7	A
SB movements from St. Paul St	0.10	8.7	A	0.09	8.6	A	0.10	8.8	A	0.09	8.6	A
Bank St at St. Paul St												
EB movements from Bank St	0.14	8.0	A	0.10	7.8	A	0.14	8.1	A	0.10	7.8	A
WB movements from Bank St	0.18	8.5	A	0.17	8.4	A	0.18	8.6	A	0.18	8.4	A
NB movements from St. Paul St	0.18	8.5	A	0.11	7.9	A	0.18	8.6	A	0.11	7.9	A
SB movements from St. Paul St	0.04	7.5	A	0.07	7.8	A	0.04	7.5	A	0.07	7.8	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 7: Unsignalized Intersection Capacity Analysis Summary - PM Peak Hour

Intersection / Movement	2021 PM No Build			2021 PM Build			2026 PM No Build			2026 PM Build		
	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Pine Street at Macy's/CPB Garages												
EB movements from Macy's Garage	DOES NOT EXIST IN NO BUILD			-	-	-	DOES NOT EXIST IN NO BUILD			-	-	-
WB movements from CPB Garage				0.06	9.3	A				0.06	9.3	A
NB movements from Pine St				0.00	0.0	-				0.00	0.0	-
SB movements from Pine St				0.01	2.9	A				0.02	2.9	A
St. Paul Street at CPB Garage												
EB movements from Garage	DOES NOT EXIST IN NO BUILD			0.06	9.2	A	DOES NOT EXIST IN NO BUILD			0.06	9.2	A
NB movements from St. Paul St				0.02	4.2	A				0.02	4.2	A
SB movements from St. Paul St				0.03	0.0	-				0.04	0.0	-
Bank St at Pine St												
WB movements from Bank St	0.18	8.5	A	0.11	8.0	A	0.17	8.5	A	0.12	8.0	A
NB movements from Pine St	0.17	7.7	A	0.13	7.5	A	0.17	7.8	A	0.13	7.6	A
SB movements from Garage	0.18	8.4	A	0.16	8.1	A	0.18	8.4	A	0.16	8.2	A
Cherry St at Pine St												
EB movements from Cherry St	0.30	9.9	A	0.25	9.2	A	0.29	10.0	A	0.26	9.3	A
WB movements from Cherry St	0.46	10.8	B	0.33	9.3	A	0.45	10.9	B	0.34	9.4	A
NB movements from Pine St	0.12	9.0	A	0.08	8.4	A	0.11	9.0	A	0.08	8.5	A
SB movements from Pine St	0.21	9.5	A	0.14	8.7	A	0.19	9.6	A	0.14	8.8	A
College St at Pine St												
EB movements from College St	0.42	11.4	B	0.37	10.7	B	0.41	11.7	B	0.39	10.9	B
WB movements from College St	0.30	10.5	B	0.26	9.9	A	0.29	10.7	B	0.27	10.1	B
NB movements from Pine St	0.28	10.3	B	0.19	9.6	A	0.25	10.5	B	0.20	9.7	A
SB movements from Pine St	0.37	11.1	B	0.25	9.9	A	0.35	11.3	B	0.26	10.1	B
College St at St. Paul St												
EB movements from College St	0.31	10.4	B	0.27	9.8	A	0.29	10.6	B	0.28	10.0	B
WB movements from College St	0.26	10	B	0.22	9.5	A	0.25	10.2	B	0.23	9.6	A
NB movements from St. Paul St	0.39	11.1	B	0.30	10.1	A	0.37	11.3	B	0.31	10.3	B
SB movements from St. Paul St	0.33	10.5	B	0.22	9.5	A	0.32	10.7	B	0.23	9.6	A
Bank St at St. Paul St												
EB movements from Bank St	0.31	9.2	A	0.15	8.2	A	0.30	9.3	A	0.15	8.3	A
WB movements from Bank St	0.18	8.8	A	0.16	8.5	A	0.17	8.8	A	0.17	8.5	A
NB movements from St. Paul St	0.25	9.1	A	0.17	8.2	A	0.24	9.2	A	0.18	8.3	A
SB movements from St. Paul St	0.04	7.8	A	0.06	7.9	A	0.04	7.9	A	0.07	7.9	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

4

Full Build Analysis

The final analysis conducted as part of this traffic study is determining the cumulative traffic impact of the CityPlace and 67 Cherry Street developments. The resulting analysis shows that these two developments collectively result in fewer trips than the previously permitted Burlington CityPlace.

4.1 Trip Generation

In addition to the CityPlace trip generation, a Full Build trip generation estimate was calculated which includes the construction of the 67 Cherry Street project. The 67 Cherry Street building program consists of the following:

- Restaurant – 9,000 square feet
- Office – 81,000 square feet

Parking is proposed to be provided on site in a ground-floor garage accessible from Pine Street. A total of 97 parking spaces will be provided on site for trips to and from the office use. Indoor bike parking will also be provided in the parking garage. A site plan of this development is provided in the Appendix.

The LUCs used for this project include High-Turnover (Sit-Down) Restaurant (*LUC 932*) and General Office Building (*LUC 710*). Trip generation for this scenario is shown in **Table 8**. Given that this analysis intends to show the combined impact of the two developments, Internal capture rates for the Full Build condition with both projects were calculated and is estimated to be 25% in the AM and 41% in the PM.

Table 8: Full Build Peak Hour Site Trip Generation Estimate

	Total Peak Hour Site Generated Trips				Net New Vehicle Trips
	Total New Trips	Transit	Bike & Pedestrian	Internal Capture	
Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)
Weekday Morning		5%	25%	25%	
Enter	292	11	57	65	159
Exit	<u>232</u>	<u>8</u>	<u>42</u>	<u>65</u>	117
Total	524	20	99	130	276
Weekday Evening		5%	25%	41%	
Enter	345	10	51	140	144
Exit	<u>344</u>	<u>10</u>	<u>51</u>	<u>140</u>	143
Total	689	20	102	280	287

Table 8 shows that a total of 276 net new vehicle trips are anticipated in the weekday AM peak hour and 287 net new vehicle trips in the weekday PM Peak Hour. **Table 9** shows a comparison of the site generated trips from the previously permitted Burlington CityPlace Phase 1 and the current building programs for the 67 Cherry Street and CityPlace developments. Based on these tables, there is a net decrease of 110 trips in the weekday AM peak hour and 338 trips in the weekday PM peak hour from the Full Build to Build scenarios.

Table 9: Permitted Burlington CityPlace and 67 Cherry Street Peak Hour Site Trip Generation Estimate

Peak Period	Burlington City Place Phase 1 Site Generated Trips*	67 Cherry Street & City Place Block Site Generated Trips	Net New Vehicle Trips
Weekday Morning			
Enter	270	159	-111
Exit	<u>116</u>	<u>117</u>	<u>1</u>
Total	386	276	-110
Weekday Evening			
Enter	255	144	-111
Exit	<u>370</u>	<u>143</u>	<u>-227</u>
Total	625	287	-338

*Burlington Design Review Board Findings of Fact Released March 17, 2017

4.2 Traffic Analyses

As with the No Build and Build conditions, the Full Build conditions were analyzed in the 2021 and 2026 weekday AM and PM peak hours using the criteria published in the *2000 Highway Capacity Manual*. **Table 10** through **Table 13** show the results of the Full Build condition.

As shown in these tables, all intersections operate at nearly the same volume to capacity ratio, delay, and LOS as compared to the Build scenario with only minor increases, but the results are still better than the 2021 and 2026 No Build scenarios at almost all intersection approaches. Any approach that experiences increased delay compared to No Build is anticipated to increase by less than half a second.

Table 10: Signalized Intersection Capacity Analysis Summary – 2021 Full Build

Intersection	Peak Hour	2021 Build			2021 Full Build		
		v/c	Delay	LOS	v/c	Delay	LOS
Battery St/Park St at Pearl St	Weekday AM	0.75	12.4	B	0.76	12.6	B
	Weekday PM	0.59	10.4	B	0.59	10.4	B
Pine St at Pearl St	Weekday AM	0.45	18.2	B	0.46	18.6	B
	Weekday PM	0.46	15.0	B	0.47	15.0	B
N/S Winooski Ave at Pearl St	Weekday AM	0.44	11.5	B	0.45	11.6	B
	Weekday PM	0.51	11.8	B	0.51	11.9	B
N/S Union St at Pearl St	Weekday AM	0.46	14.4	B	0.47	14.6	B
	Weekday PM	0.63	16.6	B	0.63	16.7	B
N/S Willard St at Pearl St	Weekday AM	0.53	14.6	B	0.54	14.7	B
	Weekday PM	0.74	21.3	C	0.74	21.5	C
N/S Prospect St at Pearl St/Colchester Ave	Weekday AM	1.03	85.8	F	1.03	85.3	F
	Weekday PM	1.15	128.0	F	1.15	128.0	F
Pine St at Main St	Weekday AM	0.45	27.8	C	0.45	27.9	C
	Weekday PM	0.59	29.7	C	0.60	29.7	C
Saint Paul St at Main St	Weekday AM	0.44	13.0	B	0.46	13.3	B
	Weekday PM	0.41	13.3	B	0.41	13.3	B
S Winooski Ave at Main St	Weekday AM	0.54	22.6	C	0.56	24.6	C
	Weekday PM	0.75	33.6	C	0.76	34.3	C
S Union St at Main St	Weekday AM	0.78	18.9	B	0.79	19.3	B
	Weekday PM	0.71	15.2	B	0.71	15.4	B
S Willard St at Main St	Weekday AM	0.91	30.5	C	0.92	30.6	C
	Weekday PM	0.98	39.3	D	0.98	40.1	D
S Prospect St at Main St	Weekday AM	0.87	26.4	C	0.89	26.9	C
	Weekday PM	1.03	72.4	E	1.04	72.5	E
S Winooski Ave at Cherry St	Weekday AM	0.31	6.4	A	0.31	5.9	A
	Weekday PM	0.40	7.6	A	0.40	7.6	A
S Winooski Ave at Bank St	Weekday AM	0.34	5.3	A	0.34	5.3	A
	Weekday PM	0.40	7.1	A	0.40	7.2	A
Battery St at Cherry St	Weekday AM	0.79	10.9	B	0.80	11.5	B
	Weekday PM	0.67	10.2	B	0.67	10.2	B
St Paul St at Cherry St	Weekday AM	0.26	9.4	A	0.26	9.4	A
	Weekday PM	0.27	9.1	A	0.27	9.1	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 11: Signalized Intersection Capacity Analyses Summary - 2026 Full Build

Intersection	Peak Hour	2026 Build			2026 Full Build		
		v/c	Delay	LOS	v/c	Delay	LOS
Battery St/Park St at Pearl St	Weekday AM	0.78	13.2	B	0.78	13.4	B
	Weekday PM	0.61	10.7	B	0.61	10.7	B
Pine St at Pearl St	Weekday AM	0.47	19.2	B	0.48	20.4	C
	Weekday PM	0.48	15.5	B	0.48	15.5	B
N/S Winooski Ave at Pearl St	Weekday AM	0.46	11.7	B	0.46	11.7	B
	Weekday PM	0.53	12.0	B	0.53	12.0	B
N/S Union St at Pearl St	Weekday AM	0.47	14.7	B	0.48	14.8	B
	Weekday PM	0.66	17.4	B	0.66	17.6	B
N/S Willard St at Pearl St	Weekday AM	0.55	15.0	B	0.56	15.0	B
	Weekday PM	0.78	25.1	C	0.78	25.1	C
N/S Prospect St at Pearl St/Colchester Ave	Weekday AM	1.06	94.8	F	1.06	94.8	F
	Weekday PM	1.19	141.5	F	1.18	141.5	F
Pine St at Main St	Weekday AM	0.46	27.6	C	0.46	27.8	C
	Weekday PM	0.62	29.9	C	0.62	29.7	C
Saint Paul St at Main St	Weekday AM	0.45	13.2	B	0.47	13.4	B
	Weekday PM	0.42	13.4	B	0.42	13.4	B
S Winooski Ave at Main St	Weekday AM	0.56	24.0	C	0.57	26.4	C
	Weekday PM	0.78	37.1	D	0.78	37.6	D
S Union St at Main St	Weekday AM	0.80	20.1	C	0.81	20.7	C
	Weekday PM	0.73	15.9	B	0.73	16.1	B
S Willard St at Main St	Weekday AM	0.94	34.0	C	0.96	34.9	C
	Weekday PM	1.02	45.9	D	1.02	47.1	D
S Prospect St at Main St	Weekday AM	0.90	27.7	C	0.91	28.3	C
	Weekday PM	1.07	77.6	E	1.08	77.7	E
S Winooski Ave at Cherry St	Weekday AM	0.32	6.5	A	0.32	6.5	A
	Weekday PM	0.42	7.8	A	0.42	7.7	A
S Winooski Ave at Bank St	Weekday AM	0.35	5.3	A	0.35	5.4	A
	Weekday PM	0.41	7.2	A	0.41	7.3	A
Battery St at Cherry St	Weekday AM	0.82	12.4	B	0.83	13.2	B
	Weekday PM	0.69	10.6	B	0.69	10.7	B
St Paul St at Cherry St	Weekday AM	0.27	9.4	A	0.27	9.4	A
	Weekday PM	0.28	9.1	A	0.25	9.1	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 12: Unsignalized Intersection Capacity Analysis Summary - AM Peak Hour Full Build

Intersection / Movement	2021 AM Build			2021 AM Full Build			2026 AM Build			2026 AM Full Build		
	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Pine Street at Macy's/CPB Garages												
EB movements from Macy's Garage	-	-	-	0.02	9.2	A	-	-	-	0.02	9.3	A
WB movements from CPB Garage	0.06	9.1	A	0.05	9.4	A	0.06	9.1	A	0.07	9.6	A
NB movements from Pine St	0.03	0.0	-	0.01	1.1	A	0.03	0.0	-	0.01	1.2	A
SB movements from Pine St	0.01	3.1	A	0.02	3.3	A	0.01	3.1	A	0.02	3.5	A
St. Paul Street at CPB Garage												
EB movements from Garage	0.06	9.0	A	0.04	9.0	A	0.06	9.0	A	0.04	9.0	A
NB movements from St. Paul St	0.02	3.3	A	0.02	3.6	A	0.02	3.5	A	0.02	3.8	A
SB movements from St. Paul St	0.03	0	-	0.03	0.0	A	0.03	0.0	-	0.03	0.0	A
Bank St at Pine St												
WB movements from Bank St	0.11	7.7	A	0.11	7.8	A	0.12	7.7	A	0.12	7.9	A
NB movements from Pine St	0.12	7.6	A	0.15	7.8	A	0.13	7.6	A	0.17	7.9	A
SB movements from Garage	0.09	7.8	A	0.10	7.9	A	0.09	7.8	A	0.11	7.9	A
Cherry St at Pine St												
EB movements from Cherry St	0.21	8.8	A	0.21	8.9	A	0.21	8.9	A	0.22	9.0	A
WB movements from Cherry St	0.21	8.7	A	0.21	8.8	A	0.22	8.8	A	0.22	8.9	A
NB movements from Pine St	0.08	8.1	A	0.08	8.2	A	0.08	8.2	A	0.09	8.3	A
SB movements from Pine St	0.19	8.6	A	0.19	8.7	A	0.19	8.7	A	0.20	8.8	A
College St at Pine St												
EB movements from College St	0.25	9.4	A	0.26	9.5	A	0.27	9.5	A	0.27	9.7	A
WB movements from College St	0.28	9.7	A	0.30	9.9	A	0.30	9.9	A	0.32	10.1	B
NB movements from Pine St	0.22	9.5	A	0.24	9.7	A	0.23	9.7	A	0.25	10.0	A
SB movements from Pine St	0.14	8.8	A	0.13	8.8	A	0.14	8.9	A	0.14	9.0	A
College St at St. Paul St												
EB movements from College St	0.20	9.0	A	0.20	9.1	A	0.21	9.1	A	0.21	9.2	A
WB movements from College St	0.30	9.6	A	0.30	9.7	A	0.31	9.7	A	0.31	9.9	A
NB movements from St. Paul St	0.25	9.6	A	0.27	9.8	A	0.26	9.7	A	0.29	10.0	A
SB movements from St. Paul St	0.09	8.6	A	0.09	8.6	A	0.09	8.6	A	0.09	8.7	A
Bank St at St. Paul St												
EB movements from Bank St	0.10	7.8	A	0.13	7.8	A	0.10	7.8	A	0.14	7.9	A
WB movements from Bank St	0.17	8.4	A	0.17	8.3	A	0.18	8.4	A	0.18	8.4	A
NB movements from St. Paul St	0.11	7.9	A	0.11	7.9	A	0.11	7.9	A	0.12	8.0	A
SB movements from St. Paul St	0.07	7.8	A	0.04	7.4	A	0.07	7.8	A	0.07	7.8	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

Table 13: Unsignalized Intersection Capacity Analysis Summary - PM Peak Hour Full Build

Intersection / Movement	2021 PM Build			2021 PM Full Build			2026 PM Build			2026 PM Full Build		
	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Pine Street at Macy's/CPB Garages												
EB movements from Macy's Garage	-	-	-	0.03	9.4	A	-	-	-	0.03	9.4	A
WB movements from CPB Garage	0.06	9.3	A	0.08	9.7	A	0.06	9.3	A	0.08	9.7	A
NB movements from Pine St	0.00	0.0	-	0.01	1.1	A	0.00	0.0	-	0.01	1.1	A
SB movements from Pine St	0.01	2.9	A	0.02	2.7	A	0.02	2.9	A	0.02	2.7	A
St. Paul Street at CPB Garage												
EB movements from Garage	0.06	9.2	A	0.05	9.0	A	0.06	9.2	A	0.05	9.6	A
NB movements from St. Paul St	0.02	4.2	A	0.02	3.6	A	0.02	4.2	A	0.02	3.6	A
SB movements from St. Paul St	0.03	0.0	-	0.03	0.0	-	0.04	0.0	-	0.03	0.0	-
Bank St at Pine St												
WB movements from Bank St	0.11	8.0	A	0.12	8.1	A	0.12	8.0	A	0.12	8.1	A
NB movements from Pine St	0.13	7.5	A	0.15	7.7	A	0.13	7.6	A	0.15	7.7	A
SB movements from Garage	0.16	8.1	A	0.19	8.4	A	0.16	8.2	A	0.19	8.4	A
Cherry St at Pine St												
EB movements from Cherry St	0.25	9.2	A	0.25	9.3	A	0.26	9.3	A	0.26	9.4	A
WB movements from Cherry St	0.33	9.3	A	0.34	9.5	A	0.34	9.4	A	0.35	9.6	A
NB movements from Pine St	0.08	8.4	A	0.11	8.6	A	0.08	8.5	A	0.11	8.7	A
SB movements from Pine St	0.14	8.7	A	0.14	8.8	A	0.14	8.8	A	0.14	8.9	A
College St at Pine St												
EB movements from College St	0.37	10.7	B	0.37	10.8	B	0.39	10.9	B	0.39	11.1	B
WB movements from College St	0.26	9.9	A	0.28	10.7	B	0.27	10.1	B	0.29	10.3	B
NB movements from Pine St	0.19	9.6	A	0.20	9.7	A	0.20	9.7	A	0.20	9.9	A
SB movements from Pine St	0.25	9.9	A	0.27	10.1	B	0.26	10.1	B	0.28	10.3	B
College St at St. Paul St												
EB movements from College St	0.27	9.8	A	0.27	9.9	A	0.28	10.0	B	0.28	10.0	B
WB movements from College St	0.22	9.5	A	0.22	9.5	A	0.23	9.6	A	0.23	9.7	A
NB movements from St. Paul St	0.30	10.1	A	0.30	10.2	B	0.31	10.3	B	0.32	10.4	B
SB movements from St. Paul St	0.22	9.5	A	0.23	9.6	A	0.23	9.6	A	0.24	9.7	A
Bank St at St. Paul St												
EB movements from Bank St	0.15	8.2	A	0.19	8.3	A	0.15	8.3	A	0.20	8.4	A
WB movements from Bank St	0.16	8.5	A	0.16	8.4	A	0.17	8.5	A	0.17	8.5	A
NB movements from St. Paul St	0.17	8.2	A	0.16	8.2	A	0.18	8.3	A	0.17	8.3	A
SB movements from St. Paul St	0.06	7.9	A	0.04	7.5	A	0.07	7.9	A	0.04	7.5	A

* Volume to capacity ratio

** Delay expressed in seconds per vehicle

*** Level of service

5

Conclusions

This Traffic Impact Study was conducted to analyze the impacts on the local roadway network of developing CityPlace Burlington, a mixed-use project with residences, a hotel, retail, and restaurant spaces. The proposed on-site parking is accessible from the future Pine Street and Saint Paul Street connections between Cherry and Bank Streets. This study found that minimal impacts are anticipated at 23 intersections studied through downtown Burlington, particularly due to the reduction in size from the previously permitted iteration of this project.

The proposed redevelopment of CityPlace Burlington includes the following general components:

- Residential – 350 apartment units
- Retail – 45,900 square feet
- Restaurant – 8,100 square feet
- Hotel – 200 rooms

The trip generation estimates conducted for this study indicate that the proposed redevelopment program will generate approximately 202 net new vehicle trips (93 entering and 109 exiting) during the weekday AM peak hour and 240 net new vehicle trips (135 entering and 105 exiting) during the weekday PM peak hour. The site-generated trips were distributed onto the downtown street network based on trip distribution data developed through the use of the CCRPC regional travel demand model.

All scenarios analyze include the new Pine Street and St. Paul Street blocks between Cherry and Bank Streets. In the future configuration of the four-way intersection of Cherry Street and St. Paul Street, signals heads for the new northbound approach shall be constructed in coordination with the City and BTC Mall Associates, LLC.

From a traffic operations perspective, all intersections improve from No Build to Build conditions due to the replacement of the previously permitted Burlington CityPlace with the currently downsized CityPlace building program. In 2021 and 2026, nearly all of the signalized intersections were found to operate at LOS D or better in each of the No Build and Build scenarios. All unsignalized intersection approach operate at LOS B or better.

In conclusion, based on the results of this Traffic Impact Study, the CityPlace Burlington project is not expected to generate unreasonable congestion or unsafe conditions within Burlington's transportation system.

Appendix

Appendix A – Traffic Volume Data

Appendix B – Crash Data

Appendix C – Trip Generation Calculations

Appendix D – Internal Capture Calculations

Appendix E – 2021 Intersection Capacity Analysis

Appendix F – 2026 Intersection Capacity Analysis

Appendix G – Full Build Intersection Capacity Analysis

Appendix A – Traffic Volume Data



Computations - Traffic Volumes

Project: BTV Town Center **Project #:** 57881.00
Location: Burlington, VT **Sheet:** _____
Calculated by: E. Quallen **Date:** 11/28/16
Checked by: _____ **Date:** _____
Title: _____
Intersection: _____

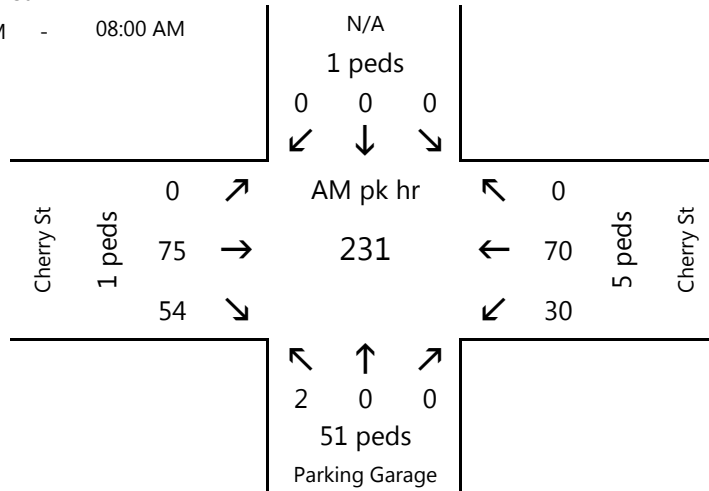
Intersection: Cherry St / Parking Garage **Town:** Burlington
 Count Date(s): 6/14/2016 **Counter:** VHB

Peak Hour Volumes

	SB				WB				NB				EB				Total
	N/A				Cherry St				Parking Garage				Cherry St				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	0	0	0	1	0	70	30	5	0	0	2	51	54	75	0	1	231
PM pk hr	0	0	0	0	0	182	14	1	63	0	96	73	9	135	0	4	499

AM Peak Hour

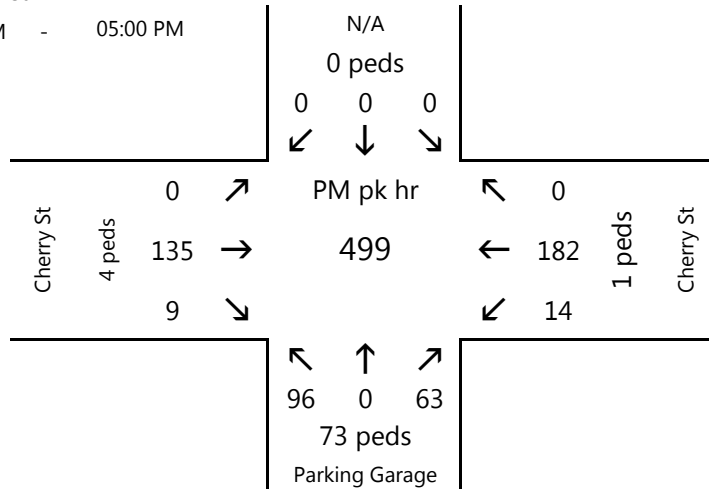
07:00 AM - 08:00 AM



% Auto: 79.9%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%

PM Peak Hour

04:00 PM - 05:00 PM



% Auto: 86.5%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%



Computations - Traffic Volumes

Project: BTV Town Center
Location: Burlington, VT
Calculated by: E. Quallen
Checked by:
Title:
Intersection:

Project #: 57881.00
Sheet:
Date: 11/28/16
Date:

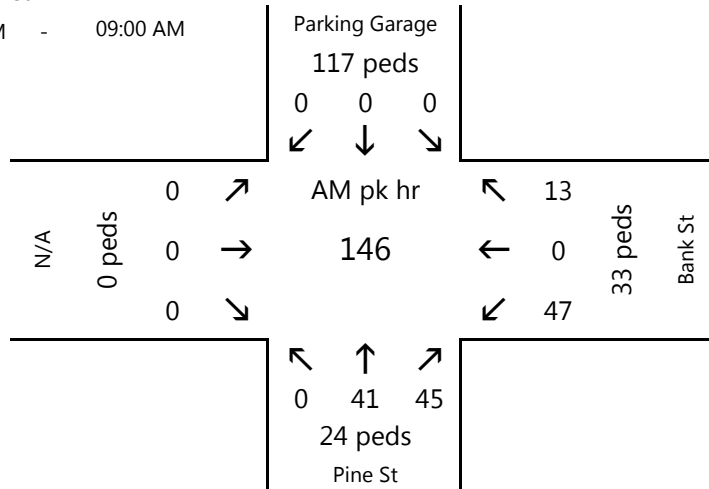
Intersection: Bank St / Pine St/Parking Garage
Town: Burlington
Count Date(s): 6/14/2016
Counter: VHB

Peak Hour Volumes

	SB				WB				NB				EB				Total
	Parking Garage				Bank St				Pine St				N/A				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	0	0	0	117	13	0	47	33	45	41	0	24	0	0	0	0	146
PM pk hr	0	0	0	102	9	1	61	61	53	9	0	35	0	0	0	0	133

AM Peak Hour

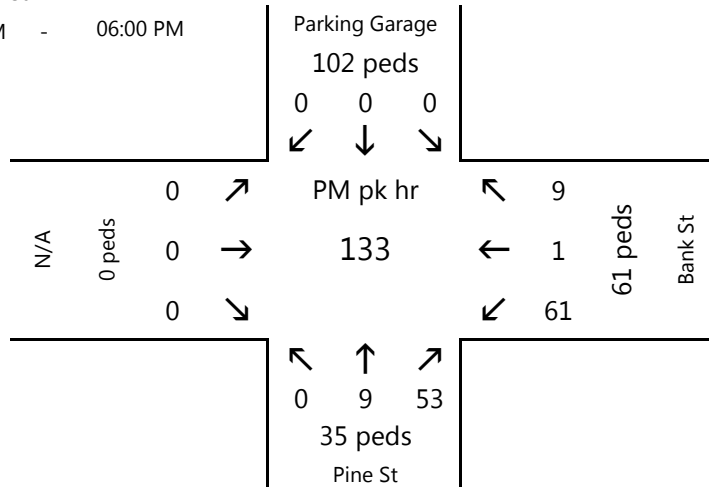
08:00 AM - 09:00 AM



% Auto: 45.6%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%

PM Peak Hour

05:00 PM - 06:00 PM



% Auto: 40.2%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%



Computations - Traffic Volumes

Project: BTV Town Center Project #: 57881.00
 Location: Burlington, VT Sheet: _____
 Calculated by: E. Quallen Date: 12/2/16
 Checked by: _____ Date: _____
 Title: BTV Town Center Traffic Counts
 Intersection: Pine St / Cherry St

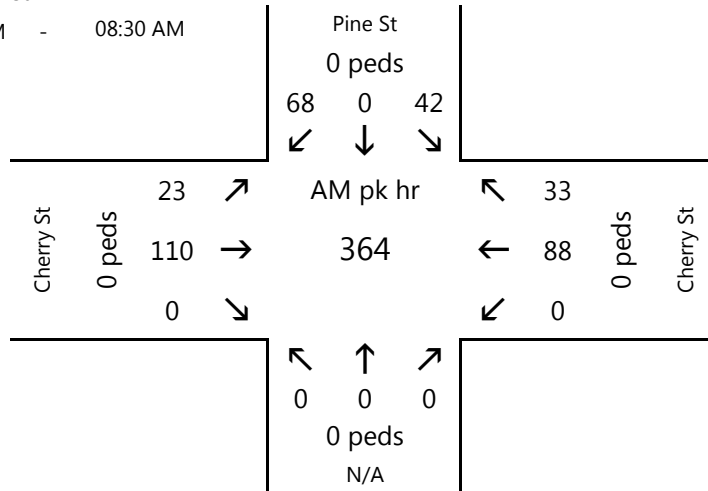
Intersection: Pine St / Cherry St Town: Burlington
 Count Date(s): 12/2/2016 (AM) 11/30/2016 (PM) Counter: VHB

Peak Hour Volumes

	SB				WB				NB				EB				Total
	Pine St				Cherry St				N/A				Cherry St				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	68	0	42	0	33	88	0	0	0	0	0	0	0	110	23	0	364
PM pk hr	31	0	26	29	143	88	0	9	0	0	0	0	0	80	79	33	447

AM Peak Hour

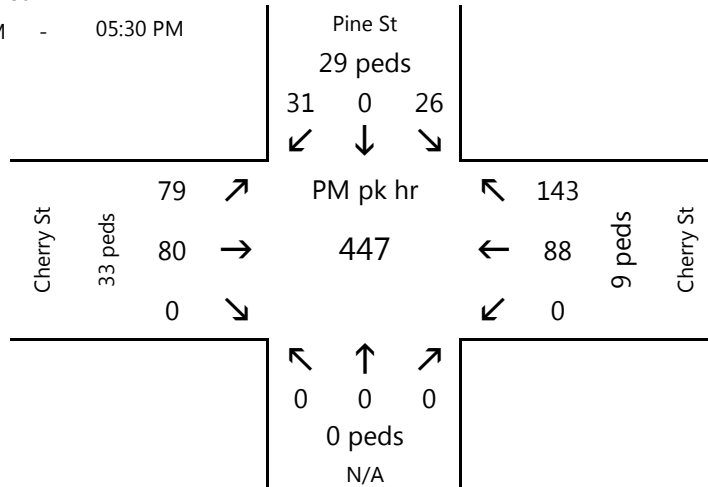
07:30 AM - 08:30 AM



% Auto: 95.9%
 % Med: 4.1%
 % Heavy: 0.0%
 total % Trucks: 4.1%

PM Peak Hour

04:30 PM - 05:30 PM



% Auto: 82.4%
 % Med: 3.9%
 % Heavy: 0.0%
 total % Trucks: 3.9%

Peak Hour Data for Intersection

Int ID: 30403224
 Community: BURLINGTON
 Road 1: BATTERY ST
 Road 2: PEARL ST

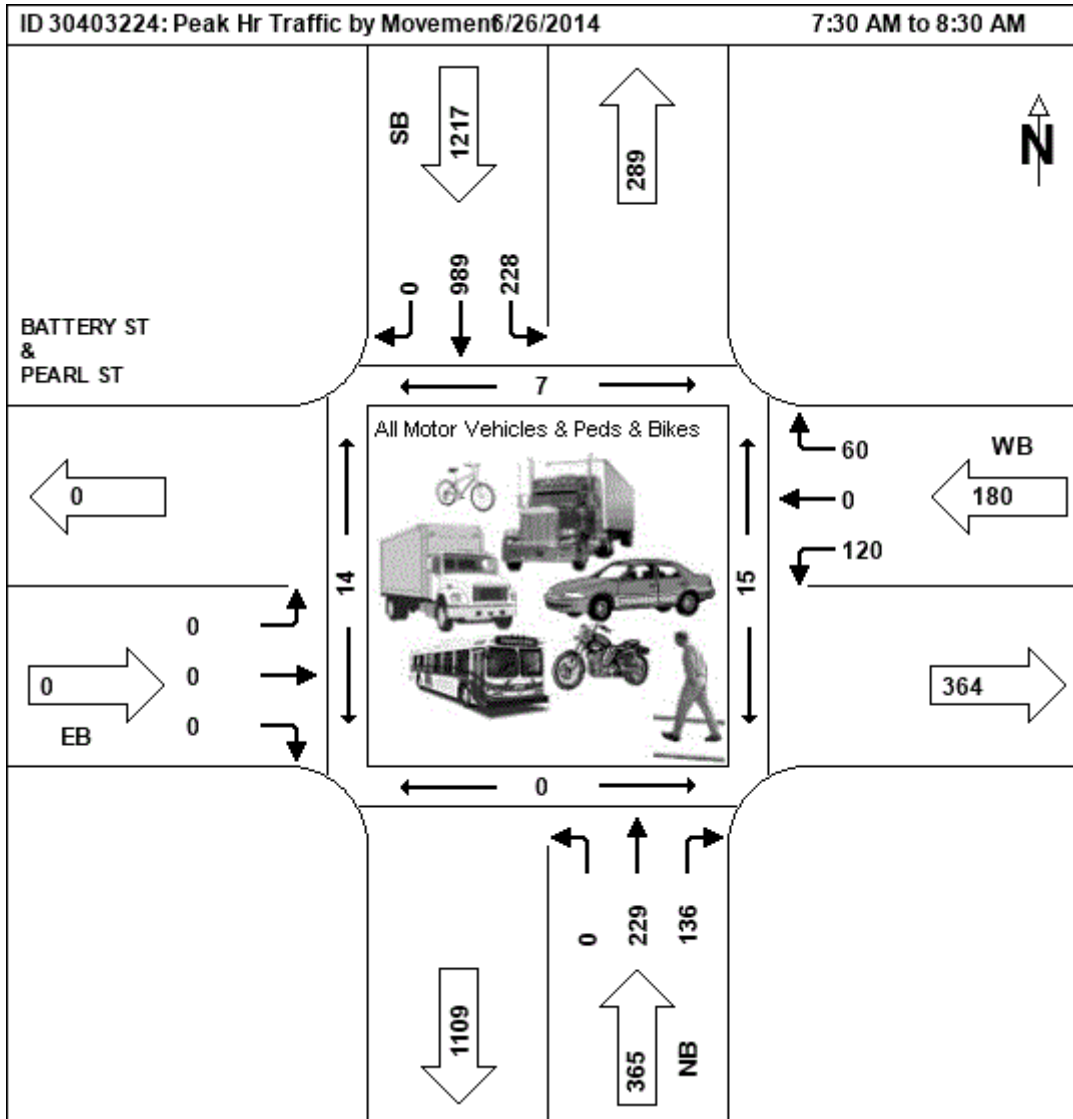
Corridor:
 Road 3: BATTERY ST
 Road 4:

|<<|<|>|>>| 1-1 of 1

AM Peak Hour
06/26/2014

NB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total	Total
7:30 AM	0	61	38	2	99	48	249	0	3	297	23	0	10	2	33	429
7:45 AM	0	75	39	3	114	65	252	0	1	317	32	0	28	0	60	491
8:00 AM	0	42	34	6	76	54	237	0	5	291	32	0	6	3	38	405
8:15 AM	0	51	25	4	76	61	251	0	5	312	33	0	16	2	49	437
Total	0	229	136	15	365	228	989	0	14	1217	120	0	60	7	180	1762
PHF		0.76	0.87		0.80	0.88	0.98			0.96	0.91		0.54		0.75	
HV %		11	10			2	3			10		13				

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

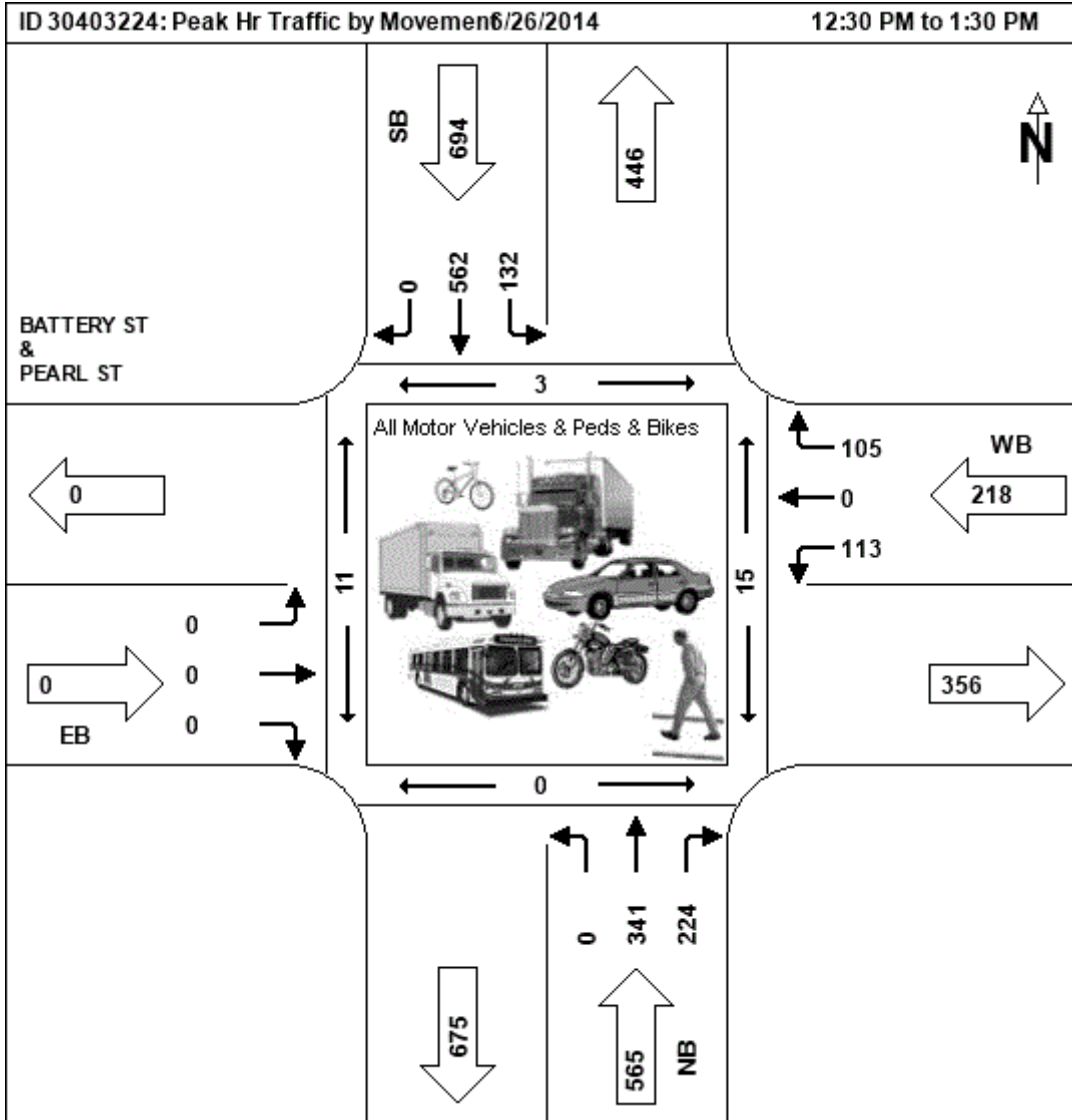


Midday Peak Hour
06/26/2014

NB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total	Total
12:30 PM	0	81	46	6	127	39	143	0	4	182	22	0	26	0	48	357

12:45 PM	0	78	58	2	136	35	155	0	0	190	33	0	36	1	69	395
1:00 PM	0	98	53	5	151	26	135	0	1	161	24	0	16	1	40	352
1:15 PM	0	84	67	2	151	32	129	0	6	161	34	0	27	1	61	373
Total	0	341	224	15	565	132	562	0	11	694	113	0	105	3	218	1477
PHF		0.87	0.84		0.94	0.85	0.91			0.91	0.83		0.73		0.79	
HV %		3	3		2	4				6			5			

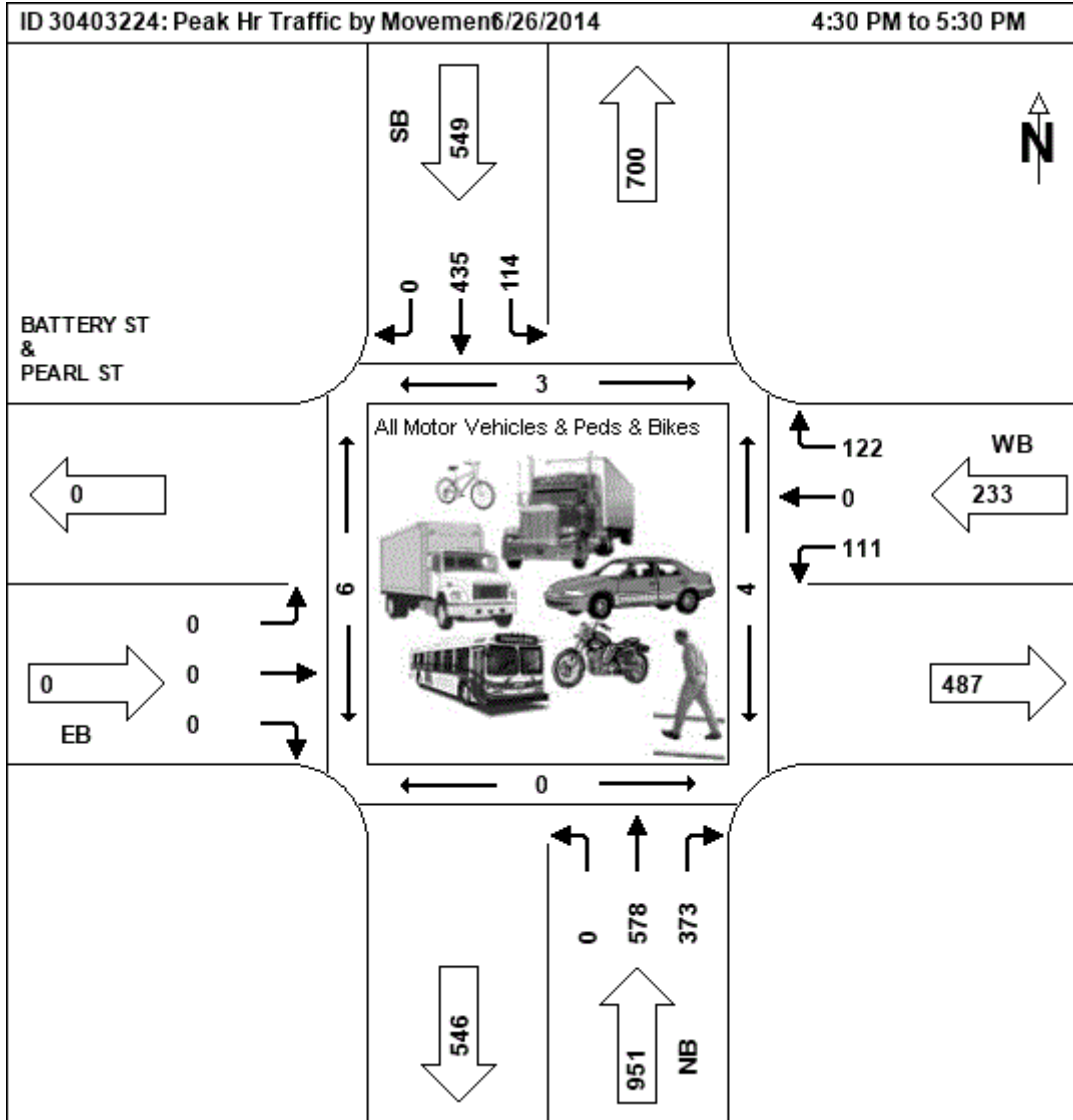
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/26/2014

NB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:30 PM	0	131	94	1	225	27	100	0	3	127	33	0	25	1	58	410
4:45 PM	0	158	79	1	237	23	119	0	0	142	27	0	28	0	55	434
5:00 PM	0	150	120	2	270	31	107	0	0	138	25	0	30	1	55	463
5:15 PM	0	139	80	0	219	33	109	0	3	142	26	0	39	1	65	426
Total	0	578	373	4	951	114	435	0	6	549	111	0	122	3	233	1733
PHF		0.91	0.78		0.88	0.86	0.91			0.97	0.84		0.78		0.90	
HV %		2	3		4	1				1			2			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403221
 Community: BURLINGTON
 Road 1: PEARL ST
 Road 2: PINE ST

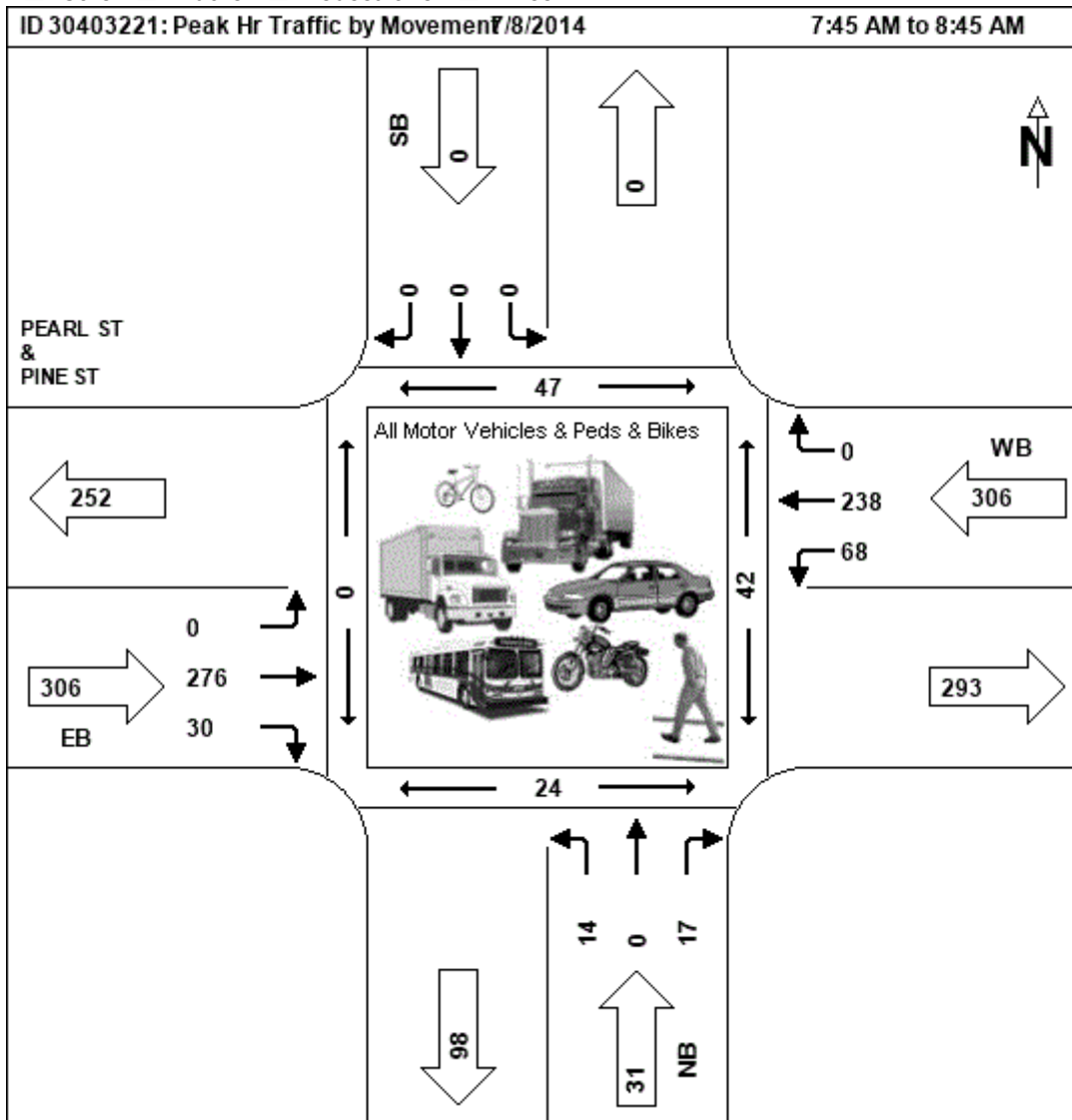
Corridor:
 Road 3: PEARL ST
 Road 4:

<< < > >> 1-1 of 1

AM Peak Hour
07/08/2014

NB					EB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total	Total
7:45 AM	4	0	4	10	8	0	79	10	5	89	16	50	0	14	66	163
8:00 AM	3	0	6	14	9	0	57	4	10	61	20	62	0	9	82	152
8:15 AM	4	0	4	9	8	0	67	9	4	76	14	67	0	13	81	165
8:30 AM	3	0	3	9	6	0	73	7	5	80	18	59	0	11	77	163
Total	14	0	17	42	31	0	276	30	24	306	68	238	0	47	306	643
PHF	0.88		0.71		0.86		0.87	0.75		0.86	0.85	0.89			0.93	
HV %	14		6				4	10			7	7				

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

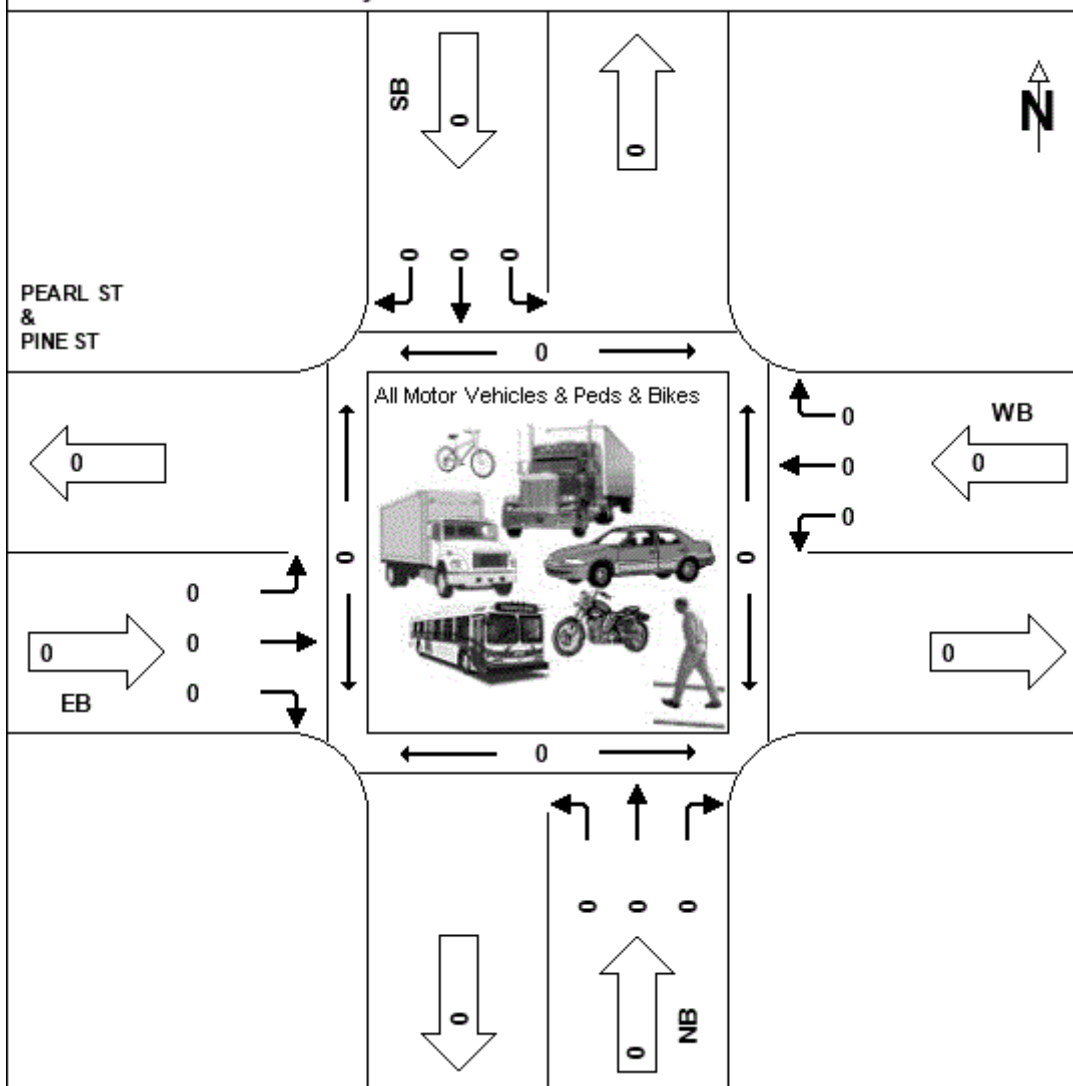


Midday Peak Hour
07/08/2014

NB					EB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total	Total
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

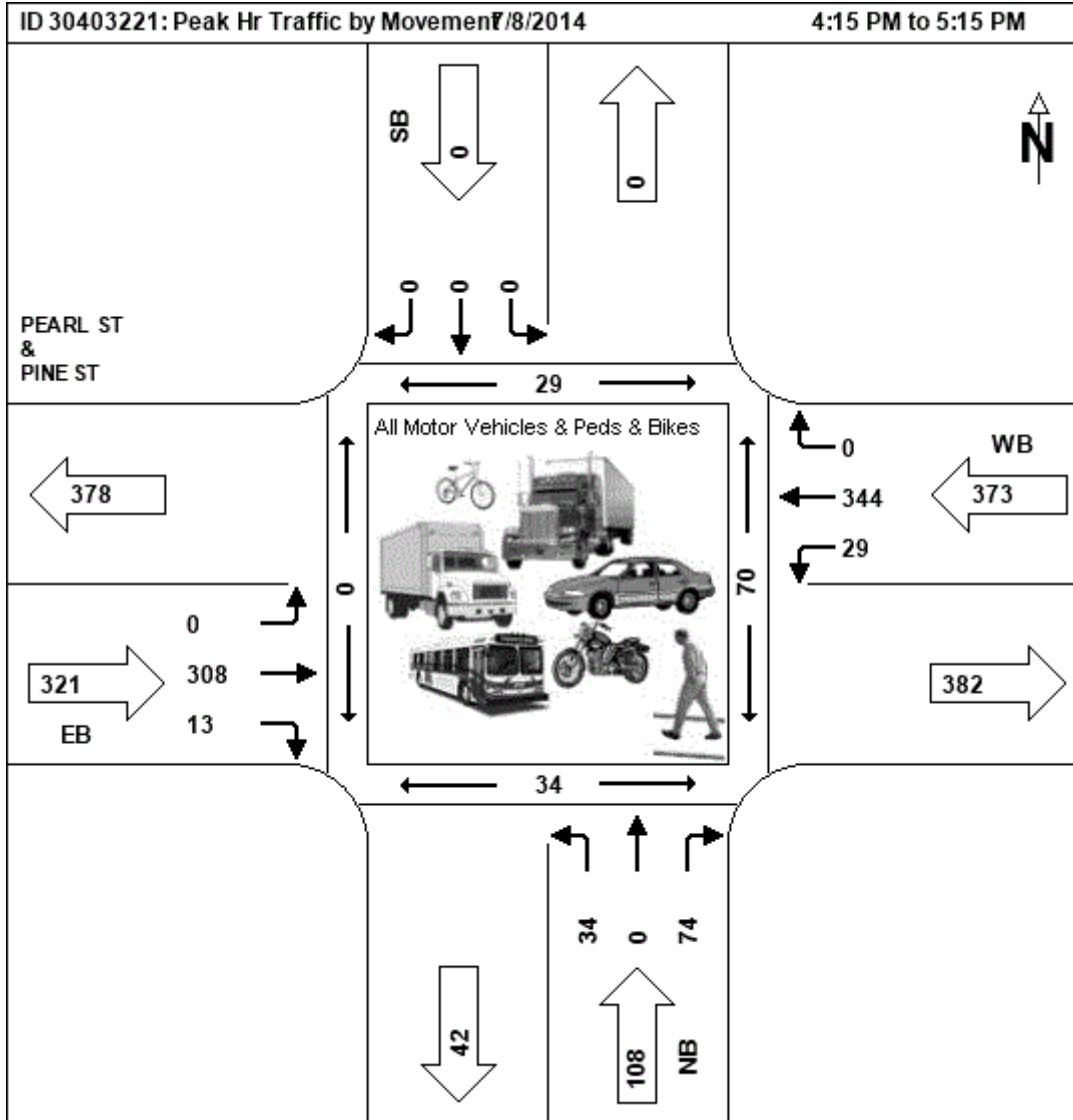
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 30403221: Peak Hr Traffic by Movement 7/8/2014



PM Peak Hour
07/08/2014

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403620
 Community: BURLINGTON
 Road 1: ALT-7
 Road 2: PEARL ST

Corridor: NA
 Road 3: ALT-7
 Road 4: PEARL ST

|<<|<|>|>>| 1-5 of 5

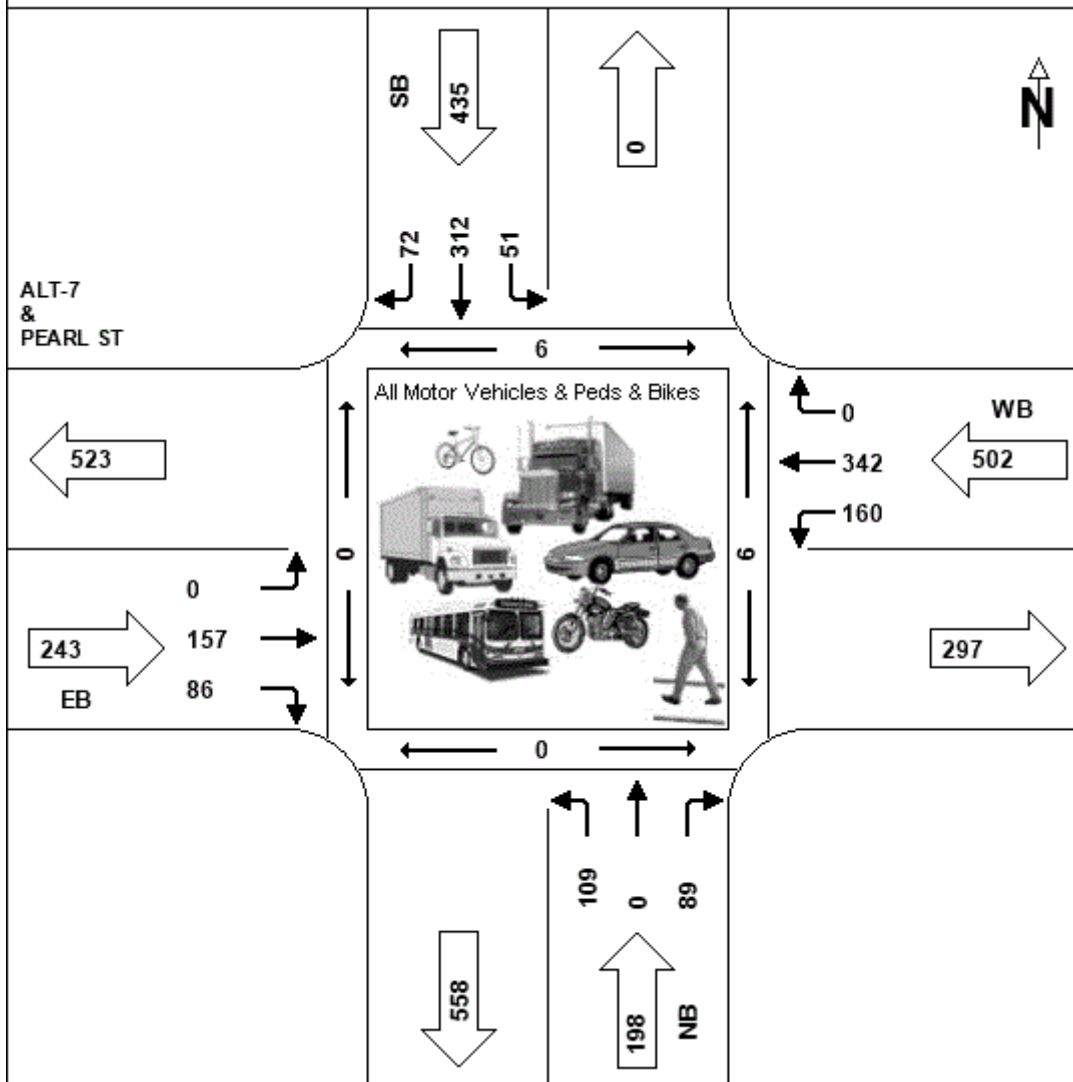
AM Peak Hour
08/05/2016

NB						EB						SB						WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total		
7:45 AM	25	0	19	0	44	0	50	23	0	73	9	74	23	0	106	34	94	0	0	128	351		
8:00 AM	28	0	23	0	51	0	33	21	0	54	11	76	18	0	105	34	87	0	0	121	331		
8:15 AM	30	0	22	0	52	0	42	21	0	63	18	64	14	0	96	41	80	0	1	121	332		
8:30 AM	26	0	25	6	51	0	32	21	0	53	13	98	17	0	128	51	81	0	5	132	364		
Total	109	0	89	6	198	0	157	86	0	243	51	312	72	0	435	160	342	0	6	502	1378		
PHF	0.91		0.89		0.95		0.79	0.93		0.83	0.71	0.80	0.78		0.85	0.78	0.91			0.95			
HV %	8		15			3	1				4	1	7		3	6							

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 30403620: Peak Hr Traffic by Movement 8/5/2016

7:45 AM to 8:45 AM

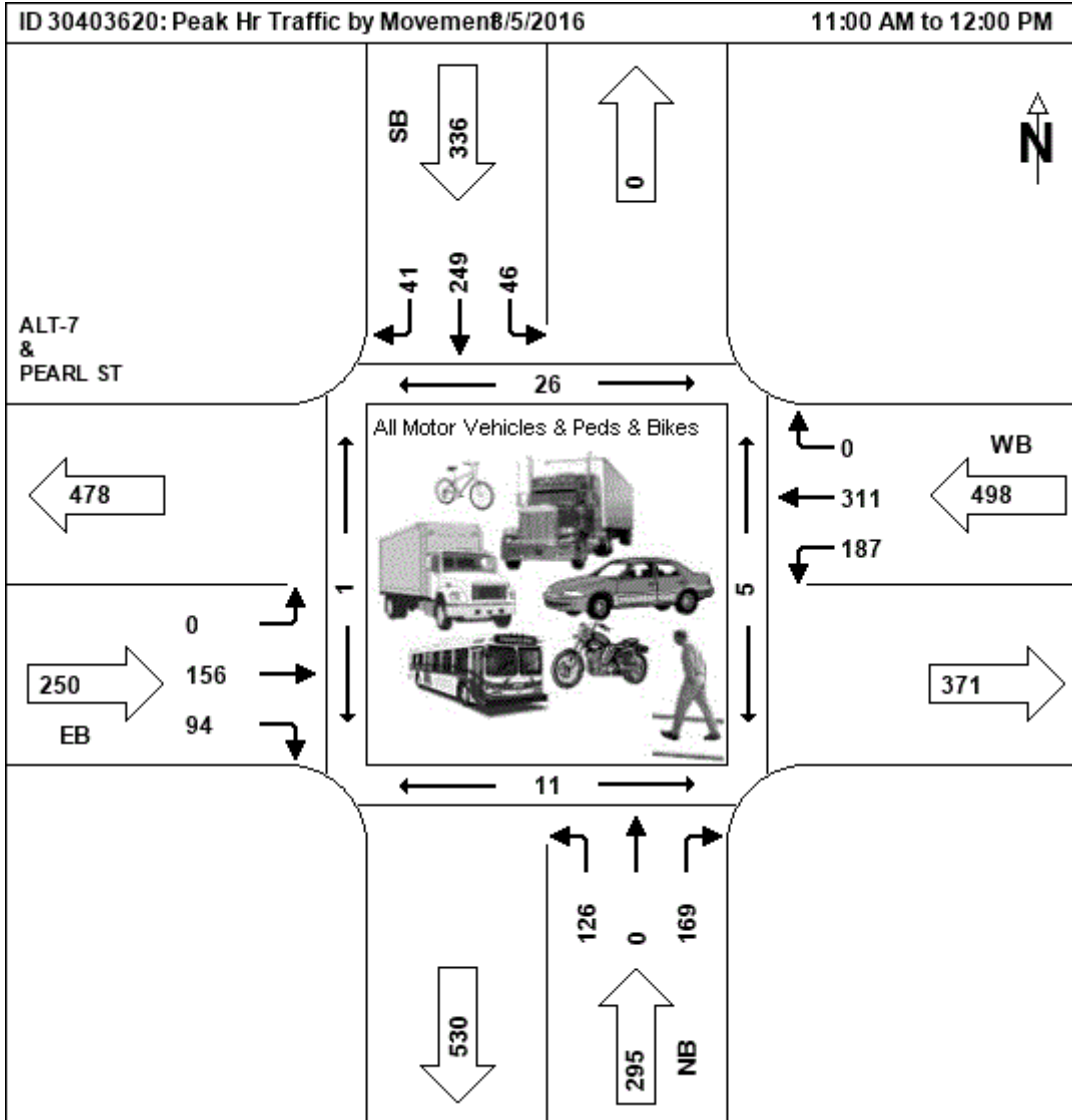


Midday Peak Hour
08/05/2016

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
11:00 AM	24	0	51	0	75	0	49	24	0	73	13	65	14	0	92	49	66	0	7	115	355

11:15 AM	34	0	40	0	74	0	32	18	0	50	15	57	11	0	83	40	94	0	0	134	341
11:30 AM	26	0	38	5	64	0	37	19	5	56	7	52	4	0	63	46	64	0	6	110	293
11:45 AM	42	0	40	0	82	0	38	33	6	71	11	75	12	1	98	52	87	0	13	139	390
Total	126	0	169	5	295	0	156	94	11	250	46	249	41	1	336	187	311	0	26	498	1379
PHF	0.75		0.83		0.90		0.80	0.71		0.86	0.77	0.83	0.73		0.86	0.90	0.83			0.90	
HV %	9		5				4	5			2	3	2			2	5				

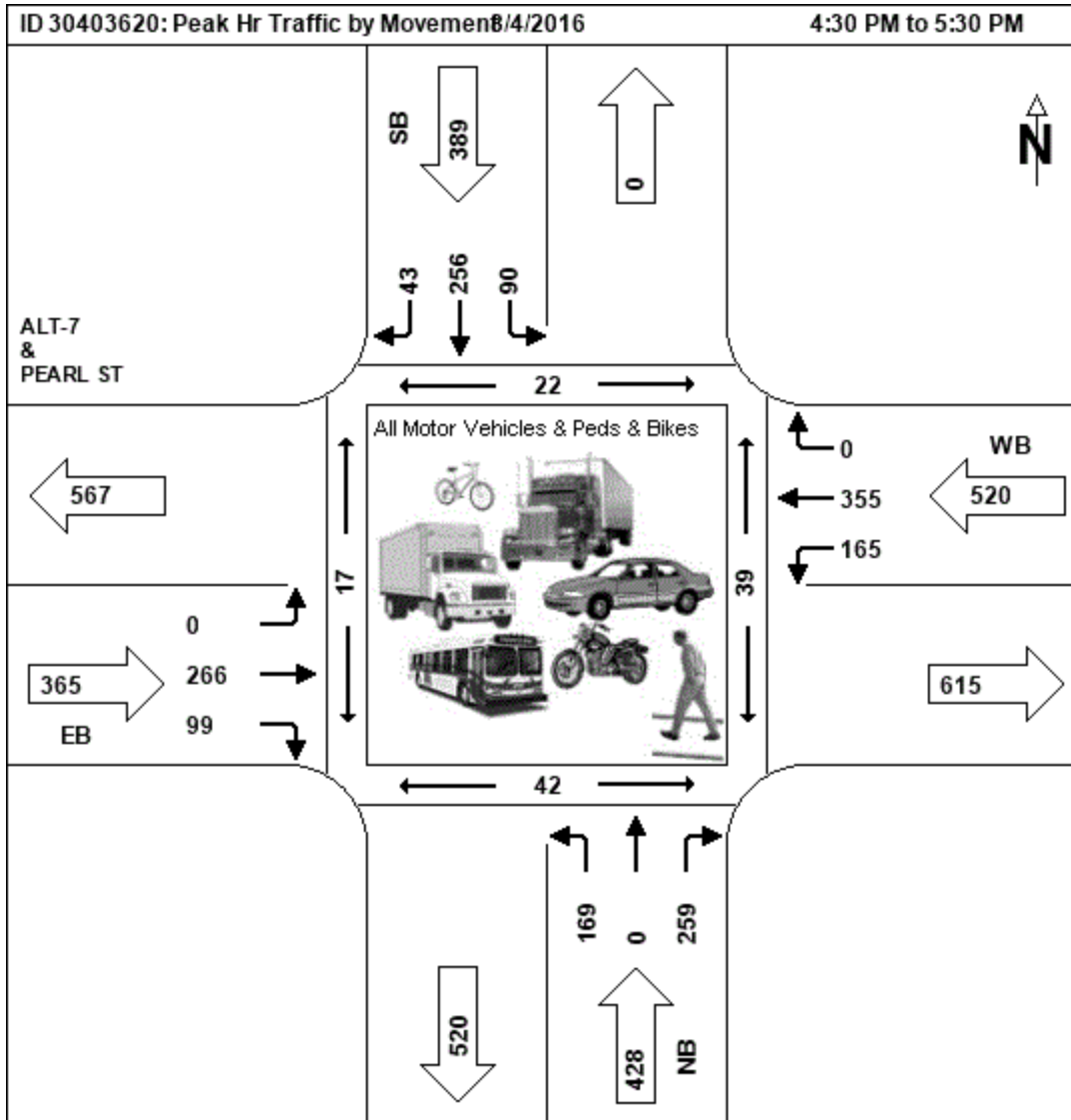
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
08/04/2016

NB						EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:30 PM	43	0	64	14	107	0	64	25	17	89	20	49	14	10	83	44	86	0	6	130	409
4:45 PM	43	0	62	7	105	0	73	26	4	99	21	71	8	7	100	37	90	0	5	127	431
5:00 PM	31	0	63	7	94	0	64	27	14	91	18	64	11	0	93	54	99	0	11	153	431
5:15 PM	52	0	70	11	122	0	65	21	7	86	31	72	10	0	113	30	80	0	0	110	431
Total	169	0	259	39	428	0	266	99	42	365	90	256	43	17	389	165	355	0	22	520	1702
PHF	0.81		0.93		0.88		0.91	0.92		0.92	0.73	0.89	0.77		0.86	0.76	0.90			0.85	
HV %	4		2				3	0			0	1	9			1	2				

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403325
 Community: BURLINGTON
 Road 1: N UNION ST
 Road 2: PEARL ST

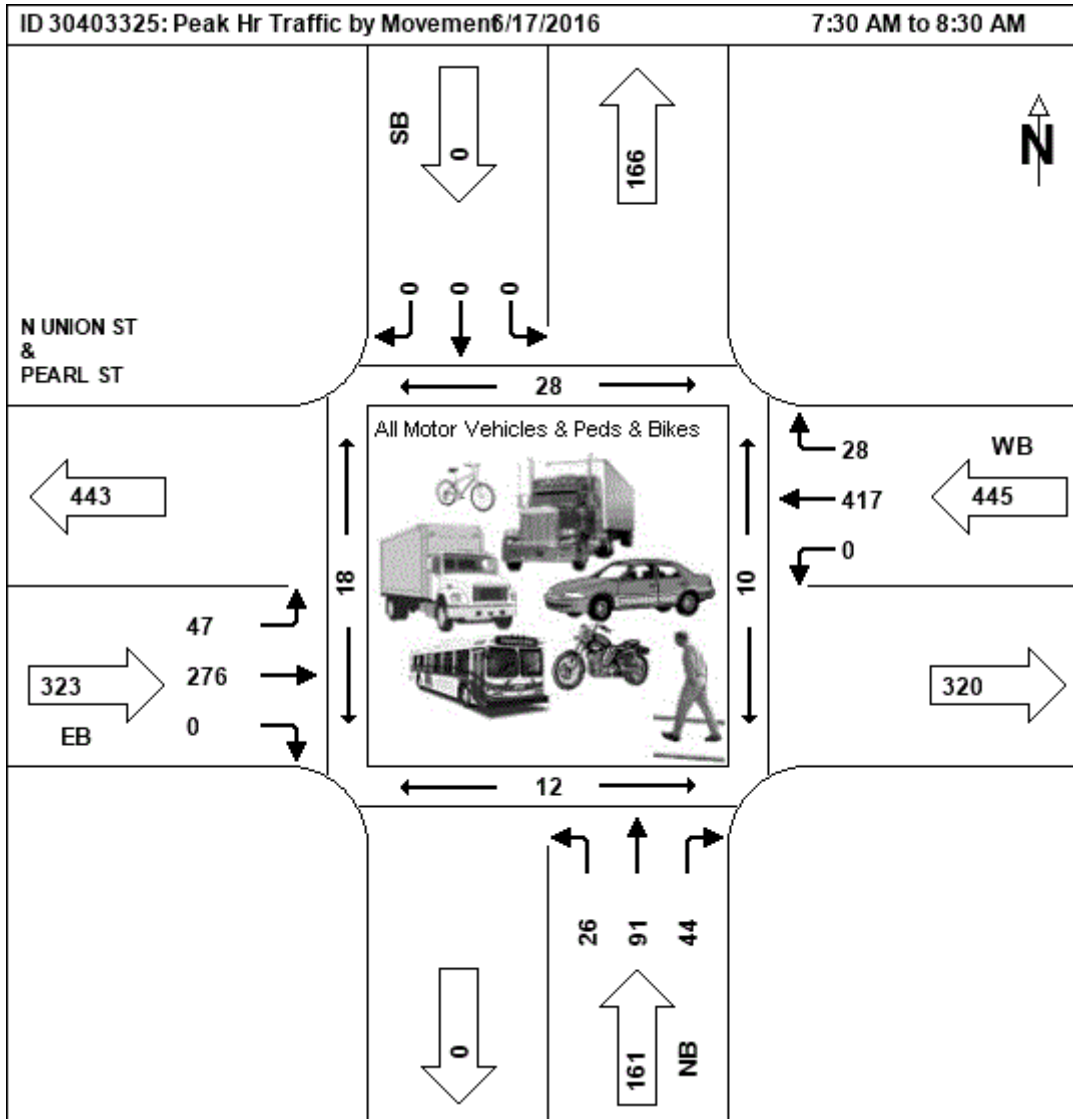
Corridor: NA
 Road 3: S UNION ST
 Road 4: PEARL ST

|<<|<|>|>>| 1-5 of 5

AM Peak Hour
06/17/2016

NB						EB						SB						WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total		
7:30 AM	9	26	7	2	42	7	63	0	2	70	0	0	0	3	0	0	111	10	8	121	233		
7:45 AM	6	19	11	2	36	17	66	0	3	83	0	0	0	4	0	0	117	3	7	120	239		
8:00 AM	4	21	11	2	36	12	77	0	3	89	0	0	0	6	0	0	83	9	5	92	217		
8:15 AM	7	25	15	4	47	11	70	0	4	81	0	0	0	5	0	0	106	6	8	112	240		
Total	26	91	44	10	161	47	276	0	12	323	0	0	0	18	0	0	417	28	28	445	929		
PHF	0.72	0.88	0.73		0.86	0.69	0.90			0.91							0.89	0.70		0.92			
HV %	0	1	2			13	5										5	0					

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



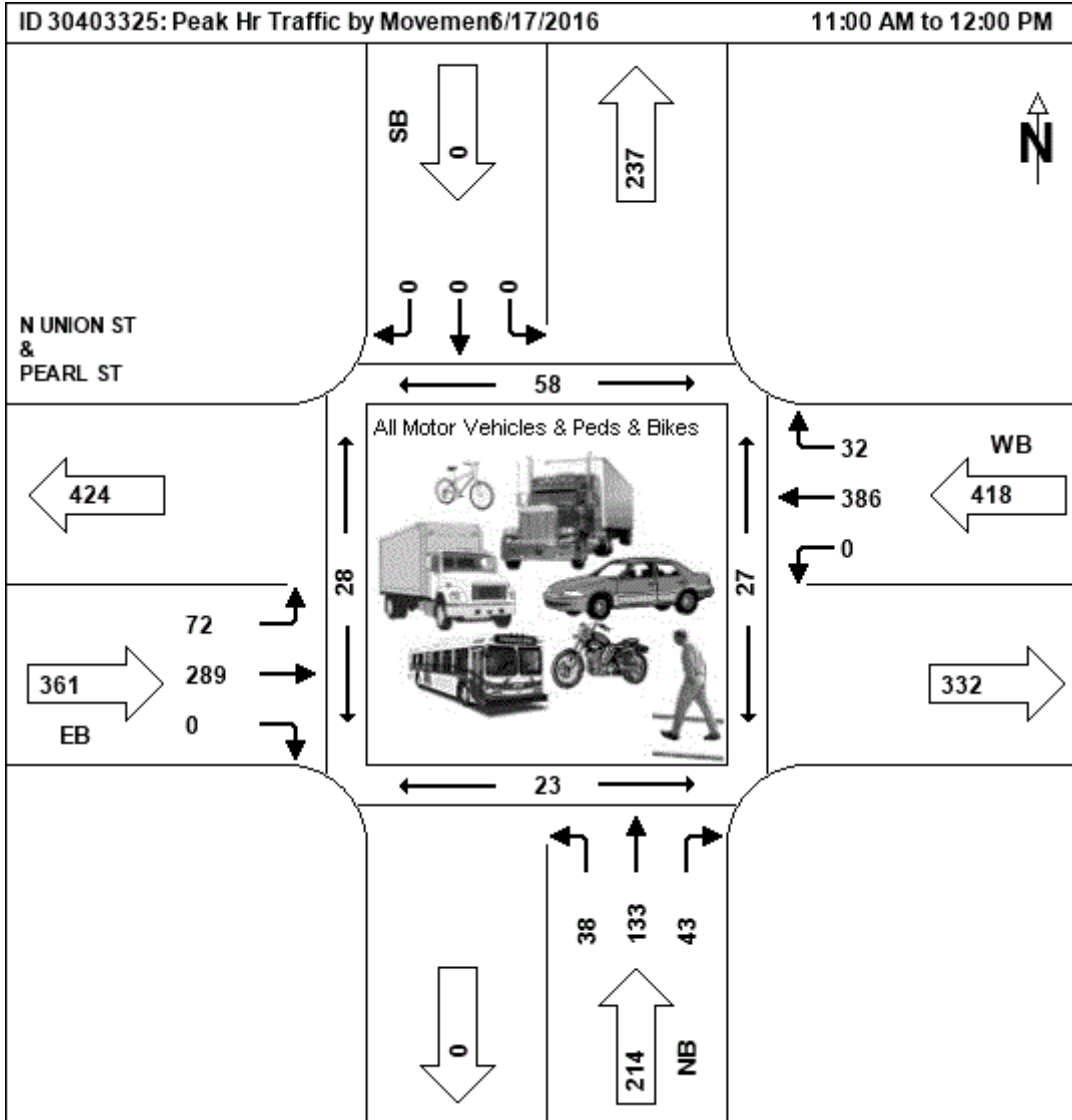
Midday Peak Hour
06/17/2016

06/11/2019

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
11:00 AM	10	32	6	4	48	13	69	0	9	82	0	0	0	13	0	0	102	7	25	109	239

11:15 AM	6	35	6	7	47	19	64	0	5	83	0	0	0	4	0	0	89	9	8	98	228
11:30 AM	12	36	15	7	63	19	71	0	3	90	0	0	0	10	0	0	98	5	4	103	256
11:45 AM	10	30	16	9	56	21	85	0	6	106	0	0	0	1	0	0	97	11	21	108	270
Total	38	133	43	27	214	72	289	0	23	361	0	0	0	28	0	0	386	32	58	418	993
PHF	0.79	0.92	0.67		0.85	0.86	0.85			0.85							0.95	0.73		0.96	
HV %	0	1	0		7	2											2	13			

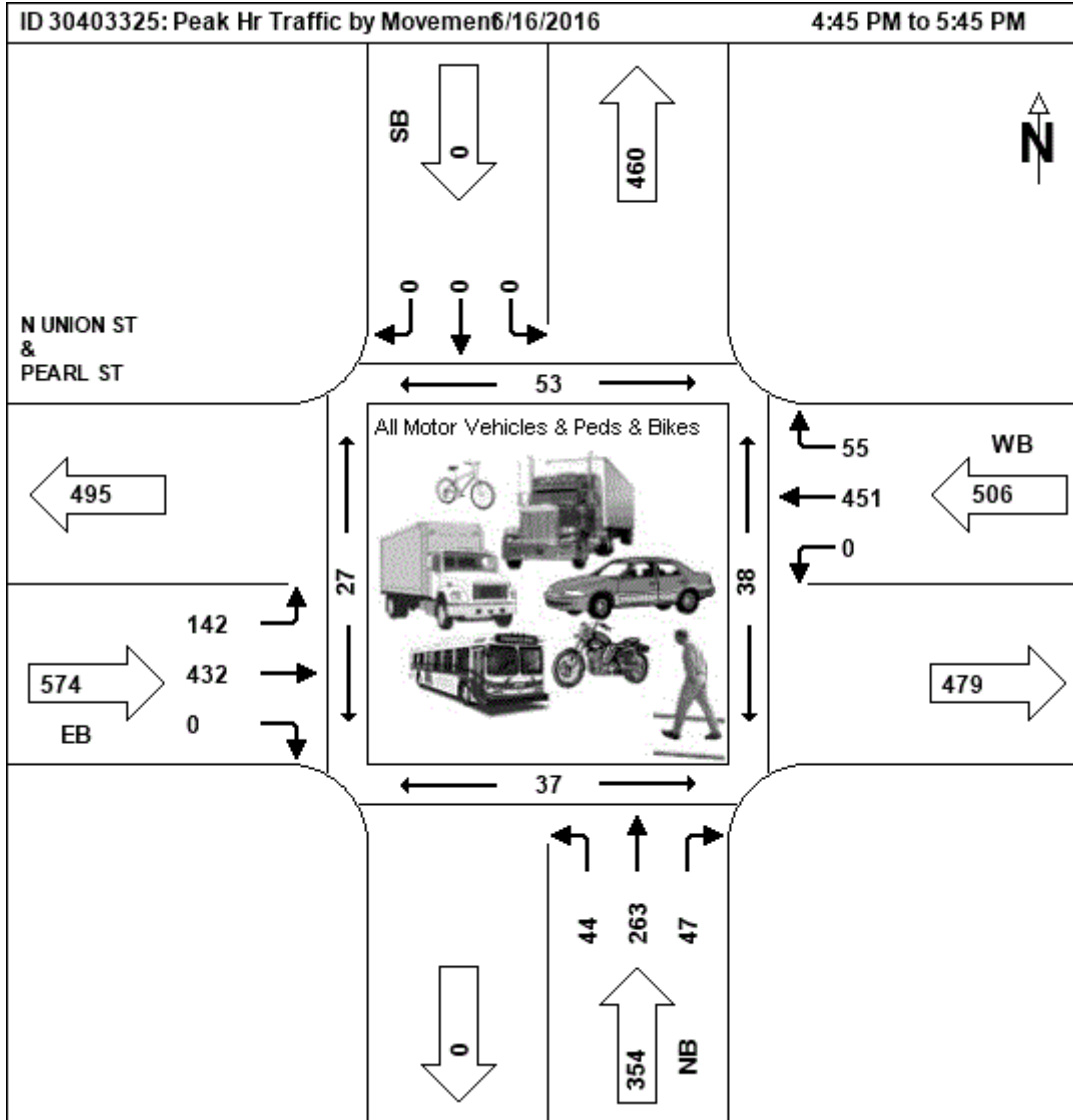
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/16/2016

NB						EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:45 PM	16	63	13	4	92	31	125	0	10	156	0	0	0	6	0	0	117	15	10	132	380
5:00 PM	8	78	12	9	98	41	115	0	9	156	0	0	0	2	0	0	103	9	12	112	366
5:15 PM	11	68	11	16	90	32	90	0	4	122	0	0	0	11	0	0	114	18	13	132	344
5:30 PM	9	54	11	9	74	38	102	0	14	140	0	0	0	8	0	0	117	13	18	130	344
Total	44	263	47	38	354	142	432	0	37	574	0	0	0	27	0	0	451	55	53	506	1434
PHF	0.690	0.84	0.90		0.90	0.870	0.86			0.92							0.96	0.76		0.96	
HV %	0	0	0		1	3											2	2			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403745
 Community: BURLINGTON
 Road 1: US-7
 Road 2: PEARL ST

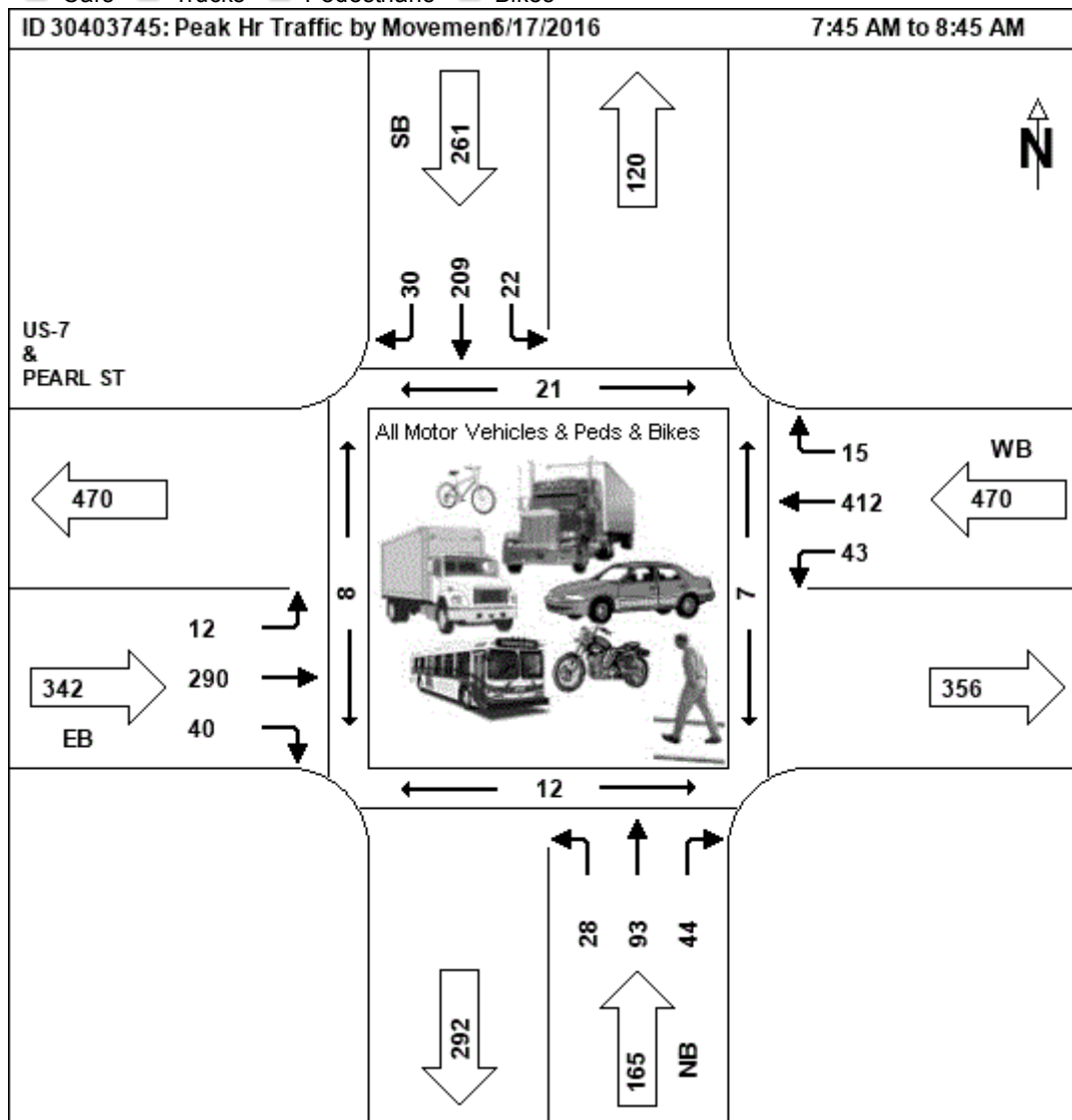
Corridor: NA
 Road 3: US-7
 Road 4: PEARL ST

|<<|<|>|>>| 1-4 of 4

AM Peak Hour 06/17/2016

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
7:45 AM	9	25	6	2	40	0	71	13	4	84	8	62	8	3	78	17	99	4	2	120	322
8:00 AM	4	23	9	2	36	3	71	15	4	89	5	47	6	3	58	6	90	3	2	99	282
8:15 AM	10	21	14	3	45	4	77	5	2	86	6	52	7	0	65	9	103	5	9	117	313
8:30 AM	5	24	15	0	44	5	71	7	2	83	3	48	9	2	60	11	120	3	8	134	321
Total	28	93	44	7	165	12	290	40	12	342	22	209	30	8	261	43	412	15	21	470	1238
PHF	0.70	0.93	0.73		0.92	0.60	0.94	0.67		0.96	0.69	0.84	0.83		0.84	0.63	0.86	0.75		0.88	
HV %	4	6	2			0	5	3			0	3	3			0	4	0			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

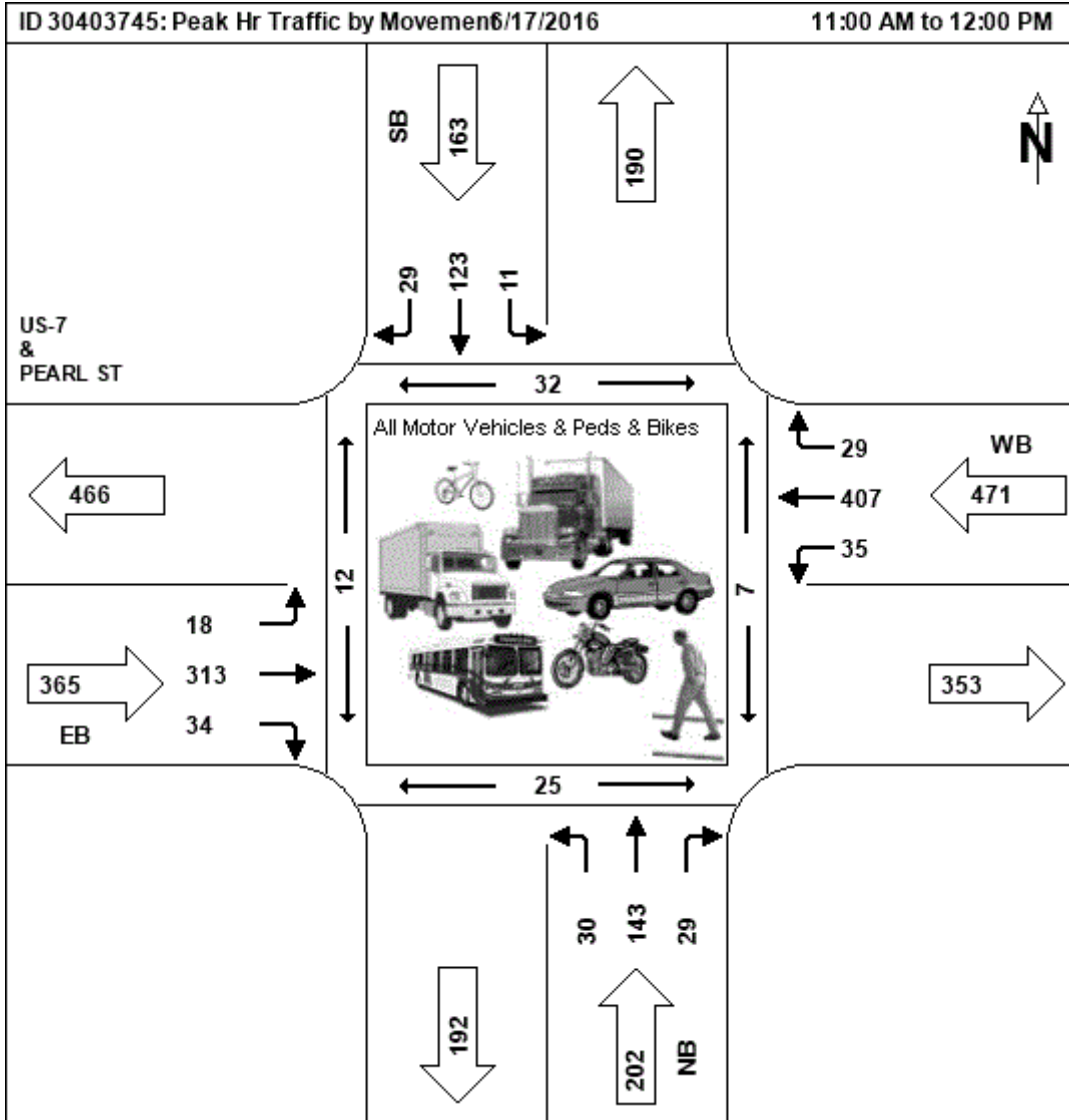


Midday Peak Hour 06/17/2016

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
11:00 AM	8	34	5	3	47	2	76	9	7	87	4	26	6	0	36	10	112	7	13	129	299

11:15 AM	8	36	7	2	51	3	74	8	7	85	3	31	6	3	40	8	102	7	7	117	293
11:30 AM	8	36	8	0	52	4	72	6	6	82	2	36	6	6	44	5	91	6	1	102	280
11:45 AM	6	37	9	2	52	9	91	11	5	111	2	30	11	3	43	12	102	9	11	123	329
Total	30	143	29	7	202	18	313	34	25	365	11	123	29	12	163	35	407	29	32	471	1201
PHF	0.94	0.97	0.81		0.97	0.50	0.86	0.77		0.82	0.69	0.85	0.66		0.93	0.73	0.91	0.81		0.91	
HV %	10	4	3			11	4	3			0	3	7			0	3	0			

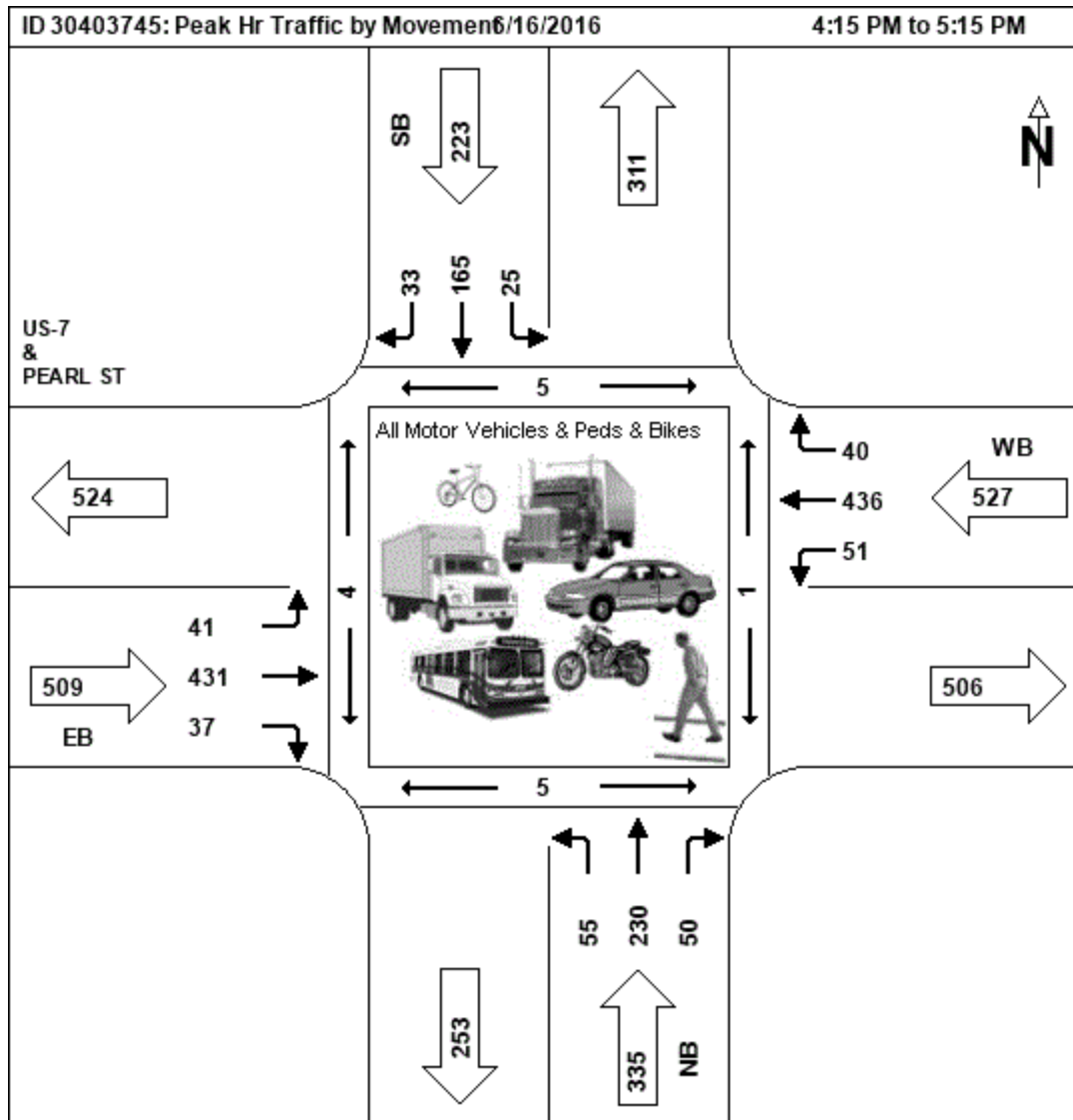
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/16/2016

NB						EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:15 PM	10	55	10	0	75	4	114	6	0	124	4	54	7	0	65	7	106	5	0	118	382
4:30 PM	17	56	14	1	87	10	98	12	0	120	6	36	11	0	53	18	105	13	4	136	396
4:45 PM	19	48	10	0	77	13	112	6	5	131	10	44	9	0	63	16	125	12	1	153	424
5:00 PM	9	71	16	0	96	14	107	13	0	134	5	31	6	4	42	10	100	10	0	120	392
Total	55	230	50	1	335	41	431	37	5	509	25	165	33	4	223	51	436	40	5	527	1594
PHF	0.720.810.78				0.87	0.730.950.71				0.95	0.630.760.75				0.86	0.710.870.77				0.86	
HV %	0	1	2			2	3	0			0	1	0			2	3	0			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403330
 Community: BURLINGTON
 Road 1: N PROSPECT ST
 Road 2: COLCHESTER AV

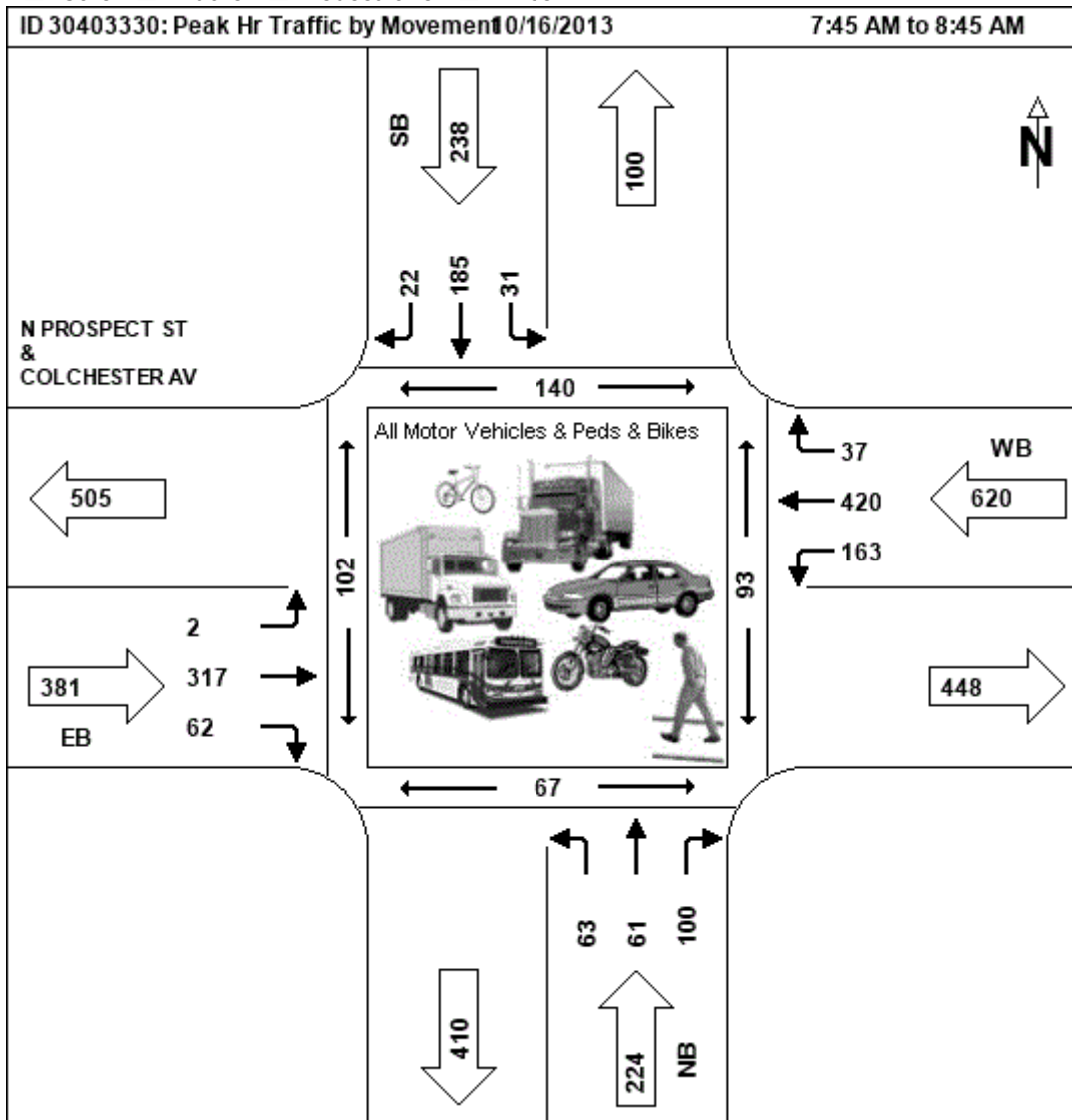
Corridor: NA
 Road 3: S PROSPECT ST
 Road 4: PEARL ST

|<<|<|>|>>| 1-5 of 5

AM Peak Hour 10/16/2013

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
7:45 AM	13	15	28	37	56	0	76	28	25	104	9	33	6	35	48	43	109	12	39	164	372
8:00 AM	20	20	30	19	70	0	89	7	5	96	9	55	4	18	68	38	112	12	26	162	396
8:15 AM	18	12	22	30	52	1	81	20	28	102	7	46	5	30	58	42	96	7	53	145	357
8:30 AM	12	14	20	7	46	1	71	7	9	79	6	51	7	19	64	40	103	6	22	149	338
Total	63	61	100	93	224	2	317	62	67	381	31	185	22	102	238	163	420	37	140	620	1463
PHF	0.79	0.76	0.83		0.80	0.50	0.89	0.55		0.92	0.86	0.84	0.79		0.88	0.95	0.94	0.77		0.95	
HV %	6	0	13			0	5	0			0	2	0			11	5	3			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

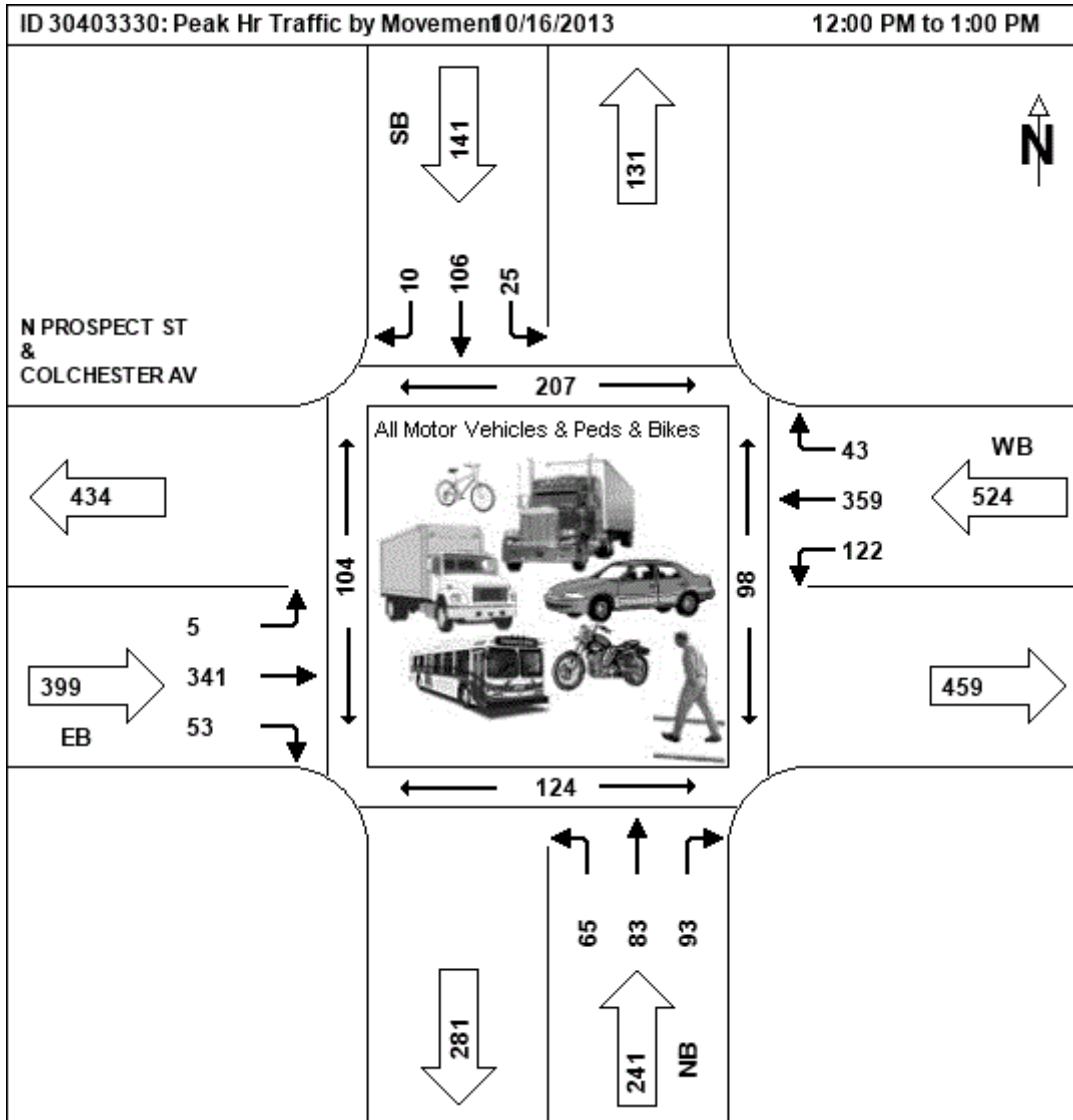


Midday Peak Hour 10/16/2013

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
12:00 PM	16	24	32	20	72	0	71	21	22	92	10	21	2	17	33	28	81	10	15	119	316

12:15 PM	13	15	21	9	49	1	87	11	17	99	2	27	1	16	30	33	90	9	16	132	310
12:30 PM	20	22	17	39	59	3	78	11	54	92	6	19	6	42	31	34	76	10	140	120	302
12:45 PM	16	22	23	30	61	1	105	10	31	116	7	39	1	29	47	27	112	14	36	153	377
Total	65	83	93	98	241	5	341	53	124	399	25	106	10	104	141	122	359	43	207	524	1305
PHF	0.81	0.86	0.73		0.84	0.42	0.81	0.63		0.86	0.63	0.68	0.42		0.75	0.90	0.80	0.77		0.86	
HV %	8	2	9			0	5	4			8	6	10			12	4	2			

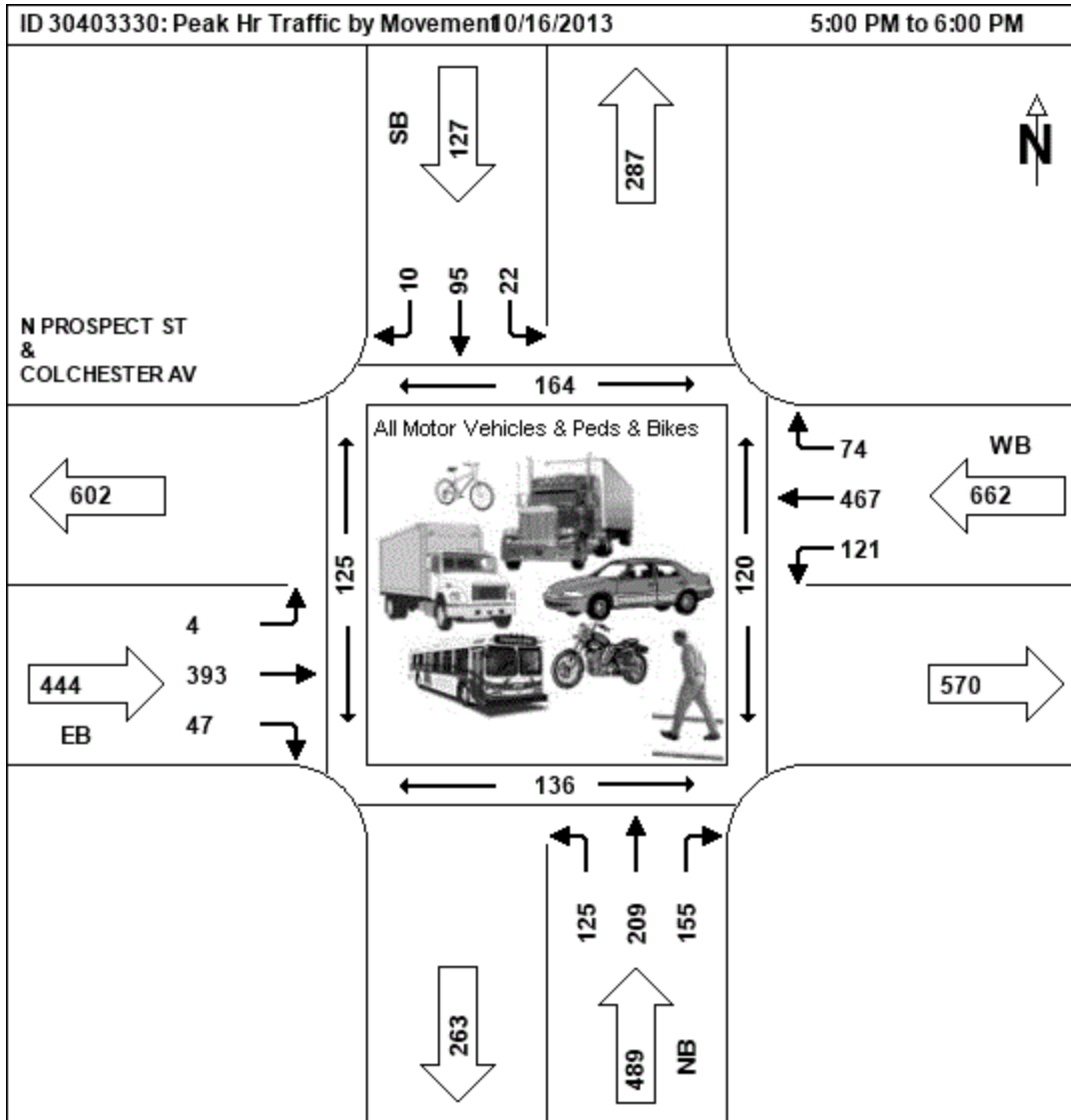
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
10/16/2013

NB						EB						SB						WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total		
5:00 PM	31	49	46	39	126	0	104	7	57	111	3	26	3	31	32	42	117	11	48	170	439		
5:15 PM	33	62	29	22	124	1	89	7	33	97	7	23	3	41	33	29	115	24	56	168	422		
5:30 PM	36	53	43	33	132	2	97	19	27	118	7	24	2	28	33	32	115	15	30	162	445		
5:45 PM	25	45	37	26	107	1	103	14	19	118	5	22	2	25	29	18	120	24	30	162	416		
Total	125	209	155	120	489	4	393	47	136	444	22	95	10	125	127	121	467	74	164	662	1722		
PHF	0.870	0.84	0.84		0.93	0.500	0.94	0.62		0.94	0.790	0.91	0.83		0.96	0.720	0.97	0.77		0.97			
HV %	0	0	0	5		0	3	0			0	3	0			7	1	0					

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes





Computations - Traffic Volumes

Project: BTV Town Center **Project #:** 57881.00
Location: Burlington, VT **Sheet:**
Calculated by: E. Quallen **Date:** 12/2/16
Checked by:
Title: BTV Town Center Traffic Counts
Intersection: College St / Pine St

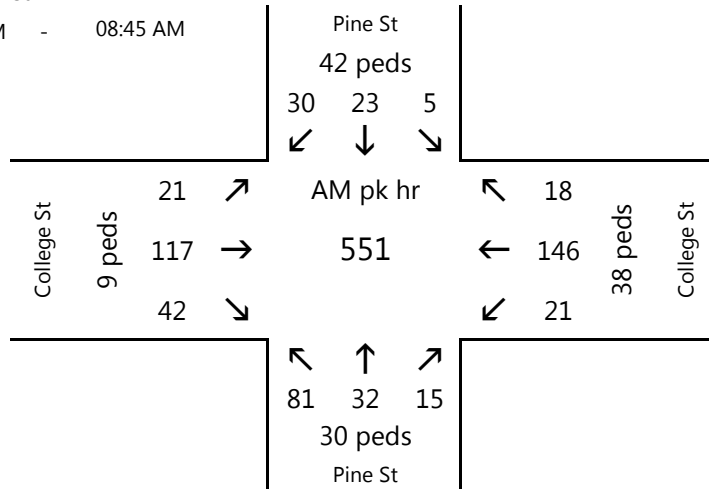
Intersection: College St / Pine St Town: Burlington
 Count Date(s): 11/30/2016 Counter: VHB

Peak Hour Volumes

	SB				WB				NB				EB				Total
	Pine St				College St				Pine St				College St				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	30	23	5	42	18	146	21	38	15	32	81	30	42	117	21	9	551
PM pk hr	52	65	20	51	12	111	34	45	21	39	32	43	97	131	24	28	638

AM Peak Hour

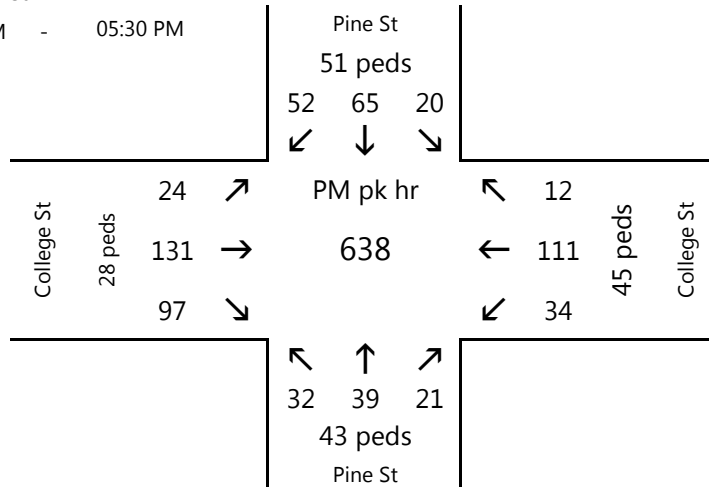
07:45 AM - 08:45 AM



% Auto: 80.1%
 % Med: 0.0%
 % Heavy: 2.1%
 total % Trucks: 2.1%

PM Peak Hour

04:30 PM - 05:30 PM



% Auto: 79.3%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%



Computations - Traffic Volumes

Project: BTV Town Center **Project #:** 57881.00
Location: Burlington, VT **Sheet:** _____
Calculated by: E. Quallen **Date:** 12/2/16
Checked by: _____ **Date:** _____
Title: BTV Town Center Traffic Counts
Intersection: College St / St Paul St

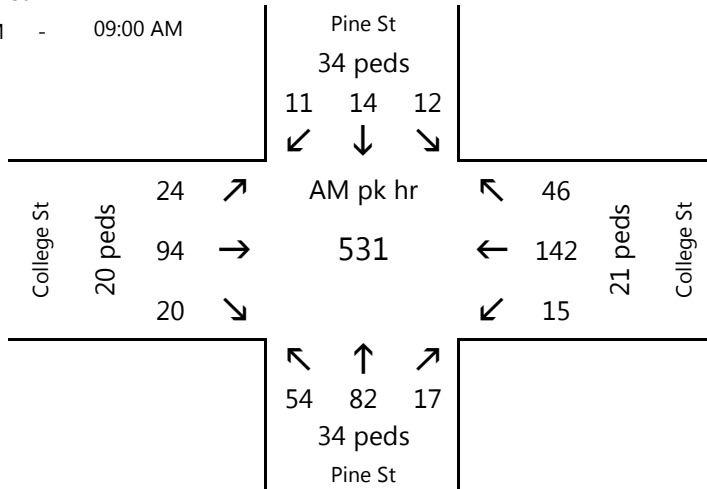
Intersection: College St / St Paul St Town: Burlington
 Count Date(s): 12/1/2016 Counter: VHB

Peak Hour Volumes

	SB				WB				NB				EB				Total
	Pine St				College St				Pine St				College St				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	11	14	12	34	46	142	15	21	17	82	54	34	20	94	24	20	531
PM pk hr	34	60	35	133	38	72	26	80	43	79	52	111	43	110	19	102	611

AM Peak Hour

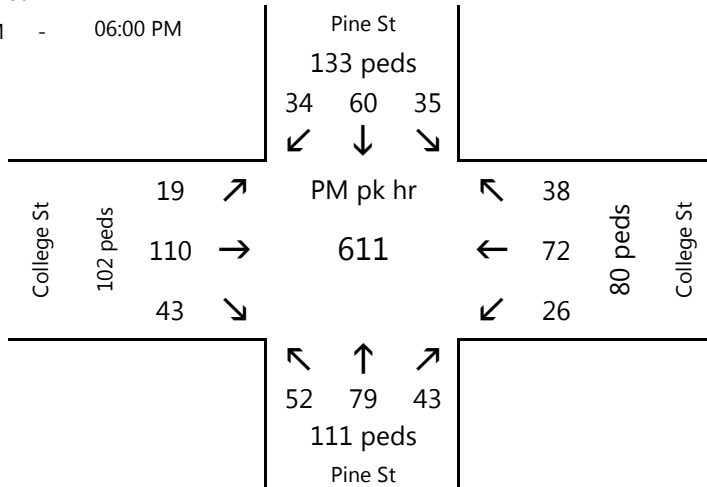
08:00 AM - 09:00 AM



% Auto: 83.0%
 % Med: 0.0%
 % Heavy: 0.0%
 total % Trucks: 0.0%

PM Peak Hour

05:00 PM - 06:00 PM



% Auto: 58.1%
 % Med: 0.8%
 % Heavy: 0.0%
 total % Trucks: 0.8%

Peak Hour Data for Intersection

Int ID: 30403275
 Community: BURLINGTON
 Road 1: PINE ST
 Road 2: MAIN ST

Corridor: NA
 Road 3: PINE ST
 Road 4: MAIN ST

|<<|<|>|>>| 1-5 of 5

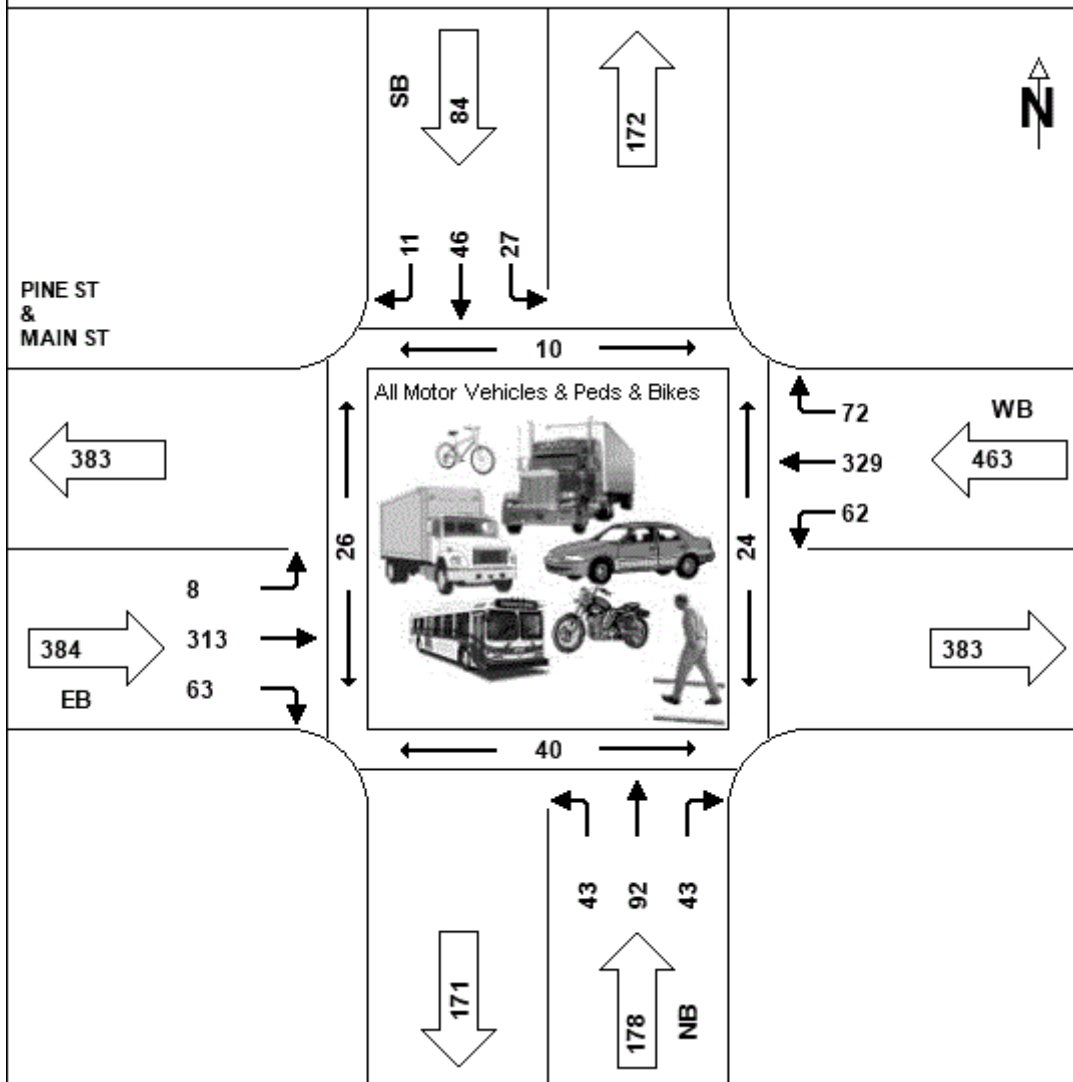
AM Peak Hour
06/05/2014

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
7:45 AM	11	26	10	7	47	1	73	17	4	91	6	11	2	3	19	18	73	21	3	112	269
8:00 AM	11	19	9	4	39	3	91	19	5	113	3	14	1	3	18	12	89	18	1	119	289
8:15 AM	13	26	13	5	52	2	70	14	13	86	10	10	4	11	24	20	81	19	6	120	282
8:30 AM	8	21	11	8	40	2	79	13	18	94	8	11	4	9	23	12	86	14	0	112	269
Total	43	92	43	24	178	8	313	63	40	384	27	46	11	26	84	62	329	72	10	463	1109
PHF	0.83	0.88	0.83		0.86	0.67	0.86	0.83		0.85	0.68	0.82	0.69		0.88	0.78	0.92	0.86		0.96	
HV %	12	7	21			0	6	10			4	20	9			5	6	4			

☒ Cars
 ☒ Trucks
 ☒ Pedestrians
 ☒ Bikes

ID 30403275: Peak Hr Traffic by Movement 6/5/2014

7:45 AM to 8:45 AM

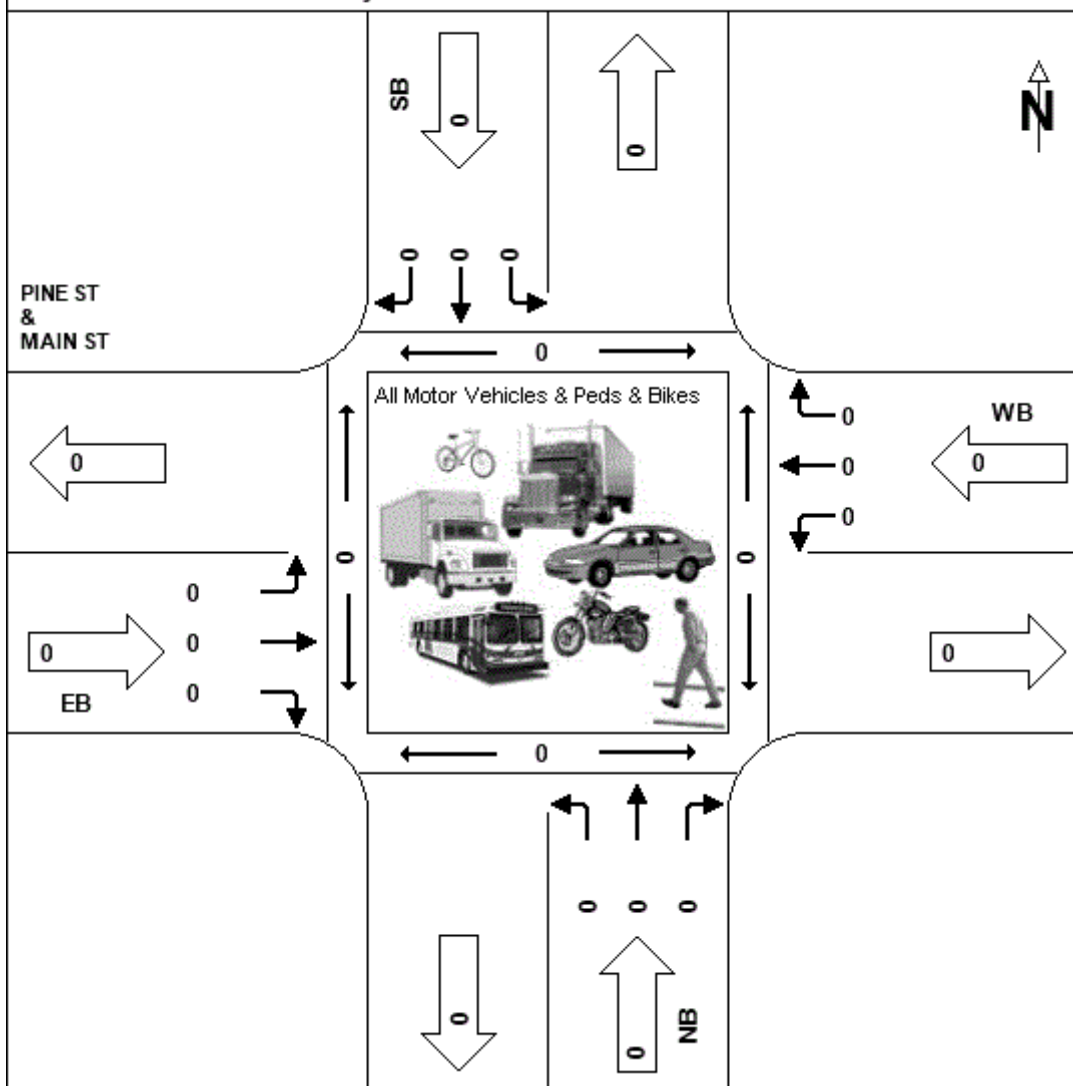


Midday Peak Hour
06/05/2014

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

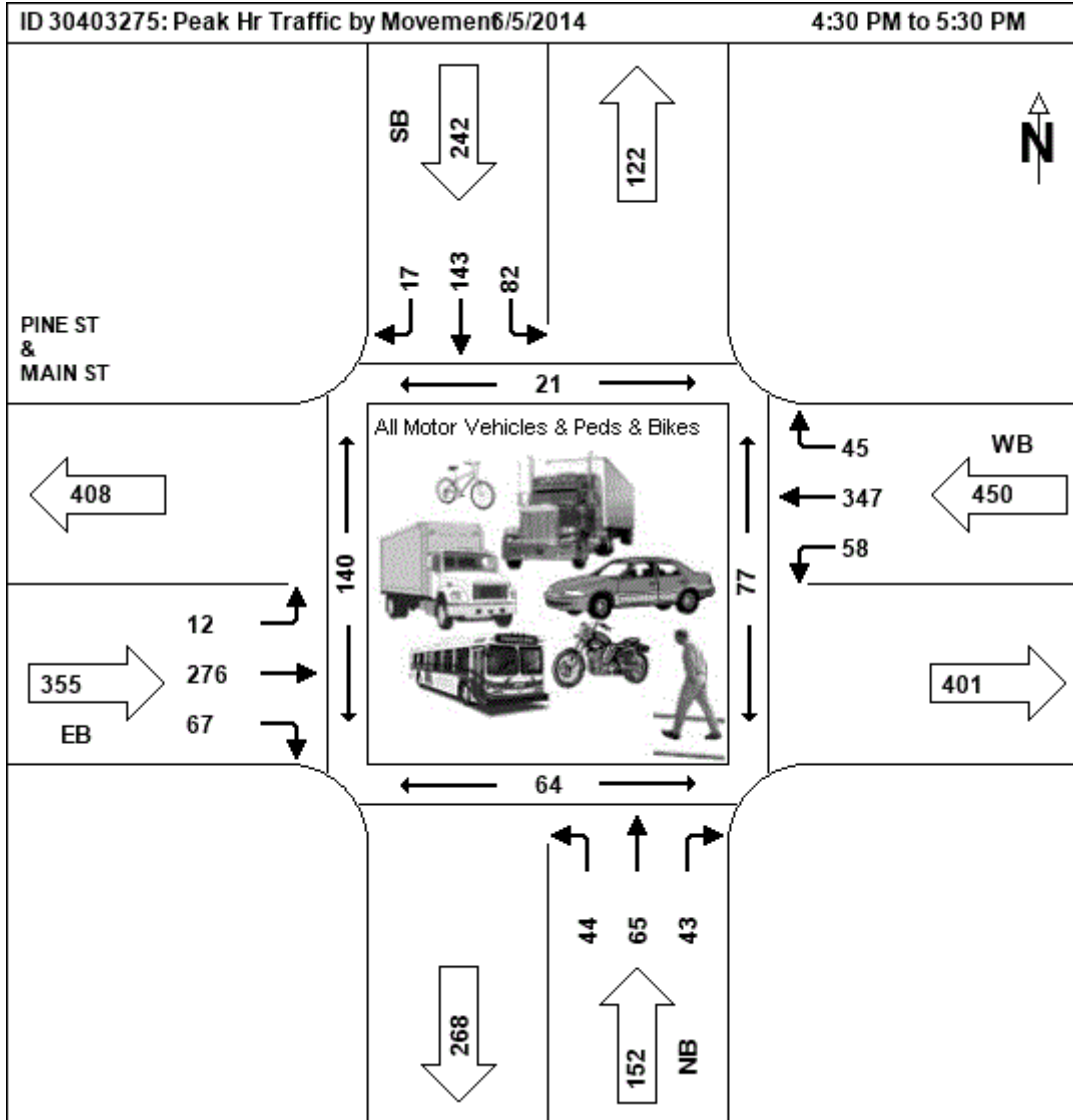
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

10:00 AM to 11:00 AM



PM Peak Hour
06/05/2014

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403270
 Community: BURLINGTON
 Road 1: ST PAUL ST
 Road 2: MAIN ST

Corridor: NA
 Road 3: ST PAUL ST
 Road 4: MAIN ST

<< < > >> 1-4 of 4

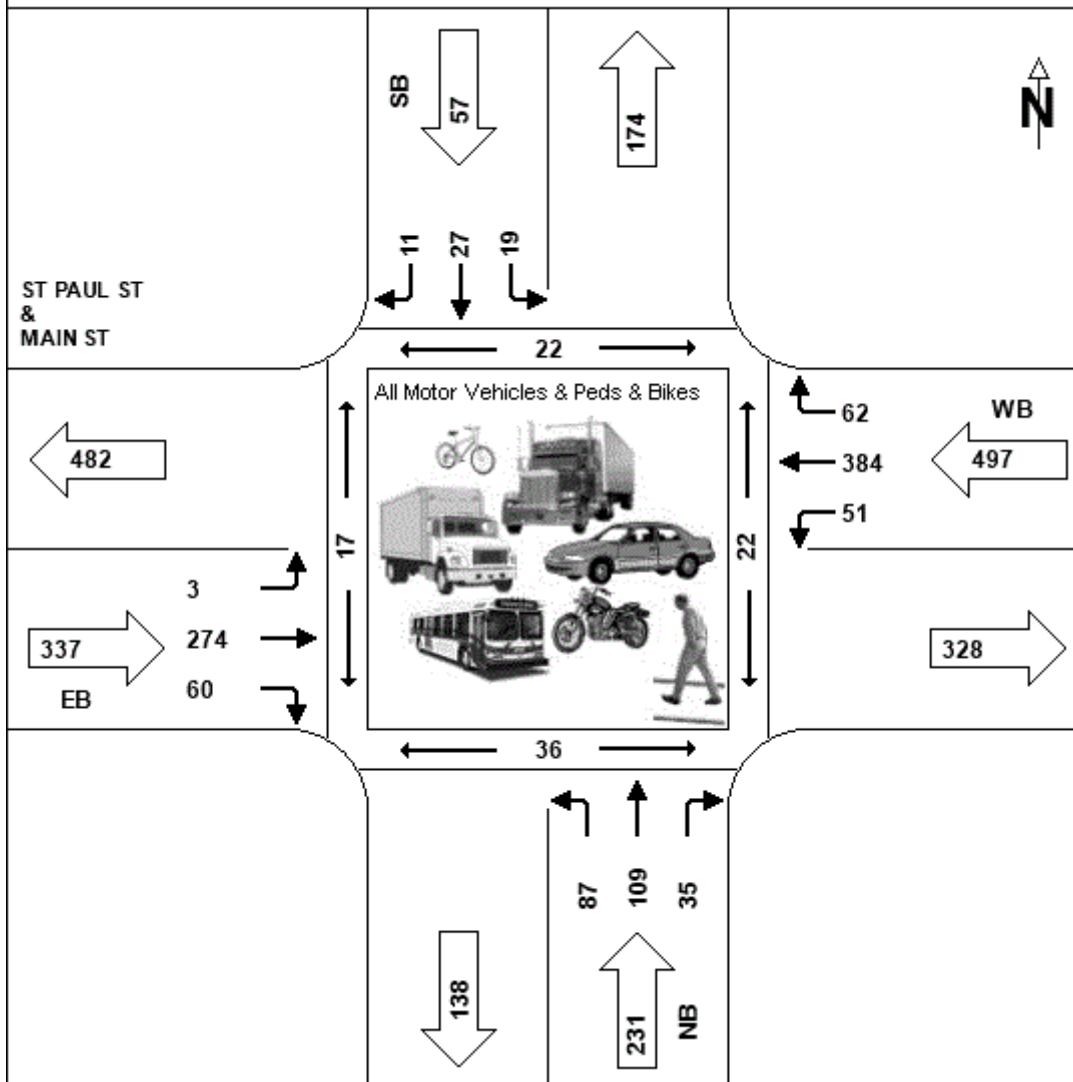
AM Peak Hour
06/14/2016

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
7:45 AM	25	21	5	3	51	1	80	19	4	100	7	4	1	5	12	13	101	16	1	130	293
8:00 AM	20	39	11	10	70	0	70	21	7	91	6	6	0	4	12	15	90	11	7	116	289
8:15 AM	18	26	9	6	53	2	62	13	9	77	2	10	4	2	16	9	98	17	11	124	270
8:30 AM	24	23	10	3	57	0	62	7	16	69	4	7	6	6	17	14	95	18	3	127	270
Total	87	109	35	22	231	3	274	60	36	337	19	27	11	17	57	51	384	62	22	497	1122
PHF	0.87	0.70	0.80		0.83	0.38	0.86	0.71		0.84	0.68	0.68	0.46		0.84	0.85	0.95	0.86		0.96	
HV %	7	2	6			33	7	0			5	4	0			10	5	0			

☒ Cars
 ☒ Trucks
 ☒ Pedestrians
 ☒ Bikes

ID 30403270: Peak Hr Traffic by Movement 6/14/2016

7:45 AM to 8:45 AM

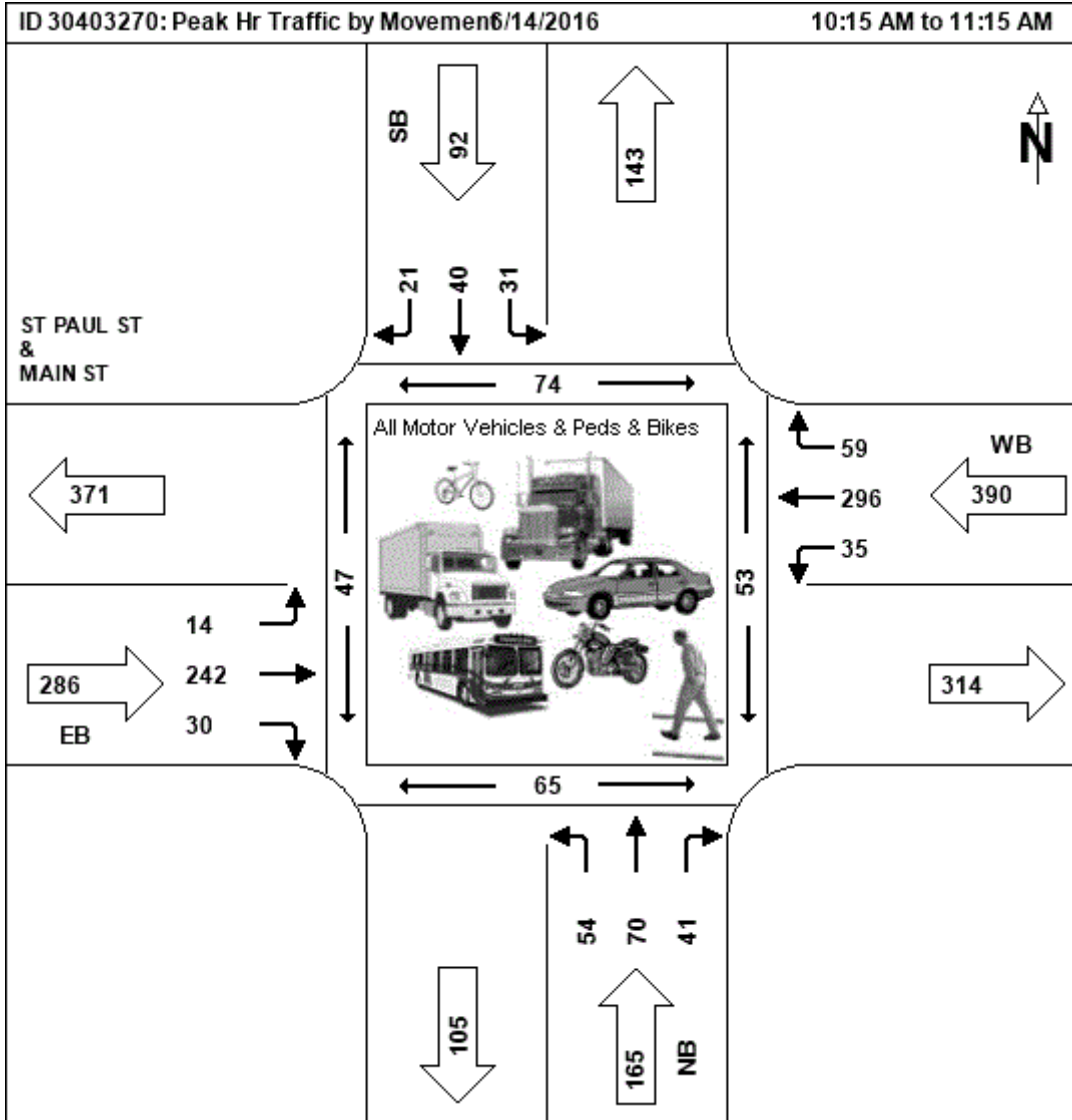


Midday Peak Hour
06/14/2016

NB					EB					SB					WB					App	Int
Start	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Left	Thru	Right	Ped	App	Int
Time					Total					Total					Total					Total	Total
10:15 AM	18	16	9	10	43	0	72	8	15	80	8	9	8	15	25	16	68	18	14	102	250

10:30 AM	14	9	12	10	35	4	57	7	19	68	8	9	3	11	20	5	82	14	20	101	224
10:45 AM	8	24	9	15	41	3	51	4	14	58	7	13	4	8	24	8	73	15	23	96	219
11:00 AM	14	21	11	18	46	7	62	11	17	80	8	9	6	13	23	6	73	12	17	91	240
Total	54	70	41	53	165	14	242	30	65	286	31	40	21	47	92	35	296	59	74	390	933
PHF	0.75	0.73	0.85		0.90	0.50	0.84	0.68		0.89	0.97	0.77	0.66		0.92	0.55	0.90	0.82		0.96	
HV %	7	4	7		0	3	3			10	5	5			6	6	8				

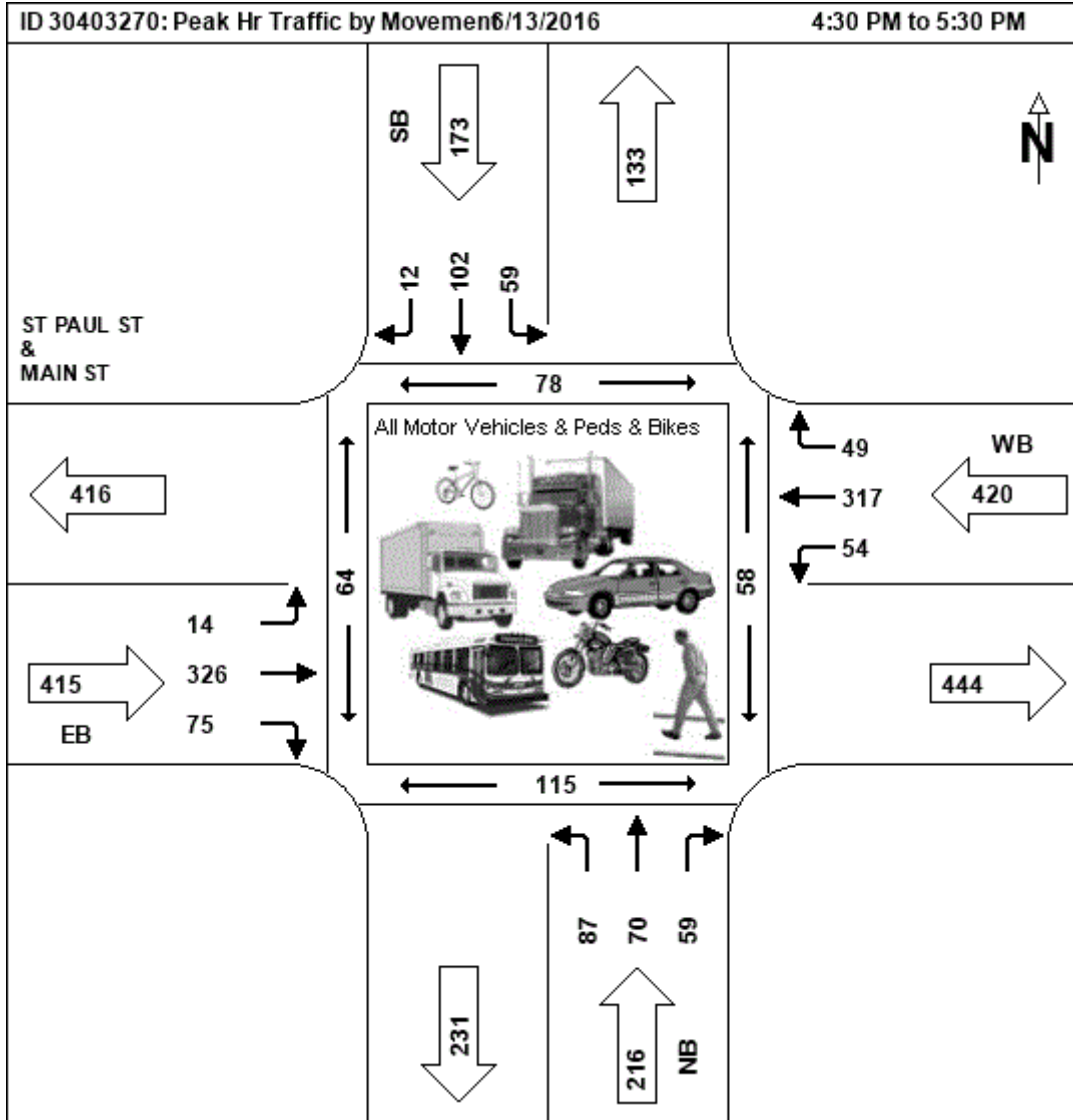
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/13/2016

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:30 PM	21	28	12	11	61	7	70	17	16	94	14	31	6	14	51	12	81	11	10	104	310
4:45 PM	22	13	21	11	56	3	78	23	25	104	16	22	1	20	39	11	67	10	12	88	287
5:00 PM	21	12	19	25	52	2	107	21	39	130	14	30	2	16	46	19	83	11	36	113	341
5:15 PM	23	17	7	11	47	2	71	14	35	87	15	19	3	14	37	12	86	17	20	115	286
Total	87	70	59	58	216	14	326	75	115	415	59	102	12	64	173	54	317	49	78	420	1224
PHF	0.95	0.63	0.70		0.89	0.50	0.76	0.82		0.80	0.92	0.82	0.50		0.85	0.71	0.92	0.72		0.91	
HV %	8	0	0			0	2	5			2	2	0			0	2	2			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403615
 Community: BURLINGTON
 Road 1: ALT-7
 Road 2: MAIN ST

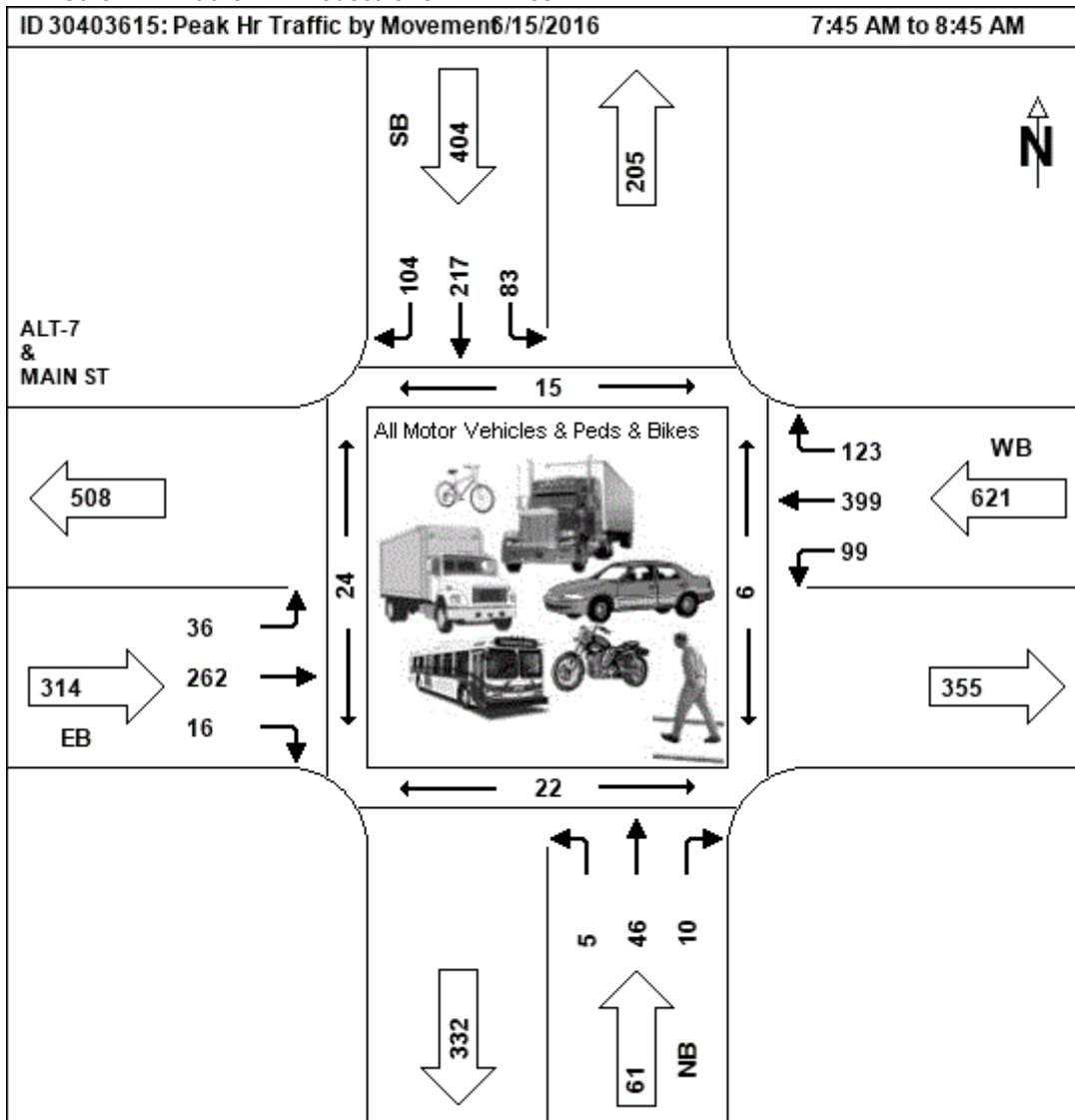
Corridor: NA
 Road 3: ALT-7
 Road 4: MAIN ST

|<<|<|>|>>| 1-5 of 5

AM Peak Hour
06/15/2016

NB						EB						SB						WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int. Total		
7:45 AM	1	7	4	0	12	9	80	3	3	92	20	58	18	4	96	28	97	29	3	154	354		
8:00 AM	0	13	3	4	16	2	59	4	11	65	18	43	19	7	80	32	98	25	5	155	316		
8:15 AM	3	10	1	1	14	11	58	5	5	74	21	55	28	4	104	25	110	37	1	172	364		
8:30 AM	1	16	2	1	19	14	65	4	3	83	24	61	39	9	124	14	94	32	6	140	366		
Total	5	46	10	6	61	36	262	16	22	314	83	217	104	24	404	99	399	123	15	621	1400		
PHF	0.42	0.72	0.63		0.80	0.64	0.82	0.80		0.85	0.86	0.89	0.67		0.81	0.77	0.91	0.83		0.90			
HV %	0	0	0			6	5	0			13	7	3			1	4	4					
☒ Cars	☒ Trucks	☒ Pedestrians	☒ Bikes																				

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

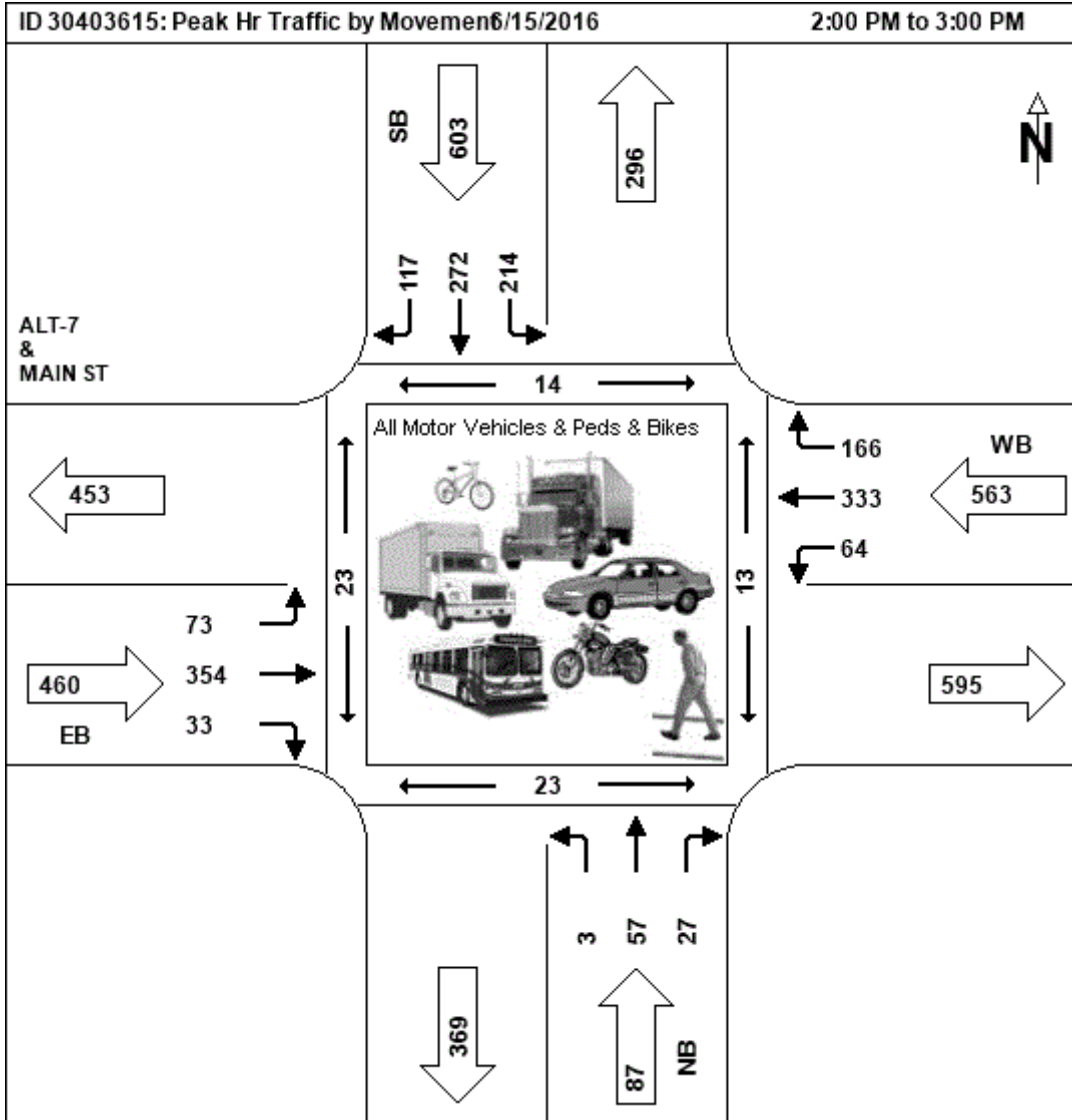


Midday Peak Hour
06/15/2016

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
2:00 PM	0	19	7	4	26	11	96	9	7	116	59	72	31	0	162	21	78	32	1	131	435

2:15 PM	1	14	8	3	23	19	84	12	9	115	42	59	26	10	127	7	81	50	5	138	403
2:30 PM	2	11	9	2	22	23	89	6	5	118	56	69	21	8	146	9	90	42	5	141	427
2:45 PM	0	13	3	4	16	20	85	6	2	111	57	72	39	5	168	27	84	42	3	153	448
Total	3	57	27	13	87	73	354	33	23	460	214	272	117	23	603	64	333	166	14	563	1713
PHF	0.38	0.75	0.75		0.84	0.79	0.92	0.69		0.97	0.91	0.94	0.75		0.90	0.59	0.93	0.83		0.92	
HV %	0	2	0			3	4	0			3	6	9			0	3	2			

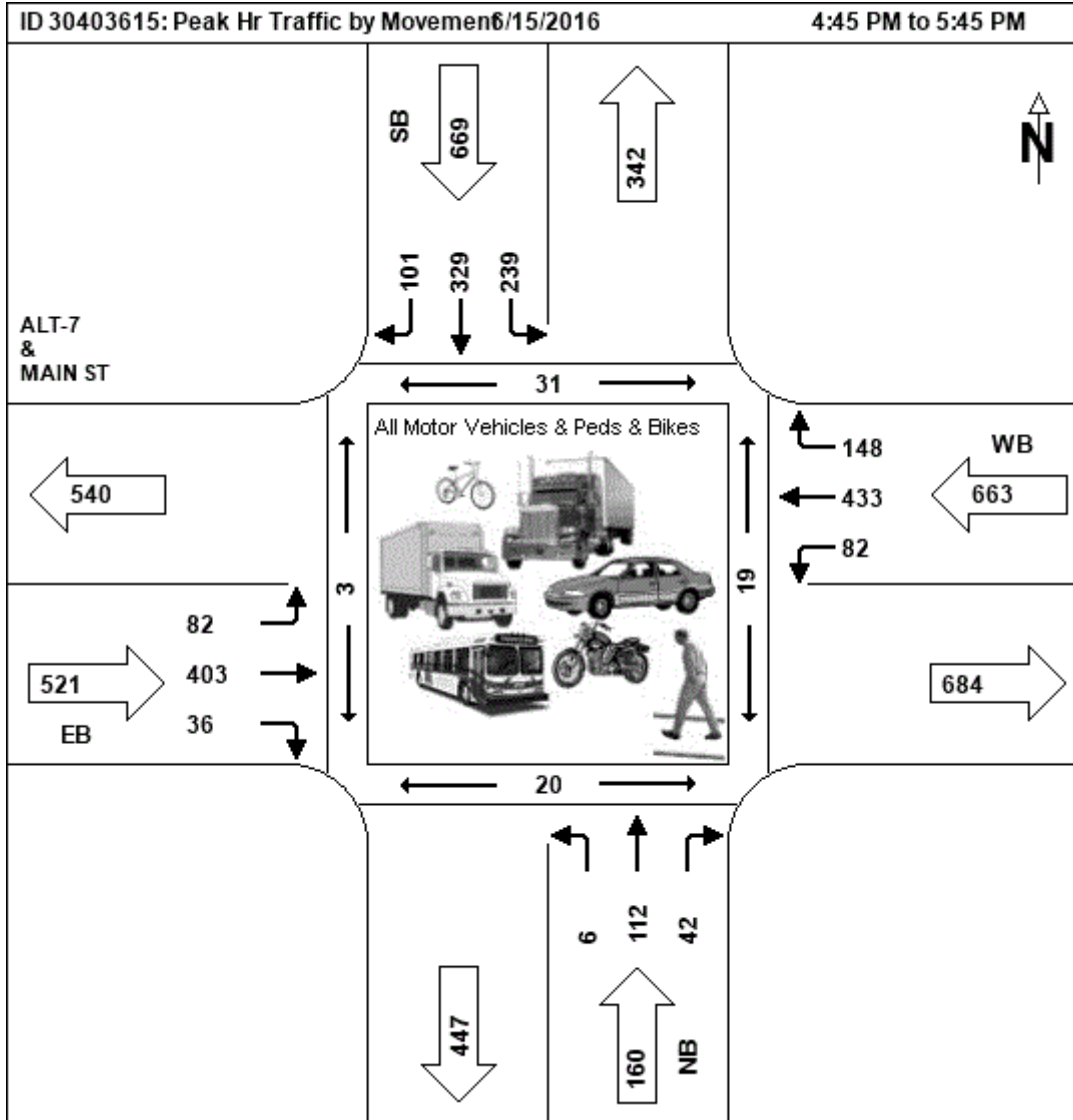
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/15/2016

NB						EB					SB					WB					Int
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	
4:45 PM	1	30	12	2	43	19	101	11	0	131	59	85	38	0	182	11	92	44	10	147	503
5:00 PM	1	31	15	6	47	21	111	8	8	140	70	79	20	0	169	23	118	48	4	189	545
5:15 PM	2	31	4	6	37	21	98	7	5	126	64	84	25	3	173	26	109	21	6	156	492
5:30 PM	2	20	11	5	33	21	93	10	7	124	46	81	18	0	145	22	114	35	11	171	473
Total	6	112	42	19	160	82	403	36	20	521	239	329	101	3	669	82	433	148	31	663	2013
PHF	0.75	0.90	0.70		0.85	0.98	0.91	0.82		0.93	0.85	0.97	0.66		0.92	0.79	0.92	0.77		0.88	
HV %	0	0	0	5		2	0	0			3	2	2			0	2	0			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Peak Hour Data for Intersection

Int ID: 30403265
 Community: BURLINGTON
 Road 1: S UNION ST
 Road 2: MAIN ST

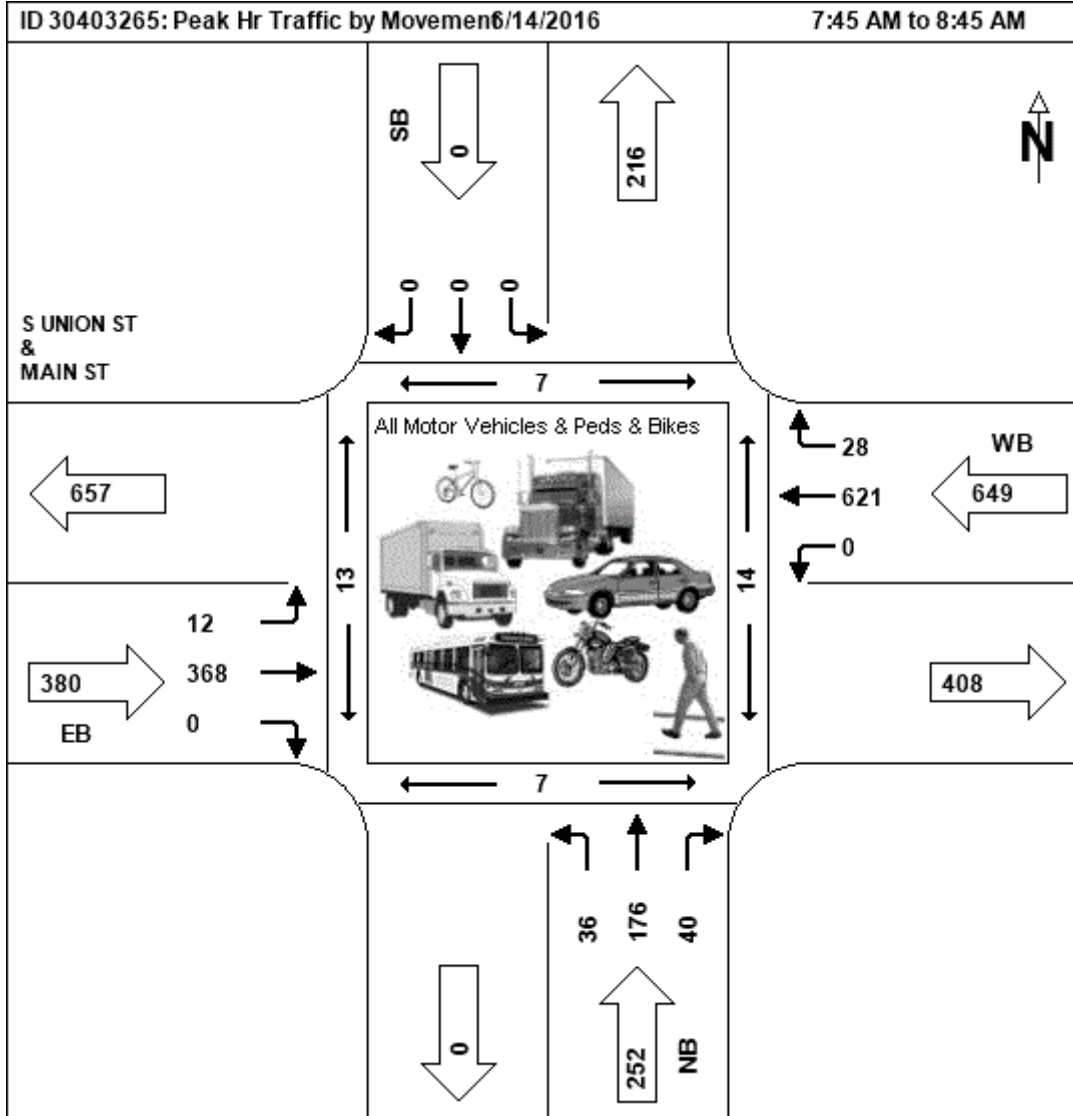
Corridor: NA
 Road 3: S UNION ST
 Road 4: MAIN ST

|<<|<|>|>>| 1-6 of 6

AM Peak Hour 06/14/2016

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
7:45 AM	3	46	5	7	54	6	112	0	2	118	0	0	0	7	0	0	166	4	0	170	342
8:00 AM	6	41	14	4	61	1	87	0	1	88	0	0	0	1	0	0	158	4	3	162	311
8:15 AM	19	50	11	2	80	2	88	0	1	90	0	0	0	1	0	0	141	12	2	153	323
8:30 AM	8	39	10	1	57	3	81	0	3	84	0	0	0	4	0	0	156	8	2	164	305
Total	36	176	40	14	252	12	368	0	7	380	0	0	0	13	0	0	621	28	7	649	1281
PHF	0.47	0.88	0.71		0.79	0.50	0.82			0.81							0.94	0.58		0.95	
HV %	11	2	3			17	7										4	4			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

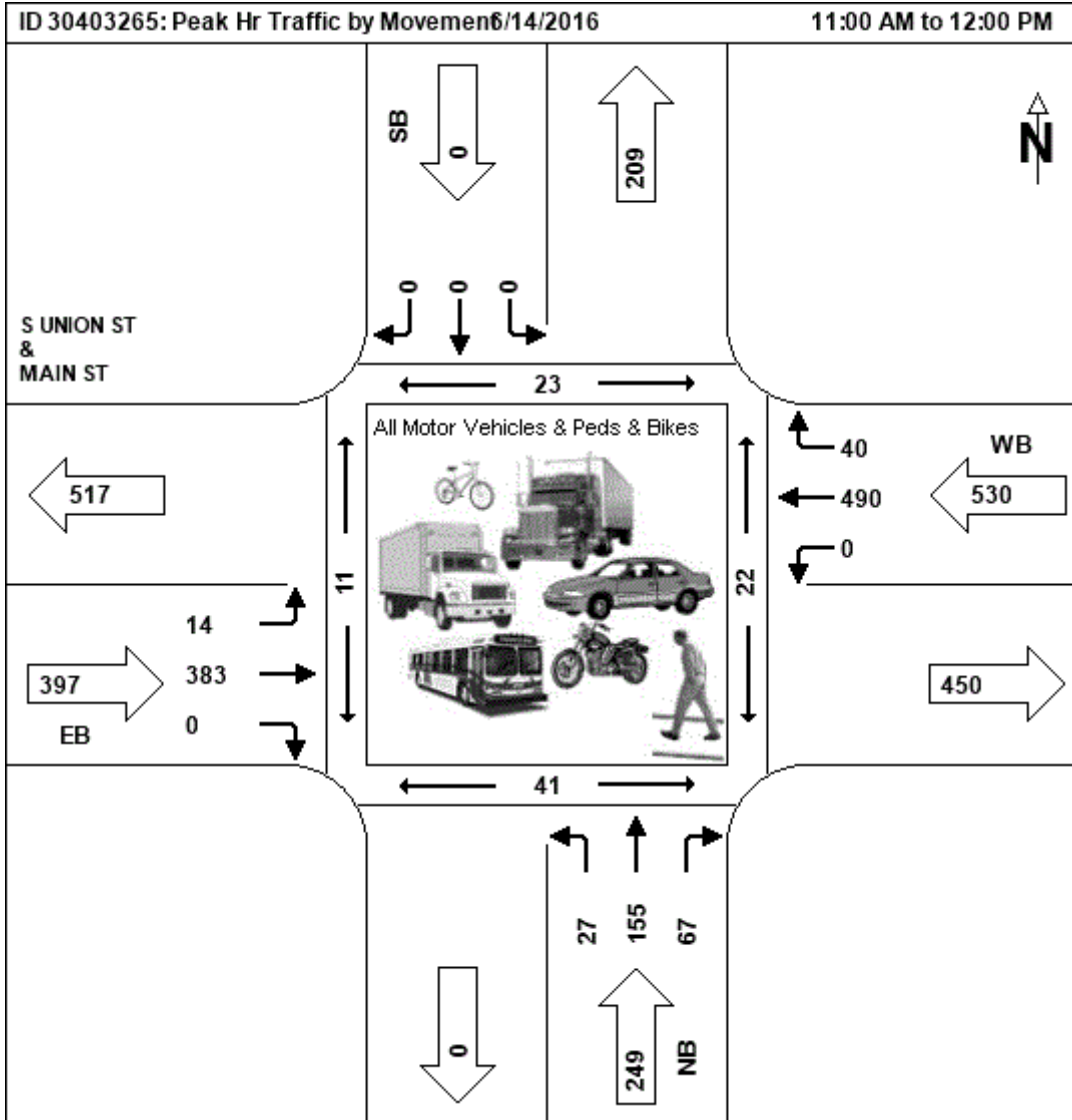


Midday Peak Hour 06/14/2016

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
11:00 AM	5	28	13	3	46	4	80	0	9	84	0	0	0	2	0	0	119	10	5	129	259

11:15 AM	4	53	18	4	75	4	102	0	0	106	0	0	0	2	0	0	119	4	0	123	304
11:30 AM	9	23	23	1	55	1	97	0	28	98	0	0	0	4	0	0	107	10	7	117	270
11:45 AM	9	51	13	14	73	5	104	0	4	109	0	0	0	3	0	0	145	16	11	161	343
Total	27	155	67	22	249	14	383	0	41	397	0	0	0	11	0	0	490	40	23	530	1176
PHF	0.75	0.73	0.73		0.83	0.70	0.92			0.91							0.84	0.63		0.82	
HV %	11	2	3		0	7											5	3			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/13/2016

NB						EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:30 PM	6	66	23	3	95	12	163	0	3	175	0	0	0	3	0	0	122	5	7	127	397
4:45 PM	13	61	25	2	99	7	175	0	1	182	0	0	0	2	0	0	123	11	4	134	415
5:00 PM	7	57	33	2	97	9	179	0	5	188	0	0	0	3	0	0	148	11	9	159	444
5:15 PM	15	57	16	5	88	13	158	0	5	171	0	0	0	10	0	0	158	5	9	163	422
Total	41	241	97	12	379	41	675	0	14	716	0	0	0	18	0	0	551	32	29	583	1678
PHF	0.68	0.91	0.73		0.96	0.79	0.94			0.95							0.87	0.73		0.89	
HV %	5	2	0		0	2											1	0			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

Peak Hour Data for Intersection

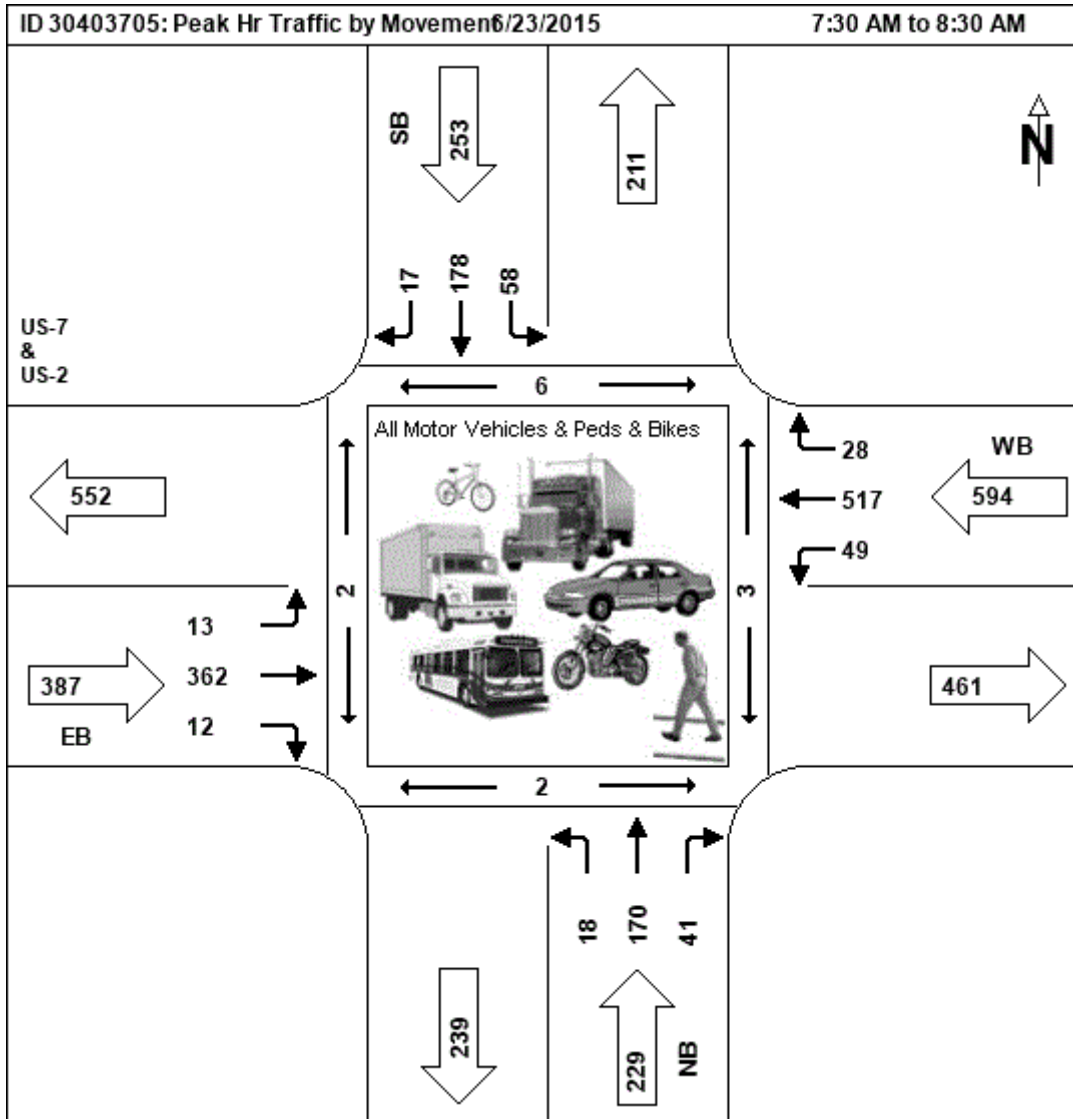
Int ID: 30403705
 Community: BURLINGTON
 Road 1: US-7
 Road 2: US-2

Corridor: NA
 Road 3: US-7
 Road 4: MAIN ST

|<<|<|>|>>| 1-8 of 8

AM Peak Hour
06/23/2015

NB						EB						SB						WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total		
7:30 AM	7	43	10	1	60	3	74	3	2	80	13	34	3	0	50	11	99	7	2	117	307		
7:45 AM	3	44	11	1	58	3	109	3	0	115	18	67	7	2	92	17	155	7	3	179	444		
8:00 AM	5	46	11	1	62	6	99	3	0	108	13	43	4	0	60	13	144	10	1	167	397		
8:15 AM	3	37	9	0	49	1	80	3	0	84	14	34	3	0	51	8	119	4	0	131	315		
Total	18	170	41	3	229	13	362	12	2	387	58	178	17	2	253	49	517	28	6	594	1463		
PHF	0.64	0.92	0.93		0.92	0.54	0.83	1.00		0.84	0.81	0.66	0.61		0.69	0.72	0.83	0.70		0.83			
HV %	11	2	0			38	5	17			2	0	0			2	3	0					
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes																							



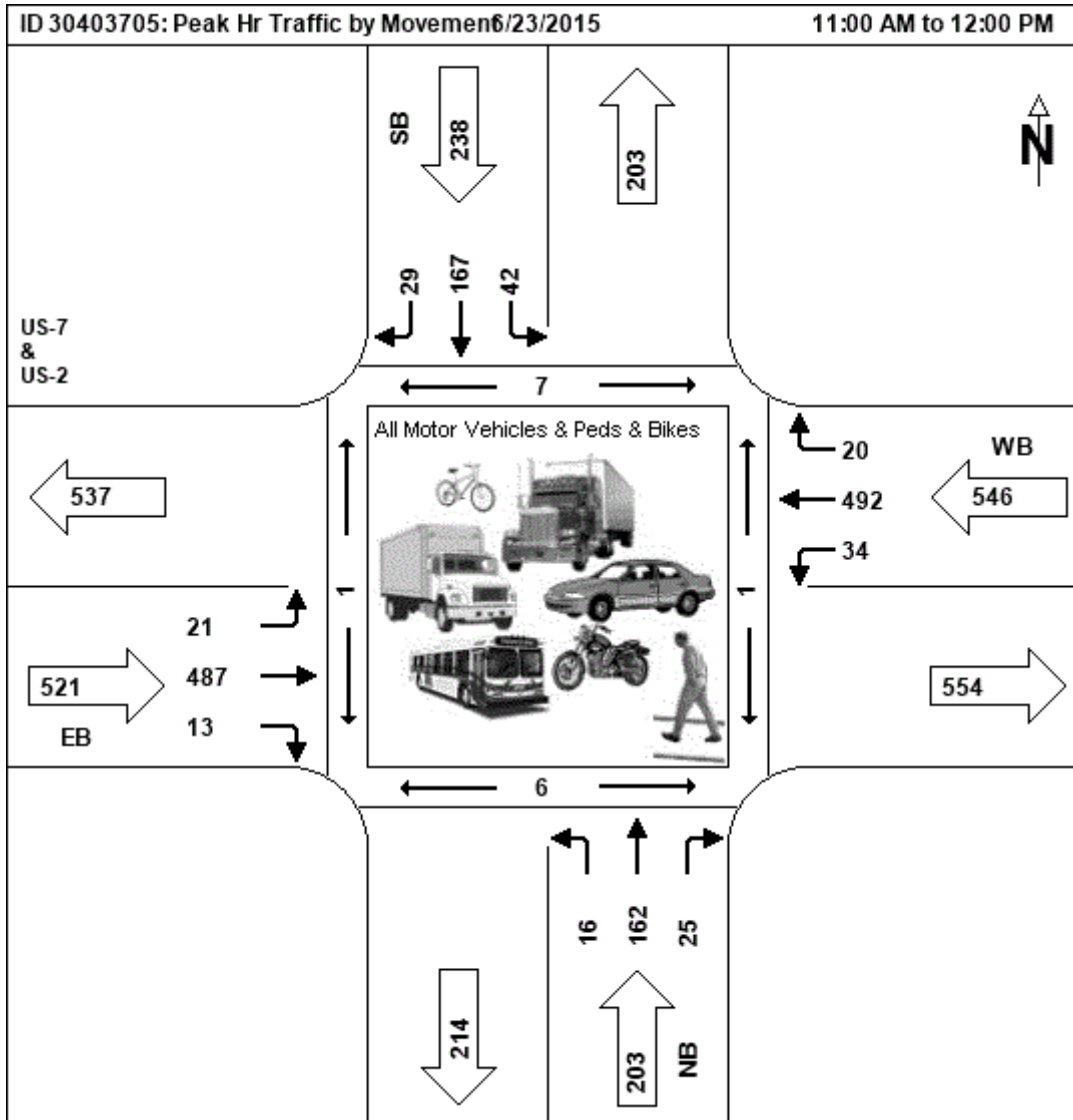
Midday Peak Hour
06/23/2015

06/26/2019

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
11:00 AM	4	39	4	0	47	6	114	2	1	122	8	33	10	0	51	6	106	1	1	113	333

11:15 AM	3	33	10	0	46	4	126	2	0	132	12	41	5	0	58	16	142	5	2	163	399
11:30 AM	5	40	3	0	48	8	130	4	3	142	12	38	8	0	58	4	119	8	0	131	379
11:45 AM	4	50	8	1	62	3	117	5	2	125	10	55	6	1	71	8	125	6	4	139	397
Total	16	162	25	1	203	21	487	13	6	521	42	167	29	1	238	34	492	20	7	546	1508
PHF	0.80	0.81	0.63		0.82	0.66	0.94	0.65		0.92	0.88	0.76	0.73		0.84	0.53	0.87	0.63		0.84	
HV %	0	2	0		5	4	8			5	2	3			0	4	5				

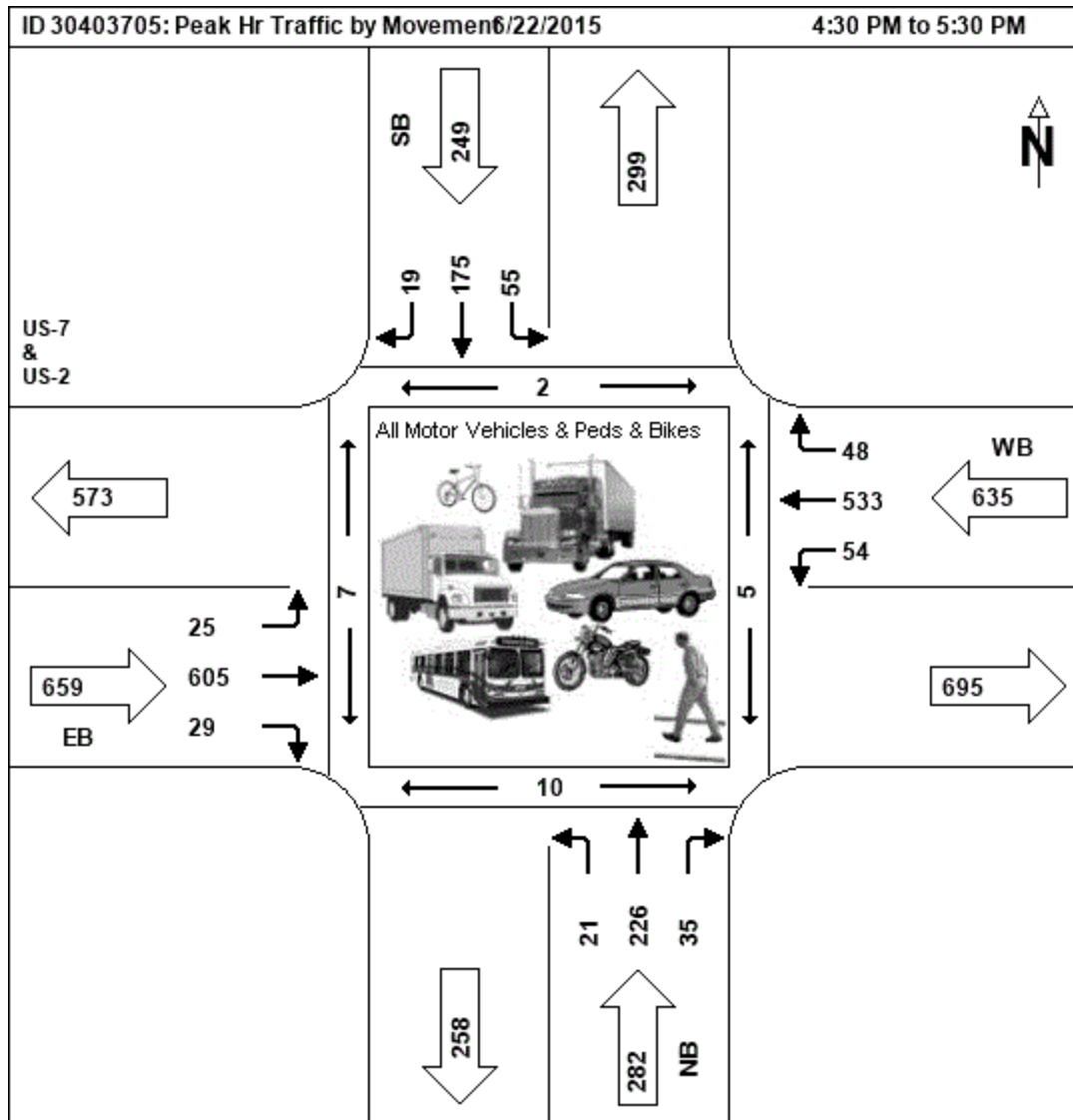
☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



PM Peak Hour
06/22/2015

NB						EB					SB					WB					
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
4:30 PM	2	40	7	3	49	9	155	7	2	171	12	40	7	3	59	18	128	7	0	153	432
4:45 PM	2	58	7	1	67	5	158	8	0	171	13	57	6	1	76	10	150	14	2	174	488
5:00 PM	8	72	12	1	92	7	149	2	0	158	8	37	3	0	48	13	142	16	0	171	469
5:15 PM	9	56	9	0	74	4	143	12	8	159	22	41	3	3	66	13	113	11	0	137	436
Total	21	226	35	5	282	25	605	29	10	659	55	175	19	7	249	54	533	48	2	635	1825
PHF	0.58	0.78	0.73		0.77	0.69	0.96	0.60		0.96	0.63	0.77	0.68		0.82	0.75	0.89	0.75		0.91	
HV %	5	1	6			0	2	3			0	1	0			0	2	0			

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Computations - Traffic Volumes

Project: BTV Town Center

Project #: 57881.00

Location: Burlington, VT

Sheet:

Calculated by: E. Quallen

Date: 1/13/20

Checked by:

Date:

Title: BTV Town Center Traffic Counts

Intersection: Main St / S Prospect St

Intersection: Main St / S Prospect St

Town: Burlington

Count Date(s): 7/19/2017

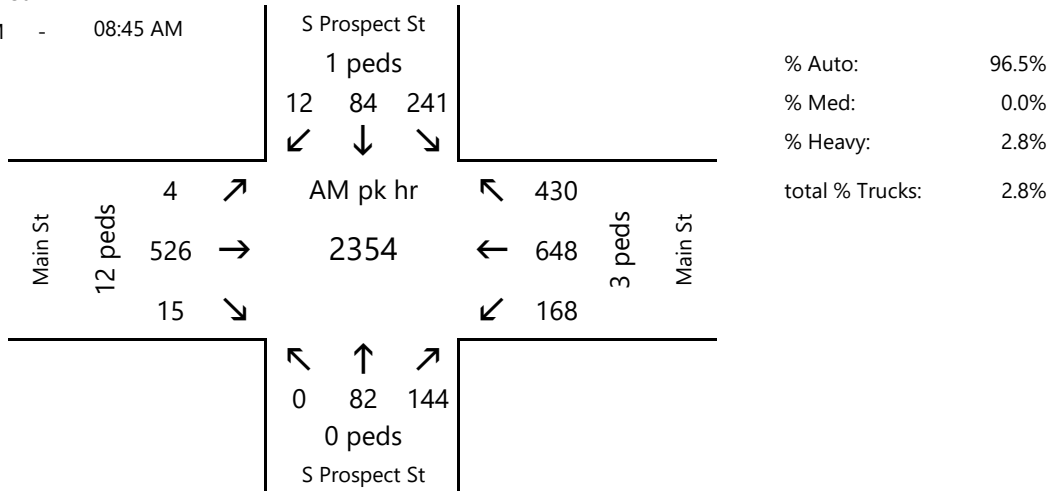
Counter: VTrans

Peak Hour Volumes

	SB				WB				NB				EB				Total
	S Prospect St				Main St				S Prospect St				Main St				
	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	RT	Thru	LT	Ped	
AM pk hr	12	84	241	1	430	648	168	3	144	82	0	0	15	526	4	12	2354
PM pk hr	9	104	376	29	576	733	173	18	347	105	0	15	6	625	0	29	3054

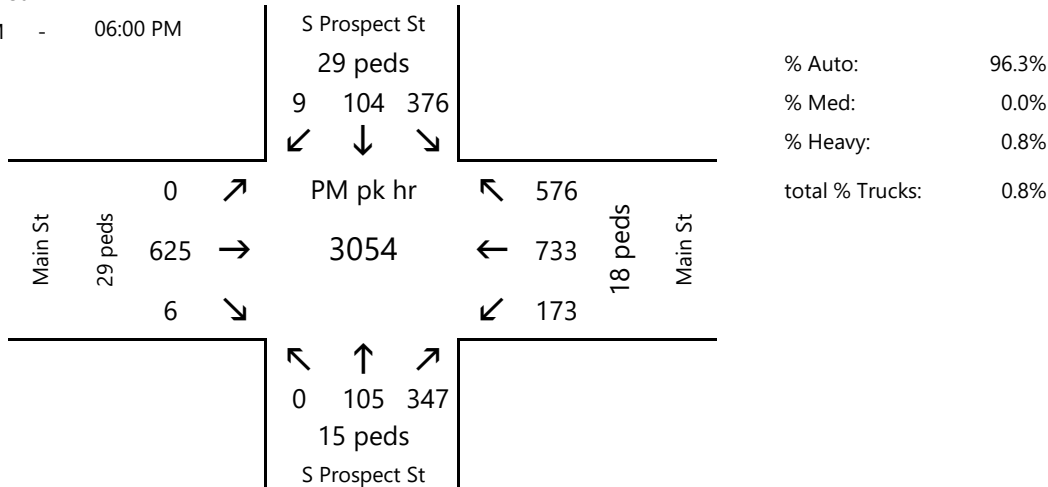
AM Peak Hour

07:45 AM - 08:45 AM



PM Peak Hour

05:00 PM - 06:00 PM



Peak Hour Data for Intersection

Int ID: 30403604
 Community: BURLINGTON
 Road 1: S WINOOSKI AVE
 Road 2: CHERRY ST

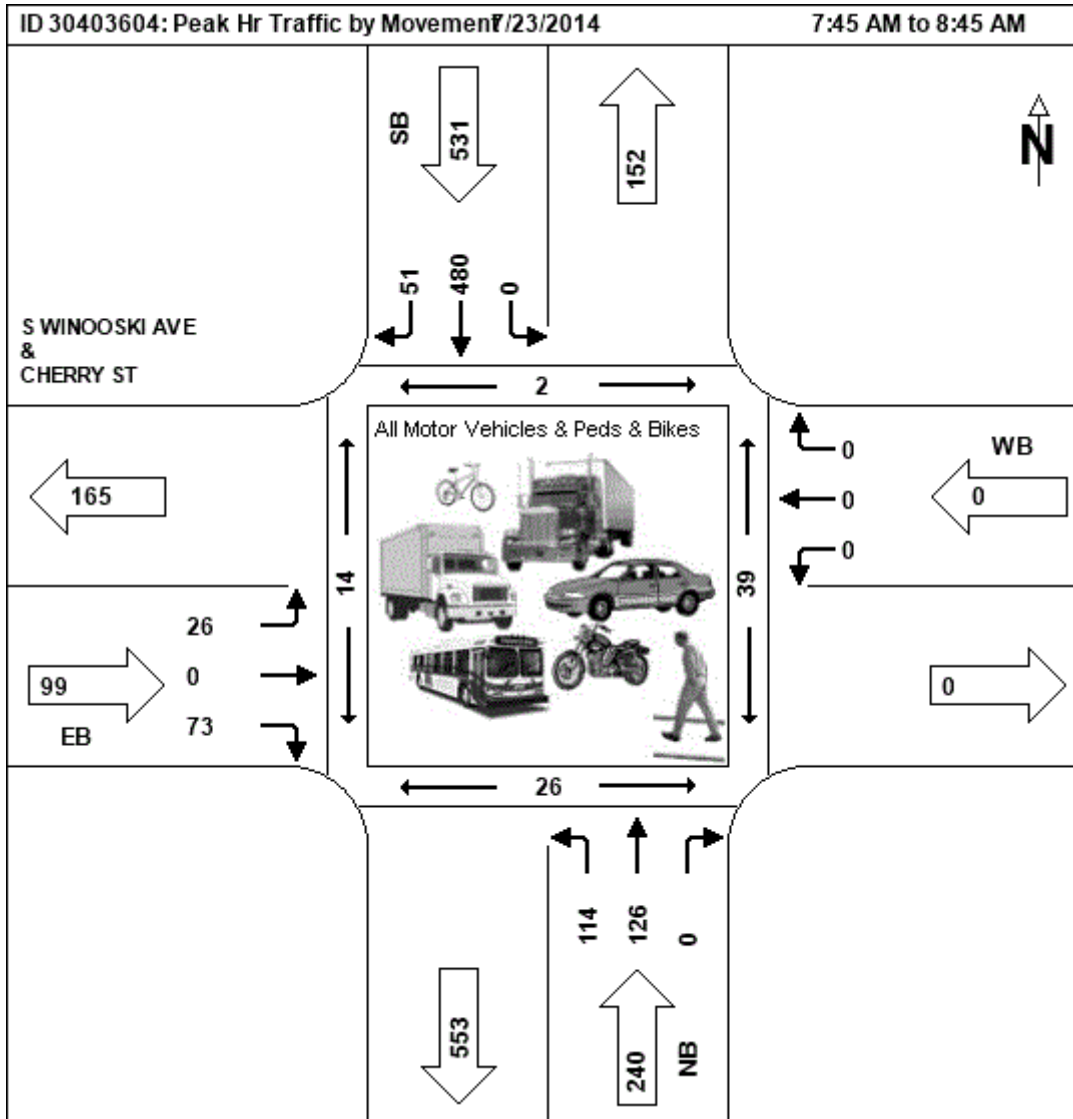
Corridor:
 Road 3: S WINOOSKI AVE
 Road 4:

|<<|<|>|>>| 1-1 of 1

AM Peak Hour
07/23/2014

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
7:45 AM	31	29	0	8	60	9	0	18	4	27	0	128	10	3	138	0	0	0	0	0	225
8:00 AM	32	32	0	5	64	6	0	16	10	22	0	114	7	3	121	0	0	0	0	0	207
8:15 AM	27	34	0	8	61	8	0	17	6	25	0	127	22	3	149	0	0	0	0	0	235
8:30 AM	24	31	0	18	55	3	0	22	6	25	0	111	12	5	123	0	0	0	2	0	203
Total	114	126	0	39	240	26	0	73	26	99	0	480	51	14	531	0	0	0	2	0	870
PHF	0.890.93				0.94	0.720.83				0.92	0.940.58				0.89						
HV %	26					2326					42										

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Midday Peak Hour
07/23/2014

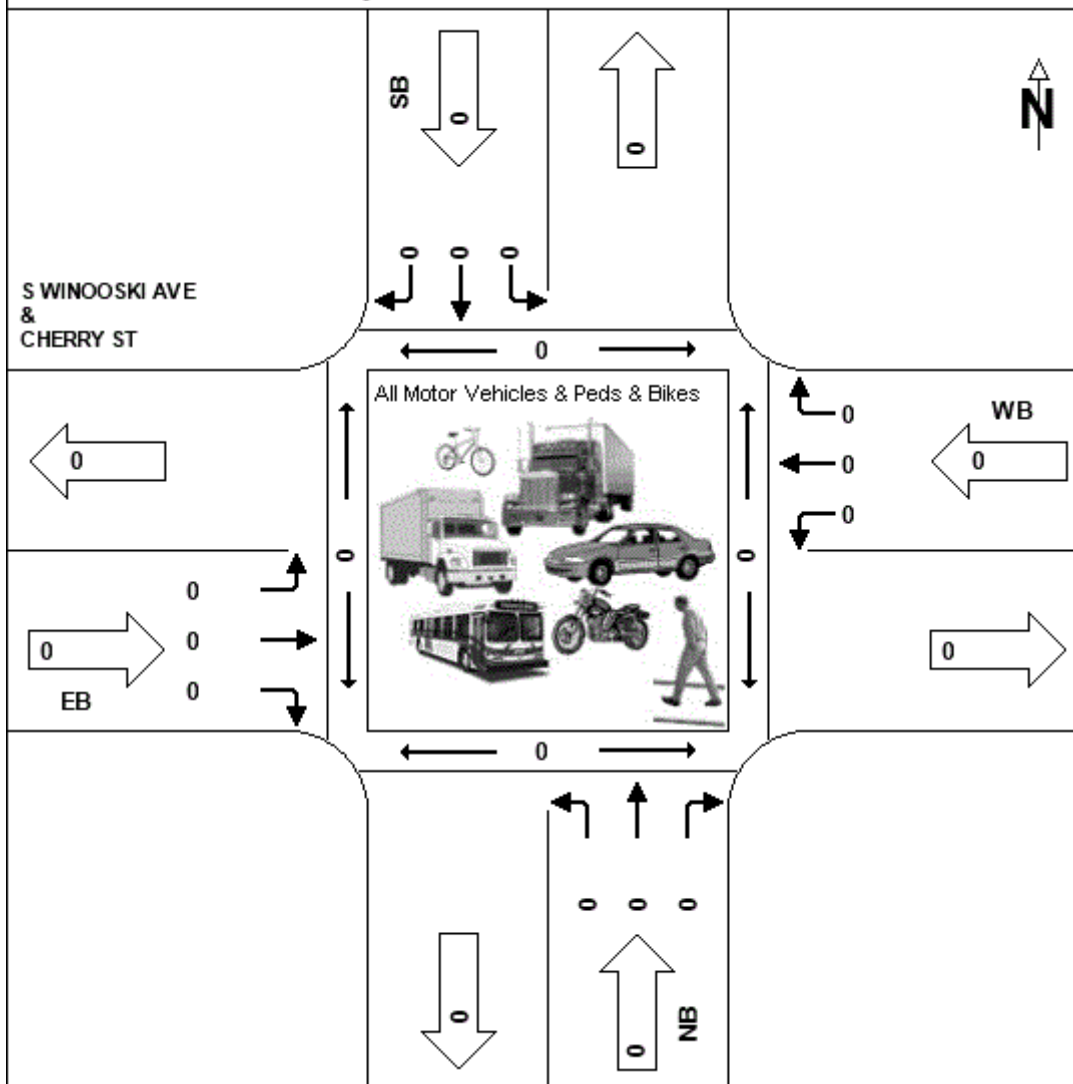
NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[illegible]

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 30403604: Peak Hr Traffic by Movement 7/23/2014

10:00 AM to 11:00 AM



PM Peak Hour
07/23/2014

NB					EB					SB					WB						
Start Time	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Left	Thru	Right	Ped	App Total	Int Total
5:00 PM	23	87	0	19	110	7	0	36	21	43	0	125	18	15	143	0	0	0	0	0	296
5:15 PM	22	94	0	13	116	15	0	35	46	50	0	151	16	4	167	0	0	0	0	0	333
5:30 PM	21	94	0	11	115	8	0	24	22	32	0	117	13	3	130	0	0	0	0	0	277
5:45 PM	29	80	0	15	109	14	0	26	20	40	0	100	15	9	115	0	0	0	0	0	264
Total	95	355	0	58	450	44	0	121	109	165	0	493	62	31	555	0	0	0	0	0	1170
PHF	0.820.94				0.970.73				0.84				0.820.86				0.83				
HV %	0 1				7 10				2 0												

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes



Appendix B – Crash Data

Pine Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Intersection With	Impairment	Involving	Road		
							Characteristics	Road Condition	Surface Condition
April 5, 2019, 8:14 PM	Injury	Other - Explain in Narrative	Rain	Main St	None	Pedestrian	Four-way Intersec	None	Wet
February 8, 2018, 12:30 PM	Injury	Other - Explain in Narrative	Clear	College St	None	Pedestrian	Four-way Intersec	Unknown	Dry
August 8, 2016, 9:33 AM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Main St	Alcohol	None	Four-way Intersec	None	Dry
December 13, 2016, 9:34 AM	Property Damage Only	Same Direction Sideswipe	Clear	College St	None	None	Not at a Junction	None	Dry
February 17, 2017, 11:45 AM	Property Damage Only	Right Turn and Thru, Angle Broadside -->^--	Clear	College St	None	None	Four-way Intersec	None	Wet
January 28, 2019, 6:42 PM	Property Damage Only	Same Direction Sideswipe	Cloudy	Main St	None	Heavy Truck	Four-way Intersec	None	Dry
July 11, 2016, 1:10 PM	Property Damage Only	Other - Explain in Narrative	Clear	College St	None	None	Not at a Junction	None	Dry
June 28, 2018, 4:11 PM	Property Damage Only			Cherry St	None	None			
June 6, 2019, 7:02 AM	Property Damage Only			Main St	None	Heavy Truck			
March 9, 2017, 7:38 PM	Property Damage Only	Other - Explain in Narrative	Clear	Main St - Vermont Cor	None	None	Not at a Junction	None	Dry
May 5, 2017, 9:18 AM	Property Damage Only	Right Turn, Same Direciton, Rear End ^--^--	Rain	Cherry St	None	None	Not at a Junction	None	Wet
May 6, 2019, 4:35 PM	Property Damage Only			College St	None	None			
November 7, 2017, 5:25 PM	Property Damage Only			Main St	None	None			
September 15, 2018, 11:49 AM	Property Damage Only	Same Direction Sideswipe	Clear	College St	None	Heavy Truck	Other - Explain in	None	Dry
September 19, 2018, 2:10 PM	Property Damage Only	Rear End	Clear	College St	None	None	Not at a Junction	None	Dry
September 5, 2017, 11:41 AM	Property Damage Only	Other - Explain in Narrative	Rain	Pearl St	None	None	T - Intersection	wet, icy, snow, slush, €	Wet

St. Paul Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
February 1, 2016, 3:14 PM	Injury	Left Turn and Thru, Angle Broadside --	Clear	Main St	None	Pedestrian	Four-way Intersection	None	Dry
March 31, 2016, 8:18 PM	Injury	Left Turn and Thru, Head On ^v--	Clear	Main St	None	Motorcycle	Other - Explain in Narrat	None	Dry
December 15, 2016, 1:27 AM	Injury	Other - Explain in Narrative	Freezing Precipitation	College St	Alcohol	None	Not at a Junction	wet, icy, snow, slush, €	Snow
November 9, 2017, 11:54 AM	Property Damage Only			Main St	None	None			
April 28, 2018, 2:24 PM	Property Damage Only	Left Turn and Thru, Angle Broadside --	Rain	Main St	None	None	Driveway	wet, icy, snow, slush, €	Wet
August 15, 2016, 11:19 AM	Property Damage Only	Rear End	Clear	Main St	None	None	Four-way Intersection	None	Dry
September 13, 2016, 1:02 PM	Property Damage Only	No Turns, Thru moves only, Broadside	Clear	Main St	None	None	Not at a Junction	None	Dry
March 10, 2017, 10:20 PM	Property Damage Only	Rear End	Clear	Main St	None	None	Not at a Junction	None	Dry
June 1, 2016, 1:39 PM	Property Damage Only	Rear-to-rear	Clear	St Paul St	None	None	Not at a Junction	None	Dry
August 11, 2016, 9:09 AM	Property Damage Only	Head On	Clear	Bank St	None	Bicycle	Other - Explain in Narrat	None	Dry
February 16, 2016, 9:22 AM	Property Damage Only	Left Turn and Thru, Angle Broadside --	Rain	College St	None	None	Four-way Intersection	None	Wet
July 18, 2016, 5:24 PM	Property Damage Only	Rear-to-rear	Clear	College St	None	None	Not at a Junction	None	Dry
January 28, 2017, 10:48 PM	Property Damage Only	Rear End	Clear	College St	Alcohol	None	Not at a Junction	None	Dry
February 24, 2017, 3:20 PM	Property Damage Only	Other - Explain in Narrative	Clear	College St	None	None	Not at a Junction	None	Dry
September 3, 2017, 12:00 PM	Property Damage Only	Same Direction Sideswipe	Rain	College St	None	None	Not at a Junction	None	Wet
September 22, 2017, 2:19 PM	Property Damage Only	Rear End	Clear	College St	None	Heavy Truck	Not at a Junction	None	Dry
February 7, 2019, 10:27 AM	Property Damage Only			College St	None	Heavy Truck			
February 20, 2019, 9:59 AM	Property Damage Only			College St	None	None			
April 29, 2019, 10:48 AM	Property Damage Only			College St	None	None			
August 26, 2016, 7:25 PM	Property Damage Only	Other - Explain in Narrative	Clear	Main St	None	None	Parking Lot	Unknown	Dry
October 28, 2016, 6:21 PM	Property Damage Only	Other - Explain in Narrative	Clear	Main St	None	None	Not at a Junction	None	Dry
April 18, 2017, 1:07 PM	Property Damage Only	Opp Direction Sideswipe	Clear	Main St	None	Heavy Truck	Not at a Junction	None	Dry
July 22, 2018, 10:04 PM	Property Damage Only			Main St	None	None			
August 7, 2018, 9:44 PM	Property Damage Only			Main St	None	None			
November 16, 2018, 1:22 AM	Property Damage Only			Main St	None	None			

Bank Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
February 6, 2016, 12:25 PM	Property Damage Only	Rear End	Cloudy	Church St	None	None	Not at a Junction	None	Dry
August 25, 2016, 1:28 AM	Property Damage Only	Rear End	Clear	S Winooski Ave	None	None	T - Intersection	None	Dry
October 6, 2016, 11:50 AM	Property Damage Only	Rear End	Clear	Pine St	None	None	Not at a Junction	None	Dry
December 17, 2016, 10:18 AM	Property Damage Only	Rear End	Freezing Precipitation	S Winooski Ave	None	None	Four-way Intersection	wet, icy, snow, slush, etc	Snow
March 18, 2017, 12:13 PM	Property Damage Only	Other - Explain in Narrative		S Winooski Ave	None	None	T - Intersection	Unknown	Unknown
April 8, 2017, 2:28 PM	Property Damage Only	Other - Explain in Narrative	Clear	Center St	None	None	Not at a Junction		Dry
April 14, 2017, 1:03 PM	Property Damage Only	Left Turn and Thru, Same Direction Side	Clear	church St	None	Heavy Truck	Four-way Intersection	None	Dry
May 9, 2017, 8:46 PM	Property Damage Only	Other - Explain in Narrative	Clear	S Winooski Ave	None	None	Parking Lot	None	Dry
June 8, 2017, 11:22 PM	Property Damage Only	Other - Explain in Narrative	Clear	St Paul St	None	None	Not at a Junction		
June 17, 2017, 8:56 PM	Property Damage Only	Rear-to-rear	Clear	St. Paul St.	None	None	Parking Lot	None	Dry
June 23, 2017, 2:56 PM	Property Damage Only	Other - Explain in Narrative	Cloudy	S Winooski Ave	None	None	Not at a Junction	None	Dry
July 6, 2017, 10:50 AM	Property Damage Only	Other - Explain in Narrative	Clear	St Paul St	None	Heavy Truck	Not at a Junction	None	Dry
September 18, 2017, 7:48 PM	Property Damage Only	Same Direction Sideswipe	Clear	St Paul St	None	None	T - Intersection	None	Dry
December 4, 2017, 11:42 AM	Property Damage Only			church St	None	None			
January 2, 2018, 9:38 AM	Property Damage Only	Same Direction Sideswipe	Clear	Church ST	None	Heavy Truck	Not at a Junction	None	Wet
January 30, 2018, 7:28 PM	Property Damage Only			Center St	None	None			
January 31, 2018, 11:09 AM	Property Damage Only			S Winooski Ave	None	None			
March 5, 2018, 11:30 AM	Property Damage Only			St Paul St	None	None			
June 22, 2018, 4:33 PM	Property Damage Only			S Winooski Ave	None	None			
June 22, 2018, 6:52 PM	Property Damage Only			S Winooski Ave	None	None			
August 19, 2018, 12:35 PM	Property Damage Only			Church St	None	None			
August 27, 2018, 4:44 PM	Property Damage Only	Other - Explain in Narrative		Church St	None	None	Unknown	Unknown	Unknown
October 6, 2018, 9:47 AM	Property Damage Only			Pine St	None	None			
February 1, 2019, 11:50 AM	Property Damage Only			Center St	None	None			
February 20, 2019, 2:41 AM	Property Damage Only			St Paul St	None	None			

Cherry Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
January 11, 2017, 4:22 PM	Injury	Other - Explain in Narrative	Clear	St Paul St	None	Pedestrian	Not at a Junction	None	Dry
March 3, 2017, 4:25 PM	Injury	Head On	Clear	Battery St	None	None	T - Intersection	None	Dry
June 10, 2017, 11:43 AM	Injury	No Turns, Thru moves only, Broadside	Clear	S Winooski Ave	None	Bicycle	Parking Lot	None	Dry
March 24, 2016, 12:52 PM	Property Damage Only	Rear End	Cloudy	Pine St	None	None	Not at a Junction	None	Dry
April 21, 2016, 5:11 PM	Property Damage Only	Opp Direction Sideswipe	Clear	N Winooski Ave	None	None	Parking Lot	None	Dry
May 28, 2016, 8:34 PM	Property Damage Only		Clear	S Winooski Ave	None	None	Other - Explain in Narrative	Unknown	Dry
July 8, 2016, 10:56 AM	Property Damage Only	Same Direction Sideswipe	Cloudy	Church St	None	None	Not at a Junction	None	Dry
July 9, 2016, 3:50 PM	Property Damage Only	Other - Explain in Narrative	Clear	S Winooski Ave	None	Heavy Truck	Not at a Junction		Dry
July 18, 2016, 8:02 AM	Property Damage Only	Rear End	Clear	S Winooski Ave	None	None	Not at a Junction	None	Dry
August 22, 2016, 12:15 PM	Property Damage Only	Rear End	Clear	S Winooski Ave	None	None	Not at a Junction	None	Dry
October 12, 2016, 12:39 PM	Property Damage Only	Same Direction Sideswipe	Clear	S Winooski Ave	None	Heavy Truck	T - Intersection	None	Not Reported
November 18, 2016, 10:17 AM	Property Damage Only	Other - Explain in Narrative	Clear	Pine St	None	None	Not at a Junction	None	Dry
December 20, 2016, 7:52 PM	Property Damage Only	Other - Explain in Narrative	Clear	Pine St	None	Heavy Truck	Not at a Junction	None	Dry
February 8, 2017, 6:45 AM	Property Damage Only	Rear End	Freezing Precipitation	Church St	None	None	Not at a Junction	None	Wet
February 17, 2017, 3:05 PM	Property Damage Only	Rear End	Clear	S Winooski Ave	None	None	Not at a Junction	None	Wet
March 23, 2017, 12:49 PM	Property Damage Only	Same Direction Sideswipe	Clear	S Winooski Ave	None	None	Not at a Junction	None	Dry
April 6, 2017, 8:27 PM	Property Damage Only	Rear End	Clear	Battery St	None	None	Not at a Junction	None	Wet
May 23, 2017, 10:43 AM	Property Damage Only	Same Direction Sideswipe	Clear	S Winooski Ave	None	None	Not at a Junction	None	Dry
June 20, 2017, 5:15 PM	Property Damage Only	Same Direction Sideswipe	Clear	St Paul Street	None	Heavy Truck	T - Intersection	None	Dry
July 13, 2017, 2:42 PM	Property Damage Only	Same Direction Sideswipe	Cloudy	Battery St	None	None	Parking Lot	None	Dry
August 10, 2017, 12:31 PM	Property Damage Only	Rear-to-rear	Clear	S Winooski Ave	None	None	Parking Lot	None	Dry
September 4, 2017, 6:26 PM	Property Damage Only	Single Vehicle Crash	Clear	Pine St	None	None	Parking Lot	Other - Explain in Narrative	Dry
September 5, 2017, 8:22 AM	Property Damage Only	Rear End	Cloudy	Battery St	None	None	Not at a Junction	None	Wet
September 10, 2017, 1:30 PM	Property Damage Only	Rear End	Clear	Battery St	None	None	T - Intersection	None	Dry
November 9, 2017, 5:12 AM	Property Damage Only	Same Direction Sideswipe		Church St	None	Heavy Truck	Not at a Junction	None	
November 19, 2017, 5:10 PM	Property Damage Only	Other - Explain in Narrative	Cloudy	S Winooski Ave	None	None	Not at a Junction	None	Dry
May 9, 2018, 7:58 PM	Property Damage Only			Church St	None	None			
May 29, 2018, 5:47 PM	Property Damage Only			S Winooski Ave	None	None			
July 6, 2018, 4:16 PM	Property Damage Only			Church St	None	None			
July 18, 2018, 5:17 PM	Property Damage Only			S Winooski Ave	None	None			
August 11, 2018, 7:23 PM	Property Damage Only			Cherry St	None	None			
August 22, 2018, 8:49 AM	Property Damage Only			Battery St	None	None			
September 28, 2018, 8:02 PM	Property Damage Only			S Winooski Ave	None	None			
September 30, 2018, 3:02 PM	Property Damage Only			S Winooski Ave	None	None			
January 10, 2019, 7:05 AM	Property Damage Only			Church St	None	Heavy Truck			
January 13, 2019, 6:37 PM	Property Damage Only			S Winooski Ave	None	None			
February 2, 2019, 12:43 PM	Property Damage Only	Other - Explain in Narrative	Cloudy	Battery St	None	None	T - Intersection	None	Dry

Main Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
July 5, 2016, 5:01 PM	Injury	Rear End	Clear	Day	S Willard St	Alcohol	None	Four-way Intersection	None	Dry
June 15, 2017, 3:00 PM	Injury	Other - Explain in Narrative	Clear	Day	S Willard St	None	Bicycle	Four-way Intersection	None	Dry
July 19, 2017, 4:51 PM	Injury	Rear End	Clear	Day	Prospect St	None	None	Not at a Junction	None	Dry
September 9, 2018, 7:20 PM	Injury	Rear End	Cloudy	Night	S Willard St	None	None	Four-way Intersection	None	Dry
September 18, 2018, 4:43 PM	Injury	Single Vehicle Crash	Clear	Day	S Williams St	None	None	Not at a Junction	None	Dry
August 2, 2017, 8:18 AM	Injury	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Williams St	None	Bicycle	T - Intersection	None	Dry
February 16, 2017, 4:41 PM	Injury	Other - Explain in Narrative	Cloudy	Day	Summit St	None	Pedestrian	T - Intersection	None	Slush
August 26, 2019, 8:09 PM	Injury	Right Turn and Thru, Angle Broadside -->	Clear	Night	Summit St	None	Bicycle	T - Intersection	None	Dry
June 28, 2016, 3:16 PM	Injury	Other - Explain in Narrative	Clear	Day	Pine St	None	Pedestrian	Four-way Intersection	None	Dry
June 12, 2019, 8:13 AM	Injury	Rear End	Clear	Day	Pine St	None	None	Four-way Intersection	None	Dry
July 11, 2019, 10:46 AM	Injury	Rear End	Clear	Day	Pine St	None	None	Four-way Intersection	None	Dry
June 28, 2018, 12:05 PM	Injury	Rear End	Cloudy	Day	St Paul St	None	None	Not at a Junction	None	Wet
February 22, 2016, 1:30 PM	Injury	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
February 22, 2016, 1:30 PM	Injury	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
June 18, 2017, 11:00 AM	Injury	Same Direction Sideswipe	Clear	Day	Main @ S. Prospect St	None	Motorcycle	Not at a Junction	None	Dry
June 18, 2018, 4:51 PM	Injury	Rear End		Day	S Prospect St	None	None	Four-way Intersection	None	Unknown
January 18, 2019, 1:06 PM	Injury	Rear End	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Wet
March 3, 2016, 10:07 AM	Injury	Left Turn and Thru, Angle Broadside -->v	Clear	Day	St Paul St	None	Pedestrian	Four-way Intersection	None	Dry
August 29, 2016, 6:34 PM	Injury	Left Turn and Thru, Angle Broadside -->v	Clear	Day	Church St	None	None	Four-way Intersection	None	Dry
October 27, 2016, 4:37 PM	Injury	Head On	Clear	Day	Church St	None	Pedestrian	T - Intersection	None	Dry
April 17, 2017, 11:40 AM	Injury	Left Turn and Thru, Same Direction Sideswipe	Cloudy	Day	Church St	None	Heavy Truck	Not at a Junction	None	Dry
August 24, 2019, 2:37 AM	Injury	Left Turn and Thru, Angle Broadside -->v	Clear	Night	S Winooski Ave	None	None	Not at a Junction	None	Dry
July 3, 2018, 10:11 PM	Injury	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Winooski Ave	None	Bicycle	Four-way Intersection	None	Dry
August 18, 2016, 9:19 AM	Injury	Left Turn and Thru, Angle Broadside -->v	Cloudy	Day	Perrywinkle's Fine Jeep	None	Pedestrian	Not at a Junction	None	Dry
June 7, 2017, 6:12 PM	Injury	Right Turn and Thru, Broadside ^<--	Clear	Day	@ Union	None	Bicycle	Four-way Intersection	None	Dry
May 18, 2019, 8:49 AM	Injury	Same Direction Sideswipe	Cloudy	Day	Edmunds Middle School	None	Bicycle	Not at a Junction	None	
August 4, 2016, 8:18 PM	Injury	Same Direction Sideswipe	Clear	Night	S Union St	None	Bicycle	Not at a Junction	None	Dry
August 26, 2016, 4:33 PM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	None	Not at a Junction	None	Dry
September 29, 2016, 11:11 AM	Property Damage Only	Head On	Clear	Day	S Willard St	None	None	Four-way Intersection	None	Dry
October 12, 2016, 4:42 PM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	None	Four-way Intersection	None	Dry
February 11, 2017, 12:54 PM	Property Damage Only	Rear End	Cloudy	Day	S Willard St	None	None	Four-way Intersection	None	Unknown
February 25, 2017, 4:13 PM	Property Damage Only	Rear End	Rain	Day	S Willard St	None	None	Four-way Intersection	None	Dry
April 9, 2017, 10:49 AM	Property Damage Only	Head On	Clear	Day	S Willard St	None	None	Four-way Intersection	None	Dry
April 12, 2017, 5:31 PM	Property Damage Only	Rear End	Clear	Day	N Willard St	None	None	Not at a Junction	None	Dry
May 21, 2017, 6:18 PM	Property Damage Only	Head On	Clear	Day	South Willard St	None	None	Four-way Intersection	None	Dry
May 31, 2017, 3:01 PM	Property Damage Only	Rear End	Rain	Day	So. Willard St	None	None	Four-way Intersection	None	Wet
September 29, 2017, 8:05 PM	Property Damage Only	Right Turn and Thru, Angle Broadside -->	Clear	Night	Main St/ S. Willard St	None	None	Four-way Intersection	None	Dry
October 20, 2017, 6:05 PM	Property Damage Only	Rear End	Clear	Night	S Prospect St	None	None	Not at a Junction	None	Dry
October 27, 2017, 2:07 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
November 14, 2017, 1:46 PM	Property Damage Only			Day	S Willard St	None	Heavy Truck			
November 28, 2017, 1:54 PM	Property Damage Only			Day	S Willard St	None	None			
January 5, 2018, 7:52 AM	Property Damage Only	Single Vehicle Crash	Freezing Precipitation	Day	S Willard St	None	Heavy Truck	Four-way Intersection	wet, icy, snow, slush,	Snow
January 5, 2018, 1:29 PM	Property Damage Only	Single Vehicle Crash	Freezing Precipitation	Day	S Willard St	None	Heavy Truck	Four-way Intersection	wet, icy, snow, slush,	Snow
January 29, 2018, 9:32 PM	Property Damage Only	Rear End	Clear	Night	S Willard St	None	None	Four-way Intersection	None	Dry
March 14, 2018, 1:46 PM	Property Damage Only			Day	S Willard St	None	None			
August 6, 2018, 5:29 PM	Property Damage Only			Day	S Willard St	None	None			
August 14, 2018, 5:43 PM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	Heavy Truck	Four-way Intersection	None	Dry
August 20, 2018, 5:08 PM	Property Damage Only			Day	S Willard St	None	None			
September 7, 2018, 9:22 PM	Property Damage Only			Night	S Willard St	None	None			

Main Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
January 27, 2019, 1:19 PM	Property Damage Only			Day	Main St	None	None			
March 1, 2019, 8:36 PM	Property Damage Only			Night	S Willard St	None	None			
May 3, 2019, 12:20 PM	Property Damage Only			Day	S Willard St	None	None			
June 8, 2019, 7:35 AM	Property Damage Only			Day	S Willard St	None	None			
August 6, 2019, 5:56 AM	Property Damage Only			Night	S Willard	None	None			
August 16, 2019, 4:54 PM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	None	Not at a Junction	None	Dry
August 17, 2019, 11:10 AM	Property Damage Only			Day	S Willard St	None	None			
August 22, 2019, 8:28 AM	Property Damage Only			Day	S Willard St	None	None			
January 12, 2016, 7:33 AM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	None	Not at a Junction	None	Dry
November 13, 2017, 6:18 AM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	Heavy Truck	Four-way Intersection	None	Dry
May 25, 2018, 5:40 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
May 10, 2019, 11:32 AM	Property Damage Only	Same Direction Sideswipe	Rain	Day	S Willard St	None	None	Four-way Intersection	None	Wet
September 7, 2019, 12:12 AM	Property Damage Only			Night	Willard St	None	None			
November 29, 2018, 12:12 PM	Property Damage Only			Day	Main St	None	None			
February 26, 2016, 5:41 PM	Property Damage Only	Rear End	Clear	Night	388 Main St	None	None	Not at a Junction	None	Dry
October 4, 2018, 11:53 AM	Property Damage Only			Day	72 Main St	None	None			
August 26, 2016, 6:03 PM	Property Damage Only	Rear End	Clear	Day	S Williams St	None	None	Not at a Junction	None	Dry
November 4, 2016, 6:41 PM	Property Damage Only	Left Turn and Thru, Angle Broadside -->v	Clear	Night	S Williams St	None	None	T - Intersection	None	Dry
July 25, 2017, 4:38 PM	Property Damage Only	Rear End	Clear	Day	S. Williams St	None	None	Not at a Junction	None	Dry
October 11, 2018, 11:27 AM	Property Damage Only			Day	S Williams St	None	None			
April 13, 2019, 1:50 PM	Property Damage Only			Day	S Williams St	None	None			
July 14, 2019, 10:03 AM	Property Damage Only	Left Turn and Thru, Angle Broadside -->v	Cloudy	Day	75 Main St	None	None	Not at a Junction	None	Dry
June 30, 2016, 4:37 AM	Property Damage Only	Single Vehicle Crash	Clear	Night	Summit St	None	None	Not at a Junction	None	Dry
September 13, 2019, 10:18 AM	Property Damage Only	Other - Explain in Narrative	Clear	Day	Pine St	None	None	Other - Explain in Narrativ	None	Dry
January 6, 2016, 7:09 AM	Property Damage Only	Rear End	Clear	Day	Summit St	None	None	Not at a Junction	Other - Explain in Nar	Dry
July 25, 2018, 3:21 PM	Property Damage Only			Day	Summit St	None	None			
February 11, 2019, 8:52 PM	Property Damage Only		Clear	Night	Summit St	None	None	Not at a Junction	None	Dry
April 27, 2019, 2:30 AM	Property Damage Only			Night	Pine St	None	None			
February 15, 2016, 7:27 AM	Property Damage Only	Rear End	Clear	Day	Summit St	None	None	Not at a Junction	None	Dry
May 18, 2016, 4:32 PM	Property Damage Only	Rear End	Clear	Day	Summit St	None	None	Not at a Junction	None	Dry
September 10, 2016, 8:20 PM	Property Damage Only	Rear End	Cloudy	Night	Summit St	None	None	Not at a Junction	None	Dry
December 7, 2016, 2:30 PM	Property Damage Only	Rear End	Clear	Day	Summit St	None	None	Not at a Junction	None	Dry
July 24, 2017, 5:09 PM	Property Damage Only	Other - Explain in Narrative		Day	Pine St	None	None	Not at a Junction	None	Wet
August 22, 2017, 4:00 PM	Property Damage Only	Rear End	Cloudy	Day	Summit St	None	None	Not at a Junction	None	Dry
February 11, 2018, 1:10 PM	Property Damage Only			Day	Summit St	None	None			
July 13, 2018, 1:51 PM	Property Damage Only			Day	Summit St	None	None			
August 12, 2018, 2:37 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Cloudy	Day	Summit St	None	None	Not at a Junction	None	Dry
February 9, 2019, 1:40 PM	Property Damage Only			Day	Summit St	None	None			
December 18, 2017, 10:01 AM	Property Damage Only	Rear End	Cloudy	Day	Summit St	None	None	Not at a Junction	wet, icy, snow, slush, Snow	
June 25, 2016, 3:15 PM	Property Damage Only	Rear End	Clear	Day	Pine St	None	None	Not at a Junction	None	Dry
July 13, 2016, 12:58 PM	Property Damage Only	Rear End	Clear	Day	Pine St	None	None	Not at a Junction	None	Dry
September 29, 2016, 12:39 PM	Property Damage Only	Opp Direction Sideswipe	Clear	Day	Pine St	None	None	Not at a Junction	None	Dry
October 25, 2016, 8:19 AM	Property Damage Only		Cloudy	Day	Pine St	None	None	Four-way Intersection	None	Dry
August 19, 2017, 2:31 PM	Property Damage Only	Rear End	Clear	Day	Pine St	None	None	Four-way Intersection	Unknown	Dry
September 26, 2018, 6:13 PM	Property Damage Only			Day	Pine St	None	None			
January 21, 2019, 12:14 PM	Property Damage Only			Day	Pine St	None	None			
June 23, 2019, 12:22 PM	Property Damage Only			Day	Pine Street	None	None			
August 26, 2019, 6:01 AM	Property Damage Only			Day	Pine St	None	None			
September 2, 2019, 10:55 AM	Property Damage Only			Day	Pine St	None	None			

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VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
September 26, 2019, 10:16 AM	Property Damage Only			Day	Pine St	None	Heavy Truck			
December 5, 2017, 8:24 AM	Property Damage Only			Day	Hilton Garden Inn	None	None			
June 2, 2018, 3:53 PM	Property Damage Only			Day	Pine St	None	None			
June 14, 2019, 12:00 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Prospect St	None	None	Driveway	Not reported	Dry
October 11, 2016, 6:03 PM	Property Damage Only	Rear End	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry
March 14, 2019, 7:03 PM	Property Damage Only			Night	St Paul St	None	None			
May 5, 2017, 2:57 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Not at a Junction	None	Dry
May 23, 2018, 8:42 AM	Property Damage Only			Day	S Prospect St	None	None			
June 6, 2018, 7:05 PM	Property Damage Only			Night	St Paul St	None	None			
March 18, 2019, 3:35 PM	Property Damage Only			Day	N Champlain St	None	None			
February 12, 2016, 10:36 AM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Not at a Junction	None	Dry
February 19, 2016, 10:30 PM	Property Damage Only	Rear End	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry
April 25, 2016, 3:33 PM	Property Damage Only	Other - Explain in Narrative	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
July 26, 2016, 9:55 AM	Property Damage Only	Rear End	Cloudy	Day	S Prospect St	None	None	Not at a Junction	None	Dry
July 31, 2016, 10:05 PM	Property Damage Only	Rear End	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry
September 2, 2016, 3:00 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Not at a Junction	None	Dry
September 16, 2016, 6:56 PM	Property Damage Only	Rear End	Clear	Day	Main St	None	None	Four-way Intersection	None	Dry
October 17, 2016, 2:24 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
October 17, 2016, 3:55 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
December 7, 2016, 7:35 AM	Property Damage Only	Rear End	Cloudy	Day	S Prospect St	None	None	Four-way Intersection	None	Wet
December 14, 2016, 5:10 PM	Property Damage Only	Rear End	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry
January 27, 2017, 4:03 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	Prospect St	None	None	Four-way Intersection	None	Dry
April 11, 2017, 4:39 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Cloudy	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
May 6, 2017, 3:17 PM	Property Damage Only	Left Turn and Thru, Head On ^v--	Cloudy	Day	So Prospect St	None	None	Four-way Intersection	None	Dry
June 6, 2017, 10:52 AM	Property Damage Only	Rear End	Rain	Day	S Prospect St	None	None	Four-way Intersection	None	Wet
June 15, 2017, 5:13 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	Main & S Prospect	None	Heavy Truck	Four-way Intersection	None	Dry
June 19, 2017, 10:30 AM	Property Damage Only	Rear End	Cloudy	Day	Main St/S Prospect S	None	Heavy Truck	Four-way Intersection	None	Wet
June 27, 2017, 10:23 AM	Property Damage Only	Same Direction Sideswipe	Cloudy	Day	S. Prospect St	None	None	Four-way Intersection	None	Dry
August 23, 2017, 12:39 PM	Property Damage Only			Day	S Prospect Street	None	None			
September 23, 2017, 5:25 PM	Property Damage Only	Rear End	Clear	Day	So. Prospect St	None	None	Four-way Intersection	None	Dry
October 4, 2017, 10:57 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	So. Prospect St	None	None	Four-way Intersection	None	Wet
October 14, 2017, 12:23 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
November 2, 2017, 6:46 AM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Rain	Night	S Prospect St	None	None	Four-way Intersection	wet, icy, snow, slush,	Wet
December 14, 2017, 12:56 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	S Prospect St	None	Heavy Truck	Four-way Intersection	None	Dry
January 26, 2018, 1:21 PM	Property Damage Only	Same Direction Sideswipe		Day	S Prospect St	None	None	Four-way Intersection	None	Dry
January 30, 2018, 7:15 AM	Property Damage Only			Day	S Prospect St	None	None			
February 1, 2018, 11:31 AM	Property Damage Only			Day	S Prospect St	None	None			
April 1, 2018, 12:00 PM	Property Damage Only			Day	S Prospect St	None	None			
April 10, 2018, 6:15 PM	Property Damage Only			Day	S Prospect St	None	None			
April 13, 2018, 3:12 PM	Property Damage Only			Day	S Prospect St	None	None			
April 16, 2018, 6:21 PM	Property Damage Only			Day	S Prospect St	None	None			
May 10, 2018, 8:53 AM	Property Damage Only			Day	S Prospect St	None	Motorcycle			
May 30, 2018, 8:14 PM	Property Damage Only			Night	S Prospect St	None	None			
June 14, 2018, 5:44 PM	Property Damage Only			Day	S Prospect St	None	None			
June 29, 2018, 8:14 PM	Property Damage Only			Night	S Prospect St	None	None			
July 30, 2018, 2:59 PM	Property Damage Only	Same Direction Sideswipe	Cloudy	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
August 24, 2018, 3:50 PM	Property Damage Only			Day	S Prospect St	None	None			
September 14, 2018, 6:58 AM	Property Damage Only			Day	S Prospect St	None	None			
October 5, 2018, 9:25 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry

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Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
October 23, 2018, 3:25 PM	Property Damage Only			Day	Main St	None	None			
November 1, 2018, 12:18 AM	Property Damage Only			Night	Main St	None	None			
November 3, 2018, 10:34 AM	Property Damage Only			Day	S Prospect St	None	None			
July 2, 2019, 7:36 AM	Property Damage Only			Day	S Prospect St	None	None			
July 27, 2019, 2:07 PM	Property Damage Only			Day	S Prospect St	None	None			
August 16, 2019, 2:13 PM	Property Damage Only			Day	S Prospect St	None	None			
September 8, 2019, 12:09 PM	Property Damage Only			Day	S Prospect St	None	None			
October 1, 2019, 2:04 PM	Property Damage Only			Day	S Prospect St	None	None			
June 26, 2016, 3:13 PM	Property Damage Only	Left Turn and Thru, Angle Broadside -->v	Clear	Day	South Prospect Street	None	None	Four-way Intersection	None	Dry
August 18, 2017, 4:20 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	St. Paul St	None	None	Not at a Junction	None	Dry
June 28, 2018, 11:55 AM	Property Damage Only	Rear End	Cloudy	Day	St Paul St	None	Heavy Truck	Four-way Intersection	None	Dry
September 13, 2018, 8:55 AM	Property Damage Only			Day	St Paul St	None	None			
October 9, 2018, 7:10 PM	Property Damage Only			Night	N Prospect St	None	None			
November 27, 2018, 3:44 PM	Property Damage Only			Day	S Prospect St	None	None			
June 30, 2019, 9:46 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Prospect St	None	None	Four-way Intersection	None	Dry
July 22, 2016, 2:28 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	St Paul St	None	None	Not at a Junction	None	Dry
August 22, 2016, 2:19 PM	Property Damage Only	Rear End	Clear	Day	St Paul St	None	None	Other - Explain in Narrative	None	Dry
October 29, 2016, 11:29 AM	Property Damage Only	Rear-to-rear	Rain	Day	St Paul St	None	None	Not at a Junction	None	Wet
January 4, 2017, 10:06 AM	Property Damage Only	Other - Explain in Narrative	Clear	Day	St Paul St	None	None	Four-way Intersection	Other - Explain in Narrative	Dry
January 21, 2017, 3:09 PM	Property Damage Only	Left Turn and Thru, Angle Broadside -->v	Cloudy	Day	St Paul St	None	None	Four-way Intersection	None	Dry
March 18, 2017, 6:29 PM	Property Damage Only	Same Direction Sideswipe	Clear	Night	St Paul St	None	None	Four-way Intersection	None	Dry
November 22, 2017, 9:38 AM	Property Damage Only	Same Direction Sideswipe	Freezing Precipitation	Day	St Paul St	None	None	Four-way Intersection	None	Wet
November 30, 2017, 12:35 PM	Property Damage Only			Day	St Paul St	None	None			
February 15, 2018, 2:13 PM	Property Damage Only			Day	St Paul St	None	None			
March 2, 2018, 12:29 PM	Property Damage Only			Day	St Paul St	None	None			
April 5, 2018, 1:21 AM	Property Damage Only	Other - Explain in Narrative	Wind	Night	St Paul St	None	None	Not at a Junction	None	Dry
May 24, 2018, 3:25 PM	Property Damage Only			Day	St Paul St	None	None			
August 1, 2018, 10:16 PM	Property Damage Only			Night	Main St	None	None			
August 18, 2018, 12:37 AM	Property Damage Only	Same Direction Sideswipe	Rain	Night	St Paul St	None	None	Four-way Intersection	Unknown	Wet
October 15, 2018, 9:51 PM	Property Damage Only			Night	S Prospect St	None	None			
March 9, 2019, 11:14 AM	Property Damage Only			Day	St Paul St	None	None			
April 24, 2019, 1:40 PM	Property Damage Only			Day	St Paul St	None	None			
April 26, 2019, 11:32 PM	Property Damage Only			Night	St Paul St	None	None			
June 29, 2019, 12:33 AM	Property Damage Only	Same Direction Sideswipe	Clear	Night	St Paul St	None	None	Four-way Intersection	Unknown	Dry
August 11, 2016, 2:28 PM	Property Damage Only	Rear End	Clear	Day	St Paul St	None	None	Not at a Junction	None	Dry
July 6, 2017, 1:21 PM	Property Damage Only	Rear End	Clear	Day	St Paul St	None	None	Four-way Intersection	None	Dry
August 8, 2018, 10:47 AM	Property Damage Only	Same Direction Sideswipe	Clear	Day	St Paul St	None	None	Not at a Junction	None	Dry
July 1, 2017, 11:04 AM	Property Damage Only	Rear End	Cloudy	Day	St Paul St	None	None	Not at a Junction	None	Dry
February 4, 2019, 3:48 PM	Property Damage Only			Day	Main St	None	None			
October 16, 2016, 1:44 AM	Property Damage Only	Rear End	Clear	Night	Church St	None	None	Not at a Junction	None	Dry
January 20, 2016, 6:24 PM	Property Damage Only	Same Direction Sideswipe	Clear	Night	Main St	None	None	Not at a Junction	None	Wet
October 14, 2016, 3:53 PM	Property Damage Only	Rear End	Clear	Day	Flynn Theater	None	None	Other - Explain in Narrative	Unknown	Dry
July 5, 2019, 12:36 PM	Property Damage Only			Day	St Paul St	None	None			
August 19, 2018, 1:00 PM	Property Damage Only			Day	Church St	None	None			
December 10, 2018, 9:38 AM	Property Damage Only			Day	Church St	None	None			
September 24, 2017, 12:40 AM	Property Damage Only	Rear End	Clear	Night	Church St	None	None	Other - Explain in Narrative	None	Dry
March 11, 2016, 12:52 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	Church St	None	None	Not at a Junction	None	Dry
June 20, 2016, 12:10 PM	Property Damage Only	Rear End	Clear	Day	Church St	None	None	T - Intersection	None	Dry
December 11, 2016, 12:41 AM	Property Damage Only	Right Turn, Same Direction, Rear End ^---	Clear	Night	Church St	None	None	T - Intersection	None	Dry

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Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
March 4, 2017, 6:20 PM	Property Damage Only	Rear End	Clear	Night	Main St	None	None	T - Intersection	None	Dry
July 27, 2017, 10:06 PM	Property Damage Only	Rear End	Clear	Night	Church St.	Alcohol	None	Four-way Intersection	None	Dry
July 30, 2017, 3:01 AM	Property Damage Only	Other - Explain in Narrative	Clear	Night	Church St.	None	None	Not at a Junction	None	Dry
December 29, 2017, 12:40 PM	Property Damage Only	Other - Explain in Narrative	Freezing Precipitation	Day	Church St	None	Heavy Truck	Other - Explain in Narrativ	Unknown	Snow
January 4, 2018, 9:03 AM	Property Damage Only	Same Direction Sideswipe	Cloudy	Day	Church St	None	Heavy Truck	Four-way Intersection	None	Snow
April 17, 2018, 9:04 PM	Property Damage Only	Other - Explain in Narrative	Clear	Night	Church St	None	None	Not at a Junction	None	Dry
May 2, 2018, 5:31 PM	Property Damage Only			Day	Church St	None	None			
August 7, 2018, 10:11 AM	Property Damage Only			Day	Church St	None	None			
September 30, 2018, 11:41 AM	Property Damage Only			Day	Church St	None	None			
October 24, 2018, 9:40 AM	Property Damage Only			Day	Church St	None	Heavy Truck			
February 3, 2019, 10:39 AM	Property Damage Only			Day	Church St	None	None			
March 24, 2019, 7:56 AM	Property Damage Only			Day	Church St	None	None			
May 24, 2019, 10:14 AM	Property Damage Only			Day	Church St	None	None			
June 11, 2019, 7:48 PM	Property Damage Only			Night	Church St	None	None			
August 12, 2019, 2:02 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	Church St	None	Heavy Truck	T - Intersection	None	Dry
February 18, 2016, 5:32 PM	Property Damage Only	Rear End	Clear	Night	Church St	None	None	Not at a Junction	None	Dry
October 10, 2017, 2:24 PM	Property Damage Only	Rear End	Clear	Day	Church St	None	None	T - Intersection	None	Dry
March 30, 2016, 5:00 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	Church St	None	None	Not at a Junction	None	Dry
May 21, 2016, 11:55 AM	Property Damage Only	Rear End	Cloudy	Day	S Winooski ave	None	None	Not at a Junction	None	Dry
February 15, 2018, 8:16 PM	Property Damage Only			Night	Church St.	None	None			
July 28, 2018, 11:56 PM	Property Damage Only			Night	Church St	None	None			
March 7, 2019, 9:02 AM	Property Damage Only			Day	Church St	None	None			
July 23, 2016, 1:58 AM	Property Damage Only	Other - Explain in Narrative	Clear	Night	Church St	None	None	Other - Explain in Narrativ	None	Dry
December 16, 2016, 10:38 PM	Property Damage Only	Rear-to-rear	Clear	Night	S Winooski Ave	Alcohol	None	Not at a Junction	None	Dry
March 28, 2018, 5:28 PM	Property Damage Only			Day	Church St	None	None			
May 24, 2018, 1:31 PM	Property Damage Only			Day	Church St & Main St	None	None			
September 6, 2019, 11:31 AM	Property Damage Only			Day	Church St	None	None			
May 21, 2016, 10:57 AM	Property Damage Only	Other - Explain in Narrative	Clear	Day	S Winooski Ave	None	None	Not at a Junction	None	Dry
December 3, 2016, 7:23 PM	Property Damage Only	Other - Explain in Narrative	Clear	Night	Church St	None	None	Not at a Junction	None	Dry
May 30, 2017, 8:37 PM	Property Damage Only			Night	Church St	None	None			
June 17, 2017, 12:36 PM	Property Damage Only	Other - Explain in Narrative	Clear	Day	#188	None	None	Not at a Junction	None	Dry
May 2, 2018, 12:00 PM	Property Damage Only			Day	188 Main St	None	None			
June 12, 2018, 1:53 PM	Property Damage Only			Day	Church St	None	None			
January 20, 2019, 1:19 AM	Property Damage Only			Night	S Winooski Ave	None	None			
January 31, 2019, 1:03 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Cloudy	Day	194 Main St	None	None	Not at a Junction	None	Wet
February 13, 2019, 4:19 PM	Property Damage Only			Day	Church St	None	None			
March 6, 2019, 2:32 PM	Property Damage Only			Day	Church St	None	None			
April 27, 2019, 2:30 AM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	Church St	None	None	Not at a Junction	None	Dry
July 8, 2018, 5:42 PM	Property Damage Only			Day	S Winooski Ave	None	None			
July 25, 2018, 4:52 PM	Property Damage Only			Day	S Wlnooski Ave	None	None			
January 5, 2019, 7:04 PM	Property Damage Only			Night	S Winooski Ave	None	None			
April 5, 2019, 10:26 AM	Property Damage Only	Rear End	Clear	Day	198 Main St	None	None	Not at a Junction	None	Dry
May 29, 2019, 10:17 AM	Property Damage Only			Day	S Winooski Ave	None	None			
November 28, 2016, 3:18 PM	Property Damage Only	Rear End	Cloudy	Day	S Prospect St	None	None	T - Intersection	None	Dry
September 16, 2017, 1:48 AM	Property Damage Only	Right Turn and Thru, Same Direction Side	Clear	Night	Main St/S. Winooski	None	None	Four-way Intersection	None	Dry
September 28, 2017, 2:22 PM	Property Damage Only	Other - Explain in Narrative	Clear	Day	S Winooski Ave	None	None	Parking Lot	None	Dry
October 9, 2017, 10:47 PM	Property Damage Only	Rear End	Clear	Night	S Winooski Ave	None	None	Not at a Junction	Unknown	Dry
September 22, 2018, 2:41 AM	Property Damage Only			Night	Eastbound Lane Park	None	None			
July 11, 2019, 11:44 AM	Property Damage Only			Day	199 Main St	None	None			

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Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
September 18, 2019, 8:17 PM	Property Damage Only			Night	S Winooski Ave	None	None			
July 1, 2016, 2:34 PM	Property Damage Only	Rear End	Clear	Day	S Winooski Ave	None	None	Four-way Intersection	None	Dry
December 29, 2016, 12:22 PM	Property Damage Only	Rear End	Freezing Precipitation	Day	S Winooski Ave	None	None	Four-way Intersection	wet, icy, snow, slush,	Snow
August 19, 2017, 1:35 PM	Property Damage Only	Rear-to-rear	Cloudy	Day	S Winooski Ave	None	None	Not at a Junction	None	Dry
October 31, 2017, 11:12 AM	Property Damage Only	Same Direction Sideswipe	Clear	Day	S Winooski Ave	None	None	Four-way Intersection	None	Dry
January 26, 2018, 6:59 AM	Property Damage Only	Rear End	Clear	Day	University Ter	None	None	Four-way Intersection	None	Dry
April 17, 2018, 1:11 PM	Property Damage Only			Day	S Winooski Ave	None	None			
April 21, 2018, 7:34 PM	Property Damage Only			Night	S Winooski Ave	None	None			
June 6, 2018, 5:41 PM	Property Damage Only			Day	S Winooski Ave	None	None			
July 28, 2018, 3:50 PM	Property Damage Only			Day	S Winooski Ave	None	None			
August 29, 2018, 11:29 PM	Property Damage Only	Rear-to-rear	Clear	Night	Main St	None	None	Other - Explain in Narrativ	None	Dry
October 4, 2018, 2:33 PM	Property Damage Only	Left Turn and Thru, Head On ^v--	Clear	Day	S Winooski Ave	None	None	Four-way Intersection	None	Dry
October 29, 2018, 7:36 PM	Property Damage Only			Night	S Winooski Ave	None	None			
April 12, 2019, 2:30 PM	Property Damage Only			Day	S Winooski Ave	None	None			
July 3, 2019, 8:51 PM	Property Damage Only	Same Direction Sideswipe	Clear	Night	S Winooski Ave	None	Heavy Truck	Four-way Intersection	None	Dry
February 12, 2016, 3:15 PM	Property Damage Only	Rear End	Cloudy	Day	S Winooski Ave	None	None	Four-way Intersection	None	Dry
June 10, 2016, 2:08 PM	Property Damage Only	Rear End	Clear	Day	S Winooski Ave	None	None	Not at a Junction	None	Dry
October 1, 2016, 9:48 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Winooski Ave	None	None	Four-way Intersection	None	Dry
October 6, 2016, 8:44 PM	Property Damage Only	Same Direction Sideswipe	Clear	Night	S Winooski Ave	None	Bicycle	Four-way Intersection	None	Dry
December 7, 2016, 9:57 AM	Property Damage Only	Same Direction Sideswipe	Cloudy	Day	S Winooski Ave	None	None	Four-way Intersection	None	Dry
June 16, 2018, 2:01 AM	Property Damage Only			Night	S Winooski Ave	None	None			
December 6, 2018, 7:53 PM	Property Damage Only	Head On	Cloudy	Night	S Winooski Ave	None	None	Four-way Intersection	None	Snow
August 18, 2016, 5:56 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Winooski Ave	None	None	Not at a Junction	None	Dry
February 19, 2018, 1:14 PM	Property Damage Only			Day	S Winooski Ave	None	None			
August 20, 2019, 8:20 AM	Property Damage Only			Day	S Winooksi Ave	None	None			
July 26, 2016, 8:13 PM	Property Damage Only	Rear End	Clear	Night	S Winooski Ave	None	None	Not at a Junction	None	Dry
December 29, 2016, 4:29 PM	Property Damage Only	Other - Explain in Narrative	Freezing Precipitation	Day	Main St	None	None	Parking Lot	wet, icy, snow, slush,	Slush
August 19, 2019, 6:00 PM	Property Damage Only			Day	S Winooski Ave	None	None			
August 22, 2019, 3:12 PM	Property Damage Only			Day	S Winooski Ave	None	None			
April 4, 2017, 4:29 PM	Property Damage Only	Same Direction Sideswipe		Day	Perrywinkles	None	None	Not at a Junction	Unknown	Unknown
July 30, 2017, 2:25 AM	Property Damage Only	Left Turn and Thru, Same Direction Sides	Clear	Night	S Union	Alcohol	None	Other - Explain in Narrativ	None	Dry
July 16, 2016, 12:51 PM	Property Damage Only	Other - Explain in Narrative	Clear	Day	S Union St	None	None	Parking Lot	None	Dry
January 12, 2016, 8:39 AM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Union St	None	None	Other - Explain in Narrativ	None	Dry
April 26, 2016, 6:52 PM	Property Damage Only	Same Direction Sideswipe	Clear	Day	S Union St	None	None	Not at a Junction	None	Dry
July 20, 2016, 5:52 PM	Property Damage Only	Rear End	Clear	Day	S Union St	None	None	Not at a Junction	None	Dry
July 28, 2016, 9:38 AM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Union St	None	None	Four-way Intersection	None	Dry
October 7, 2016, 10:02 PM	Property Damage Only	Rear End	Clear	Night	S Union St	None	None	Four-way Intersection	None	Dry
October 31, 2016, 2:53 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Day	S Union St	None	None	Not at a Junction	None	Dry
February 15, 2017, 2:44 PM	Property Damage Only	Rear End	Freezing Precipitation	Day	S Union St	None	None	Four-way Intersection	wet, icy, snow, slush,	Snow
August 23, 2017, 4:08 PM	Property Damage Only	Rear End	Clear	Day	South Union St	None	None	Four-way Intersection	None	Dry
December 19, 2017, 7:55 AM	Property Damage Only			Day	City Hall Park	None	None			
February 23, 2018, 2:24 AM	Property Damage Only			Night	S Union St	None	None			
April 14, 2018, 4:22 PM	Property Damage Only	Rear End	Freezing Precipitation	Day	S Union St	None	None	Four-way Intersection	wet, icy, snow, slush,	Wet
August 28, 2018, 7:51 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Union St	None	None	Four-way Intersection	None	Dry
January 13, 2019, 9:09 PM	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	Night	S Union St	None	None	Four-way Intersection	None	Dry
May 4, 2019, 8:41 PM	Property Damage Only	Rear End	Clear	Night	S Union St	Alcohol	None	Four-way Intersection	None	Dry
June 4, 2017, 8:19 PM	Property Damage Only	Rear End	Clear	Night	S. Union St	None	None	Not at a Junction	None	Dry
April 18, 2018, 4:19 PM	Property Damage Only			Day	S Union St	None	None			
December 19, 2018, 6:43 AM	Property Damage Only			Day	S Union St	None	None			

Main Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Crash Type	Collision Direction	Weather	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
September 23, 2018, 2:58 AM	Property Damage Only	Single Vehicle Crash	Clear	Night	South Union St	None	None	Not at a Junction	None	Dry
October 11, 2018, 5:19 PM	Property Damage Only	Rear End	Rain	Day	South Union St	None	None	Not at a Junction	None	Wet
December 16, 2016, 8:17 AM	Property Damage Only	Rear End	Cloudy	Day	S Union St	None	None	Not at a Junction	None	Dry
October 9, 2017, 1:32 PM	Property Damage Only	Rear End	Rain	Day	S Union St	None	None	Not at a Junction	None	Wet
August 6, 2016, 5:18 PM	Property Damage Only	Rear End	Clear	Day	299 Main St	None	None	Not at a Junction	None	Dry
October 17, 2016, 11:48 AM	Property Damage Only	Other - Explain in Narrative		Day	S Willard St	None	None	Parking Lot	Not reported	Unknown
October 30, 2016, 12:04 PM	Property Damage Only	Rear End	Clear	Day	S Willard St	None	None	Not at a Junction	None	Dry
September 19, 2017, 10:27 PM	Property Damage Only	Other - Explain in Narrative	Clear	Night	S Willard St	None	Bicycle	Four-way Intersection	None	Dry
October 27, 2017, 8:44 PM	Property Damage Only	Rear End	Clear	Night	S Willard St	None	None	Not at a Junction	None	Dry
March 25, 2016, 3:59 PM	Property Damage Only	Rear End	Clear	Day	S Prospect St	None	None	Four-way Intersection	None	Dry
November 8, 2017, 8:37 AM	Property Damage Only			Day	S Prospect St	None	None			
November 9, 2017, 4:31 PM	Property Damage Only			Day	S Prospect St	None	None			
December 23, 2017, 6:17 PM	Property Damage Only	Other - Explain in Narrative	Freezing Precipitation	Night	S Willard St	None	Heavy Truck	Not at a Junction	wet, icy, snow, slush,	Ice
May 19, 2017, 8:05 AM	Property Damage Only	Other - Explain in Narrative	Cloudy	Day	So Union St	None	None	Other - Explain in Narrativ	None	Dry
June 28, 2017, 5:04 PM	Property Damage Only	Left Turn and Thru, Head On ^v--	Clear	Day	S Prospect St	None	None	T - Intersection	Unknown	Dry
October 8, 2017, 4:28 PM	Property Damage Only	Opp Direction Sideswipe	Clear	Day	S. Winooski Ave	None	None	Parking Lot	None	Dry

College Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Collision Direction	Weather	Impairment	Involving	Road		Street Address	Surface Condition
					Characteristics	Road Condition		
August 10, 2016, 4:47 PM	Single Vehicle Crash	Clear	None	Pedestrian	Four-way Intersect	None	College St	Dry
May 12, 2018, 8:59 AM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersect	None	College St	Dry
March 28, 2019, 12:06 PM			None	None			119 College St	
February 14, 2019, 8:46 AM			None	None			126 College St	
January 17, 2018, 4:56 PM			None	None			144 College St	
January 20, 2018, 4:42 PM			None	None			Church St	
May 20, 2018, 2:36 PM			None	None			College St	
July 31, 2019, 4:51 PM			None	None			College St	
June 5, 2018, 10:41 PM			None	None			191 College St	
June 10, 2019, 8:30 PM			None	None			205 College St	
May 30, 2018, 12:53 PM			None	None			College St	
June 30, 2018, 2:16 PM			None	None			College St	
November 10, 2018, 1:00 PM			None	None			220 College St	
March 30, 2019, 2:31 PM			None	None			College St	
May 30, 2019, 2:19 PM			None	None			College St	
July 30, 2019, 12:53 PM			None	Heavy Truck			College St	
September 30, 2018, 2:14 PM			None	None			235 College St	
February 14, 2019, 5:03 PM			None	None			222 College St	
January 21, 2016, 2:18 PM	Rear End	Clear	None	None	Not at a Junction	None	160 College St	Wet
January 23, 2016, 12:48 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersect	None	College St	Dry
March 21, 2016, 1:20 PM	Same Direction Sideswipe	Cloudy	None	None	Not at a Junction	None	College St	Dry
April 7, 2016, 5:25 PM	Rear End	Rain	None	None	Not at a Junction	None	College St	Wet
April 18, 2016, 3:21 PM	Rear End	Clear	None	None	Not at a Junction	None	College St	Dry
May 6, 2016, 3:03 PM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	235 College St	Dry
July 15, 2016, 9:13 PM	Rear End	Clear	None	None	Not at a Junction	None	College St	Dry
July 30, 2016, 5:19 PM	Other - Explain in Narrative	Clear	None	None	Not at a Junction	None	College St	Dry
August 1, 2016, 4:31 PM	Other - Explain in Narrative	Clear	None	None	Not at a Junction	None	College	Dry
August 5, 2016, 9:15 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	College St	Dry
September 26, 2016, 11:43 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	125 College St	Dry
October 15, 2016, 2:54 PM	Other - Explain in Narrative	Cloudy	None	None	Not at a Junction	None	College St	Dry
October 17, 2016, 8:25 PM	Rear End		None	None	Not at a Junction	None	College St	Unknown
November 25, 2016, 1:38 PM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	Not at a Junction	None	College St	Wet
December 3, 2016, 12:28 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	College St	Wet
January 9, 2017, 5:06 PM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	Not at a Junction	None	College St	Dry
May 6, 2017, 9:24 AM	Other - Explain in Narrative	Rain	None	None	Four-way Intersect	None	College St	Wet
October 26, 2017, 5:12 PM	Right Turn and Thru, Same Direction Sideswipe/Angle Crash	Rain	None	None	Driveway	wet, icy, snow, sl	71 College St	Wet
November 27, 2017, 1:50 PM			None	None			College St	
January 12, 2018, 12:25 PM			None	None			160 College St	
January 14, 2018, 10:29 AM			None	None			College St	
June 10, 2018, 5:10 PM			None	None			190 College St	
April 4, 2019, 2:20 PM			None	None			244 College St	

Pearl Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Collision Direction	Weather	Impairment	Involving	Road Characteristics	Road Condition	Street Address	Surface Condition
February 4, 2016, 7:59 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
August 30, 2016, 9:24 AM	Other - Explain in Narrative	Clear	None	Bicycle	Four-way Intersection	None	Pearl St	Dry
September 9, 2016, 9:04 AM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Driveway	None	Pearl St	Dry
September 16, 2016, 5:12 PM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
November 18, 2016, 2:15 PM	Rear End	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
December 6, 2016, 12:58 PM	Left Turn and Thru, Angle Broadside -->v--	Cloudy	None	None	Four-way Intersection	None	Pearl St	Dry
January 5, 2017, 4:00 PM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	T - Intersection	None	Pearl St	Dry
March 31, 2017, 7:58 PM	No Turns, Thru moves only, Broadside ^<	Freezing Precipitation	None	None	Four-way Intersection	None	Pearl St	Water (standing / moving)
April 12, 2017, 8:16 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
July 24, 2017, 1:37 PM	Same Direction Sideswipe	Rain	None	None	Not at a Junction	None	Pearl St	Wet
September 19, 2017, 8:07 AM	Head On	Clear	None	Pedestrian	Other - Explain in Narrative	None	S Williams St	Dry
September 23, 2017, 7:53 PM	Head On	Clear	None	Pedestrian	Not at a Junction	None	Pearl St	Dry
June 5, 2018, 7:49 AM	Rear End	Cloudy	None	None	T - Intersection	None	Pearl St	Dry
July 29, 2018, 4:02 PM	Other - Explain in Narrative	Clear	None	Bicycle	Not at a Junction	None	Pearl St	Dry
September 11, 2018, 4:12 PM	Rear End	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
February 1, 2019, 2:35 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
February 22, 2019, 2:04 PM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	Driveway	Obstruction in road	394 Pearl St	Wet
August 22, 2019, 3:26 PM	Right Turn and Thru, Broadside ^<--	Cloudy	None	Bicycle	T - Intersection	None	Pearl St	Dry
September 16, 2019, 7:53 AM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	Bicycle	T - Intersection	None	Pearl St	Dry
February 19, 2016, 10:10 AM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	T - Intersection	None	Pearl St	Dry
February 29, 2016, 2:08 PM	Same Direction Sideswipe	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
March 10, 2016, 6:55 AM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
March 11, 2016, 4:19 PM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
April 4, 2016, 11:23 AM	Other - Explain in Narrative	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
April 12, 2016, 11:23 AM	Left Turn and Thru, Angle Broadside -->v--	Cloudy	None	None	Other - Explain in Narrative	Other - Explain in Narrative	Pearl St	Dry
May 3, 2016, 9:05 AM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	T - Intersection	None	300 Pearl St	Dry
May 9, 2016, 3:41 PM	Other - Explain in Narrative		None	None	Parking Lot	Unknown	286 Pearl St	Unknown
May 10, 2016, 9:23 AM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	Parking Lot	None	240 Pearl St	Dry
May 13, 2016, 12:48 PM	Rear End	Rain	None	None	T - Intersection	None	Pearl St	Wet
May 20, 2016, 1:52 PM	Other - Explain in Narrative	Clear	None	None	Parking Lot	None	240 Pearl St	Dry
May 22, 2016, 4:22 PM	Rear End	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
May 29, 2016, 10:14 AM	Left Turn and Thru, Angle Broadside -->v--	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
May 31, 2016, 12:45 PM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Dry
June 4, 2016, 10:27 AM	Right Turn and Thru, Head On v^--	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
June 6, 2016, 9:11 PM	Left Turn and Thru, Head On ^v--	Clear	None	None	Four-way Intersection		177 Pearl St	Dry
June 8, 2016, 7:00 PM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
June 17, 2016, 4:59 PM	Head On	Clear	None	None	Not at a Junction	None	366 Pearl St	Dry
June 23, 2016, 6:58 AM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
June 28, 2016, 10:01 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Dry
July 4, 2016, 4:24 PM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
July 11, 2016, 5:13 PM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
July 29, 2016, 4:36 PM	Other - Explain in Narrative	Clear	None	None	T - Intersection	None	Pearl St	Dry
August 1, 2016, 6:08 PM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	T - Intersection	None	Pearl St	Dry
August 5, 2016, 10:06 AM	Same Direction Sideswipe	Clear	Alcohol	None	Four-way Intersection	None	Pearl St	Dry
August 9, 2016, 10:22 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	185 Pearl St	Dry
August 9, 2016, 12:35 PM	Left Turn and Thru, Angle Broadside -->v--	Cloudy	None	None	Driveway	None	Pearl St	Dry
August 16, 2016, 8:43 AM	Rear End	Cloudy	None	None	Four-way Intersection	None	Colchester Ave	Dry

Pearl Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Collision Direction	Weather	Impairment	Involving	Road Characteristics	Road Condition	Street Address	Surface Condition
September 2, 2016, 8:49 AM	Left Turn and Thru, Angle Broadside -->v--	Cloudy	None	None	Driveway	None	360 Pearl St	Dry
October 12, 2016, 8:12 PM	Other - Explain in Narrative	Clear	None	Pedestrian	Other - Explain in Narrative	None	Pearl St	Dry
October 31, 2016, 12:51 PM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	Not at a Junction	Other - Explain in	Pearl St	Dry
November 4, 2016, 3:08 AM	Rear End	Rain	None	None	Parking Lot	None	Pearl St	Wet
November 5, 2016, 2:48 AM	Head On	Clear	Alcohol	None	T - Intersection	None	Pearl St	Dry
November 26, 2016, 3:40 PM	Rear End	Rain	None	None	Not at a Junction	None	Pearl St	Wet
November 28, 2016, 5:31 PM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
December 5, 2016, 4:44 PM	Other - Explain in Narrative	Cloudy	None	None	T - Intersection	None	Pearl St	Wet
December 19, 2016, 8:33 AM	Opp Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Dry
December 19, 2016, 2:27 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
December 22, 2016, 7:48 AM	Other - Explain in Narrative	Freezing Precipitation	None	None	Not at a Junction	None	70 Pearl St	Slush
December 28, 2016, 5:27 PM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Slush
January 17, 2017, 8:51 AM	Right Turn and Thru, Broadside ^<--	Clear	None	None	Not at a Junction	None	338 Pearl St	Dry
January 19, 2017, 11:53 AM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
January 24, 2017, 11:07 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	267 Pearl St	Snow
February 4, 2017, 5:29 PM	Same Direction Sideswipe	Clear	None	None	T - Intersection	None	Pearl St	Dry
February 10, 2017, 2:49 PM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Wet
February 13, 2017, 9:42 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
March 2, 2017, 12:56 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Driveway	None	Pearl St	Dry
March 5, 2017, 11:04 AM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
March 15, 2017, 7:33 AM	Same Direction Sideswipe	Freezing Precipitation	None	Heavy Truck	Not at a Junction	Debris	Pearl St	Snow
March 24, 2017, 2:37 PM	Same Direction Sideswipe	Freezing Precipitation	None	None	T - Intersection	None	Pearl St	Wet
March 30, 2017, 9:50 PM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Dry
March 31, 2017, 10:05 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	273 Pearl St	Dry
April 10, 2017, 4:12 PM	Other - Explain in Narrative	Clear	None	None	Not at a Junction	None	83 Pearl St	Dry
April 11, 2017, 11:12 AM	Other - Explain in Narrative	Clear	None	Heavy Truck	T - Intersection	None	90 Pearl St	Dry
April 26, 2017, 2:45 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
April 28, 2017, 11:41 PM	Other - Explain in Narrative	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
May 3, 2017, 1:08 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
May 5, 2017, 1:18 PM	No Turns, Thru moves only, Broadside ^<	Rain	None	None	Not at a Junction	None	300 Pearl St	Wet
May 13, 2017, 7:33 AM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	Four-way Intersection		Pearl St	Dry
May 20, 2017, 10:43 PM	Other - Explain in Narrative	Clear	None	None	Not at a Junction	None	Pearl St	Dry
May 31, 2017, 5:19 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
June 2, 2017, 11:03 PM	Rear End	Rain	None	None	Not at a Junction	None	Pearl St	Wet
June 5, 2017, 12:06 PM	Rear End	Rain	None	None	Not at a Junction	None	Pearl St	Wet
June 14, 2017, 6:20 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
June 27, 2017, 10:12 PM	Rear End	Clear	None	None	Not at a Junction	None	380 Pearl St	Dry
July 10, 2017, 3:49 PM	Rear End	Cloudy	None	None	Four-way Intersection	None	Pearl St	Dry
July 28, 2017, 2:51 PM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
August 13, 2017, 2:06 AM	Rear End	Clear	None	None	Not at a Junction	wet, icy, snow, slt	240 Pearl St	Dry
August 22, 2017, 2:05 PM	Rear End	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
September 11, 2017, 7:06 AM	Rear End	Clear	None	None	Not at a Junction	Unknown	Pearl St	Dry
September 21, 2017, 2:00 PM	Left Turn and Thru, Same Direction Sideswipe/Angle Cra	Clear	None	None	Not at a Junction	None	Pearl St	Dry
September 22, 2017, 6:38 AM	Opp Direction Sideswipe	Clear	None	None	T - Intersection	Unknown	Pearl St	Unknown
September 28, 2017, 12:44 PM	Left Turn and Thru, Angle Broadside -->v--	Clear	None	None	Driveway	None	Pearl St	Dry
October 10, 2017, 3:10 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
October 17, 2017, 11:36 AM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	None	Parking Lot	None	Pearl St	Dry

Pearl Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Collision Direction	Weather	Impairment	Involving	Road Characteristics	Road Condition	Street Address	Surface Condition
October 24, 2017, 9:27 AM	Same Direction Sideswipe	Clear	None	None	T - Intersection	None	Pearl St	Dry
November 2, 2017, 11:21 AM	Same Direction Sideswipe	Cloudy	None	None	Not at a Junction	Unknown	Pearl St	Wet
November 12, 2017, 6:31 PM			None	None			Pearl St	
November 27, 2017, 4:35 PM	Same Direction Sideswipe	Clear	None	None	T - Intersection	None	Pearl St	Dry
November 28, 2017, 3:24 PM			None	None			Pearl St	
December 12, 2017, 10:57 AM	Other - Explain in Narrative	Freezing Precipitation	None	None	T - Intersection	wet, icy, snow, slt	Pearl St	Snow
December 19, 2017, 11:23 AM		Cloudy	None	None	Not at a Junction	Unknown	Pearl St	Wet
December 23, 2017, 4:35 PM			None	None			Pearl St	
January 6, 2018, 1:50 PM	Rear End	Freezing Precipitation	None	None	Four-way Intersection	wet, icy, snow, slt	Pearl St	Ice
January 13, 2018, 11:07 PM	Rear End	Clear	Alcohol	None	Not at a Junction	None	Pearl St	Dry
January 15, 2018, 9:44 AM	Rear End	Clear	None	None	T - Intersection	wet, icy, snow, slt	Pearl St	Ice
January 15, 2018, 1:24 PM			None	None			Colchester Ave	
January 17, 2018, 8:52 AM			None	None			Pearl St	
January 25, 2018, 4:54 PM	Same Direction Sideswipe	Clear	None	None	T - Intersection	None	Pearl St	Ice
January 29, 2018, 7:26 AM	Single Vehicle Crash		None	None			242 Pearl St	
January 31, 2018, 12:48 PM	Left Turn and Thru, Broadside v<--	Cloudy	None	None	Not at a Junction	Other - Explain in	Pearl St	Dry
February 16, 2018, 6:40 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Driveway	None	360 Pearl St	Dry
February 24, 2018, 2:20 PM	Rear End	Clear	None	Heavy Truck	Not at a Junction	None	Pearl St	Dry
March 7, 2018, 1:40 PM			None	None			Pearl St	
March 8, 2018, 5:09 PM			None	None			Pearl St	
March 11, 2018, 2:11 PM			None	None			Pearl St	
March 14, 2018, 8:25 AM			None	Heavy Truck			Pearl St	
March 20, 2018, 4:46 PM			None	None			249 Pearl St	
March 23, 2018, 3:12 PM	Same Direction Sideswipe	Clear	None	None	Parking Lot	None	223 Pearl St	Dry
March 29, 2018, 3:42 PM			None	None			Pearl St	
March 30, 2018, 11:27 AM			None	None			262 Pearl St	
April 17, 2018, 7:46 AM	Same Direction Sideswipe	Clear	None	None	Not at a Junction	None	Pearl St	Dry
April 18, 2018, 5:57 PM	Same Direction Sideswipe	Clear	None	None	Four-way Intersection	None	184 Pearl St	Dry
April 22, 2018, 2:07 PM			None	None			258 Pearl St	
May 6, 2018, 1:48 AM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Four-way Intersection	None	Pearl St	Dry
May 11, 2018, 4:04 PM			None	None			240 Pearl St	
May 13, 2018, 9:50 AM	Head On	Clear	None	None	T - Intersection	None	Pearl St	Dry
June 4, 2018, 8:08 AM			None	None			Pearl St	
July 1, 2018, 6:07 PM			None	None			240 Pearl St	
July 14, 2018, 3:03 PM			None	None			174 Pearl St	
July 21, 2018, 4:50 PM			None	None			Pearl St	
July 24, 2018, 4:42 PM			None	None			Pearl St	
July 31, 2018, 3:14 PM	Right Turn and Thru, Angle Broadside -->^--	Clear	None	None	Not at a Junction	None	Pearl St	Dry
August 4, 2018, 12:53 AM	No Turns, Thru moves only, Broadside ^<	Rain	None	None	Four-way Intersection	None	Pearl St	Wet
August 24, 2018, 8:29 AM			None	Heavy Truck			Pearl St	
September 7, 2018, 7:10 PM			None	None			Pearl St	
September 7, 2018, 7:18 PM			None	None			Pearl St	
September 19, 2018, 4:43 PM	Right Turn and Thru, Same Direction Sideswipe/Angle Cr: Clear	Clear	None	None	Not at a Junction		300 Pearl St	Dry
September 24, 2018, 12:37 PM			None	None			Pearl St	
September 27, 2018, 5:32 PM			None	None			Pearl St	
October 4, 2018, 11:46 PM			None	None			Pearl St	
October 7, 2018, 9:53 AM	No Turns, Thru moves only, Broadside ^<	Cloudy	None	Bicycle	T - Intersection	None	272 Pearl St	Dry

Pearl Street - Burlington, VT

VTrans Crash Query Tool

Crash Date	Collision Direction	Weather	Impairment	Involving	Road Characteristics	Road Condition	Street Address	Surface Condition
October 10, 2018, 5:09 PM	No Turns, Thru moves only, Broadside ^<	Rain	None	None	Four-way Intersection	wet, icy, snow, slt	394 Pearl St	Wet
October 11, 2018, 5:47 PM			None	None			Pearl St	
October 18, 2018, 3:28 PM			None	None			300 Pearl St	
October 19, 2018, 5:15 PM			None	None			Pearl St	
October 27, 2018, 11:09 PM			None	None			Pearl St	
October 28, 2018, 2:21 PM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
October 30, 2018, 9:32 AM			None	Heavy Truck			338 Pearl St	
November 22, 2018, 5:09 PM			None	None			300 Pearl St	
November 23, 2018, 3:10 PM	Head On	Clear	None	None	Four-way Intersection	Not reported	174 Pearl St	Dry
November 24, 2018, 11:03 AM			None	None			Pearl St	
December 15, 2018, 8:16 PM			None	None			Pearl St	
December 26, 2018, 11:55 AM			None	None			Pearl St	
January 8, 2019, 5:41 PM			None	None			240 Pearl St	
January 19, 2019, 7:54 AM	Other - Explain in Narrative	Freezing Precipitation	None	None	Not at a Junction	wet, icy, snow, slt	81 Pearl St	Snow
January 19, 2019, 4:27 PM			None	None			Pearl St	
January 25, 2019, 1:29 PM			None	None			18 Pearl St	
January 29, 2019, 10:19 PM			None	Heavy Truck			Pearl St	
February 6, 2019, 1:27 PM			None	None			Pearl St	
February 20, 2019, 4:32 PM	Left Turn and Thru, Same Direction Sideswipe/Angle Cras	Cloudy	None	None	Other - Explain in Narrative	None	Pearl St	Dry
February 22, 2019, 3:38 PM			None	None			Pearl St	
February 28, 2019, 4:08 PM			None	None			Pearl St	
March 6, 2019, 1:53 PM			None	None			Pearl St	
March 7, 2019, 8:12 AM			None	None			Pearl St	
March 9, 2019, 10:43 AM	Opp Direction Sideswipe	Freezing Precipitation	None	None	Not at a Junction	Unknown	300 Pearl St	Snow
March 23, 2019, 2:45 AM			None	None			Pearl St	
March 24, 2019, 12:05 AM			None	None			Pearl St	
March 28, 2019, 3:31 PM			None	None			Pearl St	
April 23, 2019, 10:36 AM			None	Bicycle			Pearl St	
May 8, 2019, 9:11 AM	Rear End	Clear	None	None	T - Intersection	None	Pearl St	Dry
May 9, 2019, 9:56 AM			None	None			Pearl St	
May 16, 2019, 4:02 PM			None	None			Pearl St	
May 18, 2019, 3:26 PM	Rear End	Cloudy	None	None	Not at a Junction	Shoulders (none,	Pearl St	Dry
May 25, 2019, 4:43 AM			None	None			Pearl St	
June 2, 2019, 2:43 AM			None	None			Pearl St	
June 6, 2019, 3:49 PM	Other - Explain in Narrative	Clear	None	None	T - Intersection	None	Pearl St	Dry
June 13, 2019, 8:23 AM			None	Heavy Truck			80 Pearl St	
June 17, 2019, 12:50 PM			None	None			Pearl St	
June 19, 2019, 3:19 PM	No Turns, Thru moves only, Broadside ^<	Clear	None	None	Driveway	None	Pearl St	Dry
July 17, 2019, 4:52 PM			None	None			Pearl St	
July 17, 2019, 10:03 PM			None	None			Pearl St	
August 14, 2019, 3:51 PM	Same Direction Sideswipe	Cloudy	None	None	Not at a Junction	None	Pearl St	Dry
September 6, 2019, 2:10 PM			None	None			Pearl St	
September 7, 2019, 11:11 AM			None	None			Pearl St	
September 13, 2019, 8:22 AM	Rear End	Clear	None	None	Not at a Junction	None	Pearl St	Dry
September 15, 2019, 7:31 AM			None	None			Pearl St	
September 23, 2019, 7:06 PM			None	Heavy Truck			Pearl St	
September 29, 2019, 8:32 AM	Other - Explain in Narrative	Clear	None	None	Not at a Junction	None	Pearl St	Dry
			None	None			Pearl St	
			None	None			Pearl St	

Appendix C – Trip Generation Calculations

Trip Generation - City Place Block

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

[illegible]

Trip Generation - 67 Cherry Street

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

Site Land Uses and Descriptions				AM PK HR OF ADJACENT STREET TRAFFIC												
Code	Land Use	Size	Unit	directional dist.		# studie	average			regression		# trips		Enteri ng	Exitin g	
				% enter	% exit		Avg Rate	Std Dev.	Total by	r ²	total by	Method Chosen	Total Trips			
67 Cherry Street (Macy's Block)																
932	High-Turnover (Sit-Down) Restaurant	9	1k sf	55%	45%	39	9.94	11.33	89	-	-	average	89	49	40	
710	General Office Building	81	1k sf	86%	14%	35	1.16	0.47	94	0.85	103	regression	103	89	14	

Appendix D – Internal Capture Calculations

67 Cherry Street & CPB TIS

AM Pk Hr

Land Use	Entering							Exiting							Totals						
	All Entering Trips				Entering External			All Exiting Trips				Exiting External			All Trips				All External		
	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized
Office	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Retail	15%	4	23	27	16	1	6	19%	3	13	16	9	1	3	16%	7	36	43	25	2	9
Restaurant	32%	14	30	44	20	2	8	11%	4	32	36	22	2	8	23%	18	62	80	42	4	16
Cinema/Entertainment	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Residential	7%	2	25	27	18	1	6	12%	10	76	86	53	4	19	11%	12	101	113	71	5	25
Hotel	2%	1	55	56	38	3	14	10%	4	35	39	24	2	9	5%	5	90	95	62	5	23
All Other Land Uses	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
	14%	21	133	154	92	7	34	12%	21	156	177	108	9	39	13%	42	289	331	200	16	73

PM Pk Hr

Land Use	Entering							Exiting							Totals						
	All Entering Trips				Entering External			All Exiting Trips				Exiting External			All Trips				All External		
	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized
Office	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Retail	26%	22	62	84	43	3	16	47%	43	48	91	34	2	12	37%	65	110	175	77	5	28
Restaurant	47%	23	26	49	18	1	7	63%	19	11	30	7	1	3	53%	42	37	79	25	2	10
Cinema/Entertainment	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Residential	37%	29	50	79	34	3	13	33%	17	34	51	23	2	9	35%	46	84	130	57	5	22
Hotel	14%	9	54	63	37	3	14	7%	4	57	61	40	3	14	10%	13	111	124	77	6	28
All Other Land Uses	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
	30%	83	192	275	132	10	50	36%	83	150	233	104	8	38	33%	166	342	508	236	18	88

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	67 Cherry Street & CPB TIS			Organization:	VHB
Project Location:	Burlington, VT			Performed By:	ELQ
Scenario Description:	City Place Block			Date:	1/13/2020
Analysis Year:	2020			Checked By:	JC
Analysis Period:	AM Street Peak Hour			Date:	1/26/2020

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	81	1k sf	0		
Retail	820	46	1k sf	43	27	16
Restaurant	932	17	1K sf	80	44	36
Cinema/Entertainment						
Residential	222	357	units	113	27	86
Hotel	310	200	rooms	95	56	39
All Other Land Uses ²				0		
Total				331	154	177

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office		5%	25%		5%	25%
Retail		5%	25%		5%	25%
Restaurant		5%	25%		5%	25%
Cinema/Entertainment						
Residential		5%	25%		5%	25%
Hotel		5%	25%		5%	25%
All Other Land Uses ²		5%	25%		5%	25%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	1	0
Restaurant	0	2		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	9	0		0
Hotel	0	1	3	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	331	154	177
Internal Capture Percentage	13%	14%	12%
External Vehicle-Trips ³	200	92	108
External Transit-Trips ⁴	16	7	9
External Non-Motorized Trips ⁴	73	34	39

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	15%	19%
Restaurant	32%	11%
Cinema/Entertainment	N/A	N/A
Residential	7%	12%
Hotel	2%	10%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	67 Cherry Street & CPB TIS
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	27	27	1.00	16	16
Restaurant	1.00	44	44	1.00	36	36
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	27	27	1.00	86	86
Hotel	1.00	56	56	1.00	39	39

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	5		2	0	2	0
Restaurant	11	5		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	17	0		0
Hotel	29	5	4	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	10	0	0	0
Retail	0		22	0	1	0
Restaurant	0	2		0	1	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	9	0		0
Hotel	0	1	3	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	4	23	27	16	1	6
Restaurant	14	30	44	20	2	8
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	25	27	18	1	6
Hotel	1	55	56	38	3	14
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	3	13	16	9	1	3
Restaurant	4	32	36	22	2	8
Cinema/Entertainment	0	0	0	0	0	0
Residential	10	76	86	53	4	19
Hotel	4	35	39	24	2	9
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	67 Cherry Street & CPB TIS			Organization:	VHB
Project Location:	Burlington, VT			Performed By:	ELQ
Scenario Description:	City Place Block			Date:	1/13/2020
Analysis Year:	2020			Checked By:	JC
Analysis Period:	PM Street Peak Hour			Date:	1/26/2020

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	81	1k sf	0		
Retail	820	46	1k sf	175	84	91
Restaurant	932	17	1K sf	79	49	30
Cinema/Entertainment						
Residential	222	357	units	130	79	51
Hotel	310	200	rooms	124	63	61
All Other Land Uses ²				0		
Total				508	275	233

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office		5%	25%		5%	25%
Retail		5%	25%		5%	25%
Restaurant		5%	25%		5%	25%
Cinema/Entertainment						
Residential		5%	25%		5%	25%
Hotel		5%	25%		5%	25%
All Other Land Uses ²		5%	25%		5%	25%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail					200	
Restaurant					200	
Cinema/Entertainment						
Residential		200	200			
Hotel					200	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		14	0	24	5
Restaurant	0	12		0	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	8	7	0		2
Hotel	0	2	2	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	508	275	233
Internal Capture Percentage	33%	30%	36%
External Vehicle-Trips ³	236	132	104
External Transit-Trips ⁴	18	10	8
External Non-Motorized Trips ⁴	88	50	38

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	26%	47%
Restaurant	47%	63%
Cinema/Entertainment	N/A	N/A
Residential	37%	33%
Hotel	14%	7%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	67 Cherry Street & CPB TIS
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	84	84	1.00	91	91
Restaurant	1.00	49	49	1.00	30	30
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	79	79	1.00	51	51
Hotel	1.00	63	63	1.00	61	61

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	2		26	4	24	5
Restaurant	1	12		2	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	2	21	11	0		2
Hotel	0	10	41	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	1	0	3	0
Retail	0		14	0	36	11
Restaurant	0	42		0	13	45
Cinema/Entertainment	0	3	1		3	1
Residential	0	8	7	0		8
Hotel	0	2	2	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	22	62	84	43	3	16
Restaurant	23	26	49	18	1	7
Cinema/Entertainment	0	0	0	0	0	0
Residential	29	50	79	34	3	13
Hotel	9	54	63	37	3	14
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	43	48	91	34	2	12
Restaurant	19	11	30	7	1	3
Cinema/Entertainment	0	0	0	0	0	0
Residential	17	34	51	23	2	9
Hotel	4	57	61	40	3	14
All Other Land Uses ³	0	0	0	0	0	0

¹ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
² Person-Trips
³ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

67 Cherry Street & CPB TIS

AM Pk Hr

Land Use	Entering							Exiting							Totals						
	All Entering Trips			Entering External				All Exiting Trips				Exiting External			All Trips			All External			
	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized
Office	24%	21	68	89	48	3	17	93%	13	1	14	1	0	0	33%	34	69	103	49	3	17
Retail	30%	8	19	27	13	1	5	44%	7	9	16	7	0	2	35%	15	28	43	20	1	7
Restaurant	34%	32	61	93	43	3	15	22%	17	59	76	41	3	15	29%	49	120	169	84	6	30
Cinema/Entertainment	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Residential	7%	2	25	27	18	1	6	23%	20	66	86	46	3	17	19%	22	91	113	64	4	23
Hotel	4%	2	54	56	37	3	14	21%	8	31	39	21	2	8	11%	10	85	95	58	5	22
All Other Land Uses	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
	22%	65	227	292	159	11	57	28%	65	166	231	116	8	42	25%	130	393	523	275	19	99

PM Pk Hr

Land Use	Entering							Exiting							Totals						
	All Entering Trips			Entering External				All Exiting Trips				Exiting External			All Trips			All External			
	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized	% int.	Internal	External	Total	Vehicles	Transit	Non-Motorized
Office	40%	6	9	15	7	0	2	14%	11	67	78	47	3	17	18%	17	76	93	54	3	19
Retail	51%	43	41	84	29	2	10	63%	57	34	91	23	2	9	57%	100	75	175	52	4	19
Restaurant	42%	44	60	104	42	3	15	68%	43	20	63	14	1	5	52%	87	80	167	56	4	20
Cinema/Entertainment	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
Residential	47%	37	42	79	29	2	11	45%	23	28	51	20	1	7	46%	60	70	130	49	3	18
Hotel	17%	11	52	63	36	3	13	11%	7	54	61	37	3	14	15%	18	106	124	73	6	27
All Other Land Uses	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0
	41%	141	204	345	143	10	51	41%	141	203	344	141	10	52	41%	282	407	689	284	20	103

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	67 Cherry Street & CPB TIS			Organization:	VHB
Project Location:	Burlington, VT			Performed By:	ELQ
Scenario Description:	67 Cherry Street and City Place Block			Date:	1/13/2020
Analysis Year:	2020			Checked By:	JC
Analysis Period:	AM Street Peak Hour			Date:	1/26/2020

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	81	1k sf	103	89	14
Retail	820	46	1k sf	43	27	16
Restaurant	932	17	1K sf	169	93	76
Cinema/Entertainment						
Residential	222	357	units	113	27	86
Hotel	310	200	rooms	95	56	39
All Other Land Uses ²				0		
Total				523	292	231

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office		5%	25%		5%	25%
Retail		5%	25%		5%	25%
Restaurant		5%	25%		5%	25%
Cinema/Entertainment						
Residential		5%	25%		5%	25%
Hotel		5%	25%		5%	25%
All Other Land Uses ²		5%	25%		5%	25%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	9	0	0	0
Retail	4		2	0	1	0
Restaurant	12	2		0	1	2
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	17	0		0
Hotel	3	1	4	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	523	292	231
Internal Capture Percentage	25%	22%	28%
External Vehicle-Trips ³	275	159	116
External Transit-Trips ⁴	19	11	8
External Non-Motorized Trips ⁴	99	57	42

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	24%	93%
Retail	30%	44%
Restaurant	34%	22%
Cinema/Entertainment	N/A	N/A
Residential	7%	23%
Hotel	4%	21%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	67 Cherry Street & CPB TIS
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	89	89	1.00	14	14
Retail	1.00	27	27	1.00	16	16
Restaurant	1.00	93	93	1.00	76	76
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	27	27	1.00	86	86
Hotel	1.00	56	56	1.00	39	39

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	9	0	0	0
Retail	5		2	0	2	0
Restaurant	24	11		0	3	2
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	17	0		0
Hotel	29	5	4	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	21	0	0	0
Retail	4		47	0	1	0
Restaurant	12	2		0	1	2
Cinema/Entertainment	0	0	0		0	0
Residential	3	5	19	0		0
Hotel	3	1	6	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	21	68	89	48	3	17
Retail	8	19	27	13	1	5
Restaurant	32	61	93	43	3	15
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	25	27	18	1	6
Hotel	2	54	56	37	3	14
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	13	1	14	1	0	0
Retail	7	9	16	7	0	2
Restaurant	17	59	76	41	3	15
Cinema/Entertainment	0	0	0	0	0	0
Residential	20	66	86	46	3	17
Hotel	8	31	39	21	2	8
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	67 Cherry Street & CPB TIS			Organization:	VHB
Project Location:	Burlington, VT			Performed By:	ELQ
Scenario Description:	67 Cherry Street and City Place Block			Date:	1/13/2020
Analysis Year:	2020			Checked By:	JC
Analysis Period:	PM Street Peak Hour			Date:	1/26/2020

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	81	1k sf	93	15	78
Retail	820	46	1k sf	175	84	91
Restaurant	932	17	1K sf	167	104	63
Cinema/Entertainment						
Residential	222	357	units	130	79	51
Hotel	310	200	rooms	124	63	61
All Other Land Uses ²				0		
Total				689	345	344

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office		5%	25%		5%	25%
Retail		5%	25%		5%	25%
Restaurant		5%	25%		5%	25%
Cinema/Entertainment						
Residential		5%	25%		5%	25%
Hotel		5%	25%		5%	25%
All Other Land Uses ²		5%	25%		5%	25%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail					200	
Restaurant					200	
Cinema/Entertainment						
Residential		200	200			
Hotel					200	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	2	0	2	0
Retail	2		26	0	24	5
Restaurant	2	26		0	11	4
Cinema/Entertainment	0	0	0		0	0
Residential	2	8	11	0		2
Hotel	0	2	5	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	689	345	344
Internal Capture Percentage	41%	41%	41%
External Vehicle-Trips ³	284	143	141
External Transit-Trips ⁴	20	10	10
External Non-Motorized Trips ⁴	103	51	52

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	40%	14%
Retail	51%	63%
Restaurant	42%	68%
Cinema/Entertainment	N/A	N/A
Residential	47%	45%
Hotel	17%	11%

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	67 Cherry Street & CPB TIS
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	15	15	1.00	78	78
Retail	1.00	84	84	1.00	91	91
Restaurant	1.00	104	104	1.00	63	63
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	79	79	1.00	51	51
Hotel	1.00	63	63	1.00	61	61

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		16	3	0	2	0
Retail	2		26	4	24	5
Restaurant	2	26		5	11	4
Cinema/Entertainment	0	0	0		0	0
Residential	2	21	11	0		2
Hotel	0	10	41	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	2	0	3	0
Retail	5		30	0	36	11
Restaurant	5	42		0	13	45
Cinema/Entertainment	1	3	3		3	1
Residential	9	8	15	0		8
Hotel	0	2	5	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	6	9	15	7	0	2
Retail	43	41	84	29	2	10
Restaurant	44	60	104	42	3	15
Cinema/Entertainment	0	0	0	0	0	0
Residential	37	42	79	29	2	11
Hotel	11	52	63	36	3	13
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	11	67	78	47	3	17
Retail	57	34	91	23	2	9
Restaurant	43	20	63	14	1	5
Cinema/Entertainment	0	0	0	0	0	0
Residential	23	28	51	20	1	7
Hotel	7	54	61	37	3	14
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix E – 2021 Intersection Capacity Analysis

3: Pine St & Bank St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	65	42	72	85	25	31
Future Volume (vph)	65	42	72	85	25	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	65	42	72	85	25	31
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	107	157	56			
Volume Left (vph)	65	0	25			
Volume Right (vph)	42	85	0			
Hadj (s)	-0.08	-0.29	0.12			
Departure Headway (s)	4.3	3.9	4.4			
Degree Utilization, x	0.13	0.17	0.07			
Capacity (veh/h)	803	888	787			
Control Delay (s)	7.9	7.7	7.7			
Approach Delay (s)	7.9	7.7	7.7			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.8			
Level of Service			A			
Intersection Capacity Utilization			28.5%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	23	146	5	20	107	56	5	11	20	72	22	68
Future Volume (vph)	23	146	5	20	107	56	5	11	20	72	22	68
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	23	146	5	20	107	56	5	11	20	72	22	68
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	174	183	36	162								
Volume Left (vph)	23	20	5	72								
Volume Right (vph)	5	56	20	68								
Hadj (s)	0.04	-0.13	-0.27	-0.13								
Departure Headway (s)	4.6	4.5	4.7	4.7								
Degree Utilization, x	0.22	0.23	0.05	0.21								
Capacity (veh/h)	730	760	694	716								
Control Delay (s)	9.0	8.8	7.9	8.9								
Approach Delay (s)	9.0	8.8	7.9	8.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.8											
Level of Service	A											
Intersection Capacity Utilization	35.7%			ICU Level of Service					A			
Analysis Period (min)	15											

5: Battery St/Park St & Pearl St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	150	75	296	169	314	1265
Future Volume (vph)	150	75	296	169	314	1265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3388
Flt Permitted	0.95	1.00	1.00	1.00		0.80
Satd. Flow (perm)	1711	1531	1801	1531		2726
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	75	296	169	314	1265
RTOR Reduction (vph)	0	64	0	48	0	0
Lane Group Flow (vph)	150	11	296	121	0	1579
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.9	12.9	63.4	63.4		63.4
Effective Green, g (s)	12.9	12.9	63.4	63.4		63.4
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	249	223	1293	1099		1957
v/s Ratio Prot	c0.09		0.16			
v/s Ratio Perm		0.01		0.08		c0.58
v/c Ratio	0.60	0.05	0.23	0.11		0.81
Uniform Delay, d1	35.3	32.4	4.2	3.8		8.3
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		3.7
Delay (s)	39.4	32.5	4.6	4.0		12.0
Level of Service	D	C	A	A		B
Approach Delay (s)	37.1		4.4			12.0
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			13.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			88.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			83.0%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	345	67	118	298	36	38
Future Volume (vph)	345	67	118	298	36	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1761			1775	1636	
Flt Permitted	1.00			0.66	0.98	
Satd. Flow (perm)	1761			1180	1636	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	345	67	118	298	36	38
RTOR Reduction (vph)	14	0	0	0	24	0
Lane Group Flow (vph)	398	0	0	416	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	20.0			20.0	18.3	
Effective Green, g (s)	20.0			20.0	18.3	
Actuated g/C Ratio	0.40			0.40	0.36	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	700			469	595	
v/s Ratio Prot	0.23				c0.03	
v/s Ratio Perm				c0.35		
v/c Ratio	0.57			0.89	0.08	
Uniform Delay, d1	11.8			14.1	10.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			18.0	0.3	
Delay (s)	12.9			32.1	10.8	
Level of Service	B			C	B	
Approach Delay (s)	12.9			32.1	10.8	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			21.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.50			
Actuated Cycle Length (s)			50.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			63.8%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St 2021 AM No Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	177	88	185	387	0	112	0	103	52	342	74
Future Volume (vph)	0	177	88	185	387	0	112	0	103	52	342	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3330	
Flt Permitted		1.00	1.00	0.65	1.00		0.51		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1162	1801		916		1531	1711	3330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	177	88	185	387	0	112	0	103	52	342	74
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	62	0	0	0
Lane Group Flow (vph)	0	177	30	185	387	0	112	0	41	52	416	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		621	528	400	621		361		604	675	1314	
v/s Ratio Prot		0.10			c0.21						c0.12	
v/s Ratio Perm			0.02	0.16			0.12		0.03	0.03		
v/c Ratio		0.29	0.06	0.46	0.62		0.31		0.07	0.08	0.32	
Uniform Delay, d1		11.0	10.1	11.8	12.6		9.6		8.7	8.7	9.6	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0	0.8	2.0		2.2		0.2	0.2	0.6	
Delay (s)		11.2	10.1	12.6	14.6		11.8		8.9	8.9	10.3	
Level of Service		B	B	B	B		B		A	A	B	
Approach Delay (s)		10.9			13.9			10.4			10.1	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			11.7			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			46.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			55.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	310	0	0	484	59	27	93	45	0	0	0
Future Volume (vph)	48	310	0	0	484	59	27	93	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1774		1711	1713				
Flt Permitted	0.29	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	531	1801			1774		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	310	0	0	484	59	27	93	45	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	29	0	0	0	0
Lane Group Flow (vph)	48	310	0	0	534	0	27	109	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.5	19.5			19.5		18.2	18.2				
Effective Green, g (s)	19.5	19.5			19.5		18.2	18.2				
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	208	706			696		626	627				
v/s Ratio Prot		0.17			c0.30			c0.06				
v/s Ratio Perm	0.09						0.02					
v/c Ratio	0.23	0.44			0.77		0.04	0.17				
Uniform Delay, d1	10.1	11.1			13.1		10.1	10.7				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.6	0.4			5.1		0.1	0.6				
Delay (s)	10.7	11.5			18.2		10.3	11.3				
Level of Service	B	B			B		B	B				
Approach Delay (s)		11.4			18.2			11.1			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			14.8			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			49.7			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			55.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	315	42	44	473	15	31	94	45	22	212	30
Future Volume (vph)	18	315	42	44	473	15	31	94	45	22	212	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1769		1711	1792			1721			1766	
Flt Permitted		0.97		0.53	1.00			0.91			0.97	
Satd. Flow (perm)		1712		955	1792			1572			1712	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	315	42	44	473	15	31	94	45	22	212	30
RTOR Reduction (vph)	0	9	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	366	0	44	486	0	0	144	0	0	255	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		684		382	716			565			616	
v/s Ratio Prot					c0.27							
v/s Ratio Perm		0.21		0.05				0.09			c0.15	
v/c Ratio		0.54		0.12	0.68			0.25			0.41	
Uniform Delay, d1		11.5		9.4	12.4			11.3			12.0	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		3.0		0.6	5.1			1.1			2.0	
Delay (s)		14.4		10.0	17.5			12.4			14.1	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.4			16.9			12.4			14.1	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			15.1			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			60.6%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colonial Ave Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	520	98	257	718	58	99	96	158	49	292	35
Future Volume (vph)	0	520	98	257	718	58	99	96	158	49	292	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	520	98	257	718	58	99	96	158	49	292	35
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	138	0	4	0
Lane Group Flow (vph)	0	611	0	257	776	0	99	96	20	0	372	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		490		233	777		219	230	196		384	
v/s Ratio Prot		0.35		0.09	c0.44		c0.06	0.05			c0.21	
v/s Ratio Perm				c0.38					0.01			
v/c Ratio		1.25		1.10	1.00		0.45	0.42	0.10		0.97	
Uniform Delay, d1		29.9		33.8	23.3		33.4	33.2	31.9		32.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		127.1		89.3	32.0		1.5	1.2	0.2		37.3	
Delay (s)		157.0		123.0	55.3		34.8	34.4	32.1		69.4	
Level of Service		F		F	E		C	C	C		E	
Approach Delay (s)		157.0			72.1			33.5			69.4	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM 2000 Control Delay			88.0			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			82.7			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			117.5%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	21	129	42	21	172	21	79	104	15	5	64	30
Future Volume (vph)	21	129	42	21	172	21	79	104	15	5	64	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	129	42	21	172	21	79	104	15	5	64	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	192	214	198	99								
Volume Left (vph)	21	21	79	5								
Volume Right (vph)	42	21	15	30								
Hadj (s)	-0.08	-0.01	0.07	-0.14								
Departure Headway (s)	4.9	4.9	5.1	5.1								
Degree Utilization, x	0.26	0.29	0.28	0.14								
Capacity (veh/h)	677	677	649	634								
Control Delay (s)	9.6	10.0	10.1	8.9								
Approach Delay (s)	9.6	10.0	10.1	8.9								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay				9.8								
Level of Service				A								
Intersection Capacity Utilization				38.9%	ICU Level of Service			A				
Analysis Period (min)				15								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	105	20	15	169	46	52	166	17	12	45	11
Future Volume (vph)	24	105	20	15	169	46	52	166	17	12	45	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	105	20	15	169	46	52	166	17	12	45	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	149	230	235	68								
Volume Left (vph)	24	15	52	12								
Volume Right (vph)	20	46	17	11								
Hadj (s)	-0.01	-0.07	0.03	-0.03								
Departure Headway (s)	5.0	4.8	5.0	5.2								
Degree Utilization, x	0.21	0.31	0.33	0.10								
Capacity (veh/h)	663	698	678	623								
Control Delay (s)	9.3	10.0	10.4	8.7								
Approach Delay (s)	9.3	10.0	10.4	8.7								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay	9.8											
Level of Service	A											
Intersection Capacity Utilization	39.6%			ICU Level of Service			A					
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	342	176	80	346	122	5	188	62	46	109	8
Future Volume (vph)	10	342	176	80	346	122	5	188	62	46	109	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.96			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1730			1798	1531		1764	
Flt Permitted		0.99		0.26	1.00			0.99	1.00		0.89	
Satd. Flow (perm)		1702		465	1730			1791	1531		1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	342	176	80	346	122	5	188	62	46	109	8
RTOR Reduction (vph)	0	20	0	0	14	0	0	0	32	0	2	0
Lane Group Flow (vph)	0	508	0	80	454	0	0	193	30	0	161	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		30.6		30.6	30.6			43.2	43.2		43.2	
Effective Green, g (s)		31.6		30.6	31.6			44.2	44.2		44.2	
Actuated g/C Ratio		0.35		0.34	0.35			0.49	0.49		0.49	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		597		158	607			879	751		777	
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.30		0.17				c0.11	0.02		0.10	
v/c Ratio		0.85		0.51	0.75			0.22	0.04		0.21	
Uniform Delay, d1		27.0		23.7	25.7			13.1	11.9		13.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.2		2.5	5.0			0.6	0.1		0.1	
Delay (s)		38.2		26.2	30.7			13.6	12.0		13.1	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		38.2			30.0			13.2			13.1	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			28.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			80.7%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	256	68	52	396	104	59	148	41	38	39	16
Future Volume (vph)	3	256	68	52	396	104	59	148	41	38	39	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1744		1711	1744		1711	1742		1711	1722	
Flt Permitted	0.33	1.00		0.54	1.00		0.72	1.00		0.64	1.00	
Satd. Flow (perm)	596	1744		981	1744		1299	1742		1150	1722	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	256	68	52	396	104	59	148	41	38	39	16
RTOR Reduction (vph)	0	20	0	0	20	0	0	17	0	0	10	0
Lane Group Flow (vph)	3	304	0	52	480	0	59	172	0	38	45	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	18.1	18.1		18.1	18.1		18.2	18.2		18.2	18.2	
Effective Green, g (s)	18.1	18.1		18.1	18.1		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	653		367	653		489	656		433	648	
v/s Ratio Prot		0.17			c0.28			c0.10			0.03	
v/s Ratio Perm	0.01			0.05			0.05			0.03		
v/c Ratio	0.01	0.47		0.14	0.74		0.12	0.26		0.09	0.07	
Uniform Delay, d1	9.5	11.4		10.0	13.0		9.8	10.4		9.7	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.5		0.2	4.3		0.5	1.0		0.4	0.2	
Delay (s)	9.5	12.0		10.1	17.3		10.3	11.4		10.1	9.8	
Level of Service	A	B		B	B		B	B		B	A	
Approach Delay (s)		11.9			16.7			11.1			9.9	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.8			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			48.3			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			65.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	269	11	100	459	114	10	33	10	84	227	105
Future Volume (vph)	36	269	11	100	459	114	10	33	10	84	227	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1790		1711	1747			1738		1711	1801	1531
Flt Permitted	0.20	1.00		0.51	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1790		921	1747			1643		1212	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	269	11	100	459	114	10	33	10	84	227	105
RTOR Reduction (vph)	0	3	0	0	15	0	0	7	0	0	0	51
Lane Group Flow (vph)	36	277	0	100	558	0	0	46	0	84	227	54
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	584		300	570			569		658	918	780
v/s Ratio Prot		0.15			c0.32					0.01	c0.13	
v/s Ratio Perm	0.10			0.11				0.03		0.05		0.03
v/c Ratio	0.31	0.47		0.33	0.98			0.08		0.13	0.25	0.07
Uniform Delay, d1	15.4	16.4		15.6	20.4			13.5		7.9	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	6.7	2.8		3.0	32.9			0.3		0.1	0.6	0.2
Delay (s)	22.1	19.2		18.5	53.3			13.7		8.0	9.1	7.8
Level of Service	C	B		B	D			B		A	A	A
Approach Delay (s)		19.5			48.2			13.7			8.5	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			29.4			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			59.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	374	0	0	680	28	31	482	50	0	0	0
Future Volume (vph)	12	374	0	0	680	28	31	482	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1791		1711	1775				
Flt Permitted	0.18	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	332	1801			1791		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	374	0	0	680	28	31	482	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	374	0	0	706	0	31	528	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	32.2	32.2			32.2		24.1	24.1				
Effective Green, g (s)	33.2	33.2			33.2		25.1	25.1				
Actuated g/C Ratio	0.49	0.49			0.49		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	161	875			870		628	652				
v/s Ratio Prot		0.21			c0.39			c0.30				
v/s Ratio Perm	0.04						0.02					
v/c Ratio	0.07	0.43			0.81		0.05	0.81				
Uniform Delay, d1	9.4	11.4			14.9		13.9	19.4				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.3			5.8		0.0	7.3				
Delay (s)	9.6	11.7			20.7		13.9	26.8				
Level of Service	A	B			C		B	C				
Approach Delay (s)		11.7			20.7			26.1			0.0	
Approach LOS		B			C			C			A	
Intersection Summary												
HCM 2000 Control Delay			20.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			68.3				Sum of lost time (s)		10.0			
Intersection Capacity Utilization			74.2%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	540	13	87	810	41	27	241	56	121	248	45
Future Volume (vph)	14	540	13	87	810	41	27	241	56	121	248	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1788			1751			1749	
Flt Permitted	0.13	1.00		0.35	1.00			0.94			0.71	
Satd. Flow (perm)	233	1794		628	1788			1662			1252	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	540	13	87	810	41	27	241	56	121	248	45
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	14	552	0	87	848	0	0	312	0	0	407	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	125	966		338	962			511			385	
v/s Ratio Prot		0.31			c0.47							
v/s Ratio Perm	0.06			0.14				0.19			c0.33	
v/c Ratio	0.11	0.57		0.26	0.88			0.61			1.06	
Uniform Delay, d1	7.4	10.0		8.0	13.2			19.2			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.8	2.4		1.8	11.5			2.2			61.8	
Delay (s)	9.2	12.4		9.9	24.7			21.3			84.3	
Level of Service	A	B		A	C			C			F	
Approach Delay (s)		12.4			23.3			21.3			84.3	
Approach LOS		B			C			C			F	
Intersection Summary												
HCM 2000 Control Delay			31.5			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			106.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	670	4	215	952	583	0	81	172	229	70	44
Future Volume (vph)	0	670	4	215	952	583	0	81	172	229	70	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1696	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1696	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	670	4	215	952	583	0	81	172	229	70	44
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	153	0	0	0
Lane Group Flow (vph)	0	673	0	215	952	583	0	81	19	229	114	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Effective Green, g (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Actuated g/C Ratio		0.34		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1151		289	1045	888		200	170	286	460	
v/s Ratio Prot		0.20		0.13	c0.53	0.38		c0.04		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.59		0.74	0.91	0.66		0.41	0.11	0.80	0.25	
Uniform Delay, d1		22.2		32.0	15.1	11.5		33.5	32.4	36.3	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.2		9.9	13.2	3.8		1.3	0.3	14.8	0.3	
Delay (s)		24.4		41.9	28.4	15.3		34.8	32.7	51.1	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.4			25.7			33.4			41.9	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			27.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			81.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			73.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	88	137	154	581	102
Future Volume (vph)	43	88	137	154	581	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.98			0.98	1.00	
Satd. Flow (prot)	1611			3343	3345	
Flt Permitted	0.98			0.62	1.00	
Satd. Flow (perm)	1611			2107	3345	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	88	137	154	581	102
RTOR Reduction (vph)	76	0	0	0	20	0
Lane Group Flow (vph)	55	0	0	291	663	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.9			25.0	25.0	
Effective Green, g (s)	5.9			25.0	25.0	
Actuated g/C Ratio	0.14			0.58	0.58	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	221			1227	1949	
v/s Ratio Prot	c0.03				c0.20	
v/s Ratio Perm				0.14		
v/c Ratio	0.25			0.24	0.34	
Uniform Delay, d1	16.5			4.3	4.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.6			0.5	0.5	
Delay (s)	17.1			4.8	5.1	
Level of Service	B			A	A	
Approach Delay (s)	17.1			4.8	5.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			6.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.32			
Actuated Cycle Length (s)			42.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	53	55	300	633	117
Future Volume (vph)	41	53	55	300	633	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2740	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	41	53	55	300	633	117
RTOR Reduction (vph)	0	48	0	0	19	0
Lane Group Flow (vph)	41	5	0	355	731	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		27.1	27.1	
Effective Green, g (s)	4.2	4.2		27.1	27.1	
Actuated g/C Ratio	0.10	0.10		0.63	0.63	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	165	148		1714	2091	
v/s Ratio Prot	c0.02				c0.22	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.03		0.21	0.35	
Uniform Delay, d1	18.1	17.7		3.5	3.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.9	17.8		3.8	4.3	
Level of Service	B	B		A	A	
Approach Delay (s)	18.3			3.8	4.3	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.34			
Actuated Cycle Length (s)			43.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	54	42	71	65	5	100	5	38	0	10	20
Future Volume (vph)	20	54	42	71	65	5	100	5	38	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	54	42	71	65	5	100	5	38	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	116	141	143	30								
Volume Left (vph)	20	71	100	0								
Volume Right (vph)	42	5	38	20								
Hadj (s)	-0.15	0.11	0.01	-0.37								
Departure Headway (s)	4.3	4.6	4.5	4.3								
Degree Utilization, x	0.14	0.18	0.18	0.04								
Capacity (veh/h)	793	749	748	768								
Control Delay (s)	8.0	8.5	8.5	7.5								
Approach Delay (s)	8.0	8.5	8.5	7.5								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.3											
Level of Service	A											
Intersection Capacity Utilization	35.8%			ICU Level of Service					A			
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	41	493	114	132	1391
Future Volume (vph)	76	41	493	114	132	1391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1662		3325			3406
Flt Permitted	0.97		1.00			0.82
Satd. Flow (perm)	1662		3325			2822
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	41	493	114	132	1391
RTOR Reduction (vph)	36	0	26	0	0	0
Lane Group Flow (vph)	81	0	581	0	0	1523
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.0		26.0			26.0
Effective Green, g (s)	5.0		26.0			26.0
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	193		2010			1706
v/s Ratio Prot	c0.05		0.17			
v/s Ratio Perm						c0.54
v/c Ratio	0.42		0.29			0.89
Uniform Delay, d1	17.6		4.1			7.3
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.5		0.4			7.6
Delay (s)	19.1		4.4			14.9
Level of Service	B		A			B
Approach Delay (s)	19.1		4.4			14.9
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			12.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			43.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			81.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	167	20	5	209	20	20	5	5	25	5	17
Future Volume (vph)	24	167	20	5	209	20	20	5	5	25	5	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1768			1778			1703			1668	
Flt Permitted		0.92			0.99			0.80			0.83	
Satd. Flow (perm)		1636			1755			1402			1425	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	167	20	5	209	20	20	5	5	25	5	17
RTOR Reduction (vph)	0	10	0	0	8	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	201	0	0	226	0	0	27	0	0	35	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.2			9.2	
Effective Green, g (s)		7.3			7.3			9.2			9.2	
Actuated g/C Ratio		0.26			0.26			0.32			0.32	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		419			449			452			460	
v/s Ratio Prot												
v/s Ratio Perm		0.12			0.13			0.02			0.02	
v/c Ratio		0.48			0.50			0.06			0.08	
Uniform Delay, d1		9.0			9.1			6.7			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			0.9			0.1			0.1	
Delay (s)		9.9			9.9			6.7			6.8	
Level of Service		A			A			A			A	
Approach Delay (s)		9.9			9.9			6.7			6.8	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.27										
Actuated Cycle Length (s)		28.5			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		37.1%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

3: Pine St & Bank St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	99	31	40	108	32	107
Future Volume (vph)	99	31	40	108	32	107
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	99	31	40	108	32	107
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	130	148	139			
Volume Left (vph)	99	0	32			
Volume Right (vph)	31	108	0			
Hadj (s)	0.04	-0.40	0.08			
Departure Headway (s)	4.6	4.0	4.4			
Degree Utilization, x	0.16	0.16	0.17			
Capacity (veh/h)	736	867	773			
Control Delay (s)	8.5	7.7	8.4			
Approach Delay (s)	8.5	7.7	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.2			
Level of Service			A			
Intersection Capacity Utilization			33.5%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	80	114	10	20	121	215	12	41	20	54	43	31
Future Volume (vph)	80	114	10	20	121	215	12	41	20	54	43	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	114	10	20	121	215	12	41	20	54	43	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	204	356	73	128								
Volume Left (vph)	80	20	12	54								
Volume Right (vph)	10	215	20	31								
Hadj (s)	0.08	-0.32	-0.10	-0.03								
Departure Headway (s)	5.0	4.4	5.3	5.3								
Degree Utilization, x	0.28	0.44	0.11	0.19								
Capacity (veh/h)	680	779	586	608								
Control Delay (s)	9.9	10.8	9.0	9.5								
Approach Delay (s)	9.9	10.8	9.0	9.5								
Approach LOS	A	B	A	A								
Intersection Summary												
Delay	10.1											
Level of Service	B											
Intersection Capacity Utilization	55.5%			ICU Level of Service			B					
Analysis Period (min)	15											

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	141	154	784	450	166	585
Future Volume (vph)	141	154	784	450	166	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3384
Flt Permitted	0.95	1.00	1.00	1.00		0.60
Satd. Flow (perm)	1711	1531	1801	1531		2040
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	154	784	450	166	585
RTOR Reduction (vph)	0	132	0	127	0	0
Lane Group Flow (vph)	141	22	784	323	0	751
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.4	12.4	62.3	62.3		62.3
Effective Green, g (s)	12.4	12.4	62.3	62.3		62.3
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	244	218	1294	1100		1465
v/s Ratio Prot	c0.08		c0.44			
v/s Ratio Perm		0.01		0.21		0.37
v/c Ratio	0.58	0.10	0.61	0.29		0.51
Uniform Delay, d1	34.7	32.3	6.1	4.4		5.4
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.3	0.2	2.1	0.7		1.3
Delay (s)	38.0	32.5	8.2	5.0		6.7
Level of Service	D	C	A	A		A
Approach Delay (s)	35.1		7.0			6.7
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			86.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			85.1%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	44	73	412	96	141
Future Volume (vph)	392	44	73	412	96	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1776			1787	1623	
Flt Permitted	1.00			0.82	0.98	
Satd. Flow (perm)	1776			1474	1623	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	392	44	73	412	96	141
RTOR Reduction (vph)	8	0	0	0	80	0
Lane Group Flow (vph)	428	0	0	485	157	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	20.3			20.3	18.3	
Effective Green, g (s)	20.3			20.3	18.3	
Actuated g/C Ratio	0.40			0.40	0.36	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	712			591	586	
v/s Ratio Prot	0.24				c0.10	
v/s Ratio Perm				c0.33		
v/c Ratio	0.60			0.82	0.27	
Uniform Delay, d1	12.0			13.5	11.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.4			8.9	1.1	
Delay (s)	13.4			22.5	12.5	
Level of Service	B			C	B	
Approach Delay (s)	13.4			22.5	12.5	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			17.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.56			
Actuated Cycle Length (s)			50.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			78.0%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St 2021 PM No Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	327	101	188	390	0	172	0	301	92	283	44
Future Volume (vph)	0	327	101	188	390	0	172	0	301	92	283	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3352	
Flt Permitted		1.00	1.00	0.54	1.00		0.55		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	969	1801		998		1531	1711	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	327	101	188	390	0	172	0	301	92	283	44
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	182	0	0	0
Lane Group Flow (vph)	0	327	35	188	390	0	172	0	119	92	327	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		16.0	16.0	16.0	16.0		18.2		18.2	18.2	18.2	
Effective Green, g (s)		16.0	16.0	16.0	16.0		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.35	0.35	0.35	0.35		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		623	530	335	623		393		603	674	1320	
v/s Ratio Prot		0.18			c0.22						0.10	
v/s Ratio Perm			0.02	0.19			c0.17		0.08	0.05		
v/c Ratio		0.52	0.07	0.56	0.63		0.44		0.20	0.14	0.25	
Uniform Delay, d1		12.1	10.1	12.3	12.6		10.3		9.2	9.0	9.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.8	0.1	2.1	2.0		3.5		0.7	0.4	0.4	
Delay (s)		12.9	10.2	14.4	14.6		13.8		9.9	9.4	9.9	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		12.2			14.5			11.3			9.7	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.2				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			46.2				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			64.7%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	531	0	0	506	56	46	271	49	0	0	0
Future Volume (vph)	144	531	0	0	506	56	46	271	49	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1776		1711	1759				
Flt Permitted	0.28	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	500	1801			1776		1711	1759				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	144	531	0	0	506	56	46	271	49	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	11	0	0	0	0
Lane Group Flow (vph)	144	531	0	0	554	0	46	309	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.9	19.9			19.9		18.2	18.2				
Effective Green, g (s)	19.9	19.9			19.9		18.2	18.2				
Actuated g/C Ratio	0.40	0.40			0.40		0.36	0.36				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	198	715			705		621	638				
v/s Ratio Prot		0.29			c0.31			c0.18				
v/s Ratio Perm	0.29						0.03					
v/c Ratio	0.73	0.74			0.79		0.07	0.48				
Uniform Delay, d1	12.8	12.9			13.2		10.4	12.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	12.5	4.2			5.8		0.2	2.6				
Delay (s)	25.3	17.1			19.0		10.7	14.9				
Level of Service	C	B			B		B	B				
Approach Delay (s)		18.8			19.0			14.4			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		17.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.64										
Actuated Cycle Length (s)		50.1			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		70.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	506	41	51	486	40	58	232	50	25	166	33
Future Volume (vph)	61	506	41	51	486	40	58	232	50	25	166	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1775		1711	1780			1750			1755	
Flt Permitted		0.76		0.37	1.00			0.90			0.93	
Satd. Flow (perm)		1356		658	1780			1594			1647	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	61	506	41	51	486	40	58	232	50	25	166	33
RTOR Reduction (vph)	0	5	0	0	6	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	603	0	51	520	0	0	328	0	0	212	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		542		263	712			573			592	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.44		0.08				c0.21			0.13	
v/c Ratio		1.11		0.19	0.73			0.57			0.36	
Uniform Delay, d1		15.0		9.8	12.7			12.9			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		73.1		1.6	6.5			4.1			1.7	
Delay (s)		88.1		11.4	19.2			17.0			13.4	
Level of Service		F		B	B			B			B	
Approach Delay (s)		88.1			18.5			17.0			13.4	
Approach LOS		F			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			41.7			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			103.9%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colonial Ave Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	688	74	190	781	116	197	329	244	35	150	16
Future Volume (vph)	0	688	74	190	781	116	197	329	244	35	150	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1777		1711	1766		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1777		248	1766		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	688	74	190	781	116	197	329	244	35	150	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	194	0	3	0
Lane Group Flow (vph)	0	758	0	190	897	0	197	329	50	0	198	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Effective Green, g (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Actuated g/C Ratio		0.27		0.42	0.42		0.20	0.20	0.20		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		477		223	742		350	369	313		291	
v/s Ratio Prot		c0.43		0.07	c0.51		0.12	c0.18			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.59		0.85	1.21		0.56	0.89	0.16		0.68	
Uniform Delay, d1		31.4		34.7	24.9		30.7	33.2	28.1		33.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		274.6		25.5	106.4		2.1	22.6	0.2		6.2	
Delay (s)		306.0		60.3	131.3		32.8	55.8	28.3		39.9	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		306.0			118.9			41.2			39.9	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			142.6				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.19									
Actuated Cycle Length (s)			85.9				Sum of lost time (s)		24.0			
Intersection Capacity Utilization			137.0%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	152	99	35	132	15	32	107	21	20	158	53
Future Volume (vph)	24	152	99	35	132	15	32	107	21	20	158	53
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	152	99	35	132	15	32	107	21	20	158	53
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	275	182	160	231								
Volume Left (vph)	24	35	32	20								
Volume Right (vph)	99	15	21	53								
Hadj (s)	-0.16	0.02	0.00	-0.09								
Departure Headway (s)	5.1	5.5	5.5	5.3								
Degree Utilization, x	0.39	0.28	0.25	0.34								
Capacity (veh/h)	652	602	582	620								
Control Delay (s)	11.4	10.5	10.3	11.1								
Approach Delay (s)	11.4	10.5	10.3	11.1								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay	10.9											
Level of Service	B											
Intersection Capacity Utilization	39.9%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	19	129	43	26	94	38	50	159	43	35	143	34
Future Volume (vph)	19	129	43	26	94	38	50	159	43	35	143	34
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	129	43	26	94	38	50	159	43	35	143	34
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	191	158	252	212								
Volume Left (vph)	19	26	50	35								
Volume Right (vph)	43	38	43	34								
Hadj (s)	-0.08	-0.08	-0.03	-0.03								
Departure Headway (s)	5.3	5.4	5.2	5.2								
Degree Utilization, x	0.28	0.24	0.36	0.31								
Capacity (veh/h)	615	603	641	635								
Control Delay (s)	10.4	10.0	11.1	10.5								
Approach Delay (s)	10.4	10.0	11.1	10.5								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay				10.6								
Level of Service				B								
Intersection Capacity Utilization				40.0%	ICU Level of Service				A			
Analysis Period (min)				15								

13: Pine St & Main St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	299	116	65	415	98	161	129	42	144	237	21
Future Volume (vph)	15	299	116	65	415	98	161	129	42	144	237	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1749			1752	1531		1756	
Flt Permitted		0.82		0.32	1.00			0.63	1.00		0.74	
Satd. Flow (perm)		1427		580	1749			1132	1531		1322	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	299	116	65	415	98	161	129	42	144	237	21
RTOR Reduction (vph)	0	15	0	0	9	0	0	0	21	0	1	0
Lane Group Flow (vph)	0	415	0	65	504	0	0	290	21	0	401	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		29.7		29.7	29.7			44.1	44.1		44.1	
Effective Green, g (s)		30.7		29.7	30.7			45.1	45.1		45.1	
Actuated g/C Ratio		0.34		0.33	0.34			0.50	0.50		0.50	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		486		191	596			567	767		662	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.29		0.11				0.26	0.01		c0.30	
v/c Ratio		0.85		0.34	0.85			0.51	0.03		0.60	
Uniform Delay, d1		27.6		22.8	27.5			15.1	11.4		16.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		13.6		1.1	10.6			3.3	0.1		1.6	
Delay (s)		41.2		23.8	38.1			18.3	11.4		17.6	
Level of Service		D		C	D			B	B		B	
Approach Delay (s)		41.2			36.5			17.5			17.6	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			29.7			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			82.9%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	345	99	55	357	88	84	96	70	126	121	12
Future Volume (vph)	14	345	99	55	357	88	84	96	70	126	121	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1740		1711	1747		1711	1687		1711	1776	
Flt Permitted	0.39	1.00		0.39	1.00		0.67	1.00		0.65	1.00	
Satd. Flow (perm)	696	1740		698	1747		1210	1687		1174	1776	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	345	99	55	357	88	84	96	70	126	121	12
RTOR Reduction (vph)	0	22	0	0	19	0	0	43	0	0	6	0
Lane Group Flow (vph)	14	422	0	55	426	0	84	123	0	126	127	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.7	16.7		16.7	16.7		18.2	18.2		18.2	18.2	
Effective Green, g (s)	16.7	16.7		16.7	16.7		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	619		248	622		469	654		455	689	
v/s Ratio Prot		0.24			c0.24			0.07			0.07	
v/s Ratio Perm	0.02			0.08			0.07			c0.11		
v/c Ratio	0.06	0.68		0.22	0.68		0.18	0.19		0.28	0.18	
Uniform Delay, d1	9.9	12.8		10.6	12.9		9.4	9.5		9.8	9.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	3.1		0.5	3.1		0.8	0.6		1.5	0.6	
Delay (s)	10.0	15.9		11.0	16.0		10.3	10.1		11.3	10.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		15.8			15.4			10.2			10.7	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			13.8			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			46.9			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			64.7%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	513	31	83	503	154	6	115	42	246	380	102
Future Volume (vph)	88	513	31	83	503	154	6	115	42	246	380	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1785		1711	1737			1735		1711	1801	1531
Flt Permitted	0.20	1.00		0.20	1.00			0.98		0.55	1.00	1.00
Satd. Flow (perm)	360	1785		360	1737			1707		988	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	88	513	31	83	503	154	6	115	42	246	380	102
RTOR Reduction (vph)	0	3	0	0	19	0	0	21	0	0	0	51
Lane Group Flow (vph)	88	541	0	83	638	0	0	143	0	246	380	51
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	595		120	579			540		566	900	765
v/s Ratio Prot		0.30			c0.37					0.04	c0.21	
v/s Ratio Perm	0.24			0.23				0.08		c0.17		0.03
v/c Ratio	0.73	0.91		0.69	1.10			0.26		0.43	0.42	0.07
Uniform Delay, d1	17.6	19.1		17.3	20.0			15.3		9.3	9.5	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	32.5	20.2		28.0	68.6			1.2		0.5	1.5	0.2
Delay (s)	50.1	39.3		45.3	88.6			16.5		9.8	11.0	7.9
Level of Service	D	D		D	F			B		A	B	A
Approach Delay (s)		40.8			83.7			16.5			10.1	
Approach LOS		D			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			43.2			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			86.3%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	781	0	0	631	39	36	265	98	0	0	0
Future Volume (vph)	51	781	0	0	631	39	36	265	98	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1787		1711	1728				
Flt Permitted	0.26	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	462	1801			1787		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	781	0	0	631	39	36	265	98	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	51	781	0	0	667	0	36	345	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	32.5	32.5			32.5		18.6	18.6				
Effective Green, g (s)	33.5	33.5			33.5		19.6	19.6				
Actuated g/C Ratio	0.53	0.53			0.53		0.31	0.31				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	245	956			948		531	536				
v/s Ratio Prot		c0.43			0.37			c0.20				
v/s Ratio Perm	0.11						0.02					
v/c Ratio	0.21	0.82			0.70		0.07	0.64				
Uniform Delay, d1	7.8	12.3			11.1		15.3	18.7				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.4	5.5			2.4		0.1	2.7				
Delay (s)	8.2	17.7			13.5		15.4	21.4				
Level of Service	A	B			B		B	C				
Approach Delay (s)		17.2			13.5			20.8			0.0	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay			16.6			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			63.1			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			70.6%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	990	43	80	871	82	31	344	57	81	273	28
Future Volume (vph)	37	990	43	80	871	82	31	344	57	81	273	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1789		1711	1777			1762			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.72	
Satd. Flow (perm)	206	1789		206	1777			1684			1279	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	990	43	80	871	82	31	344	57	81	273	28
RTOR Reduction (vph)	0	2	0	0	5	0	0	8	0	0	4	0
Lane Group Flow (vph)	37	1031	0	80	948	0	0	424	0	0	378	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	963		110	956			518			393	
v/s Ratio Prot		c0.58			0.53							
v/s Ratio Perm	0.18			0.39				0.25			c0.30	
v/c Ratio	0.34	1.07		0.73	0.99			0.82			0.96	
Uniform Delay, d1	8.5	15.0		11.4	14.9			20.8			22.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.1	49.7		34.1	27.1			9.7			35.3	
Delay (s)	16.5	64.7		45.5	42.0			30.5			57.4	
Level of Service	B	E		D	D			C			E	
Approach Delay (s)		63.1			42.3			30.5			57.4	
Approach LOS		E			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			50.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			113.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	878	7	212	976	707	0	129	426	462	128	11
Future Volume (vph)	0	878	7	212	976	707	0	129	426	462	128	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3417		1711	1801	1531		1801	1531	3319	1779	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3417		1711	1801	1531		1801	1531	3319	1779	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	878	7	212	976	707	0	129	426	462	128	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	297	0	0	0
Lane Group Flow (vph)	0	884	0	212	976	707	0	129	129	462	139	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.1	26.0	
Effective Green, g (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.1	26.0	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.31	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1100		275	996	847		273	232	276	543	
v/s Ratio Prot		0.26		0.12	c0.54	0.46		0.07		c0.14	0.08	
v/s Ratio Perm									c0.08			
v/c Ratio		0.80		0.77	0.98	0.83		0.47	0.56	1.67	0.26	
Uniform Delay, d1		26.4		34.2	18.5	15.8		33.0	33.4	39.0	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		6.3		12.5	24.1	9.5		1.3	2.9	318.7	0.3	
Delay (s)		32.7		46.7	42.6	25.3		34.3	36.3	357.7	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		32.7			36.6			35.9			280.2	
Approach LOS		C			D			D			F	
Intersection Summary												
HCM 2000 Control Delay			72.8				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			85.1				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			86.3%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	145	114	428	594	112
Future Volume (vph)	90	145	114	428	594	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.92			1.00	0.98	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1620			3386	3340	
Flt Permitted	0.98			0.71	1.00	
Satd. Flow (perm)	1620			2435	3340	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	145	114	428	594	112
RTOR Reduction (vph)	111	0	0	0	25	0
Lane Group Flow (vph)	124	0	0	542	681	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	7.2			21.4	21.4	
Effective Green, g (s)	7.2			21.4	21.4	
Actuated g/C Ratio	0.18			0.53	0.53	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	287			1283	1760	
v/s Ratio Prot	c0.08				0.20	
v/s Ratio Perm				c0.22		
v/c Ratio	0.43			0.42	0.39	
Uniform Delay, d1	14.9			5.8	5.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.0			1.0	0.6	
Delay (s)	15.9			6.9	6.3	
Level of Service	B			A	A	
Approach Delay (s)	15.9			6.9	6.3	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			8.1		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			40.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			64.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	103	100	100	386	702	74
Future Volume (vph)	103	100	100	386	702	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2443	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	100	100	386	702	74
RTOR Reduction (vph)	0	76	0	0	12	0
Lane Group Flow (vph)	103	24	0	486	764	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.6	6.6		22.7	22.7	
Effective Green, g (s)	6.6	6.6		22.7	22.7	
Actuated g/C Ratio	0.16	0.16		0.55	0.55	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	273	244		1342	1853	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.02		0.20		
v/c Ratio	0.38	0.10		0.36	0.41	
Uniform Delay, d1	15.5	14.8		5.2	5.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.2		0.8	0.7	
Delay (s)	16.4	15.0		6.0	6.1	
Level of Service	B	B		A	A	
Approach Delay (s)	15.7			6.0	6.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40			
Actuated Cycle Length (s)			41.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			56.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	125	96	50	72	5	103	5	70	0	10	20
Future Volume (vph)	20	125	96	50	72	5	103	5	70	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	125	96	50	72	5	103	5	70	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	241	127	178	30								
Volume Left (vph)	20	50	103	0								
Volume Right (vph)	96	5	70	20								
Hadj (s)	-0.19	0.09	-0.09	-0.37								
Departure Headway (s)	4.4	4.8	4.7	4.6								
Degree Utilization, x	0.29	0.17	0.23	0.04								
Capacity (veh/h)	784	706	714	694								
Control Delay (s)	9.2	8.8	9.1	7.8								
Approach Delay (s)	9.2	8.8	9.1	7.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.0									
Level of Service			A									
Intersection Capacity Utilization			43.8%	ICU Level of Service					A			
Analysis Period (min)			15									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	91	1160	93	71	583
Future Volume (vph)	128	91	1160	93	71	583
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1651		3383			3403
Flt Permitted	0.97		1.00			0.70
Satd. Flow (perm)	1651		3383			2410
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	91	1160	93	71	583
RTOR Reduction (vph)	13	0	10	0	0	0
Lane Group Flow (vph)	206	0	1243	0	0	654
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	8.9		21.8			21.8
Effective Green, g (s)	8.9		21.8			21.8
Actuated g/C Ratio	0.21		0.51			0.51
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	344		1727			1230
v/s Ratio Prot	c0.12		c0.37			
v/s Ratio Perm						0.27
v/c Ratio	0.60		0.72			0.53
Uniform Delay, d1	15.3		8.1			7.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	2.8		2.6			1.6
Delay (s)	18.1		10.7			8.7
Level of Service	B		B			A
Approach Delay (s)	18.1		10.7			8.7
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			10.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			42.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			80.9%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	149	20	5	202	20	20	5	5	25	5	18
Future Volume (vph)	18	149	20	5	202	20	20	5	5	25	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		1.00			1.00			0.97			0.97	
Satd. Flow (prot)		1766			1777			1703			1666	
Flt Permitted		0.93			0.99			0.80			0.84	
Satd. Flow (perm)		1656			1755			1403			1429	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	149	20	5	202	20	20	5	5	25	5	18
RTOR Reduction (vph)	0	10	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	177	0	0	218	0	0	27	0	0	36	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.3			9.3	
Effective Green, g (s)		7.3			7.3			9.3			9.3	
Actuated g/C Ratio		0.26			0.26			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		422			447			456			464	
v/s Ratio Prot												
v/s Ratio Perm		0.11			0.12			0.02			0.03	
v/c Ratio		0.42			0.49			0.06			0.08	
Uniform Delay, d1		8.9			9.1			6.6			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.8			0.1			0.1	
Delay (s)		9.6			9.9			6.7			6.8	
Level of Service		A			A			A			A	
Approach Delay (s)		9.6			9.9			6.7			6.8	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.3			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.26										
Actuated Cycle Length (s)		28.6			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		32.7%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	24	30	25	21	30
Future Volume (Veh/h)	30	24	30	25	21	30
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	24	30	25	21	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	114	42			55	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114	42			55	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	98			99	
cM capacity (veh/h)	870	1028			1550	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	54	55	51			
Volume Left	30	0	21			
Volume Right	24	25	0			
cSH	934	1700	1550			
Volume to Capacity	0.06	0.03	0.01			
Queue Length 95th (ft)	5	0	1			
Control Delay (s)	9.1	0.0	3.1			
Lane LOS	A		A			
Approach Delay (s)	9.1	0.0	3.1			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			19.4%	ICU Level of Service		A
Analysis Period (min)			15			

2: St Paul St & CPB Garage
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	31	26	30	30	21
Future Volume (Veh/h)	25	31	26	30	30	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	31	26	30	30	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					209	
pX, platoon unblocked						
vC, conflicting volume	122	40	51			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	40	51			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	858	1031	1555			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	56	56	51			
Volume Left	25	26	0			
Volume Right	31	0	21			
cSH	946	1555	1700			
Volume to Capacity	0.06	0.02	0.03			
Queue Length 95th (ft)	5	1	0			
Control Delay (s)	9.0	3.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization			19.7%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	54	42	70	42	33	41
Future Volume (vph)	54	42	70	42	33	41
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	54	42	70	42	33	41
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	96	112	74			
Volume Left (vph)	54	0	33			
Volume Right (vph)	42	42	0			
Hadj (s)	-0.12	-0.19	0.12			
Departure Headway (s)	4.2	4.0	4.3			
Degree Utilization, x	0.11	0.12	0.09			
Capacity (veh/h)	823	868	803			
Control Delay (s)	7.7	7.6	7.8			
Approach Delay (s)	7.7	7.6	7.8			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.7			
Level of Service			A			
Intersection Capacity Utilization			22.9%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	23	124	14	20	110	38	9	31	20	44	34	68
Future Volume (vph)	23	124	14	20	110	38	9	31	20	44	34	68
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	23	124	14	20	110	38	9	31	20	44	34	68
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	161	168	60	146								
Volume Left (vph)	23	20	9	44								
Volume Right (vph)	14	38	20	68								
Hadj (s)	0.01	-0.08	-0.14	-0.19								
Departure Headway (s)	4.6	4.5	4.7	4.6								
Degree Utilization, x	0.21	0.21	0.08	0.19								
Capacity (veh/h)	733	751	698	729								
Control Delay (s)	8.8	8.7	8.1	8.6								
Approach Delay (s)	8.8	8.7	8.1	8.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.6											
Level of Service	A											
Intersection Capacity Utilization	33.9%			ICU Level of Service			A					
Analysis Period (min)	15											

5: Battery St/Park St & Pearl St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	150	75	296	169	296	1246
Future Volume (vph)	150	75	296	169	296	1246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3389
Flt Permitted	0.95	1.00	1.00	1.00		0.80
Satd. Flow (perm)	1711	1531	1801	1531		2739
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	75	296	169	296	1246
RTOR Reduction (vph)	0	64	0	48	0	0
Lane Group Flow (vph)	150	11	296	121	0	1542
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.9	12.9	63.4	63.4		63.4
Effective Green, g (s)	12.9	12.9	63.4	63.4		63.4
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	249	223	1293	1099		1966
v/s Ratio Prot	c0.09		0.16			
v/s Ratio Perm		0.01		0.08		c0.56
v/c Ratio	0.60	0.05	0.23	0.11		0.78
Uniform Delay, d1	35.3	32.4	4.2	3.8		8.0
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		3.2
Delay (s)	39.4	32.5	4.6	4.0		11.3
Level of Service	D	C	A	A		B
Approach Delay (s)	37.1		4.4			11.3
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			12.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			88.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			81.9%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	345	48	99	298	35	37
Future Volume (vph)	345	48	99	298	35	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1771			1778	1636	
Flt Permitted	1.00			0.71	0.98	
Satd. Flow (perm)	1771			1282	1636	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	345	48	99	298	35	37
RTOR Reduction (vph)	11	0	0	0	23	0
Lane Group Flow (vph)	382	0	0	397	49	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	18.3			18.3	18.3	
Effective Green, g (s)	18.3			18.3	18.3	
Actuated g/C Ratio	0.38			0.38	0.38	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	666			482	616	
v/s Ratio Prot	0.22				c0.03	
v/s Ratio Perm				c0.31		
v/c Ratio	0.57			0.82	0.08	
Uniform Delay, d1	12.1			13.7	9.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.2			10.9	0.3	
Delay (s)	13.3			24.6	10.0	
Level of Service	B			C	A	
Approach Delay (s)	13.3			24.6	10.0	
Approach LOS	B			C	A	
Intersection Summary						
HCM 2000 Control Delay			18.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			48.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			61.4%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	177	88	176	369	0	112	0	102	52	329	74
Future Volume (vph)	0	177	88	176	369	0	112	0	102	52	329	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3327	
Flt Permitted		1.00	1.00	0.65	1.00		0.51		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1162	1801		927		1531	1711	3327	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	177	88	176	369	0	112	0	102	52	329	74
RTOR Reduction (vph)	0	0	59	0	0	0	0	0	61	0	0	0
Lane Group Flow (vph)	0	177	29	176	369	0	112	0	41	52	403	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.2	15.2	15.2	15.2		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.2	15.2	15.2	15.2		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.33	0.33	0.33	0.33		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		602	512	389	602		371		613	685	1333	
v/s Ratio Prot		0.10			c0.20						c0.12	
v/s Ratio Perm			0.02	0.15			0.12		0.03	0.03		
v/c Ratio		0.29	0.06	0.45	0.61		0.30		0.07	0.08	0.30	
Uniform Delay, d1		11.1	10.2	11.8	12.6		9.3		8.4	8.4	9.3	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0	0.8	1.9		2.1		0.2	0.2	0.6	
Delay (s)		11.4	10.3	12.7	14.5		11.4		8.6	8.6	9.9	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		11.0			13.9			10.0			9.7	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			45.4			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			55.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	308	0	0	456	59	27	93	45	0	0	0
Future Volume (vph)	48	308	0	0	456	59	27	93	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.98		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1773		1711	1713				
Flt Permitted	0.32	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	573	1801			1773		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	308	0	0	456	59	27	93	45	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	28	0	0	0	0
Lane Group Flow (vph)	48	308	0	0	505	0	27	110	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	18.6	18.6			18.6		18.2	18.2				
Effective Green, g (s)	18.6	18.6			18.6		18.2	18.2				
Actuated g/C Ratio	0.38	0.38			0.38		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	218	686			675		638	638				
v/s Ratio Prot		0.17			c0.28			c0.06				
v/s Ratio Perm	0.08						0.02					
v/c Ratio	0.22	0.45			0.75		0.04	0.17				
Uniform Delay, d1	10.2	11.3			13.1		9.7	10.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.5	0.5			4.5		0.1	0.6				
Delay (s)	10.7	11.7			17.6		9.9	10.8				
Level of Service	B	B			B		A	B				
Approach Delay (s)		11.6			17.6			10.7			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			14.4			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			48.8			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			54.4%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	314	42	44	447	15	29	94	45	22	212	30
Future Volume (vph)	17	314	42	44	447	15	29	94	45	22	212	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1769		1711	1792			1721			1766	
Flt Permitted		0.97		0.53	1.00			0.91			0.97	
Satd. Flow (perm)		1718		959	1792			1582			1713	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	314	42	44	447	15	29	94	45	22	212	30
RTOR Reduction (vph)	0	9	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	364	0	44	460	0	0	142	0	0	255	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		687		383	716			569			616	
v/s Ratio Prot					c0.26							
v/s Ratio Perm		0.21		0.05				0.09			c0.15	
v/c Ratio		0.53		0.11	0.64			0.25			0.41	
Uniform Delay, d1		11.4		9.4	12.1			11.2			12.0	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		2.9		0.6	4.4			1.0			2.0	
Delay (s)		14.3		10.0	16.5			12.3			14.1	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.3			15.9			12.3			14.1	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			14.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			59.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2021 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	520	98	257	691	58	99	96	158	49	292	35
Future Volume (vph)	0	520	98	257	691	58	99	96	158	49	292	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	520	98	257	691	58	99	96	158	49	292	35
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	138	0	4	0
Lane Group Flow (vph)	0	611	0	257	749	0	99	96	20	0	372	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		490		233	777		219	230	196		384	
v/s Ratio Prot		0.35		0.09	c0.42		c0.06	0.05			c0.21	
v/s Ratio Perm				c0.38					0.01			
v/c Ratio		1.25		1.10	0.96		0.45	0.42	0.10		0.97	
Uniform Delay, d1		29.9		33.8	22.7		33.4	33.2	31.9		32.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		127.1		89.3	24.6		1.5	1.2	0.2		37.3	
Delay (s)		157.0		123.0	47.3		34.8	34.4	32.1		69.4	
Level of Service		F		F	D		C	C	C		E	
Approach Delay (s)		157.0			66.6			33.5			69.4	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM 2000 Control Delay			85.8			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			82.7			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			116.0%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

11: College St & Pine St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	21	129	42	21	172	20	79	60	15	5	63	30
Future Volume (vph)	21	129	42	21	172	20	79	60	15	5	63	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	129	42	21	172	20	79	60	15	5	63	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	192	213	154	98								
Volume Left (vph)	21	21	79	5								
Volume Right (vph)	42	20	15	30								
Hadj (s)	-0.08	0.00	0.08	-0.14								
Departure Headway (s)	4.8	4.8	5.1	5.0								
Degree Utilization, x	0.25	0.28	0.22	0.14								
Capacity (veh/h)	704	703	648	650								
Control Delay (s)	9.4	9.7	9.5	8.8								
Approach Delay (s)	9.4	9.7	9.5	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.4											
Level of Service	A											
Intersection Capacity Utilization	36.5%			ICU Level of Service					A			
Analysis Period (min)	15											

12: St Paul St & College St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	105	20	15	167	46	53	114	17	12	41	11
Future Volume (vph)	24	105	20	15	167	46	53	114	17	12	41	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	105	20	15	167	46	53	114	17	12	41	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	149	228	184	64								
Volume Left (vph)	24	15	53	12								
Volume Right (vph)	20	46	17	11								
Hadj (s)	-0.01	-0.07	0.04	-0.03								
Departure Headway (s)	4.8	4.7	4.9	5.1								
Degree Utilization, x	0.20	0.30	0.25	0.09								
Capacity (veh/h)	694	727	679	641								
Control Delay (s)	9.0	9.6	9.6	8.6								
Approach Delay (s)	9.0	9.6	9.6	8.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.4											
Level of Service	A											
Intersection Capacity Utilization	37.0%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	342	176	80	346	96	5	170	62	46	108	8
Future Volume (vph)	10	342	176	80	346	96	5	170	62	46	108	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1742			1798	1531		1764	
Flt Permitted		0.99		0.26	1.00			0.99	1.00		0.89	
Satd. Flow (perm)		1703		465	1742			1791	1531		1590	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	342	176	80	346	96	5	170	62	46	108	8
RTOR Reduction (vph)	0	20	0	0	11	0	0	0	32	0	2	0
Lane Group Flow (vph)	0	508	0	80	431	0	0	175	30	0	160	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		30.6		30.6	30.6			43.2	43.2		43.2	
Effective Green, g (s)		31.6		30.6	31.6			44.2	44.2		44.2	
Actuated g/C Ratio		0.35		0.34	0.35			0.49	0.49		0.49	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		597		158	611			879	751		780	
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.30		0.17				0.10	0.02		c0.10	
v/c Ratio		0.85		0.51	0.71			0.20	0.04		0.21	
Uniform Delay, d1		27.0		23.7	25.2			12.9	11.9		13.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.2		2.5	3.7			0.5	0.1		0.1	
Delay (s)		38.2		26.2	28.9			13.4	12.0		13.1	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		38.2			28.5			13.0			13.1	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			27.8			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			79.7%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2021 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	259	63	52	364	82	65	117	41	34	40	16
Future Volume (vph)	3	259	63	52	364	82	65	117	41	34	40	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1748		1711	1751		1711	1731		1711	1723	
Flt Permitted	0.39	1.00		0.55	1.00		0.72	1.00		0.66	1.00	
Satd. Flow (perm)	695	1748		983	1751		1297	1731		1183	1723	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	259	63	52	364	82	65	117	41	34	40	16
RTOR Reduction (vph)	0	19	0	0	17	0	0	21	0	0	10	0
Lane Group Flow (vph)	3	303	0	52	429	0	65	137	0	34	46	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.8	16.8		16.8	16.8		18.2	18.2		18.2	18.2	
Effective Green, g (s)	16.8	16.8		16.8	16.8		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	248	624		351	625		502	670		458	667	
v/s Ratio Prot		0.17			c0.24			c0.08			0.03	
v/s Ratio Perm	0.00			0.05			0.05			0.03		
v/c Ratio	0.01	0.49		0.15	0.69		0.13	0.20		0.07	0.07	
Uniform Delay, d1	9.7	11.7		10.2	12.9		9.3	9.6		9.1	9.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.2	3.1		0.5	0.7		0.3	0.2	
Delay (s)	9.8	12.3		10.4	16.0		9.8	10.3		9.4	9.3	
Level of Service	A	B		B	B		A	B		A	A	
Approach Delay (s)		12.3			15.4			10.1			9.3	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.0			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			47.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			61.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	256	15	100	406	114	10	33	10	95	217	105
Future Volume (vph)	36	256	15	100	406	114	10	33	10	95	217	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1786		1711	1741			1738		1711	1801	1531
Flt Permitted	0.20	1.00		0.52	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1786		944	1741			1645		1212	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	256	15	100	406	114	10	33	10	95	217	105
RTOR Reduction (vph)	0	3	0	0	17	0	0	7	0	0	0	51
Lane Group Flow (vph)	36	268	0	100	503	0	0	46	0	95	217	54
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	583		308	568			569		658	918	780
v/s Ratio Prot		0.15			c0.29					0.01	c0.12	
v/s Ratio Perm	0.10			0.11				0.03		0.06		0.03
v/c Ratio	0.31	0.46		0.32	0.89			0.08		0.14	0.24	0.07
Uniform Delay, d1	15.4	16.3		15.5	19.5			13.5		8.0	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	6.7	2.6		2.8	18.2			0.3		0.1	0.6	0.2
Delay (s)	22.1	18.9		18.3	37.7			13.7		8.1	9.0	7.8
Level of Service	C	B		B	D			B		A	A	A
Approach Delay (s)		19.3			34.6			13.7			8.5	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			22.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)				15.0		
Intersection Capacity Utilization			56.9%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	371	0	0	627	28	31	482	50	0	0	0
Future Volume (vph)	12	371	0	0	627	28	31	482	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1790		1711	1775				
Flt Permitted	0.21	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	387	1801			1790		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	371	0	0	627	28	31	482	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	371	0	0	653	0	31	528	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	29.7	29.7			29.7		23.7	23.7				
Effective Green, g (s)	30.7	30.7			30.7		24.7	24.7				
Actuated g/C Ratio	0.47	0.47			0.47		0.38	0.38				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	181	845			840		646	670				
v/s Ratio Prot		0.21			c0.36			c0.30				
v/s Ratio Perm	0.03						0.02					
v/c Ratio	0.07	0.44			0.78		0.05	0.79				
Uniform Delay, d1	9.5	11.6			14.5		12.9	18.0				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.4			4.6		0.0	6.1				
Delay (s)	9.7	12.0			19.1		12.9	24.1				
Level of Service	A	B			B		B	C				
Approach Delay (s)		11.9			19.1			23.5			0.0	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay		18.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.78										
Actuated Cycle Length (s)		65.4			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		71.4%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	537	13	87	757	41	27	241	56	122	248	45
Future Volume (vph)	14	537	13	87	757	41	27	241	56	122	248	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1787			1751			1749	
Flt Permitted	0.17	1.00		0.35	1.00			0.94			0.70	
Satd. Flow (perm)	302	1794		632	1787			1661			1250	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	537	13	87	757	41	27	241	56	122	248	45
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	14	549	0	87	795	0	0	312	0	0	408	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	162	966		340	962			511			384	
v/s Ratio Prot		0.31			c0.45							
v/s Ratio Perm	0.05			0.14				0.19			c0.33	
v/c Ratio	0.09	0.57		0.26	0.83			0.61			1.06	
Uniform Delay, d1	7.3	10.0		8.0	12.5			19.2			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.0	2.4		1.8	8.1			2.2			63.5	
Delay (s)	8.3	12.4		9.8	20.6			21.3			86.0	
Level of Service	A	B		A	C			C			F	
Approach Delay (s)		12.3			19.5			21.3			86.0	
Approach LOS		B			B			C			F	
Intersection Summary												
HCM 2000 Control Delay			30.5			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			103.3%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	669	4	215	899	583	0	81	172	229	70	44
Future Volume (vph)	0	669	4	215	899	583	0	81	172	229	70	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1696	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1696	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	669	4	215	899	583	0	81	172	229	70	44
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	153	0	0	0
Lane Group Flow (vph)	0	672	0	215	899	583	0	81	19	229	114	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Effective Green, g (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Actuated g/C Ratio		0.34		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1151		289	1045	888		200	170	286	460	
v/s Ratio Prot		0.20		0.13	c0.50	0.38		c0.04		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.58		0.74	0.86	0.66		0.41	0.11	0.80	0.25	
Uniform Delay, d1		22.2		32.0	14.2	11.5		33.5	32.4	36.3	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.2		9.9	9.2	3.8		1.3	0.3	14.8	0.3	
Delay (s)		24.3		41.9	23.5	15.3		34.8	32.7	51.1	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.3			23.0			33.4			41.9	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			26.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			81.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			70.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	88	137	154	581	78
Future Volume (vph)	42	88	137	154	581	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.98			0.98	1.00	
Satd. Flow (prot)	1610			3343	3361	
Flt Permitted	0.98			0.62	1.00	
Satd. Flow (perm)	1610			2124	3361	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	88	137	154	581	78
RTOR Reduction (vph)	76	0	0	0	15	0
Lane Group Flow (vph)	54	0	0	291	644	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.9			25.0	25.0	
Effective Green, g (s)	5.9			25.0	25.0	
Actuated g/C Ratio	0.14			0.58	0.58	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	221			1237	1958	
v/s Ratio Prot	c0.03				c0.19	
v/s Ratio Perm				0.14		
v/c Ratio	0.24			0.24	0.33	
Uniform Delay, d1	16.5			4.3	4.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.6			0.4	0.5	
Delay (s)	17.1			4.8	5.1	
Level of Service	B			A	A	
Approach Delay (s)	17.1			4.8	5.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay		6.4		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		42.9		Sum of lost time (s)		12.0
Intersection Capacity Utilization		49.5%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	55	55	300	633	117
Future Volume (vph)	41	55	55	300	633	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2740	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	41	55	55	300	633	117
RTOR Reduction (vph)	0	50	0	0	19	0
Lane Group Flow (vph)	41	5	0	355	731	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		26.9	26.9	
Effective Green, g (s)	4.2	4.2		26.9	26.9	
Actuated g/C Ratio	0.10	0.10		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	149		1710	2085	
v/s Ratio Prot	c0.02				c0.22	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.04		0.21	0.35	
Uniform Delay, d1	18.0	17.6		3.5	3.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.8	17.7		3.8	4.4	
Level of Service	B	B		A	A	
Approach Delay (s)	18.2			3.8	4.4	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.34			
Actuated Cycle Length (s)			43.1		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	42	21	71	65	5	22	31	38	14	27	20
Future Volume (vph)	20	42	21	71	65	5	22	31	38	14	27	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	42	21	71	65	5	22	31	38	14	27	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	83	141	91	61								
Volume Left (vph)	20	71	22	14								
Volume Right (vph)	21	5	38	20								
Hadj (s)	-0.07	0.11	-0.17	-0.12								
Departure Headway (s)	4.3	4.5	4.3	4.4								
Degree Utilization, x	0.10	0.17	0.11	0.07								
Capacity (veh/h)	793	769	785	762								
Control Delay (s)	7.8	8.4	7.9	7.8								
Approach Delay (s)	7.8	8.4	7.9	7.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.0											
Level of Service	A											
Intersection Capacity Utilization	28.0%			ICU Level of Service			A					
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	41	493	114	113	1391
Future Volume (vph)	76	41	493	114	113	1391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1662		3325			3408
Flt Permitted	0.97		1.00			0.85
Satd. Flow (perm)	1662		3325			2891
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	41	493	114	113	1391
RTOR Reduction (vph)	36	0	26	0	0	0
Lane Group Flow (vph)	81	0	581	0	0	1504
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.0		26.0			26.0
Effective Green, g (s)	5.0		26.0			26.0
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	193		2010			1748
v/s Ratio Prot	c0.05		0.17			
v/s Ratio Perm						c0.52
v/c Ratio	0.42		0.29			0.86
Uniform Delay, d1	17.6		4.1			7.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.5		0.4			5.8
Delay (s)	19.1		4.4			12.8
Level of Service	B		A			B
Approach Delay (s)	19.1		4.4			12.8
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			10.9		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			43.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			80.7%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	156	24	22	169	20	34	5	16	25	5	17
Future Volume (vph)	24	156	24	22	169	20	34	5	16	25	5	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.96			0.95	
Flt Protected		0.99			0.99			0.97			0.97	
Satd. Flow (prot)		1762			1768			1678			1668	
Flt Permitted		0.92			0.93			0.80			0.82	
Satd. Flow (perm)		1634			1656			1376			1411	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	156	24	22	169	20	34	5	16	25	5	17
RTOR Reduction (vph)	0	12	0	0	10	0	0	11	0	0	11	0
Lane Group Flow (vph)	0	192	0	0	201	0	0	44	0	0	36	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			9.5			9.5	
Effective Green, g (s)		7.2			7.2			9.5			9.5	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		409			415			455			467	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.12			c0.03			0.03	
v/c Ratio		0.47			0.48			0.10			0.08	
Uniform Delay, d1		9.1			9.2			6.6			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			0.9			0.1			0.1	
Delay (s)		10.0			10.1			6.7			6.7	
Level of Service		A			B			A			A	
Approach Delay (s)		10.0			10.1			6.7			6.7	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.26										
Actuated Cycle Length (s)		28.7			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		29.3%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

1: Pine St & Macy's Garage/CBP Garage
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	0	28	0	24	0	36	37	29	48	0	
Future Volume (Veh/h)	0	0	0	28	0	24	0	36	37	29	48	0	
Sign Control	Stop				Stop				Free		Free		
Grade	0%				0%				0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	0	28	0	24	0	36	37	29	48	0	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None								None				
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	184	179	48	160	160	54	48						73
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	184	179	48	160	160	54	48						73
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	100	96	100	98	100						98
cM capacity (veh/h)	747	701	1021	793	718	1012	1559						1527
Direction, Lane #	EB 1	WB 1	NB 1	SB 1									
Volume Total	0	52	73	77									
Volume Left	0	28	0	29									
Volume Right	0	24	37	0									
cSH	1700	881	1559	1527									
Volume to Capacity	0.00	0.06	0.00	0.02									
Queue Length 95th (ft)	0	5	0	1									
Control Delay (s)	0.0	9.3	0.0	2.9									
Lane LOS	A	A		A									
Approach Delay (s)	0.0	9.3	0.0	2.9									
Approach LOS	A	A											
Intersection Summary													
Average Delay				3.5									
Intersection Capacity Utilization				20.8%	ICU Level of Service				A				
Analysis Period (min)				15									

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	24	29	38	30	30	31
Future Volume (Veh/h)	24	29	38	30	30	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	29	38	30	30	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					208	
pX, platoon unblocked						
vC, conflicting volume	152	46	61			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	46	61			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	820	1024	1542			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	53	68	61			
Volume Left	24	38	0			
Volume Right	29	0	31			
cSH	920	1542	1700			
Volume to Capacity	0.06	0.02	0.04			
Queue Length 95th (ft)	5	2	0			
Control Delay (s)	9.2	4.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.2	4.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			20.3%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	62	31	51	67	40	90
Future Volume (vph)	62	31	51	67	40	90
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	62	31	51	67	40	90
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	93	118	130			
Volume Left (vph)	62	0	40			
Volume Right (vph)	31	67	0			
Hadj (s)	-0.03	-0.31	0.10			
Departure Headway (s)	4.4	4.0	4.3			
Degree Utilization, x	0.11	0.13	0.16			
Capacity (veh/h)	765	878	809			
Control Delay (s)	8.0	7.5	8.1			
Approach Delay (s)	8.0	7.5	8.1			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			25.6%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	80	94	17	20	104	153	9	30	20	30	39	31
Future Volume (vph)	80	94	17	20	104	153	9	30	20	30	39	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	94	17	20	104	153	9	30	20	30	39	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	191	277	59	100								
Volume Left (vph)	80	20	9	30								
Volume Right (vph)	17	153	20	31								
Hadj (s)	0.06	-0.28	-0.14	-0.09								
Departure Headway (s)	4.7	4.3	5.0	5.0								
Degree Utilization, x	0.25	0.33	0.08	0.14								
Capacity (veh/h)	725	806	648	655								
Control Delay (s)	9.2	9.3	8.4	8.7								
Approach Delay (s)	9.2	9.3	8.4	8.7								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.1											
Level of Service	A											
Intersection Capacity Utilization	46.4%			ICU Level of Service			A					
Analysis Period (min)	15											

5: Battery St/Park St & Pearl St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	141	154	763	450	153	572
Future Volume (vph)	141	154	763	450	153	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3386
Flt Permitted	0.95	1.00	1.00	1.00		0.61
Satd. Flow (perm)	1711	1531	1801	1531		2103
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	154	763	450	153	572
RTOR Reduction (vph)	0	132	0	127	0	0
Lane Group Flow (vph)	141	22	763	323	0	725
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.4	12.4	62.3	62.3		62.3
Effective Green, g (s)	12.4	12.4	62.3	62.3		62.3
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	244	218	1294	1100		1511
v/s Ratio Prot	c0.08		c0.42			
v/s Ratio Perm		0.01		0.21		0.34
v/c Ratio	0.58	0.10	0.59	0.29		0.48
Uniform Delay, d1	34.7	32.3	6.0	4.4		5.2
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.3	0.2	2.0	0.7		1.1
Delay (s)	38.0	32.5	7.9	5.0		6.3
Level of Service	D	C	A	A		A
Approach Delay (s)	35.1		6.9			6.3
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			86.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			83.2%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	31	58	412	58	106
Future Volume (vph)	392	31	58	412	58	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1783			1790	1615	
Flt Permitted	1.00			0.89	0.98	
Satd. Flow (perm)	1783			1610	1615	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	392	31	58	412	58	106
RTOR Reduction (vph)	5	0	0	0	67	0
Lane Group Flow (vph)	418	0	0	470	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	19.5			19.5	18.3	
Effective Green, g (s)	19.5			19.5	18.3	
Actuated g/C Ratio	0.39			0.39	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	698			630	593	
v/s Ratio Prot	0.23				c0.06	
v/s Ratio Perm				c0.29		
v/c Ratio	0.60			0.75	0.16	
Uniform Delay, d1	12.0			13.0	10.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.4			4.8	0.6	
Delay (s)	13.4			17.8	11.2	
Level of Service	B			B	B	
Approach Delay (s)	13.4			17.8	11.2	
Approach LOS	B			B	B	
Intersection Summary						
HCM 2000 Control Delay			15.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.46			
Actuated Cycle Length (s)			49.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			72.1%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	297	101	185	375	0	172	0	274	92	274	44
Future Volume (vph)	0	297	101	185	375	0	172	0	274	92	274	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3350	
Flt Permitted		1.00	1.00	0.58	1.00		0.56		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1042	1801		1007		1531	1711	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	297	101	185	375	0	172	0	274	92	274	44
RTOR Reduction (vph)	0	0	67	0	0	0	0	0	164	0	0	0
Lane Group Flow (vph)	0	297	34	185	375	0	172	0	110	92	318	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		605	514	350	605		402		612	684	1340	
v/s Ratio Prot		0.16			c0.21						0.09	
v/s Ratio Perm			0.02	0.18			c0.17		0.07	0.05		
v/c Ratio		0.49	0.07	0.53	0.62		0.43		0.18	0.13	0.24	
Uniform Delay, d1		12.0	10.3	12.2	12.7		9.9		8.8	8.7	9.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.1	1.4	1.9		3.3		0.6	0.4	0.4	
Delay (s)		12.6	10.3	13.6	14.6		13.2		9.5	9.1	9.5	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		12.0			14.3			10.9			9.4	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.8			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			45.5			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			62.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	475	0	0	487	56	46	271	49	0	0	0
Future Volume (vph)	144	475	0	0	487	56	46	271	49	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1776		1711	1759				
Flt Permitted	0.29	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	531	1801			1776		1711	1759				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	144	475	0	0	487	56	46	271	49	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	11	0	0	0	0
Lane Group Flow (vph)	144	475	0	0	534	0	46	309	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.5	19.5			19.5		18.2	18.2				
Effective Green, g (s)	19.5	19.5			19.5		18.2	18.2				
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	208	706			696		626	644				
v/s Ratio Prot		0.26			c0.30			c0.18				
v/s Ratio Perm	0.27						0.03					
v/c Ratio	0.69	0.67			0.77		0.07	0.48				
Uniform Delay, d1	12.6	12.5			13.1		10.3	12.1				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	9.5	2.5			5.1		0.2	2.5				
Delay (s)	22.1	15.0			18.2		10.5	14.7				
Level of Service	C	B			B		B	B				
Approach Delay (s)		16.7			18.2			14.1			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		16.6			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.63										
Actuated Cycle Length (s)		49.7			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		69.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	466	38	51	468	40	57	232	50	25	166	33
Future Volume (vph)	46	466	38	51	468	40	57	232	50	25	166	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1776		1711	1779			1750			1755	
Flt Permitted		0.86		0.40	1.00			0.91			0.93	
Satd. Flow (perm)		1538		717	1779			1597			1647	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	466	38	51	468	40	57	232	50	25	166	33
RTOR Reduction (vph)	0	5	0	0	6	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	545	0	51	502	0	0	327	0	0	212	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		615		286	711			574			592	
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35		0.07				c0.20			0.13	
v/c Ratio		0.89		0.18	0.71			0.57			0.36	
Uniform Delay, d1		13.9		9.7	12.5			12.9			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		17.0		1.4	5.8			4.1			1.7	
Delay (s)		31.0		11.1	18.4			16.9			13.4	
Level of Service		C		B	B			B			B	
Approach Delay (s)		31.0			17.7			16.9			13.4	
Approach LOS		C			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			21.3			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			99.6%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	649	74	190	763	116	197	329	244	35	150	16
Future Volume (vph)	0	649	74	190	763	116	197	329	244	35	150	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1776		1711	1765		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1776		248	1765		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	649	74	190	763	116	197	329	244	35	150	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	194	0	3	0
Lane Group Flow (vph)	0	719	0	190	879	0	197	329	50	0	198	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Effective Green, g (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Actuated g/C Ratio		0.27		0.42	0.42		0.20	0.20	0.20		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		477		223	741		350	369	313		291	
v/s Ratio Prot		c0.40		0.07	c0.50		0.12	c0.18			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.51		0.85	1.19		0.56	0.89	0.16		0.68	
Uniform Delay, d1		31.4		34.7	24.9		30.7	33.2	28.1		33.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		238.7		25.5	97.2		2.1	22.6	0.2		6.2	
Delay (s)		270.1		60.3	122.1		32.8	55.8	28.3		39.9	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		270.1			111.1			41.2			39.9	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			128.0				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			85.9				Sum of lost time (s)		24.0			
Intersection Capacity Utilization			134.0%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	152	99	35	132	15	32	77	21	20	104	53
Future Volume (vph)	24	152	99	35	132	15	32	77	21	20	104	53
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	152	99	35	132	15	32	77	21	20	104	53
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	275	182	130	177								
Volume Left (vph)	24	35	32	20								
Volume Right (vph)	99	15	21	53								
Hadj (s)	-0.16	0.02	-0.01	-0.12								
Departure Headway (s)	4.8	5.1	5.3	5.2								
Degree Utilization, x	0.37	0.26	0.19	0.25								
Capacity (veh/h)	698	647	600	636								
Control Delay (s)	10.7	9.9	9.6	9.9								
Approach Delay (s)	10.7	9.9	9.6	9.9								
Approach LOS	B	A	A	A								
Intersection Summary												
Delay	10.1											
Level of Service	B											
Intersection Capacity Utilization	37.1%			ICU Level of Service			A					
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	19	129	43	26	93	38	52	123	43	35	86	34
Future Volume (vph)	19	129	43	26	93	38	52	123	43	35	86	34
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	129	43	26	93	38	52	123	43	35	86	34
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	191	157	218	155								
Volume Left (vph)	19	26	52	35								
Volume Right (vph)	43	38	43	34								
Hadj (s)	-0.08	-0.08	-0.04	-0.05								
Departure Headway (s)	5.0	5.1	5.0	5.1								
Degree Utilization, x	0.27	0.22	0.30	0.22								
Capacity (veh/h)	659	648	662	649								
Control Delay (s)	9.8	9.5	10.1	9.5								
Approach Delay (s)	9.8	9.5	10.1	9.5								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay	9.8											
Level of Service	A											
Intersection Capacity Utilization	36.7%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	299	116	65	415	80	161	117	42	112	216	21
Future Volume (vph)	15	299	116	65	415	80	161	117	42	112	216	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.98			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1757			1750	1531		1758	
Flt Permitted		0.83		0.31	1.00			0.64	1.00		0.81	
Satd. Flow (perm)		1439		562	1757			1161	1531		1445	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	299	116	65	415	80	161	117	42	112	216	21
RTOR Reduction (vph)	0	15	0	0	8	0	0	0	21	0	2	0
Lane Group Flow (vph)	0	415	0	65	487	0	0	278	21	0	347	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		28.9		28.9	28.9			44.9	44.9		44.9	
Effective Green, g (s)		29.9		28.9	29.9			45.9	45.9		45.9	
Actuated g/C Ratio		0.33		0.32	0.33			0.51	0.51		0.51	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		478		180	583			592	780		736	
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.29		0.12				0.24	0.01		c0.24	
v/c Ratio		0.87		0.36	0.84			0.47	0.03		0.47	
Uniform Delay, d1		28.2		23.5	27.8			14.2	11.0		14.2	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		15.2		1.2	10.0			2.7	0.1		0.5	
Delay (s)		43.4		24.7	37.8			16.9	11.0		14.7	
Level of Service		D		C	D			B	B		B	
Approach Delay (s)		43.4			36.3			16.1			14.7	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			29.7			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			68.6%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	333	79	55	329	80	95	69	70	79	111	12
Future Volume (vph)	14	333	79	55	329	80	95	69	70	79	111	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.92		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1749		1711	1748		1711	1665		1711	1774	
Flt Permitted	0.43	1.00		0.42	1.00		0.68	1.00		0.67	1.00	
Satd. Flow (perm)	768	1749		761	1748		1221	1665		1203	1774	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	333	79	55	329	80	95	69	70	79	111	12
RTOR Reduction (vph)	0	18	0	0	19	0	0	42	0	0	7	0
Lane Group Flow (vph)	14	394	0	55	390	0	95	97	0	79	116	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.7	15.7		15.7	15.7		18.2	18.2		18.2	18.2	
Effective Green, g (s)	15.7	15.7		15.7	15.7		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.40	0.40		0.40	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	598		260	597		484	660		477	703	
v/s Ratio Prot		c0.23			0.22			0.06			0.07	
v/s Ratio Perm	0.02			0.07			c0.08			0.07		
v/c Ratio	0.05	0.66		0.21	0.65		0.20	0.15		0.17	0.17	
Uniform Delay, d1	10.1	12.8		10.7	12.8		9.1	8.9		8.9	8.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	2.6		0.4	2.6		0.9	0.5		0.7	0.5	
Delay (s)	10.2	15.4		11.1	15.4		10.0	9.3		9.7	9.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.3			14.9			9.6			9.5	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			13.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			45.9			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			58.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	422	35	83	467	154	6	115	42	256	336	102
Future Volume (vph)	88	422	35	83	467	154	6	115	42	256	336	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1780		1711	1734			1735		1711	1801	1531
Flt Permitted	0.20	1.00		0.28	1.00			0.98		0.55	1.00	1.00
Satd. Flow (perm)	360	1780		512	1734			1709		988	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	88	422	35	83	467	154	6	115	42	256	336	102
RTOR Reduction (vph)	0	5	0	0	20	0	0	21	0	0	0	51
Lane Group Flow (vph)	88	452	0	83	601	0	0	143	0	256	336	51
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	593		170	578			541		566	900	765
v/s Ratio Prot		0.25			c0.35					c0.05	0.19	
v/s Ratio Perm	0.24			0.16				0.08		c0.18		0.03
v/c Ratio	0.73	0.76		0.49	1.04			0.26		0.45	0.37	0.07
Uniform Delay, d1	17.6	17.9		15.9	20.0			15.3		9.3	9.2	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	32.5	9.0		9.7	48.2			1.2		0.6	1.2	0.2
Delay (s)	50.1	26.9		25.6	68.2			16.5		9.9	10.4	7.9
Level of Service	D	C		C	E			B		A	B	A
Approach Delay (s)		30.6			63.1			16.5			9.9	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			33.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			82.1%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	700	0	0	595	39	36	265	98	0	0	0
Future Volume (vph)	51	700	0	0	595	39	36	265	98	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1786		1711	1728				
Flt Permitted	0.27	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	491	1801			1786		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	700	0	0	595	39	36	265	98	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	51	700	0	0	631	0	36	345	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	29.1	29.1			29.1		18.0	18.0				
Effective Green, g (s)	30.1	30.1			30.1		19.0	19.0				
Actuated g/C Ratio	0.51	0.51			0.51		0.32	0.32				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	250	917			909		550	555				
v/s Ratio Prot		c0.39			0.35			c0.20				
v/s Ratio Perm	0.10						0.02					
v/c Ratio	0.20	0.76			0.69		0.07	0.62				
Uniform Delay, d1	7.9	11.6			11.0		13.9	17.0				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.4	3.8			2.3		0.1	2.2				
Delay (s)	8.3	15.5			13.3		13.9	19.2				
Level of Service	A	B			B		B	B				
Approach Delay (s)		15.0			13.3			18.7			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		15.2			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.71										
Actuated Cycle Length (s)		59.1			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		70.3%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	909	43	80	835	82	31	344	57	82	273	28
Future Volume (vph)	37	909	43	80	835	82	31	344	57	82	273	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1788		1711	1777			1762			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.71	
Satd. Flow (perm)	206	1788		206	1777			1684			1272	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	909	43	80	835	82	31	344	57	82	273	28
RTOR Reduction (vph)	0	3	0	0	6	0	0	8	0	0	4	0
Lane Group Flow (vph)	37	949	0	80	911	0	0	424	0	0	379	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	962		110	956			518			391	
v/s Ratio Prot		c0.53			0.51							
v/s Ratio Perm	0.18			0.39				0.25			c0.30	
v/c Ratio	0.34	0.99		0.73	0.95			0.82			0.97	
Uniform Delay, d1	8.5	14.8		11.4	14.2			20.8			22.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.1	26.0		34.1	19.8			9.7			36.9	
Delay (s)	16.5	40.8		45.5	34.0			30.5			59.1	
Level of Service	B	D		D	C			C			E	
Approach Delay (s)		39.9			35.0			30.5			59.1	
Approach LOS		D			C			C			E	
Intersection Summary												
HCM 2000 Control Delay			39.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			109.4%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	799	7	212	940	707	0	129	426	462	128	11
Future Volume (vph)	0	799	7	212	940	707	0	129	426	462	128	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3417		1711	1801	1531		1801	1531	3319	1779	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3417		1711	1801	1531		1801	1531	3319	1779	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	799	7	212	940	707	0	129	426	462	128	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	301	0	0	0
Lane Group Flow (vph)	0	805	0	212	940	707	0	129	125	462	139	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.0	25.9	
Effective Green, g (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.0	25.9	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.30	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1101		275	997	848		273	232	273	542	
v/s Ratio Prot		0.24		0.12	c0.52	0.46		0.07		c0.14	0.08	
v/s Ratio Perm									c0.08			
v/c Ratio		0.73		0.77	0.94	0.83		0.47	0.54	1.69	0.26	
Uniform Delay, d1		25.5		34.1	17.7	15.7		32.9	33.3	39.0	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.3		12.5	17.7	9.4		1.3	2.4	326.9	0.3	
Delay (s)		29.8		46.7	35.3	25.2		34.2	35.7	365.9	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		29.8			32.8			35.4			286.5	
Approach LOS		C			C			D			F	
Intersection Summary												
HCM 2000 Control Delay			72.4				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			85.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			84.4%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	145	114	428	594	99
Future Volume (vph)	63	145	114	428	594	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.99			0.99	1.00	
Satd. Flow (prot)	1607			3386	3348	
Flt Permitted	0.99			0.72	1.00	
Satd. Flow (perm)	1607			2450	3348	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	145	114	428	594	99
RTOR Reduction (vph)	113	0	0	0	21	0
Lane Group Flow (vph)	95	0	0	542	672	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.6			21.8	21.8	
Effective Green, g (s)	6.6			21.8	21.8	
Actuated g/C Ratio	0.16			0.54	0.54	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	262			1322	1806	
v/s Ratio Prot	c0.06				0.20	
v/s Ratio Perm				c0.22		
v/c Ratio	0.36			0.41	0.37	
Uniform Delay, d1	15.0			5.5	5.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.9			0.9	0.6	
Delay (s)	15.9			6.4	5.9	
Level of Service	B			A	A	
Approach Delay (s)	15.9			6.4	5.9	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.6		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40			
Actuated Cycle Length (s)			40.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			62.1%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	103	64	100	386	702	74
Future Volume (vph)	103	64	100	386	702	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2446	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	64	100	386	702	74
RTOR Reduction (vph)	0	54	0	0	12	0
Lane Group Flow (vph)	103	10	0	486	764	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.7	6.7		24.1	24.1	
Effective Green, g (s)	6.7	6.7		24.1	24.1	
Actuated g/C Ratio	0.16	0.16		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	267	239		1377	1898	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.01		0.20		
v/c Ratio	0.39	0.04		0.35	0.40	
Uniform Delay, d1	16.2	15.3		5.1	5.3	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.1		0.7	0.6	
Delay (s)	17.1	15.4		5.8	5.9	
Level of Service	B	B		A	A	
Approach Delay (s)	16.5			5.8	5.9	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.1		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40			
Actuated Cycle Length (s)			42.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			56.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	77	22	50	72	5	29	43	70	12	27	20
Future Volume (vph)	20	77	22	50	72	5	29	43	70	12	27	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	77	22	50	72	5	29	43	70	12	27	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	119	127	142	59								
Volume Left (vph)	20	50	29	12								
Volume Right (vph)	22	5	70	20								
Hadj (s)	-0.04	0.09	-0.22	-0.13								
Departure Headway (s)	4.5	4.6	4.3	4.5								
Degree Utilization, x	0.15	0.16	0.17	0.07								
Capacity (veh/h)	764	739	783	737								
Control Delay (s)	8.2	8.5	8.2	7.9								
Approach Delay (s)	8.2	8.5	8.2	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.3											
Level of Service	A											
Intersection Capacity Utilization	31.1%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	71	1160	93	58	583
Future Volume (vph)	128	71	1160	93	58	583
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1661		3383			3406
Flt Permitted	0.97		1.00			0.76
Satd. Flow (perm)	1661		3383			2595
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	71	1160	93	58	583
RTOR Reduction (vph)	13	0	10	0	0	0
Lane Group Flow (vph)	186	0	1243	0	0	641
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	8.5		22.2			22.2
Effective Green, g (s)	8.5		22.2			22.2
Actuated g/C Ratio	0.20		0.52			0.52
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	330		1758			1349
v/s Ratio Prot	c0.11		c0.37			
v/s Ratio Perm						0.25
v/c Ratio	0.56		0.71			0.48
Uniform Delay, d1	15.4		7.8			6.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	2.2		2.4			1.2
Delay (s)	17.6		10.2			7.7
Level of Service	B		B			A
Approach Delay (s)	17.6		10.2			7.7
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			10.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.67			
Actuated Cycle Length (s)			42.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			79.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	112	26	31	164	20	34	5	15	25	5	18
Future Volume (vph)	18	112	26	31	164	20	34	5	15	25	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.96			0.95	
Flt Protected		0.99			0.99			0.97			0.97	
Satd. Flow (prot)		1750			1765			1680			1666	
Flt Permitted		0.92			0.92			0.79			0.83	
Satd. Flow (perm)		1624			1632			1372			1414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	112	26	31	164	20	34	5	15	25	5	18
RTOR Reduction (vph)	0	18	0	0	9	0	0	10	0	0	12	0
Lane Group Flow (vph)	0	138	0	0	206	0	0	44	0	0	36	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.5			9.5	
Effective Green, g (s)		7.3			7.3			9.5			9.5	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		411			413			452			466	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.13			c0.03			0.03	
v/c Ratio		0.34			0.50			0.10			0.08	
Uniform Delay, d1		8.8			9.2			6.7			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			1.0			0.1			0.1	
Delay (s)		9.3			10.1			6.8			6.7	
Level of Service		A			B			A			A	
Approach Delay (s)		9.3			10.1			6.8			6.7	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.1			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.27										
Actuated Cycle Length (s)		28.8			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		30.7%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

Appendix F – 2026 Intersection Capacity Analysis

3: Pine St & Bank St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	67	43	73	86	25	31
Future Volume (vph)	67	43	73	86	25	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	67	43	73	86	25	31
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	110	159	56			
Volume Left (vph)	67	0	25			
Volume Right (vph)	43	86	0			
Hadj (s)	-0.08	-0.29	0.12			
Departure Headway (s)	4.3	3.9	4.4			
Degree Utilization, x	0.13	0.17	0.07			
Capacity (veh/h)	802	885	785			
Control Delay (s)	7.9	7.7	7.8			
Approach Delay (s)	7.9	7.7	7.8			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.8			
Level of Service			A			
Intersection Capacity Utilization			28.8%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	150	5	20	109	57	5	11	20	73	22	70
Future Volume (vph)	24	150	5	20	109	57	5	11	20	73	22	70
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	150	5	20	109	57	5	11	20	73	22	70
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	179	186	36	165								
Volume Left (vph)	24	20	5	73								
Volume Right (vph)	5	57	20	70								
Hadj (s)	0.04	-0.13	-0.27	-0.13								
Departure Headway (s)	4.7	4.5	4.7	4.7								
Degree Utilization, x	0.23	0.23	0.05	0.21								
Capacity (veh/h)	727	757	688	713								
Control Delay (s)	9.1	8.8	7.9	8.9								
Approach Delay (s)	9.1	8.8	7.9	8.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.9											
Level of Service	A											
Intersection Capacity Utilization	36.4%			ICU Level of Service					A			
Analysis Period (min)	15											

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	154	77	305	174	323	1302
Future Volume (vph)	154	77	305	174	323	1302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3388
Flt Permitted	0.95	1.00	1.00	1.00		0.79
Satd. Flow (perm)	1711	1531	1801	1531		2717
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	77	305	174	323	1302
RTOR Reduction (vph)	0	66	0	49	0	0
Lane Group Flow (vph)	154	11	305	125	0	1625
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	13.1	13.1	63.3	63.3		63.3
Effective Green, g (s)	13.1	13.1	63.3	63.3		63.3
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	253	226	1289	1096		1945
v/s Ratio Prot	c0.09		0.17			
v/s Ratio Perm		0.01		0.08		c0.60
v/c Ratio	0.61	0.05	0.24	0.11		0.84
Uniform Delay, d1	35.3	32.3	4.3	3.9		8.9
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		4.4
Delay (s)	39.4	32.4	4.7	4.1		13.3
Level of Service	D	C	A	A		B
Approach Delay (s)	37.0		4.5			13.3
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			13.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.80			
Actuated Cycle Length (s)			88.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			85.0%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	356	68	120	307	36	39
Future Volume (vph)	356	68	120	307	36	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1762			1776	1635	
Flt Permitted	1.00			0.65	0.98	
Satd. Flow (perm)	1762			1166	1635	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	356	68	120	307	36	39
RTOR Reduction (vph)	14	0	0	0	25	0
Lane Group Flow (vph)	410	0	0	427	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	20.7			20.7	18.3	
Effective Green, g (s)	20.7			20.7	18.3	
Actuated g/C Ratio	0.41			0.41	0.36	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	715			473	586	
v/s Ratio Prot	0.23				c0.03	
v/s Ratio Perm				c0.37		
v/c Ratio	0.57			0.90	0.09	
Uniform Delay, d1	11.7			14.2	10.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			20.3	0.3	
Delay (s)	12.9			34.5	11.1	
Level of Service	B			C	B	
Approach Delay (s)	12.9			34.5	11.1	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay		22.7		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.52				
Actuated Cycle Length (s)		51.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization		65.0%		ICU Level of Service		C
Analysis Period (min)		15				
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St 2026 AM No Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	182	91	190	398	0	115	0	105	54	352	76
Future Volume (vph)	0	182	91	190	398	0	115	0	105	54	352	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3330	
Flt Permitted		1.00	1.00	0.64	1.00		0.50		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1157	1801		905		1531	1711	3330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	182	91	190	398	0	115	0	105	54	352	76
RTOR Reduction (vph)	0	0	59	0	0	0	0	0	64	0	0	0
Lane Group Flow (vph)	0	182	32	190	398	0	115	0	41	54	428	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		16.6	16.6	16.6	16.6		18.2		18.2	18.2	18.2	
Effective Green, g (s)		16.6	16.6	16.6	16.6		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.35	0.35	0.35	0.35		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		638	543	410	638		351		595	665	1295	
v/s Ratio Prot		0.10			c0.22						c0.13	
v/s Ratio Perm			0.02	0.16			0.13		0.03	0.03		
v/c Ratio		0.29	0.06	0.46	0.62		0.33		0.07	0.08	0.33	
Uniform Delay, d1		10.8	10.0	11.7	12.5		10.0		9.0	9.0	10.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.2	0.0	0.8	1.9		2.5		0.2	0.2	0.7	
Delay (s)		11.1	10.0	12.5	14.4		12.5		9.2	9.3	10.7	
Level of Service		B	A	B	B		B		A	A	B	
Approach Delay (s)		10.7			13.8			10.9			10.5	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			11.9			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			46.8			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			57.0%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	318	0	0	497	61	27	96	46	0	0	0
Future Volume (vph)	49	318	0	0	497	61	27	96	46	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1774		1711	1713				
Flt Permitted	0.28	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	506	1801			1774		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	318	0	0	497	61	27	96	46	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	29	0	0	0	0
Lane Group Flow (vph)	49	318	0	0	549	0	27	113	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.8	19.8			19.8		18.2	18.2				
Effective Green, g (s)	19.8	19.8			19.8		18.2	18.2				
Actuated g/C Ratio	0.40	0.40			0.40		0.36	0.36				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	200	713			702		622	623				
v/s Ratio Prot		0.18			c0.31			c0.07				
v/s Ratio Perm	0.10						0.02					
v/c Ratio	0.24	0.45			0.78		0.04	0.18				
Uniform Delay, d1	10.1	11.1			13.2		10.3	10.8				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.6	0.4			5.7		0.1	0.6				
Delay (s)	10.7	11.5			18.9		10.4	11.5				
Level of Service	B	B			B		B	B				
Approach Delay (s)		11.4			18.9			11.3			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			15.2			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			56.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	323	43	45	486	16	32	97	46	23	218	31
Future Volume (vph)	19	323	43	45	486	16	32	97	46	23	218	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1769		1711	1792			1721			1765	
Flt Permitted		0.96		0.52	1.00			0.90			0.96	
Satd. Flow (perm)		1708		939	1792			1568			1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	323	43	45	486	16	32	97	46	23	218	31
RTOR Reduction (vph)	0	9	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	376	0	45	500	0	0	149	0	0	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		683		375	716			564			615	
v/s Ratio Prot				c0.28								
v/s Ratio Perm		0.22		0.05				0.10			c0.15	
v/c Ratio		0.55		0.12	0.70			0.26			0.43	
Uniform Delay, d1		11.5		9.5	12.5			11.3			12.1	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		3.2		0.7	5.6			1.1			2.2	
Delay (s)		14.7		10.1	18.1			12.5			14.3	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.7			17.4			12.5			14.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			15.4		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			50.0		Sum of lost time (s)					12.0		
Intersection Capacity Utilization			62.3%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/College Ave Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	101	265	738	60	102	99	162	50	300	36
Future Volume (vph)	0	535	101	265	738	60	102	99	162	50	300	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	535	101	265	738	60	102	99	162	50	300	36
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	141	0	4	0
Lane Group Flow (vph)	0	629	0	265	798	0	102	99	21	0	382	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		489		233	776		221	232	197		384	
v/s Ratio Prot		0.36		0.10	c0.45		c0.06	0.05			c0.22	
v/s Ratio Perm				c0.40					0.01			
v/c Ratio		1.29		1.14	1.03		0.46	0.43	0.11		1.00	
Uniform Delay, d1		29.9		33.8	23.3		33.4	33.2	31.8		32.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		143.5		101.0	39.8		1.5	1.3	0.2		44.3	
Delay (s)		173.4		134.8	63.1		34.9	34.5	32.1		76.7	
Level of Service		F		F	E		C	C	C		E	
Approach Delay (s)		173.4			81.0			33.5			76.7	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			97.3			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			82.8			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			120.6%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	22	133	44	22	177	21	82	105	16	5	65	31
Future Volume (vph)	22	133	44	22	177	21	82	105	16	5	65	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	133	44	22	177	21	82	105	16	5	65	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	199	220	203	101								
Volume Left (vph)	22	22	82	5								
Volume Right (vph)	44	21	16	31								
Hadj (s)	-0.08	0.00	0.07	-0.14								
Departure Headway (s)	4.9	5.0	5.2	5.1								
Degree Utilization, x	0.27	0.30	0.29	0.14								
Capacity (veh/h)	672	672	642	625								
Control Delay (s)	9.8	10.2	10.3	9.0								
Approach Delay (s)	9.8	10.2	10.3	9.0								
Approach LOS	A	B	B	A								
Intersection Summary												
Delay	9.9											
Level of Service	A											
Intersection Capacity Utilization	39.6%			ICU Level of Service			A					
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	108	21	15	174	47	54	169	18	12	46	11
Future Volume (vph)	25	108	21	15	174	47	54	169	18	12	46	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	108	21	15	174	47	54	169	18	12	46	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	154	236	241	69								
Volume Left (vph)	25	15	54	12								
Volume Right (vph)	21	47	18	11								
Hadj (s)	-0.02	-0.07	0.03	-0.03								
Departure Headway (s)	5.0	4.9	5.0	5.2								
Degree Utilization, x	0.21	0.32	0.34	0.10								
Capacity (veh/h)	657	693	661	616								
Control Delay (s)	9.4	10.1	10.5	8.8								
Approach Delay (s)	9.4	10.1	10.5	8.8								
Approach LOS	A	B	B	A								
Intersection Summary												
Delay			10.0									
Level of Service			A									
Intersection Capacity Utilization			40.9%	ICU Level of Service					A			
Analysis Period (min)			15									

13: Pine St & Main St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	352	181	82	357	125	5	192	64	47	111	8
Future Volume (vph)	10	352	181	82	357	125	5	192	64	47	111	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.96			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1731			1798	1531		1764	
Flt Permitted		0.99		0.27	1.00			0.99	1.00		0.88	
Satd. Flow (perm)		1702		479	1731			1791	1531		1579	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	352	181	82	357	125	5	192	64	47	111	8
RTOR Reduction (vph)	0	20	0	0	13	0	0	0	34	0	2	0
Lane Group Flow (vph)	0	523	0	82	469	0	0	197	30	0	164	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		32.0		32.0	32.0			41.8	41.8		41.8	
Effective Green, g (s)		33.0		32.0	33.0			42.8	42.8		42.8	
Actuated g/C Ratio		0.37		0.36	0.37			0.48	0.48		0.48	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		624		170	634			851	728		750	
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.31		0.17				c0.11	0.02		0.10	
v/c Ratio		0.84		0.48	0.74			0.23	0.04		0.22	
Uniform Delay, d1		26.1		22.6	24.8			13.9	12.6		13.8	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		9.6		2.2	4.5			0.6	0.1		0.1	
Delay (s)		35.7		24.7	29.3			14.5	12.7		14.0	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		35.7			28.6			14.1			14.0	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			27.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			82.7%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	263	70	53	407	105	61	151	42	39	39	17
Future Volume (vph)	3	263	70	53	407	105	61	151	42	39	39	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1744		1711	1745		1711	1742		1711	1719	
Flt Permitted	0.32	1.00		0.53	1.00		0.72	1.00		0.64	1.00	
Satd. Flow (perm)	579	1744		962	1745		1297	1742		1146	1719	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	263	70	53	407	105	61	151	42	39	39	17
RTOR Reduction (vph)	0	20	0	0	19	0	0	17	0	0	11	0
Lane Group Flow (vph)	3	313	0	53	493	0	61	176	0	39	45	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	18.6	18.6		18.6	18.6		18.2	18.2		18.2	18.2	
Effective Green, g (s)	18.6	18.6		18.6	18.6		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	220	664		366	665		483	649		427	641	
v/s Ratio Prot		0.18			c0.28			c0.10			0.03	
v/s Ratio Perm	0.01			0.06			0.05			0.03		
v/c Ratio	0.01	0.47		0.14	0.74		0.13	0.27		0.09	0.07	
Uniform Delay, d1	9.4	11.4		9.9	13.0		10.1	10.7		9.9	9.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.5		0.2	4.4		0.5	1.0		0.4	0.2	
Delay (s)	9.4	11.9		10.1	17.5		10.6	11.7		10.4	10.1	
Level of Service	A	B		B	B		B	B		B	B	
Approach Delay (s)		11.9			16.8			11.4			10.2	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			13.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			48.8			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			66.6%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	276	11	103	470	118	10	34	10	86	233	108
Future Volume (vph)	37	276	11	103	470	118	10	34	10	86	233	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1790		1711	1746			1740		1711	1801	1531
Flt Permitted	0.20	1.00		0.50	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1790		903	1746			1644		1210	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	276	11	103	470	118	10	34	10	86	233	108
RTOR Reduction (vph)	0	3	0	0	15	0	0	7	0	0	0	53
Lane Group Flow (vph)	37	284	0	103	573	0	0	47	0	86	233	55
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	584		295	570			569		657	918	780
v/s Ratio Prot		0.16			c0.33					0.01	c0.13	
v/s Ratio Perm	0.10			0.11				0.03		0.06		0.04
v/c Ratio	0.32	0.49		0.35	1.00			0.08		0.13	0.25	0.07
Uniform Delay, d1	15.5	16.5		15.7	20.6			13.5		8.0	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	2.9		3.2	38.8			0.3		0.1	0.7	0.2
Delay (s)	22.4	19.4		18.9	59.4			13.7		8.0	9.1	7.8
Level of Service	C	B		B	E			B		A	A	A
Approach Delay (s)		19.7			53.4			13.7			8.6	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			31.9			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			60.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	384	0	0	698	29	32	497	52	0	0	0
Future Volume (vph)	12	384	0	0	698	29	32	497	52	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1791		1711	1775				
Flt Permitted	0.17	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	308	1801			1791		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	384	0	0	698	29	32	497	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	384	0	0	725	0	32	545	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	33.4	33.4			33.4		24.8	24.8				
Effective Green, g (s)	34.4	34.4			34.4		25.8	25.8				
Actuated g/C Ratio	0.49	0.49			0.49		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	150	882			877		628	652				
v/s Ratio Prot		0.21			c0.40			c0.31				
v/s Ratio Perm	0.04						0.02					
v/c Ratio	0.08	0.44			0.83		0.05	0.84				
Uniform Delay, d1	9.5	11.6			15.3		14.3	20.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.3			6.4		0.0	9.1				
Delay (s)	9.7	11.9			21.8		14.3	29.3				
Level of Service	A	B			C		B	C				
Approach Delay (s)		11.9			21.8			28.5			0.0	
Approach LOS		B			C			C			A	
Intersection Summary												
HCM 2000 Control Delay			21.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			70.2				Sum of lost time (s)			10.0		
Intersection Capacity Utilization			76.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	555	13	90	832	43	27	249	57	124	256	46
Future Volume (vph)	15	555	13	90	832	43	27	249	57	124	256	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1787			1752			1749	
Flt Permitted	0.11	1.00		0.34	1.00			0.94			0.70	
Satd. Flow (perm)	206	1794		607	1787			1661			1237	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	555	13	90	832	43	27	249	57	124	256	46
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	15	567	0	90	872	0	0	321	0	0	419	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	966		326	962			511			380	
v/s Ratio Prot		0.32			c0.49							
v/s Ratio Perm	0.07			0.15				0.19			c0.34	
v/c Ratio	0.14	0.59		0.28	0.91			0.63			1.10	
Uniform Delay, d1	7.5	10.1		8.1	13.5			19.3			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.6	2.6		2.1	13.7			2.4			76.9	
Delay (s)	10.0	12.7		10.2	27.2			21.7			99.4	
Level of Service	B	B		B	C			C			F	
Approach Delay (s)		12.7			25.6			21.7			99.4	
Approach LOS		B			C			C			F	
Intersection Summary												
HCM 2000 Control Delay			35.4			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			108.4%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	689	4	221	978	600	0	83	177	236	72	46
Future Volume (vph)	0	689	4	221	978	600	0	83	177	236	72	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1695	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	689	4	221	978	600	0	83	177	236	72	46
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	157	0	0	0
Lane Group Flow (vph)	0	692	0	221	978	600	0	83	20	236	118	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Effective Green, g (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Actuated g/C Ratio		0.33		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1144		290	1042	886		204	173	286	463	
v/s Ratio Prot		0.20		0.13	c0.54	0.39		c0.05		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.61		0.76	0.94	0.68		0.41	0.12	0.83	0.25	
Uniform Delay, d1		22.5		32.1	15.8	11.8		33.5	32.3	36.5	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.4		11.2	16.5	4.1		1.3	0.3	17.3	0.3	
Delay (s)		24.9		43.4	32.3	16.0		34.8	32.6	53.8	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.9			28.2			33.3			43.7	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			29.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			81.2				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			74.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	90	141	158	599	104
Future Volume (vph)	44	90	141	158	599	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.98			0.98	1.00	
Satd. Flow (prot)	1611			3342	3345	
Flt Permitted	0.98			0.61	1.00	
Satd. Flow (perm)	1611			2082	3345	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	90	141	158	599	104
RTOR Reduction (vph)	77	0	0	0	20	0
Lane Group Flow (vph)	57	0	0	299	683	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.0			24.9	24.9	
Effective Green, g (s)	6.0			24.9	24.9	
Actuated g/C Ratio	0.14			0.58	0.58	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	225			1208	1941	
v/s Ratio Prot	c0.04				c0.20	
v/s Ratio Perm				0.14		
v/c Ratio	0.25			0.25	0.35	
Uniform Delay, d1	16.4			4.4	4.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.6			0.5	0.5	
Delay (s)	17.0			4.9	5.2	
Level of Service	B			A	A	
Approach Delay (s)	17.0			4.9	5.2	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			6.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.33			
Actuated Cycle Length (s)			42.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	54	56	309	652	120
Future Volume (vph)	42	54	56	309	652	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2728	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	54	56	309	652	120
RTOR Reduction (vph)	0	49	0	0	19	0
Lane Group Flow (vph)	42	5	0	365	753	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		26.9	26.9	
Effective Green, g (s)	4.2	4.2		26.9	26.9	
Actuated g/C Ratio	0.10	0.10		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	149		1702	2085	
v/s Ratio Prot	c0.02				c0.23	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.04		0.21	0.36	
Uniform Delay, d1	18.0	17.6		3.5	3.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.8	17.7		3.8	4.4	
Level of Service	B	B		A	A	
Approach Delay (s)	18.2			3.8	4.4	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			43.1		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	55	42	73	67	5	101	5	39	0	10	20
Future Volume (vph)	20	55	42	73	67	5	101	5	39	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	55	42	73	67	5	101	5	39	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	117	145	145	30								
Volume Left (vph)	20	73	101	0								
Volume Right (vph)	42	5	39	20								
Hadj (s)	-0.15	0.11	0.01	-0.37								
Departure Headway (s)	4.3	4.6	4.6	4.3								
Degree Utilization, x	0.14	0.18	0.18	0.04								
Capacity (veh/h)	790	748	746	764								
Control Delay (s)	8.1	8.6	8.6	7.5								
Approach Delay (s)	8.1	8.6	8.6	7.5								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.4											
Level of Service	A											
Intersection Capacity Utilization	36.1%			ICU Level of Service					A			
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	42	507	118	135	1433
Future Volume (vph)	78	42	507	118	135	1433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1662		3324			3407
Flt Permitted	0.97		1.00			0.82
Satd. Flow (perm)	1662		3324			2808
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	42	507	118	135	1433
RTOR Reduction (vph)	37	0	27	0	0	0
Lane Group Flow (vph)	83	0	598	0	0	1568
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.1		25.8			25.8
Effective Green, g (s)	5.1		25.8			25.8
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	197		1999			1688
v/s Ratio Prot	c0.05		0.18			
v/s Ratio Perm						c0.56
v/c Ratio	0.42		0.30			0.93
Uniform Delay, d1	17.5		4.2			7.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.5		0.4			10.5
Delay (s)	19.0		4.5			18.2
Level of Service	B		A			B
Approach Delay (s)	19.0		4.5			18.2
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			14.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			42.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			83.2%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 AM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	172	20	5	214	21	20	5	5	26	5	18
Future Volume (vph)	24	172	20	5	214	21	20	5	5	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1768			1778			1703			1667	
Flt Permitted		0.92			0.99			0.79			0.83	
Satd. Flow (perm)		1638			1755			1397			1421	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	172	20	5	214	21	20	5	5	26	5	18
RTOR Reduction (vph)	0	9	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	207	0	0	231	0	0	27	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.1			9.1	
Effective Green, g (s)		7.3			7.3			9.1			9.1	
Actuated g/C Ratio		0.26			0.26			0.32			0.32	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		421			451			447			455	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.13			0.02			c0.03	
v/c Ratio		0.49			0.51			0.06			0.08	
Uniform Delay, d1		9.0			9.0			6.7			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			1.0			0.1			0.1	
Delay (s)		9.9			10.0			6.7			6.8	
Level of Service		A			B			A			A	
Approach Delay (s)		9.9			10.0			6.7			6.8	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.5			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.27										
Actuated Cycle Length (s)		28.4			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		37.5%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

3: Pine St & Bank St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	101	31	40	110	33	109
Future Volume (vph)	101	31	40	110	33	109
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	101	31	40	110	33	109
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	132	150	142			
Volume Left (vph)	101	0	33			
Volume Right (vph)	31	110	0			
Hadj (s)	0.05	-0.41	0.08			
Departure Headway (s)	4.6	4.0	4.5			
Degree Utilization, x	0.17	0.17	0.18			
Capacity (veh/h)	734	865	771			
Control Delay (s)	8.5	7.8	8.4			
Approach Delay (s)	8.5	7.8	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.2			
Level of Service			A			
Intersection Capacity Utilization			33.9%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	82	116	10	20	124	220	12	41	20	55	43	32
Future Volume (vph)	82	116	10	20	124	220	12	41	20	55	43	32
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	82	116	10	20	124	220	12	41	20	55	43	32
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	208	364	73	130								
Volume Left (vph)	82	20	12	55								
Volume Right (vph)	10	220	20	32								
Hadj (s)	0.08	-0.32	-0.10	-0.03								
Departure Headway (s)	5.0	4.4	5.4	5.3								
Degree Utilization, x	0.29	0.45	0.11	0.19								
Capacity (veh/h)	677	777	581	604								
Control Delay (s)	10.0	10.9	9.0	9.6								
Approach Delay (s)	10.0	10.9	9.0	9.6								
Approach LOS	A	B	A	A								
Intersection Summary												
Delay			10.3									
Level of Service			B									
Intersection Capacity Utilization			56.3%	ICU Level of Service					B			
Analysis Period (min)			15									

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	159	806	464	171	602
Future Volume (vph)	145	159	806	464	171	602
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3384
Flt Permitted	0.95	1.00	1.00	1.00		0.59
Satd. Flow (perm)	1711	1531	1801	1531		2012
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	159	806	464	171	602
RTOR Reduction (vph)	0	136	0	131	0	0
Lane Group Flow (vph)	145	23	806	333	0	773
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.5	12.5	62.1	62.1		62.1
Effective Green, g (s)	12.5	12.5	62.1	62.1		62.1
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	246	220	1291	1097		1442
v/s Ratio Prot	c0.08		c0.45			
v/s Ratio Perm		0.01		0.22		0.38
v/c Ratio	0.59	0.10	0.62	0.30		0.54
Uniform Delay, d1	34.7	32.2	6.3	4.4		5.6
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.6	0.2	2.3	0.7		1.4
Delay (s)	38.2	32.4	8.6	5.1		7.1
Level of Service	D	C	A	A		A
Approach Delay (s)	35.2		7.3			7.1
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.62			
Actuated Cycle Length (s)			86.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			87.1%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	403	44	74	424	97	143
Future Volume (vph)	403	44	74	424	97	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.92	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1777			1787	1623	
Flt Permitted	1.00			0.81	0.98	
Satd. Flow (perm)	1777			1465	1623	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	403	44	74	424	97	143
RTOR Reduction (vph)	8	0	0	0	81	0
Lane Group Flow (vph)	439	0	0	498	159	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	21.0			21.0	18.3	
Effective Green, g (s)	21.0			21.0	18.3	
Actuated g/C Ratio	0.41			0.41	0.36	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	727			599	578	
v/s Ratio Prot	0.25				c0.10	
v/s Ratio Perm				c0.34		
v/c Ratio	0.60			0.83	0.27	
Uniform Delay, d1	11.9			13.6	11.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.4			9.6	1.2	
Delay (s)	13.3			23.1	12.9	
Level of Service	B			C	B	
Approach Delay (s)	13.3			23.1	12.9	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			17.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.57			
Actuated Cycle Length (s)			51.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			79.4%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St 2026 PM No Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	335	104	193	401	0	177	0	309	94	290	45
Future Volume (vph)	0	335	104	193	401	0	177	0	309	94	290	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3352	
Flt Permitted		1.00	1.00	0.53	1.00		0.55		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	951	1801		990		1531	1711	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	335	104	193	401	0	177	0	309	94	290	45
RTOR Reduction (vph)	0	0	67	0	0	0	0	0	189	0	0	0
Lane Group Flow (vph)	0	335	37	193	401	0	177	0	120	94	335	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		17.0	17.0	17.0	17.0		18.3		18.3	18.3	18.3	
Effective Green, g (s)		17.0	17.0	17.0	17.0		18.3		18.3	18.3	18.3	
Actuated g/C Ratio		0.36	0.36	0.36	0.36		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		647	550	341	647		383		592	661	1296	
v/s Ratio Prot		0.19			c0.22						0.10	
v/s Ratio Perm			0.02	0.20			c0.18		0.08	0.05		
v/c Ratio		0.52	0.07	0.57	0.62		0.46		0.20	0.14	0.26	
Uniform Delay, d1		11.9	9.9	12.2	12.5		10.8		9.6	9.4	9.9	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.7	0.1	2.2	1.8		4.0		0.8	0.5	0.5	
Delay (s)		12.6	10.0	14.3	14.3		14.8		10.4	9.9	10.4	
Level of Service		B	B	B	B		B		B	A	B	
Approach Delay (s)		12.0			14.3			12.0			10.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			47.3			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			65.9%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	545	0	0	520	57	47	279	50	0	0	0
Future Volume (vph)	148	545	0	0	520	57	47	279	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1777		1711	1760				
Flt Permitted	0.26	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	476	1801			1777		1711	1760				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	148	545	0	0	520	57	47	279	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	11	0	0	0	0
Lane Group Flow (vph)	148	545	0	0	569	0	47	318	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	20.2	20.2			20.2		18.2	18.2				
Effective Green, g (s)	20.2	20.2			20.2		18.2	18.2				
Actuated g/C Ratio	0.40	0.40			0.40		0.36	0.36				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	190	721			712		617	635				
v/s Ratio Prot		0.30			c0.32			c0.18				
v/s Ratio Perm	0.31						0.03					
v/c Ratio	0.78	0.76			0.80		0.08	0.50				
Uniform Delay, d1	13.2	13.0			13.3		10.6	12.6				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	18.0	4.5			6.3		0.2	2.8				
Delay (s)	31.2	17.5			19.6		10.8	15.4				
Level of Service	C	B			B		B	B				
Approach Delay (s)		20.4			19.6			14.8			0.0	
Approach LOS		C			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		18.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		50.4			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		71.7%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	519	42	53	500	42	60	239	52	26	171	34
Future Volume (vph)	62	519	42	53	500	42	60	239	52	26	171	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1775		1711	1780			1750			1755	
Flt Permitted		0.73		0.36	1.00			0.90			0.93	
Satd. Flow (perm)		1304		643	1780			1590			1642	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	519	42	53	500	42	60	239	52	26	171	34
RTOR Reduction (vph)	0	5	0	0	6	0	0	13	0	0	12	0
Lane Group Flow (vph)	0	618	0	53	536	0	0	338	0	0	219	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		521		257	712			572			591	
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.47		0.08				c0.21			0.13	
v/c Ratio		1.19		0.21	0.75			0.59			0.37	
Uniform Delay, d1		15.0		9.8	12.9			13.0			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		101.6		1.8	7.2			4.4			1.8	
Delay (s)		116.6		11.6	20.1			17.5			13.6	
Level of Service		F		B	C			B			B	
Approach Delay (s)		116.6			19.4			17.5			13.6	
Approach LOS		F			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			51.9			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			106.4%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/College Ave Build with Previously Permitted BCP
City Place Burlington Development

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	707	76	196	804	120	203	339	251	36	154	16
Future Volume (vph)	0	707	76	196	804	120	203	339	251	36	154	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1777		1711	1766		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1777		248	1766		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	707	76	196	804	120	203	339	251	36	154	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	199	0	3	0
Lane Group Flow (vph)	0	779	0	196	924	0	203	339	52	0	203	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Effective Green, g (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Actuated g/C Ratio		0.27		0.42	0.42		0.21	0.21	0.21		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		473		223	737		354	373	317		294	
v/s Ratio Prot		c0.44		0.07	c0.52		0.12	c0.19			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.65		0.88	1.25		0.57	0.91	0.16		0.69	
Uniform Delay, d1		31.7		35.0	25.2		30.8	33.5	28.1		33.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		300.1		29.9	125.2		2.2	25.1	0.2		6.6	
Delay (s)		331.8		65.0	150.3		33.1	58.5	28.4		40.5	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		331.8			135.4			42.5			40.5	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			156.3			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.22									
Actuated Cycle Length (s)			86.4			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			140.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	157	102	36	136	15	33	108	22	21	160	54
Future Volume (vph)	25	157	102	36	136	15	33	108	22	21	160	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	157	102	36	136	15	33	108	22	21	160	54
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	284	187	163	235								
Volume Left (vph)	25	36	33	21								
Volume Right (vph)	102	15	22	54								
Hadj (s)	-0.16	0.02	-0.01	-0.09								
Departure Headway (s)	5.2	5.5	5.6	5.4								
Degree Utilization, x	0.41	0.29	0.25	0.35								
Capacity (veh/h)	646	596	575	613								
Control Delay (s)	11.7	10.7	10.5	11.3								
Approach Delay (s)	11.7	10.7	10.5	11.3								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay	11.1											
Level of Service	B											
Intersection Capacity Utilization	40.6%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	133	44	27	97	39	52	161	44	36	145	35
Future Volume (vph)	20	133	44	27	97	39	52	161	44	36	145	35
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	133	44	27	97	39	52	161	44	36	145	35
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	197	163	257	216								
Volume Left (vph)	20	27	52	36								
Volume Right (vph)	44	39	44	35								
Hadj (s)	-0.08	-0.08	-0.03	-0.03								
Departure Headway (s)	5.4	5.4	5.2	5.3								
Degree Utilization, x	0.29	0.25	0.37	0.32								
Capacity (veh/h)	609	597	635	628								
Control Delay (s)	10.6	10.2	11.3	10.7								
Approach Delay (s)	10.6	10.2	11.3	10.7								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay			10.8									
Level of Service			B									
Intersection Capacity Utilization			40.9%	ICU Level of Service					A			
Analysis Period (min)			15									

13: Pine St & Main St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	308	120	67	428	100	166	132	43	147	243	21
Future Volume (vph)	15	308	120	67	428	100	166	132	43	147	243	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1749			1752	1531		1757	
Flt Permitted		0.85		0.33	1.00			0.62	1.00		0.72	
Satd. Flow (perm)		1476		595	1749			1109	1531		1282	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	308	120	67	428	100	166	132	43	147	243	21
RTOR Reduction (vph)	0	15	0	0	9	0	0	0	22	0	2	0
Lane Group Flow (vph)	0	428	0	67	519	0	0	298	21	0	409	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		31.3		31.3	31.3			42.5	42.5		42.5	
Effective Green, g (s)		32.3		31.3	32.3			43.5	43.5		43.5	
Actuated g/C Ratio		0.36		0.35	0.36			0.48	0.48		0.48	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		529		206	627			536	739		619	
v/s Ratio Prot					c0.30							
v/s Ratio Perm		0.29		0.11				0.27	0.01		c0.32	
v/c Ratio		0.81		0.33	0.83			0.56	0.03		0.66	
Uniform Delay, d1		26.1		21.6	26.3			16.4	12.2		17.7	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		8.9		0.9	8.8			4.1	0.1		2.7	
Delay (s)		35.0		22.5	35.1			20.5	12.2		20.3	
Level of Service		C		C	D			C	B		C	
Approach Delay (s)		35.0			33.7			19.5			20.3	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM 2000 Control Delay			28.2			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			85.3%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	354	101	57	366	90	87	98	72	128	124	13
Future Volume (vph)	15	354	101	57	366	90	87	98	72	128	124	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1741		1711	1747		1711	1686		1711	1775	
Flt Permitted	0.38	1.00		0.38	1.00		0.67	1.00		0.65	1.00	
Satd. Flow (perm)	675	1741		678	1747		1205	1686		1170	1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	354	101	57	366	90	87	98	72	128	124	13
RTOR Reduction (vph)	0	22	0	0	19	0	0	44	0	0	6	0
Lane Group Flow (vph)	15	433	0	57	437	0	87	126	0	128	131	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		18.2	18.2		18.2	18.2	
Effective Green, g (s)	17.0	17.0		17.0	17.0		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	627		244	629		464	650		451	684	
v/s Ratio Prot		0.25			c0.25			0.07			0.07	
v/s Ratio Perm	0.02			0.08			0.07			c0.11		
v/c Ratio	0.06	0.69		0.23	0.69		0.19	0.19		0.28	0.19	
Uniform Delay, d1	9.9	12.9		10.5	12.9		9.6	9.6		10.0	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	3.3		0.5	3.3		0.9	0.7		1.6	0.6	
Delay (s)	10.0	16.1		11.0	16.2		10.5	10.3		11.6	10.2	
Level of Service	A	B		B	B		B	B		B	B	
Approach Delay (s)		16.0			15.6			10.4			10.9	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			14.0			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			47.2			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			65.6%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	525	32	85	516	159	6	118	44	253	390	105
Future Volume (vph)	90	525	32	85	516	159	6	118	44	253	390	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1785		1711	1737			1734		1711	1801	1531
Flt Permitted	0.20	1.00		0.20	1.00			0.98		0.54	1.00	1.00
Satd. Flow (perm)	360	1785		360	1737			1706		976	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	525	32	85	516	159	6	118	44	253	390	105
RTOR Reduction (vph)	0	3	0	0	19	0	0	21	0	0	0	53
Lane Group Flow (vph)	90	554	0	85	656	0	0	147	0	253	390	53
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	595		120	579			540		561	900	765
v/s Ratio Prot		0.31			c0.38					0.05	c0.22	
v/s Ratio Perm	0.25			0.24				0.09		c0.18		0.03
v/c Ratio	0.75	0.93		0.71	1.13			0.27		0.45	0.43	0.07
Uniform Delay, d1	17.8	19.3		17.5	20.0			15.3		9.3	9.6	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	34.5	23.2		29.7	79.9			1.2		0.6	1.5	0.2
Delay (s)	52.2	42.6		47.2	99.9			16.6		9.9	11.1	7.9
Level of Service	D	D		D	F			B		A	B	A
Approach Delay (s)		43.9			94.0			16.6			10.3	
Approach LOS		D			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			47.5			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				15.0		
Intersection Capacity Utilization			88.2%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	801	0	0	648	40	37	273	101	0	0	0
Future Volume (vph)	53	801	0	0	648	40	37	273	101	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1787		1711	1728				
Flt Permitted	0.25	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	443	1801			1787		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	801	0	0	648	40	37	273	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	53	801	0	0	685	0	37	356	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	33.9	33.9			33.9		19.1	19.1				
Effective Green, g (s)	34.9	34.9			34.9		20.1	20.1				
Actuated g/C Ratio	0.54	0.54			0.54		0.31	0.31				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	237	966			959		529	534				
v/s Ratio Prot		c0.44			0.38			c0.21				
v/s Ratio Perm	0.12						0.02					
v/c Ratio	0.22	0.83			0.71		0.07	0.67				
Uniform Delay, d1	7.9	12.6			11.3		15.9	19.5				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.5	6.0			2.6		0.1	3.1				
Delay (s)	8.4	18.5			13.9		15.9	22.7				
Level of Service	A	B			B		B	C				
Approach Delay (s)		17.9			13.9			22.1			0.0	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay			17.4				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			65.0				Sum of lost time (s)			10.0		
Intersection Capacity Utilization			72.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1016	44	82	895	84	32	354	58	84	282	29
Future Volume (vph)	38	1016	44	82	895	84	32	354	58	84	282	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1789		1711	1777			1763			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.70	
Satd. Flow (perm)	206	1789		206	1777			1678			1251	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	1016	44	82	895	84	32	354	58	84	282	29
RTOR Reduction (vph)	0	2	0	0	5	0	0	8	0	0	4	0
Lane Group Flow (vph)	38	1058	0	82	974	0	0	436	0	0	391	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	963		110	956			516			384	
v/s Ratio Prot		c0.59			0.55							
v/s Ratio Perm	0.18			0.40				0.26			c0.31	
v/c Ratio	0.35	1.10		0.75	1.02			0.84			1.02	
Uniform Delay, d1	8.5	15.0		11.6	15.0			21.0			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.4	59.7		36.4	33.9			12.0			50.5	
Delay (s)	16.9	74.7		47.9	48.9			33.1			73.0	
Level of Service	B	E		D	D			C			E	
Approach Delay (s)		72.7			48.8			33.1			73.0	
Approach LOS		E			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			58.4			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			116.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	901	8	219	1003	728	0	133	439	475	131	11
Future Volume (vph)	0	901	8	219	1003	728	0	133	439	475	131	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3417		1711	1801	1531		1801	1531	3319	1780	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3417		1711	1801	1531		1801	1531	3319	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	901	8	219	1003	728	0	133	439	475	131	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	295	0	0	0
Lane Group Flow (vph)	0	908	0	219	1003	728	0	133	144	475	142	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.9	47.1	47.1		13.2	13.2	7.0	26.2	
Effective Green, g (s)		27.2		13.9	47.1	47.1		13.2	13.2	7.0	26.2	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.31	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1089		278	994	845		278	236	272	546	
v/s Ratio Prot		0.27		0.13	c0.56	0.48		0.07		c0.14	0.08	
v/s Ratio Perm									c0.09			
v/c Ratio		0.83		0.79	1.01	0.86		0.48	0.61	1.75	0.26	
Uniform Delay, d1		27.0		34.3	19.1	16.3		32.9	33.6	39.1	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		7.5		13.7	30.8	11.2		1.3	4.6	350.7	0.3	
Delay (s)		34.5		48.0	49.9	27.5		34.2	38.3	389.8	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		34.5			41.3			37.3			305.3	
Approach LOS		C			D			D			F	
Intersection Summary												
HCM 2000 Control Delay			79.5				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.10									
Actuated Cycle Length (s)			85.3				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			88.3%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	91	149	117	441	612	115
Future Volume (vph)	91	149	117	441	612	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.92			1.00	0.98	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1619			3386	3340	
Flt Permitted	0.98			0.70	1.00	
Satd. Flow (perm)	1619			2410	3340	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	91	149	117	441	612	115
RTOR Reduction (vph)	104	0	0	0	24	0
Lane Group Flow (vph)	136	0	0	558	703	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	7.4			21.3	21.3	
Effective Green, g (s)	7.4			21.3	21.3	
Actuated g/C Ratio	0.18			0.52	0.52	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	294			1261	1747	
v/s Ratio Prot	c0.08				0.21	
v/s Ratio Perm				c0.23		
v/c Ratio	0.46			0.44	0.40	
Uniform Delay, d1	14.9			6.0	5.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.2			1.1	0.7	
Delay (s)	16.0			7.1	6.5	
Level of Service	B			A	A	
Approach Delay (s)	16.0			7.1	6.5	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			8.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			40.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			65.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	106	101	103	397	723	77
Future Volume (vph)	106	101	103	397	723	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2416	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	101	103	397	723	77
RTOR Reduction (vph)	0	70	0	0	12	0
Lane Group Flow (vph)	106	31	0	500	788	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.7	6.7		22.6	22.6	
Effective Green, g (s)	6.7	6.7		22.6	22.6	
Actuated g/C Ratio	0.16	0.16		0.55	0.55	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	248		1322	1845	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.02		0.21		
v/c Ratio	0.38	0.12		0.38	0.43	
Uniform Delay, d1	15.5	14.8		5.3	5.5	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.2		0.8	0.7	
Delay (s)	16.3	15.0		6.2	6.2	
Level of Service	B	B		A	A	
Approach Delay (s)	15.7			6.2	6.2	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			41.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			57.3%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	127	97	52	74	5	104	5	72	0	10	20
Future Volume (vph)	20	127	97	52	74	5	104	5	72	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	127	97	52	74	5	104	5	72	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	244	131	181	30								
Volume Left (vph)	20	52	104	0								
Volume Right (vph)	97	5	72	20								
Hadj (s)	-0.19	0.09	-0.09	-0.37								
Departure Headway (s)	4.4	4.8	4.7	4.7								
Degree Utilization, x	0.30	0.17	0.24	0.04								
Capacity (veh/h)	781	704	711	689								
Control Delay (s)	9.3	8.8	9.2	7.9								
Approach Delay (s)	9.3	8.8	9.2	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.1											
Level of Service	A											
Intersection Capacity Utilization	44.9%			ICU Level of Service					A			
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	132	93	1195	96	73	600
Future Volume (vph)	132	93	1195	96	73	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1652		3383			3403
Flt Permitted	0.97		1.00			0.69
Satd. Flow (perm)	1652		3383			2348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	93	1195	96	73	600
RTOR Reduction (vph)	11	0	10	0	0	0
Lane Group Flow (vph)	214	0	1281	0	0	673
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	9.1		21.7			21.7
Effective Green, g (s)	9.1		21.7			21.7
Actuated g/C Ratio	0.21		0.51			0.51
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	351		1715			1190
v/s Ratio Prot	c0.13		c0.38			
v/s Ratio Perm						0.29
v/c Ratio	0.61		0.75			0.57
Uniform Delay, d1	15.2		8.4			7.3
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	3.0		3.0			1.9
Delay (s)	18.2		11.4			9.2
Level of Service	B		B			A
Approach Delay (s)	18.2		11.4			9.2
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			11.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.71			
Actuated Cycle Length (s)			42.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.8%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 PM No Build with Previously Permitted BCP

02/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	153	20	5	207	20	20	5	5	26	5	18
Future Volume (vph)	19	153	20	5	207	20	20	5	5	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		1.00			1.00			0.97			0.97	
Satd. Flow (prot)		1767			1778			1703			1667	
Flt Permitted		0.93			0.99			0.80			0.83	
Satd. Flow (perm)		1652			1756			1405			1427	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	153	20	5	207	20	20	5	5	26	5	18
RTOR Reduction (vph)	0	10	0	0	8	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	182	0	0	224	0	0	27	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.4			9.4	
Effective Green, g (s)		7.3			7.3			9.4			9.4	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		420			446			460			467	
v/s Ratio Prot												
v/s Ratio Perm		0.11			0.13			0.02			0.03	
v/c Ratio		0.43			0.50			0.06			0.08	
Uniform Delay, d1		9.0			9.1			6.6			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.9			0.1			0.1	
Delay (s)		9.7			10.0			6.7			6.7	
Level of Service		A			B			A			A	
Approach Delay (s)		9.7			10.0			6.7			6.7	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.26										
Actuated Cycle Length (s)		28.7			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		33.6%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	24	30	25	21	30
Future Volume (Veh/h)	30	24	30	25	21	30
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	24	30	25	21	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	114	42			55	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114	42			55	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	98			99	
cM capacity (veh/h)	870	1028			1550	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	54	55	51			
Volume Left	30	0	21			
Volume Right	24	25	0			
cSH	934	1700	1550			
Volume to Capacity	0.06	0.03	0.01			
Queue Length 95th (ft)	5	0	1			
Control Delay (s)	9.1	0.0	3.1			
Lane LOS	A		A			
Approach Delay (s)	9.1	0.0	3.1			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			19.4%	ICU Level of Service		A
Analysis Period (min)			15			

2: St Paul St & CPB Garage
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	31	26	30	30	21
Future Volume (Veh/h)	25	31	26	30	30	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	31	26	30	30	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					209	
pX, platoon unblocked						
vC, conflicting volume	122	40	51			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	40	51			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	858	1031	1555			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	56	56	51			
Volume Left	25	26	0			
Volume Right	31	0	21			
cSH	946	1555	1700			
Volume to Capacity	0.06	0.02	0.03			
Queue Length 95th (ft)	5	1	0			
Control Delay (s)	9.0	3.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization			19.7%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	56	43	71	43	33	42
Future Volume (vph)	56	43	71	43	33	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	56	43	71	43	33	42
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	99	114	75			
Volume Left (vph)	56	0	33			
Volume Right (vph)	43	43	0			
Hadj (s)	-0.11	-0.19	0.12			
Departure Headway (s)	4.2	4.0	4.4			
Degree Utilization, x	0.12	0.13	0.09			
Capacity (veh/h)	820	866	801			
Control Delay (s)	7.7	7.6	7.8			
Approach Delay (s)	7.7	7.6	7.8			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.7			
Level of Service			A			
Intersection Capacity Utilization			23.1%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	128	14	20	113	39	9	31	20	45	34	70
Future Volume (vph)	24	128	14	20	113	39	9	31	20	45	34	70
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	128	14	20	113	39	9	31	20	45	34	70
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	166	172	60	149								
Volume Left (vph)	24	20	9	45								
Volume Right (vph)	14	39	20	70								
Hadj (s)	0.01	-0.08	-0.14	-0.19								
Departure Headway (s)	4.6	4.5	4.8	4.6								
Degree Utilization, x	0.21	0.22	0.08	0.19								
Capacity (veh/h)	730	748	690	725								
Control Delay (s)	8.9	8.8	8.2	8.7								
Approach Delay (s)	8.9	8.8	8.2	8.7								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.7									
Level of Service			A									
Intersection Capacity Utilization			34.6%	ICU Level of Service					A			
Analysis Period (min)			15									

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	154	77	304	174	304	1283
Future Volume (vph)	154	77	304	174	304	1283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3389
Flt Permitted	0.95	1.00	1.00	1.00		0.80
Satd. Flow (perm)	1711	1531	1801	1531		2732
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	77	304	174	304	1283
RTOR Reduction (vph)	0	66	0	49	0	0
Lane Group Flow (vph)	154	11	304	125	0	1587
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	13.1	13.1	63.3	63.3		63.3
Effective Green, g (s)	13.1	13.1	63.3	63.3		63.3
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	253	226	1289	1096		1956
v/s Ratio Prot	c0.09		0.17			
v/s Ratio Perm		0.01		0.08		c0.58
v/c Ratio	0.61	0.05	0.24	0.11		0.81
Uniform Delay, d1	35.3	32.3	4.3	3.9		8.5
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		3.8
Delay (s)	39.4	32.4	4.7	4.1		12.3
Level of Service	D	C	A	A		B
Approach Delay (s)	37.0		4.5			12.3
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			13.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.78			
Actuated Cycle Length (s)			88.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			83.8%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	356	49	102	307	35	38
Future Volume (vph)	356	49	102	307	35	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1771			1778	1635	
Flt Permitted	1.00			0.70	0.98	
Satd. Flow (perm)	1771			1258	1635	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	356	49	102	307	35	38
RTOR Reduction (vph)	10	0	0	0	24	0
Lane Group Flow (vph)	395	0	0	409	49	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	18.9			18.9	18.3	
Effective Green, g (s)	18.9			18.9	18.3	
Actuated g/C Ratio	0.38			0.38	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	680			483	608	
v/s Ratio Prot	0.22				c0.03	
v/s Ratio Perm				c0.33		
v/c Ratio	0.58			0.85	0.08	
Uniform Delay, d1	12.0			13.8	10.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.3			12.9	0.3	
Delay (s)	13.3			26.7	10.3	
Level of Service	B			C	B	
Approach Delay (s)	13.3			26.7	10.3	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			19.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			49.2		Sum of lost time (s)	12.0
Intersection Capacity Utilization			62.8%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2026 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	182	91	181	380	0	115	0	105	54	338	76
Future Volume (vph)	0	182	91	181	380	0	115	0	105	54	338	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3327	
Flt Permitted		1.00	1.00	0.64	1.00		0.51		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1157	1801		917		1531	1711	3327	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	182	91	181	380	0	115	0	105	54	338	76
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	63	0	0	0
Lane Group Flow (vph)	0	182	31	181	380	0	115	0	42	54	414	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.5	15.5	15.5	15.5		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.5	15.5	15.5	15.5		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		610	519	392	610		365		609	681	1324	
v/s Ratio Prot		0.10			c0.21						0.12	
v/s Ratio Perm			0.02	0.16			c0.13		0.03	0.03		
v/c Ratio		0.30	0.06	0.46	0.62		0.32		0.07	0.08	0.31	
Uniform Delay, d1		11.1	10.2	11.8	12.7		9.5		8.5	8.5	9.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0	0.9	2.0		2.3		0.2	0.2	0.6	
Delay (s)		11.4	10.2	12.7	14.6		11.7		8.7	8.8	10.1	
Level of Service		B	B	B	B		B		A	A	B	
Approach Delay (s)		11.0			14.0			10.3			9.9	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.7			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			45.7			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			56.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	317	0	0	469	61	27	96	46	0	0	0
Future Volume (vph)	49	317	0	0	469	61	27	96	46	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.98		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1773		1711	1713				
Flt Permitted	0.30	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	549	1801			1773		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	317	0	0	469	61	27	96	46	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	29	0	0	0	0
Lane Group Flow (vph)	49	317	0	0	520	0	27	113	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.0	19.0			19.0		18.2	18.2				
Effective Green, g (s)	19.0	19.0			19.0		18.2	18.2				
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	212	695			684		632	633				
v/s Ratio Prot		0.18			c0.29			c0.07				
v/s Ratio Perm	0.09						0.02					
v/c Ratio	0.23	0.46			0.76		0.04	0.18				
Uniform Delay, d1	10.2	11.3			13.1		9.9	10.5				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.6	0.5			5.0		0.1	0.6				
Delay (s)	10.7	11.7			18.1		10.1	11.1				
Level of Service	B	B			B		B	B				
Approach Delay (s)		11.6			18.1			10.9			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		14.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.48										
Actuated Cycle Length (s)		49.2			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		55.4%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	323	43	45	460	16	30	97	46	23	218	31
Future Volume (vph)	18	323	43	45	460	16	30	97	46	23	218	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	0.99			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1769		1711	1792			1721			1765	
Flt Permitted		0.97		0.52	1.00			0.91			0.96	
Satd. Flow (perm)		1715		941	1792			1578			1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	323	43	45	460	16	30	97	46	23	218	31
RTOR Reduction (vph)	0	9	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	375	0	45	474	0	0	147	0	0	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		686		376	716			568			615	
v/s Ratio Prot				c0.26								
v/s Ratio Perm		0.22		0.05				0.09			c0.15	
v/c Ratio		0.55		0.12	0.66			0.26			0.43	
Uniform Delay, d1		11.5		9.5	12.2			11.3			12.1	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		3.1		0.6	4.8			1.1			2.2	
Delay (s)		14.6		10.1	17.0			12.4			14.3	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.6			16.4			12.4			14.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			15.0		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			50.0		Sum of lost time (s)				12.0			
Intersection Capacity Utilization			61.2%		ICU Level of Service				B			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2026 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	101	265	712	60	102	99	162	50	300	36
Future Volume (vph)	0	535	101	265	712	60	102	99	162	50	300	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	535	101	265	712	60	102	99	162	50	300	36
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	141	0	4	0
Lane Group Flow (vph)	0	629	0	265	772	0	102	99	21	0	382	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		489		233	776		221	232	197		384	
v/s Ratio Prot		0.36		0.10	c0.43		c0.06	0.05			c0.22	
v/s Ratio Perm				c0.40					0.01			
v/c Ratio		1.29		1.14	0.99		0.46	0.43	0.11		1.00	
Uniform Delay, d1		29.9		33.8	23.3		33.4	33.2	31.8		32.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		143.5		101.0	31.1		1.5	1.3	0.2		44.3	
Delay (s)		173.4		134.8	54.3		34.9	34.5	32.1		76.7	
Level of Service		F		F	D		C	C	C		E	
Approach Delay (s)		173.4			74.9			33.5			76.7	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM 2000 Control Delay			94.8			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			82.8			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			119.2%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	22	133	44	22	177	21	82	61	16	5	64	31
Future Volume (vph)	22	133	44	22	177	21	82	61	16	5	64	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	133	44	22	177	21	82	61	16	5	64	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	199	220	159	100								
Volume Left (vph)	22	22	82	5								
Volume Right (vph)	44	21	16	31								
Hadj (s)	-0.08	0.00	0.08	-0.14								
Departure Headway (s)	4.8	4.8	5.2	5.0								
Degree Utilization, x	0.27	0.30	0.23	0.14								
Capacity (veh/h)	698	697	641	642								
Control Delay (s)	9.5	9.9	9.7	8.9								
Approach Delay (s)	9.5	9.9	9.7	8.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.6											
Level of Service	A											
Intersection Capacity Utilization	37.3%			ICU Level of Service					A			
Analysis Period (min)	15											

12: St Paul St & College St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	108	21	15	172	47	55	117	18	12	42	11
Future Volume (vph)	25	108	21	15	172	47	55	117	18	12	42	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	108	21	15	172	47	55	117	18	12	42	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	154	234	190	65								
Volume Left (vph)	25	15	55	12								
Volume Right (vph)	21	47	18	11								
Hadj (s)	-0.02	-0.07	0.04	-0.03								
Departure Headway (s)	4.9	4.7	5.0	5.1								
Degree Utilization, x	0.21	0.31	0.26	0.09								
Capacity (veh/h)	688	722	673	634								
Control Delay (s)	9.1	9.7	9.7	8.6								
Approach Delay (s)	9.1	9.7	9.7	8.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.5											
Level of Service	A											
Intersection Capacity Utilization	38.4%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	352	181	82	357	98	5	174	64	47	111	8
Future Volume (vph)	10	352	181	82	357	98	5	174	64	47	111	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1742			1798	1531		1764	
Flt Permitted		0.99		0.26	1.00			0.99	1.00		0.89	
Satd. Flow (perm)		1703		466	1742			1791	1531		1587	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	352	181	82	357	98	5	174	64	47	111	8
RTOR Reduction (vph)	0	20	0	0	11	0	0	0	33	0	2	0
Lane Group Flow (vph)	0	523	0	82	444	0	0	179	31	0	164	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		31.4		31.4	31.4			42.4	42.4		42.4	
Effective Green, g (s)		32.4		31.4	32.4			43.4	43.4		43.4	
Actuated g/C Ratio		0.36		0.35	0.36			0.48	0.48		0.48	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		613		162	627			863	738		765	
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.31		0.18				0.10	0.02		c0.10	
v/c Ratio		0.85		0.51	0.71			0.21	0.04		0.21	
Uniform Delay, d1		26.6		23.2	24.7			13.4	12.3		13.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.1		2.5	3.7			0.5	0.1		0.1	
Delay (s)		37.7		25.6	28.4			13.9	12.4		13.6	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		37.7			28.0			13.5			13.6	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			27.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			81.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	267	65	53	375	84	67	121	42	34	40	17
Future Volume (vph)	3	267	65	53	375	84	67	121	42	34	40	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1748		1711	1751		1711	1731		1711	1720	
Flt Permitted	0.37	1.00		0.53	1.00		0.72	1.00		0.65	1.00	
Satd. Flow (perm)	670	1748		960	1751		1296	1731		1177	1720	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	267	65	53	375	84	67	121	42	34	40	17
RTOR Reduction (vph)	0	19	0	0	17	0	0	21	0	0	10	0
Lane Group Flow (vph)	3	313	0	53	442	0	67	142	0	34	47	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.1	17.1		17.1	17.1		18.2	18.2		18.2	18.2	
Effective Green, g (s)	17.1	17.1		17.1	17.1		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	242	631		347	633		498	666		452	661	
v/s Ratio Prot		0.18			c0.25			c0.08			0.03	
v/s Ratio Perm	0.00			0.06			0.05			0.03		
v/c Ratio	0.01	0.50		0.15	0.70		0.13	0.21		0.08	0.07	
Uniform Delay, d1	9.7	11.8		10.2	12.9		9.4	9.8		9.2	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.2	3.4		0.6	0.7		0.3	0.2	
Delay (s)	9.7	12.4		10.4	16.3		10.0	10.5		9.5	9.4	
Level of Service	A	B		B	B		B	B		A	A	
Approach Delay (s)		12.3			15.6			10.3			9.5	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			47.3			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			62.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	263	16	103	417	118	10	34	10	97	224	108
Future Volume (vph)	37	263	16	103	417	118	10	34	10	97	224	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1785		1711	1741			1740		1711	1801	1531
Flt Permitted	0.20	1.00		0.51	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1785		924	1741			1646		1210	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	263	16	103	417	118	10	34	10	97	224	108
RTOR Reduction (vph)	0	3	0	0	17	0	0	7	0	0	0	53
Lane Group Flow (vph)	37	276	0	103	518	0	0	47	0	97	224	55
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	583		301	568			570		657	918	780
v/s Ratio Prot		0.15			c0.30					0.01	c0.12	
v/s Ratio Perm	0.10			0.11				0.03		0.06		0.04
v/c Ratio	0.32	0.47		0.34	0.91			0.08		0.15	0.24	0.07
Uniform Delay, d1	15.5	16.4		15.6	19.8			13.5		8.0	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	2.7		3.1	21.4			0.3		0.1	0.6	0.2
Delay (s)	22.4	19.1		18.7	41.1			13.7		8.1	9.0	7.8
Level of Service	C	B		B	D			B		A	A	A
Approach Delay (s)		19.5			37.5			13.7			8.5	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			24.0			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			57.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	382	0	0	645	29	32	497	52	0	0	0
Future Volume (vph)	12	382	0	0	645	29	32	497	52	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1790		1711	1775				
Flt Permitted	0.20	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	364	1801			1790		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	382	0	0	645	29	32	497	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	382	0	0	672	0	32	545	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	31.0	31.0			31.0		24.4	24.4				
Effective Green, g (s)	32.0	32.0			32.0		25.4	25.4				
Actuated g/C Ratio	0.47	0.47			0.47		0.38	0.38				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	172	855			849		644	668				
v/s Ratio Prot		0.21			c0.38			c0.31				
v/s Ratio Perm	0.03						0.02					
v/c Ratio	0.07	0.45			0.79		0.05	0.82				
Uniform Delay, d1	9.6	11.8			14.9		13.3	18.9				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.4			5.1		0.0	7.6				
Delay (s)	9.8	12.2			20.0		13.4	26.5				
Level of Service	A	B			B		B	C				
Approach Delay (s)		12.1			20.0			25.8			0.0	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay		20.1			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		67.4			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		73.3%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	552	13	90	779	43	27	249	57	125	256	46
Future Volume (vph)	15	552	13	90	779	43	27	249	57	125	256	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1787			1752			1749	
Flt Permitted	0.15	1.00		0.34	1.00			0.94			0.70	
Satd. Flow (perm)	271	1794		611	1787			1661			1235	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	552	13	90	779	43	27	249	57	125	256	46
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	15	564	0	90	819	0	0	321	0	0	420	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	145	966		329	962			511			380	
v/s Ratio Prot		0.31			c0.46							
v/s Ratio Perm	0.06			0.15				0.19			c0.34	
v/c Ratio	0.10	0.58		0.27	0.85			0.63			1.11	
Uniform Delay, d1	7.3	10.1		8.1	12.8			19.3			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.4	2.6		2.0	9.4			2.4			77.8	
Delay (s)	8.8	12.7		10.2	22.2			21.7			100.3	
Level of Service	A	B		B	C			C			F	
Approach Delay (s)		12.6			21.0			21.7			100.3	
Approach LOS		B			C			C			F	
Intersection Summary												
HCM 2000 Control Delay			34.0			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			105.7%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	688	4	221	925	600	0	83	177	236	72	46
Future Volume (vph)	0	688	4	221	925	600	0	83	177	236	72	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1695	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	688	4	221	925	600	0	83	177	236	72	46
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	157	0	0	0
Lane Group Flow (vph)	0	691	0	221	925	600	0	83	20	236	118	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Effective Green, g (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Actuated g/C Ratio		0.33		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1144		290	1042	886		204	173	286	463	
v/s Ratio Prot		0.20		0.13	c0.51	0.39		c0.05		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.60		0.76	0.89	0.68		0.41	0.12	0.83	0.25	
Uniform Delay, d1		22.5		32.1	14.8	11.8		33.5	32.3	36.5	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.4		11.2	11.2	4.1		1.3	0.3	17.3	0.3	
Delay (s)		24.9		43.4	26.0	16.0		34.8	32.6	53.8	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.9			24.8			33.3			43.7	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			27.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			81.2				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			72.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	90	141	158	599	80
Future Volume (vph)	43	90	141	158	599	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.98			0.98	1.00	
Satd. Flow (prot)	1610			3342	3361	
Flt Permitted	0.98			0.61	1.00	
Satd. Flow (perm)	1610			2098	3361	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	90	141	158	599	80
RTOR Reduction (vph)	78	0	0	0	15	0
Lane Group Flow (vph)	55	0	0	299	664	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.9			24.9	24.9	
Effective Green, g (s)	5.9			24.9	24.9	
Actuated g/C Ratio	0.14			0.58	0.58	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	221			1220	1955	
v/s Ratio Prot	c0.03				c0.20	
v/s Ratio Perm				0.14		
v/c Ratio	0.25			0.25	0.34	
Uniform Delay, d1	16.5			4.4	4.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.6			0.5	0.5	
Delay (s)	17.1			4.8	5.1	
Level of Service	B			A	A	
Approach Delay (s)	17.1			4.8	5.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			6.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.32			
Actuated Cycle Length (s)			42.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	56	56	309	652	120
Future Volume (vph)	42	56	56	309	652	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2728	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	56	56	309	652	120
RTOR Reduction (vph)	0	51	0	0	19	0
Lane Group Flow (vph)	42	5	0	365	753	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		26.8	26.8	
Effective Green, g (s)	4.2	4.2		26.8	26.8	
Actuated g/C Ratio	0.10	0.10		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	149		1700	2082	
v/s Ratio Prot	c0.02				c0.23	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.04		0.21	0.36	
Uniform Delay, d1	17.9	17.6		3.5	3.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.7	17.7		3.8	4.4	
Level of Service	B	B		A	A	
Approach Delay (s)	18.1			3.8	4.4	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			43.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	43	21	73	67	5	23	31	39	14	27	20
Future Volume (vph)	20	43	21	73	67	5	23	31	39	14	27	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	43	21	73	67	5	23	31	39	14	27	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	84	145	93	61								
Volume Left (vph)	20	73	23	14								
Volume Right (vph)	21	5	39	20								
Hadj (s)	-0.07	0.11	-0.17	-0.12								
Departure Headway (s)	4.4	4.5	4.3	4.4								
Degree Utilization, x	0.10	0.18	0.11	0.07								
Capacity (veh/h)	790	768	782	758								
Control Delay (s)	7.8	8.4	7.9	7.8								
Approach Delay (s)	7.8	8.4	7.9	7.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.1											
Level of Service	A											
Intersection Capacity Utilization	28.5%			ICU Level of Service					A			
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2026 AM Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	42	507	118	116	1433
Future Volume (vph)	78	42	507	118	116	1433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1662		3324			3408
Flt Permitted	0.97		1.00			0.84
Satd. Flow (perm)	1662		3324			2877
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	42	507	118	116	1433
RTOR Reduction (vph)	37	0	27	0	0	0
Lane Group Flow (vph)	83	0	598	0	0	1549
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.1		25.8			25.8
Effective Green, g (s)	5.1		25.8			25.8
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	197		1999			1730
v/s Ratio Prot	c0.05		0.18			
v/s Ratio Perm						c0.54
v/c Ratio	0.42		0.30			0.90
Uniform Delay, d1	17.5		4.2			7.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.5		0.4			7.7
Delay (s)	19.0		4.5			15.0
Level of Service	B		A			B
Approach Delay (s)	19.0		4.5			15.0
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			12.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			42.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.6%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 AM Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	160	24	22	173	21	34	5	16	26	5	18
Future Volume (vph)	24	160	24	22	173	21	34	5	16	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.96			0.95	
Flt Protected		0.99			0.99			0.97			0.97	
Satd. Flow (prot)		1762			1768			1678			1667	
Flt Permitted		0.92			0.93			0.79			0.82	
Satd. Flow (perm)		1635			1657			1374			1408	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	160	24	22	173	21	34	5	16	26	5	18
RTOR Reduction (vph)	0	12	0	0	10	0	0	11	0	0	12	0
Lane Group Flow (vph)	0	196	0	0	206	0	0	44	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			9.5			9.5	
Effective Green, g (s)		7.2			7.2			9.5			9.5	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		410			415			454			466	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.12			c0.03			0.03	
v/c Ratio		0.48			0.50			0.10			0.08	
Uniform Delay, d1		9.2			9.2			6.6			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			0.9			0.1			0.1	
Delay (s)		10.0			10.1			6.7			6.7	
Level of Service		B			B			A			A	
Approach Delay (s)		10.0			10.1			6.7			6.7	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.27										
Actuated Cycle Length (s)		28.7			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		29.5%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

1: Pine St & Macy's Garage/CBP Garage
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	0	28	0	24	0	36	37	29	48	0	
Future Volume (Veh/h)	0	0	0	28	0	24	0	36	37	29	48	0	
Sign Control	Stop				Stop				Free		Free		
Grade	0%				0%				0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	0	28	0	24	0	36	37	29	48	0	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None								None				
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	184	179	48	160	160	54	48						73
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	184	179	48	160	160	54	48						73
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	100	96	100	98	100						98
cM capacity (veh/h)	747	701	1021	793	718	1012	1559						1527
Direction, Lane #	EB 1	WB 1	NB 1	SB 1									
Volume Total	0	52	73	77									
Volume Left	0	28	0	29									
Volume Right	0	24	37	0									
cSH	1700	881	1559	1527									
Volume to Capacity	0.00	0.06	0.00	0.02									
Queue Length 95th (ft)	0	5	0	1									
Control Delay (s)	0.0	9.3	0.0	2.9									
Lane LOS	A	A		A									
Approach Delay (s)	0.0	9.3	0.0	2.9									
Approach LOS	A	A											
Intersection Summary													
Average Delay			3.5										
Intersection Capacity Utilization			20.8%	ICU Level of Service					A				
Analysis Period (min)			15										

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	24	29	38	30	30	31
Future Volume (Veh/h)	24	29	38	30	30	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	29	38	30	30	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					208	
pX, platoon unblocked						
vC, conflicting volume	152	46	61			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	46	61			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	820	1024	1542			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	53	68	61			
Volume Left	24	38	0			
Volume Right	29	0	31			
cSH	920	1542	1700			
Volume to Capacity	0.06	0.02	0.04			
Queue Length 95th (ft)	5	2	0			
Control Delay (s)	9.2	4.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.2	4.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			20.3%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	64	31	51	69	40	92
Future Volume (vph)	64	31	51	69	40	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	31	51	69	40	92
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	95	120	132			
Volume Left (vph)	64	0	40			
Volume Right (vph)	31	69	0			
Hadj (s)	-0.03	-0.31	0.09			
Departure Headway (s)	4.4	4.0	4.3			
Degree Utilization, x	0.12	0.13	0.16			
Capacity (veh/h)	762	877	807			
Control Delay (s)	8.0	7.6	8.2			
Approach Delay (s)	8.0	7.6	8.2			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			25.8%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	82	97	17	20	107	158	9	30	20	31	39	32
Future Volume (vph)	82	97	17	20	107	158	9	30	20	31	39	32
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	82	97	17	20	107	158	9	30	20	31	39	32
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	196	285	59	102								
Volume Left (vph)	82	20	9	31								
Volume Right (vph)	17	158	20	32								
Hadj (s)	0.07	-0.28	-0.14	-0.09								
Departure Headway (s)	4.7	4.3	5.0	5.0								
Degree Utilization, x	0.26	0.34	0.08	0.14								
Capacity (veh/h)	722	803	642	650								
Control Delay (s)	9.3	9.4	8.5	8.8								
Approach Delay (s)	9.3	9.4	8.5	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.2											
Level of Service	A											
Intersection Capacity Utilization	47.4%			ICU Level of Service					A			
Analysis Period (min)	15											

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	159	786	464	158	588
Future Volume (vph)	145	159	786	464	158	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3385
Flt Permitted	0.95	1.00	1.00	1.00		0.60
Satd. Flow (perm)	1711	1531	1801	1531		2059
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	159	786	464	158	588
RTOR Reduction (vph)	0	136	0	131	0	0
Lane Group Flow (vph)	145	23	786	333	0	746
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.5	12.5	62.1	62.1		62.1
Effective Green, g (s)	12.5	12.5	62.1	62.1		62.1
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	246	220	1291	1097		1476
v/s Ratio Prot	c0.08		c0.44			
v/s Ratio Perm		0.01		0.22		0.36
v/c Ratio	0.59	0.10	0.61	0.30		0.51
Uniform Delay, d1	34.7	32.2	6.2	4.4		5.4
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.6	0.2	2.1	0.7		1.2
Delay (s)	38.2	32.4	8.3	5.1		6.7
Level of Service	D	C	A	A		A
Approach Delay (s)	35.2		7.1			6.7
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.61			
Actuated Cycle Length (s)			86.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			85.2%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	403	31	59	424	60	109
Future Volume (vph)	403	31	59	424	60	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1783			1790	1615	
Flt Permitted	1.00			0.88	0.98	
Satd. Flow (perm)	1783			1589	1615	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	403	31	59	424	60	109
RTOR Reduction (vph)	5	0	0	0	69	0
Lane Group Flow (vph)	429	0	0	483	100	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	19.9			19.9	18.3	
Effective Green, g (s)	19.9			19.9	18.3	
Actuated g/C Ratio	0.40			0.40	0.36	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	706			629	588	
v/s Ratio Prot	0.24				c0.06	
v/s Ratio Perm				c0.30		
v/c Ratio	0.61			0.77	0.17	
Uniform Delay, d1	12.0			13.1	10.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			5.6	0.6	
Delay (s)	13.5			18.8	11.4	
Level of Service	B			B	B	
Approach Delay (s)	13.5			18.8	11.4	
Approach LOS	B			B	B	
Intersection Summary						
HCM 2000 Control Delay		15.5		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.48				
Actuated Cycle Length (s)		50.2		Sum of lost time (s)		12.0
Intersection Capacity Utilization		73.7%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	306	104	190	386	0	177	0	282	94	282	45
Future Volume (vph)	0	306	104	190	386	0	177	0	282	94	282	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3351	
Flt Permitted		1.00	1.00	0.57	1.00		0.55		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1021	1801		998		1531	1711	3351	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	306	104	190	386	0	177	0	282	94	282	45
RTOR Reduction (vph)	0	0	68	0	0	0	0	0	171	0	0	0
Lane Group Flow (vph)	0	306	36	190	386	0	177	0	111	94	327	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		621	528	352	621		394		604	675	1322	
v/s Ratio Prot		0.17			c0.21						0.10	
v/s Ratio Perm			0.02	0.19			c0.18		0.07	0.05		
v/c Ratio		0.49	0.07	0.54	0.62		0.45		0.18	0.14	0.25	
Uniform Delay, d1		11.9	10.1	12.2	12.6		10.3		9.1	8.9	9.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.1	1.6	1.9		3.7		0.7	0.4	0.4	
Delay (s)		12.5	10.2	13.7	14.5		13.9		9.8	9.4	9.8	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		11.9			14.3			11.4			9.7	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.0			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			46.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			64.0%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	489	0	0	501	57	47	279	50	0	0	0
Future Volume (vph)	148	489	0	0	501	57	47	279	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1776		1711	1760				
Flt Permitted	0.28	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	506	1801			1776		1711	1760				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	148	489	0	0	501	57	47	279	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	11	0	0	0	0
Lane Group Flow (vph)	148	489	0	0	550	0	47	318	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.8	19.8			19.8		18.2	18.2				
Effective Green, g (s)	19.8	19.8			19.8		18.2	18.2				
Actuated g/C Ratio	0.40	0.40			0.40		0.36	0.36				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	200	713			703		622	640				
v/s Ratio Prot		0.27			c0.31			c0.18				
v/s Ratio Perm	0.29						0.03					
v/c Ratio	0.74	0.69			0.78		0.08	0.50				
Uniform Delay, d1	12.9	12.5			13.2		10.4	12.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	13.4	2.7			5.7		0.2	2.7				
Delay (s)	26.3	15.3			18.9		10.6	15.1				
Level of Service	C	B			B		B	B				
Approach Delay (s)		17.8			18.9			14.5			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		17.4			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		50.0			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		70.7%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	480	39	53	482	42	59	239	52	26	171	34
Future Volume (vph)	48	480	39	53	482	42	59	239	52	26	171	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1776		1711	1779			1750			1755	
Flt Permitted		0.83		0.39	1.00			0.90			0.93	
Satd. Flow (perm)		1476		698	1779			1593			1643	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	480	39	53	482	42	59	239	52	26	171	34
RTOR Reduction (vph)	0	5	0	0	6	0	0	13	0	0	12	0
Lane Group Flow (vph)	0	562	0	53	518	0	0	337	0	0	219	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		590		279	711			573			591	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.38		0.08				c0.21			0.13	
v/c Ratio		0.95		0.19	0.73			0.59			0.37	
Uniform Delay, d1		14.5		9.7	12.7			13.0			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		26.9		1.5	6.5			4.4			1.8	
Delay (s)		41.4		11.2	19.2			17.4			13.6	
Level of Service		D		B	B			B			B	
Approach Delay (s)		41.4			18.4			17.4			13.6	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			25.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			102.2%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	668	76	196	786	120	203	339	251	36	154	16
Future Volume (vph)	0	668	76	196	786	120	203	339	251	36	154	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1776		1711	1765		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1776		248	1765		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	668	76	196	786	120	203	339	251	36	154	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	199	0	3	0
Lane Group Flow (vph)	0	740	0	196	906	0	203	339	52	0	203	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Effective Green, g (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Actuated g/C Ratio		0.27		0.42	0.42		0.21	0.21	0.21		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		472		223	737		354	373	317		294	
v/s Ratio Prot		c0.42		0.07	c0.51		0.12	c0.19			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.57		0.88	1.23		0.57	0.91	0.16		0.69	
Uniform Delay, d1		31.7		35.0	25.2		30.8	33.5	28.1		33.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		265.3		29.9	114.9		2.2	25.1	0.2		6.6	
Delay (s)		297.0		65.0	140.1		33.1	58.5	28.4		40.5	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		297.0			126.7			42.5			40.5	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			141.5				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.19									
Actuated Cycle Length (s)			86.4				Sum of lost time (s)		24.0			
Intersection Capacity Utilization			137.3%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	157	102	36	136	16	33	78	22	21	106	54
Future Volume (vph)	25	157	102	36	136	16	33	78	22	21	106	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	157	102	36	136	16	33	78	22	21	106	54
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	284	188	133	181								
Volume Left (vph)	25	36	33	21								
Volume Right (vph)	102	16	22	54								
Hadj (s)	-0.16	0.02	-0.02	-0.12								
Departure Headway (s)	4.9	5.2	5.4	5.2								
Degree Utilization, x	0.39	0.27	0.20	0.26								
Capacity (veh/h)	690	641	593	628								
Control Delay (s)	10.9	10.1	9.7	10.1								
Approach Delay (s)	10.9	10.1	9.7	10.1								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay	10.3											
Level of Service	B											
Intersection Capacity Utilization	37.9%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	133	44	27	96	39	54	125	44	36	88	35
Future Volume (vph)	20	133	44	27	96	39	54	125	44	36	88	35
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	133	44	27	96	39	54	125	44	36	88	35
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	197	162	223	159								
Volume Left (vph)	20	27	54	36								
Volume Right (vph)	44	39	44	35								
Hadj (s)	-0.08	-0.08	-0.04	-0.05								
Departure Headway (s)	5.1	5.1	5.0	5.1								
Degree Utilization, x	0.28	0.23	0.31	0.23								
Capacity (veh/h)	653	641	656	642								
Control Delay (s)	10.0	9.6	10.3	9.6								
Approach Delay (s)	10.0	9.6	10.3	9.6								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay				9.9								
Level of Service				A								
Intersection Capacity Utilization				37.5%	ICU Level of Service			A				
Analysis Period (min)				15								

13: Pine St & Main St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	308	120	67	428	81	166	120	43	115	222	21
Future Volume (vph)	15	308	120	67	428	81	166	120	43	115	222	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.98			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1758			1750	1531		1758	
Flt Permitted		0.83		0.31	1.00			0.63	1.00		0.80	
Satd. Flow (perm)		1441		561	1758			1141	1531		1432	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	308	120	67	428	81	166	120	43	115	222	21
RTOR Reduction (vph)	0	15	0	0	8	0	0	0	21	0	2	0
Lane Group Flow (vph)	0	428	0	67	501	0	0	286	22	0	356	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		29.7		29.7	29.7			44.1	44.1		44.1	
Effective Green, g (s)		30.7		29.7	30.7			45.1	45.1		45.1	
Actuated g/C Ratio		0.34		0.33	0.34			0.50	0.50		0.50	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		491		185	599			571	767		717	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.30		0.12				c0.25	0.01		0.25	
v/c Ratio		0.87		0.36	0.84			0.50	0.03		0.50	
Uniform Delay, d1		27.8		22.9	27.3			15.0	11.4		14.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		15.5		1.2	9.9			3.1	0.1		0.5	
Delay (s)		43.3		24.2	37.2			18.1	11.4		15.5	
Level of Service		D		C	D			B	B		B	
Approach Delay (s)		43.3			35.7			17.2			15.5	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			29.9			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			70.9%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	343	81	57	338	81	98	71	72	81	114	13
Future Volume (vph)	15	343	81	57	338	81	98	71	72	81	114	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.92		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1749		1711	1748		1711	1665		1711	1773	
Flt Permitted	0.42	1.00		0.41	1.00		0.68	1.00		0.67	1.00	
Satd. Flow (perm)	748	1749		736	1748		1216	1665		1199	1773	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	343	81	57	338	81	98	71	72	81	114	13
RTOR Reduction (vph)	0	18	0	0	19	0	0	44	0	0	7	0
Lane Group Flow (vph)	15	406	0	57	400	0	98	99	0	81	120	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.2	16.2		16.2	16.2		18.3	18.3		18.3	18.3	
Effective Green, g (s)	16.2	16.2		16.2	16.2		18.3	18.3		18.3	18.3	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	609		256	608		478	655		471	697	
v/s Ratio Prot		c0.23			0.23			0.06			0.07	
v/s Ratio Perm	0.02			0.08			c0.08			0.07		
v/c Ratio	0.06	0.67		0.22	0.66		0.21	0.15		0.17	0.17	
Uniform Delay, d1	10.1	12.9		10.7	12.8		9.3	9.1		9.2	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	2.8		0.4	2.6		1.0	0.5		0.8	0.5	
Delay (s)	10.2	15.6		11.1	15.4		10.3	9.6		10.0	9.7	
Level of Service	B	B		B	B		B	A		A	A	
Approach Delay (s)		15.4			14.9			9.9			9.8	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			13.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			46.5			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			59.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	434	36	85	480	159	6	118	44	264	346	105
Future Volume (vph)	90	434	36	85	480	159	6	118	44	264	346	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1780		1711	1733			1734		1711	1801	1531
Flt Permitted	0.20	1.00		0.27	1.00			0.98		0.54	1.00	1.00
Satd. Flow (perm)	360	1780		483	1733			1709		976	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	434	36	85	480	159	6	118	44	264	346	105
RTOR Reduction (vph)	0	5	0	0	20	0	0	21	0	0	0	53
Lane Group Flow (vph)	90	465	0	85	619	0	0	147	0	264	346	53
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	593		161	577			541		561	900	765
v/s Ratio Prot		0.26			c0.36					c0.05	0.19	
v/s Ratio Perm	0.25			0.18				0.09		c0.19		0.03
v/c Ratio	0.75	0.78		0.53	1.07			0.27		0.47	0.38	0.07
Uniform Delay, d1	17.8	18.1		16.2	20.0			15.3		9.4	9.3	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	34.5	10.0		11.8	58.5			1.2		0.6	1.2	0.2
Delay (s)	52.2	28.1		28.0	78.5			16.6		10.0	10.5	7.9
Level of Service	D	C		C	E			B		B	B	A
Approach Delay (s)		32.0			72.6			16.6			10.0	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			37.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			84.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	720	0	0	612	40	37	273	101	0	0	0
Future Volume (vph)	53	720	0	0	612	40	37	273	101	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1786		1711	1728				
Flt Permitted	0.26	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	467	1801			1786		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	720	0	0	612	40	37	273	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	53	720	0	0	649	0	37	356	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	30.1	30.1			30.1		18.5	18.5				
Effective Green, g (s)	31.1	31.1			31.1		19.5	19.5				
Actuated g/C Ratio	0.51	0.51			0.51		0.32	0.32				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	239	924			916		550	556				
v/s Ratio Prot		c0.40			0.36			c0.21				
v/s Ratio Perm	0.11						0.02					
v/c Ratio	0.22	0.78			0.71		0.07	0.64				
Uniform Delay, d1	8.1	12.0			11.3		14.2	17.6				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.5	4.2			2.5		0.1	2.5				
Delay (s)	8.6	16.2			13.8		14.3	20.1				
Level of Service	A	B			B		B	C				
Approach Delay (s)		15.7			13.8			19.6			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		15.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.73										
Actuated Cycle Length (s)		60.6			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		71.8%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	935	44	82	858	84	32	354	58	85	282	29
Future Volume (vph)	38	935	44	82	858	84	32	354	58	85	282	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1789		1711	1777			1763			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.70	
Satd. Flow (perm)	206	1789		206	1777			1678			1245	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	935	44	82	858	84	32	354	58	85	282	29
RTOR Reduction (vph)	0	3	0	0	6	0	0	8	0	0	4	0
Lane Group Flow (vph)	38	976	0	82	936	0	0	436	0	0	392	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	963		110	956			516			383	
v/s Ratio Prot		c0.55			0.53							
v/s Ratio Perm	0.18			0.40				0.26			c0.31	
v/c Ratio	0.35	1.01		0.75	0.98			0.84			1.02	
Uniform Delay, d1	8.5	15.0		11.6	14.7			21.0			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.4	32.5		36.4	24.6			12.0			52.0	
Delay (s)	16.9	47.5		47.9	39.2			33.1			74.5	
Level of Service	B	D		D	D			C			E	
Approach Delay (s)		46.3			39.9			33.1			74.5	
Approach LOS		D			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			45.9			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			112.4%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	822	8	219	967	728	0	133	439	475	131	11
Future Volume (vph)	0	822	8	219	967	728	0	133	439	475	131	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3416		1711	1801	1531		1801	1531	3319	1780	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3416		1711	1801	1531		1801	1531	3319	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	822	8	219	967	728	0	133	439	475	131	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	829	0	219	967	728	0	133	140	475	142	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.9	47.1	47.1		13.1	13.1	7.0	26.1	
Effective Green, g (s)		27.2		13.9	47.1	47.1		13.1	13.1	7.0	26.1	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.31	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1090		279	995	846		276	235	272	545	
v/s Ratio Prot		0.24		0.13	c0.54	0.48		0.07		c0.14	0.08	
v/s Ratio Perm									c0.09			
v/c Ratio		0.76		0.78	0.97	0.86		0.48	0.60	1.75	0.26	
Uniform Delay, d1		26.1		34.2	18.4	16.2		32.9	33.6	39.1	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.0		13.5	22.5	11.1		1.3	4.0	350.7	0.3	
Delay (s)		31.1		47.7	40.9	27.4		34.3	37.6	389.8	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		31.1			36.5			36.8			305.3	
Approach LOS		C			D			D			F	
Intersection Summary												
HCM 2000 Control Delay			77.6				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			85.2				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			86.4%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	149	117	441	612	101
Future Volume (vph)	65	149	117	441	612	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.91			1.00	0.98	
Flt Protected	0.99			0.99	1.00	
Satd. Flow (prot)	1607			3386	3349	
Flt Permitted	0.99			0.71	1.00	
Satd. Flow (perm)	1607			2426	3349	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	149	117	441	612	101
RTOR Reduction (vph)	105	0	0	0	20	0
Lane Group Flow (vph)	109	0	0	558	693	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.9			21.7	21.7	
Effective Green, g (s)	6.9			21.7	21.7	
Actuated g/C Ratio	0.17			0.53	0.53	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	273			1296	1789	
v/s Ratio Prot	c0.07				0.21	
v/s Ratio Perm				c0.23		
v/c Ratio	0.40			0.43	0.39	
Uniform Delay, d1	15.0			5.7	5.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.0			1.0	0.6	
Delay (s)	16.0			6.8	6.2	
Level of Service	B			A	A	
Approach Delay (s)	16.0			6.8	6.2	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.8		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			40.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			63.5%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	106	65	103	397	723	77
Future Volume (vph)	106	65	103	397	723	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2419	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	65	103	397	723	77
RTOR Reduction (vph)	0	55	0	0	12	0
Lane Group Flow (vph)	106	10	0	500	788	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.8	6.8		24.1	24.1	
Effective Green, g (s)	6.8	6.8		24.1	24.1	
Actuated g/C Ratio	0.16	0.16		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	271	242		1358	1894	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.01		0.21		
v/c Ratio	0.39	0.04		0.37	0.42	
Uniform Delay, d1	16.2	15.3		5.2	5.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.1		0.8	0.7	
Delay (s)	17.1	15.4		6.0	6.1	
Level of Service	B	B		A	A	
Approach Delay (s)	16.5			6.0	6.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.41			
Actuated Cycle Length (s)			42.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			57.3%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	79	23	52	74	5	30	43	72	12	27	20
Future Volume (vph)	20	79	23	52	74	5	30	43	72	12	27	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	79	23	52	74	5	30	43	72	12	27	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	122	131	145	59								
Volume Left (vph)	20	52	30	12								
Volume Right (vph)	23	5	72	20								
Hadj (s)	-0.05	0.09	-0.22	-0.13								
Departure Headway (s)	4.5	4.6	4.3	4.5								
Degree Utilization, x	0.15	0.17	0.18	0.07								
Capacity (veh/h)	762	736	779	733								
Control Delay (s)	8.3	8.5	8.3	7.9								
Approach Delay (s)	8.3	8.5	8.3	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.3											
Level of Service	A											
Intersection Capacity Utilization	31.6%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	132	72	1195	96	59	600
Future Volume (vph)	132	72	1195	96	59	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1661		3383			3406
Flt Permitted	0.97		1.00			0.74
Satd. Flow (perm)	1661		3383			2543
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	72	1195	96	59	600
RTOR Reduction (vph)	11	0	10	0	0	0
Lane Group Flow (vph)	193	0	1281	0	0	659
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	8.6		22.1			22.1
Effective Green, g (s)	8.6		22.1			22.1
Actuated g/C Ratio	0.20		0.52			0.52
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	334		1750			1316
v/s Ratio Prot	c0.12		c0.38			
v/s Ratio Perm						0.26
v/c Ratio	0.58		0.73			0.50
Uniform Delay, d1	15.4		8.0			6.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	2.4		2.7			1.4
Delay (s)	17.8		10.8			8.1
Level of Service	B		B			A
Approach Delay (s)	17.8		10.8			8.1
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			10.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			42.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			81.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	116	26	31	169	20	34	5	15	26	5	18
Future Volume (vph)	19	116	26	31	169	20	34	5	15	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.96			0.95	
Flt Protected		0.99			0.99			0.97			0.97	
Satd. Flow (prot)		1751			1766			1680			1667	
Flt Permitted		0.92			0.92			0.79			0.82	
Satd. Flow (perm)		1621			1633			1371			1409	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	116	26	31	169	20	34	5	15	26	5	18
RTOR Reduction (vph)	0	17	0	0	9	0	0	10	0	0	12	0
Lane Group Flow (vph)	0	144	0	0	211	0	0	44	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.4			7.4			9.5			9.5	
Effective Green, g (s)		7.4			7.4			9.5			9.5	
Actuated g/C Ratio		0.26			0.26			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		415			418			450			463	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.13			c0.03			0.03	
v/c Ratio		0.35			0.50			0.10			0.08	
Uniform Delay, d1		8.8			9.2			6.7			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			1.0			0.1			0.1	
Delay (s)		9.3			10.1			6.8			6.8	
Level of Service		A			B			A			A	
Approach Delay (s)		9.3			10.1			6.8			6.8	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.1			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.28										
Actuated Cycle Length (s)		28.9			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		30.8%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

Appendix G – Full Build Intersection Capacity Analysis

1: Pine St & Macy's Garage/CPB Garage
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	10	32	0	26	14	30	43	35	30	11
Future Volume (Veh/h)	8	0	10	32	0	26	14	30	43	35	30	11
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	0	10	32	0	26	14	30	43	35	30	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	211	206	36	195	190	52	41	73				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	211	206	36	195	190	52	41	73				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	99	100	99	96	100	97	99	98				
cM capacity (veh/h)	709	668	1037	739	682	1016	1568	1527				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	18	58	87	76								
Volume Left	8	32	14	35								
Volume Right	10	26	43	11								
cSH	861	842	1568	1527								
Volume to Capacity	0.02	0.07	0.01	0.02								
Queue Length 95th (ft)	2	6	1	2								
Control Delay (s)	9.3	9.6	1.2	3.5								
Lane LOS	A	A	A	A								
Approach Delay (s)	9.3	9.6	1.2	3.5								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.6									
Intersection Capacity Utilization			21.0%	ICU Level of Service					A			
Analysis Period (min)			15									

2: St Paul St & CPB Garage
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	22	31	30	30	25
Future Volume (Veh/h)	18	22	31	30	30	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	18	22	31	30	30	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					209	
pX, platoon unblocked						
vC, conflicting volume	134	42	55			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134	42	55			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	98	98			
cM capacity (veh/h)	842	1028	1550			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	40	61	55			
Volume Left	18	31	0			
Volume Right	22	0	25			
cSH	935	1550	1700			
Volume to Capacity	0.04	0.02	0.03			
Queue Length 95th (ft)	3	2	0			
Control Delay (s)	9.0	3.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			20.0%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	54	42	102	42	43	43
Future Volume (vph)	54	42	102	42	43	43
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	54	42	102	42	43	43
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	96	144	86			
Volume Left (vph)	54	0	43			
Volume Right (vph)	42	42	0			
Hadj (s)	-0.12	-0.14	0.13			
Departure Headway (s)	4.3	4.1	4.4			
Degree Utilization, x	0.11	0.16	0.11			
Capacity (veh/h)	797	854	794			
Control Delay (s)	7.8	7.9	7.9			
Approach Delay (s)	7.8	7.9	7.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			28.1%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	23	125	19	20	111	38	9	41	20	44	43	68
Future Volume (vph)	23	125	19	20	111	38	9	41	20	44	43	68
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	23	125	19	20	111	38	9	41	20	44	43	68
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	167	169	70	155								
Volume Left (vph)	23	20	9	44								
Volume Right (vph)	19	38	20	68								
Hadj (s)	-0.01	-0.08	-0.11	-0.17								
Departure Headway (s)	4.6	4.6	4.8	4.6								
Degree Utilization, x	0.22	0.21	0.09	0.20								
Capacity (veh/h)	725	738	686	720								
Control Delay (s)	8.9	8.8	8.3	8.8								
Approach Delay (s)	8.9	8.8	8.3	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.8									
Level of Service			A									
Intersection Capacity Utilization			34.8%	ICU Level of Service					A			
Analysis Period (min)			15									

5: Battery St/Park St & Pearl St
City Place Burlington Development

2021 AM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	150	75	297	169	303	1253
Future Volume (vph)	150	75	297	169	303	1253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3388
Flt Permitted	0.95	1.00	1.00	1.00		0.80
Satd. Flow (perm)	1711	1531	1801	1531		2732
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	75	297	169	303	1253
RTOR Reduction (vph)	0	64	0	48	0	0
Lane Group Flow (vph)	150	11	297	121	0	1556
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.9	12.9	63.4	63.4		63.4
Effective Green, g (s)	12.9	12.9	63.4	63.4		63.4
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	249	223	1293	1099		1961
v/s Ratio Prot	c0.09		0.16			
v/s Ratio Perm		0.01		0.08		c0.57
v/c Ratio	0.60	0.05	0.23	0.11		0.79
Uniform Delay, d1	35.3	32.4	4.2	3.8		8.2
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		3.4
Delay (s)	39.4	32.5	4.6	4.0		11.6
Level of Service	D	C	A	A		B
Approach Delay (s)	37.1		4.4			11.6
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			12.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.76			
Actuated Cycle Length (s)			88.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.4%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	345	55	101	298	36	38
Future Volume (vph)	345	55	101	298	36	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1767			1778	1636	
Flt Permitted	1.00			0.70	0.98	
Satd. Flow (perm)	1767			1261	1636	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	345	55	101	298	36	38
RTOR Reduction (vph)	12	0	0	0	24	0
Lane Group Flow (vph)	388	0	0	399	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	18.6			18.6	18.3	
Effective Green, g (s)	18.6			18.6	18.3	
Actuated g/C Ratio	0.38			0.38	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	672			479	612	
v/s Ratio Prot	0.22				c0.03	
v/s Ratio Perm				c0.32		
v/c Ratio	0.58			0.83	0.08	
Uniform Delay, d1	12.0			13.7	9.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.2			11.8	0.3	
Delay (s)	13.2			25.5	10.1	
Level of Service	B			C	B	
Approach Delay (s)	13.2			25.5	10.1	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay		18.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.46				
Actuated Cycle Length (s)		48.9		Sum of lost time (s)		12.0
Intersection Capacity Utilization		62.1%		ICU Level of Service		B
Analysis Period (min)		15				
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	177	88	184	371	0	112	0	94	52	334	74
Future Volume (vph)	0	177	88	184	371	0	112	0	94	52	334	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3328	
Flt Permitted		1.00	1.00	0.65	1.00		0.51		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1162	1801		923		1531	1711	3328	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	177	88	184	371	0	112	0	94	52	334	74
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	56	0	0	0
Lane Group Flow (vph)	0	177	30	184	371	0	112	0	38	52	408	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		605	514	390	605		369		612	684	1331	
v/s Ratio Prot		0.10			c0.21						c0.12	
v/s Ratio Perm			0.02	0.16			0.12		0.02	0.03		
v/c Ratio		0.29	0.06	0.47	0.61		0.30		0.06	0.08	0.31	
Uniform Delay, d1		11.1	10.2	11.9	12.6		9.3		8.4	8.4	9.3	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0	0.9	1.8		2.1		0.2	0.2	0.6	
Delay (s)		11.4	10.3	12.8	14.5		11.4		8.6	8.7	9.9	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		11.0			13.9			10.1			9.8	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			45.5			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			55.6%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	302	0	0	466	59	27	93	45	0	0	0
Future Volume (vph)	48	302	0	0	466	59	27	93	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.98		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1773		1711	1713				
Flt Permitted	0.31	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	557	1801			1773		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	302	0	0	466	59	27	93	45	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	28	0	0	0	0
Lane Group Flow (vph)	48	302	0	0	516	0	27	110	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	18.9	18.9			18.9		18.2	18.2				
Effective Green, g (s)	18.9	18.9			18.9		18.2	18.2				
Actuated g/C Ratio	0.38	0.38			0.38		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	214	693			682		634	634				
v/s Ratio Prot		0.17			c0.29			c0.06				
v/s Ratio Perm	0.09						0.02					
v/c Ratio	0.22	0.44			0.76		0.04	0.17				
Uniform Delay, d1	10.2	11.2			13.1		9.9	10.4				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.5	0.4			4.8		0.1	0.6				
Delay (s)	10.7	11.6			17.9		10.0	11.0				
Level of Service	B	B			B		B	B				
Approach Delay (s)		11.5			17.9			10.8			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		14.6			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.47										
Actuated Cycle Length (s)		49.1			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		54.9%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	309	43	44	456	15	30	94	45	22	212	30
Future Volume (vph)	16	309	43	44	456	15	30	94	45	22	212	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1768		1711	1792			1721			1766	
Flt Permitted		0.97		0.54	1.00			0.91			0.97	
Satd. Flow (perm)		1720		967	1792			1577			1713	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	309	43	44	456	15	30	94	45	22	212	30
RTOR Reduction (vph)	0	10	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	358	0	44	469	0	0	143	0	0	255	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		688		386	716			567			616	
v/s Ratio Prot					c0.26							
v/s Ratio Perm		0.21		0.05				0.09			c0.15	
v/c Ratio		0.52		0.11	0.65			0.25			0.41	
Uniform Delay, d1		11.4		9.4	12.2			11.3			12.0	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		2.8		0.6	4.6			1.1			2.0	
Delay (s)		14.2		10.0	16.8			12.3			14.1	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.2			16.2			12.3			14.1	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			14.7			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			58.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	515	98	257	701	58	99	96	158	49	292	35
Future Volume (vph)	0	515	98	257	701	58	99	96	158	49	292	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	515	98	257	701	58	99	96	158	49	292	35
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	138	0	4	0
Lane Group Flow (vph)	0	606	0	257	759	0	99	96	20	0	372	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.6	10.6	10.6		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		490		233	777		219	230	196		384	
v/s Ratio Prot		0.34		0.09	c0.43		c0.06	0.05			c0.21	
v/s Ratio Perm				c0.38					0.01			
v/c Ratio		1.24		1.10	0.98		0.45	0.42	0.10		0.97	
Uniform Delay, d1		29.9		33.8	22.9		33.4	33.2	31.9		32.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		123.0		89.3	27.1		1.5	1.2	0.2		37.3	
Delay (s)		152.8		123.0	50.0		34.8	34.4	32.1		69.4	
Level of Service		F		F	D		C	C	C		E	
Approach Delay (s)		152.8			68.5			33.5			69.4	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM 2000 Control Delay			85.3			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			82.7			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			116.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	21	129	42	21	172	35	79	77	15	5	64	30
Future Volume (vph)	21	129	42	21	172	35	79	77	15	5	64	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	129	42	21	172	35	79	77	15	5	64	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	192	228	171	99								
Volume Left (vph)	21	21	79	5								
Volume Right (vph)	42	35	15	30								
Hadj (s)	-0.08	-0.04	0.07	-0.14								
Departure Headway (s)	4.8	4.8	5.2	5.1								
Degree Utilization, x	0.26	0.31	0.25	0.14								
Capacity (veh/h)	690	698	642	637								
Control Delay (s)	9.5	10.0	9.8	8.9								
Approach Delay (s)	9.5	10.0	9.8	8.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.6											
Level of Service	A											
Intersection Capacity Utilization	38.3%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	105	20	15	168	46	68	118	17	12	43	11
Future Volume (vph)	24	105	20	15	168	46	68	118	17	12	43	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	105	20	15	168	46	68	118	17	12	43	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	149	229	203	66								
Volume Left (vph)	24	15	68	12								
Volume Right (vph)	20	46	17	11								
Hadj (s)	-0.01	-0.07	0.05	-0.03								
Departure Headway (s)	4.9	4.7	5.0	5.1								
Degree Utilization, x	0.20	0.30	0.28	0.09								
Capacity (veh/h)	682	715	676	634								
Control Delay (s)	9.1	9.7	9.9	8.6								
Approach Delay (s)	9.1	9.7	9.9	8.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	9.5											
Level of Service	A											
Intersection Capacity Utilization	38.9%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2021 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	342	176	80	346	106	5	176	62	47	109	8
Future Volume (vph)	10	342	176	80	346	106	5	176	62	47	109	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.96			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1737			1798	1531		1764	
Flt Permitted		0.99		0.26	1.00			0.99	1.00		0.89	
Satd. Flow (perm)		1703		465	1737			1791	1531		1585	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	342	176	80	346	106	5	176	62	47	109	8
RTOR Reduction (vph)	0	20	0	0	12	0	0	0	32	0	2	0
Lane Group Flow (vph)	0	508	0	80	440	0	0	181	30	0	162	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		30.6		30.6	30.6			43.2	43.2		43.2	
Effective Green, g (s)		31.6		30.6	31.6			44.2	44.2		44.2	
Actuated g/C Ratio		0.35		0.34	0.35			0.49	0.49		0.49	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		597		158	609			879	751		778	
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.30		0.17				0.10	0.02		c0.10	
v/c Ratio		0.85		0.51	0.72			0.21	0.04		0.21	
Uniform Delay, d1		27.0		23.7	25.4			13.0	11.9		13.0	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.2		2.5	4.2			0.5	0.1		0.1	
Delay (s)		38.2		26.2	29.6			13.5	12.0		13.1	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		38.2			29.1			13.1			13.1	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			27.9			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			80.1%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	260	64	52	374	92	65	126	41	35	40	16
Future Volume (vph)	3	260	64	52	374	92	65	126	41	35	40	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1747		1711	1747		1711	1734		1711	1723	
Flt Permitted	0.36	1.00		0.54	1.00		0.72	1.00		0.65	1.00	
Satd. Flow (perm)	656	1747		979	1747		1297	1734		1173	1723	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	260	64	52	374	92	65	126	41	35	40	16
RTOR Reduction (vph)	0	19	0	0	19	0	0	20	0	0	10	0
Lane Group Flow (vph)	3	305	0	52	447	0	65	147	0	35	46	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.2	17.2		17.2	17.2		18.2	18.2		18.2	18.2	
Effective Green, g (s)	17.2	17.2		17.2	17.2		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	633		355	633		498	665		450	661	
v/s Ratio Prot		0.17			c0.26			c0.08			0.03	
v/s Ratio Perm	0.00			0.05			0.05			0.03		
v/c Ratio	0.01	0.48		0.15	0.71		0.13	0.22		0.08	0.07	
Uniform Delay, d1	9.7	11.7		10.2	12.9		9.5	9.8		9.3	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.2	3.6		0.5	0.8		0.3	0.2	
Delay (s)	9.7	12.2		10.4	16.5		10.0	10.6		9.6	9.4	
Level of Service	A	B		B	B		B	B		A	A	
Approach Delay (s)		12.2			15.9			10.4			9.5	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			47.4			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			62.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	257	16	100	426	114	10	33	10	95	218	105
Future Volume (vph)	36	257	16	100	426	114	10	33	10	95	218	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1785		1711	1744			1738		1711	1801	1531
Flt Permitted	0.20	1.00		0.52	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1785		939	1744			1645		1212	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	257	16	100	426	114	10	33	10	95	218	105
RTOR Reduction (vph)	0	4	0	0	16	0	0	7	0	0	0	51
Lane Group Flow (vph)	36	269	0	100	524	0	0	46	0	95	218	54
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	583		306	569			569		658	918	780
v/s Ratio Prot		0.15			c0.30					0.01	c0.12	
v/s Ratio Perm	0.10			0.11				0.03		0.06		0.03
v/c Ratio	0.31	0.46		0.33	0.92			0.08		0.14	0.24	0.07
Uniform Delay, d1	15.4	16.3		15.5	19.8			13.5		8.0	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	6.7	2.6		2.8	22.5			0.3		0.1	0.6	0.2
Delay (s)	22.1	18.9		18.4	42.3			13.7		8.1	9.0	7.8
Level of Service	C	B		B	D			B		A	A	A
Approach Delay (s)		19.3			38.6			13.7			8.5	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			24.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			57.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	374	0	0	646	28	31	482	50	0	0	0
Future Volume (vph)	12	374	0	0	646	28	31	482	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1791		1711	1775				
Flt Permitted	0.20	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	368	1801			1791		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	374	0	0	646	28	31	482	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	374	0	0	672	0	31	528	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	30.8	30.8			30.8		23.9	23.9				
Effective Green, g (s)	31.8	31.8			31.8		24.9	24.9				
Actuated g/C Ratio	0.48	0.48			0.48		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	175	858			853		638	662				
v/s Ratio Prot		0.21			c0.38			c0.30				
v/s Ratio Perm	0.03						0.02					
v/c Ratio	0.07	0.44			0.79		0.05	0.80				
Uniform Delay, d1	9.4	11.5			14.6		13.3	18.6				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.4			4.9		0.0	6.6				
Delay (s)	9.6	11.9			19.5		13.4	25.3				
Level of Service	A	B			B		B	C				
Approach Delay (s)		11.8			19.5			24.6			0.0	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay		19.4			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.79										
Actuated Cycle Length (s)		66.7			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		72.4%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	539	13	87	777	41	27	241	56	121	248	45
Future Volume (vph)	14	539	13	87	777	41	27	241	56	121	248	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1787			1751			1749	
Flt Permitted	0.15	1.00		0.35	1.00			0.94			0.71	
Satd. Flow (perm)	276	1794		629	1787			1662			1252	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	539	13	87	777	41	27	241	56	121	248	45
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	14	551	0	87	815	0	0	312	0	0	407	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	148	966		338	962			511			385	
v/s Ratio Prot		0.31			c0.46							
v/s Ratio Perm	0.05			0.14				0.19			c0.33	
v/c Ratio	0.09	0.57		0.26	0.85			0.61			1.06	
Uniform Delay, d1	7.3	10.0		8.0	12.7			19.2			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	2.4		1.8	9.2			2.2			61.8	
Delay (s)	8.6	12.4		9.9	21.9			21.3			84.3	
Level of Service	A	B		A	C			C			F	
Approach Delay (s)		12.3			20.7			21.3			84.3	
Approach LOS		B			C			C			F	
Intersection Summary												
HCM 2000 Control Delay			30.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			104.3%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	672	4	215	919	583	0	81	172	229	70	44
Future Volume (vph)	0	672	4	215	919	583	0	81	172	229	70	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1696	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1696	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	672	4	215	919	583	0	81	172	229	70	44
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	153	0	0	0
Lane Group Flow (vph)	0	675	0	215	919	583	0	81	19	229	114	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Effective Green, g (s)		27.3		13.7	47.0	47.0		9.0	9.0	7.0	22.0	
Actuated g/C Ratio		0.34		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1151		289	1045	888		200	170	286	460	
v/s Ratio Prot		0.20		0.13	c0.51	0.38		c0.04		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.59		0.74	0.88	0.66		0.41	0.11	0.80	0.25	
Uniform Delay, d1		22.2		32.0	14.6	11.5		33.5	32.4	36.3	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.2		9.9	10.5	3.8		1.3	0.3	14.8	0.3	
Delay (s)		24.4		41.9	25.1	15.3		34.8	32.7	51.1	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.4			23.9			33.4			41.9	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			26.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			81.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			71.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	88	137	154	581	91
Future Volume (vph)	35	88	137	154	581	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.90			1.00	0.98	
Flt Protected	0.99			0.98	1.00	
Satd. Flow (prot)	1604			3343	3352	
Flt Permitted	0.99			0.62	1.00	
Satd. Flow (perm)	1604			2127	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	88	137	154	581	91
RTOR Reduction (vph)	78	0	0	0	17	0
Lane Group Flow (vph)	45	0	0	291	655	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	4.6			25.5	25.5	
Effective Green, g (s)	4.6			25.5	25.5	
Actuated g/C Ratio	0.11			0.61	0.61	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	175			1288	2030	
v/s Ratio Prot	c0.03				c0.20	
v/s Ratio Perm				0.14		
v/c Ratio	0.25			0.23	0.32	
Uniform Delay, d1	17.2			3.8	4.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.8			0.4	0.4	
Delay (s)	18.0			4.2	4.5	
Level of Service	B			A	A	
Approach Delay (s)	18.0			4.2	4.5	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.31			
Actuated Cycle Length (s)			42.1		Sum of lost time (s)	12.0
Intersection Capacity Utilization			49.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	57	55	300	633	117
Future Volume (vph)	41	57	55	300	633	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2740	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	41	57	55	300	633	117
RTOR Reduction (vph)	0	51	0	0	19	0
Lane Group Flow (vph)	41	6	0	355	731	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		26.8	26.8	
Effective Green, g (s)	4.2	4.2		26.8	26.8	
Actuated g/C Ratio	0.10	0.10		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	149		1707	2082	
v/s Ratio Prot	c0.02				c0.22	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.04		0.21	0.35	
Uniform Delay, d1	17.9	17.6		3.5	3.9	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.7	17.7		3.8	4.4	
Level of Service	B	B		A	A	
Approach Delay (s)	18.1			3.8	4.4	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.34			
Actuated Cycle Length (s)			43.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2021 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	58	38	71	65	5	53	5	38	0	10	20
Future Volume (vph)	20	58	38	71	65	5	53	5	38	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	58	38	71	65	5	53	5	38	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	116	141	96	30								
Volume Left (vph)	20	71	53	0								
Volume Right (vph)	38	5	38	20								
Hadj (s)	-0.13	0.11	-0.09	-0.37								
Departure Headway (s)	4.2	4.4	4.4	4.2								
Degree Utilization, x	0.14	0.17	0.12	0.04								
Capacity (veh/h)	820	777	765	784								
Control Delay (s)	7.9	8.4	8.0	7.4								
Approach Delay (s)	7.9	8.4	8.0	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.1											
Level of Service	A											
Intersection Capacity Utilization	33.2%			ICU Level of Service					A			
Analysis Period (min)	15											

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	42	493	114	120	1391
Future Volume (vph)	76	42	493	114	120	1391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1661		3325			3408
Flt Permitted	0.97		1.00			0.84
Satd. Flow (perm)	1661		3325			2865
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	42	493	114	120	1391
RTOR Reduction (vph)	37	0	27	0	0	0
Lane Group Flow (vph)	81	0	580	0	0	1511
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.1		25.9			25.9
Effective Green, g (s)	5.1		25.9			25.9
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	197		2002			1725
v/s Ratio Prot	c0.05		0.17			
v/s Ratio Perm						c0.53
v/c Ratio	0.41		0.29			0.88
Uniform Delay, d1	17.6		4.1			7.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.4		0.4			6.6
Delay (s)	19.0		4.5			13.8
Level of Service	B		A			B
Approach Delay (s)	19.0		4.5			13.8
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			11.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.80			
Actuated Cycle Length (s)			43.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			81.0%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	159	20	5	200	20	20	5	5	25	5	17
Future Volume (vph)	24	159	20	5	200	20	20	5	5	25	5	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1766			1777			1703			1668	
Flt Permitted		0.92			0.99			0.80			0.83	
Satd. Flow (perm)		1633			1753			1404			1427	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	159	20	5	200	20	20	5	5	25	5	17
RTOR Reduction (vph)	0	10	0	0	9	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	193	0	0	216	0	0	27	0	0	36	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			9.3			9.3	
Effective Green, g (s)		7.2			7.2			9.3			9.3	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		412			442			458			465	
v/s Ratio Prot												
v/s Ratio Perm		0.12			0.12			0.02			0.02	
v/c Ratio		0.47			0.49			0.06			0.08	
Uniform Delay, d1		9.0			9.1			6.6			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			0.9			0.1			0.1	
Delay (s)		9.9			9.9			6.6			6.7	
Level of Service		A			A			A			A	
Approach Delay (s)		9.9			9.9			6.6			6.7	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.26										
Actuated Cycle Length (s)		28.5			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		36.6%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

1: Pine St & Macy's Garage/CBP Garage
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	12	38	0	31	13	36	39	32	48	10
Future Volume (Veh/h)	10	0	12	38	0	31	13	36	39	32	48	10
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	12	38	0	31	13	36	39	32	48	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	230	218	53	210	204	56	58	75				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	230	218	53	210	204	56	58	75				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	99	100	99	95	100	97	99	98				
cM capacity (veh/h)	688	660	1014	721	673	1011	1546	1524				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	69	88	90								
Volume Left	10	38	13	32								
Volume Right	12	31	39	10								
cSH	834	828	1546	1524								
Volume to Capacity	0.03	0.08	0.01	0.02								
Queue Length 95th (ft)	2	7	1	2								
Control Delay (s)	9.4	9.7	1.1	2.7								
Lane LOS	A	A	A	A								
Approach Delay (s)	9.4	9.7	1.1	2.7								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.6									
Intersection Capacity Utilization			22.1%	ICU Level of Service				A				
Analysis Period (min)			15									

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	27	28	30	30	23
Future Volume (Veh/h)	22	27	28	30	30	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	27	28	30	30	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					208	
pX, platoon unblocked						
vC, conflicting volume	128	42	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	42	53			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	851	1029	1553			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	49	58	53			
Volume Left	22	28	0			
Volume Right	27	0	23			
cSH	941	1553	1700			
Volume to Capacity	0.05	0.02	0.03			
Queue Length 95th (ft)	4	1	0			
Control Delay (s)	9.0	3.6	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.6	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			19.8%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	62	31	66	67	55	99
Future Volume (vph)	62	31	66	67	55	99
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	62	31	66	67	55	99
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	93	133	154			
Volume Left (vph)	62	0	55			
Volume Right (vph)	31	67	0			
Hadj (s)	-0.03	-0.27	0.11			
Departure Headway (s)	4.5	4.0	4.4			
Degree Utilization, x	0.12	0.15	0.19			
Capacity (veh/h)	746	863	804			
Control Delay (s)	8.1	7.7	8.4			
Approach Delay (s)	8.1	7.7	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.1			
Level of Service			A			
Intersection Capacity Utilization			31.2%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	80	93	18	20	106	156	9	48	20	28	41	31
Future Volume (vph)	80	93	18	20	106	156	9	48	20	28	41	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	80	93	18	20	106	156	9	48	20	28	41	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	191	282	77	100								
Volume Left (vph)	80	20	9	28								
Volume Right (vph)	18	156	20	31								
Hadj (s)	0.06	-0.28	-0.10	-0.10								
Departure Headway (s)	4.7	4.3	5.0	5.0								
Degree Utilization, x	0.25	0.34	0.11	0.14								
Capacity (veh/h)	714	793	642	647								
Control Delay (s)	9.3	9.5	8.6	8.8								
Approach Delay (s)	9.3	9.5	8.6	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay				9.2								
Level of Service				A								
Intersection Capacity Utilization				47.6%	ICU Level of Service			A				
Analysis Period (min)				15								

5: Battery St/Park St & Pearl St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	141	154	766	450	154	573
Future Volume (vph)	141	154	766	450	154	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3385
Flt Permitted	0.95	1.00	1.00	1.00		0.61
Satd. Flow (perm)	1711	1531	1801	1531		2095
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	154	766	450	154	573
RTOR Reduction (vph)	0	132	0	127	0	0
Lane Group Flow (vph)	141	22	766	323	0	727
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.4	12.4	62.3	62.3		62.3
Effective Green, g (s)	12.4	12.4	62.3	62.3		62.3
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	244	218	1294	1100		1505
v/s Ratio Prot	c0.08		c0.43			
v/s Ratio Perm		0.01		0.21		0.35
v/c Ratio	0.58	0.10	0.59	0.29		0.48
Uniform Delay, d1	34.7	32.3	6.0	4.4		5.3
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.3	0.2	2.0	0.7		1.1
Delay (s)	38.0	32.5	8.0	5.0		6.4
Level of Service	D	C	A	A		A
Approach Delay (s)	35.1		6.9			6.4
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			86.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			83.4%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	32	57	412	64	111
Future Volume (vph)	392	32	57	412	64	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1782			1790	1617	
Flt Permitted	1.00			0.90	0.98	
Satd. Flow (perm)	1782			1613	1617	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	392	32	57	412	64	111
RTOR Reduction (vph)	6	0	0	0	70	0
Lane Group Flow (vph)	418	0	0	469	105	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	19.4			19.4	18.3	
Effective Green, g (s)	19.4			19.4	18.3	
Actuated g/C Ratio	0.39			0.39	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	695			629	595	
v/s Ratio Prot	0.23				c0.06	
v/s Ratio Perm				c0.29		
v/c Ratio	0.60			0.75	0.18	
Uniform Delay, d1	12.1			13.0	10.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			4.8	0.6	
Delay (s)	13.5			17.8	11.3	
Level of Service	B			B	B	
Approach Delay (s)	13.5			17.8	11.3	
Approach LOS	B			B	B	
Intersection Summary						
HCM 2000 Control Delay		15.0		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.47				
Actuated Cycle Length (s)		49.7		Sum of lost time (s)		12.0
Intersection Capacity Utilization		72.8%		ICU Level of Service		C
Analysis Period (min)		15				
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	302	101	186	374	0	172	0	268	92	274	44
Future Volume (vph)	0	302	101	186	374	0	172	0	268	92	274	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3350	
Flt Permitted		1.00	1.00	0.57	1.00		0.56		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1031	1801		1007		1531	1711	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	302	101	186	374	0	172	0	268	92	274	44
RTOR Reduction (vph)	0	0	67	0	0	0	0	0	161	0	0	0
Lane Group Flow (vph)	0	302	34	186	374	0	172	0	107	92	318	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.3	15.3	15.3	15.3		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		605	514	346	605		402		612	684	1340	
v/s Ratio Prot		0.17			c0.21						0.09	
v/s Ratio Perm			0.02	0.18			c0.17		0.07	0.05		
v/c Ratio		0.50	0.07	0.54	0.62		0.43		0.18	0.13	0.24	
Uniform Delay, d1		12.0	10.3	12.2	12.7		9.9		8.8	8.7	9.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.7	0.1	1.6	1.9		3.3		0.6	0.4	0.4	
Delay (s)		12.7	10.3	13.8	14.5		13.2		9.4	9.1	9.5	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		12.1			14.3			10.9			9.4	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			45.5			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			63.0%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	473	0	0	489	56	46	271	49	0	0	0
Future Volume (vph)	144	473	0	0	489	56	46	271	49	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1776		1711	1759				
Flt Permitted	0.29	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	527	1801			1776		1711	1759				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	144	473	0	0	489	56	46	271	49	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	11	0	0	0	0
Lane Group Flow (vph)	144	473	0	0	536	0	46	309	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.5	19.5			19.5		18.2	18.2				
Effective Green, g (s)	19.5	19.5			19.5		18.2	18.2				
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	206	706			696		626	644				
v/s Ratio Prot		0.26			c0.30			c0.18				
v/s Ratio Perm	0.27						0.03					
v/c Ratio	0.70	0.67			0.77		0.07	0.48				
Uniform Delay, d1	12.6	12.4			13.2		10.3	12.1				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	9.9	2.4			5.3		0.2	2.5				
Delay (s)	22.6	14.9			18.4		10.5	14.7				
Level of Service	C	B			B		B	B				
Approach Delay (s)		16.7			18.4			14.1			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		16.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.63										
Actuated Cycle Length (s)		49.7			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		69.3%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	465	40	51	469	40	57	232	50	25	166	33
Future Volume (vph)	46	465	40	51	469	40	57	232	50	25	166	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1776		1711	1779			1750			1755	
Flt Permitted		0.86		0.40	1.00			0.91			0.93	
Satd. Flow (perm)		1535		716	1779			1597			1647	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	465	40	51	469	40	57	232	50	25	166	33
RTOR Reduction (vph)	0	5	0	0	6	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	546	0	51	503	0	0	327	0	0	212	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		614		286	711			574			592	
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.36		0.07				c0.20			0.13	
v/c Ratio		0.89		0.18	0.71			0.57			0.36	
Uniform Delay, d1		14.0		9.7	12.6			12.9			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		17.4		1.4	5.9			4.1			1.7	
Delay (s)		31.3		11.1	18.4			16.9			13.4	
Level of Service		C		B	B			B			B	
Approach Delay (s)		31.3			17.7			16.9			13.4	
Approach LOS		C			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			21.5			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			99.7%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	647	74	190	764	116	197	329	244	35	150	16
Future Volume (vph)	0	647	74	190	764	116	197	329	244	35	150	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1776		1711	1765		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1776		248	1765		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	647	74	190	764	116	197	329	244	35	150	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	194	0	3	0
Lane Group Flow (vph)	0	717	0	190	880	0	197	329	50	0	198	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Effective Green, g (s)		23.1		36.1	36.1		17.6	17.6	17.6		14.2	
Actuated g/C Ratio		0.27		0.42	0.42		0.20	0.20	0.20		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		477		223	741		350	369	313		291	
v/s Ratio Prot		c0.40		0.07	c0.50		0.12	c0.18			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.50		0.85	1.19		0.56	0.89	0.16		0.68	
Uniform Delay, d1		31.4		34.7	24.9		30.7	33.2	28.1		33.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		236.8		25.5	97.7		2.1	22.6	0.2		6.2	
Delay (s)		268.2		60.3	122.6		32.8	55.8	28.3		39.9	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		268.2			111.5			41.2			39.9	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			127.6			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			85.9			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			133.9%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	152	99	35	132	28	32	79	21	20	113	53
Future Volume (vph)	24	152	99	35	132	28	32	79	21	20	113	53
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	152	99	35	132	28	32	79	21	20	113	53
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	275	195	132	186								
Volume Left (vph)	24	35	32	20								
Volume Right (vph)	99	28	21	53								
Hadj (s)	-0.16	-0.02	-0.01	-0.12								
Departure Headway (s)	4.9	5.2	5.4	5.2								
Degree Utilization, x	0.37	0.28	0.20	0.27								
Capacity (veh/h)	686	646	592	628								
Control Delay (s)	10.8	10.1	9.7	10.1								
Approach Delay (s)	10.8	10.1	9.7	10.1								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay	10.3											
Level of Service	B											
Intersection Capacity Utilization	38.3%			ICU Level of Service			A					
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	19	129	43	26	93	38	64	112	43	35	93	34
Future Volume (vph)	19	129	43	26	93	38	64	112	43	35	93	34
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	129	43	26	93	38	64	112	43	35	93	34
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	191	157	219	162								
Volume Left (vph)	19	26	64	35								
Volume Right (vph)	43	38	43	34								
Hadj (s)	-0.08	-0.08	-0.03	-0.05								
Departure Headway (s)	5.0	5.1	5.0	5.1								
Degree Utilization, x	0.27	0.22	0.30	0.23								
Capacity (veh/h)	655	644	658	649								
Control Delay (s)	9.9	9.5	10.2	9.6								
Approach Delay (s)	9.9	9.5	10.2	9.6								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay				9.8								
Level of Service				A								
Intersection Capacity Utilization				38.5%	ICU Level of Service			A				
Analysis Period (min)				15								

13: Pine St & Main St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	299	116	65	415	81	161	118	42	116	219	21
Future Volume (vph)	15	299	116	65	415	81	161	118	42	116	219	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.98			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1757			1750	1531		1758	
Flt Permitted		0.83		0.31	1.00			0.64	1.00		0.81	
Satd. Flow (perm)		1442		565	1757			1156	1531		1438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	299	116	65	415	81	161	118	42	116	219	21
RTOR Reduction (vph)	0	15	0	0	8	0	0	0	21	0	2	0
Lane Group Flow (vph)	0	415	0	65	488	0	0	279	21	0	354	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		29.0		29.0	29.0			44.8	44.8		44.8	
Effective Green, g (s)		30.0		29.0	30.0			45.8	45.8		45.8	
Actuated g/C Ratio		0.33		0.32	0.33			0.51	0.51		0.51	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		480		182	585			588	779		731	
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.29		0.12				0.24	0.01		c0.25	
v/c Ratio		0.86		0.36	0.83			0.47	0.03		0.48	
Uniform Delay, d1		28.1		23.4	27.7			14.3	11.0		14.4	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		14.9		1.2	9.9			2.7	0.1		0.5	
Delay (s)		43.0		24.6	37.6			17.0	11.1		14.9	
Level of Service		D		C	D			B	B		B	
Approach Delay (s)		43.0			36.1			16.3			14.9	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			29.5			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			68.4%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	336	80	55	329	82	96	70	70	84	113	12
Future Volume (vph)	14	336	80	55	329	82	96	70	70	84	113	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1749		1711	1747		1711	1666		1711	1775	
Flt Permitted	0.42	1.00		0.42	1.00		0.68	1.00		0.67	1.00	
Satd. Flow (perm)	764	1749		752	1747		1219	1666		1202	1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	336	80	55	329	82	96	70	70	84	113	12
RTOR Reduction (vph)	0	19	0	0	20	0	0	42	0	0	6	0
Lane Group Flow (vph)	14	397	0	55	391	0	96	98	0	84	119	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.8	15.8		15.8	15.8		18.2	18.2		18.2	18.2	
Effective Green, g (s)	15.8	15.8		15.8	15.8		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.40	0.40		0.40	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	600		258	600		482	659		475	702	
v/s Ratio Prot		c0.23			0.22			0.06			0.07	
v/s Ratio Perm	0.02			0.07			c0.08			0.07		
v/c Ratio	0.05	0.66		0.21	0.65		0.20	0.15		0.18	0.17	
Uniform Delay, d1	10.1	12.8		10.7	12.8		9.1	8.9		9.0	9.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	2.7		0.4	2.5		0.9	0.5		0.8	0.5	
Delay (s)	10.2	15.6		11.1	15.3		10.0	9.4		9.8	9.5	
Level of Service	B	B		B	B		B	A		A	A	
Approach Delay (s)		15.4			14.8			9.7			9.7	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			13.3			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			46.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			59.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	429	37	83	470	154	6	115	42	260	338	102
Future Volume (vph)	88	429	37	83	470	154	6	115	42	260	338	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1779		1711	1734			1735		1711	1801	1531
Flt Permitted	0.20	1.00		0.27	1.00			0.98		0.55	1.00	1.00
Satd. Flow (perm)	360	1779		492	1734			1709		988	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	88	429	37	83	470	154	6	115	42	260	338	102
RTOR Reduction (vph)	0	5	0	0	19	0	0	21	0	0	0	51
Lane Group Flow (vph)	88	461	0	83	605	0	0	143	0	260	338	51
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	593		164	578			541		566	900	765
v/s Ratio Prot		0.26			c0.35					c0.05	0.19	
v/s Ratio Perm	0.24			0.17				0.08		c0.18		0.03
v/c Ratio	0.73	0.78		0.51	1.05			0.26		0.46	0.38	0.07
Uniform Delay, d1	17.6	18.0		16.0	20.0			15.3		9.4	9.2	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	32.5	9.6		10.7	50.1			1.2		0.6	1.2	0.2
Delay (s)	50.1	27.6		26.8	70.1			16.5		9.9	10.4	7.9
Level of Service	D	C		C	E			B		A	B	A
Approach Delay (s)		31.2			65.0			16.5			9.9	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			34.3			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			82.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	712	0	0	598	39	36	265	98	0	0	0
Future Volume (vph)	51	712	0	0	598	39	36	265	98	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1786		1711	1728				
Flt Permitted	0.27	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	489	1801			1786		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	51	712	0	0	598	39	36	265	98	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	51	712	0	0	634	0	36	345	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	29.6	29.6			29.6		18.1	18.1				
Effective Green, g (s)	30.6	30.6			30.6		19.1	19.1				
Actuated g/C Ratio	0.51	0.51			0.51		0.32	0.32				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	250	923			915		547	552				
v/s Ratio Prot		c0.40			0.36			c0.20				
v/s Ratio Perm	0.10						0.02					
v/c Ratio	0.20	0.77			0.69		0.07	0.63				
Uniform Delay, d1	7.9	11.7			11.0		14.1	17.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.4	4.0			2.3		0.1	2.2				
Delay (s)	8.3	15.8			13.3		14.2	19.5				
Level of Service	A	B			B		B	B				
Approach Delay (s)		15.3			13.3			19.0			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		15.4			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.71										
Actuated Cycle Length (s)		59.7			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		70.4%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2021 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	921	43	80	837	82	31	344	57	81	273	28
Future Volume (vph)	37	921	43	80	837	82	31	344	57	81	273	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1789		1711	1777			1762			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.72	
Satd. Flow (perm)	206	1789		206	1777			1684			1279	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	921	43	80	837	82	31	344	57	81	273	28
RTOR Reduction (vph)	0	3	0	0	6	0	0	8	0	0	4	0
Lane Group Flow (vph)	37	961	0	80	913	0	0	424	0	0	378	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	963		110	956			518			393	
v/s Ratio Prot		c0.54			0.51							
v/s Ratio Perm	0.18			0.39				0.25			c0.30	
v/c Ratio	0.34	1.00		0.73	0.96			0.82			0.96	
Uniform Delay, d1	8.5	15.0		11.4	14.3			20.8			22.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.1	28.6		34.1	20.2			9.7			35.3	
Delay (s)	16.5	43.5		45.5	34.4			30.5			57.4	
Level of Service	B	D		D	C			C			E	
Approach Delay (s)		42.5			35.3			30.5			57.4	
Approach LOS		D			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			40.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			109.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	810	7	212	943	707	0	129	426	462	128	11
Future Volume (vph)	0	810	7	212	943	707	0	129	426	462	128	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3417		1711	1801	1531		1801	1531	3319	1779	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3417		1711	1801	1531		1801	1531	3319	1779	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	810	7	212	943	707	0	129	426	462	128	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	300	0	0	0
Lane Group Flow (vph)	0	816	0	212	943	707	0	129	126	462	139	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.0	25.9	
Effective Green, g (s)		27.4		13.7	47.1	47.1		12.9	12.9	7.0	25.9	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.30	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1101		275	997	848		273	232	273	542	
v/s Ratio Prot		0.24		0.12	c0.52	0.46		0.07		c0.14	0.08	
v/s Ratio Perm									c0.08			
v/c Ratio		0.74		0.77	0.95	0.83		0.47	0.54	1.69	0.26	
Uniform Delay, d1		25.6		34.1	17.8	15.7		32.9	33.3	39.0	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.5		12.5	18.1	9.4		1.3	2.6	326.9	0.3	
Delay (s)		30.2		46.7	35.8	25.2		34.2	35.9	365.9	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		30.2			33.0			35.5			286.5	
Approach LOS		C			C			D			F	
Intersection Summary												
HCM 2000 Control Delay			72.5				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			85.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			84.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	57	145	114	428	594	101
Future Volume (vph)	57	145	114	428	594	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.90			1.00	0.98	
Flt Protected	0.99			0.99	1.00	
Satd. Flow (prot)	1604			3386	3347	
Flt Permitted	0.99			0.72	1.00	
Satd. Flow (perm)	1604			2450	3347	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	145	114	428	594	101
RTOR Reduction (vph)	113	0	0	0	21	0
Lane Group Flow (vph)	89	0	0	542	674	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.5			21.9	21.9	
Effective Green, g (s)	6.5			21.9	21.9	
Actuated g/C Ratio	0.16			0.54	0.54	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	258			1328	1814	
v/s Ratio Prot	c0.06				0.20	
v/s Ratio Perm				c0.22		
v/c Ratio	0.34			0.41	0.37	
Uniform Delay, d1	15.1			5.4	5.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.8			0.9	0.6	
Delay (s)	15.9			6.4	5.9	
Level of Service	B			A	A	
Approach Delay (s)	15.9			6.4	5.9	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.39			
Actuated Cycle Length (s)			40.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			61.9%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	103	71	100	386	702	74
Future Volume (vph)	103	71	100	386	702	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2445	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	71	100	386	702	74
RTOR Reduction (vph)	0	60	0	0	12	0
Lane Group Flow (vph)	103	11	0	486	764	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.7	6.7		23.8	23.8	
Effective Green, g (s)	6.7	6.7		23.8	23.8	
Actuated g/C Ratio	0.16	0.16		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	269	241		1369	1888	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.01		0.20		
v/c Ratio	0.38	0.05		0.36	0.40	
Uniform Delay, d1	16.0	15.2		5.1	5.3	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.1		0.7	0.6	
Delay (s)	17.0	15.3		5.9	6.0	
Level of Service	B	B		A	A	
Approach Delay (s)	16.3			5.9	6.0	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40			
Actuated Cycle Length (s)			42.5		Sum of lost time (s)	12.0
Intersection Capacity Utilization			56.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	96	45	50	72	5	57	5	70	0	10	20
Future Volume (vph)	20	96	45	50	72	5	57	5	70	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	96	45	50	72	5	57	5	70	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	161	127	132	30								
Volume Left (vph)	20	50	57	0								
Volume Right (vph)	45	5	70	20								
Hadj (s)	-0.11	0.09	-0.20	-0.37								
Departure Headway (s)	4.3	4.5	4.4	4.4								
Degree Utilization, x	0.19	0.16	0.16	0.04								
Capacity (veh/h)	800	751	767	755								
Control Delay (s)	8.3	8.4	8.2	7.5								
Approach Delay (s)	8.3	8.4	8.2	7.5								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			37.4%	ICU Level of Service					A			
Analysis Period (min)			15									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	128	74	1160	93	59	583
Future Volume (vph)	128	74	1160	93	59	583
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1659		3383			3406
Flt Permitted	0.97		1.00			0.75
Satd. Flow (perm)	1659		3383			2579
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	74	1160	93	59	583
RTOR Reduction (vph)	13	0	10	0	0	0
Lane Group Flow (vph)	189	0	1243	0	0	642
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	8.5		22.1			22.1
Effective Green, g (s)	8.5		22.1			22.1
Actuated g/C Ratio	0.20		0.52			0.52
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	331		1755			1337
v/s Ratio Prot	c0.11		c0.37			
v/s Ratio Perm						0.25
v/c Ratio	0.57		0.71			0.48
Uniform Delay, d1	15.4		7.8			6.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	2.4		2.4			1.2
Delay (s)	17.8		10.2			7.8
Level of Service	B		B			A
Approach Delay (s)	17.8		10.2			7.8
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			10.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.67			
Actuated Cycle Length (s)			42.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			79.5%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2021 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	117	20	5	192	20	20	5	5	25	5	18
Future Volume (vph)	18	117	20	5	192	20	20	5	5	25	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1759			1776			1703			1666	
Flt Permitted		0.92			0.99			0.80			0.84	
Satd. Flow (perm)		1631			1754			1404			1430	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	117	20	5	192	20	20	5	5	25	5	18
RTOR Reduction (vph)	0	14	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	142	0	0	208	0	0	27	0	0	36	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.1			7.1			9.3			9.3	
Effective Green, g (s)		7.1			7.1			9.3			9.3	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		407			438			459			468	
v/s Ratio Prot												
v/s Ratio Perm		0.09			0.12			0.02			0.03	
v/c Ratio		0.35			0.47			0.06			0.08	
Uniform Delay, d1		8.7			9.1			6.5			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			0.8			0.1			0.1	
Delay (s)		9.3			9.9			6.6			6.7	
Level of Service		A			A			A			A	
Approach Delay (s)		9.3			9.9			6.6			6.7	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.1			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.25										
Actuated Cycle Length (s)		28.4			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		31.1%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

1: Pine St & Macy's Garage/CPB Garage
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	10	32	0	26	14	30	43	35	30	11
Future Volume (Veh/h)	8	0	10	32	0	26	14	30	43	35	30	11
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	0	10	32	0	26	14	30	43	35	30	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	211	206	36	195	190	52	41	73				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	211	206	36	195	190	52	41	73				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	99	100	99	96	100	97	99	98				
cM capacity (veh/h)	709	668	1037	739	682	1016	1568	1527				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	18	58	87	76								
Volume Left	8	32	14	35								
Volume Right	10	26	43	11								
cSH	861	842	1568	1527								
Volume to Capacity	0.02	0.07	0.01	0.02								
Queue Length 95th (ft)	2	6	1	2								
Control Delay (s)	9.3	9.6	1.2	3.5								
Lane LOS	A	A	A	A								
Approach Delay (s)	9.3	9.6	1.2	3.5								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.6									
Intersection Capacity Utilization			21.0%	ICU Level of Service					A			
Analysis Period (min)			15									

2: St Paul St & CPB Garage
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	22	31	30	30	25
Future Volume (Veh/h)	18	22	31	30	30	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	18	22	31	30	30	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					209	
pX, platoon unblocked						
vC, conflicting volume	134	42	55			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134	42	55			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	98	98			
cM capacity (veh/h)	842	1028	1550			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	40	61	55			
Volume Left	18	31	0			
Volume Right	22	0	25			
cSH	935	1550	1700			
Volume to Capacity	0.04	0.02	0.03			
Queue Length 95th (ft)	3	2	0			
Control Delay (s)	9.0	3.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			20.0%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	56	43	103	43	43	43
Future Volume (vph)	56	43	103	43	43	43
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	56	43	103	43	43	43
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	99	146	86			
Volume Left (vph)	56	0	43			
Volume Right (vph)	43	43	0			
Hadj (s)	-0.11	-0.14	0.13			
Departure Headway (s)	4.3	4.1	4.4			
Degree Utilization, x	0.12	0.17	0.11			
Capacity (veh/h)	796	853	792			
Control Delay (s)	7.9	7.9	7.9			
Approach Delay (s)	7.9	7.9	7.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			28.4%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	24	128	19	20	113	39	9	41	20	45	43	70
Future Volume (vph)	24	128	19	20	113	39	9	41	20	45	43	70
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	24	128	19	20	113	39	9	41	20	45	43	70
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	171	172	70	158								
Volume Left (vph)	24	20	9	45								
Volume Right (vph)	19	39	20	70								
Hadj (s)	0.00	-0.08	-0.11	-0.17								
Departure Headway (s)	4.7	4.6	4.8	4.6								
Degree Utilization, x	0.22	0.22	0.09	0.20								
Capacity (veh/h)	722	735	682	717								
Control Delay (s)	9.0	8.9	8.3	8.8								
Approach Delay (s)	9.0	8.9	8.3	8.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.8									
Level of Service			A									
Intersection Capacity Utilization			35.4%		ICU Level of Service				A			
Analysis Period (min)			15									

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	154	77	306	174	311	1290
Future Volume (vph)	154	77	306	174	311	1290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3388
Flt Permitted	0.95	1.00	1.00	1.00		0.80
Satd. Flow (perm)	1711	1531	1801	1531		2724
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	77	306	174	311	1290
RTOR Reduction (vph)	0	66	0	49	0	0
Lane Group Flow (vph)	154	11	306	125	0	1601
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	13.1	13.1	63.3	63.3		63.3
Effective Green, g (s)	13.1	13.1	63.3	63.3		63.3
Actuated g/C Ratio	0.15	0.15	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	253	226	1289	1096		1950
v/s Ratio Prot	c0.09		0.17			
v/s Ratio Perm		0.01		0.08		c0.59
v/c Ratio	0.61	0.05	0.24	0.11		0.82
Uniform Delay, d1	35.3	32.3	4.3	3.9		8.6
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	4.1	0.1	0.4	0.2		4.0
Delay (s)	39.4	32.4	4.7	4.1		12.7
Level of Service	D	C	A	A		B
Approach Delay (s)	37.0		4.5			12.7
Approach LOS	D		A			B
Intersection Summary						
HCM 2000 Control Delay			13.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.78			
Actuated Cycle Length (s)			88.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			84.3%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

6: Pine St & Pearl St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	356	56	104	307	36	39
Future Volume (vph)	356	56	104	307	36	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.93	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1768			1778	1635	
Flt Permitted	1.00			0.68	0.98	
Satd. Flow (perm)	1768			1231	1635	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	356	56	104	307	36	39
RTOR Reduction (vph)	12	0	0	0	25	0
Lane Group Flow (vph)	400	0	0	411	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	19.0			19.0	18.3	
Effective Green, g (s)	19.0			19.0	18.3	
Actuated g/C Ratio	0.39			0.39	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	681			474	606	
v/s Ratio Prot	0.23				c0.03	
v/s Ratio Perm				c0.33		
v/c Ratio	0.59			0.87	0.08	
Uniform Delay, d1	12.0			14.0	10.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.3			15.3	0.3	
Delay (s)	13.3			29.3	10.3	
Level of Service	B			C	B	
Approach Delay (s)	13.3			29.3	10.3	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			20.4		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			49.3		Sum of lost time (s)	12.0
Intersection Capacity Utilization			63.4%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	182	91	189	382	0	115	0	97	54	343	76
Future Volume (vph)	0	182	91	189	382	0	115	0	97	54	343	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3328	
Flt Permitted		1.00	1.00	0.64	1.00		0.51		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1157	1801		913		1531	1711	3328	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	182	91	189	382	0	115	0	97	54	343	76
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	59	0	0	0
Lane Group Flow (vph)	0	182	31	189	382	0	115	0	38	54	419	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.8	15.8	15.8	15.8		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.8	15.8	15.8	15.8		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.40		0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		618	525	397	618		361		605	676	1316	
v/s Ratio Prot		0.10			c0.21						0.13	
v/s Ratio Perm			0.02	0.16			c0.13		0.03	0.03		
v/c Ratio		0.29	0.06	0.48	0.62		0.32		0.06	0.08	0.32	
Uniform Delay, d1		11.0	10.1	11.9	12.6		9.6		8.6	8.7	9.6	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0	0.9	1.8		2.3		0.2	0.2	0.6	
Delay (s)		11.3	10.2	12.8	14.4		11.9		8.8	8.9	10.2	
Level of Service		B	B	B	B		B		A	A	B	
Approach Delay (s)		10.9			13.9			10.5			10.1	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			11.7			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			46.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			56.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	311	0	0	479	61	27	96	46	0	0	0
Future Volume (vph)	49	311	0	0	479	61	27	96	46	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.98		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1773		1711	1713				
Flt Permitted	0.30	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	535	1801			1773		1711	1713				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	311	0	0	479	61	27	96	46	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	29	0	0	0	0
Lane Group Flow (vph)	49	311	0	0	531	0	27	113	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.4	19.4			19.4		18.2	18.2				
Effective Green, g (s)	19.4	19.4			19.4		18.2	18.2				
Actuated g/C Ratio	0.39	0.39			0.39		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	209	704			693		627	628				
v/s Ratio Prot		0.17			c0.30			c0.07				
v/s Ratio Perm	0.09						0.02					
v/c Ratio	0.23	0.44			0.77		0.04	0.18				
Uniform Delay, d1	10.1	11.1			13.1		10.1	10.6				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.6	0.4			5.1		0.1	0.6				
Delay (s)	10.7	11.6			18.2		10.2	11.3				
Level of Service	B	B			B		B	B				
Approach Delay (s)		11.4			18.2			11.1			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			14.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			49.6				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			55.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	318	44	45	469	16	31	97	46	23	218	31
Future Volume (vph)	16	318	44	45	469	16	31	97	46	23	218	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.96			0.98	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1769		1711	1792			1721			1765	
Flt Permitted		0.97		0.53	1.00			0.91			0.96	
Satd. Flow (perm)		1720		950	1792			1573			1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	318	44	45	469	16	31	97	46	23	218	31
RTOR Reduction (vph)	0	10	0	0	2	0	0	26	0	0	9	0
Lane Group Flow (vph)	0	368	0	45	483	0	0	148	0	0	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		688		380	716			566			615	
v/s Ratio Prot					c0.27							
v/s Ratio Perm		0.21		0.05				0.09			c0.15	
v/c Ratio		0.54		0.12	0.67			0.26			0.43	
Uniform Delay, d1		11.5		9.4	12.3			11.3			12.1	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		3.0		0.6	5.0			1.1			2.2	
Delay (s)		14.4		10.1	17.3			12.4			14.3	
Level of Service		B		B	B			B			B	
Approach Delay (s)		14.4			16.7			12.4			14.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			15.0			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			59.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	530	101	265	721	60	102	99	162	50	300	36
Future Volume (vph)	0	530	101	265	721	60	102	99	162	50	300	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.98		1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1762		1711	1780		1711	1801	1531		1767	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1762		248	1780		1711	1801	1531		1767	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	530	101	265	721	60	102	99	162	50	300	36
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	141	0	4	0
Lane Group Flow (vph)	0	624	0	265	781	0	102	99	21	0	382	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Effective Green, g (s)		23.0		36.1	36.1		10.7	10.7	10.7		18.0	
Actuated g/C Ratio		0.28		0.44	0.44		0.13	0.13	0.13		0.22	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		489		233	776		221	232	197		384	
v/s Ratio Prot		0.35		0.10	c0.44		c0.06	0.05			c0.22	
v/s Ratio Perm				c0.40					0.01			
v/c Ratio		1.28		1.14	1.01		0.46	0.43	0.11		1.00	
Uniform Delay, d1		29.9		33.8	23.3		33.4	33.2	31.8		32.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		139.2		101.0	33.9		1.5	1.3	0.2		44.3	
Delay (s)		169.1		134.8	57.2		34.9	34.5	32.1		76.7	
Level of Service		F		F	E		C	C	C		E	
Approach Delay (s)		169.1			76.9			33.5			76.7	
Approach LOS		F			E			C			E	
Intersection Summary												
HCM 2000 Control Delay			94.4			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			82.8			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			119.4%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	22	133	44	22	177	36	82	78	16	5	65	31
Future Volume (vph)	22	133	44	22	177	36	82	78	16	5	65	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	133	44	22	177	36	82	78	16	5	65	31
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	199	235	176	101								
Volume Left (vph)	22	22	82	5								
Volume Right (vph)	44	36	16	31								
Hadj (s)	-0.08	-0.04	0.07	-0.14								
Departure Headway (s)	4.9	4.9	5.2	5.1								
Degree Utilization, x	0.27	0.32	0.25	0.14								
Capacity (veh/h)	682	692	636	629								
Control Delay (s)	9.7	10.1	10.0	9.0								
Approach Delay (s)	9.7	10.1	10.0	9.0								
Approach LOS	A	B	A	A								
Intersection Summary												
Delay	9.8											
Level of Service	A											
Intersection Capacity Utilization	39.1%			ICU Level of Service			A					
Analysis Period (min)	15											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	108	21	15	173	47	70	121	18	12	43	11
Future Volume (vph)	25	108	21	15	173	47	70	121	18	12	43	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	108	21	15	173	47	70	121	18	12	43	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	154	235	209	66								
Volume Left (vph)	25	15	70	12								
Volume Right (vph)	21	47	18	11								
Hadj (s)	-0.02	-0.07	0.05	-0.03								
Departure Headway (s)	4.9	4.8	5.0	5.1								
Degree Utilization, x	0.21	0.31	0.29	0.09								
Capacity (veh/h)	676	711	670	627								
Control Delay (s)	9.2	9.9	10.0	8.7								
Approach Delay (s)	9.2	9.9	10.0	8.7								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay	9.7											
Level of Service	A											
Intersection Capacity Utilization	39.9%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	352	181	82	357	108	5	180	64	48	111	8
Future Volume (vph)	10	352	181	82	357	108	5	180	64	48	111	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.95		1.00	0.97			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			1.00	1.00		0.99	
Satd. Flow (prot)		1718		1711	1738			1798	1531		1764	
Flt Permitted		0.99		0.26	1.00			0.99	1.00		0.88	
Satd. Flow (perm)		1703		466	1738			1791	1531		1581	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	352	181	82	357	108	5	180	64	48	111	8
RTOR Reduction (vph)	0	20	0	0	12	0	0	0	33	0	2	0
Lane Group Flow (vph)	0	523	0	82	453	0	0	185	31	0	165	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		31.4		31.4	31.4			42.4	42.4		42.4	
Effective Green, g (s)		32.4		31.4	32.4			43.4	43.4		43.4	
Actuated g/C Ratio		0.36		0.35	0.36			0.48	0.48		0.48	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		613		162	625			863	738		762	
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.31		0.18				0.10	0.02		c0.10	
v/c Ratio		0.85		0.51	0.73			0.21	0.04		0.22	
Uniform Delay, d1		26.6		23.2	24.9			13.5	12.3		13.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		11.1		2.5	4.2			0.6	0.1		0.1	
Delay (s)		37.7		25.6	29.1			14.0	12.4		13.6	
Level of Service		D		C	C			B	B		B	
Approach Delay (s)		37.7			28.6			13.6			13.6	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			27.8			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			82.1%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	267	66	53	385	94	67	129	42	36	41	17
Future Volume (vph)	3	267	66	53	385	94	67	129	42	36	41	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1747		1711	1748		1711	1734		1711	1721	
Flt Permitted	0.35	1.00		0.53	1.00		0.72	1.00		0.65	1.00	
Satd. Flow (perm)	634	1747		959	1748		1295	1734		1169	1721	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	267	66	53	385	94	67	129	42	36	41	17
RTOR Reduction (vph)	0	19	0	0	18	0	0	20	0	0	11	0
Lane Group Flow (vph)	3	314	0	53	461	0	67	151	0	36	47	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.6	17.6		17.6	17.6		18.2	18.2		18.2	18.2	
Effective Green, g (s)	17.6	17.6		17.6	17.6		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	233	643		353	643		493	660		445	655	
v/s Ratio Prot		0.18			c0.26			c0.09			0.03	
v/s Ratio Perm	0.00			0.06			0.05			0.03		
v/c Ratio	0.01	0.49		0.15	0.72		0.14	0.23		0.08	0.07	
Uniform Delay, d1	9.6	11.6		10.1	13.0		9.7	10.0		9.5	9.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6		0.2	3.8		0.6	0.8		0.4	0.2	
Delay (s)	9.6	12.2		10.3	16.8		10.2	10.8		9.8	9.6	
Level of Service	A	B		B	B		B	B		A	A	
Approach Delay (s)		12.2			16.1			10.7			9.7	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			47.8			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			63.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	264	16	103	437	118	10	34	10	98	224	108
Future Volume (vph)	37	264	16	103	437	118	10	34	10	98	224	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1711	1785		1711	1743			1740		1711	1801	1531
Flt Permitted	0.20	1.00		0.51	1.00			0.94		0.67	1.00	1.00
Satd. Flow (perm)	360	1785		921	1743			1646		1210	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	264	16	103	437	118	10	34	10	98	224	108
RTOR Reduction (vph)	0	3	0	0	16	0	0	7	0	0	0	53
Lane Group Flow (vph)	37	277	0	103	539	0	0	47	0	98	224	55
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			20.2		30.2	30.2	30.2
Effective Green, g (s)	20.0	20.0		20.0	20.0			21.2		31.2	31.2	31.2
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.35		0.51	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	583		300	569			570		657	918	780
v/s Ratio Prot		0.15			c0.31					0.01	c0.12	
v/s Ratio Perm	0.10			0.11				0.03		0.06		0.04
v/c Ratio	0.32	0.47		0.34	0.95			0.08		0.15	0.24	0.07
Uniform Delay, d1	15.5	16.4		15.6	20.1			13.5		8.0	8.4	7.6
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	2.8		3.1	26.7			0.3		0.1	0.6	0.2
Delay (s)	22.4	19.2		18.7	46.8			13.7		8.1	9.0	7.8
Level of Service	C	B		B	D			B		A	A	A
Approach Delay (s)		19.5			42.4			13.7			8.5	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			26.4			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)				15.0		
Intersection Capacity Utilization			58.9%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	384	0	0	664	29	32	497	52	0	0	0
Future Volume (vph)	12	384	0	0	664	29	32	497	52	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.99				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1790		1711	1775				
Flt Permitted	0.19	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	343	1801			1790		1711	1775				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	384	0	0	664	29	32	497	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	0	0
Lane Group Flow (vph)	12	384	0	0	691	0	32	545	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	31.8	31.8			31.8		24.5	24.5				
Effective Green, g (s)	32.8	32.8			32.8		25.5	25.5				
Actuated g/C Ratio	0.48	0.48			0.48		0.37	0.37				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	164	864			859		638	662				
v/s Ratio Prot		0.21			c0.39			c0.31				
v/s Ratio Perm	0.03						0.02					
v/c Ratio	0.07	0.44			0.80		0.05	0.82				
Uniform Delay, d1	9.6	11.7			15.0		13.7	19.4				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.2	0.4			5.5		0.0	8.1				
Delay (s)	9.8	12.1			20.5		13.7	27.5				
Level of Service	A	B			C		B	C				
Approach Delay (s)		12.0			20.5			26.7			0.0	
Approach LOS		B			C			C			A	
Intersection Summary												
HCM 2000 Control Delay		20.7			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.81										
Actuated Cycle Length (s)		68.3			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		74.3%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	554	13	90	799	43	27	249	57	124	256	46
Future Volume (vph)	15	554	13	90	799	43	27	249	57	124	256	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1794		1711	1787			1752			1749	
Flt Permitted	0.14	1.00		0.34	1.00			0.94			0.70	
Satd. Flow (perm)	245	1794		608	1787			1661			1237	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	554	13	90	799	43	27	249	57	124	256	46
RTOR Reduction (vph)	0	1	0	0	3	0	0	12	0	0	7	0
Lane Group Flow (vph)	15	566	0	90	839	0	0	321	0	0	419	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	131	966		327	962			511			380	
v/s Ratio Prot		0.32			c0.47							
v/s Ratio Perm	0.06			0.15				0.19			c0.34	
v/c Ratio	0.11	0.59		0.28	0.87			0.63			1.10	
Uniform Delay, d1	7.4	10.1		8.1	13.1			19.3			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.8	2.6		2.1	10.8			2.4			76.9	
Delay (s)	9.1	12.7		10.2	23.8			21.7			99.4	
Level of Service	A	B		B	C			C			F	
Approach Delay (s)		12.6			22.5			21.7			99.4	
Approach LOS		B			C			C			F	
Intersection Summary												
HCM 2000 Control Delay			34.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			106.7%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	691	4	221	945	600	0	83	177	236	72	46
Future Volume (vph)	0	691	4	221	945	600	0	83	177	236	72	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3418		1711	1801	1531		1801	1531	3319	1695	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3418		1711	1801	1531		1801	1531	3319	1695	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	691	4	221	945	600	0	83	177	236	72	46
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	157	0	0	0
Lane Group Flow (vph)	0	694	0	221	945	600	0	83	20	236	118	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Effective Green, g (s)		27.2		13.8	47.0	47.0		9.2	9.2	7.0	22.2	
Actuated g/C Ratio		0.33		0.17	0.58	0.58		0.11	0.11	0.09	0.27	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1144		290	1042	886		204	173	286	463	
v/s Ratio Prot		0.20		0.13	c0.52	0.39		c0.05		c0.07	0.07	
v/s Ratio Perm									0.01			
v/c Ratio		0.61		0.76	0.91	0.68		0.41	0.12	0.83	0.25	
Uniform Delay, d1		22.5		32.1	15.2	11.8		33.5	32.3	36.5	23.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.4		11.2	12.9	4.1		1.3	0.3	17.3	0.3	
Delay (s)		24.9		43.4	28.0	16.0		34.8	32.6	53.8	23.3	
Level of Service		C		D	C	B		C	C	D	C	
Approach Delay (s)		24.9			25.9			33.3			43.7	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM 2000 Control Delay			28.3		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			81.2		Sum of lost time (s)					24.0		
Intersection Capacity Utilization			73.1%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	90	141	158	599	93
Future Volume (vph)	35	90	141	158	599	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.90			1.00	0.98	
Flt Protected	0.99			0.98	1.00	
Satd. Flow (prot)	1603			3342	3352	
Flt Permitted	0.99			0.61	1.00	
Satd. Flow (perm)	1603			2092	3352	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	90	141	158	599	93
RTOR Reduction (vph)	78	0	0	0	17	0
Lane Group Flow (vph)	47	0	0	299	675	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.8			25.3	25.3	
Effective Green, g (s)	5.8			25.3	25.3	
Actuated g/C Ratio	0.13			0.59	0.59	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	215			1228	1967	
v/s Ratio Prot	c0.03				c0.20	
v/s Ratio Perm				0.14		
v/c Ratio	0.22			0.24	0.34	
Uniform Delay, d1	16.6			4.3	4.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.5			0.5	0.5	
Delay (s)	17.1			4.8	5.1	
Level of Service	B			A	A	
Approach Delay (s)	17.1			4.8	5.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			6.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.32			
Actuated Cycle Length (s)			43.1		Sum of lost time (s)	12.0
Intersection Capacity Utilization			50.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	58	56	309	652	120
Future Volume (vph)	42	58	56	309	652	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3395	3341	
Flt Permitted	0.95	1.00		0.80	1.00	
Satd. Flow (perm)	1711	1531		2727	3341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	58	56	309	652	120
RTOR Reduction (vph)	0	52	0	0	19	0
Lane Group Flow (vph)	42	6	0	365	753	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	4.2	4.2		26.6	26.6	
Effective Green, g (s)	4.2	4.2		26.6	26.6	
Actuated g/C Ratio	0.10	0.10		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	150		1694	2076	
v/s Ratio Prot	c0.02				c0.23	
v/s Ratio Perm		0.00		0.13		
v/c Ratio	0.25	0.04		0.22	0.36	
Uniform Delay, d1	17.8	17.5		3.5	4.0	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.1		0.3	0.5	
Delay (s)	18.6	17.6		3.8	4.5	
Level of Service	B	B		A	A	
Approach Delay (s)	18.0			3.8	4.5	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			42.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	59	39	73	67	5	53	5	39	0	10	20
Future Volume (vph)	20	59	39	73	67	5	53	5	39	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	59	39	73	67	5	53	5	39	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	118	145	97	30								
Volume Left (vph)	20	73	53	0								
Volume Right (vph)	39	5	39	20								
Hadj (s)	-0.13	0.11	-0.10	-0.37								
Departure Headway (s)	4.2	4.4	4.4	4.2								
Degree Utilization, x	0.14	0.18	0.12	0.04								
Capacity (veh/h)	819	776	763	780								
Control Delay (s)	7.9	8.4	8.0	7.4								
Approach Delay (s)	7.9	8.4	8.0	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.1											
Level of Service	A											
Intersection Capacity Utilization	33.5%			ICU Level of Service					A			
Analysis Period (min)	15											

22: Battery St & Cherry St
City Place Burlington Development

2026 AM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	43	507	118	123	1433
Future Volume (vph)	78	43	507	118	123	1433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.97			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1661		3324			3408
Flt Permitted	0.97		1.00			0.83
Satd. Flow (perm)	1661		3324			2851
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	43	507	118	123	1433
RTOR Reduction (vph)	38	0	27	0	0	0
Lane Group Flow (vph)	83	0	598	0	0	1556
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	5.1		25.7			25.7
Effective Green, g (s)	5.1		25.7			25.7
Actuated g/C Ratio	0.12		0.60			0.60
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	197		1995			1711
v/s Ratio Prot	c0.05		0.18			
v/s Ratio Perm						c0.55
v/c Ratio	0.42		0.30			0.91
Uniform Delay, d1	17.5		4.2			7.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.5		0.4			8.7
Delay (s)	18.9		4.6			16.2
Level of Service	B		A			B
Approach Delay (s)	18.9		4.6			16.2
Approach LOS	B		A			B
Intersection Summary						
HCM 2000 Control Delay			13.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			42.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			82.9%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 AM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	164	20	5	205	21	20	5	5	26	5	18
Future Volume (vph)	24	164	20	5	205	21	20	5	5	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1767			1777			1703			1667	
Flt Permitted		0.92			0.99			0.80			0.83	
Satd. Flow (perm)		1635			1753			1402			1425	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	164	20	5	205	21	20	5	5	26	5	18
RTOR Reduction (vph)	0	10	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	198	0	0	222	0	0	27	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.3			7.3			9.3			9.3	
Effective Green, g (s)		7.3			7.3			9.3			9.3	
Actuated g/C Ratio		0.26			0.26			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		417			447			455			463	
v/s Ratio Prot												
v/s Ratio Perm		0.12			0.13			0.02			0.03	
v/c Ratio		0.48			0.50			0.06			0.08	
Uniform Delay, d1		9.0			9.1			6.6			6.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.9			0.9			0.1			0.1	
Delay (s)		9.9			10.0			6.7			6.8	
Level of Service		A			A			A			A	
Approach Delay (s)		9.9			10.0			6.7			6.8	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.26										
Actuated Cycle Length (s)		28.6			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		36.9%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

1: Pine St & Macy's Garage/CBP Garage
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	12	38	0	31	13	36	39	32	48	10
Future Volume (Veh/h)	10	0	12	38	0	31	13	36	39	32	48	10
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	0	12	38	0	31	13	36	39	32	48	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	230	218	53	210	204	56	58	75				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	230	218	53	210	204	56	58	75				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	99	100	99	95	100	97	99	98				
cM capacity (veh/h)	688	660	1014	721	673	1011	1546	1524				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	69	88	90								
Volume Left	10	38	13	32								
Volume Right	12	31	39	10								
cSH	834	828	1546	1524								
Volume to Capacity	0.03	0.08	0.01	0.02								
Queue Length 95th (ft)	2	7	1	2								
Control Delay (s)	9.4	9.7	1.1	2.7								
Lane LOS	A	A	A	A								
Approach Delay (s)	9.4	9.7	1.1	2.7								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.6									
Intersection Capacity Utilization			22.1%	ICU Level of Service				A				
Analysis Period (min)			15									

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	27	28	30	30	23
Future Volume (Veh/h)	22	27	28	30	30	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	27	28	30	30	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					208	
pX, platoon unblocked						
vC, conflicting volume	128	42	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	42	53			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	851	1029	1553			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	49	58	53			
Volume Left	22	28	0			
Volume Right	27	0	23			
cSH	941	1553	1700			
Volume to Capacity	0.05	0.02	0.03			
Queue Length 95th (ft)	4	1	0			
Control Delay (s)	9.0	3.6	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	3.6	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			19.8%	ICU Level of Service		A
Analysis Period (min)			15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	64	31	66	69	55	100
Future Volume (vph)	64	31	66	69	55	100
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	31	66	69	55	100
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total (vph)	95	135	155			
Volume Left (vph)	64	0	55			
Volume Right (vph)	31	69	0			
Hadj (s)	-0.03	-0.27	0.10			
Departure Headway (s)	4.5	4.0	4.4			
Degree Utilization, x	0.12	0.15	0.19			
Capacity (veh/h)	744	862	792			
Control Delay (s)	8.1	7.7	8.4			
Approach Delay (s)	8.1	7.7	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.1			
Level of Service			A			
Intersection Capacity Utilization			31.4%	ICU Level of Service		A
Analysis Period (min)			15			

4: Pine St & Cherry St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	82	96	18	20	109	161	9	48	20	29	41	32
Future Volume (vph)	82	96	18	20	109	161	9	48	20	29	41	32
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	82	96	18	20	109	161	9	48	20	29	41	32
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	196	290	77	102								
Volume Left (vph)	82	20	9	29								
Volume Right (vph)	18	161	20	32								
Hadj (s)	0.06	-0.29	-0.10	-0.10								
Departure Headway (s)	4.8	4.3	5.1	5.0								
Degree Utilization, x	0.26	0.35	0.11	0.14								
Capacity (veh/h)	711	791	635	642								
Control Delay (s)	9.4	9.6	8.7	8.9								
Approach Delay (s)	9.4	9.6	8.7	8.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.3									
Level of Service			A									
Intersection Capacity Utilization			48.6%	ICU Level of Service					A			
Analysis Period (min)			15									

5: Battery St/Park St & Pearl St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	159	789	464	159	589
Future Volume (vph)	145	159	789	464	159	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1711	1531	1801	1531		3385
Flt Permitted	0.95	1.00	1.00	1.00		0.60
Satd. Flow (perm)	1711	1531	1801	1531		2051
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	159	789	464	159	589
RTOR Reduction (vph)	0	136	0	131	0	0
Lane Group Flow (vph)	145	23	789	333	0	748
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	12.5	12.5	62.1	62.1		62.1
Effective Green, g (s)	12.5	12.5	62.1	62.1		62.1
Actuated g/C Ratio	0.14	0.14	0.72	0.72		0.72
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	246	220	1291	1097		1470
v/s Ratio Prot	c0.08		c0.44			
v/s Ratio Perm		0.01		0.22		0.36
v/c Ratio	0.59	0.10	0.61	0.30		0.51
Uniform Delay, d1	34.7	32.2	6.2	4.4		5.5
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	3.6	0.2	2.2	0.7		1.3
Delay (s)	38.2	32.4	8.3	5.1		6.7
Level of Service	D	C	A	A		A
Approach Delay (s)	35.2		7.2			6.7
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			10.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.61			
Actuated Cycle Length (s)			86.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			85.5%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	403	32	58	424	65	114
Future Volume (vph)	403	32	58	424	65	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.99			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1783			1790	1616	
Flt Permitted	1.00			0.88	0.98	
Satd. Flow (perm)	1783			1593	1616	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	403	32	58	424	65	114
RTOR Reduction (vph)	6	0	0	0	72	0
Lane Group Flow (vph)	429	0	0	482	107	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	19.8			19.8	18.3	
Effective Green, g (s)	19.8			19.8	18.3	
Actuated g/C Ratio	0.40			0.40	0.37	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	704			629	590	
v/s Ratio Prot	0.24				c0.07	
v/s Ratio Perm				c0.30		
v/c Ratio	0.61			0.77	0.18	
Uniform Delay, d1	12.1			13.1	10.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			5.6	0.7	
Delay (s)	13.6			18.7	11.5	
Level of Service	B			B	B	
Approach Delay (s)	13.6			18.7	11.5	
Approach LOS	B			B	B	
Intersection Summary						
HCM 2000 Control Delay		15.5		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.48				
Actuated Cycle Length (s)		50.1		Sum of lost time (s)		12.0
Intersection Capacity Utilization		74.3%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	104	191	385	0	177	0	276	94	282	45
Future Volume (vph)	0	310	104	191	385	0	177	0	276	94	282	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	3351	
Flt Permitted		1.00	1.00	0.56	1.00		0.55		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1011	1801		998		1531	1711	3351	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	310	104	191	385	0	177	0	276	94	282	45
RTOR Reduction (vph)	0	0	68	0	0	0	0	0	167	0	0	0
Lane Group Flow (vph)	0	310	36	191	385	0	177	0	109	94	327	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8						6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		621	528	348	621		394		604	675	1322	
v/s Ratio Prot		0.17			c0.21						0.10	
v/s Ratio Perm			0.02	0.19			c0.18		0.07	0.05		
v/c Ratio		0.50	0.07	0.55	0.62		0.45		0.18	0.14	0.25	
Uniform Delay, d1		11.9	10.1	12.2	12.6		10.3		9.1	8.9	9.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.1	1.8	1.9		3.7		0.7	0.4	0.4	
Delay (s)		12.6	10.2	14.0	14.4		13.9		9.7	9.4	9.8	
Level of Service		B	B	B	B		B		A	A	A	
Approach Delay (s)		12.0			14.3			11.4			9.7	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.0			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			46.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			64.3%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

8: S Union St/N Union St & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	487	0	0	503	57	47	279	50	0	0	0
Future Volume (vph)	148	487	0	0	503	57	47	279	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.98				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1776		1711	1760				
Flt Permitted	0.28	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	502	1801			1776		1711	1760				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	148	487	0	0	503	57	47	279	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	11	0	0	0	0
Lane Group Flow (vph)	148	487	0	0	552	0	47	318	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	19.8	19.8			19.8		18.2	18.2				
Effective Green, g (s)	19.8	19.8			19.8		18.2	18.2				
Actuated g/C Ratio	0.40	0.40			0.40		0.36	0.36				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	198	713			703		622	640				
v/s Ratio Prot		0.27			c0.31			c0.18				
v/s Ratio Perm	0.29						0.03					
v/c Ratio	0.75	0.68			0.78		0.08	0.50				
Uniform Delay, d1	13.0	12.5			13.2		10.4	12.3				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	14.3	2.7			5.7		0.2	2.7				
Delay (s)	27.2	15.2			19.0		10.6	15.1				
Level of Service	C	B			B		B	B				
Approach Delay (s)		18.0			19.0			14.5			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay		17.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		50.0			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		70.8%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

9: S Willard St/N Willard St & Pearl St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	478	41	53	482	42	59	239	52	26	171	34
Future Volume (vph)	47	478	41	53	482	42	59	239	52	26	171	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.99		1.00	0.99			0.98			0.98	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1776		1711	1779			1750			1755	
Flt Permitted		0.83		0.39	1.00			0.90			0.93	
Satd. Flow (perm)		1485		698	1779			1593			1643	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	47	478	41	53	482	42	59	239	52	26	171	34
RTOR Reduction (vph)	0	5	0	0	6	0	0	13	0	0	12	0
Lane Group Flow (vph)	0	561	0	53	518	0	0	337	0	0	219	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0		20.0	20.0			18.0			18.0	
Effective Green, g (s)		20.0		20.0	20.0			18.0			18.0	
Actuated g/C Ratio		0.40		0.40	0.40			0.36			0.36	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		594		279	711			573			591	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.38		0.08				c0.21			0.13	
v/c Ratio		0.94		0.19	0.73			0.59			0.37	
Uniform Delay, d1		14.5		9.7	12.7			13.0			11.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		25.4		1.5	6.5			4.4			1.8	
Delay (s)		39.8		11.2	19.2			17.4			13.6	
Level of Service		D		B	B			B			B	
Approach Delay (s)		39.8			18.4			17.4			13.6	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			24.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			50.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			102.2%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	666	76	196	786	120	203	339	251	36	154	16
Future Volume (vph)	0	666	76	196	786	120	203	339	251	36	154	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1776		1711	1765		1711	1801	1531		1766	
Flt Permitted		1.00		0.14	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1776		248	1765		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	666	76	196	786	120	203	339	251	36	154	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	199	0	3	0
Lane Group Flow (vph)	0	738	0	196	906	0	203	339	52	0	203	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Effective Green, g (s)		23.0		36.1	36.1		17.9	17.9	17.9		14.4	
Actuated g/C Ratio		0.27		0.42	0.42		0.21	0.21	0.21		0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		472		223	737		354	373	317		294	
v/s Ratio Prot		c0.42		0.07	c0.51		0.12	c0.19			c0.11	
v/s Ratio Perm				0.29					0.03			
v/c Ratio		1.56		0.88	1.23		0.57	0.91	0.16		0.69	
Uniform Delay, d1		31.7		35.0	25.2		30.8	33.5	28.1		33.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		263.4		29.9	114.9		2.2	25.1	0.2		6.6	
Delay (s)		295.1		65.0	140.1		33.1	58.5	28.4		40.5	
Level of Service		F		E	F		C	E	C		D	
Approach Delay (s)		295.1			126.7			42.5			40.5	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			140.9				HCM 2000 Level of Service		F			
HCM 2000 Volume to Capacity ratio			1.18									
Actuated Cycle Length (s)			86.4				Sum of lost time (s)		24.0			
Intersection Capacity Utilization			137.2%				ICU Level of Service		H			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	157	102	36	136	28	33	80	22	21	115	54
Future Volume (vph)	25	157	102	36	136	28	33	80	22	21	115	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	157	102	36	136	28	33	80	22	21	115	54
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	284	200	135	190								
Volume Left (vph)	25	36	33	21								
Volume Right (vph)	102	28	22	54								
Hadj (s)	-0.16	-0.01	-0.01	-0.11								
Departure Headway (s)	4.9	5.2	5.5	5.3								
Degree Utilization, x	0.39	0.29	0.20	0.28								
Capacity (veh/h)	681	639	585	621								
Control Delay (s)	11.1	10.3	9.9	10.3								
Approach Delay (s)	11.1	10.3	9.9	10.3								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay				10.5								
Level of Service				B								
Intersection Capacity Utilization				38.9%	ICU Level of Service						A	
Analysis Period (min)				15								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	133	44	27	96	39	66	115	44	36	95	35
Future Volume (vph)	20	133	44	27	96	39	66	115	44	36	95	35
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	133	44	27	96	39	66	115	44	36	95	35
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	197	162	225	166								
Volume Left (vph)	20	27	66	36								
Volume Right (vph)	44	39	44	35								
Hadj (s)	-0.08	-0.08	-0.02	-0.05								
Departure Headway (s)	5.1	5.1	5.1	5.1								
Degree Utilization, x	0.28	0.23	0.32	0.24								
Capacity (veh/h)	648	637	660	641								
Control Delay (s)	10.0	9.7	10.4	9.7								
Approach Delay (s)	10.0	9.7	10.4	9.7								
Approach LOS	B	A	B	A								
Intersection Summary												
Delay	10.0											
Level of Service	A											
Intersection Capacity Utilization	39.4%			ICU Level of Service					A			
Analysis Period (min)	15											

13: Pine St & Main St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	308	120	67	428	83	166	121	43	119	225	21
Future Volume (vph)	15	308	120	67	428	83	166	121	43	119	225	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0			4.0	4.0		4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.96		1.00	0.98			1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)		1732		1711	1757			1750	1531		1758	
Flt Permitted		0.83		0.31	1.00			0.63	1.00		0.79	
Satd. Flow (perm)		1441		564	1757			1136	1531		1414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	308	120	67	428	83	166	121	43	119	225	21
RTOR Reduction (vph)	0	15	0	0	8	0	0	0	22	0	2	0
Lane Group Flow (vph)	0	428	0	67	503	0	0	287	22	0	363	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		29.8		29.8	29.8			44.0	44.0		44.0	
Effective Green, g (s)		30.8		29.8	30.8			45.0	45.0		45.0	
Actuated g/C Ratio		0.34		0.33	0.34			0.50	0.50		0.50	
Clearance Time (s)		5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		493		186	601			568	765		707	
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.30		0.12				0.25	0.01		c0.26	
v/c Ratio		0.87		0.36	0.84			0.51	0.03		0.51	
Uniform Delay, d1		27.7		22.9	27.3			15.1	11.4		15.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		14.9		1.2	9.9			3.2	0.1		0.6	
Delay (s)		42.6		24.1	37.2			18.2	11.5		15.8	
Level of Service		D		C	D			B	B		B	
Approach Delay (s)		42.6			35.6			17.4			15.8	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			29.7			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			82.2%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

14: St. Paul St/St Paul St & Main St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	346	82	57	339	83	98	71	72	86	116	13
Future Volume (vph)	15	346	82	57	339	83	98	71	72	86	116	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.92		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1749		1711	1748		1711	1665		1711	1773	
Flt Permitted	0.41	1.00		0.41	1.00		0.67	1.00		0.67	1.00	
Satd. Flow (perm)	744	1749		730	1748		1214	1665		1199	1773	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	346	82	57	339	83	98	71	72	86	116	13
RTOR Reduction (vph)	0	18	0	0	19	0	0	44	0	0	7	0
Lane Group Flow (vph)	15	410	0	57	403	0	98	99	0	86	122	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.3	16.3		16.3	16.3		18.2	18.2		18.2	18.2	
Effective Green, g (s)	16.3	16.3		16.3	16.3		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	613		255	612		475	651		469	693	
v/s Ratio Prot		c0.23			0.23			0.06			0.07	
v/s Ratio Perm	0.02			0.08			c0.08			0.07		
v/c Ratio	0.06	0.67		0.22	0.66		0.21	0.15		0.18	0.18	
Uniform Delay, d1	10.0	12.8		10.6	12.8		9.4	9.2		9.3	9.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	2.8		0.4	2.6		1.0	0.5		0.9	0.6	
Delay (s)	10.1	15.6		11.1	15.3		10.4	9.7		10.1	9.8	
Level of Service	B	B		B	B		B	A		B	A	
Approach Delay (s)		15.4			14.8			9.9			9.9	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			13.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			46.5			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			60.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	441	38	85	483	159	6	118	44	267	348	105
Future Volume (vph)	90	441	38	85	483	159	6	118	44	267	348	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.96			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1779		1711	1734			1734		1711	1801	1531
Flt Permitted	0.20	1.00		0.26	1.00			0.98		0.54	1.00	1.00
Satd. Flow (perm)	360	1779		463	1734			1708		976	1801	1531
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	441	38	85	483	159	6	118	44	267	348	105
RTOR Reduction (vph)	0	5	0	0	20	0	0	21	0	0	0	53
Lane Group Flow (vph)	90	474	0	85	622	0	0	147	0	267	348	53
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	29.0
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	0.50
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	120	593		154	578			540		561	900	765
v/s Ratio Prot		0.27			c0.36					c0.05	0.19	
v/s Ratio Perm	0.25			0.18				0.09		c0.19		0.03
v/c Ratio	0.75	0.80		0.55	1.08			0.27		0.48	0.39	0.07
Uniform Delay, d1	17.8	18.2		16.3	20.0			15.3		9.4	9.3	7.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	34.5	10.8		13.5	59.6			1.2		0.6	1.3	0.2
Delay (s)	52.2	28.9		29.8	79.6			16.6		10.1	10.6	7.9
Level of Service	D	C		C	E			B		B	B	A
Approach Delay (s)		32.6			73.8			16.6			10.0	
Approach LOS		C			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			37.6			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			84.3%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

16: Main St & S Union St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	732	0	0	615	40	37	273	101	0	0	0
Future Volume (vph)	53	732	0	0	615	40	37	273	101	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00				
Frt	1.00	1.00			0.99		1.00	0.96				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1711	1801			1786		1711	1728				
Flt Permitted	0.26	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	466	1801			1786		1711	1728				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	732	0	0	615	40	37	273	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	18	0	0	0	0
Lane Group Flow (vph)	53	732	0	0	652	0	37	356	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	30.6	30.6			30.6		18.6	18.6				
Effective Green, g (s)	31.6	31.6			31.6		19.6	19.6				
Actuated g/C Ratio	0.52	0.52			0.52		0.32	0.32				
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	240	929			922		547	553				
v/s Ratio Prot		c0.41			0.37			c0.21				
v/s Ratio Perm	0.11						0.02					
v/c Ratio	0.22	0.79			0.71		0.07	0.64				
Uniform Delay, d1	8.1	12.1			11.3		14.5	17.8				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	0.5	4.5			2.5		0.1	2.6				
Delay (s)	8.5	16.6			13.8		14.5	20.4				
Level of Service	A	B			B		B	C				
Approach Delay (s)		16.0			13.8			19.9			0.0	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			16.1			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			61.2			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			72.0%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

17: S Willard St & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	947	44	82	861	84	32	354	58	84	282	29
Future Volume (vph)	38	947	44	82	861	84	32	354	58	84	282	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1711	1789		1711	1777			1763			1764	
Flt Permitted	0.11	1.00		0.11	1.00			0.95			0.70	
Satd. Flow (perm)	206	1789		206	1777			1678			1251	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	947	44	82	861	84	32	354	58	84	282	29
RTOR Reduction (vph)	0	3	0	0	6	0	0	8	0	0	4	0
Lane Group Flow (vph)	38	988	0	82	939	0	0	436	0	0	391	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			19.0			19.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0			20.0			20.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.31			0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	110	963		110	956			516			384	
v/s Ratio Prot		c0.55			0.53							
v/s Ratio Perm	0.18			0.40				0.26			c0.31	
v/c Ratio	0.35	1.03		0.75	0.98			0.84			1.02	
Uniform Delay, d1	8.5	15.0		11.6	14.7			21.0			22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.4	35.9		36.4	25.2			12.0			50.5	
Delay (s)	16.9	50.9		47.9	39.9			33.1			73.0	
Level of Service	B	D		D	D			C			E	
Approach Delay (s)		49.6			40.6			33.1			73.0	
Approach LOS		D			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			47.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			112.6%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	833	8	219	970	728	0	133	439	475	131	11
Future Volume (vph)	0	833	8	219	970	728	0	133	439	475	131	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3416		1711	1801	1531		1801	1531	3319	1780	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3416		1711	1801	1531		1801	1531	3319	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	833	8	219	970	728	0	133	439	475	131	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	840	0	219	970	728	0	133	140	475	142	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.2		13.9	47.1	47.1		13.1	13.1	7.0	26.1	
Effective Green, g (s)		27.2		13.9	47.1	47.1		13.1	13.1	7.0	26.1	
Actuated g/C Ratio		0.32		0.16	0.55	0.55		0.15	0.15	0.08	0.31	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1090		279	995	846		276	235	272	545	
v/s Ratio Prot		0.25		0.13	c0.54	0.48		0.07		c0.14	0.08	
v/s Ratio Perm									c0.09			
v/c Ratio		0.77		0.78	0.97	0.86		0.48	0.60	1.75	0.26	
Uniform Delay, d1		26.2		34.2	18.5	16.2		32.9	33.6	39.1	22.3	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.3		13.5	23.1	11.1		1.3	4.0	350.7	0.3	
Delay (s)		31.5		47.7	41.6	27.4		34.3	37.6	389.8	22.5	
Level of Service		C		D	D	C		C	D	F	C	
Approach Delay (s)		31.5			36.9			36.8			305.3	
Approach LOS		C			D			D			F	
Intersection Summary												
HCM 2000 Control Delay			77.7				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			85.2				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			86.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	58	149	117	441	612	103
Future Volume (vph)	58	149	117	441	612	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.90			1.00	0.98	
Flt Protected	0.99			0.99	1.00	
Satd. Flow (prot)	1603			3386	3347	
Flt Permitted	0.99			0.71	1.00	
Satd. Flow (perm)	1603			2426	3347	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	58	149	117	441	612	103
RTOR Reduction (vph)	105	0	0	0	21	0
Lane Group Flow (vph)	102	0	0	558	694	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.7			21.8	21.8	
Effective Green, g (s)	6.7			21.8	21.8	
Actuated g/C Ratio	0.17			0.54	0.54	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	265			1305	1801	
v/s Ratio Prot	c0.06				0.21	
v/s Ratio Perm				c0.23		
v/c Ratio	0.38			0.43	0.39	
Uniform Delay, d1	15.1			5.6	5.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.9			1.0	0.6	
Delay (s)	16.0			6.6	6.1	
Level of Service	B			A	A	
Approach Delay (s)	16.0			6.6	6.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.7		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			40.5		Sum of lost time (s)	12.0
Intersection Capacity Utilization			63.2%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	106	72	103	397	723	77
Future Volume (vph)	106	72	103	397	723	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		0.99	1.00	
Satd. Flow (prot)	1711	1531		3386	3372	
Flt Permitted	0.95	1.00		0.71	1.00	
Satd. Flow (perm)	1711	1531		2419	3372	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	72	103	397	723	77
RTOR Reduction (vph)	0	61	0	0	12	0
Lane Group Flow (vph)	106	11	0	500	788	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.7	6.7		23.7	23.7	
Effective Green, g (s)	6.7	6.7		23.7	23.7	
Actuated g/C Ratio	0.16	0.16		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	270	241		1352	1884	
v/s Ratio Prot	c0.06				c0.23	
v/s Ratio Perm		0.01		0.21		
v/c Ratio	0.39	0.05		0.37	0.42	
Uniform Delay, d1	16.0	15.1		5.2	5.4	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.1		0.8	0.7	
Delay (s)	17.0	15.2		6.0	6.1	
Level of Service	B	B		A	A	
Approach Delay (s)	16.3			6.0	6.1	
Approach LOS	B			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.41			
Actuated Cycle Length (s)			42.4		Sum of lost time (s)	12.0
Intersection Capacity Utilization			57.3%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

21: St Paul St & Bank St
City Place Burlington Development

2026 PM Full Build
02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	98	45	52	74	5	58	5	72	0	10	20
Future Volume (vph)	20	98	45	52	74	5	58	5	72	0	10	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	98	45	52	74	5	58	5	72	0	10	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	163	131	135	30								
Volume Left (vph)	20	52	58	0								
Volume Right (vph)	45	5	72	20								
Hadj (s)	-0.11	0.09	-0.20	-0.37								
Departure Headway (s)	4.3	4.6	4.4	4.4								
Degree Utilization, x	0.20	0.17	0.17	0.04								
Capacity (veh/h)	796	748	764	750								
Control Delay (s)	8.4	8.5	8.3	7.5								
Approach Delay (s)	8.4	8.5	8.3	7.5								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			38.3%	ICU Level of Service					A			
Analysis Period (min)			15									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	132	75	1195	96	60	600
Future Volume (vph)	132	75	1195	96	60	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1660		3383			3406
Flt Permitted	0.97		1.00			0.74
Satd. Flow (perm)	1660		3383			2524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	75	1195	96	60	600
RTOR Reduction (vph)	11	0	10	0	0	0
Lane Group Flow (vph)	196	0	1281	0	0	660
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	8.7		22.0			22.0
Effective Green, g (s)	8.7		22.0			22.0
Actuated g/C Ratio	0.20		0.52			0.52
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	338		1742			1300
v/s Ratio Prot	c0.12		c0.38			
v/s Ratio Perm						0.26
v/c Ratio	0.58		0.74			0.51
Uniform Delay, d1	15.3		8.1			6.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	2.4		2.8			1.4
Delay (s)	17.8		10.9			8.2
Level of Service	B		B			A
Approach Delay (s)	17.8		10.9			8.2
Approach LOS	B		B			A
Intersection Summary						
HCM 2000 Control Delay			10.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			42.7		Sum of lost time (s)	12.0
Intersection Capacity Utilization			81.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

23: St Paul St & Cherry St
City Place Burlington Development

2026 PM Full Build

02/11/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	120	20	5	197	20	20	5	5	26	5	18
Future Volume (vph)	19	120	20	5	197	20	20	5	5	26	5	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.95	
Flt Protected		0.99			1.00			0.97			0.97	
Satd. Flow (prot)		1760			1777			1703			1667	
Flt Permitted		0.92			0.99			0.80			0.83	
Satd. Flow (perm)		1627			1755			1402			1425	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	120	20	5	197	20	20	5	5	26	5	18
RTOR Reduction (vph)	0	13	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	146	0	0	213	0	0	27	0	0	37	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			9.3			9.3	
Effective Green, g (s)		7.2			7.2			9.3			9.3	
Actuated g/C Ratio		0.25			0.25			0.33			0.33	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		411			443			457			465	
v/s Ratio Prot												
v/s Ratio Perm		0.09			0.12			0.02			0.03	
v/c Ratio		0.36			0.48			0.06			0.08	
Uniform Delay, d1		8.7			9.1			6.6			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			0.8			0.1			0.1	
Delay (s)		9.3			9.9			6.6			6.7	
Level of Service		A			A			A			A	
Approach Delay (s)		9.3			9.9			6.6			6.7	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.1			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.25										
Actuated Cycle Length (s)		28.5			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		31.9%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												



Memorandum

To: BTC Mall Associates, LLC

Date: October 1, 2020

Project #: 57881.00

From: VHB

Re: CityPlace Burlington
Supplemental Traffic Analysis – Trip Generation Update

VHB completed a Traffic Impact Study (TIS) dated March 2020 for the redevelopment of the Burlington Town Center Mall between St. Paul Street and Pine Street into the mixed use CityPlace Burlington (CPB) project (March CPB TIS)¹. The building program for the CPB site has since changed. VHB has completed supplemental trip generation analysis for the proposed revised development program. This evaluation compares the trip generation of the redevelopment plan included in the CityPlace Burlington Traffic Impact Study completed by VHB in March 2020 and the current redevelopment plan.

Project History

The proposed redevelopment plan outlined in the March CPB TIS (March 2020 development plan) included a mixed use facility comprised of residences, a hotel, retail, a community room, and restaurant spaces with primary vehicular access and egress provided to the internal parking garage via midblock access points on St. Paul and Pine Streets. The March 2020 development plan was anticipated to generate 331 new trips during the weekday AM peak hour and 508 new trips during the weekday PM peak hour.

The March CPB TIS analyzed the anticipated impacts on operations at approximately 23 intersections within the City of Burlington. Nearly all the signalized intersections were anticipated to operate at a LOS of D or better and the unsignalized intersections were anticipated to operate at LOS B or better. The March CPB TIS found that the CPB project was not expected to generate unreasonable congestion or unsafe conditions within Burlington's transportation system.

Proposed Redevelopment Plan

The March 2020 development plan consisted of residential units, retail space, restaurant space, a community room, and a hotel. The current redevelopment plan includes additional residential units, additional retail space, a reduction in restaurant space, a community room, the addition of office space, and the elimination of the hotel land use.

The breakdown of the previous and the current redevelopment plans are shown in **Table 1**.

¹ CityPlace Burlington Traffic Impact Study, VHB, 2020.

VHB
40 IDX Drive Building 100
Suite 200
South Burlington, VT 05403

Table 1: Redevelopment Plan Comparison

	MARCH 2020 DEVELOPMENT PLAN ¹	CURRENT REDEVELOPMENT PLAN
RESIDENTIAL (UNITS)	357	427
RETAIL (SF)	45,900	46,600
RESTAURANT (SF)	8,100	4,250
HOTEL (ROOMS)	200	0
OFFICE SPACE (SF)	0	8,600
COMMUNITY ROOM (SF)	3,150	3,150

1. PROPOSED REDEVELOPMENT PLAN FROM MARCH CPB TIS.

Trip Generation

The trip generation estimates for the March 2020 and current redevelopment plans were calculated using rates published by the Institute of Transportation Engineers (ITE) in [Trip Generation](#).² The land use codes (LUCs) assumed for this project include Multi-Family Housing (High Rise) (LUC 222), Shopping Center (LUC 820), High-Turnover (Sit-Down) Restaurant (LUC 932), Hotel (LUC 310), and General Office Building (LUC 710).

Table 2 summarizes the trip generation estimates for the March 2020 and current redevelopment plans during the weekday morning and weekday evening peak hours. Calculations supporting the proposed trip generation estimates are provided in the Appendix.

Table 2: Trip Generation Comparison

PEAK PERIOD	MARCH 2020 DEVELOPMENT PLAN ¹	CURRENT REDEVELOPMENT PLAN	NET DIFFERENCE
WEEKDAY MORNING			
ENTER	154	91	-63
EXIT	<u>177</u>	<u>138</u>	<u>-39</u>
TOTAL	331	229	-102
WEEKDAY EVENINGS			
ENTER	276	206	-69
EXIT	<u>232</u>	<u>176</u>	<u>-56</u>
TOTAL	508	383	-125

1. PROPOSED REDEVELOPMENT PLAN FROM MARCH CPB TIS.

² [Trip Generation Manual, 10th Edition](#), Institute of Transportation Engineers, 2017.

The March 2020 development plan was anticipated to generate 331 new trips during the weekday morning peak hour and 508 new trips during the weekday evening peak hour. The current redevelopment plan is anticipated to generate 229 new trips during the weekday morning peak hour and 383 new trips during the weekday evening peak hour. With the modification to the development plan outlined in **Table 2**, the current development plan is anticipated to reduce the new trips by 102 trips during the weekday morning peak hour and 125 trips during the weekday evening peak hour for all movements (entering and exiting).

Summary

The March CPB TIS found minimal impacts anticipated at the 23 intersection studied through downtown Burlington under the March 2020 development plan. The current redevelopment plan is anticipated to reduce the number of trips generated by the site significantly. **In conclusion, based on the results of the March CPB TIS and the reduction in trips associated with the new development plan, the current CityPlace Burlington project is not expected to generate unreasonable congestion or unsafe conditions within Burlington's transportation system.**



Memorandum

Attachment A

Trip Generation

Trip Generation - City Place Block - March CPB TIS

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

Site Land Uses and Descriptions			
Code	Land Use	Size	Unit
City Place Block			
222	Multi-Family Housing (High-Rise)	357	Units
820	Shopping Center	45.9	1k sf
310	Hotel	200	Rooms
932	High-Turnover (Sit-Down) Restaurant	8.1	1k sf

AM PK HR OF ADJACENT STREET TRAFFIC											
directional dist.		average			regression		# trips				
% enter	% exit	# studie	Avg Rate	Std Dev.	Total by	r ²	total by	Method Chosen	Total Trips	Enterin g	Exiting
24%	76%	25	0.31	0.08	111	0.90	113	regression average	113	27	86
62%	38%	84	0.94	0.87	43	0.50	175	regression average	43	27	16
59%	41%	25	0.47	0.14	94	0.85	95	regression average	95	56	39
55%	45%	39	9.94	11.33	81	-	-	regression average	81	44	36

PM PK HR OF ADJACENT STREET TRAFFIC											
directional dist.		average			regression		# trips				
% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen	Total Trips	Enterin g	Exiting
61%	39%	25	0.36	0.06	129	0.96	130	regression average	130	79	51
48%	52%	261	3.81	2.04	175	0.82	305	regression average	175	84	91
51%	49%	28	0.60	0.22	120	0.80	124	regression average	124	63	61
62%	38%	107	9.77	7.37	79	-	-	regression average	79	49	30

total			entering			exiting		
332			154			177		

AM Peak Hour Total Site Trips:			508			276			232		
--------------------------------	--	--	-----	--	--	-----	--	--	-----	--	--

Trip Generation - City Place Block - Current

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

Site Land Uses and Descriptions			
Code	Land Use	Size	Unit
City Place Block			
222	Multi-Family Housing (High-Rise)	427	Units
820	Shopping Center	46.6	1k sf
310	Hotel	0	Rooms
932	High-Turnover (Sit-Down) Restaurant	4.25	1k sf
710	General Office Building	8.6	1k sf

AM PK HR OF ADJACENT STREET TRAFFIC													
directional dist.		average			regression		# trips						
% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen	Total Trips	Entering	Exiting		
24%	76%	25	0.31	0.08	132	0.90	133	regression	133	32	101		
62%	38%	84	0.94	0.87	44	0.50	176	average	44	27	17		
-	-	-	-	-	-	-	-	average	42	23	19		
86%	14%	35	1.16	0.47	10	0.85	35	average	10	9	1		

PM PK HR OF ADJACENT STREET TRAFFIC													
directional dist.		average			regression		# trips						
% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen	Total Trips	Entering	Exiting		
61%	39%	25	0.36	0.06	154	0.96	154	regression	154	94	60		
48%	52%	261	3.81	2.04	178	0.82	309	average	178	85	92		
62%	38%	107	9.77	7.37	42	-	-	average	42	26	16		
16%	84%	32	1.15	0.42	10	0.88	11	average	10	2	8		

AM Peak Hour Total Site Trips:				229	91	138
PM Peak Hour Total Site Trips:				383	206	176

Trip Generation Summary**March CPB TIS Building Program (City Place Block)****Current Building Program (City Place Block)**

<u>Peak Period</u>	<u>Total New Trips</u>	<u>Peak Period</u>	<u>Total New Trips</u>	<u>Trip Comparison</u>
Weekday Morning		Weekday Morning		
Enter	154	Enter	91	-63
Exit	<u>177</u>	Exit	<u>138</u>	<u>-39</u>
Total	331	Total	229	-102
Weekday Evening		Weekday Evening		
Enter	276	Enter	206	-69
Exit	<u>232</u>	Exit	<u>176</u>	<u>-56</u>
Total	508	Total	383	-125

MEMORANDUM



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Project Name: **CityPlace Burlington**

Project Number: **A1947.00**

Date: **14 Oct 2020**

To: Zoning Department- Scott Gustin
From: Jesse Beck, FFF
Re: Construction Phasing/TCO Plan

Phased occupancy based on the following:
Construction Start – September 15, 2021

North Building/West - Phase 1/TCO 1 (20 mos.) May 15, 2023

Construct Western portion of the North Building (west of elevator core)
Basement level- Mech./Utilities/Storage ; Parking Level P1
Western ½ of P2 Garage, North of Garage Break line
Residential floors L1-8, Residential loading dock, Roof Top Mech.
Retail – Western phase areas facing Cherry Street

North Building/East - Phase 2 /TCO 2 (+18 mos.) Nov. 15, 2024

Construct Eastern half of the North Building (east of elevator core)
Residential Floors L1- 8, Residential loading dock, Roof Top Mech.
Finish Garage levels P2 & P3
Retail – Eastern phase areas facing Cherry Street

South Building - Phase 3/TCO 3 (+18 mos.) May 15, 2026

Retail on Bank, Residential Lobby, Loading Dock.
Parking Garage – Remaining bays of Garage, South of Garage break line
Level 1 – Office/Meeting space/Community Space/ Amenity

South Building - Phase 4/ TCO 4 (+6 mos.) Nov. 15, 2026

Complete Residential fit up L2 to L8
Restaurant and Observation Deck on L9 ; Roof Top Mech.
New St. Paul and New Pine Ground Level Spaces.

CC

File A1947.00			



Memorandum

To: BTC Mall Associates, LLC

Date: October 1, 2020

Project #: 57881.00

From: VHB

Re: Noise Impact Assessment – CityPlace Burlington

Introduction

VHB has conducted a noise assessment of the proposed multi-use development project at CityPlace in Burlington, VT. This development has the potential to introduce new stationary and mobile sources of noise that could potentially affect the existing community. This noise impact memo provides background on the proposed development, describes applicable noise impact criteria and qualitatively assesses the potential for impact.

Background

The CityPlace building program would include 427 apartment units, 46,600 square feet of retail, 4,250 square feet of restaurant, 8,600 square feet of office space, and a 3,150 square feet community room. The proposed development would be in lieu of previously permitted CityPlace Burlington development which was evaluated and determined would not result in adverse noise impact according to the Burlington Noise Ordinance as it relates to the introduction of new stationary sources including rooftop mechanical equipment, increases in traffic volumes due to the additional retail, office and residential uses or construction-period activities.

Noise Ordinance

There are no federal or state-level noise regulations in Vermont that apply to evaluate potential noise effects due to the proposed development. Additionally, the project is not subject to environmental review pursuant to the Act 250 program administered by the Natural Resources Board.

The Burlington Noise Code (Section 21-13) "Noise Ordinance" is intended to preserve the public health, safety and welfare by prohibiting excessive and disturbing noise. Specific noise-generating activities are prohibited including the following that may be applicable to the proposed development:

- making "loud or unreasonable" noise which disturbs, injures or endangers the peace or health of another;
- operating radios, television, musical instruments or similar devices that is plainly audible from another property or from the street between the hours of 10:00 PM and 7:00 AM;
- parties and social events that generate unreasonably loud noise or is plainly audible between the hours of 10:00 PM and 7:00 AM at another property or at the street;
- construction activities between 9:00 PM and 7:00 AM; and
- use of loudspeakers for the purpose of attracting the attention of the public to a building.

40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403-7771
P 802.497.6100

Noise Impact Assessment

The development will include retail and office uses similar in nature and character to existing uses on the site and on abutting parcels typical of the downtown. Noise-sensitive receptors near the proposed development include retail buildings, residences on Cherry Street, the Hilton Burlington Lake Champlain to the west, and the Costello Courthouse on Cherry Street.

The project would not be expected to include specific noise-generating activities which are prohibited according to the Noise Code such as making loud or unreasonable noise, operating radios, televisions, musical instruments or similar devices that could be audible from other properties or the street, and parties or social events that generate plainly audible noise between 10:00 PM and 7:00 AM.

The proposed parking would be in a ground-floor garage, loading docks and trash and recycling facilities will be located within the building.

Specific details including location, types and sizes of stationary mechanical equipment such as condenser units and generators are not known at this time. Standard mechanical equipment will be located on the building roofs and would be enclosed which would substantially reduce noise to the community.

As described in the Traffic Impact Study, the proposed development would result in a net decrease in vehicle trips compared to the CityPlace Burlington Phase 1 development. This decrease in traffic volumes would result in a small reduction in noise due to additional mobile sources.

Construction of the proposed developments would involve equipment and methods typical of mixed-use development projects in the region. As feasible, construction of the proposed facility would not occur during the hours of 9:00 PM and 7:00 AM which is prohibited according to the town ordinance.

Conclusions

The proposed CityPlace development would not result in adverse noise impact according to the Burlington Noise Ordinance as it relates to the introduction of new stationary sources including rooftop mechanical equipment, changes in traffic volumes due to the additional retail, office and residential uses or construction-period activities.



Memorandum

To: BTC Mall Associates, LLC

Date: October 1, 2020

Project #: 57881.00

From: VHB

Re: Air Quality Impact Assessment – CityPlace Burlington

Introduction

VHB has conducted an air quality assessment of the proposed multi-use development project at CityPlace in Burlington, VT. The development has the potential to introduce new stationary and mobile sources of air quality pollution that could potentially affect the existing community. This air quality impact memo provides background on the proposed development, describes applicable air quality criteria and qualitatively assesses the potential for impact.

Background

The CityPlace building program would include 427 apartment units, 46,600 square feet of retail, 4,250 square feet of restaurant, 8,600 square feet of office space, and a 3,150 square feet community room. This proposed development would be in lieu of previously permitted CityPlace Burlington development which was evaluated and determined would not result in adverse air quality impact as it relates to applicable federal, state or local requirements.

Existing Air Quality Conditions

The United States Environmental Protection Agency (EPA) has set the National Ambient Air Quality Standards (NAAQS) for criteria pollutants to protect public health. Sources of pollution from the proposed development would include boilers, generators and project-generated motor vehicle traffic. Carbon monoxide (CO) and particulate matter (PM) having diameters of 10 micrometers or less (PM₁₀) and having diameters of 2.5 micrometers or less (PM_{2.5}) are directly emitted by motor vehicles. Other criteria pollutants that are regulated by the EPA and are set in the NAAQS include nitrogen oxides (NO₂), ozone (O₃), and sulfur dioxide (SO₂).

The following table presents the most recent existing pollutant concentrations in the region which are monitored at the following monitoring stations:

- South Winooski and Main Street Parking Lot in Burlington;
- Proctor Maple Research Center in Underhill; and
- 96 State Street in Rutland.

40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403-7771
P 802.497.6100

Table 1 Existing Pollutant Concentrations

Pollutant	Averaging Time	Existing Pollutant Concentration	NAAQS
Carbon Monoxide (CO)	8-Hour (2 nd max)	0.6 ppm (Burlington)	9 ppm
	1-Hour (2 nd max)	0.7 ppm (Burlington)	35 ppm
Nitrogen Dioxide (NO ₂)	Annual mean	5.7 ppb (Burlington)	53 ppb
	1-Hour (98 th percentile value)	29 ppb (Burlington)	100 ppb
Ozone (O ₃)	8-Hour (4 th max)	0.060 ppm (Underhill)	0.070 ppm
Particulate Matter (PM ₁₀)	24-Hour* (max)	31.7 µg/m ³ (Burlington)	150 µg/m ³
Particulate Matter (PM _{2.5})	Annual mean	5.7 µg/m ³ (Burlington)	12 µg/m ³
	24-Hour (98 th percentile values)	14 µg/m ³ (Burlington)	35 µg/m ³
Sulfur Dioxide (SO ₂)	1-Hour (99 th percentile values)	2 ppb (Rutland)	75 ppb

Source: Design values from the Vermont Annual Air Monitoring Network Plan 2019.

* Value calculated using data from EPA's Air Quality System Quick Look Report (AMP4501).

The project is located in a designated in attainment status, which means the concentration levels do not exceed the NAAQS, for the various criteria pollutants. As shown in Table 1 the ambient air quality conditions, representing the average concentrations for the past three years (2016-2018), in the Burlington region are below the NAAQS.

Air Quality Impact Assessment

The Federal Highway Administration (FHWA) and EPA have established procedures for Transportation Conformity requirements of the Clean Air Act Amendments. Because Vermont is in attainment for all criteria pollutants, regional (mesoscale) impact analyses are required only for large "regionally significant" transportation projects and "hotspot" (microscale) intersection impact analyses are only required for certain projects. The redevelopment CityPlace does not qualify as projects that require either mesoscale or microscale quantitative analyses. Therefore, a qualitative assessment has been conducted to evaluate the potential for vehicle trips generated by the projects to cause adverse air impact.

Potential increases in air emissions associated with the project is based primarily on the increase in traffic volumes, the vehicle classification of trips generated by the projects, and/or the potential increase in delay or a degradation in level of service (LOS). As presented in the Traffic Impact Study, the proposed developments would decrease traffic volumes relative to the previously permitted CityPlace Burlington development. With the proposed development, congestion at intersections would not significantly degrade to have an effect on air emissions. Specifically, LOS at the three worst intersections would remain similar with the proposed development. Based on this assessment of the potential for changes in mobile source air emissions, the proposed developments would not be expected to change the criteria pollutant attainment status in the region or cause levels to exceed the National Ambient Air Quality Standards.

The state of Vermont has an Air Pollution Control statute (10 V.S.A. §551) which implements the state's policy to achieve and maintain such levels of air quality that will protect human health and safety. The Vermont Department of Environmental Conservation implements state regulations and the federal Clean Air Act as it relates to stationary sources of air emissions.

Specific details including location, types and sizes of stationary heating and power-generating equipment such as boilers and generators are not known at this time. Standard mechanical equipment will be located on the building roofs and would likely be enclosed. As the project design advances, air emissions from such equipment will be evaluated and permitted, as needed, through the VT Department of Environmental Conservation to assure that there are no adverse impacts on air quality. Whether further air quality analysis and permits are required depend on the size and type of equipment and whether generators are intended for emergency or non-emergency use.

Conclusions

The proposed development would not result in adverse air quality impact as it relates to applicable federal, state or local requirements. Changes in traffic due to the proposed project would not significantly affect air emissions and all stationary equipment will be analyzed and permitted, as needed, to assure that there are no adverse air quality impacts.



Waste Management Procedures for City Place Burlington

Overview

The following report outlines the Waste Management Procedures for the CityPlace Burlington project in downtown Burlington, VT. This program has been developed alongside our architects, engineers, and two local/regional Waste Management providers by integrating best practices among Urban mixed-use projects. Local City of Burlington and State of Vermont laws, Projected Waste Generation, and traffic flows throughout this mixed-use project were incorporated into the design criteria to optimize an efficient and cost-effective Waste Management Program.

Index

A. General Description

1. On-site drop-off locations
2. Equipment List
3. Pick up Locations and Times

B. North Residential

1. North Building – Residential

C. South Residential

1. South Building – Residential

D. Retail

E. Garage

F. Other Considerations

1. Recycling Laws
2. Composting Procedures

A. General Description

3. On-site drop-off locations

a. South Residential, Retail and Garage tenant loading dock trash facilities

The loading dock located on Bank Street will serve as a drop off point for all uses south of the parking garage. It is principally for south residential, retail and garage tenants. Each tenant or the Landlord being reimbursed by the other office tenants will be responsible for taking their trash to the compactor. Residents will have access either to waste management rooms or trash chutes on each floor, TBD.

b. Residential Waste Management Loading Docks

There is a second loading dock located on Pine street and a third dock on St Paul Street which are for residential use and are separate and apart from the commercial waste management procedures. There is a freight elevator at the back of the dock that stops on every residential floor. Each tenant will be responsible to deliver their trash, recyclables and composting to the residential truck dock via the freight elevator. Alternatively, there will be a trash chute located on the western side of the north residential building where residents can drop their trash. A trash chute is also under consideration for the east side of the north residences. These pathways are accessible and secure 24/7. The dock will have a trash and recycle compactors with alarm sensors as well as compost bins for the disposition of organic food waste. Organic or compost will be brought to the loading dock by the tenants as these materials are prohibited from being dropped in the trash chute. Containers from the dock will be regularly picked up by the Waste Management company- Casella Waste Management.

4. Facility Waste Management Equipment

a. Pine St. Loading Dock, Residential- All equipment except compactor paid for by trash management company

1. 35-yard self-contained compactor for Municipal Solid Waste (MSW)
2. 35 yard self-contained compactor for Recycling
3. 6 64 gallon compost tote bins
4. 1 Monitoring Service

b. Bank St. Loading Dock, Commercial- All equipment except compactor paid for by trash management company

1. 35-yard self-contained compactor for Municipal Solid Waste (MSW)
2. 35 yard self-contained compactor for Recycling

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BURLINGTON

3. 12 64 gallon compost tote bins
4. 1 Monitoring Service

5. Pick-up Locations and Times

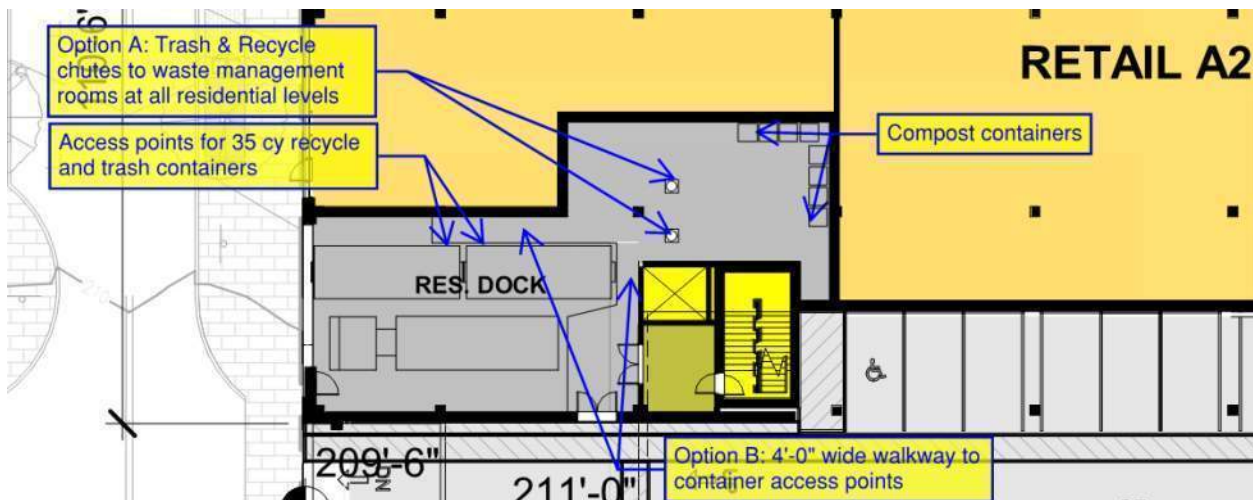
Our third-party waste management contractor will haul trash from two locations:

- a. **Pine Street and St Paul Street Loading Docks:** This is for residential use only. Pick up times will be during off-hours every day except Sunday and Wednesday. Schedule TBD.
- b. **Bank Street Loading Dock.** This location is for retail, south residential, and garage trash & recycling materials. Pick up times will be during off-hours every day except Sunday. Schedule TBD.

B. Residential

The residential portion of the project is independent and separate from the rest of the project.

1. **North Residential Building:** Trash, recycling and composting from the North residential building will be conveyed via a western freight elevator and delivered to the residential loading dock on Pine Street. **Alternatively, the resident will drop the trash in a trash chute located on the western side of the residential building where marked on the diagram below.** During early morning hours, trash management personnel will empty the containers from the dock.



C. South Building

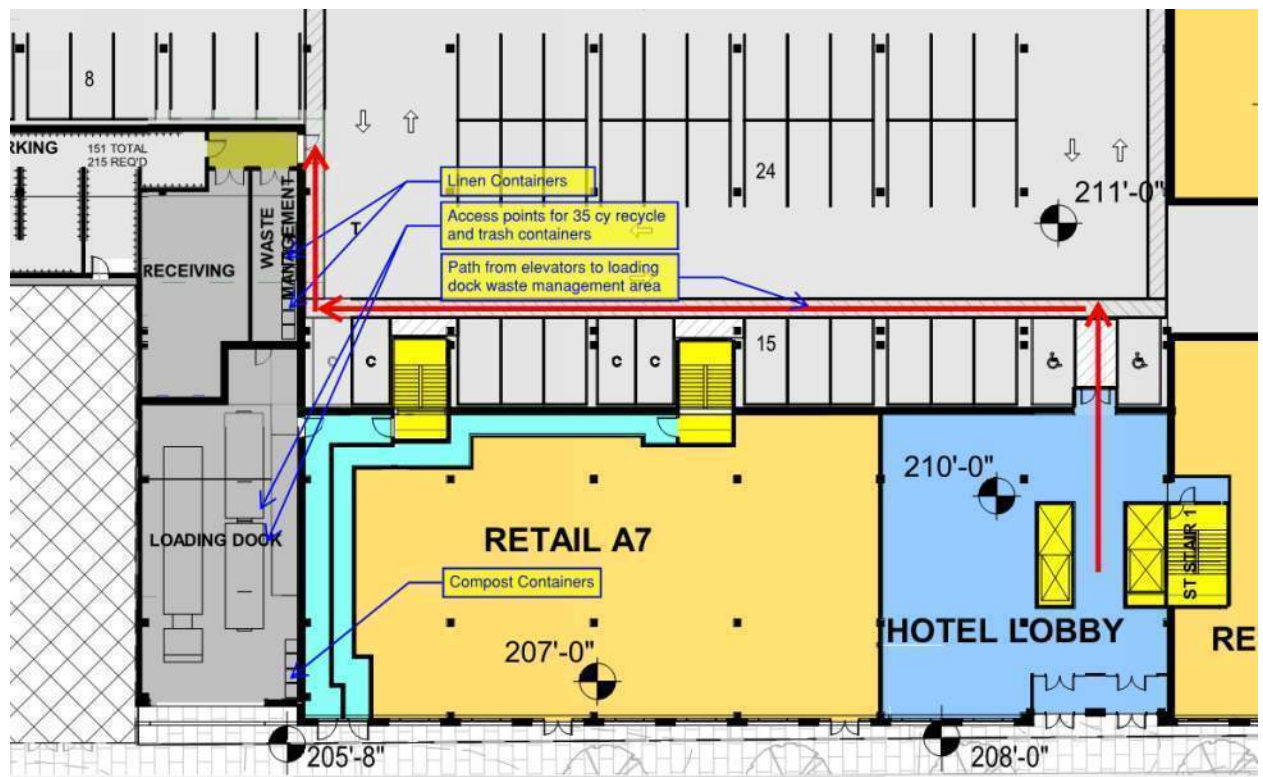
CITYPLACE

BURLINGTON

The is located on Bank Street adjacent to the Bank St. loading dock at the western side of the building.

1. South Building

Trash and recycling by south building tenants will either be collected in waste management rooms on each floor and conveyed to the Bank Street Loading Dock by building staff, or trash chutes will be provided.



D. Retail

Trash, recycling, and compost will be collected by each tenant and transported to the loading dock. All retail tenants will have access to the loading dock on the basement level or the first floor of the garage, down the freight elevator, and/or by curbside access through the front of their store.

E. Garage

Garage trash and recycling will be collected by garage personnel and deposited in the appropriate receptacles within the loading dock for central collection by our third-party waste management contractor.



F. Other Considerations

1. Recycling

Recycling is commingled in Burlington and does not need to be separated on-site.

2. Composting

Composting bins are located at both loading docks. All tenants are responsible to deliver their compost waste to the respective docks as necessary. Compost materials in the designated bins to be removed by the waste management contractor.

BTC MALL Associates LLC

15 January 2021

CityPlace Burlington - Description of Transportation Demand Management Plan

1) Intent

- a) BTC Mall Associates will if its DRB permit requires implement Transportation Demand Management (TDM) strategies for the CityPlace Burlington project. The project is located adjacent to the Downtown Transit Center, the public transportation hub for Northwestern Vermont, and the site is likely among the best served by public transit in the state. Any plan will be a preliminary plan because, as noted in the zoning submission package, the first occupancy is not anticipated until May of 2023, and options for TDM strategies are likely to shift in the 28 months between now and the arrival of the first building occupants in May 2023.
- b) In order to address the TDM program requirements of Section 8.1.16 of the Burlington Comprehensive Development Ordinance (dated October 21, 2020), BTC Mall Associates offers the following: Does this even apply to us since our permit predates this legislation and we are only amending our permit.
- c) At this time, it is too early to determine whether TDM will be implemented using in house programs and staff or through membership in a Transportation Management Association. WE are looking into both types of programs.

2) Program Provisions. The TDM Program will include:

- a) A Transportation Coordinator from building management staff, who will manage the following activities or represent building ownership, residents, and tenants in a Transportation Management Association (TMA) and coordinate the following activities through that TMA.
 - i) Ensure all tenants who require a pass and who do not park in the CityPlace garage, residents again who do not park in the CityPlace garage, and staff receive educational materials and are aware of TDM options.
 - ii) Organize and hold an annual meeting open to all tenants, residents, and staff to present TDM strategies and encourage their use and participation.
 - iii) Electronically distribute a transportation and travel survey to tenants, residents, and staff annually
 - iv) Report TDM offerings.
- b) For 10 years after f the Certificate of Occupancy for each phase, either directly or through a TMA, tenants, residents, and staff who request it and who do not park in our garage will all be offered:
 - i) A free GMT pass for the first year of occupancy t and a 50% discount for each year thereafter
 - ii) A "Share a Little" membership to Car Share Vermont (or an alternate provide should one be available); 5 parking spaces in the building's parking structure will be offered to a car-share provider.
- c) Parking Management. The project includes a total of 422 parking spaces, fewer than the number of apartments. To manage parking and ensure availability:
 - i) Parking Utilization reports will be prepared annually for 10 years after occupancy of Phase 3, which includes completion of the parking facilities.
 - ii) The cost of parking will not be included in the rent charged for any apartment.
 - iii) . Previous legal agreements will govern the terms of parking made available to tenants of the abutting structure at 100 Bank Street.
 - iv) The Garage is accessible from our building as well as from public streets. We shall meet all legal requirements for handicap parking, and we are also providing short term and long-term bike parking. Motorcycle Parking is also provided. CarShare spaces will be located near street or building entrances in coordination with the CarShare provider. We are able if the need materializes to provide up to 5 Vanpool spaces for use before 9am on weekdays.

Regards,

William Fellows

DUST MITIGATION & CONTROL MEASURES

BTC Mall Associates takes dust control seriously and recognizes the City of Burlington's concern about controlling dust during the entirety of the project. As such, the following dust control measures are proposed:

- During dry conditions, soil disturbance areas will be visually monitored by onsite Construction supervision / personnel that are experienced in proactively identifying areas needing dust control before visible dust is generated. When such areas are identified, the contractor will preemptively employ appropriate dust mitigation measures/practices. It will be the responsibility of the contractor and applicable subcontractors to perform the dust mitigation measures.
- Dust mitigation will be addressed via the use of calcium chloride amended water that will be applied to roadways, access corridors, soil excavation areas, demolition areas, soil stockpiles, and/or other areas where dust may be generated; however, care will be taken not to produce a condition where runoff results. Water will be applied to potential areas of concern via industrial fan misters, sprinklers, water trucks, and/or other similar methods.
- Should visible dust be observed, work will temporarily cease until adequate water application is achieved and no visible dust is being generated. In addition to water application, other dust mitigation practices may be employed during windy, dry conditions when dust is most likely to be generated. These additional practices will include reduction of truck traffic speeds and a general increased level of care during excavation and soil loading activities (e.g. place bucket of soil as opposed to dumping it from some height). As part of the design plan, an Erosion Prevention and Sediment Control Plan will be prepared which will further address dust mitigation measures.

Heavy equipment will be utilized for demolition of structures, processing of debris and haulage of said material, as well as movement of vehicles at the work site, and movement of demolition materials.

- Dust control will be provided by routine spraying and dependent upon weather conditions at the time, i.e., wind, temperature, use of haul roads, type of debris being processed) with water trucks or fire hoses.

The following locations are the main areas of work for the project and may or may not generate dust:

- Lay-down area
- Foot print of the work area
- Processing of debris
- Equipment travel path
- Mobilization and De-mobilization of equipment
- Demolition of structures and foundations



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Pre-Application Public Neighborhood Meeting Certification

I, Jesse Beck, certify that the Pre-Application Public Neighborhood Meeting requirement pursuant to Sec. 3.2.1(d) of the *Burlington Comprehensive Development Ordinance* has been satisfied in accordance with the procedures and requirements set forth the Department of Permitting and Inspections for a public neighborhood meeting held on February 27, 2020 at Burlington Contois Auditorium.

A copy of the meeting date, time and location; list of attendees with contact information; NPA meeting minutes or meeting notes summarizing the discussion; and method and copy of public notice is attached and made a part of this Certification.

Signature: _____

Jesse Beck, AIA, NCARB

President, Freeman French Freeman, Inc.

STATE OF VERMONT

COUNTY OF Chittenden

The above and foregoing Affidavit as subscribed before me this 1st day of October, A.D., 2020 personally by Jesse Beck.

Alyssa Francine Frederick

Notary Public

Seal

My Commission Expires: 1/31/2021



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MEETING MINUTES

Freeman French Freeman Inc. | Architecture · Planning · Interiors

81 Maple Street · Burlington Vermont 05401

802-864-6844 · www.fffinc.com

Project Name: City

Bur

Project Number:

Meeting #: Public M

Location: Contois Audi

Burlington C

Date of Meeting: 27 Feb

Attendance:

- | | | |
|---|---|--------------------------|
| ☐ William Fellows, Devonwood | ☐ Chelsea Ziegelbaum, Brookfield | ☐ |
| ☐ Jesse Beck, FFF | ☐ Ken Liatsos, PMG | ☐ |
| ☐ Jesse Robbins, FFF | ☐ Public (See attached list) | ☐ |
| ☐ Aanen Olsen, Brookfield | ☐ | ☐ |
| ☐ Peter Calkins, Brookfield | ☐ | ☐ |

General:

A pre-application neighborhood meeting was held at Burlington City Hall's Contois Auditorium. All NPAs, abutters, and public were invited by Burlington Towne Place Mall Associates through USPS first class mail.

Discussion:

1. A lot of concerns about public access. For example: the roof, indoor contiguous space for residents to go out of the weather (i.e. the mall).
2. Ongoing questions regarding the rental prices of apartments.
3. Street Extensions: will they have sidewalks, landscaping, space for outdoor dining, overhangs for protection from inclement weather?
4. A few residents made the point that we need to be proactive at DRB meetings, attendance and transparency.
5. Financing of the project: What is the current status? Why can we not update specifically on this topic.
6. Status of the litigation.
7. What is the status of Don Sinex's involvement with the project?
8. For existing retail tenants, what will we be doing to make sure they are not disrupted?
9. What are we doing about wastewater and storm runoff?
10. Many concerns about parking. Will there be public access? Will there be enough spaces for all the retail customers and staff, residents, and day visitor?
11. How will people get from store to store, and to restaurants from inside the building without having to go outside?
12. Need to build trust through communication and transparency. What is the plan for communication? What are the next meetings going to be?
13. There was a feeling expressed that 2023 is way too late for completion, and we need to speed the process up.
14. Will there be noise created by the rooftop mechanical spaces?
15. What variety of apartments are being built, and what are their relative square footage?

End minutes.



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MEETING SIGN IN

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Project Name: CityPlace Burl

Project Number: A1947

Meeting #: Public Meeting #2

Location: Contois Auditorium
Hall

Date of Meeting: 27 Feb. 202

Meeting Goals:

Overview of the CityPlace Burlington project and opportunity for public comment.

Attendees:

Name

Address

Email Address

Jesse Robbins	Wiston St Burlington	jrobbins@fffinc.com
Lea Terhune	63 Appleton Pl Ln	leaterhune44@gmail.com
TOM CULLINS	545 EXPROPECT ST #18	TKCULLINS@GMAIL.
KELLY CULLINS	"	kellycullinsrt@gmail
Joe Carton	25 Cherry St - BURL VT	Joe@hotelvt.com
Dan D'Ambrosio	Burlington Free Press	
Catherine Lange	24 Overlook Dr. 05403	clange@fffinc.com
Nalhaba Ellis	500 Pine St.	nellis@fffinc.com
PAT ROBINS	1 JUNIPER TER	gpatthio70@gmail.
George Blaik	25 Burn St Sbu	George@hickokandBourbr
KATE KEOUIT	LYNN	KFkvt1@gmail
Wright Preston	160 College	Wright.Preston@ns
Virginia Munkelwitz	68 Ledge Rd	munkelwitz@alum.mit.
Gail Raffer	4 Elm Terrace	
DAVID BECKETT	"	david@askdavidbe
BERT JOHNSON	602 NORTH AVE #19	bjohnsoemillbury,vt
Amy Mellencamp	110 Summit St	amy.mellencamp
Jolly Lee	37 Butler Dr.	Jolly38@GMAIL.C
Deanne Stenroos	23 Pine St	diannestenoos@
Les Turner	" " "	11



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MEETING SIGN IN

Freeman French Freeman Inc. | Architecture • Planning • Interiors

81 Maple Street • Burlington Vermont 05401

802-864-6844 • www.fffinc.com

Project Name: CityPlace Burl

Project Number: A1947

Meeting #: Public Meeting #2

Location: Contois Auditorium Hall

Date of Meeting: 27 Feb. 2012

Meeting Goals:

Overview of the CityPlace Burlington project and opportunity for public comment.

Attendees:

Name

Address

Email Address

Stephen Pond	18 Elm Terrace, Burl, VT	steve.betsy.pond
WM. FELLOWS	3602 S. UNION ST.	W.FELLOWS@PKLB
Tom Smith	60 Battery St.	Thomas Smith@Hill
Richard Hilliard	43 High Grove St BTV	Pompeyhecc@hufmail
Becki Tenaglia	133 Bank St.	Beckit@asinglepead
Jay CANNING	25 CHERRY ST BTV	JAY@HOTELVT.
KEVIN WORDEN	23 BROOKS AVE. BTV	KEVINW@ENGINEERINGVA
MARK & WILL FARRELL	322 COLLEGE ST.	WTF@TANNERHOU
WHIT SMITH	29 PINE STREET, BURLINGTON	WHIT@MILLDOXSN.COM
Emily Alois	935 S Prospect St. Burl.	Emily@hickokandla
PETER LISKA	175 Lyman Av. Burl.	PLISKA04@GMAIL.COM
John Franco	110 Main St Burlington	Johnfranco@wpad.com
Stellar Lobdell	37 Church St	StellarL@geant.com
Chris Jarvis	60 g s	Ch J
Jeffrey	151 College St / (S)	jeffery fure
	7	gma
	2 P	c @bb org
	low	ike, d v
	17 out R A	Kpaul bu ington



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802-864-6844 · www.fffinc.com

Project Name: CityPlace Burlin

Project Number: A1947

Meeting #: Public Meeting #2

Location: Contois Auditorium
Hall

Date of Meeting: 27 Feb. 202

Meeting Goals:

Overview of the CityPlace Burlington project and opportunity for public comment.

Attendees:

Name

Address

Email Address

C, M

33 Scarth Ave., Burlington

I, M

2/8/20

MAILING RECEIPT + ABOUT
LIT

=====

BURLINGTON
11 ELWOOD AVE LBBY
BURLINGTON, VT 05401-9998
501008-0530
(800)275-8777
02/08/2020 09:49 AM

=====

Product	Qty	Unit Price	Price
US Flag Bklt/20	3	\$11.00	\$33.00
Total:			\$33.00

=====

Credit Card Remitd \$33.00
(Card Name:VISA)
(Account #:XXXXXXXXXX0839)
(Approval #:07035D)
(Transaction #:396)
(AID:A0000000031010 Chip)
(AL:VISA CREDIT)
(PIN:Not Required CHASE VISA)

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Project: 75 Cherry St NPA Meeting Abutter request
Date Created: 02.03.2020

Page 1 of 3

State of Vermont Building & General Services Dept.
10 BALDWIN ST
MONTPELIER VT 05663-7001

Steven V. Kipkin
25 CRESCENT RD
BURLINGTON VT 05401

MDS Realty, LLC
29 PINE STREET
BURLINGTON, VT 05401

Gus J. Stenroos
23 PINE ST
BURLINGTON VT 05401

Cathedral of the Immaculate Conception Parish Charitable
Trust
20 PINE ST
BURLINGTON VT 05401

28 Pine Street LLC
82 OVERLAKE PARK
BURLINGTON VT 05401

Craig Pease
70-B CHERRY ST
BURLINGTON VT 05401

Burlington Housing Authority
65 MAIN ST
BURLINGTON VT 05401

RD Burlington Anchor Associates, LLC
C/O BROOKFIELD PROPERTIES RETAIL
PO BOX 3487
CHICAGO IL 60654-3487

City Of Burlington - Department of Public Works
645 PINE ST
BURLINGTON VT 05401

Precourt Investment Company
215 Maple Leaf Lane
SHELBURNE VT 05482

State of Vermont Building & General Services Dept.
10 BALDWIN ST
MONTPELIER VT 05663-7001

100 Bank LLC
C/O REDSTONE
PO BOX 790

BURLINGTON VT 05402

Miller Properties, LLC
71 CHURCH ST
BURLINGTON VT 05401

Dot Real Estate Inc.
161 AUSTIN DR UNIT 41
BURLINGTON VT 05401

Herman Dana Foundation, LLC
1340 CENTRE ST UNIT 101
NEWTON MA 02459

Bigger Boat LLC
37 CHURCH ST
BURLINGTON VT 05401

Nick & Morrissey Development LLC
29 CHURCH ST FLOOR 3
BURLINGTON VT 05401

Handy Investment Group
75 South Winooski Avenue
Burlington, VT 05401

Sisters & Brothers Investment Group, LLP
75 South Winooski Avenue
Burlington VT 05401

Susan C. Gregoire
15 PINNACLE DRIVE
SOUTH BURLINGTON, VT 05403

Prelco Inc.
2564 SNPE IRELAND RD
RICHMOND VT 05477

Milot 150 Burlington Properties, LLC
3516 NE LIGHTHOUSE POINT AVE
LIGHTHOUSE POINT FL 33064

Handy Sisters LLC
PO Box 189
Bridgton, ME 04009

State of Vermont Building & General Services Dep
10 BALDWIN ST
MONTPELIER VT 05663-7001

127-129 Bank Street FJT LLC
JERICHO MANAGEMENT CO., LLC
1 NATIONAL LIFE DR

Project: 75 Cherry St NPA Meeting Abutter request
Date Created: 02.03.2020

Page 2 of 3

~~MONTPELIER VT 05604~~

~~125 BANK STREET FJT LLC
1 NATIONAL LIFE DR M230
MONTPELIER VT 05604~~

~~Sisters & Brothers Investment Group, LLP
75 South Winooski Avenue
Burlington VT 05401~~ D

~~Sisters & Brothers Investment Group, LLP
75 South Winooski Avenue
Burlington VT 05401~~

~~AFS Realty, LLC
PO BOX 1053
BURLINGTON VT 05402-1053~~

~~People's United Bank
RES CONTRACT MANAGER BC05-451
850 MAIN ST
BRIDGEPORT CT 06604~~

~~First Baptist Church, Inc.
81 SAINT PAUL ST
BURLINGTON VT 05401~~

~~First Baptist Church
C/O REDSTONE
PO BOX 790
BURLINGTON VT 05402~~

D ~~Sisters & Brothers Investment Group, LLP
75 South Winooski Avenue
Burlington VT 05401~~

~~Vermont Realty Inc.
PO BOX 949
BURLINGTON VT 05402-0949~~

~~Vermont Realty Inc.
PO BOX 949
BURLINGTON VT 05402-0949~~ D

~~Vermont Realty Inc.
PO BOX 949
BURLINGTON VT 05402-0949~~ D

~~L & L Holdings, LLC
C/O LYNN, LYNN, & BLACKMAN
76 SAINT PAUL ST - SUITE 400
BURLINGTON, VT 05401~~

~~Milot Properties, Inc.
PO Box 4193
Burlington VT 05406~~ D

~~Vermont Realty Inc.
PO BOX 949
BURLINGTON VT 05402-0949~~ D

~~Milot Properties, Inc.
PO Box 4193
Burlington VT 05406~~ D

~~Milot Properties, Inc.
PO Box 4193
Burlington VT 05406~~ D

~~Milot Properties, Inc.
PO Box 4193
Burlington VT 05406~~

~~Jowall Limited Partnership
PO Box 2282
SOUTH BURLINGTON, VT 05407~~

~~Holly J. Feingold
76 SAINT PAUL ST UNIT 8NE
BURLINGTON VT 05401~~

~~Mary D. Morrisseau
9550 SOUTH OCEAN DRIVE 910
JENSEN BEACH, FL 34957~~

~~Barbara Bordwell McGrew
76 SAINT PAUL ST UNIT 8
BURLINGTON VT 05401~~

~~Milot Investments, LLC
32 SEYMOUR ST
WILLISTON VT 05495~~ D

~~Milot Investments, LLC
32 SEYMOUR ST
WILLISTON VT 05495~~

~~Park Place Joint Venture LLC
186 COLLEGE STREET
BURLINGTON, VT 05401~~

~~Howard Opera House Assoc
159 BANK STREET
BURLINGTON VT 05401~~ D

~~Howard Opera House Assoc~~

Project: 75 Cherry St NPA Meeting Abutter request
Date Created: 02.03.2020

Page 3 of 3

~~159 BANK STREET
BURLINGTON VT 05401~~

~~City of Burlington
149 CHURCH ST
BURLINGTON VT 05401~~

~~Sisters & Brothers Investment Group, LLP
75 South Winooski Avenue
Burlington VT 05401~~

~~Corporate Plaza Associates
76 SAINT PAUL STREET
BURLINGTON VT 05401~~

~~Gary Feingold
76 SAINT PAUL ST UNIT 8NE
BURLINGTON VT 05401~~

~~Howard Opera House Assoc
159 BANK STREET
BURLINGTON VT 05401~~ D

~~Howard Opera House Assoc
159 BANK STREET
BURLINGTON VT 05401~~ D

~~Howard Opera House Assoc
159 BANK STREET
BURLINGTON VT 05401~~

~~41 Cherry Street LLC
25 CHERRY ST
BURLINGTON VT 05401~~ D

~~41 Cherry Street LLC
25 CHERRY ST
BURLINGTON VT 05401~~

~~Kong LLC
49 Church Street
Burlington VT 05401~~

~~A Single Pebble
133 Bank Street
Burlington VT 05401~~

~~Willhou Co. LLC
29 Church Street
Burlington VT 05401~~

~~Good Stuff of Burlington
21 Church Street~~

~~Burlington VT 05401~~

~~Hen of the Wood - Burlington, LLC
55 Cherry Street
Burlington VT 05401~~

~~41 Cherry Street LLC
41 Cherry Street
Burlington VT 05401~~

~~High Life Inc.
71 Church Street
Burlington VT 05401~~

~~Nick & Morrissey Development LLC
29 CHURCH ST FLOOR 3
BURLINGTON VT 05401~~

~~83 Church Street LLC
83 Church Street
Burlington VT 05401~~

~~Ski Rack, Inc.
85 Main Street
Burlington VT 05401~~

~~Swan Dojo
19 Church Street, Suite 1 & 2
Burlington VT 05401~~

~~Catamount Hospitality LLC
20 LANG DR
ESSEX JUNCTION VT 05452~~

~~Glickmerica, LLC
63 Church Street
Burlington VT 05401~~

0527

NOTICE

Pursuant to Sec. 3.2.1(d) of the Burlington Comprehensive Development Ordinance, which requires a Pre-Application Public Neighborhood Meeting prior to submission of a Zoning Permit Application, BTC Mall Associates, the owner/developer of CityPlace Burlington, will hold a public meeting at **12:00 Noon on Thursday, February 27, 2020** in **Contois Auditorium at City Hall** to present and discuss the proposed CityPlace project located at 75 Cherry St., a 763,200 sf mixed-use project.

This project will bring to the downtown core new housing comprising 357 new rental units inclusive of 72 affordable units; new retail space comprising 45,000 sf fronting on each of the adjacent streets; a limited service hotel of 196 rooms and new parking for 550 cars. In addition, the project will reintroduce and reconnect St. Paul and Pine Streets between Bank St. and Cherry St.

The presentation will include a discussion of the targeted permitting timeline for the project, and will be followed by an opportunity for questions and answers.

Additional information on the project is posted at www.CityPlaceBurlington.com.



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Pre-Application Public Neighborhood Meeting Certification

I, Jesse Beck, certify that a second Pre-Application Public Neighborhood Meeting requirement pursuant to Sec. 3.2.1(d) of the *Burlington Comprehensive Development Ordinance* has been satisfied in accordance with the procedures and requirements set forth the Department of Permitting and Inspections for a public neighborhood meeting held on October 8, 2020 with Wards 2 and 3 via Zoom.

A copy of the meeting date, time and location; list of attendees and minutes are attached. The meeting public notice and agenda was posted by the CEDO Office.

Signature: _____

Jesse Beck, AIA, NCARB

President, Freeman French Freeman, Inc.

STATE OF VERMONT

COUNTY OF Chittenden

The above and foregoing Affidavit as subscribed before me this 9th day of October, A.D., 2020 personally by Jesse Beck.

Notary Public

My Commission Expires:

Seal

Alyssa Frederick
 Credential # 157.00128
 Notary Public, State of
 My commission expires
 Jan 31, 2021



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MEETING MINUTES

Freeman French Freeman Inc. | Architecture · Planning · Interiors
81 Maple Street · Burlington Vermont 05401
802-864-6844 · www.fffinc.com

Project Name: CPB Rec

Project Number: /

Meeting #: NPA Meet

Location: FFF Office (2

Date of Meeting: 8 October

Attendance:

☐ Pat O'Brien	☐	☐
☐ Doug Farrington	☐	☐
☐ William Fellows, Devonwood	☐	☐
☐ Jesse Beck, FFF	☐	☐
☐	☐	☐

General:

A second NPA meeting was held to review project changes from the February 27th NPA public session. The meeting was held via Zoom with Wards 2 & 3 and notice by the CEDO Office.

NPAs attended remotely: Kevin Deutermann, Jess Hyman, Tony Redington, Michael Blood, Amanda Hanna, Meg Cline, Charlie, Alissa Faber, Albert Petrarca, Brian D., Al Senecal, Barbara McGrew, Max Tracy, Meg Humphrey, Perri Freeman, Melissa Cain, Carol Livingston, Carol Ann, Mark Huges, Kim Ireland, T.S., Jeff Glassberg, Martha Lang, WGH 118

Discussion:

1. Presentation by Jesse Beck: North Building is 9 stories and 356 units of housing. South building is 10 stories and has changed from hotel to housing (70 units above community space & office space). 45,000 square feet of retail on grade level for street frontage. Total Square feet is approximately 703,000 square feet, including garage.
2. Barbara McGrew asked about phasing, Macy's building, UVM Medical, and financing.
3. Tony Redington: appreciates presentation and is pleased with new scale, stating that is more in-line with original zoning.
4. 80 units inclusionary- "Obtain from HVD at 80 units of Section 8".
5. Would like to see more bike racks at sidewalk level on the two streets.
6. Opportunity zone financing.
7. Parking to support Church Street Marketplace.
8. William Fellows: Following inclusionary requirement, which equals 84 units
9. Jesse Beck: Will follow Burlington rules regarding smart street design, as well as rules regarding zoning parking. Project has a zero requirement for housing and a maximum capacity for spaces.
10. Amanda Hanna: Projects seems improved! Better scale. How many parking spaces will be allocated? How many apartments will be for sale?
11. Jesse Beck described parking: Over 200 spaces in the basement. 100 each at the 2 levels above for a total of 422 spaces. Discussed required needs for ADA & van parking. Addressed housing allocation.
12. Melissa Cain: Requested social responsibility plan be in place, and that a non-profit venture be set up.
13. William Fellows: In response to Melissa, "We're already doing that but we are happy to talk".
14. Jesse Beck gave closing statement.

Meeting ended at 7:51PM.

End minutes.

Jesse Robbins

From: LEED Info <leedinfo@usgbc.org>
Sent: Thursday, December 08, 2016 4:17 PM
To: Jesse Robbins
Subject: Thank you for your LEED Project Registration

U.S. GREEN BUILDING COUNCIL



Dear Jesse Robbins,

Your LEED project has been successfully registered in LEED Online.

Project ID	: 1000097092
Project Title	: Burlington City Center
Project Rating System	: LEED v4 BD+C: NC
Registration Type	: Individual Project
Registration Date	: 12/08/2016
Project Location	: Burlington,VT,US,05401

You may now log into LEED Online to manage your project and begin the application process. The first time you log in, you will be presented with a set of 'Getting Started' information that will help you kick off the certification process. Further technical LEED assistance is available through the following resources:

- The help section of LEED Online
- LEED Resources & Tools : <https://new.usgbc.org/leed/certification>
- LEED Reference Guides : <https://new.usgbc.org/store/reference-guides>
- Subscribe to LEED Update, a quarterly e-newsletter from USGBC and GBCI : <https://new.usgbc.org/legacy/account/subscriptions>
- LEEDuser, a third-party resource that offers a variety of supplemental LEED advice: <http://www.leeduser.com>

If you find an error within the LEED Online system, including any of the forms, please report it using the feedback button, located in the menu bar. If you have questions

We thank you for your
registration and
pleasing

LEED ONLINE

 Jesse Robbins



Project Registration

Details	Agreement	Payment								
Thank you! Your payment has been received and your receipt has been sent to jrobbins@ffinc.com. Order summary <table><thead><tr><th>ORDER #</th><td>0012045856</td></tr><tr><th>AMOUNT</th><td>\$ 1,200.00</td></tr><tr><th>TITLE</th><td>Burlington City Center</td></tr><tr><th>ID</th><td>1000097092</td></tr></thead></table> PRINT ORDER DONE Notes Upon receipt, please allow 2-3 business days for processing. A copy of the invoice must be included with payment. To avoid delays in processing, please write the invoice number on the check. Projects may NOT submit for review until the check processing for the registration payment is complete. Receipt			ORDER #	0012045856	AMOUNT	\$ 1,200.00	TITLE	Burlington City Center	ID	1000097092
ORDER #	0012045856									
AMOUNT	\$ 1,200.00									
TITLE	Burlington City Center									
ID	1000097092									

FIGURE 9a

FIGURE 9a.2



LEED Certification Review Report

This report contains the results of the technical review of an application for LEED® certification submitted for the specified project. LEED certification is an official recognition that a project complies with the requirements prescribed within the LEED rating systems as created and maintained by the U.S. Green Building Council® (USGBC®). The LEED certification program is administered by the Green Business Certification Inc. (GBCI®).

Burlington City Center

Project ID 1000097092
Rating system & version LEED v4 BD+C: NC
Project registration date 12/08/2016



Precertification Final Application

CERTIFIED: 40-49, SILVER: 50-59, GOLD: 60-79,
 PLATINUM: 80+

LEED V4 BD+C: NEW CONSTRUCTION

ATTEMPTED: 85, DENIED: 5, PENDING: 21, AWARDED: 58 OF 126 POINTS

INTEGRATIVE PROCESS 1 OF 1		MATERIALS AND RESOURCES CONTINUED	
Integrative Process	1 / 1	Construction and Demolition Waste Mgmt	0 / 2
LOCATION AND TRANSPORTATION 13 OF 32		INDOOR ENVIRONMENTAL QUALITY 10 OF 16	
LEED for Neighborhood Development Location	0 / 16	Minimum IAQ Performance	Y
Sensitive Land Protection	1 / 1	Environmental Tobacco Smoke Control	Y
High Priority Site	1 / 2	Enhanced IAQ Strategies	2 / 2
Surrounding Density and Diverse Uses	5 / 5	Low-Emitting Materials	3 / 3
Access to Quality Transit	4 / 5	Construction IAQ Mgmt Plan	1 / 1
Bicycle Facilities	0 / 1	IAQ Assessment	0 / 2
Reduced Parking Footprint	1 / 1	Thermal Comfort	1 / 1
Green Vehicles	1 / 1	Interior Lighting	1 / 2
		Daylight	0 / 3
		Quality Views	1 / 1
		Acoustic Performance	1 / 1
SUSTAINABLE SITES 5 OF 10		INNOVATION 2 OF 6	
Construction Activity Pollution Prevention	Y	Innovation	1 / 5
Site Assessment	1 / 1	LEED Accredited Professional	1 / 1
Site Development - Protect or Restore Habitat	0 / 2		
Open Space	1 / 1		
Rainwater Mgmt	0 / 3		
Heat Island Reduction	2 / 2		
Light Pollution Reduction	1 / 1		
WATER EFFICIENCY 5 OF 11		REGIONAL PRIORITY CREDITS 4 OF 4	
Outdoor Water Use Reduction	Y	Surrounding Density and Diverse Uses	1 / 1
Outdoor Water Use Reduction	2 / 2	Reduced Parking Footprint	1 / 1
Indoor Water Use Reduction	N	Site Assessment	1 / 1
Indoor Water Use Reduction	0 / 6	Optimize Energy Performance	1 / 1
Building-Level Water Metering	Y		
Cooling Tower Water Use	2 / 2		
Water Metering	1 / 1		
ENERGY AND ATMOSPHERE 17 OF 33		TOTAL 58 OF 126	
Fundamental Commissioning and Verification	Y		
Minimum Energy Performance	Y		
Optimize Energy Performance	10 / 18		
Building-Level Energy Metering	Y		
Fundamental Refrigerant Mgmt	Y		
Enhanced Commissioning	3 / 6		
Advanced Energy Metering	1 / 1		
Demand Response	0 / 2		
Renewable Energy Production	2 / 3		
Enhanced Refrigerant Mgmt	1 / 1		
Green Power and Carbon Offsets	0 / 2		
MATERIALS AND RESOURCES 1 OF 13			
Storage and Collection of Recyclables	Y		
Construction and Demolition Waste Mgmt Planning	Y		
Building Life-Cycle Impact Reduction	0 / 5		
Product disclosure & optimization - Environmental	1 / 2		
Product disclosure & optimization - Sourcing of R	0 / 2		
Product disclosure & optimization - Material Ingr	0 / 2		

CREDIT DETAILS



Project Information

Project Information

Awarded

11/29/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

The Precertification Workbook has been completed. Please note that credits without a comment have been awarded.



Integrative Process

Integrative Process

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Awarded.

For the LEED Certification Review, be sure to demonstrate that a simple box energy model and water budget analysis is performed before the completion of schematic design.



Location and Transportation

**LEED for Neighborhood Development
Location**
POSSIBLE POINTS: 16

**Not
Attempted**

Sensitive Land Protection

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

High Priority Site

POSSIBLE POINTS: 2
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

Surrounding Density and Diverse Uses

POSSIBLE POINTS: 5
ATTEMPTED: 5, DENIED: 0, PENDING: 0, AWARDED: 5

Awarded: 5

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Option 2. Diverse Uses

Awarded.

For the LEED-NC certification review, ensure that the uses fall under three of the five use categories, exclusive of the building's primary use.

Access to Quality Transit

POSSIBLE POINTS: 5
ATTEMPTED: 4, DENIED: 0, PENDING: 0, AWARDED: 4

Awarded: 4

Bicycle Facilities

POSSIBLE POINTS: 1
ATTEMPTED: 2, DENIED: 2, PENDING: 0, AWARDED: 0

Denied

11/21/2017 PRECERTIFICATION PRELIMINARY REVIEW

The narrative indicates that this credit is not being pursued, therefore it has been denied. The project team may elect to withdraw any credits not being attempted so that they do now show as denied credits.

Reduced Parking Footprint

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

Green Vehicles

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1



Sustainable Sites

Construction Activity Pollution Prevention

Awarded

Site Assessment

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Site Development - Protect or Restore Habitat

Not Attempted

POSSIBLE POINTS: 2

Open Space

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Rainwater Management

Pending

POSSIBLE POINTS: 3

ATTEMPTED: 4, DENIED: 0, PENDING: 5, AWARDED: 0

11/21/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. The project has attempted more points than are possible for a LEED-NC project. It is not clear which option and path the project plans to attempt.

Provide a revised narrative that indicates which option and path the project intends to pursue. Revise the points attempted to align with the option/path being pursued.

2. It appears that the rainwater is being discharged into the city stormwater system. In order to meet the credit requirements the rainwater must be managed onsite.

Provide a revised narrative to confirm what types of rainwater strategies will be implemented so that water will be managed onsite and will not enter the city stormwater system.

Heat Island Reduction

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

Light Pollution Reduction

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Awarded.

Please note that tenant guidelines cannot be used toward credit compliance. Information on how to address incomplete spaces within a LEED-NC project can be found in the LEED BD+C Reference Guide, under "Getting Started", subsection "Maintaining Consistency in the Application — In complete Spaces".



Water Efficiency

Outdoor Water Use Reduction

Awarded

Outdoor Water Use Reduction

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

Awarded: 2

Indoor Water Use Reduction

Pending

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. Future fixtures that are addressed in nonbinding tenant guidelines cannot be used toward credit compliance. It is not clear if the project will meet the requirements without the use of water savings claimed by tenant fixtures.

Provide a narrative confirming that all fixtures and occupants within the project (including the future occupants and fixtures within the incomplete spaces) have been included in the calculations and that the project will reduce indoor water use by a minimum of 20%.

Indoor Water Use Reduction

Pending

POSSIBLE POINTS: 6

ATTEMPTED: 2, DENIED: 0, PENDING: 2, AWARDED: 0

11/21/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. WEp Indoor Water Use Reduction has not been awarded.

Address the issues within the prerequisite and resubmit this credit.

2. Future tenant installed fixtures must be included in the calculations as neutral unless supported by a legally binding tenant sales or lease agreement (TSLA) per the LEED BD+C v4 Reference Guide, Getting Started, Maintaining Consistency in the Application, Incomplete Spaces section. The TSLA must be signed by the owner and the tenants, and be fully executed at the time of submitting for LEED-NC certification. The TSLA compliance path cannot be used to meet prerequisite compliance, but can be used to earn points under WEc Indoor Water Use Reduction.

Provide a revised narrative to confirm the anticipated percentage of water use reduction for the project. In addition, indicate if the project plans to use the TSLA compliance path to achieve points.

Building-Level Water Metering

Awarded

Cooling Tower Water Use

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

Awarded: 2

Water Metering

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1



Energy and Atmosphere

Fundamental Commissioning and Verification

Awarded

Minimum Energy Performance

Awarded

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Awarded

1. It is unclear if the project intends to take credit for residential lighting savings. Please note the following regarding lighting savings in the residential units. Because these spaces include living quarters, sleeping areas, cooking, and sanitation within a single unit, they meet the ASHRAE definition of a "dwelling unit." Per Section 9.1 Exception (b), lighting within dwelling units is not regulated by ASHRAE 90.1 and any savings associated with permanently installed lighting in dwelling units must be claimed using an Exceptional Calculation Method.

A narrative should accompany all Baseline and Proposed case assumptions included for this measure as well as the calculation methodology used to determine the projected savings. The narrative and energy savings should be reported separately from the other efficiency measures in the Minimum Energy Performance Calculator. The Baseline case description should verify that the efficiency measure is not standard practice for a similar newly constructed facility by referencing a recently published document (published within five years of the project registration date), utility program that incentivizes the equipment installed, or by documenting systems used to perform the same function in other newly constructed facilities (three facilities built within the past five years of the project registration date). Savings associated with the proposed case measure should also be justified with published or monitored data.

The Energy Star Multifamily High Rise Program Simulation Guidelines (Version 1.0, Revision 02, September 2013) are an acceptable methodology for documenting savings for space lighting within the dwelling units.

2. Note that items such as lighting or equipment loads for areas that are under the tenants' control must be identical in the proposed building and in the baseline, as specified by Appendix G. However, projects can claim credit for energy reductions in tenant spaces if those reductions (such as lighting power density reductions or improved HVAC efficiency) are required through a tenant lease agreement or other legally binding document. The document must be signed by both the owner and the future tenant to be considered binding, a sample TSLA and an owner letter of commitment is not sufficient. See requirements in the Reference Guide under Getting Started, Tenant Sales and Lease Agreement.

Optimize Energy Performance

POSSIBLE POINTS: 18

ATTEMPTED: 10, DENIED: 0, PENDING: 0, AWARDED: 10

Awarded: 10

Building-Level Energy Metering

Awarded

Fundamental Refrigerant Management

Awarded

Enhanced Commissioning

POSSIBLE POINTS: 6

ATTEMPTED: 6, DENIED: 0, PENDING: 0, AWARDED: 3

Awarded: 3

Advanced Energy Metering

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Awarded.

Note that all energy end uses that represent 10% or more of the total annual consumption of the building must be individually submetered. Additionally all meters must meet the advanced meter requirements including: meters must be permanently installed, record at intervals of one hour or less, and transmit data to a remote location; electricity meters must record both consumption and demand. Whole-building electricity meters should record the power factor, if appropriate; the data collection system must use a local area network, building automation system, wireless network, or comparable communication infrastructure, the system must be capable of storing all meter data for at least 36 months, the data must be remotely accessible; and all meters in the system must be capable of reporting hourly, daily, monthly, and annual energy use.

Demand Response

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 2, AWARDED: 0

Pending

FIGURE 9a.2

11/22/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

It is not clear if the project will be able to meet the credit requirements and is attempting the credit.

Provide a narrative to indicate how the project intends to meet the credit requirements. If the project is not clear if the credit will be attempted, please consider withdrawing the credit.

Renewable Energy Production

POSSIBLE POINTS: 3

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

Awarded: 2

Enhanced Refrigerant Management

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

Green Power and Carbon Offsets

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 2, PENDING: 0, AWARDED: 0

Denied

11/21/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

The narrative indicates that this credit is not being pursued, therefore it has been denied. The project team may elect to withdraw any credits not being attempted so that they do now show as denied credits.



Materials and Resources

Storage and Collection of Recyclables

Awarded

11/22/2017 PRECERTIFICATION PRELIMINARY REVIEW

For future projects please ensure that that narrative confirms that there will be safe storage and collection for batteries, mercury-containing lamps, and/or e-waste.

Construction and Demolition Waste Management Planning

Awarded

Building Life-Cycle Impact Reduction
POSSIBLE POINTS: 5

Not Attempted

Building Product Disclosure and Optimization - Environmental Product Declarations

Awarded: 1

POSSIBLE POINTS: 2
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Building Product Disclosure and Optimization - Sourcing of Raw Materials

Pending

POSSIBLE POINTS: 2
ATTEMPTED: 2, DENIED: 0, PENDING: 2, AWARDED: 0

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. It is not clear which strategies the project plans to pursue and which materials the project intends to target.

Provide a revised narrative that confirms the strategies the project plans to pursue and which materials the project intends to target.

Building Product Disclosure and Optimization - Material Ingredients

Pending

POSSIBLE POINTS: 2
ATTEMPTED: 1, DENIED: 0, PENDING: 1, AWARDED: 0

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. It is not clear which options the project plans to pursue and which materials the project intends to target.

Provide a revised narrative that confirms the options the project plans to pursue and which materials the project intends to target.

Construction and Demolition Waste Management

Pending

POSSIBLE POINTS: 2
ATTEMPTED: 2, DENIED: 0, PENDING: 2, AWARDED: 0

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

1. It appears that the project is intending to meet the LEED NC v2009 credit requirements. It is not clear that the project will meet the new LEED NC v4 credit requirements.

Provide a narrative that describes the number of material streams anticipated by the project.

Please note, that the threshold for exemplary performance in v4 has changed and the project must achieve both Option 1 and Option 2.



Indoor Environmental Quality

Minimum Indoor Air Quality Performance

Awarded

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Awarded.

Note that if the scope of work includes the ventilation systems (i.e. DOAS serving office and residential portions), the project team must comply with both the ventilation and monitoring requirements. For incomplete spaces, the project team must make reasonable assumptions about the distribution of spaces and ensure that air handlers are capable of providing enough outdoor air for anticipated occupants and space types. For example, a typical buildout by an office tenant will include office spaces, corridors, and conference rooms. If these spaces are all served by the air handling unit, the system-level outdoor air must be sufficient to meet the outdoor air requirements of all three space types. For incomplete spaces that do not include the mechanical systems within the scope of work of this project, the ventilation and monitoring requirements must be met by providing a sample TSLA (does not have to be an executed contract) and an owner letter of commitment stating that the all spaces will meet the prerequisite requirements.

Environmental Tobacco Smoke Control

Awarded

Enhanced Indoor Air Quality Strategies

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Option 2, strategy c; carbon dioxide monitoring

Low-Emitting Materials

Awarded: 3

POSSIBLE POINTS: 3

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 3

Construction Indoor Air Quality Management Plan

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Indoor Air Quality Assessment

Pending

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 2, AWARDED: 0

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

The narrative indicates that the project may attempt the credit via Option 2; but that testing for the entire area may not be feasible. It is not clear if the project will meet the credit requirements via Option 2; and would choose to pursue Option 1 instead.

Please provide a narrative to confirm how the project will be able to meet the credit requirements. If the project cannot meet the credit requirements the project may wish to withdraw the credit.

Thermal Comfort

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Interior Lighting

Pending

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 1, AWARDED: 1

12/04/2017 PRECERTIFICATION PRELIMINARY REVIEW

Option 1

Awarded.

Option 2

It is not clear if the project will meet the credit requirements and achieve this credit.

Provide a revised narrative to describe how the project will meet the requirements of Option 2. The project may consider withdrawing the point if the project is not able to meet the credit requirements.

FIGURE 9a.2

Daylight

POSSIBLE POINTS: 3

ATTEMPTED: 1, DENIED: 1, PENDING: 0, AWARDED: 0

Denied

12/04/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

Based upon the narrative provided it appears that the project will not meet the credit requirements. It does not appear that the project intends to attempt this credit, therefore it has been denied. The project team may elect to withdraw any credits not being attempted so that they do now show as denied credits.

Quality Views

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

Acoustic Performance

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1

12/04/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

Awarded.

For the Certification Review, the team should be sure to address the requirements for Sound Isolation, Reverberation Time, and if needed Sound Reinforcement and Masking Systems.



Innovation

FIGURE 9a.2

Innovation

POSSIBLE POINTS: 5

ATTEMPTED: 5, DENIED: 0, PENDING: 4, AWARDED: 1

Pending

12/04/2017 **PRECERTIFICATION PRELIMINARY REVIEW**

Exemplary Performance Credit 1 — Construction and Demolition Waste Management

The credit has not been awarded. In addition, the exemplary performance threshold for v4 Construction and Demolition Waste Management is the achievement of Option 1 and Option 2.

Address the issues within the base credit, and confirm that the project will meet the credit requirements for Option 1 and Option 2.

Innovation Credit 1 — Tenant Design and Construction Guidelines

Tenant design and construction guidelines are a requirement for incomplete spaces within a LEED-NC project and therefore do not qualify as an Innovation strategy.

The project may attempt a different Innovation strategy for the final review.

Pilot Credit 1 — Design for Active Occupants

Awarded.

The project has attempted five points but has only indicated three Innovation strategies. Please revise the number of points submitted so that it correlates with the number of Innovation strategies attempted. Two points marked as pending do not qualify as Innovation strategies and must be withdrawn or resubmitted with different strategies.

LEED Accredited Professional

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

Awarded: 1



Regional priority

Surrounding Density and Diverse Uses

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

Reduced Parking Footprint

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

Site Assessment

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

Optimize Energy Performance

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

TOTAL	126	85	5	21	58
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FIGURE 9a.2

REVIEW SUMMARY

FIGURE 9a.2

Review			POINTS:			
	SUBMITTED	RETURNED	SUBMITTED	DENIED	PENDING	AWARDED
Precertification Preliminary	10/19/2017	12/04/2017	85	5	21	58
Credit	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Project Information	Awarded		0	0	0	0
Integrative Process	Awarded	Design	1	0	0	1
Sensitive Land Protection	Awarded	Design	1	0	0	1
High Priority Site	Awarded	Design	1	0	0	1
Surrounding Density and Diverse Uses	Awarded	Design	6	0	0	6
Access to Quality Transit	Awarded	Design	4	0	0	4
Bicycle Facilities	Denied	Design	2	2	0	0
Reduced Parking Footprint	Awarded	Design	2	0	0	2
Green Vehicles	Awarded	Design	1	0	0	1
Construction Activity Pollution Prevention	Awarded	Construction	0	0	0	0
Site Assessment	Awarded	Design	2	0	0	2
Open Space	Awarded	Design	1	0	0	1
Rainwater Management	Pending	Design	4	0	5	0
Heat Island Reduction	Awarded	Design	2	0	0	2
Light Pollution Reduction	Awarded	Design	1	0	0	1
Outdoor Water Use Reduction	Awarded	Design	0	0	0	0
Outdoor Water Use Reduction	Awarded	Design	2	0	0	2
Indoor Water Use Reduction	Pending	Design	0	0	0	0
Indoor Water Use Reduction	Pending	Design	2	0	2	0
Building-Level Water Metering	Awarded	Design	0	0	0	0
Cooling Tower Water Use	Awarded	Design	2	0	0	2
Water Metering	Awarded	Design	1	0	0	1
Fundamental Commissioning and Verification	Awarded	Construction	0	0	0	0
Minimum Energy Performance	Awarded	Design	0	0	0	0
Optimize Energy Performance	Awarded	Design	11	0	0	11
Building-Level Energy Metering	Awarded	Design	0	0	0	0
Fundamental Refrigerant Management	Awarded	Design	0	0	0	0
Enhanced Commissioning	Awarded	Construction	6	0	0	3
Advanced Energy Metering	Awarded	Design	1	0	0	1
Demand Response	Pending	Construction	2	0	2	0
Renewable Energy Production	Awarded	Design	2	0	0	2

FIGURE 9a.2

Enhanced Refrigerant Management	Awarded	Design	1	0	0	1
Green Power and Carbon Offsets	Denied	Construction	2	2	0	0
Storage and Collection of Recyclables	Awarded	Design	0	0	0	0
Construction and Demolition Waste Management Planning	Awarded	Construction	0	0	0	0
Building Product Disclosure and Optimization - Environmental Product Declarations	Awarded	Construction	1	0	0	1
Building Product Disclosure and Optimization - Sourcing of Raw Materials	Pending	Construction	2	0	2	0
Building Product Disclosure and Optimization - Material Ingredients	Pending	Construction	1	0	1	0
Construction and Demolition Waste Management	Pending	Construction	2	0	2	0
Minimum Indoor Air Quality Performance	Awarded	Design	0	0	0	0
Environmental Tobacco Smoke Control	Awarded	Design	0	0	0	0
Enhanced Indoor Air Quality Strategies	Awarded	Design	2	0	0	2
Low-Emitting Materials	Awarded	Construction	2	0	0	3
Construction Indoor Air Quality Management Plan	Awarded	Construction	1	0	0	1
Indoor Air Quality Assessment	Pending	Construction	2	0	2	0
Thermal Comfort	Awarded	Design	1	0	0	1
Interior Lighting	Pending	Design	2	0	1	1
Daylight	Denied	Design	1	1	0	0
Quality Views	Awarded	Design	1	0	0	1
Acoustic Performance	Awarded	Design	1	0	0	1
Innovation	Pending	Design	5	0	4	1
LEED Accredited Professional	Awarded	Construction	1	0	0	1



LEED v4 - Building Design and Construction - New Construction (Not Schools or Health Care)

Updated: December 1, 2016
 Project Name: Burlington Town Center
 Phase:

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
Y	Design	Minimum Program Requirements	Architect Project is permanent on existing land and complies with size requirements. Design team to establish LEED boundary. [No Form Required?]
Y	Design	Project Information	Architect Establish systems narrative and occupancy counts. Design documentation upload at design completion.
1	0	0	Integrative Process (IP) 1 Point Possible
1	Design	IPc1 Integrative Process [1]	Full Team Perform and document discovery and implementation on Energy-Related Systems and Water-Related Systems Recommend charrette and exploration of impacts of various building orientations. Having CM on board already will help us achieve this credit.
9	5	2	Location and Transportation 16 Points Possible
Option 1: LEED for Neighborhood Development Location			
Not Applicable, Use Opt. 2	Design	LTc1 LEED for Neighborhood Development Location [16]	None in Vermont- Not Applicable
		Locate the project within the boundary of a development certified under LEED for Neighborhood Development (Stage 2 or Stage 3 under the Pilot or 2009 rating systems, Certified Plan or Certified Project under the LEED v4 rating system).	Using Option 2- Individual Credits
Option 2: Individual Credits			
1	Design	LTc2 Sensitive Land Protection [1]	Architect
		Option 1: Locate the footprint on land that has been previously developed. Option 2: Locate footprint on land that meets these criteria: * Not prime farmland of statewide or local importance * Not within a 100 year floodplain * Not a threatened, imperiled or endangered species habitat * Not within 100 feet of a water body * Not within 50 feet of a wetland except for minor improvements	Previously developed site, this point is a given, easy documentation
	1	1	LTc3 High-Priority Site [1-2]
	Design	Option 1: Locate on an infill location in a historic district. [1] Option 2: Locate in a nationally recognized priority zone. [1] Option 3: Located on a brownfield site where soil or groundwater contamination has been identified and where the AHJ requires its remediation. Perform remediation. [2]	Architect Determine if we meet the requirements of options 1 or 2.
3	2		LTc4 Surrounding Density and Diverse Uses [1-5]
	Design	Category 1: Locate on a site with a surrounding existing density of at least 22,000 SF/acre [2pts] or 35,000 SF/acre [3] within a 1/4 mile radius of the project boundary. AND/OR Category 2: Construct or renovate a building or a space within a building such that the building's main entrance is within a 1/2-mile walking distance of the main entrance of four to seven [2] or eight or more [3] existing and publicly available diverse uses.	Architect We will get points for redeveloping a previously developed site and for access to transportation resources. The "maybe" points depend on whether we can count this as a redevelopment of more than one site or

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
3	2	Design	LTc5 Access to Quality Transit [1-5]
		Locate any functional entry of the project within a ¼-mile walking distance of existing or planned bus, streetcar, or rideshare stops with minimum 72 daily weekday trips (see reference guide).	Architect One of the few sites in Vermont where this credit is achievable.
1		Design	LTc6 Bicycle Facilities [1]
		Design or locate the project such that a functional entry or bicycle storage is within a 200-yard walking distance or bicycling distance from a bicycle network that connects to at least one of the following: * at least 10 diverse uses (see reference guide Appendix 1) * a school or employment center, if project floor area 50% or more residential * a bus rapid transit stop, light or heavy rail station, commuter rail station, or ferry terminal All destinations must be within a 3-mile (4800-meter) bicycling distance of the project boundary	Architect We will need to provide covered bicycle parking for residential units and shower facilities accessible to retail and office employees working in the building. The entrance to the bike parking needs to be within 200yds of the new transit center at Cherry and St. Paul.
	1	Design	LTc7 Reduced Parking Footprint [1]
		Do not exceed the minimum local code requirements for parking capacity. Provide parking capacity that is a percentage reduction below the base ratios recommended by the Parking Consultants Council, as shown in the Institute of Transportation Engineers' Transportation Planning Handbook, 3rd edition, Tables 18-2 through 18-4	Architect, Civil, Landscape We are providing more parking than the zoning requirement and are therefore ineligible for this point.
1		Design	LTc8 Green Vehicles [1]
		Designate 5% of all parking spaces used by the project as preferred parking for green vehicles. AND Option 1. Electric Vehicle Charging: Install Level 2 electrical vehicle supply equipment (EVSE) in 2% of all parking spaces used by the project. Option 2. Liquid, gas, or battery facilities: Install liquid or gas alternative fuel fueling facilities or a battery switching station capable of refueling a number of vehicles per day equal to at least 2% of all parking spaces	Architect, Civil, Landscape This version of LEED does require Level 2 Charging stations (220/240v charging). Potentially partner with BED to offer street parking with chargers. LEED site boundary will need to include these spaces and they will need to be quantified as "spaces used by the project". 2% of 815 spaces results in 9 charging stations serving 2 spaces each. It may be possible to provide a mix of 240v rapid charging stations and standard 110v outlets.
4	4	2	Sustainable Sites (SS) 10 Points Possible
Y		Const.	SSp1 Construction Activity Pollution Prevention
		Create and implement an erosion and sedimentation control plan for all construction activities associated with the project. The plan must conform to the erosion and sedimentation requirements of the 2012 U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) or local equivalent, whichever is more stringent.	Civil Assume General Construction Permit from requirements State will be most stringent. Civil engineer to verify.
1		Design	SSc1 Site Assessment [1]
		Complete and document a site survey or assessment that includes the following information: topography, hydrology, climate, vegetation, soils, human use, human health effects.	Landscape Architect, Civil, Architect Create site diagram as part of concept design. By EV and SE Group
	2	Design	SSc2 Site Development - Protect or Restore Habitat [1-2]
		Preserve and protect from all development and construction activity 40% of the greenfield area on the site (if such areas exist). AND Option 1. On-Site Restoration (Previously Disturbed): Using native or adapted vegetation, restore 30% (including the building footprint) of all portions of the site identified as previously disturbed [2] Option 2. Option 2. Financial Support: Provide financial support equivalent to at least \$0.40 per square foot for the total site area (including the building footprint). Financial support must be provided to a nationally or locally recognized land trust or conservation organization within the same EPA Level III ecoregion or the project's state. The land trust must be accredited by the Land Trust Alliance. [1]	Landscape Architect, Civil

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
1	Design	SSc3 Open Space [1] Provide outdoor space greater than or equal to 30% of the total site area (including building footprint). A minimum of 25% of that outdoor space must be vegetated (turf grass does not count as vegetation) or have overhead vegetated canopy.	Landscape Architect, Civil, Owner Note 25% vegetated requirement; this would require an extensive amount of green roof. We consider this unlikely.
3	Design	SSc4 Rainwater Management [2-3] Option 1. Percentile of Rainfall Events * Path 1. 95th Percentile: In a manner best replicating natural site hydrology processes, manage on site the runoff from the developed site for the 95th percentile of regional or local rainfall events using low-impact development (LID) and green infrastructure. [2] * Path 2. 98th Percentile: Same as Path 1 but for the 98th percentile of rainfall events. * Path 3. Zero Lot Line projects only - using green infrastructure and low-impact development, manage 100% of runoff from 85th percentile rainfall event on site through infiltration, evapotranspiration, or capture and reuse. [3] Option 2. Natural Land Cover Conditions: Not applicable to project	Civil Path 3 may be achievable with infiltration in combination with green roofs, pourous paving, and planter boxes. Explore infiltration potential.
2	Design	SSc5 Heat Island Reduction [1-2] Option 1. Nonroof and Roof: Provide a total amount of non-roof measures and high-reflectance roof as per formula in reference guide [2] Option 2. Parking under Cover: Place a minimum of 75% of parking spaces under cover [1]	Landscape Architect, Civil, Architect Between PV systems, light colored membranes, and green roofs, this credit should be achievable. The SRI and color of pervious play surface for the Daycare must take this credit into account but there should be a compliant play surface solution.
1	Design	SSc6 Light Pollution Reduction [1] Meet uplight and light trespass requirements, using either the backlight-uplight-glare (BUG) method or the calculation method. Projects may use different options for uplight and light trespass. See reference guide for detailed requirements.	Landscape Architect, Civil, Electrical During concept design, establish the methods that will be used to address uplight and trespass. Establish the lighting zone of the project property. SE Group will need to provide additional photometrics beyond requirements for zoning compliance in order to to document compliance with this credit.
4	4	3	11 Points Possible
Y	Design	WEp1 Outdoor Water Use Reduction Option 1. (Always use) Show that the landscape does not require a permanent irrigation system beyond a maximum two-year establishment period.	Landscape Architect Have always achieved this credit on Vermont projects. Install no permanent irrigation systems. Hose bibs are OK.
Y	Design	WEp2 Indoor Water Use Reduction For the fixtures and fittings listed in Table 1, as applicable to the project scope, reduce aggregate water consumption by 20% from the baseline. Base calculations on the volumes and flow rates shown in Table 1. All newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled. Install appliances, equipment, and processes within the project scope that meet the requirements listed in the requirement tables.	Plumbing This has not been difficult to achieve on past projects. Baseline is minimally code compliant fixtures (e.g. baseline assumes such things as 1.6gpf toilets) Possibly more complicated with private residential use, but we must achieve this water use reduction.
Y	Design	WEp3 Building-Level Water Metering Install permanent water meters that measure the total potable water use for the building and associated grounds. Meter data must be compiled into monthly and annual summaries; meter readings can be manual or automated. Commit to sharing with USGBC the resulting whole-project water usage data for a five-year period beginning on the date the project accepts LEED certification or typical occupancy, whichever comes first. This commitment must carry forward for five years or until the building changes ownership or lessee.	Plumbing Building level metering required by city, no issue here.
2	Design	WEc1 Outdoor Water Use Reduction [1-2] Option 1. (Always use) Show that the landscape does not require a permanent irrigation system beyond a maximum two-year establishment period. [2]	Landscape Architect Have always achieved this credit on Vermont projects. Install no permanent irrigation systems. Hose bibs are OK.

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
1 2 3	Design	WEc2 Indoor Water Use Reduction [1-6] <i>Further reduce fixture and fitting water use from the calculated baseline in WE Prerequisite Indoor Water Use Reduction AND Appliance and Process Water. Install equipment within the project scope that meets the minimum requirements in Table 2, 3, 4, or 5. One point is awarded for meeting all applicable requirements in any one table. All applicable equipment listed in each table must meet the standard.</i>	Plumbing <i>Make further improvements over baseline described in WEp3. 25% improvement = 1 point, 30%=2points, each 5% increase is one more point up to 50% reduction/ 6 points</i>
1 1	Design	WEc3 Cooling Tower Water Use [1-2] <i>Conserve water used for cooling tower makeup while controlling microbes, corrosion, and scale in the condenser water system. See reference guide.</i>	Mechanical <i>Review requirements for any methods that may add significant project cost. Note methods of reducing cooling tower water use generally have associated operating cost savings.</i>
1	Design	WEc4 Water Metering [1] <i>Install permanent water meters for two or more of the following water subsystems, as applicable to the project: Irrigation, Indoor plumbing fixtures and fittings, Domestic hot water, Boiler over certain size (see reference guide), reclaimed water, other process water.</i>	Plumbing <i>Incorporate metering into BOD</i>

20	11	2	Energy & Atmosphere (EA)	33 Points Possible
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Y	Const.	EAp1 Fundamental Commissioning of Building Energy Systems <i>Commission mechanical, electrical, plumbing, and renewable energy systems and assemblies. Prerequisite requirements for exterior enclosures are limited to inclusion in the owner's project requirements (OPR) and basis of design (BOD), as well as internal 3rd party review of the OPR, BOD and project design. Develop the OPR. Develop a BOD. CxA must review OPR, BOD and design; develop and implement a Cx plan and confirm requirements incorporated into construction documents; develop construction checklists; develop system test procedures; verify tests execution; maintain an issues log; prepare a final report. Cx to report directly to the owner throughout the process. Prepare and maintain a current facilities requirements and operations and maintenance plan that contains the information necessary to operate the building efficiently.</i>	Owner <i>Provide project OPR inclusive of enclosure requirements. Contract systems commissioning agents prior to 30% design completion</i>
Y	Design	EAp2 Minimum Energy Performance <i>Option 1. Demonstrate an improvement of 5% for new construction, 3% for major renovations, or 2% for core and shell projects in the proposed performance rating compared with the baseline building performance rating. Calculate the baseline building performance according to ANSI/ASHRAE/IESNA Standard 90.1–2010, Appendix G, with errata (or a USGBC-approved equivalent standard for projects outside the U.S.), using a simulation model. [For Retail projects see exception.] Option 2. Prescriptive Compliance: ASHRAE 50% Advanced Energy Design Guide Option 3. Prescriptive Compliance: Advanced Buildings™ Core Performance™ Guide</i>	Mechanical <i>Establish energy model (Option 1)</i>
Y	Design	EAp3 Building Level Energy Metering <i>Install new or use existing building-level energy meters, or submeters that can be aggregated to provide building-level data representing total building energy consumption. Commit to sharing with USGBC the resulting energy consumption data and electrical demand data (if metered) for a five-year period beginning on the date the project accepts LEED certification. At a minimum, energy consumption must be tracked at one-month intervals. This commitment must carry forward for five years or until the building changes ownership or lessee.</i>	Mechanical, Owner
Y	Design	EAp4 Fundamental Refrigerant Management <i>Do not use chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration (HVAC&R) systems. Existing small HVAC&R units (containing less than 0.5 pound) and other equipment, such as standard refrigerators and small water coolers are exempt.</i>	Mechanical <i>Design and select equipment without CFC refrigerants</i>

FIGURE 9a.3

Qualify			Phase	Title, [Available Points]	Team / Comments																																				
Yes ? No																																									
6			Const.	EAc1 Enhanced Commissioning [2-6] <i>Option 1. Enhanced Systems Commissioning</i> <i>Path 1. In addition to the Fundamental Building Commissioning prerequisite, the CxA must do the following:</i> <i>Review contractor submittals; Verify inclusion of systems manual requirements in construction documents; Verify inclusion of operator and occupant training requirements in construction documents; Verify systems manual updates and delivery; Verify operator and occupant training delivery and effectiveness; Verify seasonal testing; Review building operations 10 months after substantial completion; Develop an on-going commissioning plan.</i> <i>Include all enhanced commissioning tasks in the OPR and BOD. [3]</i> <i>Path 2. Achieve Path 1 AND Develop monitoring-based procedures and identify points to be measured and evaluated to assess performance of energy- and water-consuming systems. [4]</i> <i>AND/OR</i> <i>Option 2. Envelope Commissioning. 3rd party external CxA must perform the required design reviews and complete the following commissioning process (CxP) activities for the building's thermal envelope in accordance with ASHRAE Guideline 0–2005 and the National Institute of Building Sciences (NIBS) Guideline 3–2012, Exterior Enclosure Technical Requirements for the Commissioning Process, as they relate to energy, water, indoor environmental quality, and durability.</i> <i>Review contractor submittals; Verify inclusion of systems manual requirements in construction documents; Verify inclusion of operator and occupant training requirements in construction documents; Verify systems manual updates and delivery; Verify operator and occupant training delivery and effectiveness; Verify seasonal testing; Review building operations 10 months after substantial completion; Develop an on-going commissioning plan. [2]</i>	Owner Confirm intent and contract CxA (Systems Commissioning Authority) and BeCxA (Building Envelope Commissioning Authority) prior to 30% design documentation. Note that BECx is one path for energy code compliance.																																				
10	6	2	Design	EAc2 Optimize Energy Performance [1-18] <i>Establish an energy performance target no later than the schematic design phase. The target must be established as kBtu per square foot-year (kW per square meter-year) of source energy use.</i> <i>Option 1. Project teams pursuing the Integrative Process credit must complete the basic energy analysis for that credit before conducting the energy simulation. Points for percentage improvement in energy performance compared with baseline model meeting ASHRAE/ASHRAE/IESNA Standard 90.1–2010 requirements. [1-18]</i> <i>OR Option 2. Prescriptive Compliance. See reference guide. [1-6]</i> <table><tr><td>1</td><td>6% New Buildings or 4% Existing Building Renovations</td></tr><tr><td>1</td><td>8% New Buildings or 6% Existing Building Renovations</td></tr><tr><td>1</td><td>10% New Buildings or 8% Existing Building Renovations</td></tr><tr><td>1</td><td>12% New Buildings or 10% Existing Building Renovations</td></tr><tr><td>1</td><td>14% New Buildings or 12% Existing Building Renovations</td></tr><tr><td>1</td><td>16% New Buildings or 14% Existing Building Renovations</td></tr><tr><td>1</td><td>18% New Buildings or 16% Existing Building Renovations</td></tr><tr><td>1</td><td>20% New Buildings or 18% Existing Building Renovations</td></tr><tr><td>1</td><td>22% New Buildings or 20% Existing Building Renovations</td></tr><tr><td>1</td><td>24% New Buildings or 22% Existing Building Renovations</td></tr><tr><td>?</td><td>26% New Buildings or 24% Existing Building Renovations</td></tr><tr><td>?</td><td>29% New Buildings or 27% Existing Building Renovations</td></tr><tr><td>?</td><td>32% New Buildings or 30% Existing Building Renovations</td></tr><tr><td>?</td><td>35% New Buildings or 33% Existing Building Renovations</td></tr><tr><td>?</td><td>38% New Buildings or 36% Existing Building Renovations</td></tr><tr><td>?</td><td>42% New Buildings or 40% Existing Building Renovations</td></tr><tr><td>X</td><td>46% New Buildings or 44% Existing Building Renovations</td></tr><tr><td>X</td><td>50% New Buildings or 48% Existing Building Renovations</td></tr></table>	1	6% New Buildings or 4% Existing Building Renovations	1	8% New Buildings or 6% Existing Building Renovations	1	10% New Buildings or 8% Existing Building Renovations	1	12% New Buildings or 10% Existing Building Renovations	1	14% New Buildings or 12% Existing Building Renovations	1	16% New Buildings or 14% Existing Building Renovations	1	18% New Buildings or 16% Existing Building Renovations	1	20% New Buildings or 18% Existing Building Renovations	1	22% New Buildings or 20% Existing Building Renovations	1	24% New Buildings or 22% Existing Building Renovations	?	26% New Buildings or 24% Existing Building Renovations	?	29% New Buildings or 27% Existing Building Renovations	?	32% New Buildings or 30% Existing Building Renovations	?	35% New Buildings or 33% Existing Building Renovations	?	38% New Buildings or 36% Existing Building Renovations	?	42% New Buildings or 40% Existing Building Renovations	X	46% New Buildings or 44% Existing Building Renovations	X	50% New Buildings or 48% Existing Building Renovations	Mechanical, Electrical <i>[Note that percentage here is inclusive of assumed 10% building energy solar system as part of project and that the baseline is ASHRAE 90.1-2010 Zone 6. This represents a significant energy use reduction for the baseline comparison compared to LEED v3.]</i> <i>Establish energy performance target.</i> <i>Complete Integrative Process credit energy analysis.</i> <i>Create first draft energy model based on 30% Design Documents [to discuss].</i> An energy model will be required to demonstrate energy code compliance based on current % fenestration. Burlington Electric will provide targeted incentives based on the model. The PV produced energy counts as "energy saved" for this credit. Simply meeting VT energy code will earn us some additional points. Design to a low lighting power density and select mechanical equipment that has favorable cost/efficiency ratios (quick paybacks).
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FIGURE 9a.3

Qualify			Phase	Title, [Available Points]	Team / Comments						
Yes ? No											
1			Design	EAc3 Advanced Energy Metering [1] Install advanced energy metering for all whole-building energy sources used by the building and any individual energy end uses that represent 10% or more of the total annual consumption of the building. The advanced energy metering must have the following characteristics: Meters must be permanently installed, record at intervals of one hour or less, and transmit data to a remote location; Electricity meters must record both consumption and demand. Whole-building electricity meters should record the power factor, if appropriate; The data collection system must use a local area network, building automation system, wireless network, or comparable communication infrastructure; The system must be capable of storing all meter data for at least 36 months; The data must be remotely accessible; All meters in the system must be capable of reporting hourly, daily, monthly, and annual energy use.	Mechanical, Electrical This dovetails with municipal/ Burlington Electric Department goals for green infrastructure. Discuss incentives and cost-sharing with BED. Individually meter residential units and consider individually metering each tenant rather than including electrical use in leases- this strategy may help earn additional LEED points elsewhere.						
	2		Const.	EAc4 Demand Response [1-2] Case 1. Demand Response Program Available: Participate in an existing demand response (DR) program. Design a system with the capability for real-time, fully-automated DR based on external initiation by a DR Program Provider. Semi-automated DR may be utilized in practice. Enroll in a minimum one-year DR participation amount contractual commitment with a qualified DR program provider, with the intention of multiyear renewal, for at least 10% of the estimated peak electricity demand as determined under EA Prerequisite Minimum Energy Performance. Develop a comprehensive plan for meeting the contractual commitment during a Demand Response event. Include the DR processes in the scope of work for the commissioning authority, including participation in at least one full test of the DR plan. [2] Case 2. Demand Response Program Not Available: Provide infrastructure to take advantage of future demand response programs or dynamic, real-time pricing programs. Install interval recording meters with communications and ability for the building automation system to accept an external price or control signal. Develop a comprehensive plan for shedding at least 10% of building estimated peak electricity demand as determined under EA Prerequisite Minimum Energy Performance. Include the DR processes in the scope of work for the commissioning authority, including participation in at least one full test of the DR plan. Contact local utility representatives to	Electrical, Owner, Utility A demand response program is available from both BED and Vermont Gas; discuss incentives and implementation with these utilities.						
2	1		Design	EAc5 Renewable Energy Production [1-3] Use renewable energy systems to offset building energy costs. The use of solar gardens or community renewable energy systems is allowed if both: The project owns the system or has signed a lease agreement for a period of at least 10 years; The system is located with the same utility service area as the facility claiming the use. Credit is based on the percentage of ownership or percentage of use assigned in the lease agreement. <table><tr><td>1</td><td>1% of total building energy cost offset</td></tr><tr><td>1</td><td>5% of total building energy cost offset</td></tr><tr><td>1</td><td>10% of total building energy cost offset</td></tr></table>	1	1% of total building energy cost offset	1	5% of total building energy cost offset	1	10% of total building energy cost offset	Owner, Electrical We will need an energy model to predict building energy use in order to understand the % we will generate with the PV array. Note that PV generated power gets double counted as energy use reduction in EAc1.
1	1% of total building energy cost offset										
1	5% of total building energy cost offset										
1	10% of total building energy cost offset										
1			Design	EAc6 Enhanced Refrigerant Management [1] Option 1. No Refrigerants or Low-Impact Refrigerants: Do not use refrigerants, or use only refrigerants (naturally occurring or synthetic) that have an ozone depletion potential (ODP) of zero and a global warming potential (GWP) of less than 50. Option 2. Calculation of Refrigerant Impact: Select refrigerants that are used in heating, ventilating, air-conditioning, and refrigeration (HVAC&R) equipment to minimize or eliminate the emission of compounds that contribute to ozone depletion and climate change. See reference guide for calculation. [See additional requirements for Retail uses.]	Mechanical For base building systems and residential units, obtain refrigerant info for all						

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
☒ 2 ☐	Const.	EAc7 Green Power and Carbon Offsets [1-2] <i>Engage in a contract for qualified resources that have come online since January 1, 2005, for a minimum of five years, to be delivered at least annually. The contract must specify the provision of at least 50% or 100% of the project's energy from green power, carbon offsets, or renewable energy certificates (RECs).</i>	Owner <i>This credit represents the possibility to purchase RECs on the market. We advise using this credit as a backup in case the review of our submission does not return the minimum of 60 points needed for LEED Gold.</i>
4 7 2	Materials & Resources (MR)		13 Points Possible
Y ☐	Design	MRp1 Storage & Collection of Recyclables <i>Provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building. Collection and storage areas may be separate locations. Recyclable materials must include mixed paper, corrugated cardboard, glass, plastics, and metals. Take appropriate measures for the safe collection, storage, and disposal of two of the following: batteries, mercury-containing lamps, and electronic waste.</i>	Owner, Architect, Civil <i>Provide standard waste handling procedures that will be used at this facility.</i>
Y ☐	Const.	MRp2 Construction and Demolition Waste Management Planning <i>Develop and implement a construction and demolition waste management plan to establish waste diversion goals for the project by identifying at least five materials (both structural and nonstructural) targeted for diversion. Approximate a percentage of the overall project waste that these materials represent. Specify whether materials will be separated or comingled and describe the diversion strategies planned for the project. Describe where the material will be taken and how the recycling facility will process the material. Provide a final report detailing all major waste streams generated, including disposal and diversion rates. Alternative daily cover (ADC) does not qualify as material diverted from disposal. Land-clearing debris is not considered construction, demolition, or renovation waste that can contribute to waste diversion.</i>	Specifications, Contractor <i>Specify CDWM requirements. Contractor to develop, submit, implement and track CDWM plan. Note this was previously a credit but is now a pre-requisite</i>
☐ 3 2	Const.	MRc1 Building Life-Cycle Impact Reduction [2-5] <i>Option 1. Historic Building Reuse. See reference guide. [5] Option 2. Renovation of Abandoned or Blighted Building. See reference guide. [5] Option 3. Building and Material Reuse. Reuse or salvage building materials from off site or on site as a percentage of the surface area, as listed in Table 1. Include structural elements (e.g., floors, roof decking), enclosure materials (e.g., skin, framing), and permanently installed interior elements (e.g., walls, doors, floor coverings, ceiling systems). Exclude from the calculation window assemblies and any hazardous materials that are remediated as a part of the project. Points by percentage of completed project surface area reused. 25% [2], 50% [3], 75% [4] Option 4. Whole-Building Life-Cycle Assessment. Conduct a life-cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed below, one of which must be global warming potential. No impact category assessed as part of the life-cycle assessment may increase by more than 5% compared with the baseline building. Global warming potential; depletion of the stratospheric ozone; acidification of land and water sources; eutrophication (nitrogen or phosphate); formation of tropospheric ozone; and depletion of nonrenewable energy resources. [3]</i>	Full Team <i>Would require a whole building life-cycle assesment. Potentially costly.</i>

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
1 1	Const.	MRc2 Environmental Product Declarations [1-2] Achieve one or more of the options below, for a maximum of 2 points. One point per Option. Option 1. Environmental Product Declaration (EPD). Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet one of three disclosure criteria. (1) Products with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that have at least a cradle to gate scope are valued as one quarter (1/4) of a product for the purposes of credit calculation. (2) Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope: Industry-wide (generic) EPD -- Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator are valued as one half (1/2) of a product for purposes of credit calculation. Product-specific Type III EPD -- Products with third-party certification (Type III), including external verification in which the manufacturer is explicitly recognized as the participant by the program operator are valued as one whole product for purposes of credit achievement calculation. (3) USGBC approved program -- Products that comply with other USGBC approved environmental product declaration frameworks. Option 2. Multi-Attribute Optimization. Use products that comply with one of the criteria below for 50%, by cost, of the total value of permanently installed products in the project. (1) Third party certified products that demonstrate impact reduction below industry average in at least three of the following categories are valued at 100% of their cost for credit achievement calculations: global warming potential; depletion of the stratospheric ozone layer; acidification of land and water sources; eutrophication (nitrogen or phosphate); formation of tropospheric ozone; and depletion of nonrenewable energy resources. (2) USGBC approved program -- Products that comply with other USGBC approved environmental product declaration frameworks. Products sourced (extracted, manufactured, purchased) within 100 miles of the project site are valued at 200% of their base contributing cost. Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.	Specifications, Contractor Include requirements for the submission of EPDs in specifications.
2	Const.	MRc3 Sourcing of Raw Materials [1-2] Achieve one or more of the options below, for a maximum of 2 points. One point per Option. Option 1. Raw Material Source and Extraction Reporting. Use at least 20 different permanently installed products from at least five different manufacturers that have publicly released a report from their raw material suppliers which include raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms from extraction and/or manufacturing processes, and a commitment to meeting applicable standards or programs voluntarily that address responsible sourcing criteria. Products sourced from manufacturers with self-declared reports are valued as one half (1/2) of a product for credit achievement. Third-party verified corporate sustainability reports (CSR) which include environmental impacts of extraction operations and activities associated with the manufacturer's product and the product's supply chain, are valued as one whole product for credit achievement calculation. Option 2. Leadership Extraction Practices. Use products that meet at least one of the responsible extraction criteria for at least 25%, by cost, of the total value of permanently installed building products in the project: Extended producer responsibility; Bio-based materials; Certified Wood products; Materials reuse; Recycled content; USGBC approved program. For credit achievement calculation, products sourced (extracted, manufactured and purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost. Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.	Specifications, Contractor Documentation is time intensive and costly. Was previously worth more points. While this may not add much to construction costs, it will require documentation by subcontractors, contractors, and LEED consultant/ architect, as well as specifications language.

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
1 1	Const.	MRc4 Material Ingredients [1-2] Achieve one or more of the options below, for a maximum of 2 points. One point per Option. Option 1: Material Ingredient Reporting. Use at least 20 different permanently installed products from at least five different manufacturers that use any of the following programs to demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm). Manufacturer Inventory. The manufacturer has published complete content inventory for the product; Health Product Declaration. The end use product has a published, complete Health Product Declaration with full disclosure of known hazards in compliance with the Health Product Declaration open Standard; Cradle to Cradle. The end use product has been certified at the Cradle to Cradle v2 Basic level or Cradle to Cradle v3 Bronze level; USGBC approved program. Option 2: Material Ingredient Optimization. Use products that document their material ingredient optimization for at least 25%, by cost, of the total value of permanently installed products in the project using one of these paths: GreenScreen v1.2 with no Benchmark 1 hazards; Cradle to Cradle Certified; USGBC approved program. Option 3: Product Manufacturer Supply Chain Optimization Use building products for at least 25%, by cost, of the total value of permanently installed products in the project that are sourced from product manufacturers who engage in validated and robust safety, health, hazard, and risk programs which at a minimum document at least 99% (by weight) of the ingredients used to make the building product or building material, and are sourced from product manufacturers with independent third party verification of their supply chain that verifies processes are in place to identify, document and communicate information about safety, health, and hazards of chemicals within the products throughout the supply chain. For credit achievement calculation of options 2 and 3, products sourced (extracted, manufactured, purchased) within 100 miles of the project site are valued at 200% of their base contributing cost. For credit achievement calculation, the value of individual products compliant with either option 2 or 3 can be combined to reach the 25% threshold but products compliant with both option 2 and 3 may only be counted once. Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.	Specifications, Contractor Option 1 should be attainable. This is a new approach to LEED materials optimization, and the contractor will need to play an active role in sourcing the "20 products from 5 manufacturers" to obtain this point. Specs should identify material categories where documentation is available and require documentation of compliance as part of product submittals.
2	Const.	MRc5 Construction and Demolition Waste Management [1-2] Option 1. Diversion Path 1. Divert at least 50% of the total construction and demolition material; diverted materials must include at least three material streams. [1] Path 2. Divert at least 75% of the total construction and demolition material; diverted materials must include at least four material streams. [2] Option 2. Reduction of Total Waste Material Do not generate more than 2.5 pounds of construction waste per square foot of the building's floor area. [2]	Specifications, Contractor Specify CDWM requirements. Require strategies for reduction and tracking of total waste material while leaving option for credit compliance open to contractor discretion. Contractor to develop, submit, implement and track CDWM plan.
10 6 0	Indoor Environmental Quality (EQ)		16 Points Possible
Y	Prereq 1	EQp1 Minimum IAQ Performance For mechanically ventilated spaces (and for mixed-mode systems when the mechanical ventilation is activated), meet the minimum requirements of ASHRAE Standard 62.1–2010, Sections 4–7, Ventilation for Acceptable Indoor Air Quality (with errata), or a local equivalent, whichever is more stringent. For naturally ventilated spaces (and for mixed-mode systems when the mechanical ventilation is inactivated), determine the minimum outdoor air opening and space configuration requirements using the natural ventilation procedure from ASHRAE Standard 62.1–2010 or a local equivalent, whichever is more stringent. Confirm that natural ventilation is an effective strategy for the project by following the flow diagram in the Chartered Institution of Building Services Engineers (CIBSE) Applications Manual AM10, March 2005, Natural Ventilation in Nondomestic Buildings, Figure 2.8, and meet the requirements of ASHRAE Standard 62.1–2010, Section 4, or a local equivalent, whichever is more stringent.	Mechanical Verify and document compliance.

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
Y	Prereq 2	EQp2 Environmental Tobacco Smoke Control	Owner
		Prohibit smoking inside the building. Prohibit smoking outside the building except in designated smoking areas located at least 25 feet from all entries, outdoor air intakes, and operable windows. Also prohibit smoking outside the property line in spaces used for business purposes. Signage must be posted within 10 feet of all building entrances indicating the no-smoking policy.	Provide compliant property smoking policy.
1 1	Design	EQc1 Enhanced Indoor Air Quality Strategies [1-2]	Mechanical, Architect
		Achieve one or more of the options below, for a maximum of 2 points. One point per Option. Option 1. Enhanced IAQ Strategies Mechanically ventilated spaces to have entryway systems, interior cross-contamination prevention, and filtration. Naturally ventilated spaces to have entryway systems and natural ventilation design calculations. Mixed-mode systems to have entryway systems, interior cross-contamination prevention, filtration, natural ventilation design calculations, and mixed-mode design calculations Option 2. Additional Enhanced IAQ Strategies Mechanically ventilated spaces (select one): exterior contamination prevention; increased ventilation; carbon dioxide monitoring; or additional source control and monitoring. Naturally ventilated spaces (select one): exterior contamination prevention; additional source control and monitoring; or natural ventilation room by room calculations. Mixed-mode systems (select one): exterior contamination prevention; increased ventilation; additional source control and monitoring; or natural ventilation room-by-room calculations.	Assess options and strategies to confirm number of points to target.
2 1	Const.	EQc2 Low-Emitting Materials [1-3]	Architect, Interiors, Contractor
		Option 1. Product Category Calculations. Achieve the threshold level of compliance with emissions and content standards for the number of product categories listed in credit Table 2. Option 2. Budget Calculation Method. If some products in a category do not meet the criteria, project teams may use the budget calculation method (Table 3).	Select and specify products during design development to meet credit criteria. There are 6 categories: Interior Paints & Coatings, Interior Adhesives and Sealants, Flooring, Composite Wood, Ceilings, walls and acoustic & thermal insulation, and Furniture. Compliance in 2 categories= 1 point; 4 categories= 2 points; 5 categories=3points
1	Const.	EQc3 Construction Indoor Air Quality Management Plan [1]	Specifications, Contractor
		Develop and implement an indoor air quality (IAQ) management plan for the construction and preoccupancy phases of the building.	Specify requirement for creation and implementation of compliant construction indoor air quality management plan.
2	Const.	EQc4 Indoor Air Quality Assessment [1-2]	Owner, Contractor
		Option 1. Flush-Out [1] Path 1. Before Occupancy. Install new filtration media and supply a total air volume of 14,000 cubic feet of outdoor air per gross square foot while maintaining temperature and humidity prior to occupancy. Path 2. During Occupancy. Install new filtration media and supply a total air volume of 3,500 cubic feet of outdoor air per gross square foot while maintaining temperature and humidity prior to occupancy. Continue flushout at 0.3 CFM until total of 14,000 cubic feet per square foot have been delivered. Option 2. Air Testing [2] After construction ends and before occupancy, but under ventilation conditions typical for occupancy, conduct baseline IAQ testing for all occupied spaces.	Determine whether air testing between construction and occupancy is desirable for confirmation of air quality and attainment of second LEED point.
1	Design	EQc5 Thermal Comfort [1]	Mechanical
		Option 1. ASHRAE Standard 55-2010. Design heating, ventilating, and air-conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55-2010, Thermal Comfort Conditions for Human Occupancy with errata or a local equivalent. Option 2. ISO and CEN Standards. Design HVAC systems and the building envelope to meet the requirements of the applicable standard.	Confirm design will be able to meet ASHRAE 55-2010.

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
1 1	Design	EQc6 Interior Lighting [1-2] Select one or both of the following two options. <i>Option 1. Lighting Control. For at least 90% of individual occupant spaces, provide individual lighting controls that enable occupants to adjust the lighting to suit their individual tasks and preferences, with at least three lighting levels or scenes (on, off, midlevel). For all shared multioccupant spaces have in place multizone control systems with at least three lighting levels, lighting for any presentation or projection wall must be separately controlled. Switches or manual controls must be located in the same space as the controlled luminaires.</i> <i>Option 2. Lighting Quality. Choose four of the following strategies: low glare fixtures; high CRI; long life light sources; less than 25% direct-only lighting; light/high reflectance interior finishes; light/high reflectance furnishings; proportionate wall/work plane illuminance; proportionate ceiling/work plane illuminance.</i> <i>[Other requirements for Retail.]</i>	Electrical, Owner <i>Pursue Option 2 and select the four or more strategies that will be employed on the project. Review whether Option 1 will be achievable on the project.</i>
3	Design	EQc7 Daylight [1-3] <i>Option 1. Simulation: Spatial Daylight Autonomy and Annual Sunlight Exposure. Demonstrate through annual computer simulations that spatial daylight autonomy 300/50% is achieved for 55% [2] or 75% [3] of regularly occupied floor area is achieved. And, demonstrate through annual computer simulations that annual sunlight exposure 1000,250 of no more than 10% is achieved.</i> <i>Option 2. Simulation: Illuminance Calculations. Demonstrate through computer modeling that illuminance levels will be between 300 lux and 3,000 lux for 9 a.m. and 3 p.m., both on a clear-sky day at the equinox, for 75% [1] or 90% [2] of regularly occupied floor area.</i> <i>Option 3. Measurement. Achieve illuminance levels between 300 lux and 3,000 lux for 75% [2] or 90% [3] of regularly occupied floor area as measured on two dates in year following completion.</i>	Architect, Interiors <i>Indicate whether daylight simulation will be able to show credit achievement and/or whether team should plan on field measurement following completion.</i>
1	Design	EQc8 Quality Views [1] <i>Achieve a direct line of sight to the outdoors via vision glazing, not obstructed by patterns or tints that distort color balance, for 75% of all regularly occupied floor area. Additionally, provide at least two of the following four kinds of views: multiple lines of sight to vision glazing in different directions at least 90 degrees apart; views that include at least two of the following: (1) flora, fauna, or sky; (2) movement; and (3) objects at least 25 feet from the exterior of the glazing; unobstructed views located within the distance of three times the head height of the vision glazing; and views with a view factor of 3 or greater, as defined in "Windows and Offices: A Study of Office Worker Performance and the Indoor Environment."</i>	Architect, Interiors <i>Provide design concept indicating all regularly occupied spaces, concepts for locations of permanent interior obstructions. Provide building sections through all exterior glazing and skylight conditions.</i>
1	Design	EQc9 Acoustic Performance [1] <i>For all occupied spaces, meet the requirements for HVAC background noise, sound isolation, reverberation time, and sound reinforcement and masking.</i> <i>Achieve maximum background noise levels from heating, ventilating, and air conditioning (HVAC) systems per 2011 ASHRAE Handbook, HVAC Applications, Chapter 48, Table 1; AHRI Standard 885-2008, Table 15; or a local equivalent. Calculate or measure sound levels.</i> <i>Meet the composite sound transmission class (STCC) ratings listed in credit Table, or local building code, whichever is more stringent.</i> <i>Meet the reverberation time requirements in credit Table.</i> <i>For all large conference rooms and auditoriums seating more than 50 persons, evaluate whether sound reinforcement and AV playback capabilities are needed. For projects that use masking systems, the design levels must not exceed 48 dBA. Ensure that loudspeaker coverage provides uniformity of +/-2 dBA and that speech spectra are effectively masked.</i>	Architect, Interiors, Mechanical <i>Review credit requirements and confirm readiness to meet credit going forward.</i>

FIGURE 9a.3

Qualify	Phase	Title, [Available Points]	Team / Comments
Yes ? No			
5	0	0	Innovation 6 Points Possible
1			Innovation in Design or Pilot Credit or Exemplary Performance Full Team
		Possible Exemplary Performance Credits: Protect or Restore Habitat; Rainwater Management; Optimize Energy Performance; Renewable Energy Production; Building Life-Cycle Impact Reduction; Environmental Product Declarations; Sourcing of Raw Materials; BPDO-Material Ingredients; Construction and Demolition Waste Management; Enhanced Air Quality Strategies; Low-Emitting Materials; Quality Views	Plan a team meeting during concept or schematic design to discuss the options available for Exemplary Performance, Innovation and Pilot Credits. Select no more than ten for further analysis and consideration to be narrowed to 6 by the end of construction documents and 5 for submission.
1			Innovation in Design or Exemplary Performance
		Possible Innovation Credits: Sustainable Purchasing Policy; Green Building Education; Solid Waste Management Policy; Building Exterior and Hardscape Management Plan; Green Cleaning (3 options); IPM, Erosion Control, and Landscape Management Plan	Achieve 95% diversion of construction waste.
1			Innovation in Design or Pilot Credit
		Possible Pilot Credits: Ergonomics Strategy; Bird Collision Deterrence; Clean Construction; Exterior Noise Control; Design for Active Occupants; Environmentally Preferable Interior Finishes and Furnishings; Local Food Production; Verified Construction & Demolition Recycling Rates; LEED O+M Starter: Green Cleaning Policy and IPM Plan, Purchasing Waste and Renovation Policies, Site Management Policy, and/or Systems O+M Plan; Social Equity Within the Supply Chain; Social Equity Within the Project Team	
1			Innovation in Design or Pilot Credit Potentially provide tenant fitup design guidelines (a core and shell credit)
		See above	
			Pilot Credit
		See above	
1			LEED® Accredited Professional Architect
			Achieved, complete form.
3	2	1	Regional Priority 4 Points Possible
Earn up to 4 points out of six possible priority points based on achieved credits above.			Regional credits list is at http://www.usgbc.org/rpc ; this list is for our downtown Burlington site.
1			Renewable Energy Production (EAc5)
1			Surrounding Density and Diverse Uses (LTc4)
1			Bicycle Facilities (LTc6)
	1		Sourcing of Raw Materials (MRc3)
		1	Protect or Restore Habitat (SSc2)
	1		Rainwater Management (SSc4)
Yes ? No			
60	39	12	Project Totals (pre-certification estimates) 100 of 110 Points Possible*
Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, Platinum: 80+ points			* Innovation and Regional Priority are excluded from the base of 100 possible points.

FIGURE 9a.3



1 NORTH (CHERRY STREET) ELEVATION
SCALE: 1/16" = 1'-0" REF.: A102A

NORTH ELEVATION - MATERIALS LEGEND

MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	16,784	52
PRIMARY MATERIAL 1B BUFF BRICK	3,406	11
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	7,073	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	3,415	10
SECONDARY MATERIAL 2 GRANITE	402	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	119	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	1,188	3
TOTAL ELEVATION, EXCLUDING WINDOWS	32,387	100
TOTAL ELEVATION, INCLUDING WINDOWS**	38,151	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

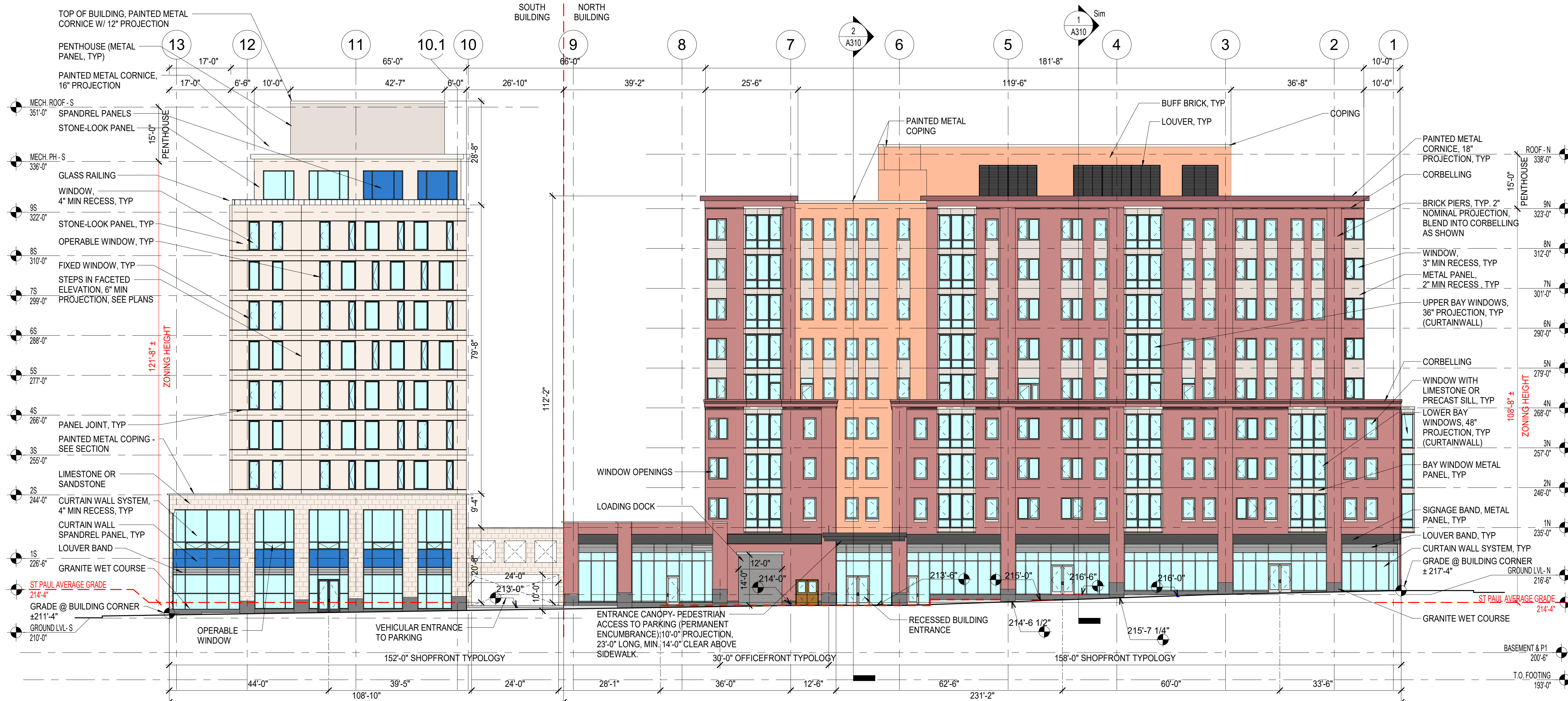
EAST ELEVATION - MATERIALS LEGEND

MATERIAL	NORTH BUILDING AREA (SQ. FT.)	SOUTH BUILDING AREA (SQ. FT.)	TOTAL AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	9,192	N/A	9,192	34
PRIMARY MATERIAL 1B BUFF BRICK	2,488	N/A	2,488	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	4,410	1,724	6,134	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	2,173	N/A	2,173	8
SECONDARY MATERIAL 2 GRANITE	334	140	474	2
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	27	N/A	27	0
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	834	N/A	834	3
PRIMARY MATERIAL 3A STONE-LOOK PANEL	N/A	5,040	5,040	18
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	N/A	1,190	1,190	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,458	8,094	27,552	100
TOTAL ELEVATION, INCLUDING WINDOWS**	23,050	9,581	32,631	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

ELEVATION & SECTION GENERAL NOTE

1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.



2 EAST (ST PAUL STREET) ELEVATION
SCALE: 1/16" = 1'-0" REF.: A410

CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

BTC MALL ASSOCIATES, LLC

DEVONWOOD INVESTORS, LLC

PROJECT NO: **A1947.00**
CONSULTANT PROJ. #: **10/15/2020**
SCALE: **1/16" = 1'-0"**
DRAWN BY: **CL/NE/JC**
CHECKED BY: **JR**
SUBMISSION DATE: **15 Oct 2020**
SUBMISSION CLASSIFICATION: **9 Nov 2020**
Rev. 2: **15 Jan 2021**

EXTERIOR ELEVATIONS

A200



WEST ELEVATION - MATERIALS LEGEND

MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	11,533	59
PRIMARY MATERIAL 1B BUFF BRICK	1,760	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	3,717	19
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,438	7
SECONDARY MATERIAL 2 GRANITE	344	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	66	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	769	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,627	100
TOTAL ELEVATION, INCLUDING WINDOWS**	22,920	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

1 WEST (PINE STREET) ELEVATION
A201 SCALE: 1/16" = 1'-0" REF.: A090A



SOUTH ELEVATION - MATERIALS LEGEND

MATERIAL	SOUTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 3A STONE-LOOK PANEL	15,000	60
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	3,600	14
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING (TRANSPARENT/ SPANDREL)	4,122	17
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,520	6
SECONDARY MATERIAL 2 GRANITE	360	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	480	12
TOTAL ELEVATION, EXCLUDING WINDOWS	25,082	100
TOTAL ELEVATION, INCLUDING WINDOWS**	32,540	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

2 SOUTH (BANK STREET) ELEVATION
A201 SCALE: 1/16" = 1'-0" REF.: A090A

ELEVATION & SECTION GENERAL NOTE

1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.

CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SAEZ, MANAGING DIRECTOR

PROJECT NO.: A1947.00
CONSULTANT PROJ. #: 10/15/2020
SCALE: 1/16" = 1'-0"
DRAWN BY: CL/NE/JC
CHECKED BY: JR
SUBMITTAL DATE: 15 Oct 2020
SUBMITTAL CLASSIFICATION: 6 Jan 2021
Rev. 2: 15 Jan 2021

SHEET CONTENTS

EXTERIOR
ELEVATIONS

SHEET NO.: A201

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City of Burlington
Department of Public Works

Technical Services Engineering Division
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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
Don Sinex – BTC Mall Associates, LLC*

From: *Norman J. Baldwin P.E. – City Engineer/Ass't Director, DPW
Laura K. Wheelock P.E. - Public Works Engineer, DPW*

Date: *February 19, 2021*

Subject: *75 Cherry Street – BTC Mall Associates
Permit Amendment Application*

The Department of Public Works (DPW) had been working with the BTC Mall Associates Development Team (BTC) to review and discuss details of the project as it relates to the public Right-of-Way (ROW) along Cherry Street and Bank Street, the project intersections, as well as the internal streets as the applicant has indicated that they would like to turn over to the City 60-foot public ROW for the two internal streets.

DPW has conducted our review of the submitted plans dated 11/13/2020 including revisions submitted to DPW on 2/17/21; as well as the Traffic Impact Assessment dated 03/2020, revised by memo on 10/01/2020.

Water Resources review to be submitted separately.

1. Traffic Impact Study (TIS):

DPW has been working with Clough, Harbour & Associates, LLP to assist DPW in review of the traffic impact study submitted by the applicant for this project. A memo with their findings is attached to this communication as of the date of the communication. There are findings within the review that DPW feels need to be addressed before we are comfortable providing our recommendation to accept the study. The findings were communicated to the applicant on 2/17/21 for their consideration ahead of their DRB Hearing.

2. Project Plans:

DPW reviewed the project plans for impacts on Bank Street and Cherry Street, as well as the two internal project streets in anticipation that the Applicant will seek to have these streets and their ROW accepted by the City in the future. DPW's findings are as follows.

Bank Street/Cherry Street

The proposed improvements as shown in the submitted plan meet or exceed City Standards as currently specified with the following exceptions, notes, or comments:

- A. The Applicant will be required reconstruct the ROW where limits of construction work remove existing infrastructure, or contribute an amount agreed upon in the development

agreement towards a portion of the City's planned public improvement project along these streets.

Project Streets (Pine Street and St. Paul Street)

The proposed improvements as shown in the submitted plan meet or exceed City Standards as currently specified with the following exceptions, notes, or comments:

- B. Minimum clearance between the top of road on Pine Street and bottom of the 100 Bank Street building shall be 12'-6" minimum. Warning bars shall be placed in advance of this low clearance with signage and height indicating bar to warn trucks of low clearances.

General Comments

- C. DPW would like to review turning radius of vehicles at all project drives and loading docks to ensure encroachment within oncoming travel lanes does not exceed the Design Vehicle Guide that DPW has developed.
 - a. DPW is concerned with these encroachments on St. Paul Street with the future transit
- D. DPW has concerns for the overall streetscape with the addition of the loading docks on Pine and St. Paul. Additionally presentations from the applicant and discussion during meetings they have not provided clear need for both of these and it has only been speculated that both are needed.
- E. Areaways – DPW continues to be concerned with their placement within the clear sidewalk width for long term maintenance, accessibility, and aesthetic of the streetscape. DPW believes that a new structure should be able to accommodate the ventilation needed within the parcel footprint.
- F. Short term bike parking – following the findings of the Conservation Board on 2/1/21 to provide covered short term bike parking for the project, DPW met with the applicant to understand how they would meet this finding. Coming from those discussions the applicant in a communication with DPW stated they would accommodate the entire short term bike parking need for the project within their parking structure. DPW supports this approach with ensuring good signage so it is clear that these spaces are open to the public, free of charge, and how to safely access them.
- G. Garage lighting – DPW requests that the lighting levels at the entrances to the garage be brightly lit, to a tunnel lighting standard to ensure the safety of vehicles entering and exiting the structure and the comingling of the pedestrians and bicycles in close proximity to this area. It is extremely important to have lighting levels that are higher than minimums at these locations to ensure the transition from daylight to covered indoor lighting allows for proper acclimation and visibility from the outside of the structure.
- H. The parking garage exit/entrance shall have audio and visual warnings displayed for pedestrians on the street when a vehicle is entering/exiting the structure.
- I. Applicant will be required to place monuments at all parcel boundaries.
- J. Concrete sidewalk shall be 5" thick minimum and 8" thick at commercial driveways
- K. All public infrastructure intended must be within the proposed limits of the ROW.
- L. Any materials used in the ROW that exceed City Standards will be the responsibility of the Applicant, and the Applicant will be required to enter into a License Agreement with

DPW, unless otherwise waived, for the care, maintenance, replacement, removal for the life that material unless otherwise replaced with a Standard material, at which time the Agreement can be dissolved.

M. For the reconstruction of Bank/Cherry and new construction of Pine/St. Paul the Applicant must, at minimum, provide the following to DPW:

- 1) As-built drawings of all infrastructure in the ROW
- 2) Certification from the engineer of record that infrastructure constructed was completed per plans and specification
- 3) All documentation by the project resident engineer for all infrastructure in the ROW. This shall include but is not limited to: Notes, photographs, reports, quality control testing, change orders, submittals.
- 4) The City shall be invited to participate at all construction meetings
- 5) The City shall have the right to have oversight during construction, review of resident engineer documentation, submittals.

Should you have any questions please contact me at LWheelock@burlingtonvt.gov or 338-2125.



February 17, 2021

Laura Wheelock, P.E.
Department of Public Works
645 Pine Street
Burlington, VT 05401

Re: City Place Traffic Impact Study Review
Burlington, VT
CHA File: 57094

Dear Ms. Wheelock:

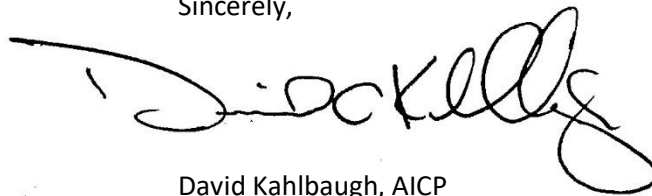
We have completed our review of the City Place TIS (March 2020) and the Trip Generation Update Memo (Oct 1, 2020) prepared by VHB. The following are our comments.

1. We agree with the trip generation assessment presented for the proposed development plan as described in the March 2020 TIS and for the revised development plan described in the October 2020 memo. This analysis shows that the current revised development plan will generate about 30% fewer new trips during the AM peak hour and 25% fewer new trips during the PM peak hour than what was proposed in the March 2020 study.
2. The March 2020 and October 2020 development concepts generate fewer site trips than the original development concept that was analyzed in the January 23, 2017 TIS.
3. The March 2020 study provided mode share and “internal capture” assessments of the site trips to estimate the amount of new vehicle traffic generated by the project during the peak hours. These calculations were not provided for the current revised development plan documented in the October 2020 Trip Gen Update. The change in the mix and density of land uses of the site may affect the amount of internal capture trips, and consequently affect how much vehicle traffic is generated onto the surrounding street network. The calculations of mode share and “internal capture” should be provided for the current development plan to document the estimated net new vehicle trips generated by the project. A table should be provided comparing the current net vehicle trip generation of the current proposal to the net vehicle trip generation of the former development proposals from March 2020 and January 2017.
4. The March 2020 study used the same source traffic data as the previous January 2017 study. Most of this data was originally collected in 2016-2017, but some of the data is from 2013-2015. It is noted that the traffic volumes for the intersection of Main Street and Prospect Street were updated for the March 2020 study using 2017 counts. Although some of this data is more than five years old, it is acceptable to continue to use this data as the basis of the analysis since most of the data is less than five years old, the study is an update of a formerly approved study and the traffic flows have been adjusted and balanced through the study network to adjust for the different years of the counts.

5. The March 2020 study adjusted the base volumes to reflect 2021 and 2026 conditions. However, the 2021 No-Build volumes at some of the study intersections are lower than the 2019 No-Build condition volumes from the 2017 study even though the 2021 No-Build volumes include the previously permitted phase 1 City Place project traffic. At other locations, the 2021 No-Build volumes are significantly higher; for example, the 2021 No-Build volumes at the Pearl/Colchester/Prospect intersection are 28% higher than the 2019 No-Build volumes and are also higher than the previously projected volumes at this intersection for the 2024 Build condition with the former development concept. Additional supporting documentation should be provided to validate and confirm these calculations of the No-Build and Build volumes. This documentation should include volume diagrams showing the 2021 and 2026 No-Build conditions without the other permitted developments to provide a basis of correlating the volumes from the March 2020 and January 2017 studies.
6. The site traffic distribution calculations and volume assignments to the street network should be provided for the March 2020 development concept (since this is the basis of the detailed level-of-service analysis).
7. The March 2020 analysis shows that two intersections will have operations at LOS E or LOS F during one or both peak hours in the Build condition.
 - a. Pearl Street/Prospect/Colchester (LOS F: AM & PM)
 - b. Main/Prospect (LOS E PM)This is a significant change in the LOS compared to the study of the former development concept. These intersections were shown in the 2017 study to operate at LOS D or better in the 2024 Build condition. Additional information should be provided explaining the factors contributing to the reduced LOS at these locations and to identify improvement strategies to mitigate for these conditions.
8. The capacity analysis of the intersections along S Winooski Avenue presented in the study are based on the former road configuration (four-lane undivided) of S Winooski Avenue. This analysis does not reflect the current Complete Streets Road Diet improvements that were implemented by the City in October 2020. Additional documentation should be provided to confirm that the traffic volumes developed for the Road Diet project reflect the permitted volumes for the City Place project and to provide updated analysis of the study intersections along S Winooski Avenue for the 2021 and 2026 conditions.

Please feel free to call me (518-453-3983) if you have any questions.

Sincerely,



David Kahlbaugh, AICP
Senior Transportation Planner

DCK/

c: Norm Baldwin; Burlington DPW
Dale Gozalkowski; CHA



Burlington Water Resources Division
Megan J. Moir, Division Head
235 Penny Lane | P.O. Box 878
Burlington, VT 05401
(802) 863-4501
water-resources@burlingtonvt.gov

To: Mary O'Neil, Principal Planner, City of Burlington
Kevin Worden, P.E., Engineering Ventures
Jesse Robbins, Freeman French Freeman, Inc.

CC: Chapin Spencer, Director, Burlington Public Works
Megan J. Moir, Assistant DPW Director, Burlington Water Resources
Norman Baldwin, P.E., City Engineer, Burlington Public Works
Laura Wheelock, P.E., Senior Engineer, Burlington Public Works

From: Jenna Olson, Water Policy & Program Manager, Burlington Water Resources

Date: February 19, 2021

RE: Burlington Water Resources comments on City Place Burlington 2/16/2021 submittal

Following a productive meeting with the City Place Burlington design team on February 12, 2021, Burlington Water Resources received a package of updated materials from the project design team on February 16, 2021. The following comments are in response to this most recent submittal, and outline the remaining items for resolution. Please note that Water Resources may have additional comments as new or updated information is provided.

1. Please confirm that there is design flexibility to divert all sewer flow to St. Paul and Bank St. if deemed necessary.
2. Please provide a description of water service connections. Water Resources must determine the best connection approach for the new buildings (i.e. single pipe for fire domestic or two separate pipes entering the building from outside).
3. Regarding the proposed waterline, Water Resources prefers to minimize the number of fittings. Therefore, if installing two offset tees at the intersection of St. Paul Street and Bank Street will reduce the number of fittings, please revise the plans accordingly.
4. Please update specifications to include SDR 35 PVC pipe for both sewer and storm lines. Sanitite style HDPE may be allowed for *stormwater* on a case-by-case basis, and the design team should schedule a discussion with Water Resources if they wish to use that material.



Burlington Water Resources Division
Megan J. Moir, Division Head
235 Penny Lane | P.O. Box 878
Burlington, VT 05401
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water-resources@burlingtonvt.gov

-
5. Please provide the complete plan set when it is available for review. Final plans, including mechanical drawings related to metering, shall be reviewed and approved by Water Resources prior to construction.
 6. See attached design checklist for Burlington's Water Resources infrastructure – please confirm that the checklist items have been completed for the latest iteration of the project and provide the completed checklist back to Water Resources.
 7. The water service line on the street side of the meter shall be fused HDPE pipe with threaded fittings.
 8. As previously discussed, if a booster pump is proposed an agreement will be needed with Burlington. Please provide an update on whether a booster pump is necessary as soon as possible.
 9. The maximum fire flows should be provided to Water Resources as soon as possible. The flows will be modeled to ensure the distribution system can manage the proposed flows.
 10. Water meter(s) shall be sized appropriately for the proposed buildings. Please note that Water Resources must install all water meters and meter reading equipment, and that work should be coordinated and scheduled with our crews accordingly.
 11. The project must submit final fixture counts to Water Resources, including mechanical drawings showing the location and layout of metering.
 12. Grease trap design should be presented to Water Resources for applicable areas of the proposed site.
 13. A testable backflow preventer appropriate for the level of risk based on the proposed use of the building shall be installed for the water service.
 14. The following link has additional information about water connections in Burlington:
<https://www.burlingtonvt.gov/DPW/Connection-Requirements>
 15. Record Drawings stamped by a PE shall be provided that accurately depict all water resources infrastructure. The record drawings shall include all infrastructure in the right of way as well as infrastructure on the property. The record drawings shall include detailed mechanical drawings.
 16. 14660-BTC-Drainage Analysis Report
 - Please confirm which thickness of Vegetated "Green" Roofs are proposed to retain 1" of rainwater.



Burlington Water Resources Division
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- Site Soils (pg. 4) – Why are the soils assumed to be Group B in accordance with the DMUC? What has prevented soil samples in the excavated site location?
- As pervious pavers will become the responsibility of the City, please require these pavers be brick, and not concrete.
- Concentrated infiltrating (pg. 5)
 - The drainage analysis notes that “It is not presently feasible to evaluate all of these parameters because an existing building occupies the current site.” As this is not true for the portion of the site that has been demolished and excavated please provide narrative language matching the conditions as they currently exist and provide clear steps to determine if concentrated infiltration is, in fact, appropriate for use at this location.
- Peak Flow hydrographs were not included as part of the provided hydraulic modeling. Please provide these as part of the final application package.

17. Stormwater Specification Sections

- Please add a spec for pervious pavers to be brick per comment above.

18. Standard EPSC form Nov 2015(v4)

- In consideration of routine delays any construction project of this scale may experience, please check the Yes “Y” box on page 3 of this PDF indicating soils exposed after November 1st will be stabilized if needed. The contractor should be prepared for winter EPSC measures.
- A signature on the EPSC plan is required prior to final approval
- This project will also require the completion of a PCSW Management Plan prior to final approval – while the majority of this information is somewhere within the materials, we ask for a summary document to ensure there is a clear record of the parameters required for our review and approval.

LAW OFFICES
OF
JOHN L. FRANCO, JR.

110 Main Street, Suite 208
Burlington, Vermont 05401-8451
Telephone (802) 864-7207
email: johnfrancolaw@aol.com

February 17, 2021

City of Burlington, Vermont
Development Review Board
Department of Planning and Inspections
645 Pine Street
Burlington, VT. 05401

VIA ELECTRONIC MAIL
sgustin@burlingtonvt.gov

Re: *Permit Amendment Application #21-0414CA/MA*, 75 Cherry Street, BTC Mall Associates

To Whom It May Concern:

Barbara McGrew of 76 St. Paul Street, Apt. 8 NW, Burlington, Steven Goodkind of 260 Ethan Allen Parkway, Burlington, Michael Long of 55 Henry Street Burlington, and Lynn Martin of 101 College Street #211, Burlington hereby enter their appearances as interested persons in the proceedings before the Development Review Board in the above captioned matter. As of this date, this matter has been warned for public hearing commencing on March 3, 2021.

They do so to protect their vested rights stemming from their settlement of a series of legal challenges to the redevelopment being proposed for the former Burlington Square Mall at 75 Cherry Street.

- Barbara McGrew individually and Steven Goodkind on his own behalf and on behalf of a group of individuals had brought an appeal in *Devonwood Investors, LLC (75 Cherry Street)*, Vermont Superior Court, Environmental Division, Docket Number 39-4-17 Vtec regarding the local land use approval issued by the Development Review Board on March 17, 2017 to Devonwood Investors, LLC on behalf of the property owner BTC Mall Associates, LLC.
- Barbara McGrew individually brought the appeal *Devonwood Investors, LLC JO 4-255*, Vermont Superior Court, Environmental Division, Docket Number 63-5-17 Vtec claiming that Act 250 had jurisdiction to also review the proposal.

- Steven Goodkind, Michael Long and Lynn Martin in Counts I, II, and III of *Long et. al. v. City of Burlington et. al.* Vermont Superior Court, Civil Division, Docket No. 996-11-16 Cncv brought a taxpayer challenge to \$22 million in Tax Increment Financing (TIF) provided by State and City property taxpayers to BTC Mall Associates to subsidize the project, and in Count IV of that action also as individual plaintiffs challenged a denial of a request for public records regarding that subsidy.

These claims, including these parking objections in the Environmental Division appeal, were all settled and compromised in a global *Settlement Agreement* between the appellants and the developers mediated by former Burlington Mayor Peter Clavelle. In terms of parking, the compromise provided for 967 on site spaces on nearly 386,000 SF of onsite parking floor area. Three of these four court actions were dismissed by the plaintiffs with prejudice and in the fourth they individually withdrew as per the *Settlement Agreement* in exchange for the conditions in that *Settlement Agreement*. This gave them both contract rights and *res judicata* rights in any proposed changes to the project. They contend that the proposed project amendment(s) violate those rights.

Disproportionate Reduction in Onsite Parking.

They support this rightsizing of the project as a major improvement in it. The overall size of the project has been reduced by one third.

However, the reduction has disproportionately fallen on the parking commitments made in that 2017 global settlement. The gross floor area devoted to non-parking uses has been reduced by 18%, while the floor areas devoted to off street parking has been reduced by 58%. In fact, this proposal is identical to that of a year ago by Brookfield except that it cuts out a floor of parking then proposed.

There is no public parking. This amendment has fewer parking spaces (422) than residential units (426). There is no parking for the customers or employees of the new retail elements. There is no parking to cover the loss of that provided for the LL Bean building, the developers' own offices, or the retail use in what remains of the old mall. The adjoining property at 100 Bank Street has dibs on some of those spaces. Additionally, there were 300 people holding parking space leases that the garage which was demolished which are currently being accommodated in City facilities, developers remain under contract to others provide some 300 long term rental spaces. The new *Amended and Restated Development Agreement* provides that alternatives for those spaces will be explored elsewhere, including in South Burlington.

I. THE PROPOSED AMENDMENTS ARE PREMATURE BECAUSE THEY DO NOT COMPLY CONTRACTUALLY WITH THE SETTLEMENT AGREEMENT.

My Clients Have Not Agreed to the Amendments.

Justice Burgess' concurrence in *In re Dunkin Donuts*, 2008 VT 139, 185 Vt. 583 cautioned that there should be a proviso "that a party to a stipulated *judgment* cannot undo that agreement without the consent of the other person..." (emphasis original). Otherwise "no party in opposition to a permit application would risk compromise to settle litigation, for fear the other party has its fingers crossed behind its back." To protect against such crossed fingers, the *Settlement Agreement* ¶9 stipulated that it "may not be amended, modified, or terminated except by written consent signed by all the parties hereto." No written consent has been obtained from my clients for these amendments. Without their agreement, or without judicial resolution of their contract claim which is pending in the Civil Division, *McGrew et al. v. Devonwood Investors, LLC et al.*, Superior Court Chittenden Civil Division, Docket No. 118-2-19 Cncv, the zoning permit application is premature.

Demolition of the Cherry Street Garage Eliminated of 1/5 of Offstreet Parking in the Downtown.

Key to their appeal to the Environmental Division were their objections to the inadequacy of the parking requirements in the March 17, 2017 zoning permit issued by the DRB. My clients argued to the Environmental Division that:

...The actual on-site parking required by the size of this project is more than double the 761 on-site spaces being proposed. The resulting parking deficit would choke off both existing business in the downtown and compromise the ability of the City to grow in the future.

Because of its scope, the project is subject to the Major Impact Review section of the zoning ordinance (Part 5. Conditional Use and Major Impact Review §§ 3.5.1 -3.5.7, (attached). The stated purpose in §3.5.1 is "to provide for a more detailed consideration of development proposals which may present a greater impact on the community" by subjecting "projects of major significance or impact" to "a major impact review" and "to ensure that the city's natural, physical and fiscal resources and city services and infrastructure are adequate to accommodate the impact of such developments, both individually and cumulatively." It is sometimes referred to as the "mini Act 250 ordinance" because the review criteria of §3.5.6(b) include the same impact the review criteria as Act 250. In order to receive approval it must be satisfied that the proposed development shall not have adverse impact under the ordinance's enumerated criteria 1-12. Of particular relevance here are criteria that the project

5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;
7. Not place an unreasonable burden on the city's ability to provide municipal services;
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;
10. Be in substantial conformance with the city's municipal development plan and all incorporated plans.

1) The elimination of 1/5 of the existing off-street public parking capacity of the Downtown Core violates the *Burlington Municipal Development Plan*.

The Achilles heel of the project is the demolition of the 567-space Burlington Town Center Cherry Street parking garage and permanent loss of its off-street parking capacity. This garage was built in as the original parking anchor of the decades-old Champlain Street Urban Renewal Plan.¹ It is the second largest such facility in the City and accounts for one fifth of the total downtown off street public parking capacity of the City of Burlington (attached). The DRB's approval never even discussed this issue.

The demolition and loss of these spaces violates §3.5.6 (b)(10) of the Major Impact Review criteria because it directly conflicts with the *Burlington Municipal Development Plan*² whose *Transportation Plan*³ component requires replacement of the Cherry Street garage's spaces to be lost by demolition:

Parking

Parking is a critical resource for any community, especially in the downtown/core area. It is a means by which a driver is converted into a

¹ See Land Lease, March 1, 1974 at Vol. 219, P.449 of Burlington land records. The Lakeview garage, the College Street garage, and the Marketplace garage were added later. All but the Cherry Street garage are city-owned. The Cherry Street garage was privately constructed and owned, but built pursuant to a lease of the underlying City-owned land acquired in condemnation as part of the Champlain Street Urban Renewal Plan for the purposes of providing a public parking facility as part of its urban renewal project. Also see Act 250 permit LUP#4C0116, *Burlington Square Associates*, June 29, 1973.

² Published by the City of Burlington on the internet at www.burlingtonvt.gov/PZ/Municipal-Development-Plan.

³ At Pp. 4-5 and 16.

shopper, client, visitor, or just plain citizen. Provision of appropriate parking in terms of location, quantity, and accessibility is essential to the survival and prosperity of any community's downtown core, including Burlington...

It is the policy and priority of the City to better utilize the existing parking inventory by implementing improved parking management strategies, and to add to additional inventory in strategic locations necessary and as new development presents opportunities. *Parking in the downtown is currently inadequate and action should be taken to address this issue...*

Downtown Parking Supply

Some parking in downtown is likely to be lost due to redevelopment. The City has a policy of no net loss, so these spaces will need to be replaced. Additional parking spaces in strategic locations – particularly the Main Street corridor – also may be needed.

Opportunities for increasing parking supply include expanding the Marketplace garage into the Handy air rights and adding on-street parking spaces with conversion to one-way streets. (emphasis added).

The pre-existing parking capacity that will not be replaced includes that which currently serves 254 thousand square feet of BTC Mall's own *existing* floor space:⁴

- 167 thousand square feet of existing retail floor space in BTC's own mall, 105 thousand sf of which will be demolished but fully replaced; and
- 87 thousand sf of existing retail and office floor space in BTC's own building at 101 Cherry Street.

According to public statements by Devonwood's representative, that retail square footage will be retained by, plus an additional 20 thousand square feet of net new retail space will be added to, the project,⁵ totaling about 550 thousand sf of new space (attached).

The new 761 space parking facility will service the on-site parking needs only of the new portions of the facility and is calculated based only the *minimum* on-site-spaces required by the Parking Ordinance. It is based on servicing only the new office and residential space to be constructed, but none of the retail space – neither the 105 thousand existing sf being replaced nor the 20 thousand sf of net new retail space to be added. It will not replace any of the 567 space capacity

⁴ See the attached Burlington Assessor's Office material discussed above.

⁵ *Burlington Free Press*, March 25, 2017, P.2, Sinex sees 'vertical rather than horizontal'.

which currently serves BTC's existing 254 thousand sf of office and retail space.

2) Satisfaction of the minimum on-site requirements of the Parking Ordinance is insufficient under Major Impact Review.

Properly understood, this project is a modification to and expansion of BTC's existing complex. In aggregate terms, **it more than triples BTC's gross floor area** from 254 thousand to over 800 thousand sf, **but increases BTC's on-site parking capacity by only a third.** Consequently, while BTC's Cherry Street garage currently provides 1 parking space for every 450 sf of gross floor area, its new garage would provide only 1 parking space for every 1,100 sf of gross floor area – **a 60% reduction in BTC's on-site parking per sf.**

Looking to the minimum requirements of the parking ordinance alone therefore also does not satisfy the cumulative impact criteria of the Major Impact Review ordinance. Section 3.5.2 requires that the applicant prove that "the city's physical and fiscal resources and city services and infrastructure are adequate to accommodate the impact of such developments *both individually and cumulatively*" (emphasis added). Relatedly under § 3.5.6(b) they must "not have an undue adverse impact on the city's present or future growth patterns nor on the City's fiscal ability to accommodate such growth..." The DRB decision itself noted that "approximately 1337 parking spaces could be provided under the maximum" of the ordinance, and that even more spaces are allowed within a parking structure because they are not even to be counted toward this maximum. Public parking spaces also are not counted toward this maximum.

a) The parking ordinance pre-supposes the existence of the very public parking and parking sharing opportunities to be demolished and lost.

The Parking Ordinance establishes baseline on-site parking requirements, and then §8.1.3 reduces them depending on the zone and the availability of existing parking resources and other factors:

The demand for parking is highly dependent on the context within which a given use or structure is located. Factors such as proximity to other related uses, availability of public transportation, the density of land uses, and the ability to share parking with nearby uses are all factors which influence the demand for individual and dedicated off-site parking.

The greatest reduction from the baseline standards is within the Downtown Parking District. This is in large part because of "the extensive sharing of parking demand between nearby uses" and the presence of "an array of public parking facilities." CDO §8.3.1(c). This pre-supposes the existing of other on-site parking and parking-sharing alternatives – the very alternatives which in this case are

going to be significantly reduced by this project. Indeed, none of the parking studies which have been conducted -- especially 2011 *PlanBTV Transportation Study*⁶ created for the preparation of the municipal land use plan -- ever contemplated the elimination of a facility such as the 567 space capacity of BTC Cherry Street garage without replacing it.

b) The loss of the Cherry Street garage capacity is aggravated by the unmet accommodation of the new parking demand created by the project itself.

1) Residential parking spaces.

The baseline on-site parking requirement is two spaces per residential unit. This is consistent with the U.S. Department of Transportation, Bureau of Transportation data (attached) that residential parking demand is just under *two* spaces per residential unit.⁷ But only one space per residential unit is required in the Downtown Parking District. Therefore, the project will generate an **additional demand of nearly 272 more new spaces** that will need to be accommodated elsewhere either by sharing of parking demand or by the public parking facilities.

2) The net new retail floor area.

According to public statements by Devonwood's representative, 125 thousand sf of new retail space to be constructed, 20 thousand of which is net new retail space of the 105 sf of old space to be demolished. Under the baseline parking standards to accommodate this net new retail, **an additional 60 new spaces** would be required. The parking ordinance for the Downtown Parking District similarly also does not require any onsite parking because of the assumed availability of public parking. But one fifth of that inventory is now to be permanently eliminated with the demolition of the Cherry Street garage.

3) The use of tandem and stacked valet parking will deter use of the new facility and will create even more parking pressures outside of the new facility.

The floor plans submitted as part of the original December 15, 2016 permit application purported to show a standard parking configuration for the 761 spaces to be provided. But the applicant revealed for the first time in a power point during its February 7th, 2017 DBR presentation that due to space limitations,

⁶ Published by the City of Burlington on the internet at www.burlingtonvt.gov/sites/default/files/PZ/planBTV/Downtown_Plan/Final%20Report_102511.pdf.

The Burlington Zoning ordinance formerly required two spaces per residential unit. See *In re McGrew*, 2009 VT 44 ¶3, 186 Vt. 37.

much of the parking was to be “stacked” or “tandem” two and three spaces deep which will require valet parking. The proposal is to have one valet per floor on duty. Customer waits to either park or retrieve vehicles resulting from this valet system, especially during peak hours, will create further pressures for users to find more convenient parking alternatives elsewhere, in terms of actual utilization effectively reducing the facility capacity from 761 spaces. This will mean a deterioration in the Burlington parking experience, not the improvement called for in the *PlanBTV* study.

The Global Settlement Agreement Resolved Three Cases Creating Contract Rights for My Clients’ Forbearance.

The Zoning Appeal.

The *Settlement Agreement* incorporated by reference a *Stipulation for Final Judgment* along with a *Proposed Judgement Order* in zoning appeal Docket 35-4-17 Vtec. Paragraph 3 of that *Settlement Agreement* incorporated by reference a *Stipulation for Final Judgment* along with a *Proposed Judgement Order*. The *Stipulated Findings of Fact Supporting Final Judgment* were approved and signed by the appellants, the developers and the City. The *Proposed Judgement Order* was adopted by the Vermont Superior Court Environmental Division as a *Judgment Order* on July 17, 2017 in Docket 35-4-17 Vtec.

If Ms. McGrew and Mr. Goodkind had not exercised this forbearance, the developers would have been forced to litigate this zoning appeal both before the Environmental Division and subject to an appeal to the Vermont Supreme Court. Ms. McGrew and Mr. Goodkind are entitled to the benefit of their bargain and may enforce the *Settlement Agreement*. *Spaulding v. Cahill*, 146 Vt. 386, 388 (1985) .

Ms. McGrew’s Claim of Act 250 Jurisdiction.

Also settled was Ms. McGrew’s appeal of the decision of the District Environmental Coordinator whether there was Act 250 jurisdiction over the project. In exchange for the consideration of these stipulated amendments to the project, Ms. McGrew dropped her Act 250 jurisdictional challenge, and agreed not to oppose the developers in any further proceedings that might be necessary. The status of this Act 250 forbearance as independent from the zoning appeal is underscored by the express language of ¶4 of the *Settlement*.

...the Applicant and the appellant thereto stipulate that the project, as amended to include the addition of subsurface parking capacity for approximately 200 automobiles (recognizing as stated above that the total number of automobiles accommodated will depend on engineering and other constraints including that the subsurface parking will not extend below one level and will not be included in the buildings constructed at and above ground), is not subject to Act 250

jurisdiction, and does not require an Act 250 permit because it is a Mixed-Use Priority Housing Project.(emphasis added)...

If the Court does not approve a *Stipulated Final Judgment Order* resulting in a final adjudication that *the Project, as modified by the Settlement Agreement*, is exempt from Act 250 regulation, then Ms. McGrew will allow Applicant the time to seek confirmation that Priority Housing Project eligibility is satisfied by *the project, as modified by the Settlement Agreement*, and is exempt from Act 250 regulation (emphasis added).

A separate *Consent Judgment* regarding Act 250 jurisdiction was in fact issued by the Environmental Division.

If Ms. McGrew had not exercised this forbearance, the developers would have been forced to litigate the Act 250 jurisdiction question both before the Environmental Court subject to an appeal to the Vermont Supreme Court. She is entitled to the benefit of her bargain and may enforce the *Settlement Agreement. Spaulding v. Cahill, supra*. Zoning and zoning permit amendments do not have jurisdiction over and cannot change this bargained-for contractual obligation.

The Challenge to the Legality of the Project's Tax Increment Financing (TIF).

Also settled was the challenge brought by Ms. Martin, and Messrs. Long and Goodkind in the Civil Division to the legality of the vote held during a Burlington Special City Meeting held during the 2016 Presidential election approving \$22 million in public Tax Increment Financing (TIF) for the project. In exchange for the parking commitments in the global settlement, they agreed in *Settlement Agreement* ¶15 to drop this challenge. Absent their forbearance, it was still subject to a Vermont Supreme Court appeal. Their forbearance resulted in not just the plaintiffs' withdrawal of their claim, but in the entry of an unopposed final judgment in the City's favor as well, which the City sought out of "an overabundance of caution" *Ruling on Unopposed Motion to Enter Final Judgment*, P.2). They are entitled to the benefit of their bargain and may enforce the settlement agreement under *Spaulding v. Cahill, supra*.

The Developers Benefitted from and Acted Upon Their Forbearance.

In the words of Justice Burgess' concurrence in the *Dunkin Donuts* case at ¶16, "(t)he settlement agreement here allowed the applicant to proceed with a project that might have been stalled, modified, or defeated, but for the settlement." My clients' forbearance in the *Settlement Agreement* allowed the developers first to secure a *Development Agreement* from the City executed on October 26, 2017. As a result of their forbearance, the developers were also able to secure zoning and demolition permits to commence work on the project in December of 2017. This was explained in the

November 4, 2020 comments of Burlington Zoning Administrator Scott Gustin to the DRB:

Zoning permit 17-0622CA/MA was approved by the Development Review Board on March 17, 2017. It was appealed to the Superior Court Environmental Division. A stipulation agreement was reached among the parties, and the project was ultimately approved on July 17, 2017.

Pre-release conditions associated with the zoning permit were met in full November 16, 2017, and the zoning permit was picked up by the applicant the same day...

Demolition work ensued December 2017 and continued through August 2018. At that point, activity at the construction site essentially stopped. Work associated with the zoning permit started within a year as required by standard condition 2... (Plaintiffs' Exhibit #5).

The demolition included that of the former 567 space public parking garage.

II. THE 2017 PROJECT AMENDMENTS MUST HONOR THE PARKING MITIGATION MEASURES RESOLVED IN THE 2017 PERMIT APPROVAL.

The 2017 zoning approval cannot be amended with no consideration of the parking mitigation issues previously resolved in the earlier permit process. That doctrine is called *res judicata*. It means that the matter has been decided. *Res judicata* prevents relitigation of the subject matter that was central to the litigation and that the settlement agreement resolved, including claims that the parties should have raised in the previous proceeding. *Bidgood, supra*. The same is true of settlement agreements in zoning cases.

We have often indicated that a stipulated agreement incorporated into a court order has *the same* preclusive effect as a final judgment on the merits... Environmental Court consent judgments have *the same* effect as final judgments on the merits, and the successive-application doctrine is the appropriate method of seeking relief from a final zoning decision. *Dunkin Donuts, supra* at ¶12.

The application of the *res judicata* doctrine in zoning cases is done through the process described in *In re Application of Lathrop*, 2015 VT 49, ¶55 and *In re Hildebrand*, 2007 VT 5, 181 Vt. 562, and based upon an Act 250 case *In re Stowe Club Highlands*, 166 Vt. 33, 39 (1996). On one hand there must be some level of certainty in the zoning and use of land because “allowing changes in zoning applications without according respect to prior denials would encourage erratic, unpredictable land use,” *Id.* at ¶10 On the other hand it is more flexible than traditional claim and issue preclusion principles, “that allows changes in proposals or permits without destroying the finality of decisions on which both interested parties and the public rely.” *Lathrop, supra* at ¶59. The doctrine

uses the criteria of *Stowe Club Highlands* for when amendments will be allowed: whether there are (a) changes in factual or regulatory circumstances beyond the control of the permittee; (b) changes in the construction or operation of the permittee's project not reasonably foreseeable at the time the permit was issued; or (c) changes in technology. *Hildebrand* at ¶7.

Lathrop at ¶65 describes the situation presented in the Washington case *DeTray v. City of Olympia*, 121 Wn. App. 777, 90 P.3d 1116 (Wash. Ct. App. 2004) as "a good example of the proper application of preclusion doctrines to facts like those before us." There the developer's original permit contained certain impact mitigation requirements. Later the developer submitted a permit amendment which called for a reduction in the original proposal, and which sought to eliminate the mitigation requirements on the grounds that the new proposal was a substantial change from the earlier one. The court rejected the argument that a substantial change in the overall development justified the striking of the original permit conditions.

As in *DeTray*, the main question is whether the permit amendment is motivated by changes in construction or operation reasonably foreseeable at the time the permit was issued, one of the three critical factors in *Hildebrand*, 181 Vt. 568, 2007 VT 5, ¶7, 917 A.2d 478. The testimony regarding the contested application conditions indicates that no such change in circumstances occurred, but rather *Lathrop* finds the conditions impractical....Under the circumstances, we hold that the grounds for a permit amendment were not established...
Lathrop at ¶73.

This is even more true here. The CityPlace developers acted on the *Settlement Agreement* and *Consent Judgment* creating the loss of parking that they were enacted to mitigate.

The Developers Commenced the Demolition of the Parking Garage Before Project Financing Was Secured.

Here, the need for financial viability and in-place financing was not only foreseeable in the *Stowe Club Highlands* criteria, but was *foreseen*. The problem was with the developers' own recklessness. The developers acted on the *Settlement Agreement* and consent judgment issued by the Environmental Division in July of 2017. They proceeded with construction of the project by commencing demolition in December of 2017. That included demolition of the former 567 space public parking garage. They did so before any financing was in place or and before learning whether the *CityPlace* development was creditworthy. This was done in the face of the conditions of their October 26, 2017 *Development Agreement* with the City of Burlington imposed expressly "to provide assurance that he construction of the Project would continue without interruption." It required that before demolition was to commence, it required an executed construction contract which covered the performance of the site work, soils work, and foundation for the project. The developers had none.

Demolishing the Collateral Which Secured the Existing Mortgage.

Worse, the real and personal property being demolished, and the gross revenues and rents generated therefrom including the Chery Street garage, were collateral which secured the then-existing BTC Mall mortgage and mortgage note. Upon information and belief this demolition of the mortgage collateral precipitated a notice of default or threat of same from the mortgage holder, Forethought Life Insurance Company. It is a subsidiary of the Global Atlantic Financial Group of Indianapolis. According to Burlington's land records Vol. 1418, P.109, Forethought's mortgage was discharged following a July 27, 2018 cash payoff. According to the defendants' own published statements in the *Burlington Free Press* on December 28, 2018, that payoff was \$22 million. This was in addition to \$24 spent million on demolition and other expenses totaling \$46 million. This is what ground progress to a halt in the summer of 2018.

The Developers Painted Themselves into Their Own Corner.

Any burdens of complying with the parking mitigation measures agreed-to in 2017 are self-inflicted. Had they waited for financing, they would have learned that their project was not feasible before demolition of the Cherry Street garage was undertaken, we would still have had available that public parking infrastructure available to work with when deciding what to do next. They cannot now present the *fait accompli* of the demolished parking as a rationale for avoiding the agreed-to parking mitigation. This would violate *Lathrop* and *DeTray*, *supra*.

The Developers Are Consequently Estopped by the Consequences of their Actions.

Even without ¶9 of the *Settlement Agreement*, "(a)s a general rule one may be estopped by an agreement or stipulation made in a judicial proceeding." *Bidgood v. Town of Cavendish*, 2005 VT 64, ¶¶6-7, 179 Vt. 530, 878 A.2d 290; *In re Estate of Cartmell*, 120 Vt. 234, 240, 138 A.2d 592 (1958). Where a settlement agreement is incorporated into an order of dismissal, *res judicata* prevents collateral attack of the order. *Bidgood v. Town of Cavendish*, 2005 VT 64, ¶¶6-7, 179 Vt. 530. My clients contend that the proposed amendments are such a prohibited collateral attack on the *Settlement Agreement*.

III. THE NEWLY ADOPTED PARKING ORDINANCE IS NOT APPLICABLE TO THESE AMENDMENTS.

It has been suggested that the 422 parking spaces set forth in this proposed amendment are the maximum allowable under the new downtown parking ordinance. This is not true for three reasons.

The 2016-17 Application was the “Vesting Event.”

The Ordinances in effect in 2016-17 are the operative ordinance. The original application in 2016-17 is the “vesting event.” Vermont law provides that the zoning ordinance which is applicable is the ordinance which was in effect at the time of the original permit application, and not subsequently enacted amendments. *In re Times & Seasons LLC Act 250 Reconsideration*, 2011 VT 76, ¶¶11-14, 190 Vt. 163 citing *Smith v. Winhall Planning Commission*, 140 Vt. 178, 181-82 (1981).

The Developers Cannot Take Advantage of Favorable Changes In The Ordinance.

Typically, this vesting issue comes up when a municipality enacts more stringent regulations after the developer has applied for a permit. In *Smith* this rule gave the developer a vested right to rely on the earlier, less stringent ordinance in effect at the time of his permit application. But *Smith’s* vesting rule also applies when less stringent requirements are adopted after the original application. The purpose of this rule is

avoidance of extended litigation and maneuvering, and certainty in the law and its administration. Allowing an applicant to take advantage of favorable changes in the law...would be contrary to these principles...(W)e conclude that holding the applicant to the laws in effect at the time of initial application is the more equitable approach in the long run.

Times & Seasons, supra.

Here the minimum parking requirements in effect in 2016-17 were more stringent than those amended in 2020. But the result is the same: my clients as parties have a vested right to rely on the more stringent ordinance in effect at the time. That the demolition commenced before the project had bank financing and the project as permitted ran into difficulties which now require amendments does not change that, and is an aggravating factor.

The bottom line is that the effective parking ordinance is the one in effect at the time of the 2016 permit application, 2017 DRB approval, and 2017 consent judgment, which is in turn what the developers acted upon when they commenced demolition of the parking garage and the major part of the old mall. Again, see the November 4, 2020 comments of Scott Gustin in the developers’ so-called relinquishment appeal. Also see the preamble to the *Amended and Restated Development Agreement*.

Public Parking is Exempted from the Current Ordinance.

Public parking is exempted by **Section 8.1.9 Maximum On-Site Parking Spaces**
(a)(1) **Exemptions**. It provides

- 1. Public Parking:** Spaces provided and available for use by the public shall not be counted towards the maximum. Such spaces shall be available to the public at a minimum of nights and weekends, and be signed or marked accordingly;..

The 2017 Settlement Agreement was Based on the Major Impact Development Ordinance.

As discussed above, the 2017 appeal, settlement, and consent judgment were based upon impacts of the loss of the 567 space public parking facility under the major impact development ordinance, not the then-existing parking minimums. It remains on the books.

IV. THE EX PARTE FEBRUARY, 2018 PERMIT AMENDMENTS WERE ILLEGAL.

The developers' proposed project amendments incorporate parking reductions to the July 2017 consent judgment which were granted by the City on February 23, 2018. They reduced the parking floor area by nearly 37% to 245,339 SF. They were made administratively, not by the DRB, and without any notice to my clients. Those 2018 administrative amendments were consequently illegal and invalid.

The Absence of Actual Notice to Parties to the Consent Judgment Violated Chapter I, Article 4 of the Vermont Constitution.

Absent actual notice, Ms. McGrew and the other parties to the consent judgment did not and could not make a knowing and intentional waiver of their right to appeal any changes to that consent judgment as provided by the Planning Act. Chapter I Article 4 of the Vermont Constitution entitled them to actual notice of the proposed and granted amendments to the consent judgment. Failure to give them such notice renders the amendments invalid.

The right to participate in municipal development proceedings is recognized as fundamental, protected by the due process clause of the Vermont Constitution Chapter I Article 4. Any waiver of the right to participate in a land use adjudicatory proceeding, whether in an administrative process or before the courts, must be knowing and intentional. The right to participate in municipal development proceedings is "fundamental," protected by Chapter I Article 4 of the Vermont Constitution. *Weinstein v. Leonard*, 2015 VT 135, ¶¶15-17, 200 Vt. 615. *In re Appeal of Hignite*, 2003 VT. 111, ¶8, 176 Vt. 562 recognized, but did not resolve, "whether due process or fundamental fairness requires that a party deprived of notice of a zoning permit be allowed to contest the permit, notwithstanding the strong policy interests in finality" provided by 24 V.S.A. § 4472(d). Ms. McGrew claims that in the circumstances of this case, the due process consideration of Chapter I Article 4 of the Vermont Constitution trump § 4472(d) finality. Chapter I Article 4 of the Vermont Constitution is self-executing and therefore provides

an independent basis for a determination whether adequate notice was provided. *Nelson v. Town of St. Johnsbury*, 2015 VT. 5.

Where a “substantive right” conferred by statute or common law exists, Article 4 protects against deprivation of that right without due process. *Id.* The rights at issue here are created both by common law and statute. By both common law and statute they also are enforceable under *res judicata*. *Dunkin Donuts, supra* at ¶12; *Hildebrand, supra*; *Lathrop, supra* ¶¶ 55-66. They do so because “*the parties* and other interested persons reasonably rely on the permit conditions...” *In re Nehemiah Associates*, 168 Vt. 288, 294, 689 A.2d 102 (1998)(emphasis added); The policy behind this finality is to “protect the courts and *the parties* from the burden of relitigation” (emphasis added) of these environmental and quality of life issues *Lathrop* at. ¶58. “Otherwise, the initial permitting process would be merely a prologue to continued applications for permits.” *Hildebrand, supra*.

These rights and interests are not worth a plug nickel if all parties to the judgment are not notified of proposed changes to a consent judgment so that they can be asserted. “The right to be heard is worth little unless one is informed that the matter is pending and one can choose ‘whether to appear, or default, or acquiesce, or contest.’” *Town of Randolph v. White*, 166 Vt. 280, 283 (1997). “We must ensure that any waiver of the important right to participate in a land use adjudicatory proceeding, whether in an administrative process or before the courts, is done knowingly and intentionally.” *Id.* Without notice, there has been no knowing and intentional waiver.

The Developers Failed to Comply with the Notice Provisions §3.2.1(d) of the Comprehensive Development Ordinance.

The *Comprehensive Development Ordinance* §3.2.1(d) did in fact require actual notice to Barbara McGrew of the proposed 2018 amendments.

A Pre-Application Public Neighborhood Meeting *shall be required for all development involving the construction of five (5) or more dwelling units and/or ten thousand (10,000) s.f. or more of gross floor area of non-residential development in order to allow neighbors to become aware of potential development projects at an early stage of a development’s conceptual design and for applicants to take into consideration neighborhood comments and concerns. Procedures and requirements regarding matters including but not limited to scheduling, location, public notice, and documentation shall be set forth by the department of planning and zoning (emphasis added).*

Barbara McGrew is an immediate neighbor. She lives directly across Bank Street from the project. That notice was never provided even though the February 2018 amendments involved the construction of 16 additional residential units. In fact, no §3.2.1(d) meeting was ever held at all on these 2018 amendments. Unaware of the amendments she lost her opportunity to appeal them to the DRB under 24 V.S.A. § 4465.

By contrast a §3.2.1(d) neighborhood meeting on the 2020 project amendments proposed by Brookfield was held on February 27, 2020 regarding them. Ms. McGrew *did* receive actual notice of that meeting by mail and had her counsel attend the meeting. Also a neighborhood meeting on the current amendments was held virtually in October of 2020 which she attended. Ms. McGrew was provided written notice in February of 2021 of this hearing by the DRB, as was her counsel. It is absolutely inexcusable that this also did not occur regarding the 2018 amendments.

The Developers Also Failed to Comply With the Requirements of Posting Notice.

On March 14, 2018, after having learned that these amendments were granted without actual notice to them, I sent the City of Burlington a letter asking that the appeal period be re-opened. This prompted Ms. O'Neil to email BTC Mall's/Devonwood's architect

As you are aware, John Franco has requested re-opening the appeal period for the February permit for 75 Cherry Street...

Can you confirm for me:

1. That the red "Z" card was posted on the property;
2. Please define *where* it was posted; and
3. *When* it was posted. Did it remain for 15 days?

(Emphasis original).

The architect responded on March 19, 2018 that it was posted by BTC Mall Associates at the LL Bean Entrance to the Mall, was posted on January 26th, and remained there at least 15 days. This prompted a follow-up email from Ms. O'Neil on March 20, 2018:

Do you know the date it was removed?

To which the architect replied:

BTC Mall Assoc. removed it on Monday February 26th.

This failed to comply with the posting notice requirements of the Planning Act at 24 V.S.A. § 4449(b). It requires that the "Z" card be posted "until the time for appeal in section 6654 of this title has passed." This requirement appears on the face of the "Z" card itself. That period did not pass until March 10, 2018, as stated on the permit. ["An interested person may appeal a decision of the Zoning Administrator to the Development Review Board until 4 pm on March 10, 2018"]. Therefore by BTC Mall's own admission, the notice was removed 12 day *before* the appeal period expired, and the movants' request for an appeal to the DRB was timely. This consequently failed to

comply with the posting notice requirements of the Planning Act, denying the appellants due process of law under Article I Chapter 4 of the Vermont Constitution rendering the amendments invalid and the bar of 24 V.S.A. § 4472(d) inapplicable.

The 2018 Amendments Circumvented the 2017 Judgment Order Which Required DRB Review and Approval of Any Amendments.

The July 2017 *Judgment Order* provided that the project would be constructed as per the March 17, 2017 findings and order of the DRB. The DRB's findings and order required that *all* amendments to the project must be reviewed and approved by the DRB. Consequently, the administrative officer lacked jurisdiction to grant the 2018 permit amendments for the project.

The 2018 Amendments Failed to Comply with the Planning Act's Requirements that Variances Be Granted Only by the DRB.

About 600 of the parking spaces shown on these amended parking floor plans did not comply with the minimum dimensional requirements of the Burlington *Comprehensive Development Ordinance* §8.1.11 Parking Dimensional Requirements (attachment #4). There is no distinction between variances from use requirements and area requirements. *In re Mutschler, Canning & Wilkins*, 2006 VT 43 ¶¶8-11, 180 Vt. 501; *In re Ray Reilly Tire Mart*, 141 Vt. 330, 331 (1982). The Planning Act requires DRB or ZBA as applicable to make findings that the applicant has met each of the five statutory requirements for approval of a variance under § 4469(a)(1)-(5). *Mutschler* and *Ray Reilly Tire Mart*, *supra*; *Gadhue v. Marcott*, 141 Vt. 238, 239 (1982); *Sorg v. North Hero Zoning Board of Adjustment*, 135 Vt. 423, 426-27 (1977). Variances are disfavored and are not justified on the basis of personal convenience or maximizing profitability, *Mutschler*, *supra* at ¶11. They cannot be granted where the hardship that was created by the applicant, *Ray Reilly Tire Mart* at 331, 335-35. The second of the statutory criteria, which serves as an escape valve against a regulatory taking, requires that there be no possibility that the property can be developed at all in strict conformity with the provisions of the zoning regulation. *Mutschler* and *Ray Reilly*, *supra*.

Under 24 V.S.A. § 4460(e)(11) when presented with a request for a variance, “the matter shall come before the panel by referral from the administrative officer. Any such referral decision shall be appealable as a decision of the administrative officer.” The same requirement for a referral applies under §4460(e)(12) for “(a)ny reviews required by the bylaws” such as the requirement of Burlington’s *Comprehensive Development Ordinance*. It provides that “(t)hese standards shall be adhered to except in situations where a lesser standard is deemed necessary by the DRB ...” Since the only action by the administrative officer which is an appealable administrative decision under 24 V.S.A. § 4465(a) would have been a *referral* to the DRB, Ms. O’Neil’s grant of this permit is not an appealable administrative decision and the bar of §4472(d) was not triggered. The permit amendments were ineffective under *In re Burns Two-Unit Residential Building (Michae Long et al. Appellants)* 2016 VT 63 ¶¶11, 12, and 15, the appeal period of §4465(a) was never commenced, did not run, and did not trigger the bar of §4472(d).

Ms. O’Neil Lacked the Necessary Statutory Authority to Grant the February, 2018 Amendments.

The City has since claimed that Ms. O’Neil was nominated and appointed as an assistant administrative officer. But that alone does not satisfy the statutory requirements of 24 V.S.A. § 4448(b). The City must provide “clear policies regarding the authority of the administrative officer in relation to the acting or assistant officer.” Also see Burns at ¶12. Those clear policies were not provided by the City. Burlington’s *Comprehensive Development Ordinance* §2.3.3(c) simply provides “One or more assistant administrative officers may be appointed by the ZAO *and shall have such authority and duties as delegated to them by the ZAO.*” (emphasis supplied). This ordinance therefore does not satisfy the requirements of §4448(b). Ms. O’Neil’s grant of the permit amendments was therefore not an action of the “administrative officer” under § 4465(a) and did not trigger the appeal period of §4472(d) under *Burns, supra*. The administrative officer lacks authority to supply them because *Herbert v. Town of Mendon*, 159 Vt. 255, 259 (1992) requires that such policies be adopted by ordinance. They prescribe “a permanent rule of conduct or government that will remain in effect until repealed” which “affects the people of a municipality in an important or material way.” *Id.*

Conclusion.

For these reasons the requested amendments must be denied.

Thank you for your attention to this matter. Please provide us with actual notice of any and all actions taken on this application, including but not limited to advance notice of the dates and times of all hearings before the DRB.

Very truly yours,

/s/ John L. Franco, Jr

John L. Franco, Jr.

Attorney for Barbara McGrew,

Steven Goodkind, Michael Long,
and Lynn Martin



February 17, 2021

Laura Wheelock, P.E.
Department of Public Works
645 Pine Street
Burlington, VT 05401

Re: City Place Traffic Impact Study Review
Burlington, VT
CHA File: 57094

Dear Ms. Wheelock:

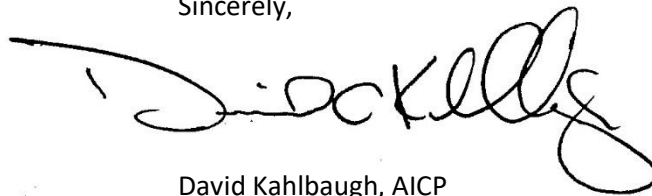
We have completed our review of the City Place TIS (March 2020) and the Trip Generation Update Memo (Oct 1, 2020) prepared by VHB. The following are our comments.

1. We agree with the trip generation assessment presented for the proposed development plan as described in the March 2020 TIS and for the revised development plan described in the October 2020 memo. This analysis shows that the current revised development plan will generate about 30% fewer new trips during the AM peak hour and 25% fewer new trips during the PM peak hour than what was proposed in the March 2020 study.
2. The March 2020 and October 2020 development concepts generate fewer site trips than the original development concept that was analyzed in the January 23, 2017 TIS.
3. The March 2020 study provided mode share and “internal capture” assessments of the site trips to estimate the amount of new vehicle traffic generated by the project during the peak hours. These calculations were not provided for the current revised development plan documented in the October 2020 Trip Gen Update. The change in the mix and density of land uses of the site may affect the amount of internal capture trips, and consequently affect how much vehicle traffic is generated onto the surrounding street network. The calculations of mode share and “internal capture” should be provided for the current development plan to document the estimated net new vehicle trips generated by the project. A table should be provided comparing the current net vehicle trip generation of the current proposal to the net vehicle trip generation of the former development proposals from March 2020 and January 2017.
4. The March 2020 study used the same source traffic data as the previous January 2017 study. Most of this data was originally collected in 2016-2017, but some of the data is from 2013-2015. It is noted that the traffic volumes for the intersection of Main Street and Prospect Street were updated for the March 2020 study using 2017 counts. Although some of this data is more than five years old, it is acceptable to continue to use this data as the basis of the analysis since most of the data is less than five years old, the study is an update of a formerly approved study and the traffic flows have been adjusted and balanced through the study network to adjust for the different years of the counts.

5. The March 2020 study adjusted the base volumes to reflect 2021 and 2026 conditions. However, the 2021 No-Build volumes at some of the study intersections are lower than the 2019 No-Build condition volumes from the 2017 study even though the 2021 No-Build volumes include the previously permitted phase 1 City Place project traffic. At other locations, the 2021 No-Build volumes are significantly higher; for example, the 2021 No-Build volumes at the Pearl/Colchester/Prospect intersection are 28% higher than the 2019 No-Build volumes and are also higher than the previously projected volumes at this intersection for the 2024 Build condition with the former development concept. Additional supporting documentation should be provided to validate and confirm these calculations of the No-Build and Build volumes. This documentation should include volume diagrams showing the 2021 and 2026 No-Build conditions without the other permitted developments to provide a basis of correlating the volumes from the March 2020 and January 2017 studies.
6. The site traffic distribution calculations and volume assignments to the street network should be provided for the March 2020 development concept (since this is the basis of the detailed level-of-service analysis).
7. The March 2020 analysis shows that two intersections will have operations at LOS E or LOS F during one or both peak hours in the Build condition.
 - a. Pearl Street/Prospect/Colchester (LOS F: AM & PM)
 - b. Main/Prospect (LOS E PM)This is a significant change in the LOS compared to the study of the former development concept. These intersections were shown in the 2017 study to operate at LOS D or better in the 2024 Build condition. Additional information should be provided explaining the factors contributing to the reduced LOS at these locations and to identify improvement strategies to mitigate for these conditions.
8. The capacity analysis of the intersections along S Winooski Avenue presented in the study are based on the former road configuration (four-lane undivided) of S Winooski Avenue. This analysis does not reflect the current Complete Streets Road Diet improvements that were implemented by the City in October 2020. Additional documentation should be provided to confirm that the traffic volumes developed for the Road Diet project reflect the permitted volumes for the City Place project and to provide updated analysis of the study intersections along S Winooski Avenue for the 2021 and 2026 conditions.

Please feel free to call me (518-453-3983) if you have any questions.

Sincerely,



David Kahlbaugh, AICP
Senior Transportation Planner

DCK/

c: Norm Baldwin; Burlington DPW
Dale Gozalkowski; CHA

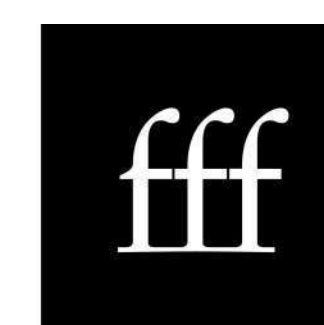
CITYPLACE

BURLINGTON

ZONING SUBMISSION

October 15, 2020

REVISION 2, 15 JAN 2021



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d/b/a BTC Mall Associates, LLC
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11/9/2020 3:27:13 PM

COVER, CONTENTS, PLAT	
ID	Sheet Name
-	COVER SHEET
A000.1	INDEX
a	PLAT PLAN

Civil Drawings	
ID	Sheet Name
C101	EXISTING CONDITIONS PLAN
C102	DEMOLITION PLAN
C103	SITE PLAN
C104	GRADING PLAN
C105	UTILITY PLAN
C106	EROSION PREVENTION & SEDIMENT CONTROL PLAN
C201	ST. PAUL STREET PROFILE
C203	PINE STREET PROFILE
C205	PINE STREET SECTIONS
C206	ST. PAUL STREET SECTIONS
C207	ST. PAUL STREET WATERLINE PROFILE
C208	ST. PAUL STREET & BANK STREET SEWER PROFILE
C300	SITE DETAILS & NOTES
C301	WATER DETAILS & NOTES
C302	SEWER DETAILS & NOTES
C303	STORMWATER DETAILS
C304	STORMWATER DETAILS
C304G	GARAGE STORMWATER DETAILS
C305	EROSION PREVENTION & SEDIMENTATION CONTROL DETAILS
C306	DETAILS
C307	ST. PAUL STREET ROAD SECTIONS
C308	PINE STREET ROAD SECTIONS

Landscape Drawings	
ID	Sheet Name
LA200	MATERIALS PLAN
LA400	PLANTING PLAN

Architectural Drawings	
ID	Sheet Name
A090	OVERALL PLAN- BASEMENT AND P1 PARKING
A100	OVERALL PLAN- GROUND FLOOR AND P2 PARKING
A100.5	OVERALL PLAN- GROUND FLOOR MEZZANINES AND P3 PARKING
A101	OVERALL PLAN- FIRST FLOOR
A102	OVERALL PLAN- LEVEL 2
A103	OVERALL PLAN- LEVEL 3
A104	OVERALL PLAN- LEVEL 4
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A107	OVERALL PLAN - LEVEL 7
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A109	OVERALL PLAN- LVL 9 AMENITIES & MECHANICAL PENTHOUSES
A110	MECHANICAL PENTHOUSE
A200	EXTERIOR ELEVATIONS
A201	EXTERIOR ELEVATIONS
A210	RENDERINGS
A211	RENDERINGS
A212	SUN STUDIES
A220	AXONOMETRIC 3D MASSING
A300	BUILDING SECTIONS - NORTH BUILDING
A310	WALL SECTIONS
A410	TYPICAL UNITS
AE100	WEST ELEVATION, CHURCH STREET DETAIL
AE113	ENABLING PLAN - ROOF
AE201	ENABLING EXTERIOR ELEVATION - SOUTH
AL001	LEVEL 1 - GARAGE LIGHTING
AL002	LEVEL 2 - GARAGE LIGHTING
AL003	LEVEL 3 - GARAGE LIGHTING
AL004	STREET AND SIDEWALK LIGHTING

HIGHLIGHTING INDICATES REVISIONS FOR SUBMISSION CLARIFICATIONS (REV 1) 11/9/2020 or REV 2, 1/15/21- SEE INDIVIDUAL SHEET ISSUE LOGS FOR DETAILS.



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OWNER

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DEVONWOOD INVESTORS, LLC

DOAN SANEZ, MANAGING DIRECTOR

PRJ PROJECT NO:	CONSULTANT PROJ. #:
A1947.00	
ORIGINATION DATE:	SCALE:
03/XX/2020	
DRAWN BY:	CHECKED BY:
NE	JDR
ISSUE LOGS: Zoning Submission 15 Oct 2020 Submission Clarifications 9 Nov 2020	

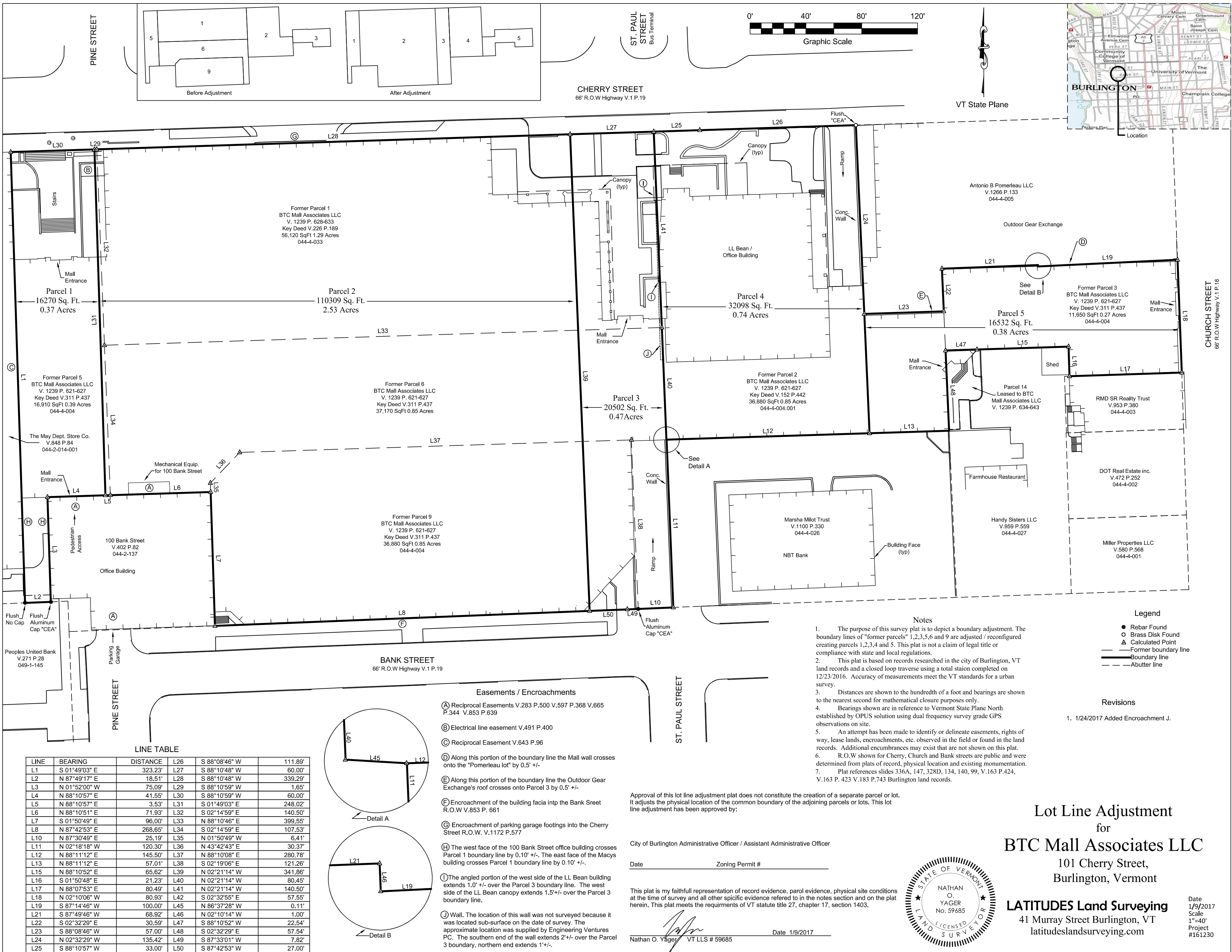
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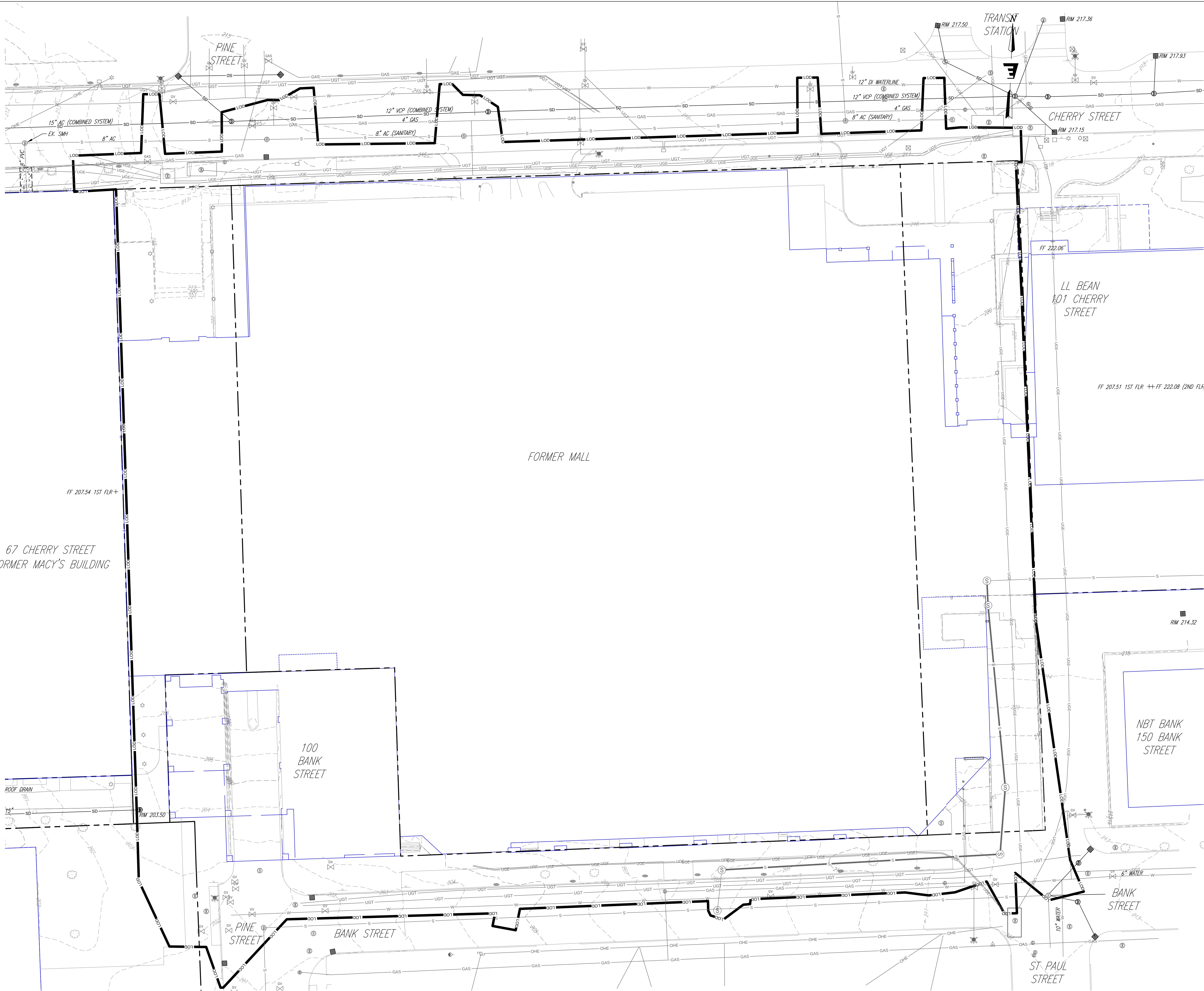
INDEX

SHEET NO:

A000.1

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EXISTING CONDITIONS LEGEND

- BOLLARD
- SN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR
- WATERLINE/GATE VALVE/HYDRANT
- SANITARY SEWER LINE/MANHOLE
- STORM LINE/CATCH BASIN/MANHOLE
- NATURAL GAS LINE/VALVE
- OVERHEAD ELECTRIC/SITE LIGHT
- UNDERGROUND ELECTRIC/PULL BOX
- UNDERGROUND TELECOM/PULL BOX

SURVEY NOTES

INFORMATION DEPICTED ON THIS PLAN HAS BEEN COLLECTED FROM A VARIETY OF SOURCES INCLUDING THE FOLLOWING:

1. TOPOGRAPHIC SURVEYS BY LATITUDES LAND SURVEY, PC, NATE YAGER, LLS OCT. AND NOV. 2016.
2. UTILITY RECORD DRAWINGS
3. CITY OF BURLINGTON RECORD DRAWINGS
4. CITY OF BURLINGTON GIS
5. CITY OF BURLINGTON TAX MAPS

NOT ALL INFORMATION IS ACCURATE OR CURRENT. SUBSURFACE CONDITIONS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL CONDITIONS MAY BE MATERIALLY DIFFERENT.

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DEVELOPMENT MANAGING DIRECTOR

PROJECT NO.

A1947.00

CONSULTANT PROJECT NO.

14660

ORIGIN DATE

10/15/20

SCALE

As Indicated

DRAWN BY

HKW

CHECKED BY

KW

DATE LOG

Zoning Submission

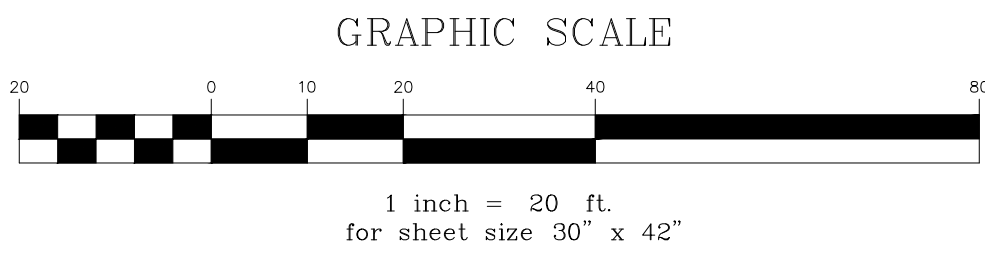
15 Oct 2020

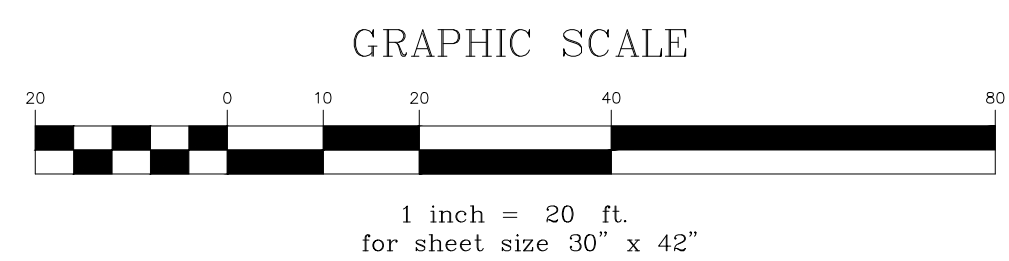
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Existing
Conditions
Plan

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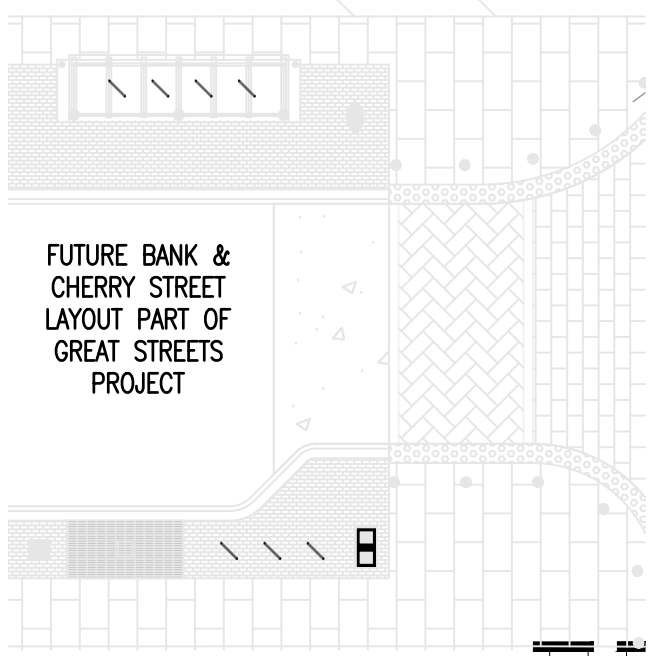
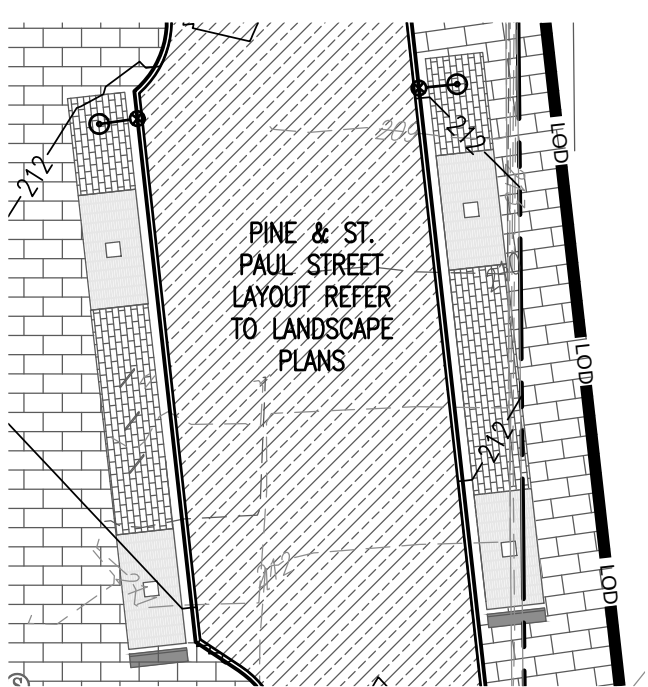
C-101







	EDGE OF PAVEMENT/CURB
	250
	MAJOR CONTOUR
	251
	MINOR CONTOUR
	0
	SIGN
	SITE LIGHT
	CATCH BASIN
	DRAINAGE MANHOLE
	WATER VALVE
	HYDRANT
	SEWER MANHOLE



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PROJECT NO:	CONSULTANT F
1947 00	1466

REGISTRATION DATE:	SCALE:
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10/15/20	As Indic
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HKW	KW
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SUBLOG: **Online Submission** **15 Oct**

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Sito Plan

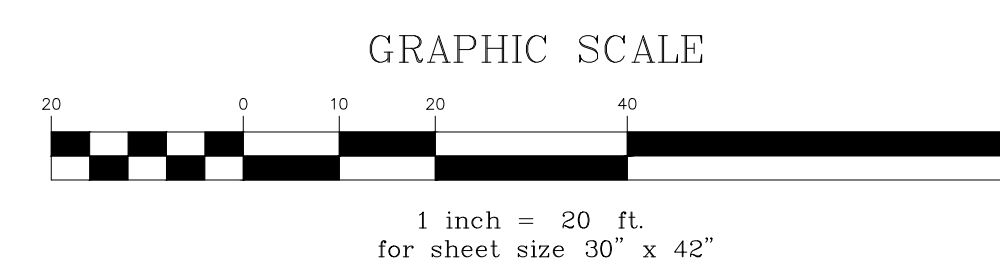
Site Plan

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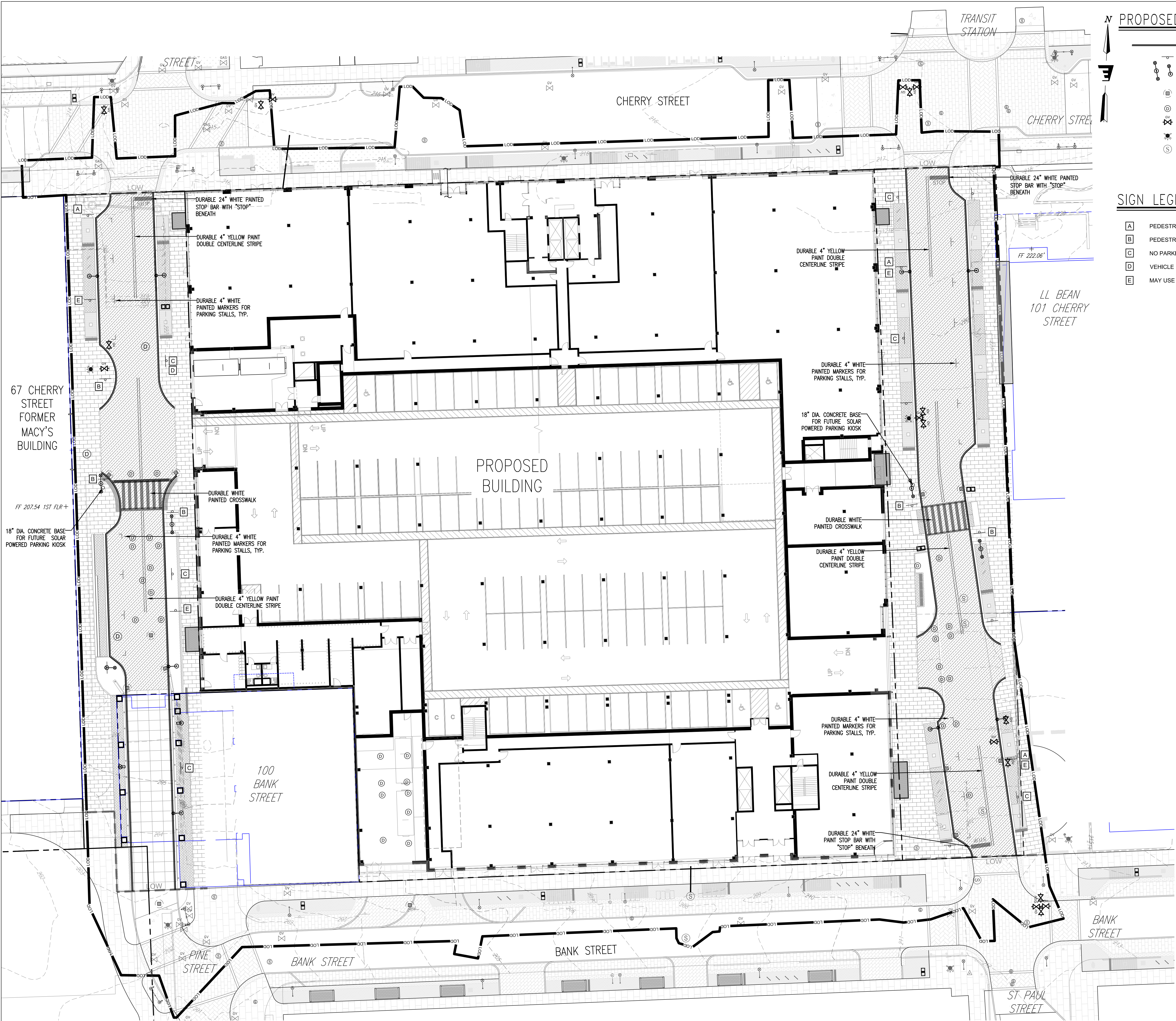
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	EDGE OF PAVEMENT/CURB
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	SIGN
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	CATCH BASIN
	DRAINAGE MANHOLE
	VALVE WATER VALVE
	HYDRANT
	SEWER MANHOLE
	STORM PIPE
	SW SUBSURFACE STORMWATER TREATMENT AREA
	WM WATER MAIN/WATER SERVICE LINE
	S SEWER MAIN/SEWER SERVICE LINE

•	BOLLARD
—○—	SIGN
— — — — — 251 — — — — —	PARKING METER
— — — — — 250 — — — — —	MINOR CONTOUR
	MAJOR CONTOUR



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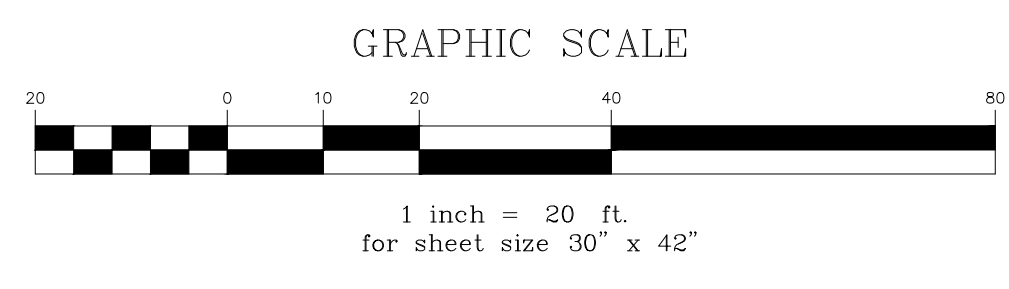
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- SIGN
- SITE LIGHT
- CATCH BASIN
- DRAINAGE MANHOLE
- WATER VALVE
- HYDRANT
- SEWER MANHOLE

EXISTING CONDITIONS LEGEND

- BOLLARD
- SIGN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR

SIGN LEGEND

- A PEDESTRIANS
- B PEDESTRIAN CROSSING, YIELD
- C NO PARKING THIS SIDE OF STREET
- D VEHICLE LOADING/LIMITED PARKING
- E MAY USE FULL LANE/SHARE THE ROAD



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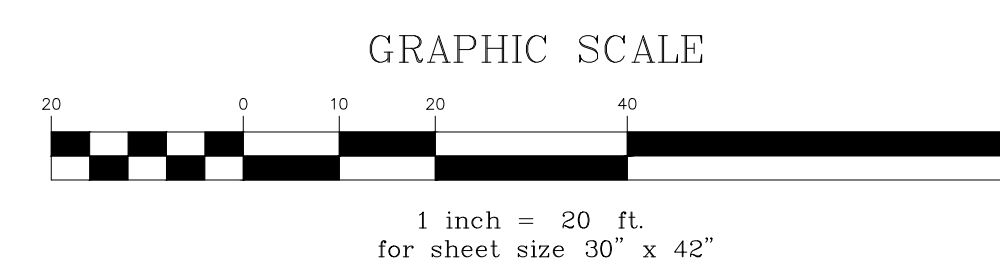
OWNER
BTC MALL ASSOCIATES, LLC

A PROJECT BY
DEVONWOOD INVESTORS, LLC
DEN SINEE, MANAGING DIRECTOR

HY PROJECT NO:	A1947.00	CONSULTANT PROJ. NO:	14660
ORIGINATION DATE:	10/15/20	SCALE:	As Indicated
DRAWN BY:	HKW	CHECKED BY:	KW
DATE LOG:	Zoning Submission		15 Oct 2020

SHEET CONTENTS:

Sign &
Pavement
Marking Plan



	EDGE OF PAVEMENT/CURB
	250 MAJOR CONTOUR
	251 MINOR CONTOUR
	SITE LIGHT
	CATCH BASIN
	DRAINAGE MANHOLE
	WATER VALVE
	HYDRANT
	SEWER MANHOLE
	STORM PIPE
	SUBSURFACE STORMWATER TREATMENT AREA

	BOLLARD
	SIGN
	PARKING METER
	MINOR CONTOUR
	MAJOR CONTOUR



OWNER — BTC MALL ASSOCIATES, LLC

A PROJECT BY — DEVONWOOD INVESTORS, LLC

FOR SNEY, MANAGING DIRECTOR

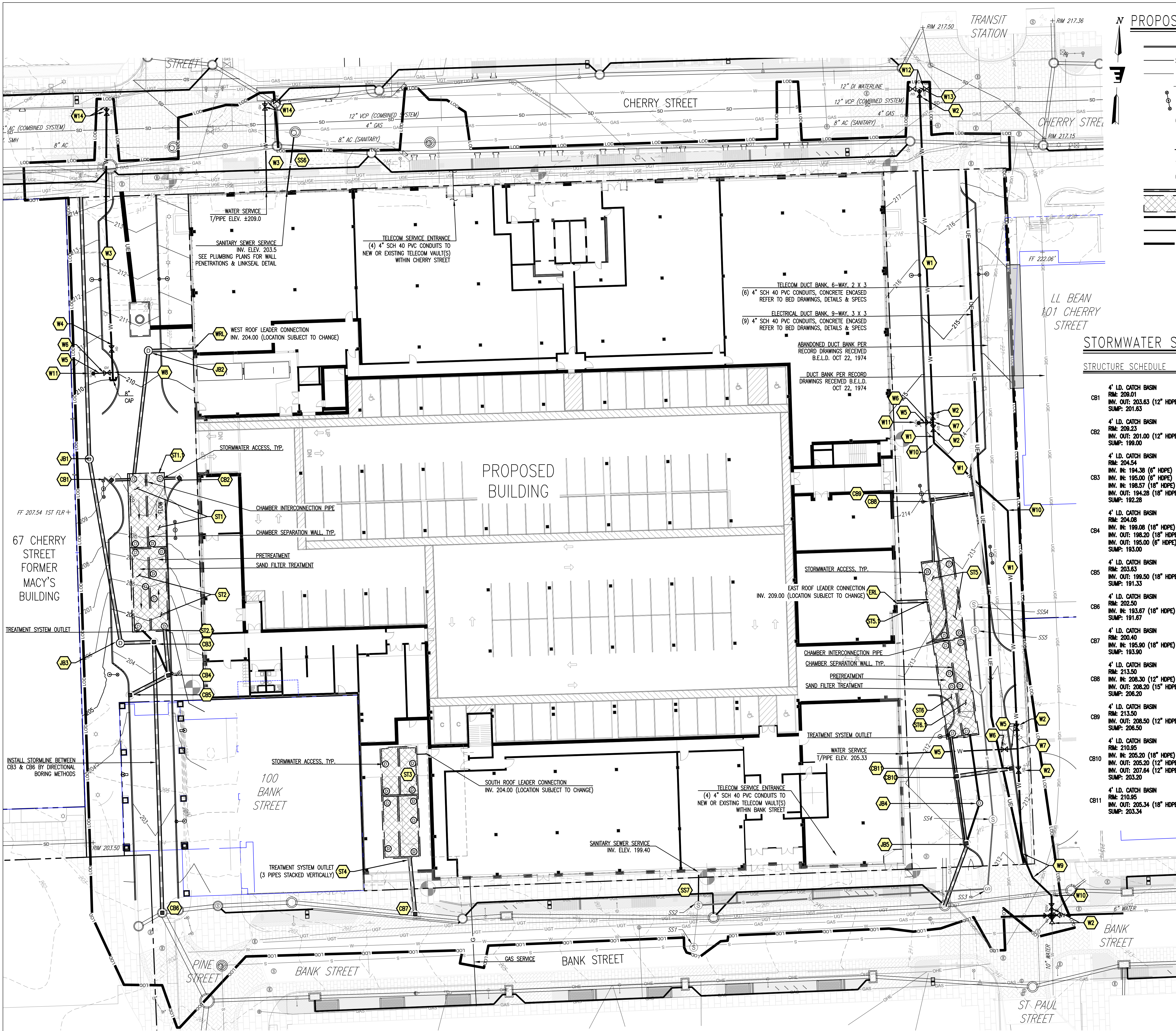
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ORIGINATION DATE:	SCALE:
10/15/20	As Indica
DRAWN BY:	CHECKED BY:
HKW	KW
ISSUE LOG: Zoning Submission	15 Oct

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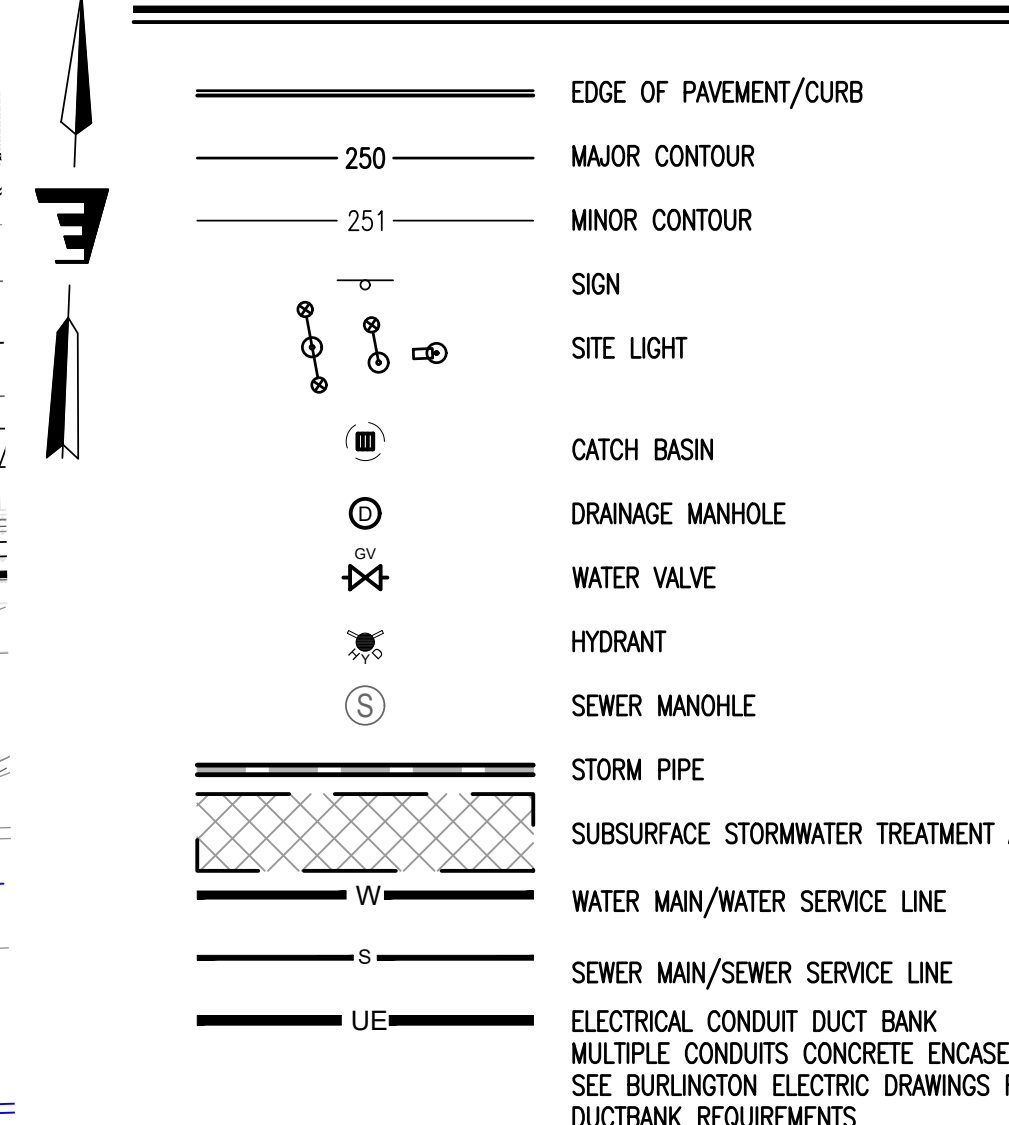
Grading Plan

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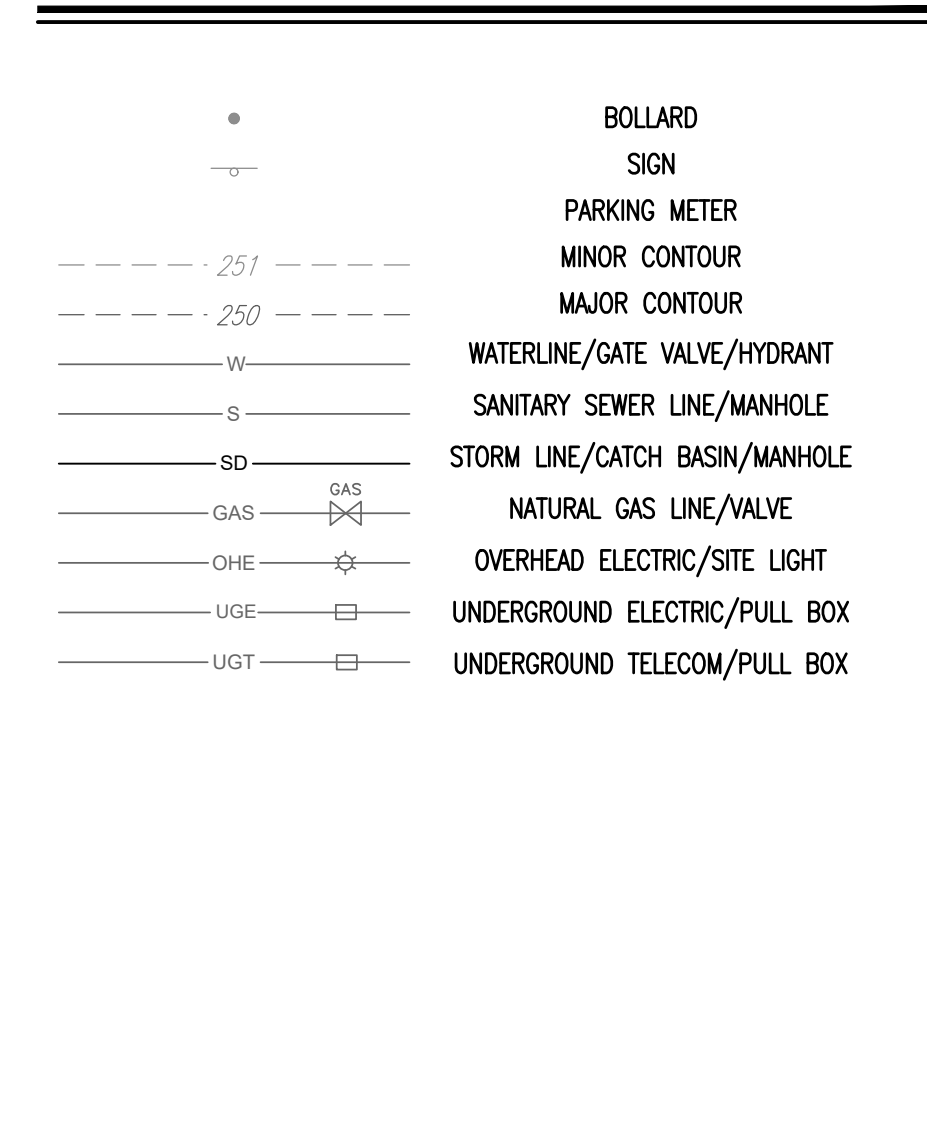
C-104



PROPOSED FEATURES LEGEND



EXISTING CONDITIONS LEGEND



STORMWATER SCHEDULE

STRUCTURE SCHEDULE				PIPE SCHEDULE			
CB1	4" I.D. CATCH BASIN RM: 209.01 INV. OUT: 203.63 (12" HDPE) SUMP: 201.63	4" I.D. MANHOLE RM: 209.54 INV. IN: 205.00 (18" HDPE) SUMP: 203.50	CB1-ST1	11'-LF	OF 12" HDPE	AT 1.00% SLOPE	
CB2	4" I.D. CATCH BASIN RM: 208.23 INV. OUT: 201.00 (12" HDPE) SUMP: 199.00	4" I.D. MANHOLE RM: 210.80 INV. IN: 203.70 (15" HDPE) SUMP: 202.18	CB2-ST1	11'-LF	OF 12" HDPE	AT 4.33% SLOPE	
CB3	4" I.D. CATCH BASIN RM: 204.54 INV. IN: 194.38 (6" HDPE) INV. IN: 195.00 (6" HDPE) INV. OUT: 194.28 (18" HDPE) SUMP: 192.28	4" I.D. MANHOLE RM: 204.50 INV. IN: 200.00 (18" HDPE) SUMP: 198.50	CB3-CB8	133'-LF	OF 18" HDPE	AT 0.46% SLOPE	
CB4	4" I.D. CATCH BASIN RM: 204.08 INV. OUT: 198.20 (18" HDPE) INV. OUT: 195.00 (6" HDPE) SUMP: 193.00	4" I.D. MANHOLE RM: 211.47 INV. IN: 201.08 (6" HDPE) INV. OUT: 201.19 (12" HDPE) SUMP: 199.58	CB4-CB3	18'-LF	OF 6" HDPE	AT 0.00% SLOPE	
CB5	4" I.D. CATCH BASIN RM: 203.63 INV. OUT: 199.50 (18" HDPE) SUMP: 191.33	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB4-ST2	22'-LF	OF 18" HDPE	AT 0.92% SLOPE	
CB6	4" I.D. CATCH BASIN RM: 202.50 INV. IN: 193.67 (18" HDPE) SUMP: 191.67	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB5-CB4	21'-LF	OF 18" HDPE	AT 1.99% SLOPE	
CB7	4" I.D. CATCH BASIN RM: 200.40 INV. IN: 195.90 (18" HDPE) SUMP: 193.90	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB8-CB7	27'-LF	OF 18" HDPE	AT 0.52% SLOPE	
CB8	4" I.D. CATCH BASIN RM: 213.50 INV. IN: 208.30 (12" HDPE) INV. OUT: 208.20 (15" HDPE) SUMP: 206.20	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB8-ST5	30'-LF	OF 15" HDPE	AT 11.62% SLOPE	
CB9	4" I.D. CATCH BASIN RM: 213.50 INV. OUT: 208.50 (12" HDPE) SUMP: 206.50	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB9-CB8	20'-LF	OF 12" HDPE	AT 1.00% SLOPE	
CB10	4" I.D. CATCH BASIN RM: 210.95 INV. IN: 205.20 (18" HDPE) INV. OUT: 205.20 (12" HDPE) SUMP: 203.20	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB10-JB5	33'-LF	OF 12" HDPE	AT 1.08% SLOPE	
CB11	4" I.D. CATCH BASIN RM: 210.95 INV. OUT: 205.34 (18" HDPE) SUMP: 203.34	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48	CB10-ST6	19'-LF	OF 12" HDPE	AT 1.07% SLOPE	
			ERL-ST5	15'-LF	OF 15" HDPE	AT 28.99% SLOPE	
			EX TO JB1	128'-LF	OF 18" HDPE	AT 1.56% SLOPE	
			JB1-JB3	91'-LF	OF 18" HDPE	AT 5.47% SLOPE	
			JB2-ST1	61'-LF	OF 15" HDPE	AT 0.50% SLOPE	
			JB3-CB3	16'-LF	OF 18" HDPE	AT 8.68% SLOPE	
			JB4-JB5	21'-LF	OF 12" HDPE	AT 1.00% SLOPE	
			JB5-EX	12'-LF	OF 18" HDPE	AT -0.40% SLOPE	
			ST2-SB3	7'-LF	OF 6" HDPE	AT 2.79% SLOPE	
			ST3-CB7	28'-LF	OF 18" HDPE	AT 2.16% SLOPE	
			ST6-JB4	33'-LF	OF 6" HDPE	AT 1.49% SLOPE	
			WRL-JB1	22'-LF	OF 15" HDPE	AT 1.39% SLOPE	
			ERL		EAST ROOF LEADER		
			ST1		ATTENUATION TANK		
			ST2		SAND FILTER		
			ST2.1		PRE-TREATMENT TANK		
			ST3		ATTENUATION TANK		
			ST4		SAND FILTER		
			ST5		ATTENUATION TANK		
			ST6		PRE-TREATMENT TANK		
			ST6.1		SAND FILTER		
			WRL		ROOF LEADER		

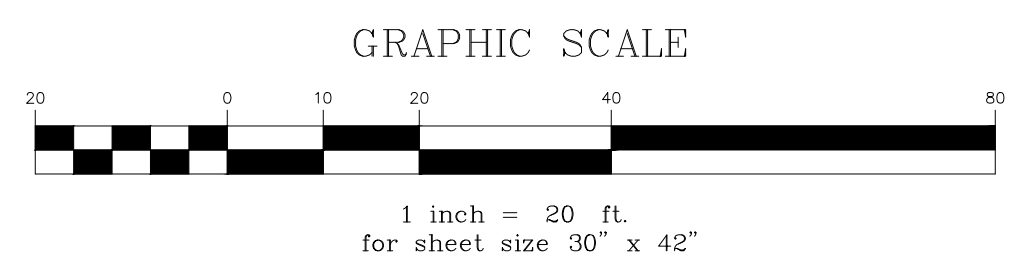
WATER SCHEDULE

REFER TO PROFILES ON SHEET C-207 & WATER DETAILS & NOTES ON SHEET C-301	
W1	10" C900 PVC PIPE WITH TRACER WIRE
W2	10" GATE VALVE
W3	8" C900 PVC PIPE WITH TRACER WIRE
W4	8" GATE VALVE
W5	6" C900 PVC PIPE WITH TRACER WIRE
W6	6" GATE VALVE
W7	10" X 10" X 6" TEE
W8	8" X 8" X 6" TEE
W9	22.5-DEG ELBOW
W10	45-DEG ELBOW
W11	HYDRANT
W12	12" GATE VALVE
W13	12" X 12" X 10" TEE
W14	12" X 8" TAPPING SLEEVE & 8" GATE VALVE

SEWER SCHEDULE

REFER TO PROFILES ON SHEET C-208 & SEWER DETAILS & NOTES ON SHEET C-302	
SS1	EX. 4" I.D. MANHOLE RM: 207.80 INV. IN: 198.17 (12 inch PVC) INV. IN: 198.36 (8" PVC) INV. OUT: 198.17 (12 inch PVC)
SS2	EX. 4" I.D. MANHOLE RM: 208.13 INV. IN: 198.85 (8" PVC) INV. IN: 198.85 (8" SDR35 PVC) INV. OUT: 198.70 (8" PVC)
SS3	EX. 4" I.D. MANHOLE RM: 211.27 INV. IN: 200.03 (8" PVC) INV. OUT: 199.87 (8" PVC)
SS4	EX. 4" I.D. MANHOLE (RAISE RIM) RM: 211.70 INV. IN: 200.31 (8" SDR35 PVC) INV. OUT: 200.18 (8" PVC)
SS5	EX. 4" I.D. MANHOLE (RAISE RIM) RM: 212.47 INV. IN: 201.38 (8" PVC) INV. OUT: 201.27 (8" SDR35 PVC)
SS6	EX. 4" I.D. MANHOLE (RAISE RIM) RM: 212.65 INV. IN: 201.51 (8" PVC) INV. IN: 201.69 (8" SDR35 PVC) INV. OUT: 201.51 (8" PVC)

- SS6 30'-LF OF 8" SDR35 PVC AT 3.51% SLOPE
- SS7 15'-LF OF 8" SDR35 PVC AT 3.71% SLOPE



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CITYPLACE BURLINGTON

ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTG MALL ASSOCIATES, LLC

BY A PROJECT BY
DEVONWOOD INVESTORS, LLC
DEAN BAKER, MANAGING DIRECTOR

PROJ. NO. C1947.00
CONTRACT NO. 14660

ORGANIZATION DATE: 10/15/20
SCALE: As Indicated

DRAWN BY: HKW
CHECKED BY: KW

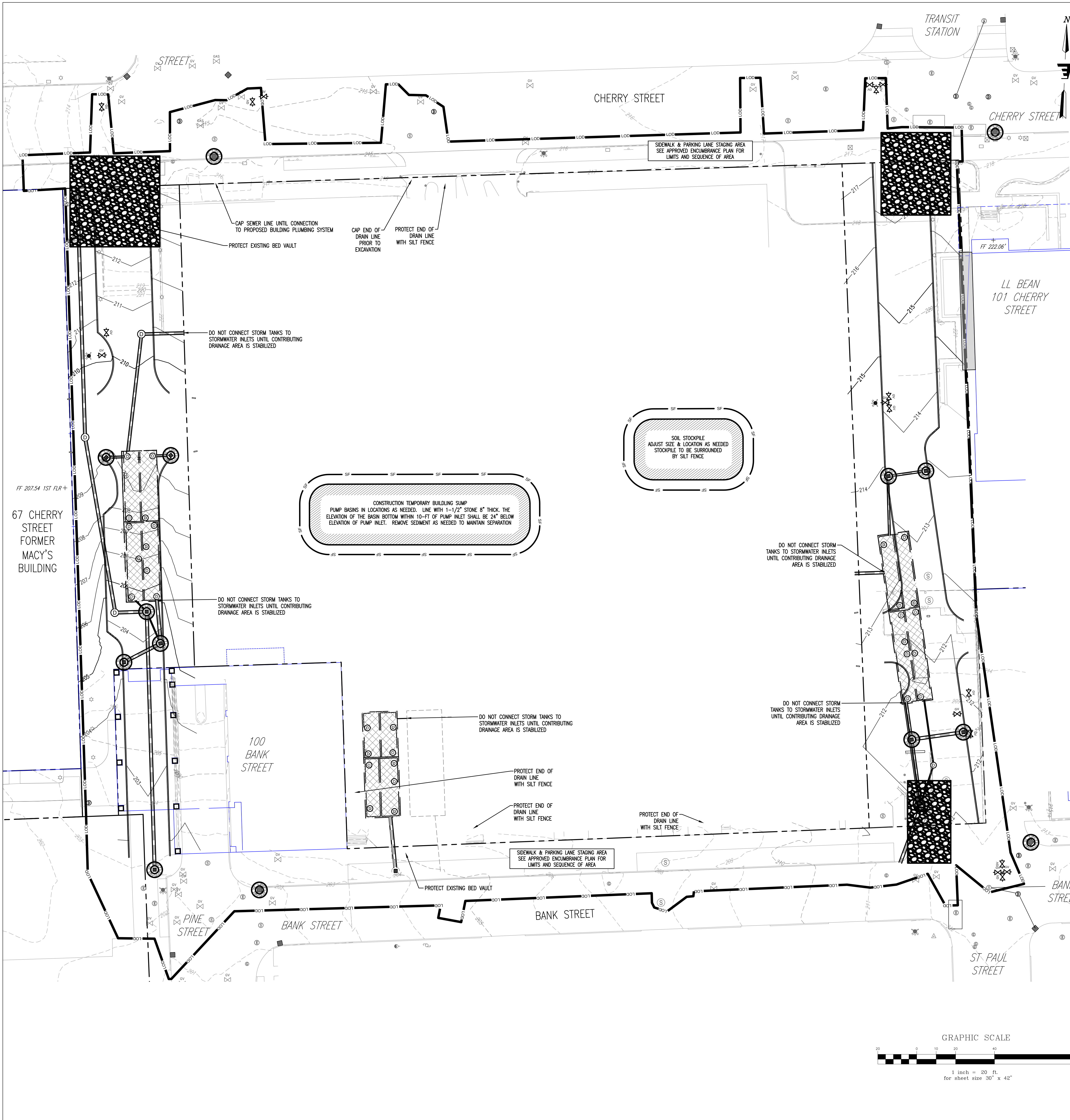
ISSUE LOG:
Zoning Submission 15 Oct 2020

SHEET CONTENTS:

Utility Plan

SHEET NO.
C-105

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PROPOSED FEATURES LEGEND

- EDGE OF PAVEMENT/CURB
- 250 MAJOR CONTOUR
- 251 MINOR CONTOUR
- CATCH BASIN
- DRAINAGE MANHOLE
- WATER VALVE
- HYDRANT
- SEWER MANHOLE
- STORM PIPE
- SUBSURFACE STORMWATER TREATMENT AREA

EXISTING CONDITIONS LEGEND

- BOLLARD
- SIGN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR

EROSION CONTROL LEGEND

THIS DRAWING SHOWS STORM DRAINAGE FEATURES TO REMAIN, TEMPORARY FEATURES, FEATURES TO BE DEMOLISHED, AND PROPOSED FEATURES TO COORDINATE EROSION PREVENTION AND SEDIMENT CONTROL FEATURES BETWEEN ALL PHASES OF CONSTRUCTION. COORDINATE EPSCS WITH DEMOLITION AND PROPOSED CONDITIONS DRAWINGS.

EROSION PREVENTION AND SEDIMENT CONTROL (EPSCS) STRATEGY
THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES. REFER TO DETAIL DRAWINGS FOR ADDITIONAL EPSCS INFORMATION AND REQUIREMENTS.

STABILIZED CONSTRUCTION ENTRANCE SEE DTL SHT C305
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

SILT FENCING SEE 1/C305
THIS STRUCTURAL MEASURE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC USED TO INTERCEPT SEDIMENT LOADED RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. IT IS INSTALLED ALONG THE PERIMETER OF IMPACTED AREAS AND ALONG THE BASE OF THE FILL SLOPES. ADDITIONALLY, WHEN DESIGNATED ALONG THE LIMITS OF DISTURBANCE, INSTALL CONSTRUCTION FENCE BEHIND THE SILT FENCE. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

TEMPORARY INLET PROTECTION SEE 2 AND 9/C305
THIS STRUCTURAL MEASURE IS A EITHER STONE SURROUNDING A CATCH BASIN INLET OR FILTER FABRIC SURROUNDING THE GATE OF A CATCH BASIN TO PREVENT SEDIMENT FROM ENTERING A STORM PIPE SYSTEM. INSTALL AS INDICATED ON PLANS. GENERALLY, FILTER INLET PROTECTION SHOULD BE USED IN PAVED AREAS AND STONE INLET PROTECTION SHOULD BE USED IN GRASSY AREAS. STONE TO BE REMOVED AND REPLACED WITH CLEAN STONE WHEN SEDIMENT IS $\leq 1/2$ DEPTH OF STONE. FABRIC TO BE CLEANED/REPLACED WHEN WATER SEEPAGE INTO CATCH BASIN IS INHIBITED BY SEDIMENT BUILDUP ON FABRIC. REMOVE ALL SEDIMENT IF COLLECTED IN STRUCTURE AS SOON AS POSSIBLE. INSTALL ON EXISTING INLETS PRIOR TO REMOVAL AND PROPOSED INLETS AFTER INSTALLATION.

APPROXIMATE SOIL STOCKPILE AREAS
THESE ARE APPROVED LOCATIONS WHERE SOIL MATERIALS MAY BE STORED. THESE STOCKPILES WILL BE PROTECTED FROM EROSION BY A NUMBER OF METHODS, INCLUDING INSTALLING SILT FENCING AROUND THE DOWN GRADIENT PERIMETER OF THE STOCKPILE AND SEEDING AND MULCHING THE STOCKPILE WHEN NOT IN USE FOR MORE THAN FIVE DAYS. CONTRACTOR SHALL SUBMIT PROPOSED AREA FOR ENGINEER APPROVAL.

APPROXIMATE STAGING AND WASTE AREAS
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.

LIMITS OF DISTURBANCE
THE CONTRACTOR SHALL CONTAIN ANY EARTH MOVING ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THIS PLAN. CONFIRM LOCATION, EXTENTS AND GATES WITH OWNER. FENCE LOCATION AND GATES TO BE RE-ADJUSTED AS NECESSARY BASED ON CM REQUIREMENTS AND COORDINATION.

EROSION CONTROL NOTES

HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION, WITH THE CONTRACTOR, OWNER, ENGINEER, AND CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL EROSION CONTROL MEASURES DELINEATED ON THE PLANS AND ANY ADDITIONAL MEASURES THAT ARE NECESSARY TO MINIMIZE EROSION. THE CONTRACTOR SHALL HAVE EROSION CONTROL MATERIALS AND INSTALLATION EQUIPMENT ON SITE AT ALL TIMES.

GENERAL NOTES

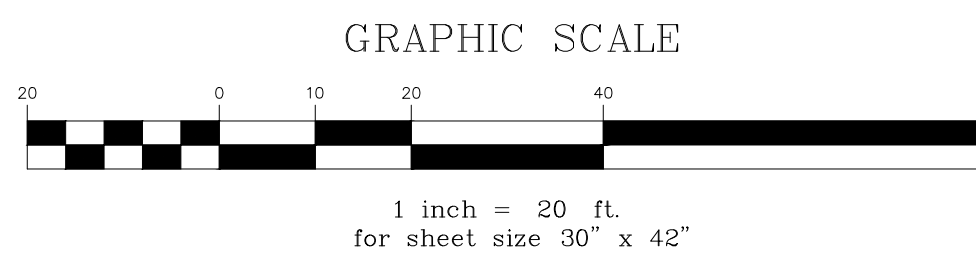
- THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE PRESENT ON-SITE FROM DAY-TO-DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ON-SITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
- EROSION CONTROL MEASURES SHALL BE CONDUCTED IN ACCORDANCE WITH THE "VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL", DATED 2006.
- THE CONTRACTOR SHALL INSPECT DAILY ALL SURROUNDING ROADS FOR SOIL OR DEBRIS. AT THE END OF THE DAY ALL SOIL AND DEBRIS SHALL BE SWEEP FROM THE STREET. DURING TRUCK HAULING OPERATIONS, CONTINUOUS SWEEPING OF THE STREETS SHALL BE PERFORMED.

TEMPORARY/CONSTRUCTION EROSION CONTROL MEASURES

- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE ENGINEER.
- DUST SHALL BE CONTROLLED WITH WATER DISTRIBUTED BY A TRUCK-MOUNTED SPRAY BAR. CALCIUM CHLORIDE (ASHTO M 144) OR SODIUM CHLORIDE (ASHTO M 143) SHALL BE USED AS DIRECTED BY THE ENGINEER.
- STOCKPILED MATERIAL (TOPSOIL, BORROW, ETC.) SHALL HAVE SILT FENCE CONSTRUCTED AROUND THE PERIMETER. THE STOCKPILED MATERIAL SHALL BE SEEDING AND MULCHED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION AND SEDIMENTATION OFF SITE. LOCATE STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, IF POSSIBLE. DURING WINDY CONDITIONS, STOCKPILED MATERIAL SHALL BE COVERED OR WATERED APPROPRIATELY TO PREVENT WIND EROSION.
- SLOPES GREATER THAN 3:1 SHALL BE COVERED WITH AN 8" THICK BLANKET OF CRUSHED STONE.
- COVER DISTURBED AREAS WITH A 8" THICK BLANKET OF CRUSHED STONE WITHIN 14 DAYS.

PERMANENT EROSION CONTROL MEASURES

- WHEN FINAL GRADES ARE REACHED IN AN AREA, IT SHALL BE COVERED WITH CRUSHED STONE FILL WITHIN 48 HOURS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL DISTURBED AREAS, INCLUDING WATERING UNTIL THE AREA IS INSPECTED AND ACCEPTED BY THE OWNER OR ENGINEER.
- AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PAVEMENT ON THE DISTURBED AREAS.



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ZONING SUBMISSION - NOT FOR CONSTRUCTION

BTO MALL ASSOCIATES, LLC
OWNER

DEVONWOOD INVESTORS, LLC
A PROJECT BY
DEVELOPER

PROJECT NO: **A1947.00** CONSULTANT PROJECT NO: **14660**

ORIGIN DATE: **10/15/20** SCALE: **As Indicated**

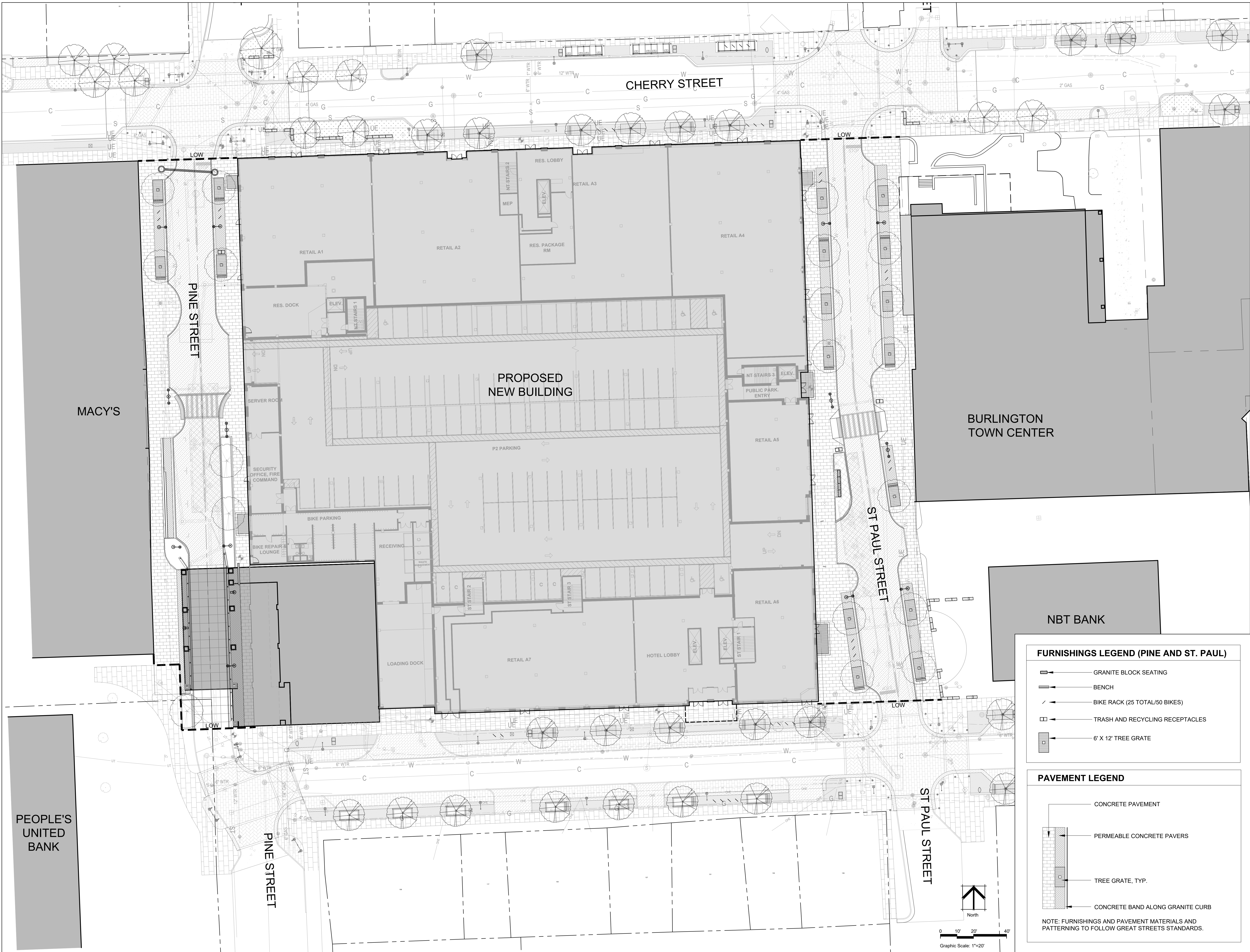
DRAWN BY: **HWK** CHECKED BY: **KW**

ISSUE LOG:
Zoning Submission 15 Oct 2020

SHEET CONTENTS:
Erosion Prevention & Sediment Control Plan

SHEET NO: **C-106**

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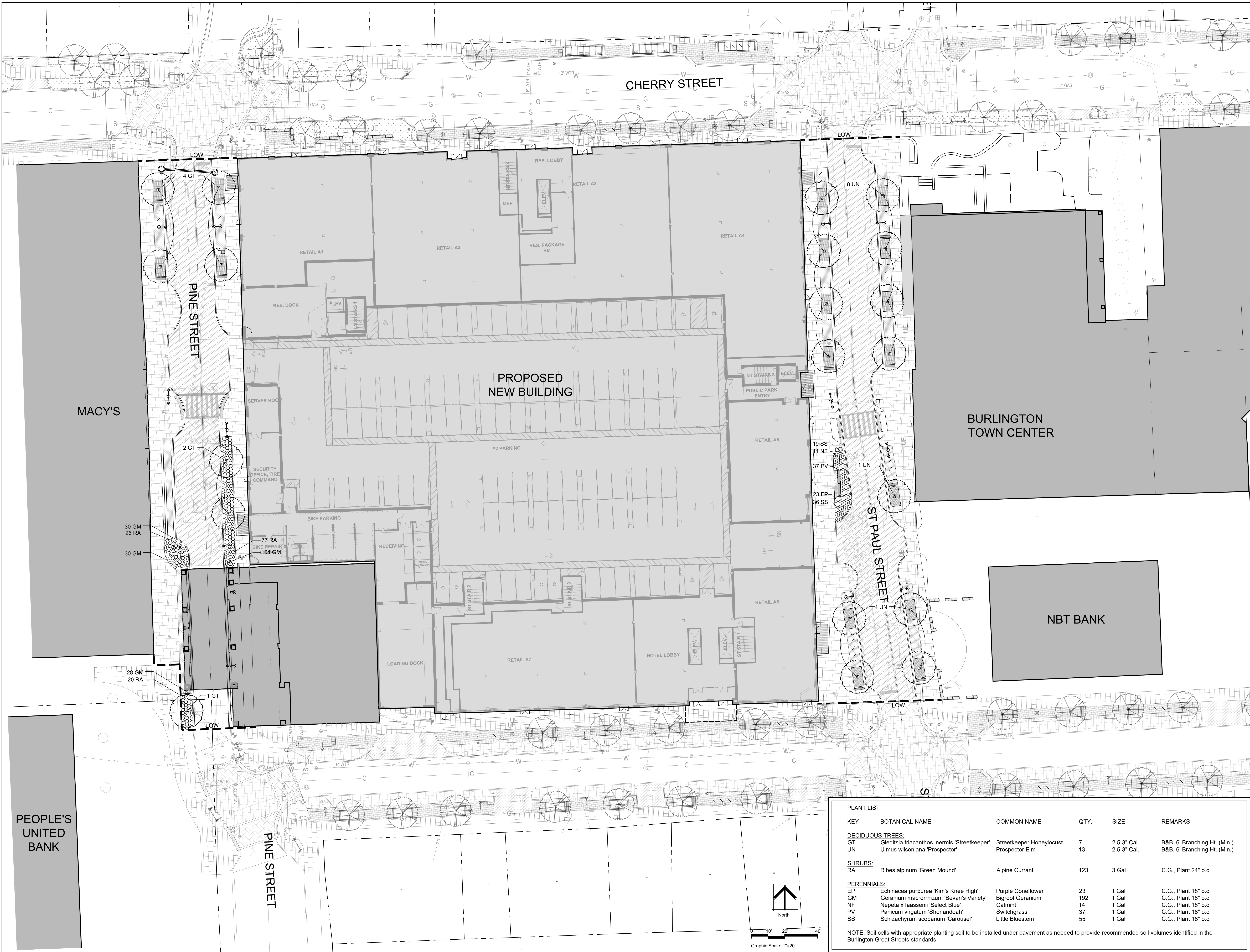
FURNISHINGS LEGEND (PINE AND ST. PAUL)

- GRANITE BLOCK SEATING
- BENCH
- BIKE RACK (25 TOTAL/50 BIKES)
- TRASH AND RECYCLING RECEPTACLES
- 6' X 12' TREE GRATE

PAVEMENT LEGEND

- CONCRETE PAVEMENT
- PERMEABLE CONCRETE PAVERS
- TREE GRATE, TYP.
- CONCRETE BAND ALONG GRANITE CURB

NOTE: FURNISHINGS AND PAVEMENT MATERIALS AND PATTERNING TO FOLLOW GREAT STREETS STANDARDS.



PLANT LIST					
KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
DECIDUOUS TREES:					
GT	Gleditsia triacanthos inermis 'Streetkeeper'	Streetkeeper Honeylocust	7	2.5-3" Cal.	B&B, 6' Branching Ht. (Min.)
UN	Ulmus wilsoniana 'Prospector'	Prospector Elm	13	2.5-3" Cal.	B&B, 6' Branching Ht. (Min.)
SHRUBS:					
RA	Ribes alpinum 'Green Mound'	Alpine Currant	123	3 Gal	C.G., Plant 24" o.c.
PERENNIALS:					
EP	Echinacea purpurea 'Kim's Knee High'	Purple Coneflower	23	1 Gal	C.G., Plant 18" o.c.
GM	Geranium macrorrhizum 'Bevan's Variety'	Bigroot Geranium	192	1 Gal	C.G., Plant 18" o.c.
NF	Nepeta x faassenii 'Select Blue'	Catmint	14	1 Gal	C.G., Plant 18" o.c.
PV	Panicum virgatum 'Shenandoah'	Switchgrass	37	1 Gal	C.G., Plant 18" o.c.
SS	Schizachyrum scoparium 'Carousel'	Little Bluestem	55	1 Gal	C.G., Plant 18" o.c.

NOTE: Soil cells with appropriate planting soil to be installed under pavement as needed to provide recommended soil volumes identified in the Burlington Great Streets standards.

10/15/2020 2:13:14 PM



FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
- PLANS ARE TO BE VIEWED IN CONJUNCTION WITH CIVIL, LANDSCAPE, STRUCTURAL, MEP/FP AND ALL OTHER TRADES, AS APPROPRIATE. DISCREPANCIES ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE COMMENCING WORK.
- ALL NON-ARCHITECTURAL INFORMATION SHOWN HERE IS FOR REFERENCE ONLY.
- REFER TO CIVIL PLANS FOR LIMIT OF WORK.

FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- PARKING
- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- RETAIL

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RETAIL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- OFFICE/ CO-WORKING
- COMMUNITY SPACE
- MEETING, MTG SUPPORT

THIS LEVEL (P1): 214 STRIPPED
TOTAL: 422 STRIPPED



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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

FFI PROJECT NO:

A1947.00

ORIGINATOR DATE:

10/15/2020

SCALE:

1/16" = 1'-0"

DRAWN BY:

JDR

CHECKED BY:

JDR/JB

ISSUE LOG:

Zoning Submission

15 Oct 2020

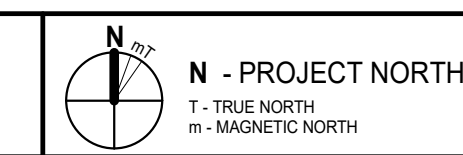
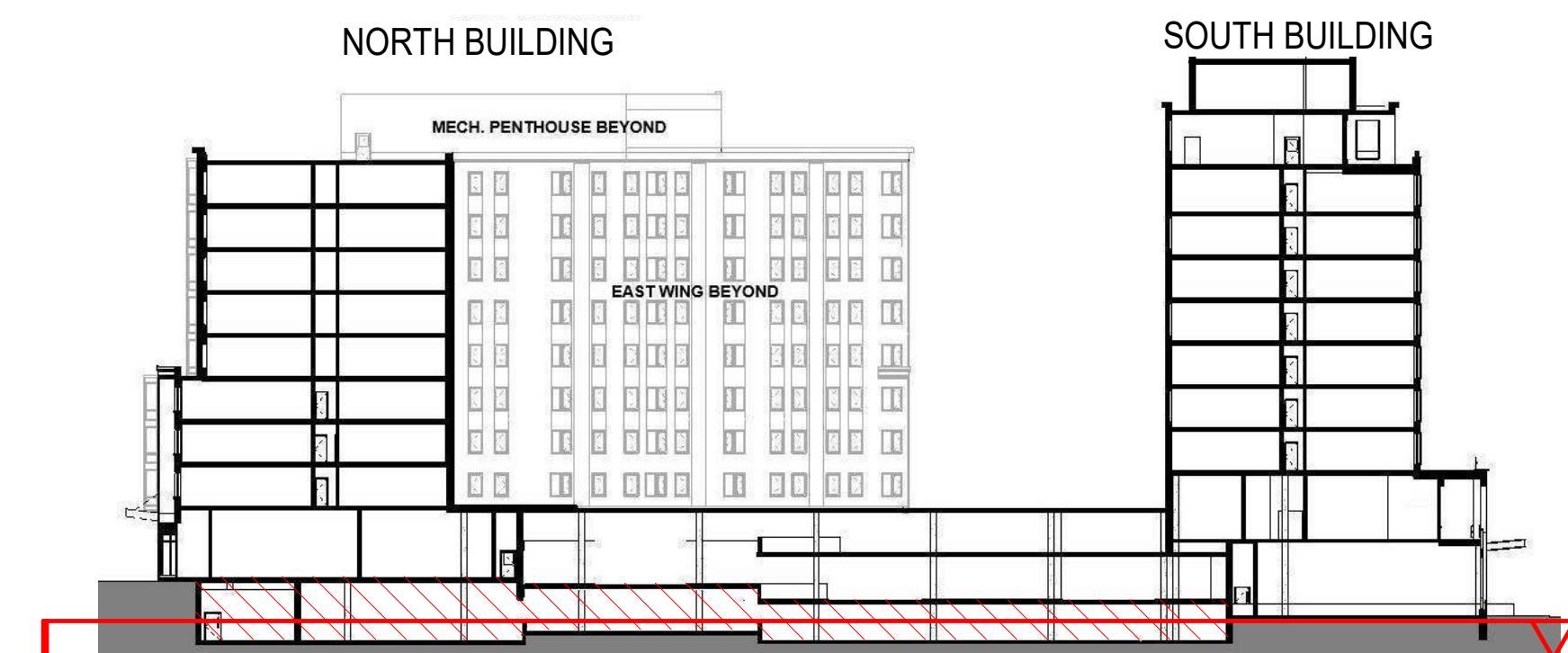
SHEET CONTENTS:

**OVERALL PLAN-
BASEMENT AND
P1 PARKING**

SHEET NO:

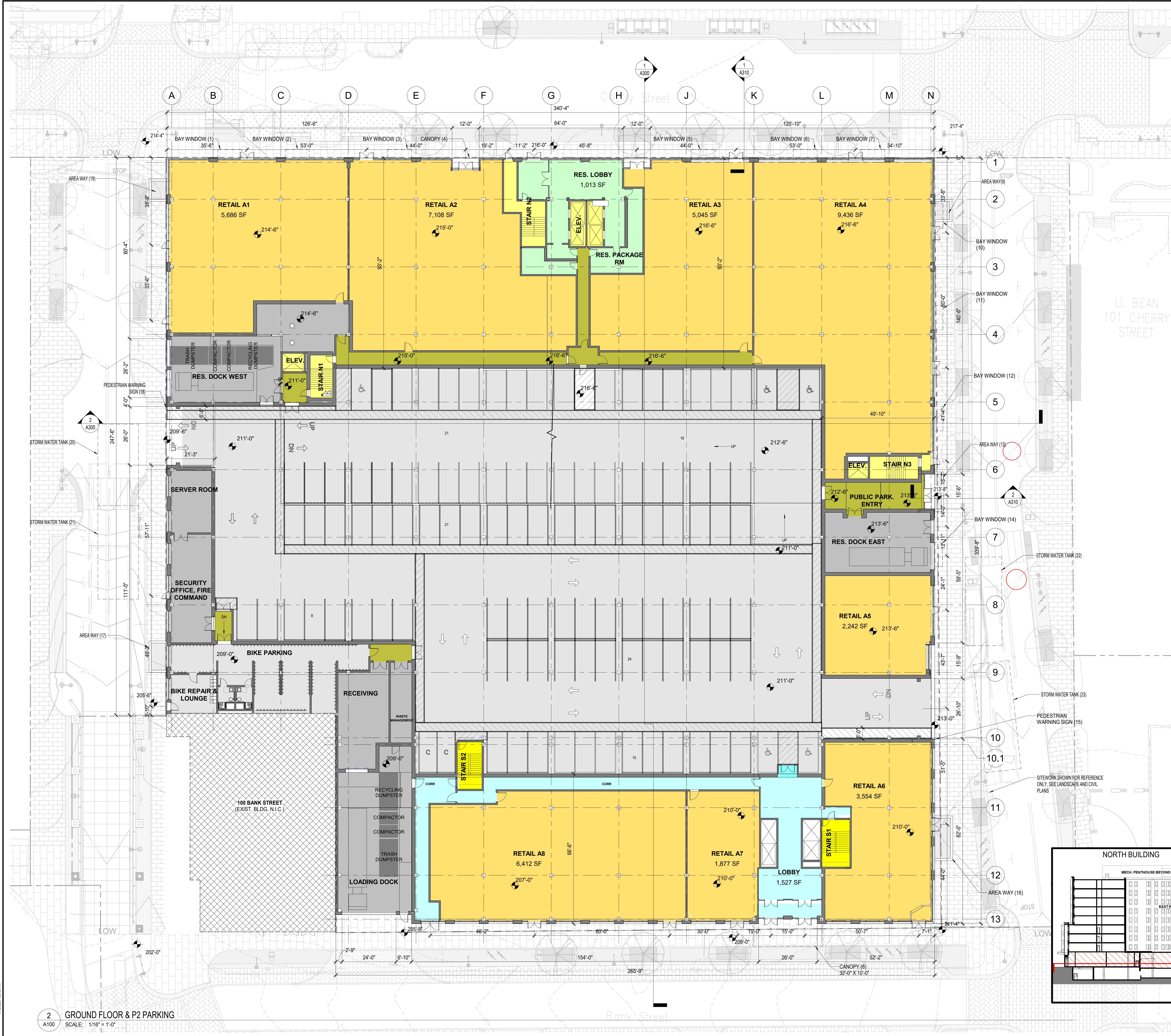
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GRAPHIC SCALE

0 8' 16' 32'



FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

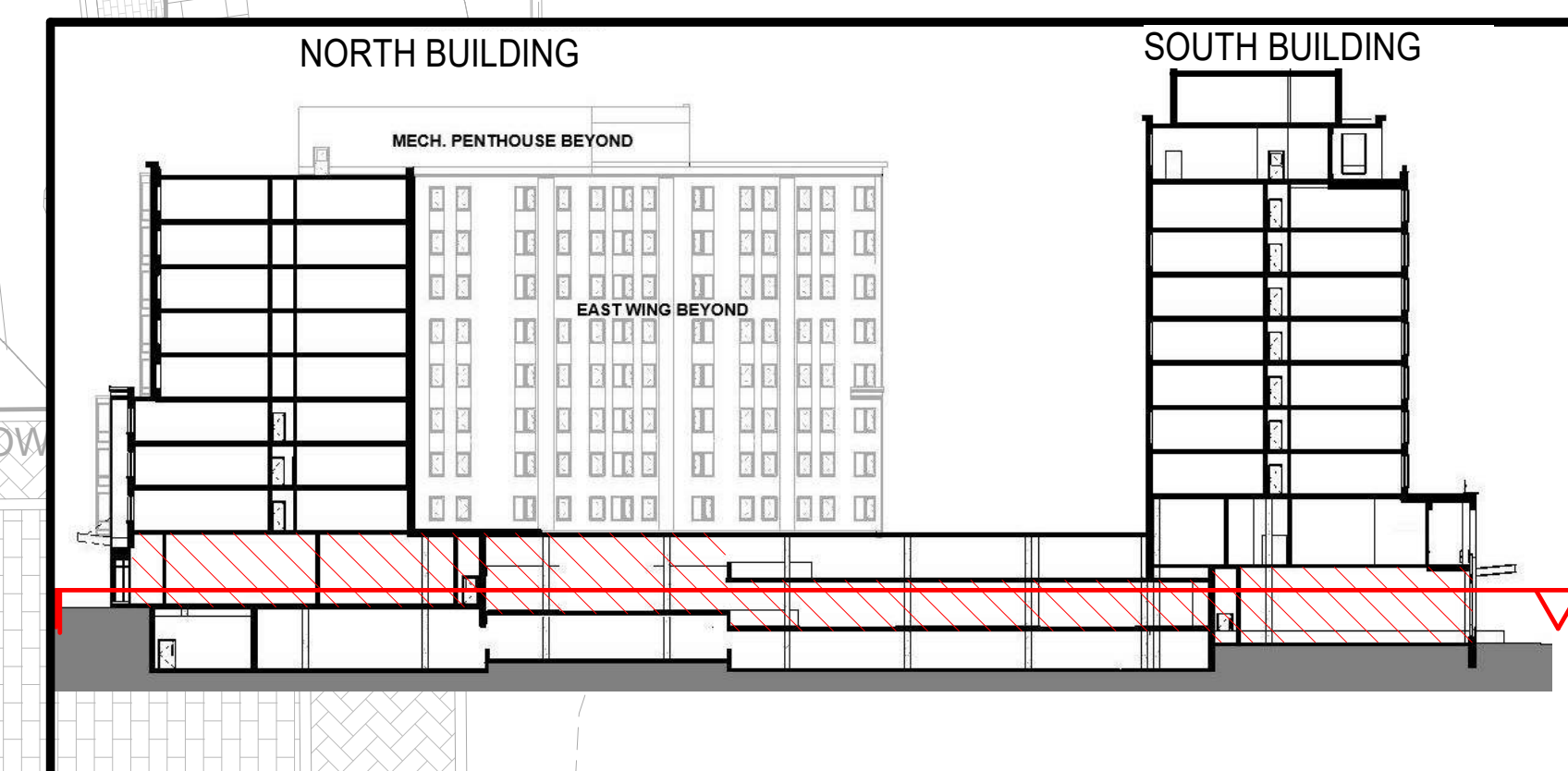
OCCUPANCY & USE LEGEND

- PARKING
 - MEP/BUILDING SUPPORT
 - RESIDENTIAL - STORAGE
 - RES. LOBBY & AMENITY
 - RETAIL
- NORTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - RETAIL
- SOUTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - OFFICE/CO-WORKING
 - COMMUNITY SPACE
 - MEETING, MTS SUPPORT

THIS LEVEL (P2): 109 STRIPPED
TOTAL: 422 STRIPPED

ENCUMBRANCES SCHEDULE					
#	TYPE	LOCATION	DIMENSIONS (LxW)	HT ABOVE SIDEWALK	NOTES
1	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	19'-6"	
2	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	19'-2"	
3	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	18'-10"	
4	CANOPY	CHERRY ST		14'	
5	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	17'-5"	
6	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	16'-8"	
7	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	16'-0"	
8	CANOPY	BANK ST	32' X 10'	15'-7"	
9	AREAWAY	ST PAUL ST	10'-0" X 7'-7"	-	
10	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	16'-4"	
11	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	17'-5"	
12	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	19'-0"	
13	AREAWAY	ST PAUL ST	17'-5" X 4'-0"	-	
14	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	30'-10"	
15	WARNING SIGN	ST PAUL ST	N/A	N/A	within property line
16	AREAWAY	ST PAUL ST	20'-0" X 8'-0"	-	
17	AREAWAY	PINE ST	14' X 7'-8"	-	
18	WARNING SIGN	PINE ST	1'-6" X 1'-4"	8'-0"	
19	AREAWAY	PINE ST	10'-0" X 7'-8"	-	
20	STORM WATER TANK	PINE ST	36' X 18'	-	below road & furnishings zone
21	STORM WATER TANK	PINE ST	41' X 18'	-	below road
22	STORM WATER TANK	ST PAUL ST	39' X 16'	-	below road & furnishings zone
23	STORM WATER TANK	ST PAUL ST	48' X 16'	-	below road

NOTE: "WIDTH" IN ENCUMBRANCE DIMENSIONS ABOVE FOR ITEMS 1-19 INDICATES PROJECTION FROM THE PRIMARY BUILDING FACE. IN ALL CASES, THE R.O.W. ENCUMBRANCE WILL BE LESS THAN THIS DIMENSION. ON PINE AND CHERRY STREETS, THE PRIMARY FACE IS 4' FROM THE PROPERTY LINE. ON BANK AND ST PAUL STREETS THE PROPERTY LINES ARE NOT PARALLEL TO THE BUILDING AND THE PRIMARY FACE WILL BE BETWEEN 4' AND 42' FROM THE PROPERTY LINE.



2 GROUND FLOOR & P2 PARKING
A100 SCALE: 1/16" = 1'-0"

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CITYPLACE

BURLINGTON

ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER

BTC MALL ASSOCIATES, LLC

A PROJECT BY

DEVONWOOD INVESTORS, LLC

DON SANEZ, MANAGING DIRECTOR

PROJECT NO.

A1947.00

CONSULTANT PROJ. #

ORIGINATOR DATE:

10/15/2020

SCALE:

1/16" = 1'-0"

DRAWN BY:

JDR

CHECKED BY:

JDR/JB

SHEET NO.

15 Oct 2020

Rev. 2

15 Jan 2023

SHEET CONTENTS

OVERALL PLAN-GROUND FLOOR AND P2 PARKING

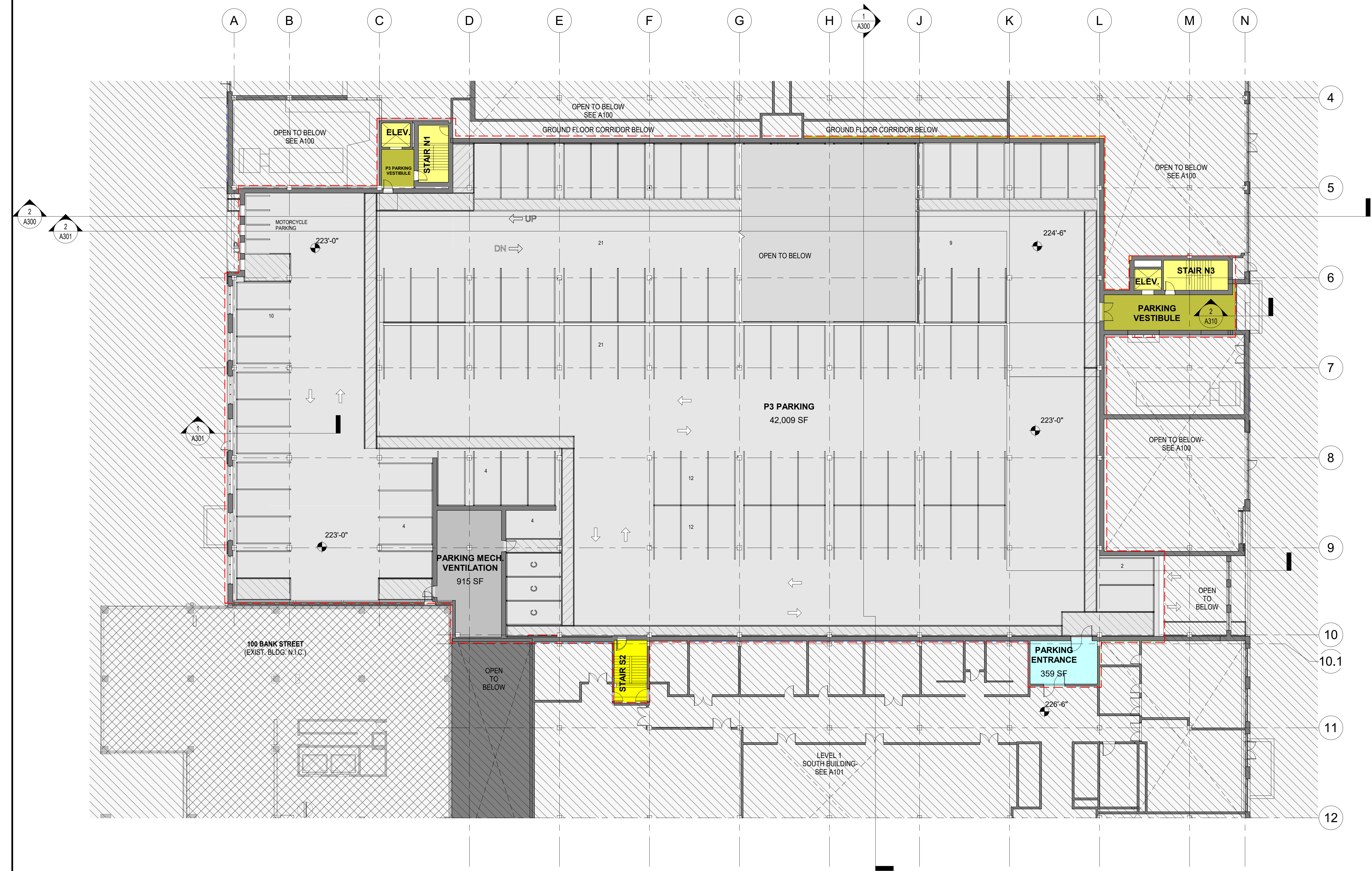
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A100

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2
A100.5
LEVEL P3
SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
- PLANS ARE TO BE VIEWED IN CONJUNCTION WITH CIVIL, LANDSCAPE, STRUCTURAL, MEP/FP AND ALL OTHER TRADES, AS APPROPRIATE. DISCREPANCIES ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE COMMENCING WORK.
- ALL NON-ARCHITECTURAL INFORMATION SHOWN HERE IS FOR REFERENCE ONLY.
- REFER TO CIVIL PLANS FOR LIMIT OF WORK.

FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- PARKING
- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- RETAIL

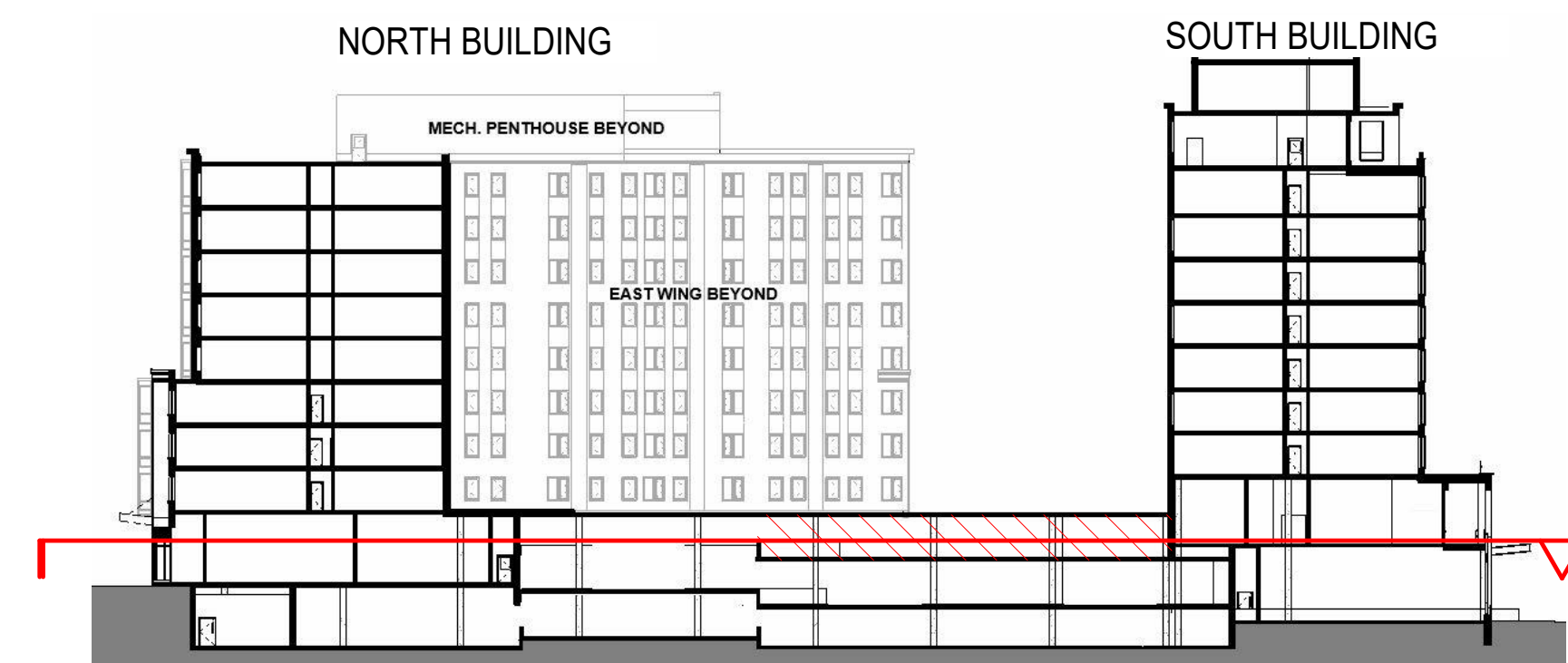
NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RETAIL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- OFFICE / CO-WORKING
- COMMUNITY SPACE
- MEETING, MTS SUPPORT

THIS LEVEL (P3): 199 STRIPPED
TOTAL: 422 STRIPPED



N
N - PROJECT NORTH
N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SAEZ, MANAGING DIRECTOR

FFI PROJECT NO:
A1947.00
CONSULTANT PROJ. #
ORIGINATION DATE:
10/15/2020
SCALE:
1/16" = 1'-0"
DRAWN BY:
JDR
CHECKED BY:
JDR/JB
ISSUE LOG:
Zoning Submission 15 Oct 2020

SHEET CONTENTS:
**OVERALL PLAN-
GROUND FLOOR
MEZZANINES AND
P3 PARKING**

SHEET TAG:
A100.5
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1 LEVEL 1
A101 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

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- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF G/WB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- PARKING
- MEP/BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY

NORTH BUILDING

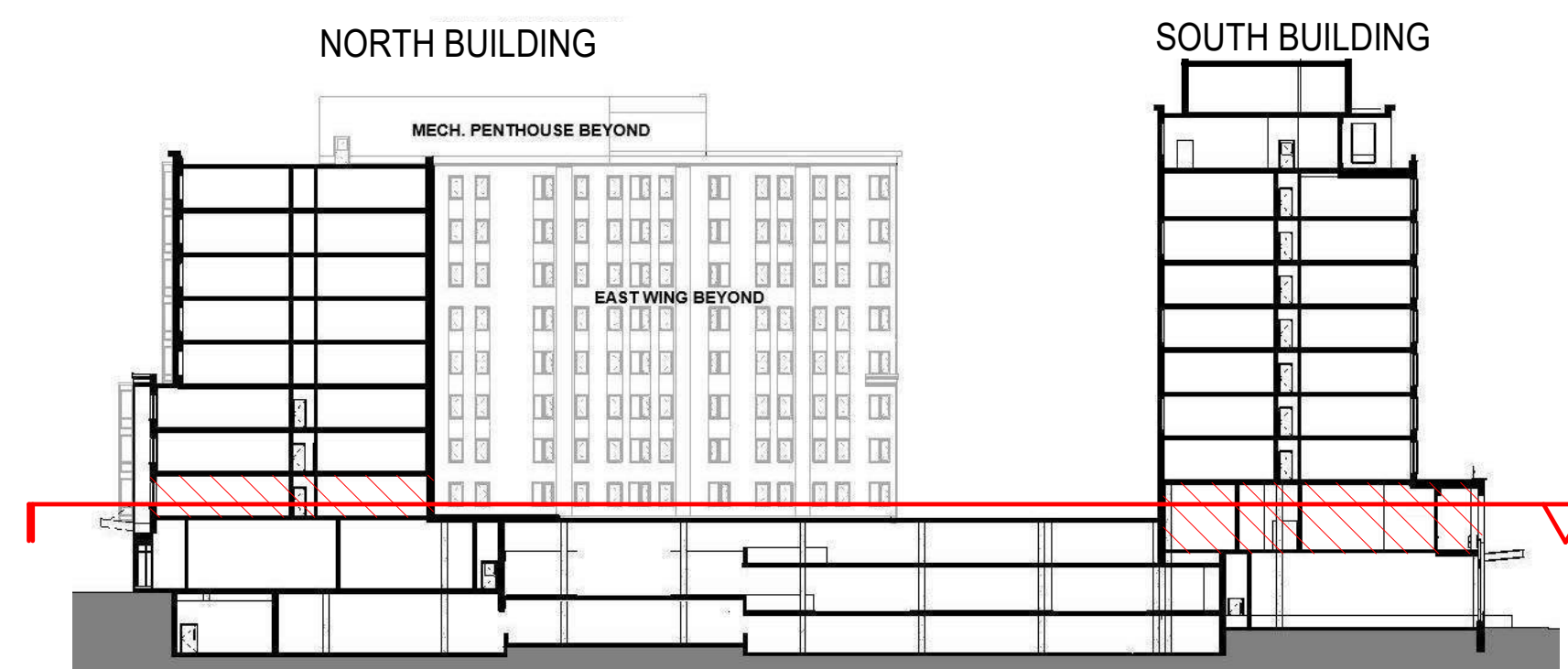
- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- OFFICE/CO-WORKING
- COMMUNITY SPACE
- MEETING, MTS SUPPORT

RESIDENTIAL UNITS

NORTH BUILDING 1 WEST:
3 Studios, 4 Jr. 1BR, 4 1BR, 5 Jr. 2BR, 2 2BR: 18 Units
NORTH BUILDING 1 EAST:
2 Studios, 7 Jr. 1BR, 6 1BR, 3 Jr. 2BR, 1 2BR: 19 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms,
5 Two BR, 1 Three BR (Total 10 Units)



N - PROJECT NORTH
True North
MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

PROJECT NO:
A1947.00
CONSULTANT PROJ. NO:
ORIGINATOR DATE:
10/15/2020
SCALE:
1/16" = 1'-0"
DRAWN BY:
JR/NE/CL
CHECKED BY:
JR
DATE LOG:
Zoning Submission 15 Oct 2020
Submission Clarifications 9 Nov 2020

SHEET CONTENTS
OVERALL PLAN - FIRST FLOOR

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A101
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2 LEVEL 2
A102 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY

NORTH BUILDING

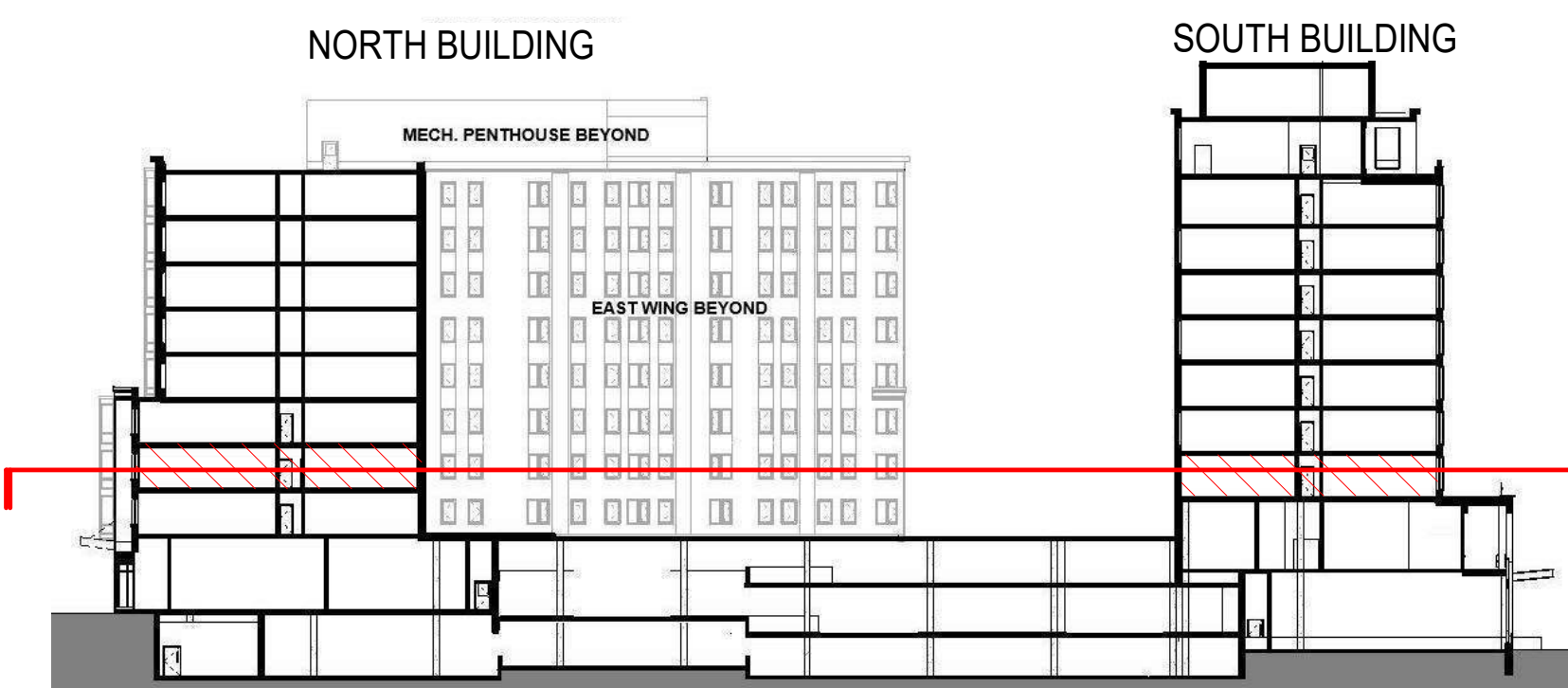
- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 2 & 3 WEST, each:
6 Studios, 4 Jr. 1BR, 7 1BR, 5 Jr. 2BR, 2 2BR: 24 Units
NORTH BUILDING 2 & 3 EAST, each:
3 Studios, 7 Jr. 1BR, 9 1BR, 3 Jr. 2BR, 1 2BR: 23 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units)



N - PROJECT NORTH
True North
Magnetic North

GRAPHIC SCALE
0 8' 16' 32'

CITYPLACE
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OWNER
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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

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SHEET CONTENTS
OVERALL PLAN-
LEVEL 2

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A102
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FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 2 & 3 WEST, each:
6 Studios, 4 Jr. 1BR, 7 1BR, 5 Jr. 2BR, 2 2BR: 24 Units
NORTH BUILDING 2 & 3 EAST, each:
3 Studios, 7 Jr. 1BR, 9 1BR, 3 Jr. 2BR, 1 2BR: 23 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs, 1 3BRs (Total 10 Units)



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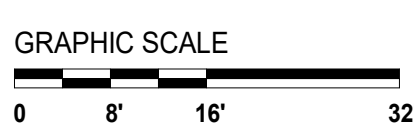
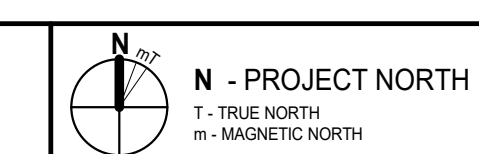
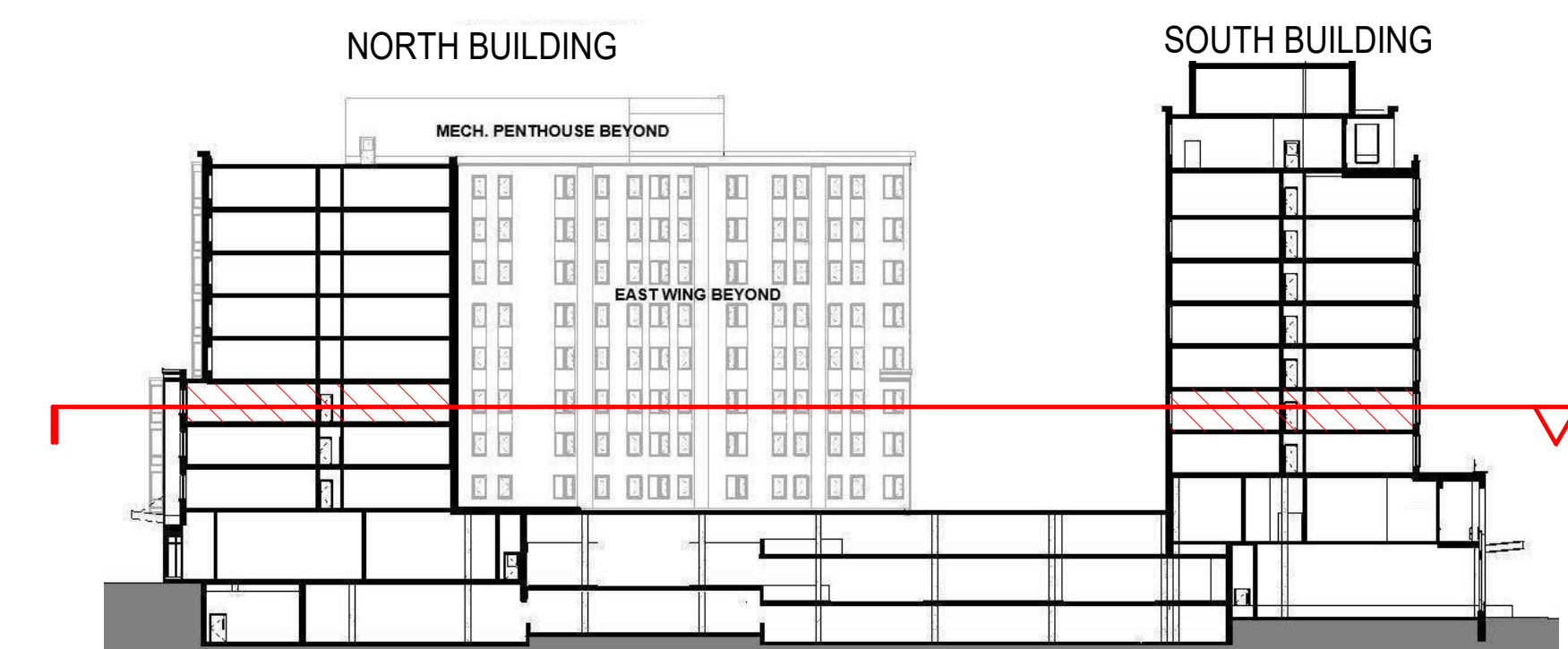
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DONA SENEZ, MANAGING DIRECTOR

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SHEET NO:
A103
OVERALL PLAN-
LEVEL 3

A103



2 LEVEL 3
SCALE: 1/16" = 1'-0"

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FLOOR PLAN GENERAL NOTES

- ALSO SEE SYMBOL LEGEND ON COVER SHEET.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr. 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



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DEAN SENE, MANAGING DIRECTOR

FFI PROJECT NO:

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CONSULTANT PROJ. #

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OVERALL PLAN-
LEVEL 4

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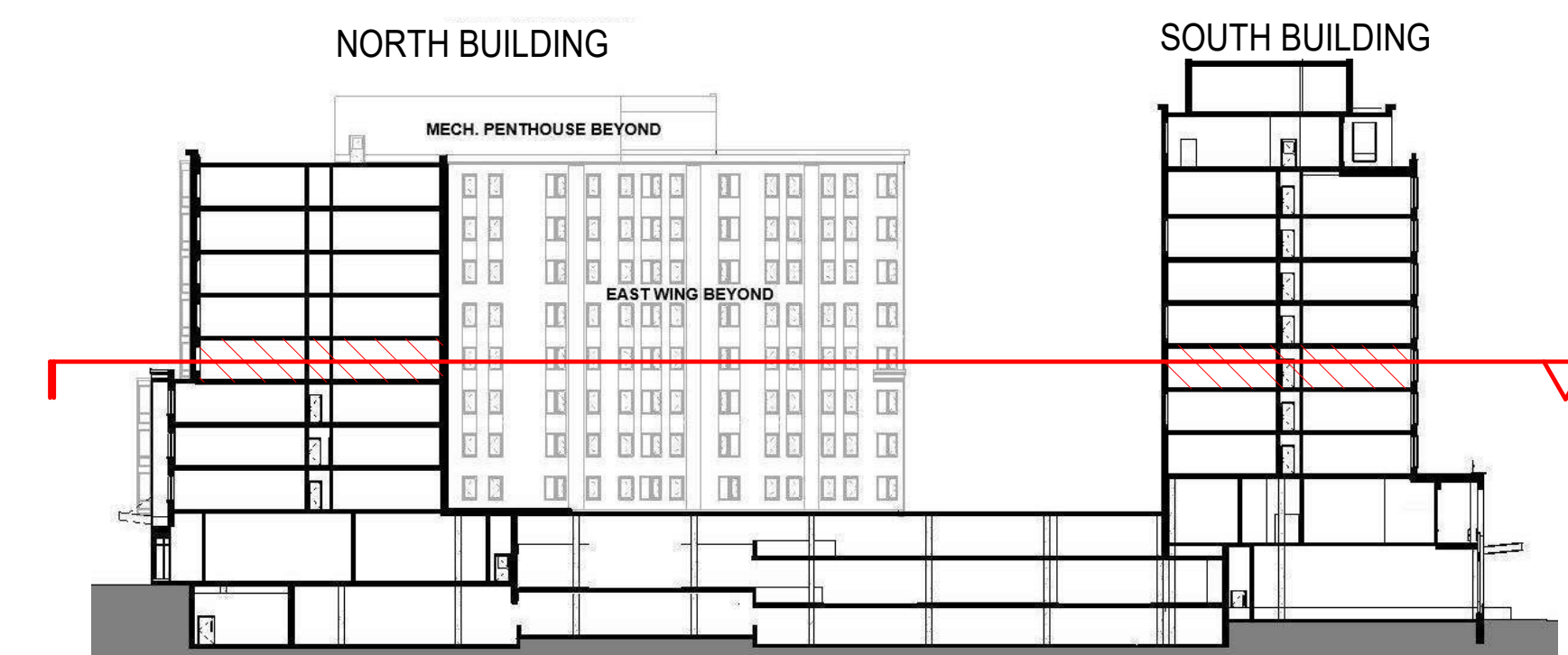
A104

N - PROJECT NORTH
N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE

0 8' 16' 32'

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2 LEVEL 4
A104 SCALE: 1/16" = 1'-0"

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10/15/2020 11:14 AM

2 LEVEL 5
A105 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

- ALSO SEE SYMBOL LEGEND ON COVER SHEET.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

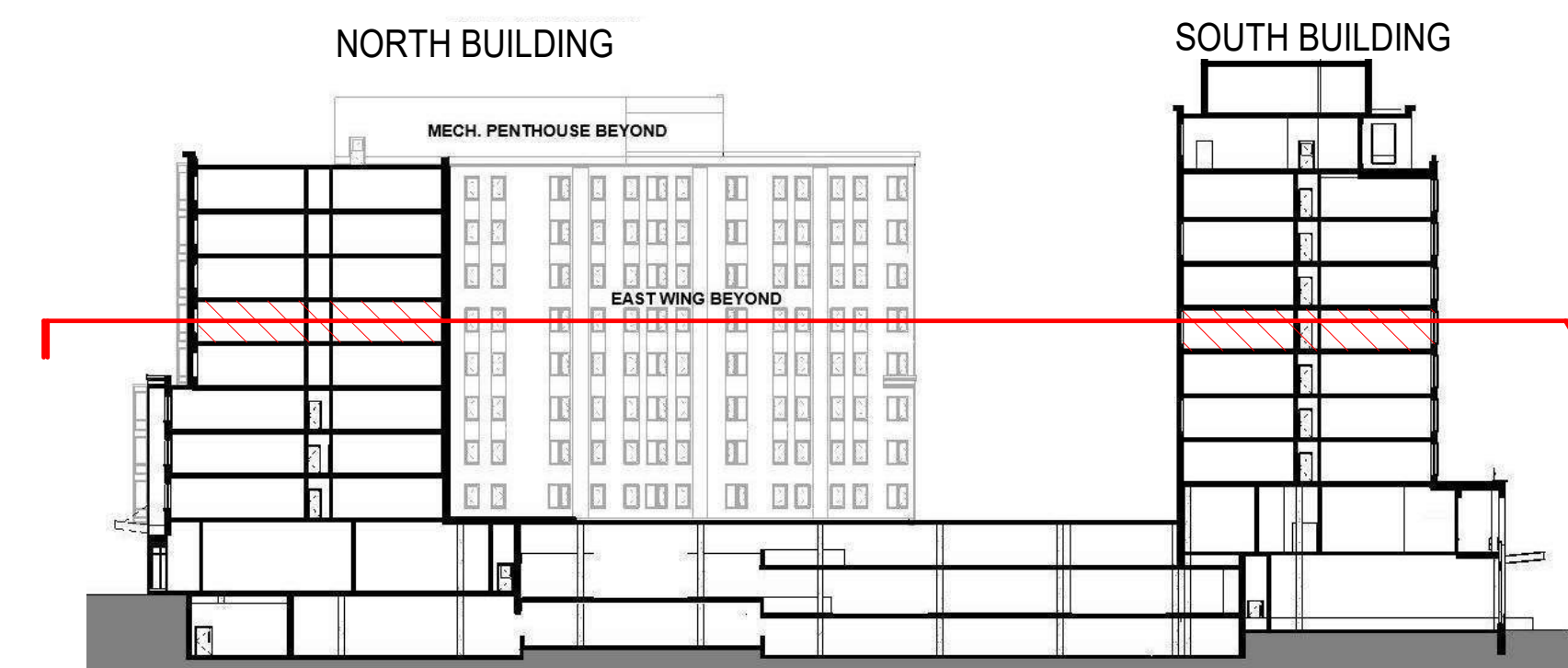
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- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr 2BR, 1 2BR, 22 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



CITYPLACE
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OWNER
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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEI, MANAGING DIRECTOR

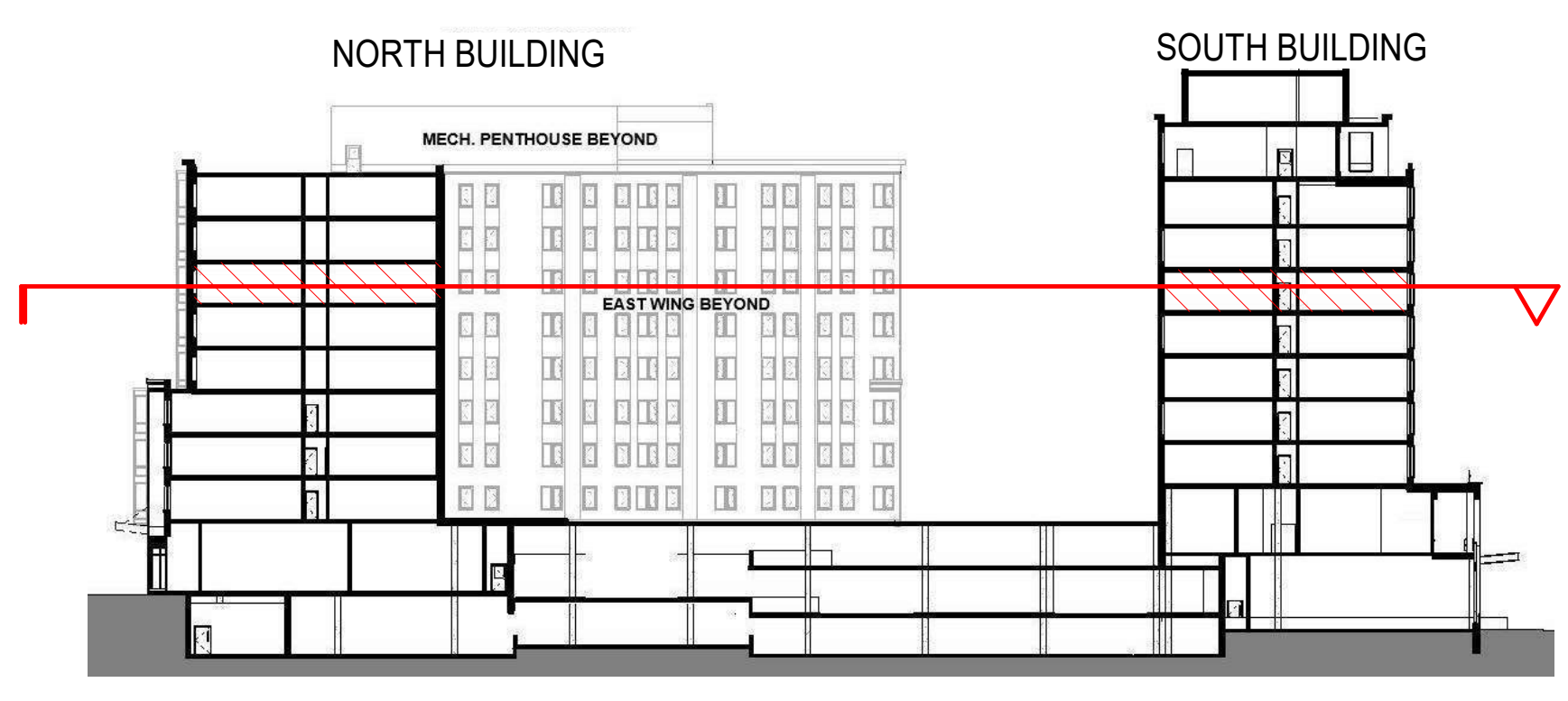
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CONSULTANT PROJ. #:
ORIGINATOR DATE:
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JR
SHEET NO.:
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15 Oct 2020

SHEET CONTENTS
OVERALL PLAN-
LEVEL 5

SHEET NO.:
A105
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- FLOOR PLAN GENERAL NOTES**
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 - REFER TO CIVIL PLANS FOR LIMIT OF WORK.
- FLOOR PLAN LEGEND**
- NEW WALL
 - NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
 - FINISH FLOOR ELEVATION
- OCCUPANCY & USE LEGEND**
- MEP / BUILDING SUPPORT
 - RESIDENTIAL - STORAGE
 - RES LOBBY & AMENITY
- NORTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - RESIDENTIAL STUDIO
 - Jr. 1 BEDROOM RESIDENTIAL
 - 1 BR RESIDENTIAL
 - Jr. 2 BR RESIDENTIAL
 - 2 BR RESIDENTIAL
- SOUTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - 1 BR RESIDENTIAL
 - 2 BR RESIDENTIAL
 - 3 BR RESIDENTIAL
- RESIDENTIAL UNITS**
- NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr. 1BR, 11 1BR, 2 2BR, 23 Units
- NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units
- SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs, 1 3BRs (Total 10 Units per floor)



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OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEI, MANAGING DIRECTOR

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CONSULTANT PROJ. #: 10/15/2020
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DATE: 15 Oct 2020

SHEET NO.: A106

10/15/2020 11:13 AM

2 LEVEL 7
A107 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

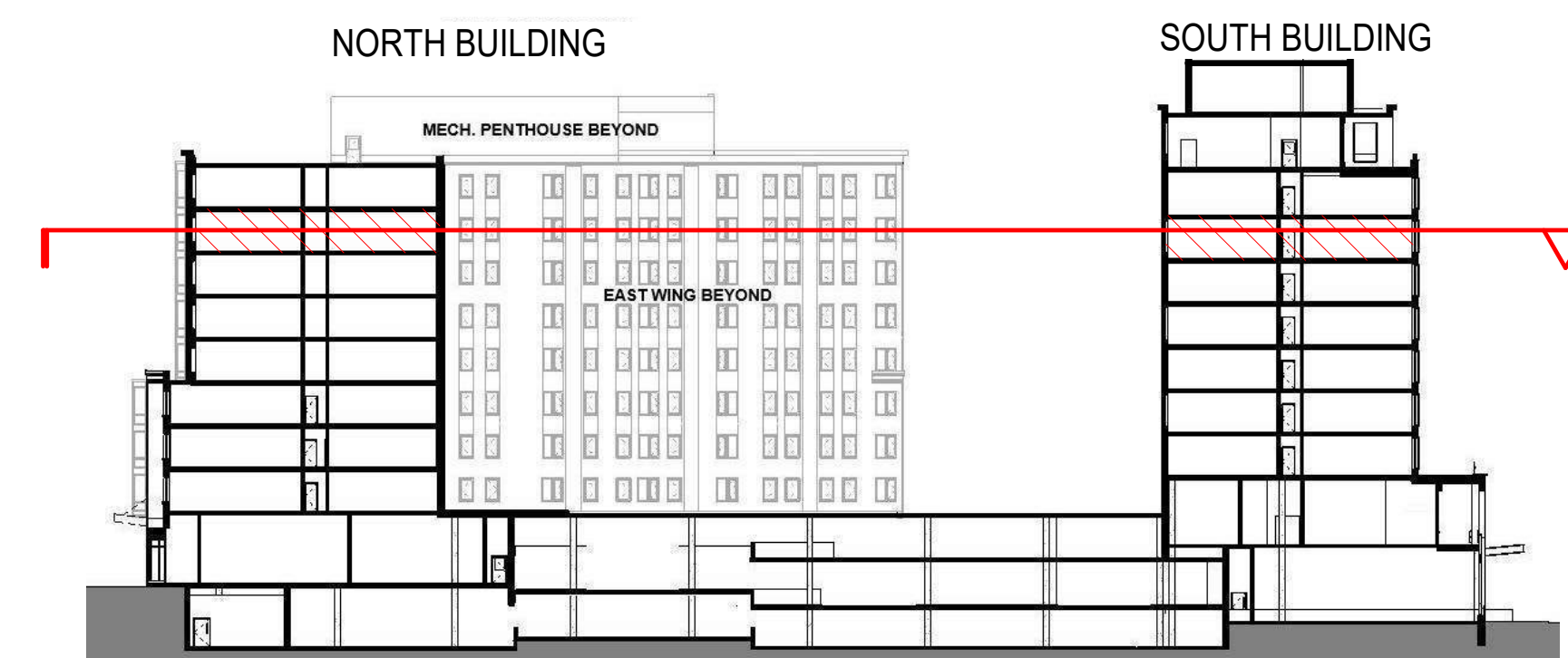
SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr. 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units

SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



N - PROJECT NORTH
TIME NORTH
MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

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CITYPLACE BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEI, MANAGING DIRECTOR

FFI PROJECT NO:
A1947.00

CONSULTANT PROJ. #

ORIGINATOR DATE:
10/15/2020

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

DRAWN BY:
JR/NE/CL

CHECKED BY:
JR

DATE LOC:
Zoning Submission

15 Oct 2020

SHEET CONTENTS

OVERALL PLAN - LEVEL 7

SHEET NO:
A107

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10/15/2020 11:20:21 PM

2 LEVEL 8
A108 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
- PLANS ARE TO BE VIEWED IN CONJUNCTION WITH CIVIL, LANDSCAPE, STRUCTURAL, MEP/FPF AND ALL OTHER TRADES, AS APPROPRIATE. DISCREPANCIES ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE COMMENCING WORK.
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- REFER TO CIVIL PLANS FOR LIMIT OF WORK.

FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr. 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units

SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



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A1947.00

ORIGINATOR DATE: SCALE:

10/15/2020 1/16" = 1'-0"

DRAWN BY: CHECKED BY:

JR/NE/CL JR

SOURCE: Zoning Submission 15 Oct 2020

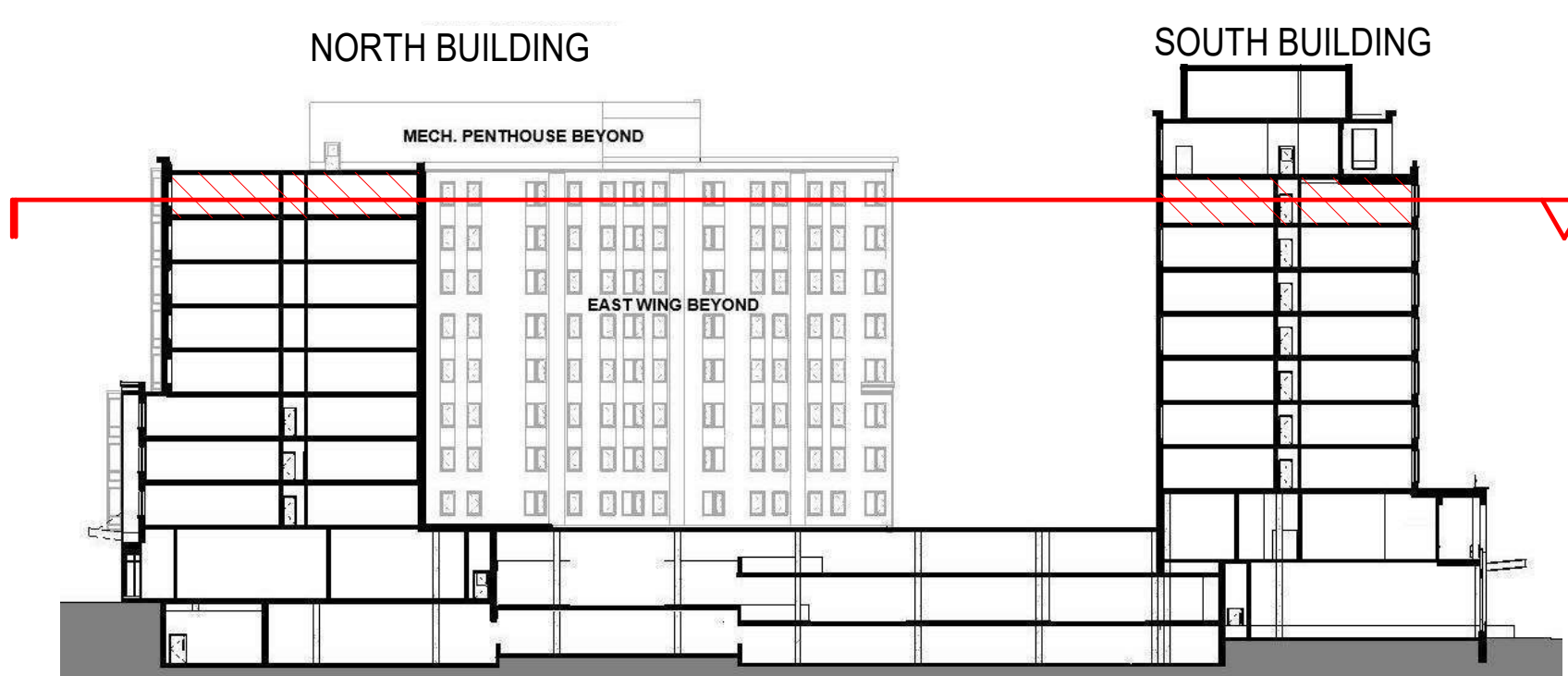
SHEET CONTENTS

OVERALL PLAN -
LEVEL 8

SHEET NO:

A108

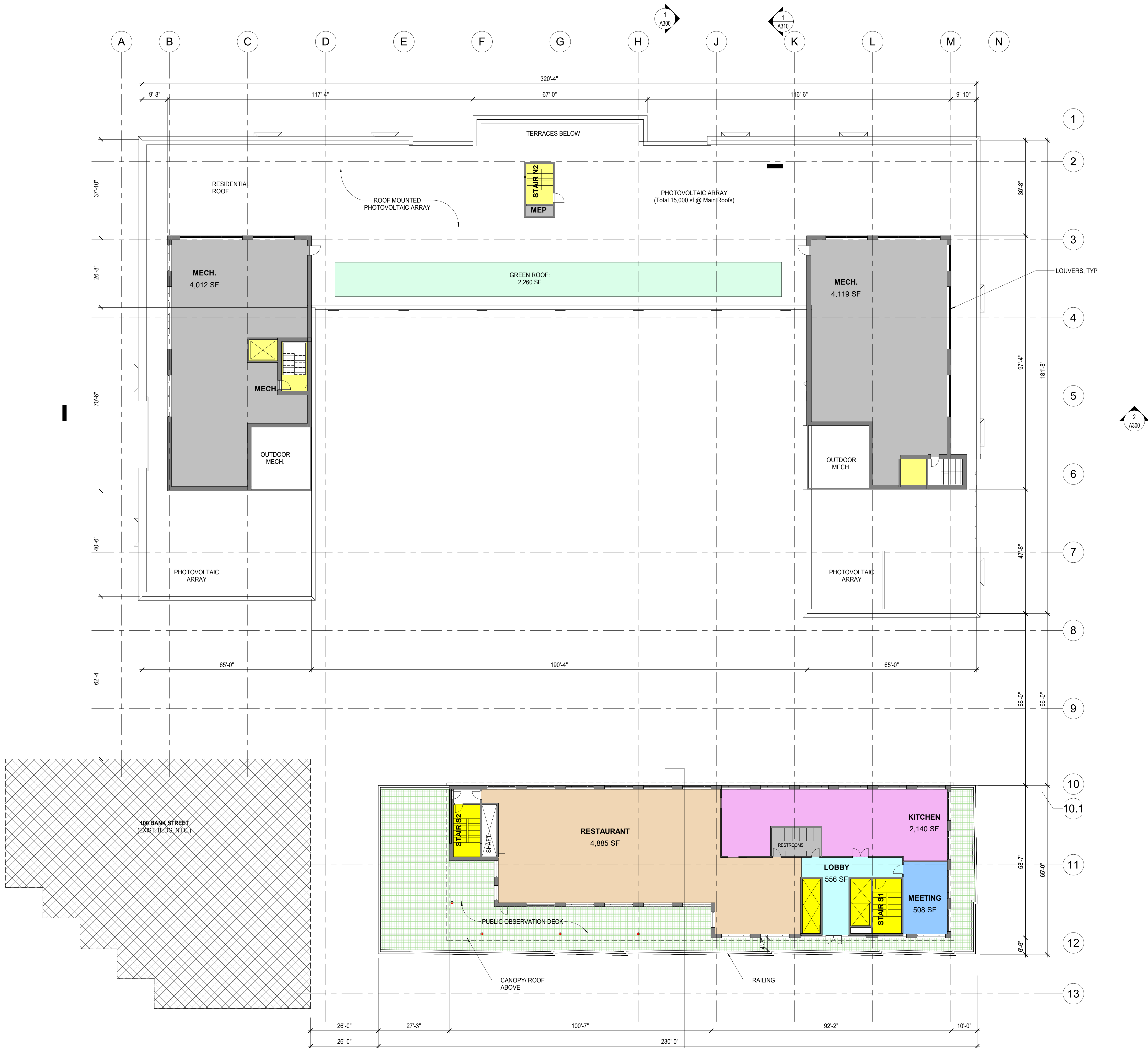
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N - PROJECT NORTH
N - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

10/15/2020 11:20:23 PM



2 LEVEL 9
A109 SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

- ALSO SEE SYMBOL LEGEND ON COVER SHEET.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- ELEVATORS & STAIRS

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- MEETING, MTG SUPPORT
- KITCHEN
- RESTAURANT



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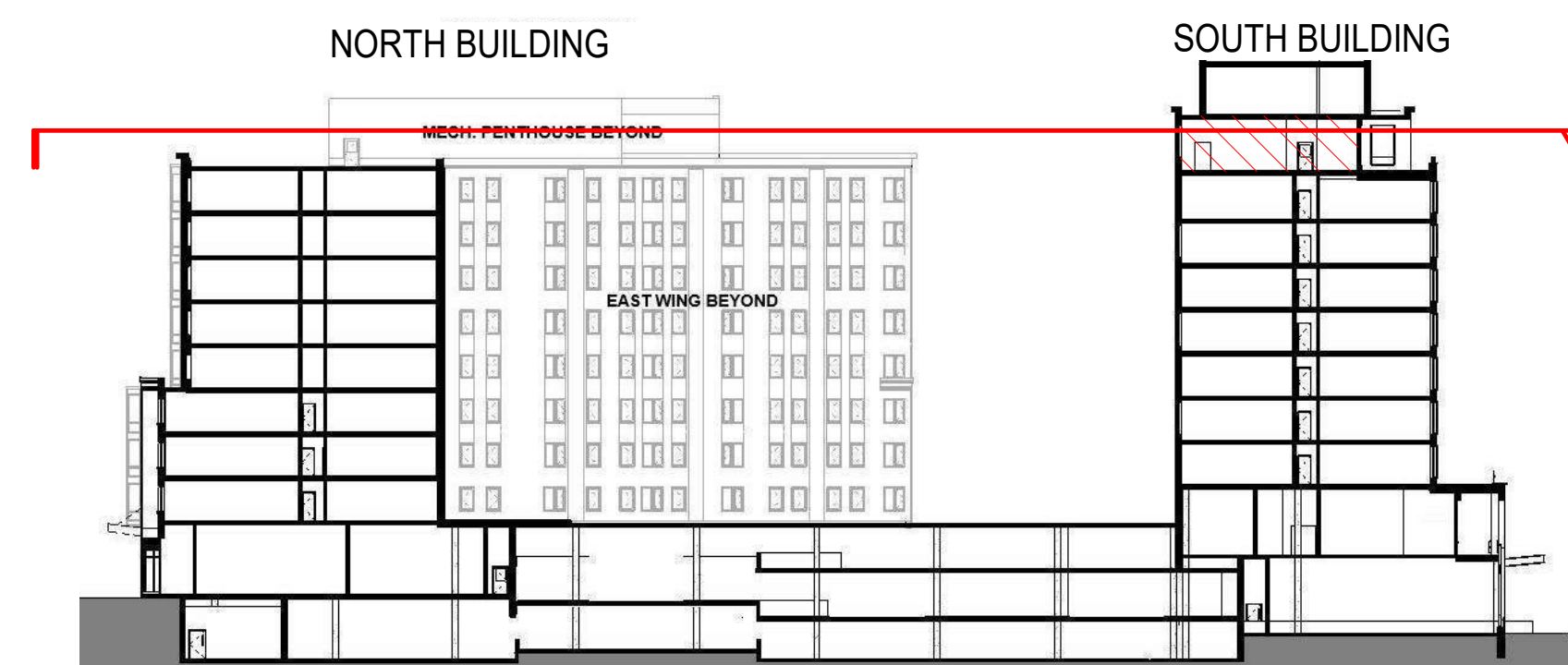
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DRAWN BY:
JR/NE/CL
CHECKED BY:
JR
DATE LOC:
Zoning Submission
15 Oct 2020

SHEET CONTENTS
OVERALL PLAN-
LVL 9 AMENITIES
& MECHANICAL
PENTHOUSES

A109



N - PROJECT NORTH
N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

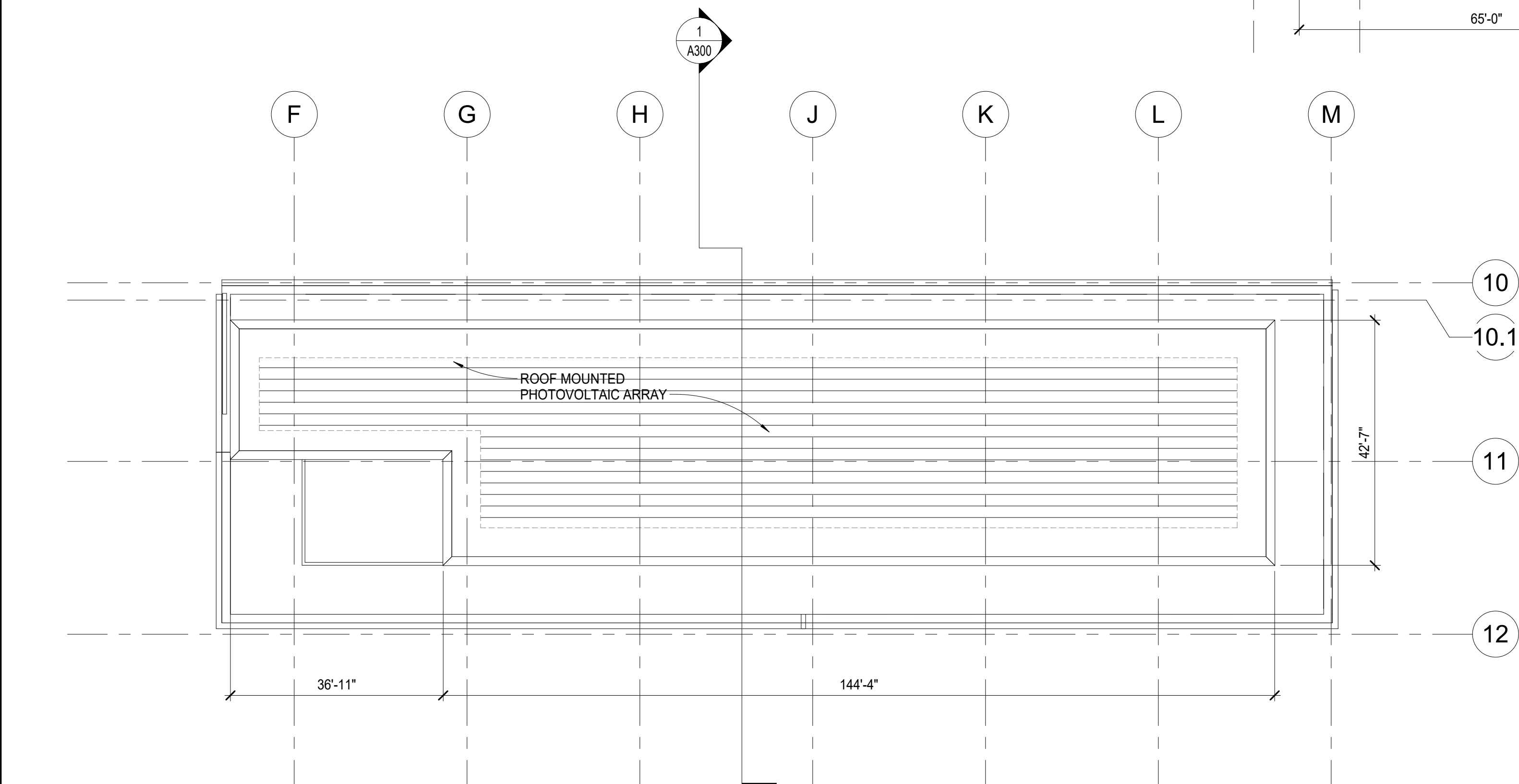
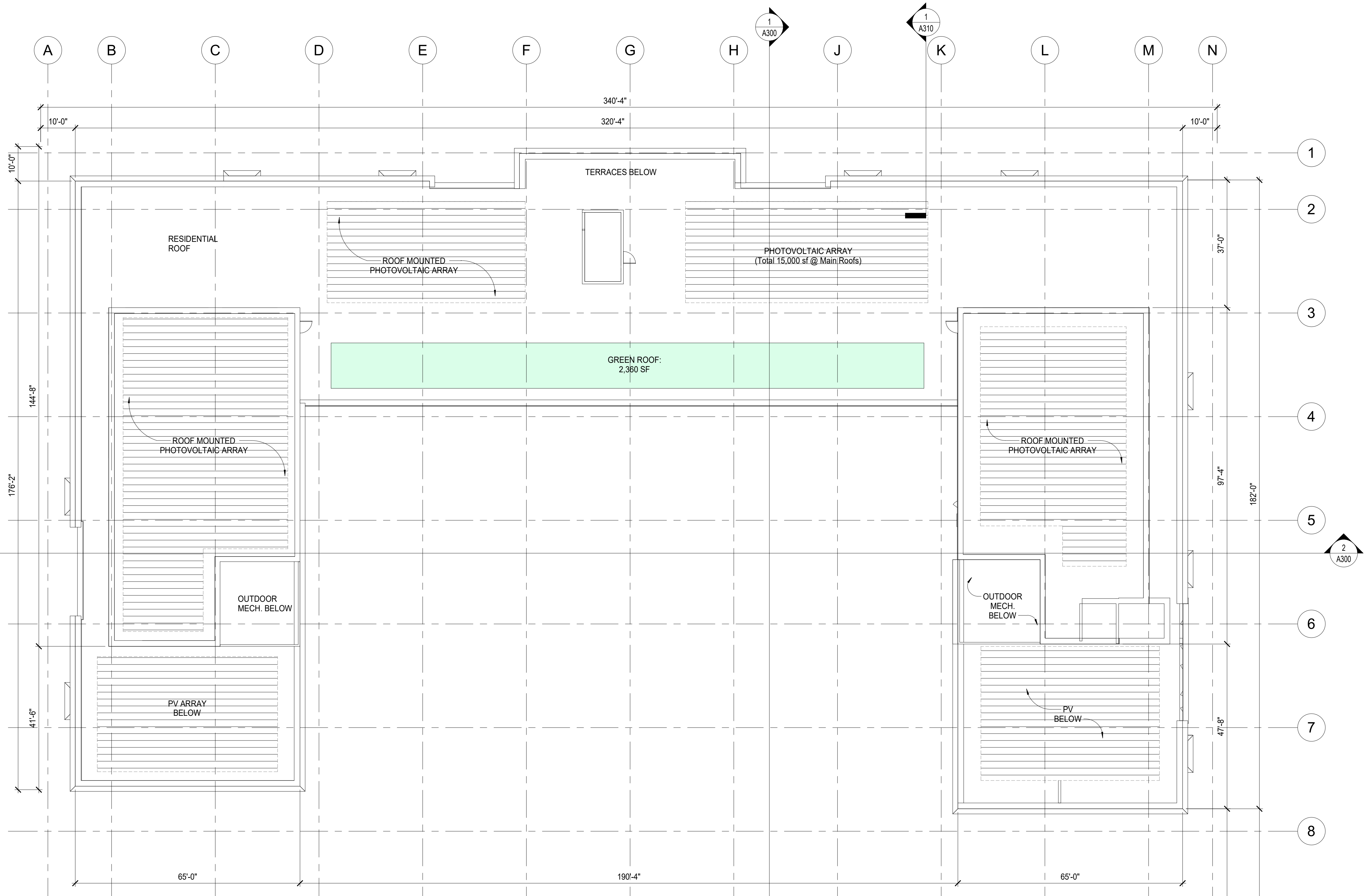
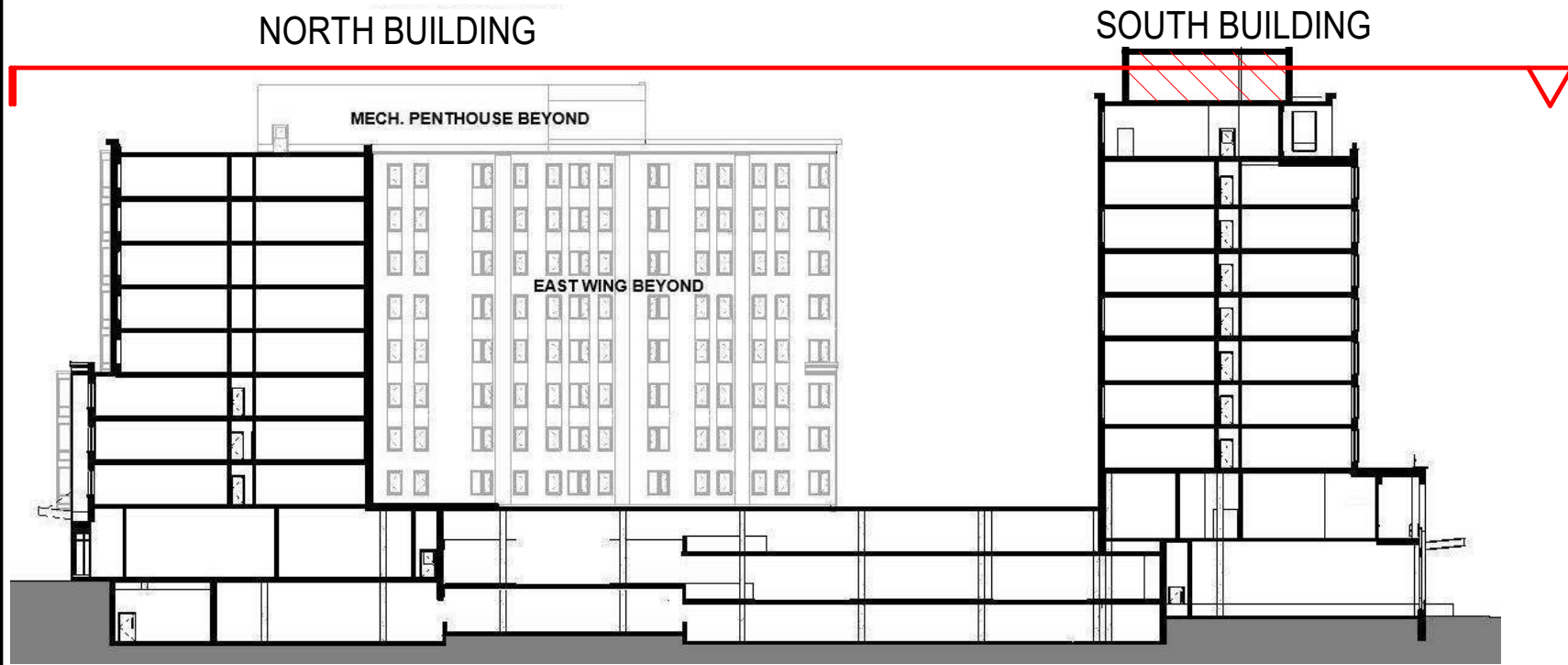
- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- ELEVATORS & STAIRS

SOUTH BUILDING

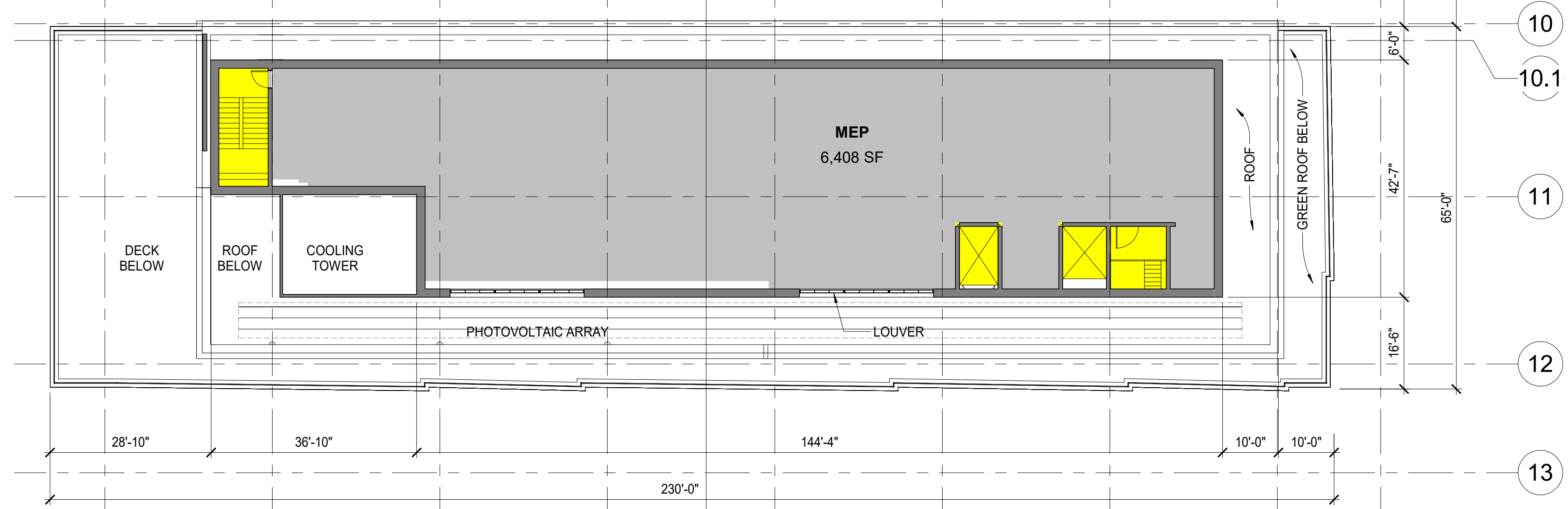
- CIRCULATION
- ELEVATORS & STAIRS
- MEETING, MTG SUPPORT
- KITCHEN
- RESTAURANT

PHOTOVOLTAIC ARRAY TOTAL AREA: +/- 19,250 sf
Effective area w/ rooftop eqpt, stacks, etc.: +/- 14,250 sf
Estimated generation at 12kWh/sf/yr: 171,000 kWh/yr
PV estimates subject to utility agreements and installer/ operator requirements.

GREEN ROOF TOTAL AREA: +/- 11,000 sf
Level 8 Roof (Level 9), North Building: 2,360 sf
Parking Roof (Level 1), North Building: 5,440 sf
Level 1 Roof (Level 2), South Building: 3,200 sf



2 MECH. ROOF - SOUTH
SCALE: 1/16" = 1'-0"



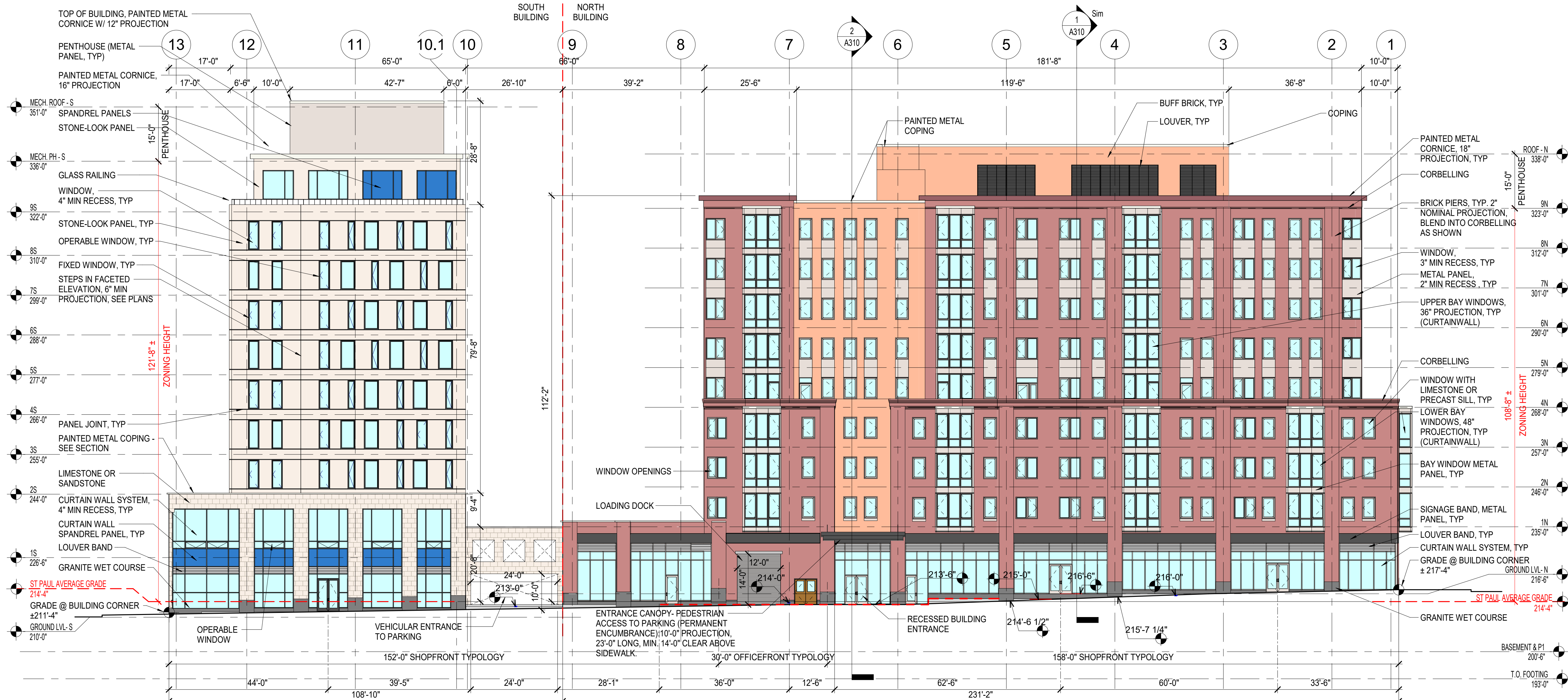
1 MECH. PENTHOUSE - SOUTH
SCALE: 1/16" = 1'-0"



1 NORTH (CHERRY STREET) ELEVATION
A200 SCALE: 1/16" = 1'-0" REF.: A102A

NORTH ELEVATION - MATERIALS LEGEND		
MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	16,784	52
PRIMARY MATERIAL 1B BUFF BRICK	3,406	11
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	7,073	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	3,415	10
SECONDARY MATERIAL 2 GRANITE	402	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	119	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	1,188	3
TOTAL ELEVATION, EXCLUDING WINDOWS	32,387	100
TOTAL ELEVATION, INCLUDING WINDOWS**	38,151	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS



2 EAST (ST PAUL STREET) ELEVATION
A200 SCALE: 1/16" = 1'-0" REF.: A410

EAST ELEVATION - MATERIALS LEGEND				
MATERIAL	NORTH BUILDING AREA (SQ. FT.)	SOUTH BUILDING AREA (SQ. FT.)	TOTAL AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	9,192	N/A	9,192	34
PRIMARY MATERIAL 1B BUFF BRICK	2,488	N/A	2,488	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	4,410	1,724	6,134	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	2,173	N/A	2,173	8
SECONDARY MATERIAL 2 GRANITE	334	140	474	2
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	27	N/A	27	0
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	834	N/A	834	3
PRIMARY MATERIAL 3A STONE-LOOK PANEL	N/A	5,040	5,040	18
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	N/A	1,190	1,190	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,458	8,094	27,552	100
TOTAL ELEVATION, INCLUDING WINDOWS**	23,050	9,581	32,631	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

ELEVATION & SECTION GENERAL NOTE

1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.

CITYPLACE
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BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SENEZ, MANAGING DIRECTOR

PROJECT NO: A1947.00
CONSULTANT PROJ. NO:
ORIGINATOR DATE: 10/15/2020
SCALE: 1/16" = 1'-0"
DRAWN BY: CL/NE/JC
CHECKED BY: JR
SUBMISSION CLARIFICATIONS: 15 Oct 2020
Rev. 2: 15 Jan 2021

EXTERIOR
ELEVATIONS

A200



WEST ELEVATION - MATERIALS LEGEND

MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	11,533	59
PRIMARY MATERIAL 1B BUFF BRICK	1,760	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	3,717	19
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,438	7
SECONDARY MATERIAL 2 GRANITE	344	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	66	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	769	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,627	100
TOTAL ELEVATION, INCLUDING WINDOWS**	22,920	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

1 WEST (PINE STREET) ELEVATION
A201 SCALE: 1/16" = 1'-0" REF.: A090A



SOUTH ELEVATION - MATERIALS LEGEND

MATERIAL	SOUTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 3A STONE-LOOK PANEL	15,000	60
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	3,600	14
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING (TRANSPARENT/ SPANDREL)	4,122	17
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,520	6
SECONDARY MATERIAL 2 GRANITE	360	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	480	12
TOTAL ELEVATION, EXCLUDING WINDOWS	25,082	100
TOTAL ELEVATION, INCLUDING WINDOWS**	32,540	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

ELEVATION & SECTION GENERAL NOTE

1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.

2 SOUTH (BANK STREET) ELEVATION
A201 SCALE: 1/16" = 1'-0" REF.: A090A



3 CHERRY AND PINE
A210 SCALE: 1/4" = 1'-0"

1 CHERRY AND ST PAUL
A210 SCALE: 1/4" = 1'-0"



4 PINE CLOSE UP
A210 SCALE: 1/4" = 1'-0"

2 ST PAUL CLOSE UP
A210 SCALE: 1/4" = 1'-0"

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SCALE: 1/4" = 1'-0"
DRAWN BY: CL/NE/JC
CHECKED BY: JR
SHEET NO.:
Zoning Submission 15 Oct 2020

SHEET CONTENTS

RENDERINGS

A210



1 BANK AND ST PAUL
A211 SCALE: 1/4" = 1'-0"

2 BANK CLOSE UP
A211 SCALE: 1/4" = 1'-0"

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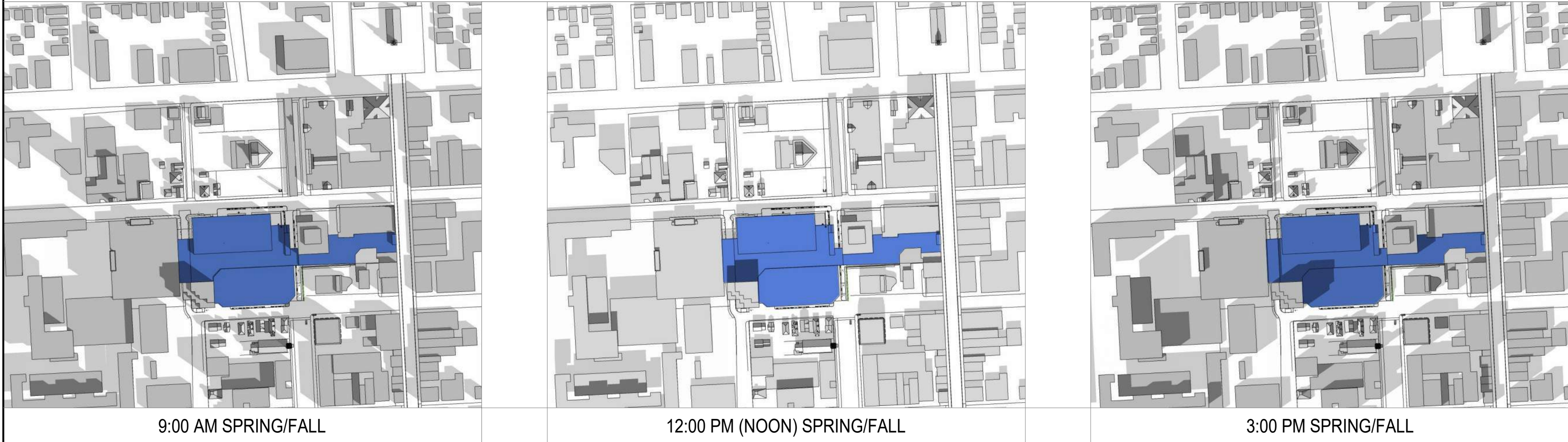
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ISSUE LOG: Zoning Submission	15 Oct 2020

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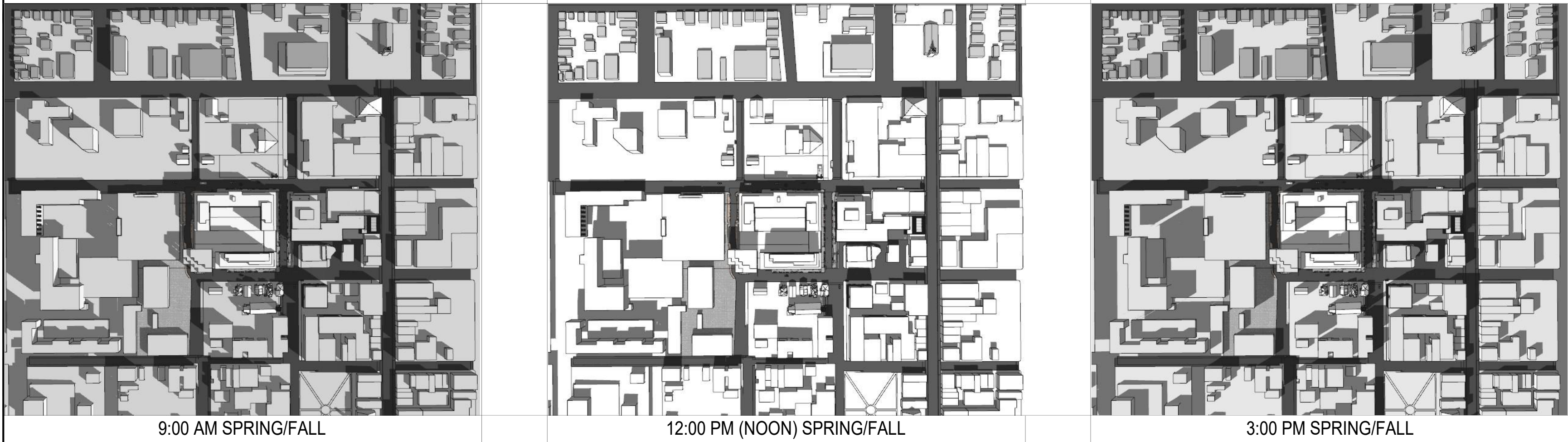
RENDERINGS

SHEET NO:
A211

SUN STUDY - VERNAL EQUINOX (SPRING AND FALL EQUINOX)



EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.



PROPOSED

SUN STUDY - WINTER SOLSTICE

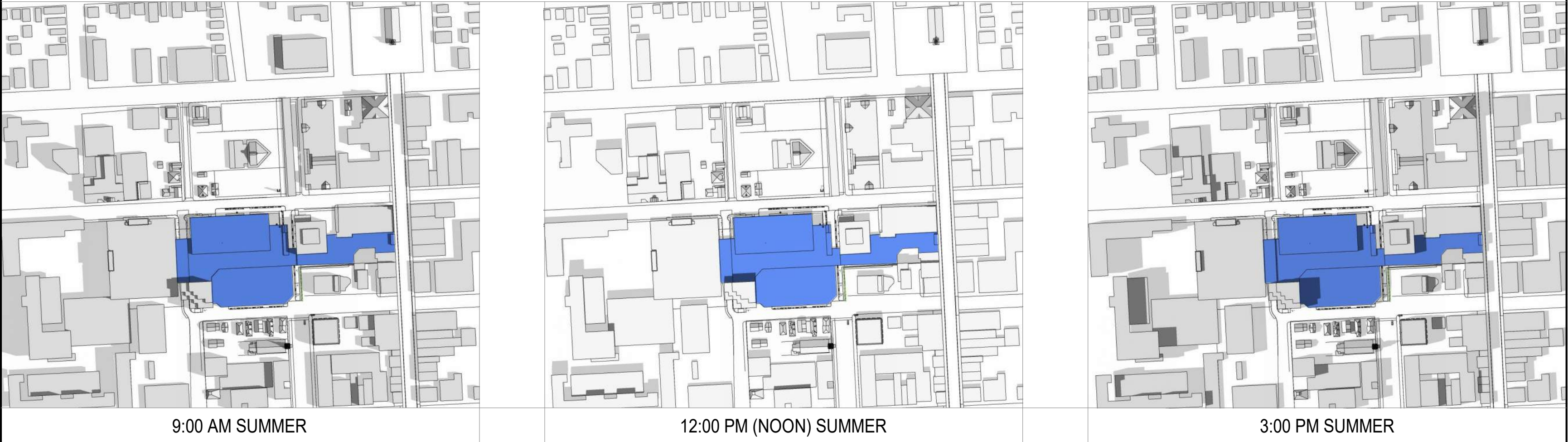


EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.

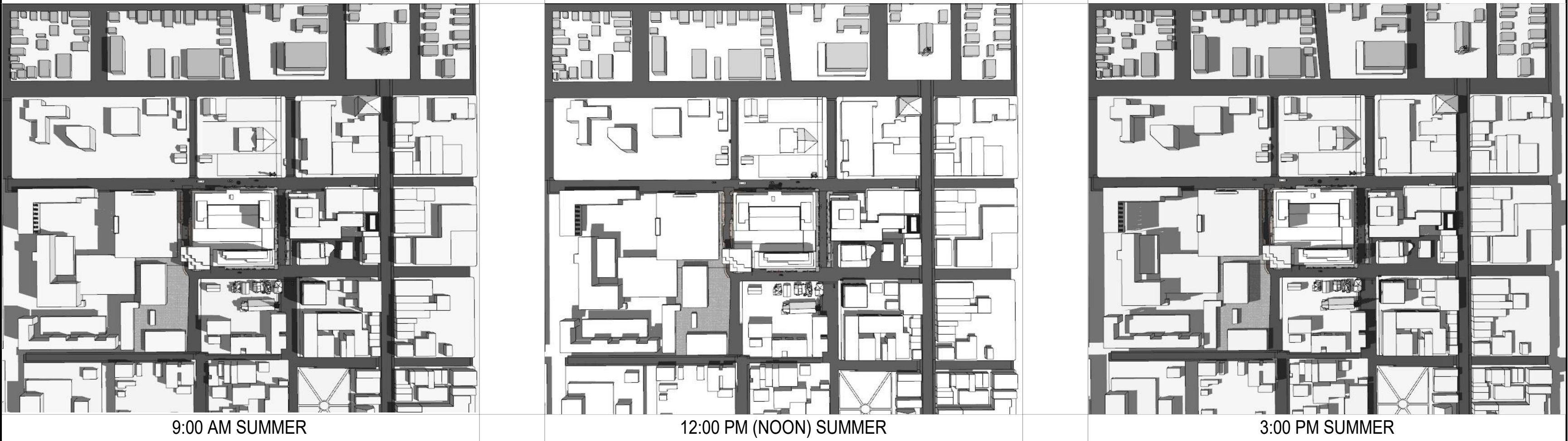


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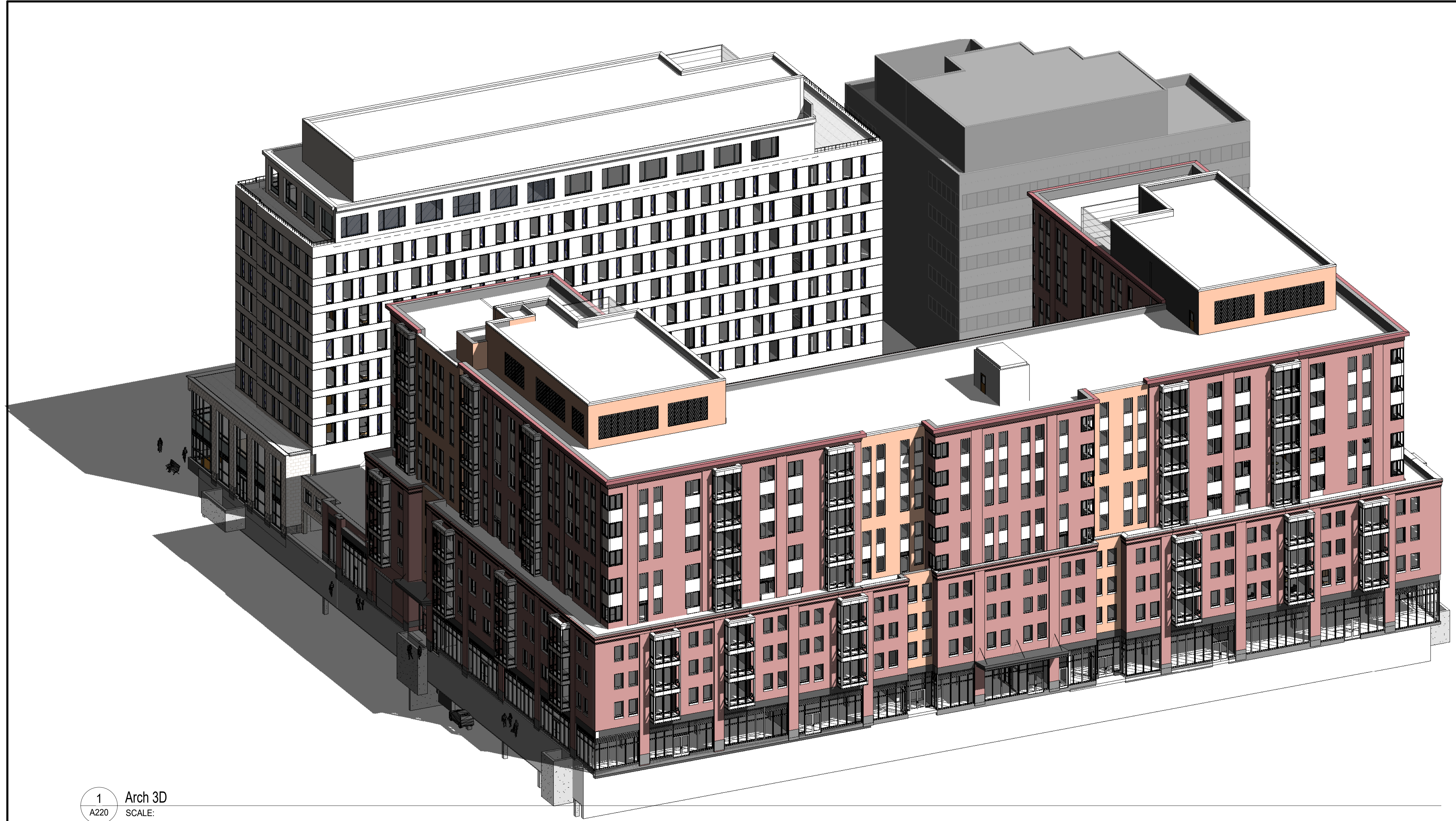
SUN STUDY - SUMMER SOLSTICE



EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.



PROPOSED



1 Arch 3D
A220 SCALE:



3 Arch 3D Cutaway -NS cut looking West Copy 1
A220 SCALE:

2 Arch 3D Cutaway -EW Cut looking north
A220 SCALE:

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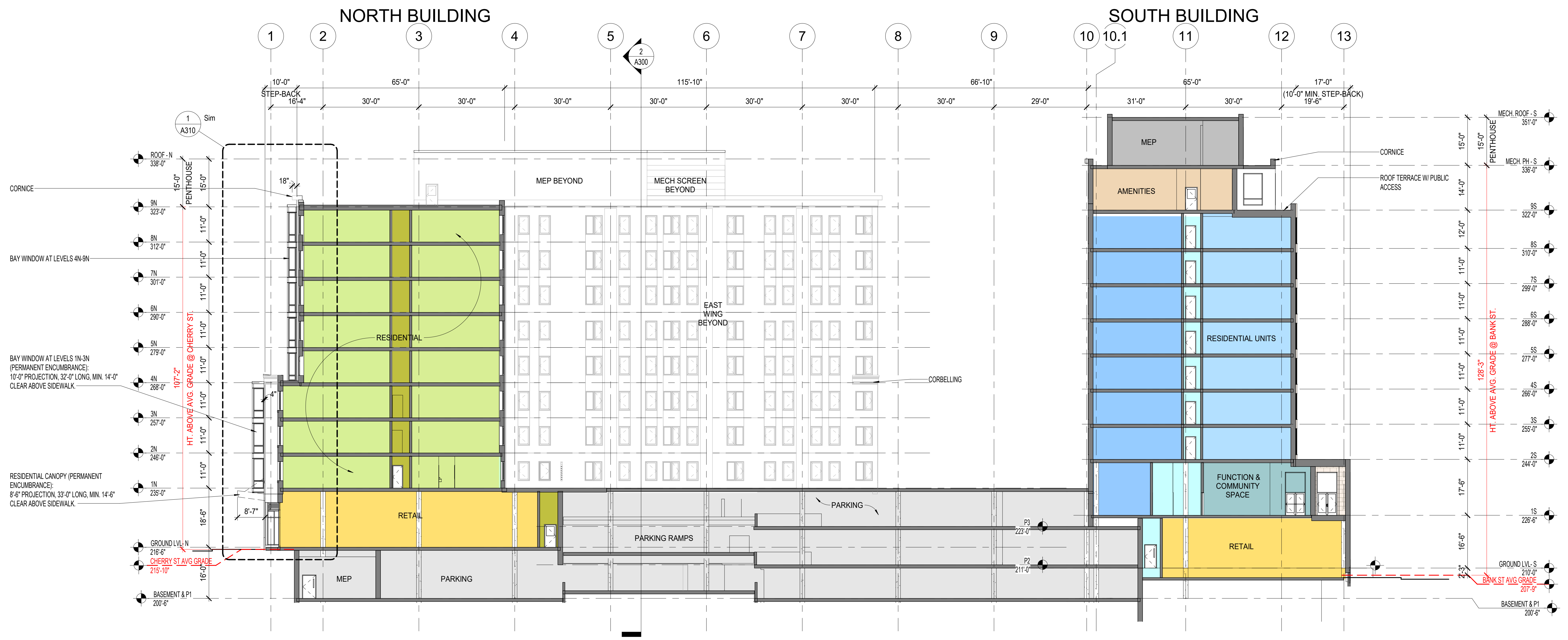
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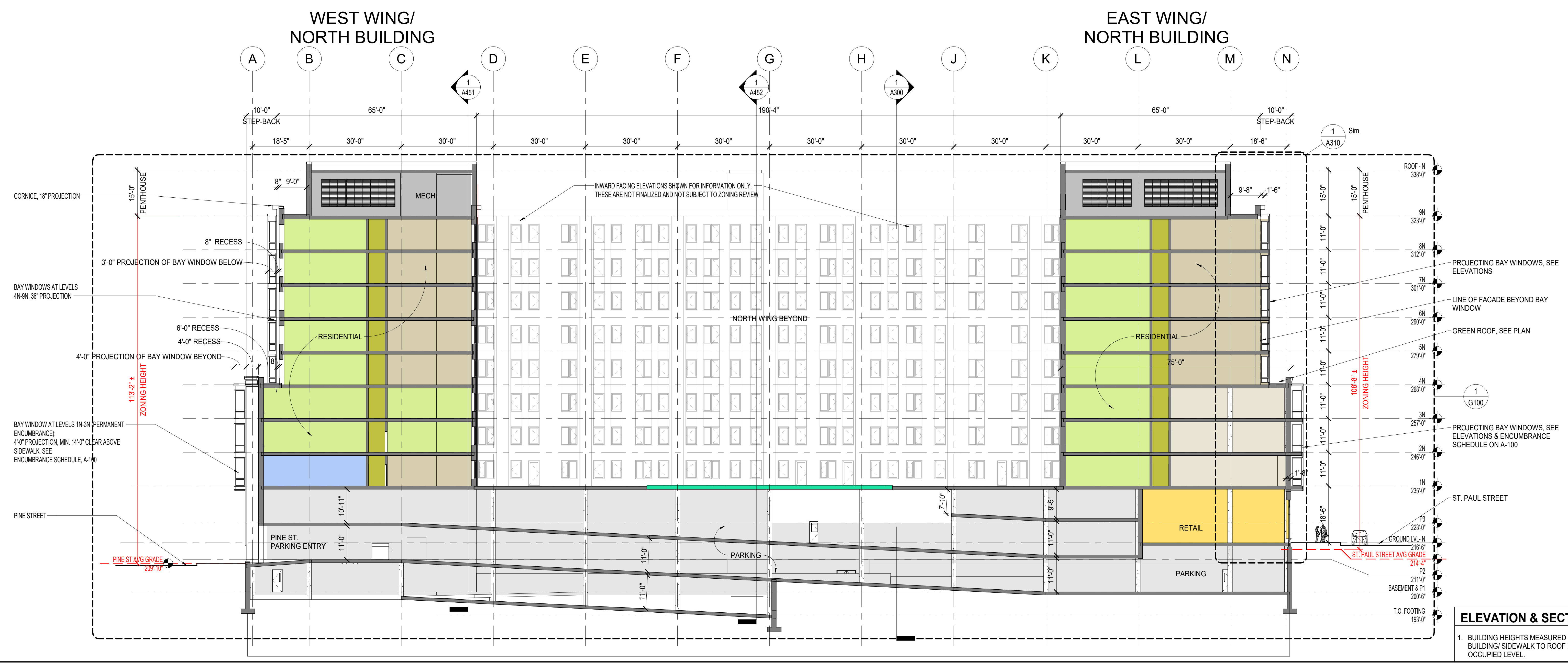
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ORIGINATOR DATE: **02/04/2020** SCALE:
DRAWN BY: **NE/JC/CL/JR** CHECKED BY: **JDR**
ISSUE LOG:
Zoning Submission 15 Oct 2020

SHEET CONTENTS
AXONOMETRIC 3D MASSING

SHEET NO:
A220
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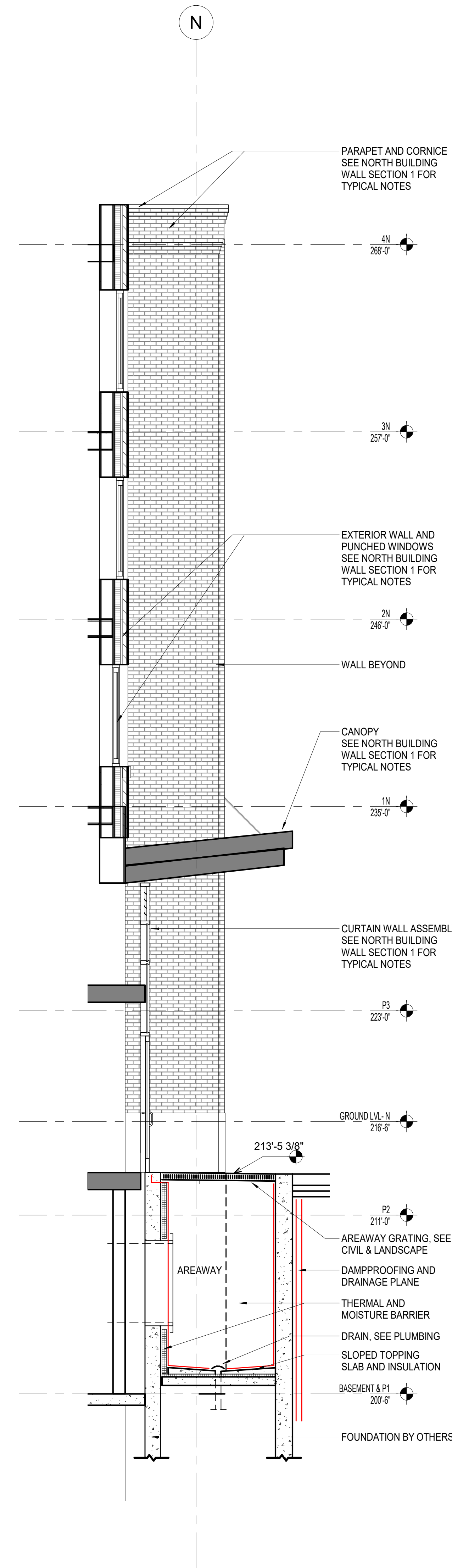


1 NORTH-SOUTH SECTION LOOKING EAST
SCALE: 1/16" = 1'-0"

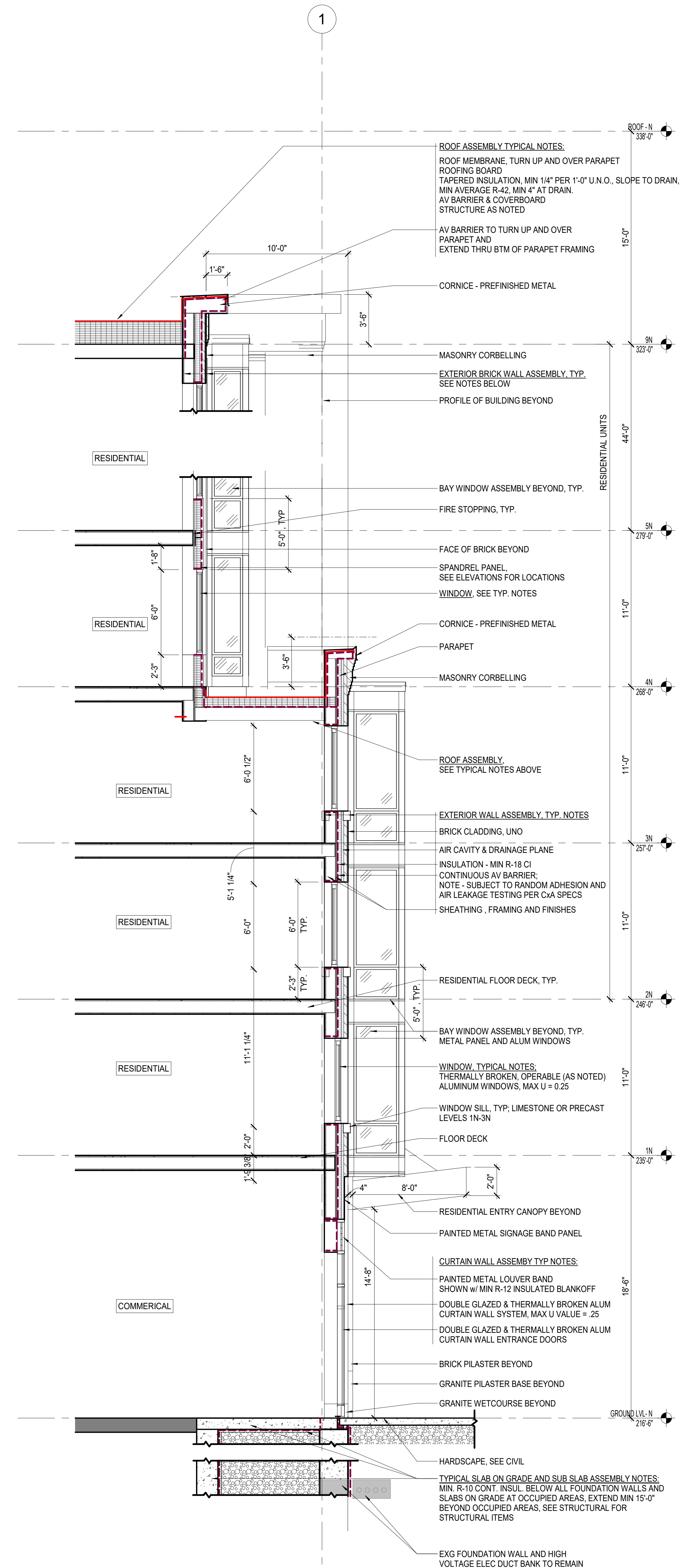


2 EAST-WEST SECTION THROUGH NORTH TOWER LOOKING NORTH
SCALE: 1/16" = 1'-0"

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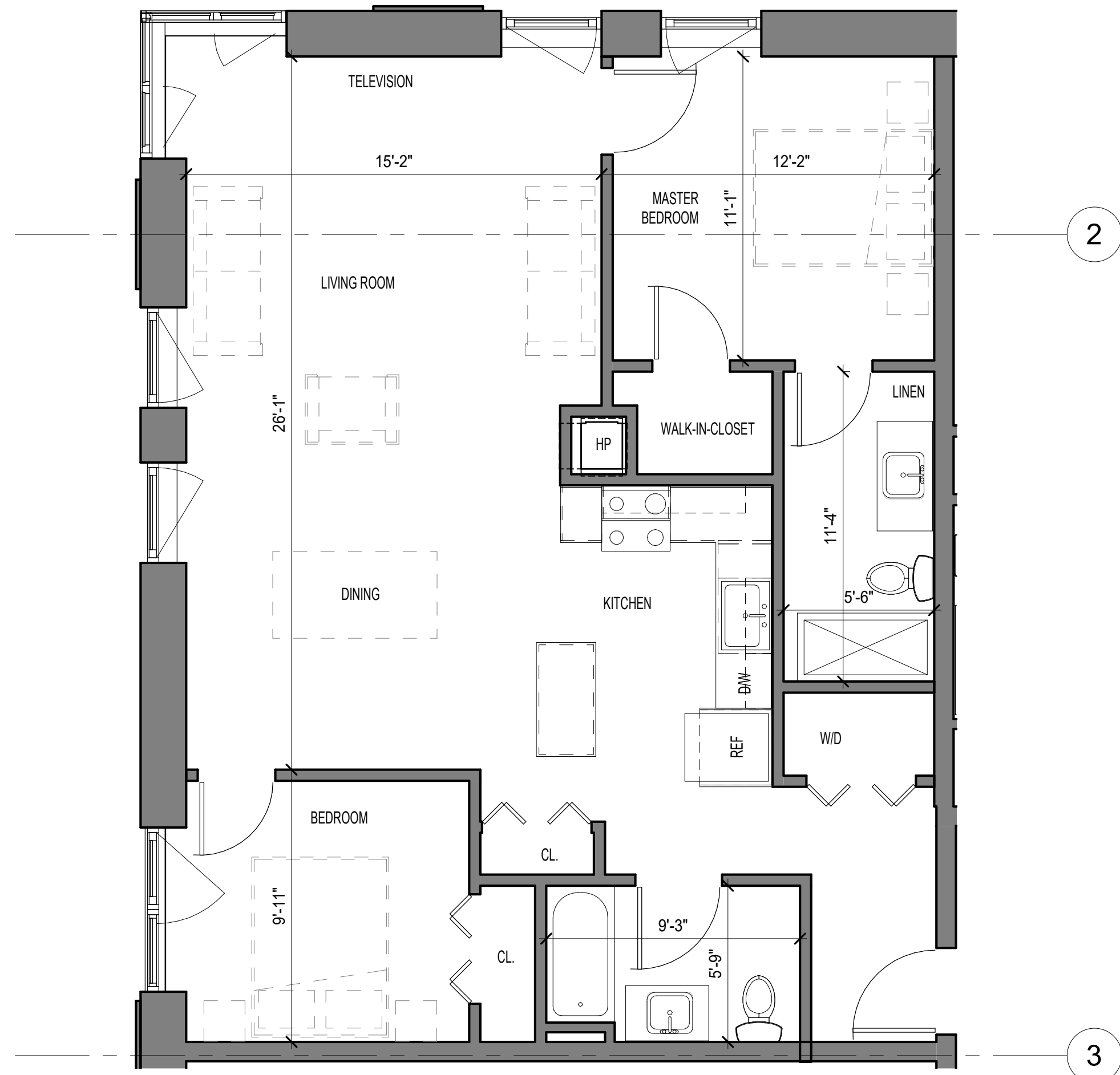
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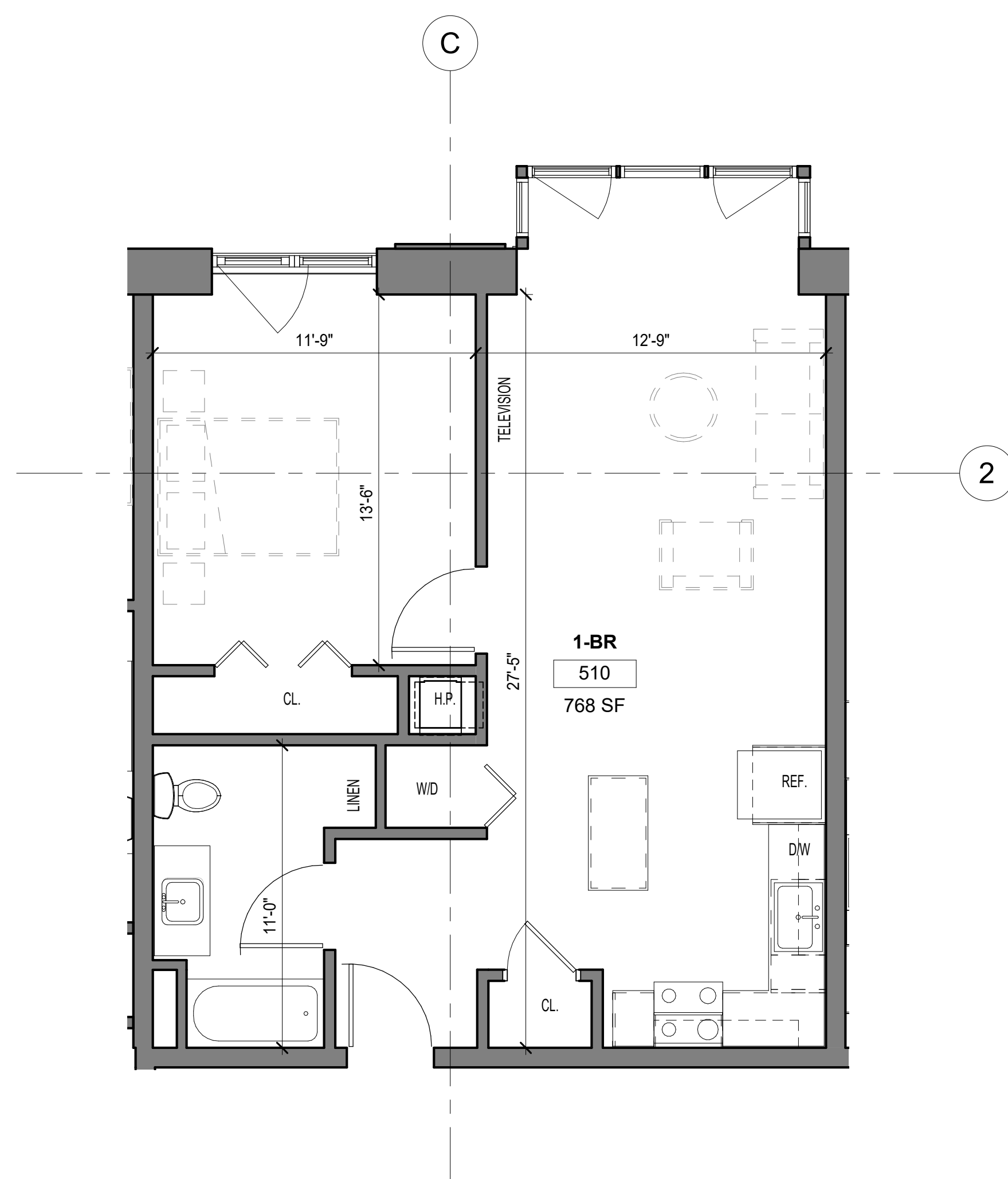
1 NORTH BUILDING - WALL SECTION 1
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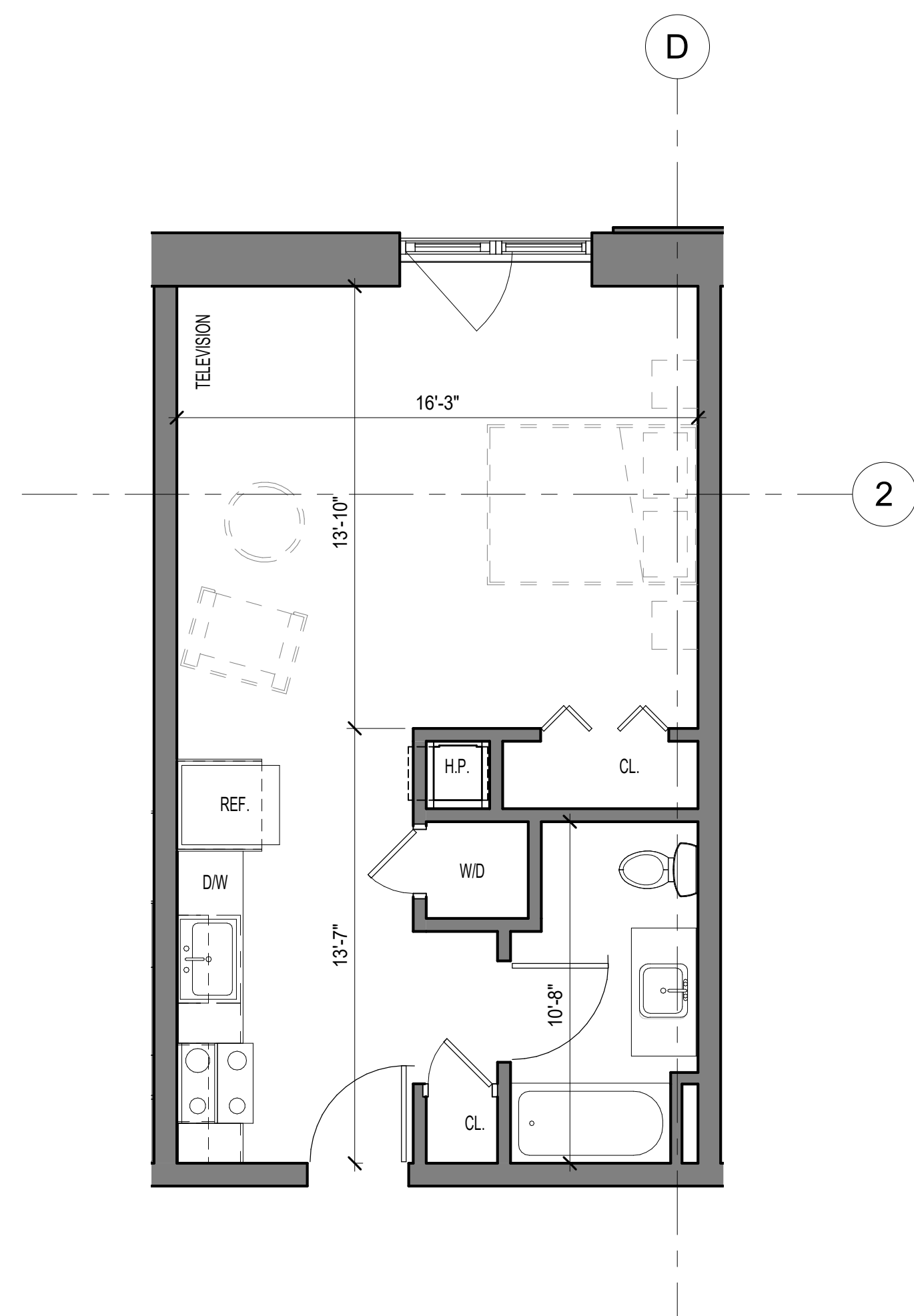
3 TYPICAL 2-BR
A410 SCALE: 1/4" = 1'-0"



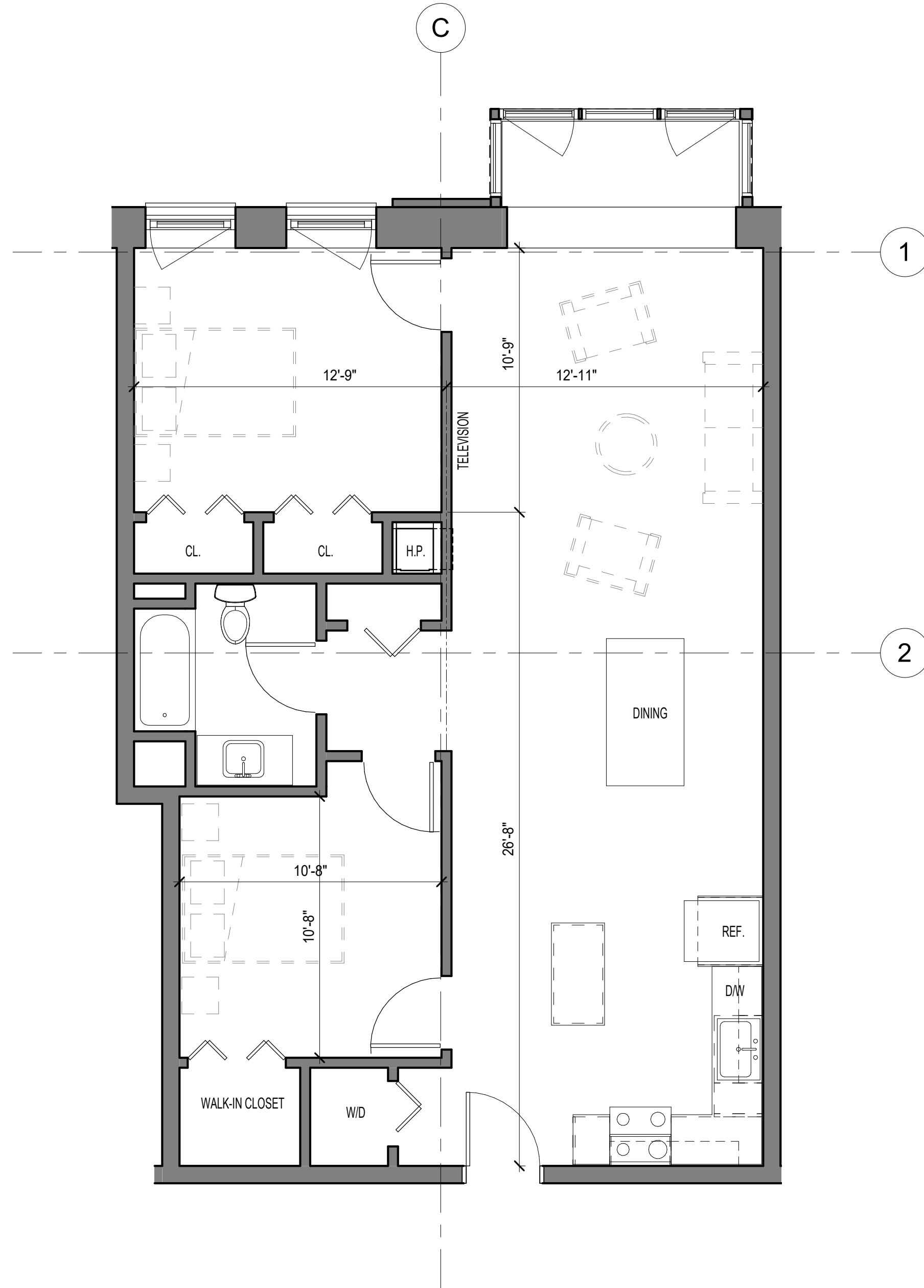
2 TYPICAL 1-BR
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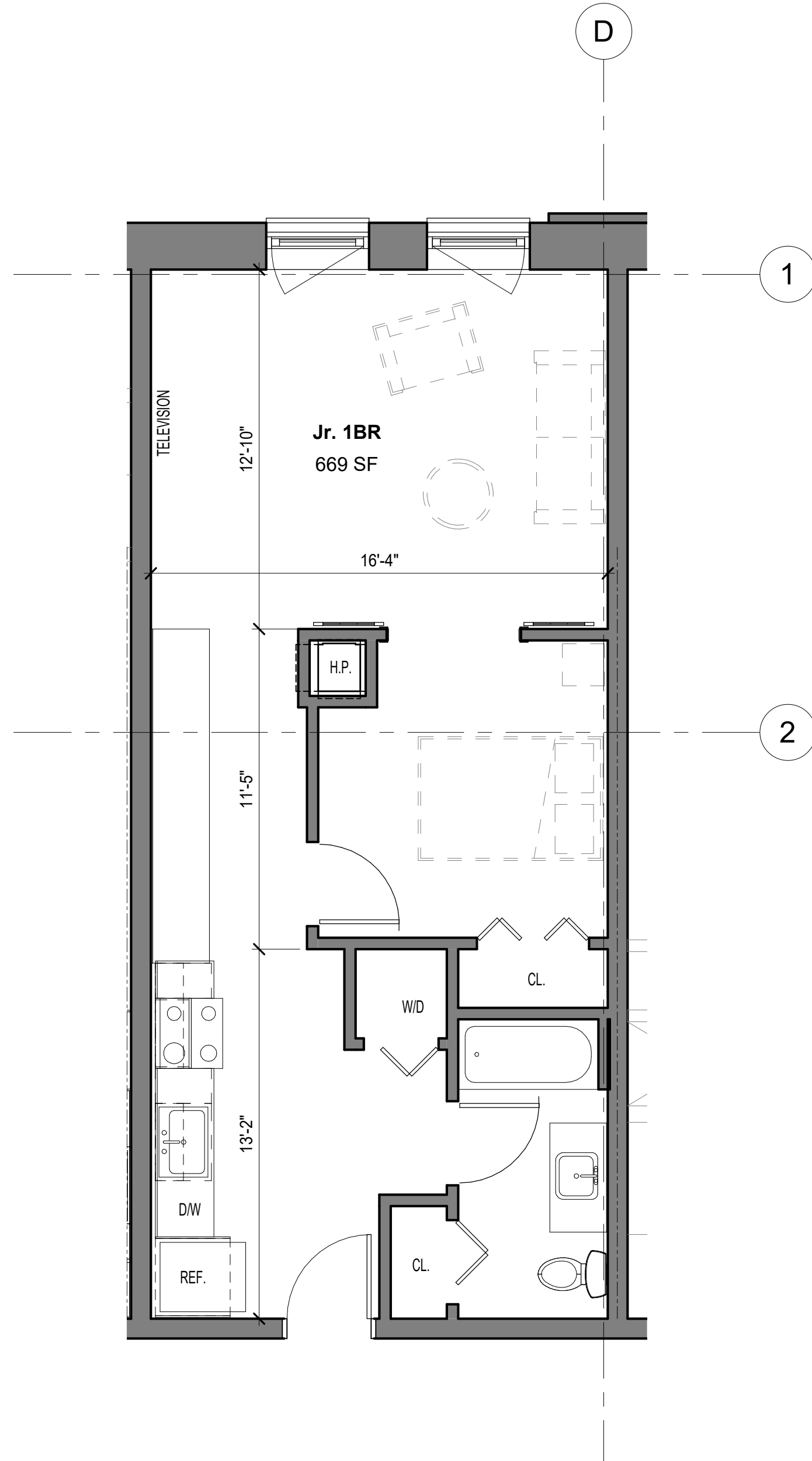
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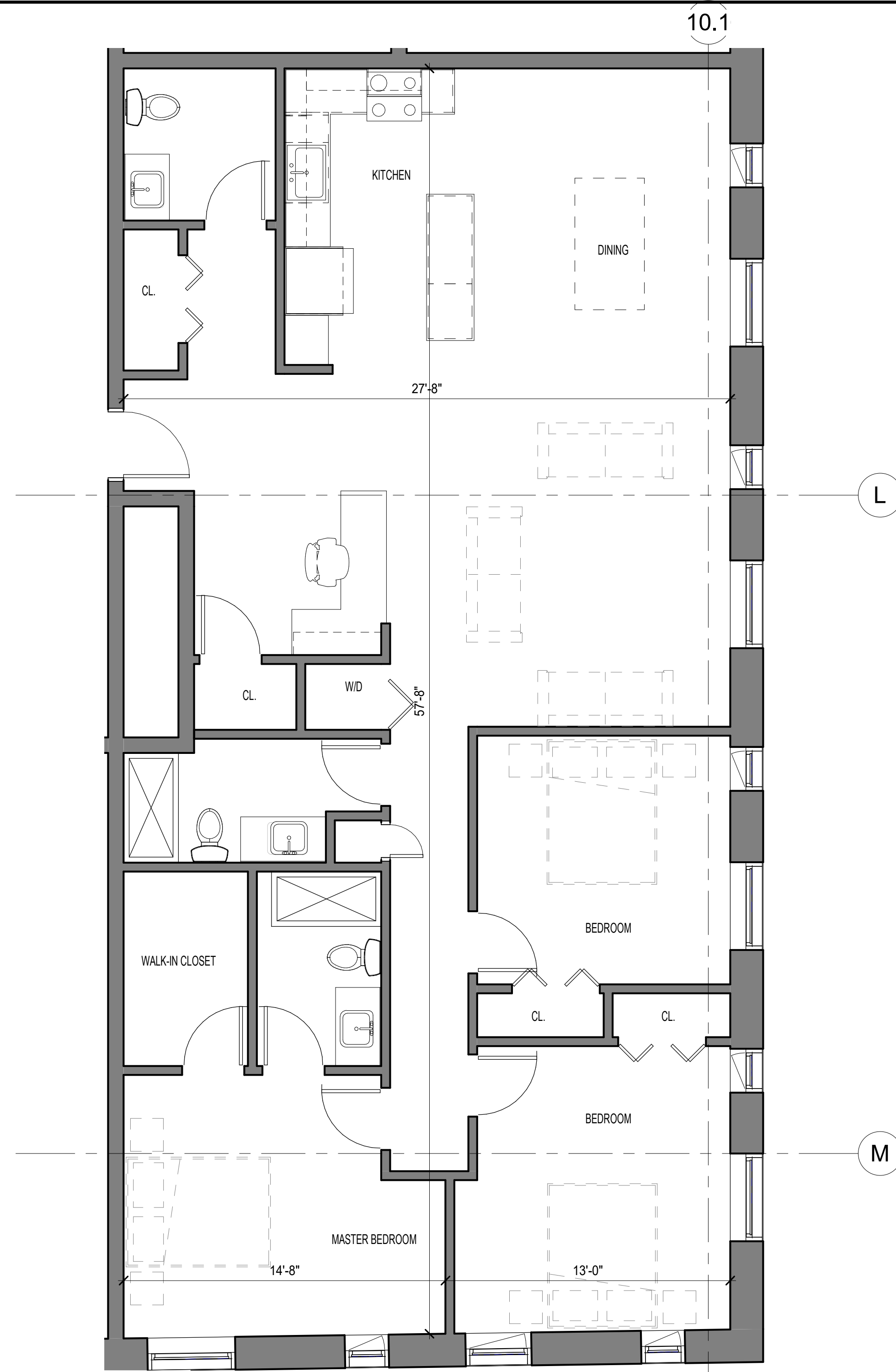
6 TYPICAL JR 2-BR
A410 SCALE: 1/4" = 1'-0"



5 TYPICAL JR 1-BR
A410 SCALE: 1/4" = 1'-0"



4 TYPICAL 3-BR
A410 SCALE: 1/4" = 1'-0"



A410

TYPICAL UNITS

SHEET CONTENTS

Author Checker

10/15/2020 1/4" = 1'-0"

A1947.00

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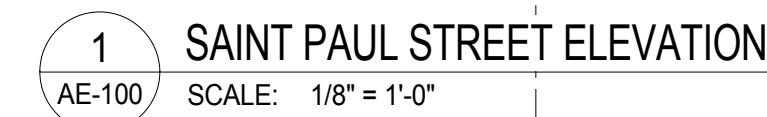
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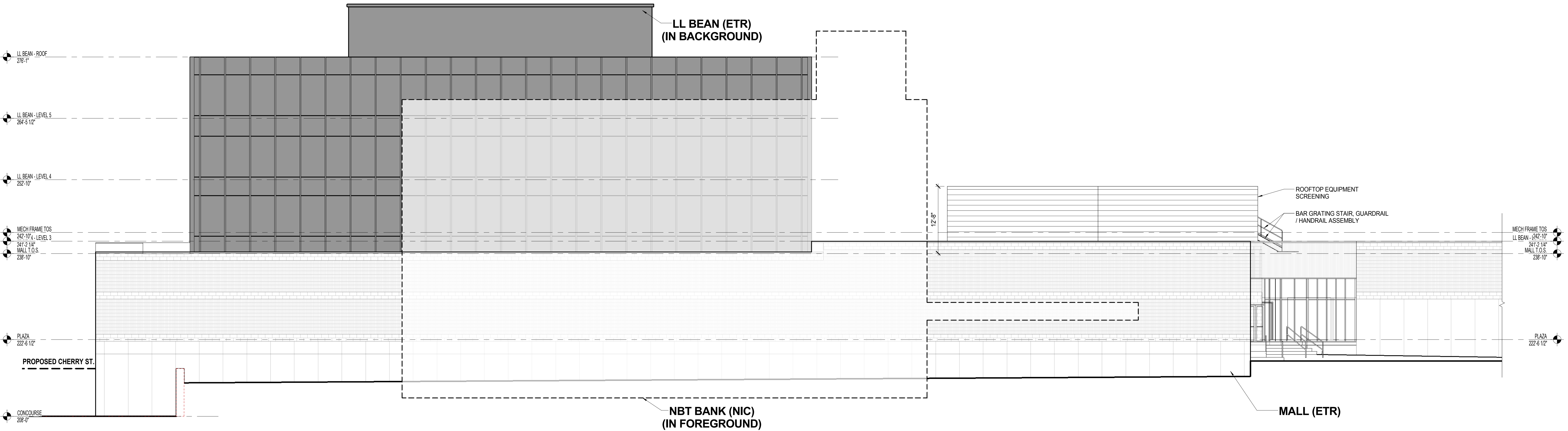


HEET NO:

AE-100

4/1/2017 5:20:07 PM

PRELIMINARY/ FOR REFERENCE ONLY. WORK SHOWN IS ON A SEPARATE PARCEL AND WILL BE PERMITTED THROUGH A SEPARATE ZONING SUBMISSION.



1 ENABLING EXTERIOR ELEVATION - SOUTH (Column line 12-7)
SCALE: 1/8" = 1'-0"



2 EQUIPMENT SCREEN SAMPLE PHOTOGRAPH
NOT TO SCALE

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Tel: 802.455.4891 • www.evg.com

**BURLINGTON TOWN CENTER REDEVELOPMENT:
ENABLING ROOFTOP EQUIPMENT**

Burlington Town
Center,
Devonwood Investors,
LLC

49 Church Street
Burlington, VT
05401

PROJECT NO: A1636.03	
ORGANIZATION DATE: 02/03/17	SCALE: 1/8" = 1'-0"
DRAWN BY: BW/SP	CHECKED BY: BW
DATE: 03/27/2017	DEMOLITION PACKAGE ISSUED FOR PERMIT
03/28/2017	DEMOLITION AND ENABLING PACKAGE ISSUED FOR BID
06/21/2017	ISSUED FOR BID

ENABLING
EXTERIOR
ELEVATION - SOUTH

SHEET NO: AE-201

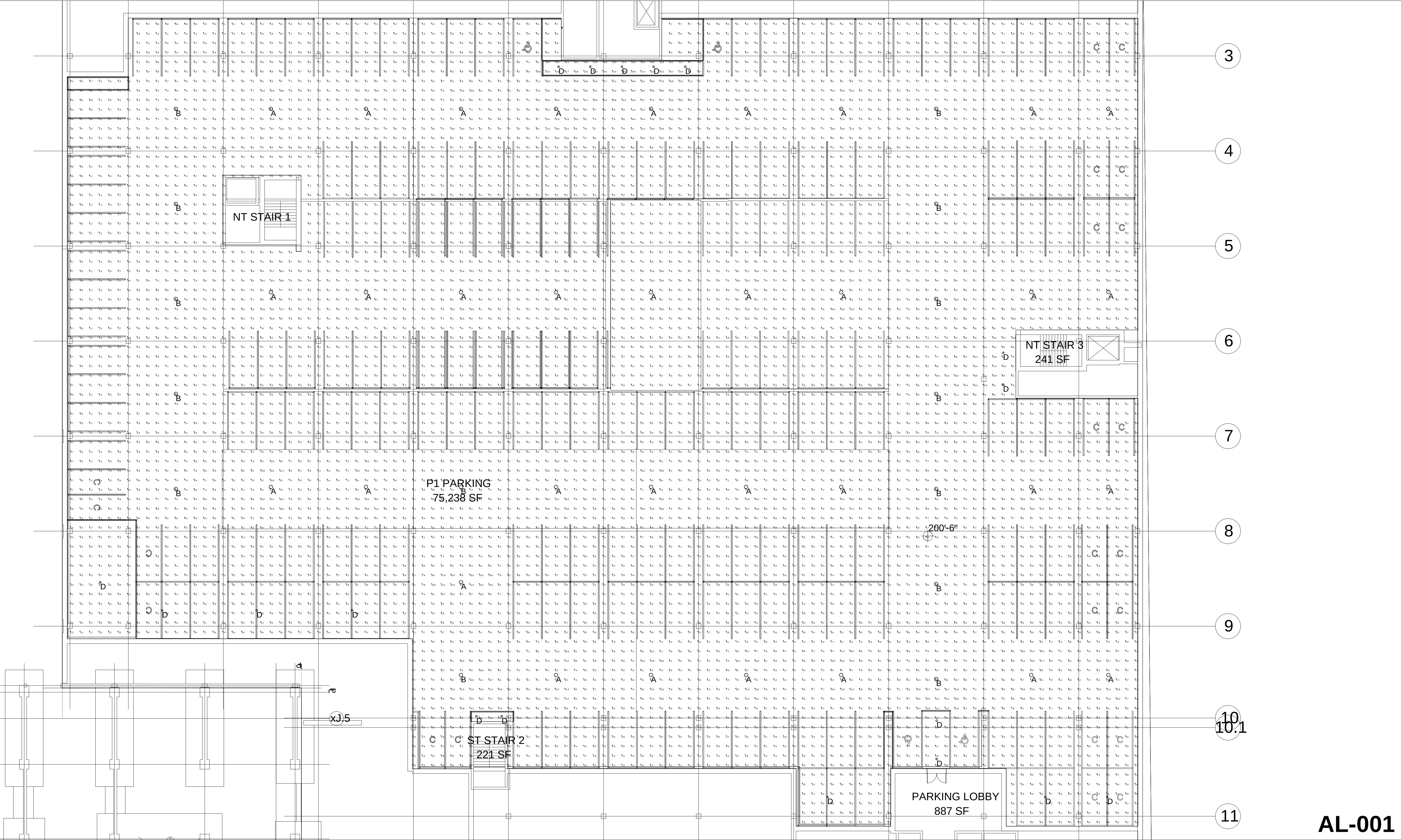
ENABLING SCOPE
BASIS OF DESIGN DRAWING

Calculation Summary					
Room Name	Avg	Max	Min	Avg/Min	Max/Min
LEVEL 1 Floor	5.15	20.9	0.4	N.A.	N.A.
TYP DRIVE LANE	6.65	13.3	3.7	1.80	3.59

Room Summary	
Room Name	Wall Ht.
LEVEL 1	11

Luminaire Schedule (note fixture catalogue numbers are not complete)						
Tag	Symbol	Qty	Lum. Lumens	LLF	Lum. Watts	Description
A	⊙	33	8714	0.900	71.2	SRT2-65-4K7-5RW
B	⊙	14	8634	0.900	71.2	SRT2-65-4K7-5QW
D	⊙	18	3769	0.900	34.6	SRT1-35-4K7-5QW

- NOTES:
- 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
 - 2) CALCULATIONS MAY OR MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE.
 - 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
 - 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE.
 - 5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
 - 6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
 - 7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.



PLAN VIEW

GENERATED FOR:
FREEMAN, FRENCH
FREEMAN

SCALE AS SHOWN

DATE: 11/29/2020

Page 1 of 1

REF. NO. CITY PLACE LVL 1.AGI

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

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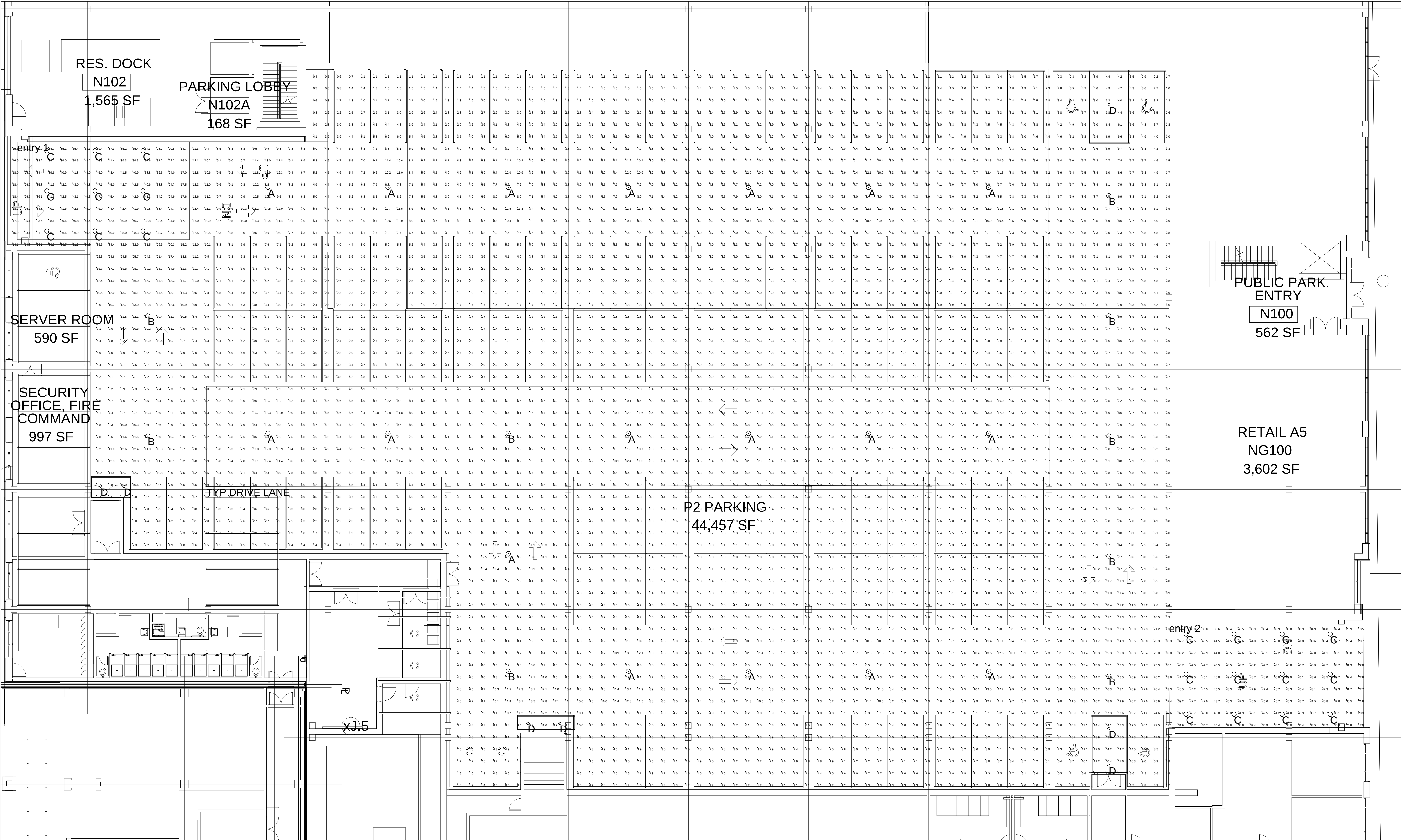
AL-001

Calculation Summary					
Room Name	Avg	Max	Min	Avg/Min	Max/Min
LEVEL 2_Floor	7.35	50.8	0.4	N.A.	N.A.
entry 1	35.64	47.9	14.7	2.42	3.26
entry 2	40.12	50.8	17.9	2.24	2.84
TYP DRIVE LANE	6.70	13.3	3.8	1.76	3.50

Room Summary	
Room Name	Wall Ht.
LEVEL 2	11

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	Symbol	Qty	Lum. Lumens	LLF	Lum. Watts
A	⊙	18	8714	0.900	71.2
B	⊙	9	8634	0.900	71.2
C	⊙	21	9064	1.040	87.2
D	⊙	7	3769	0.900	34.6

- NOTES:
- 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
 - 2) CALCULATIONS MAY OR MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE.
 - 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
 - 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE.
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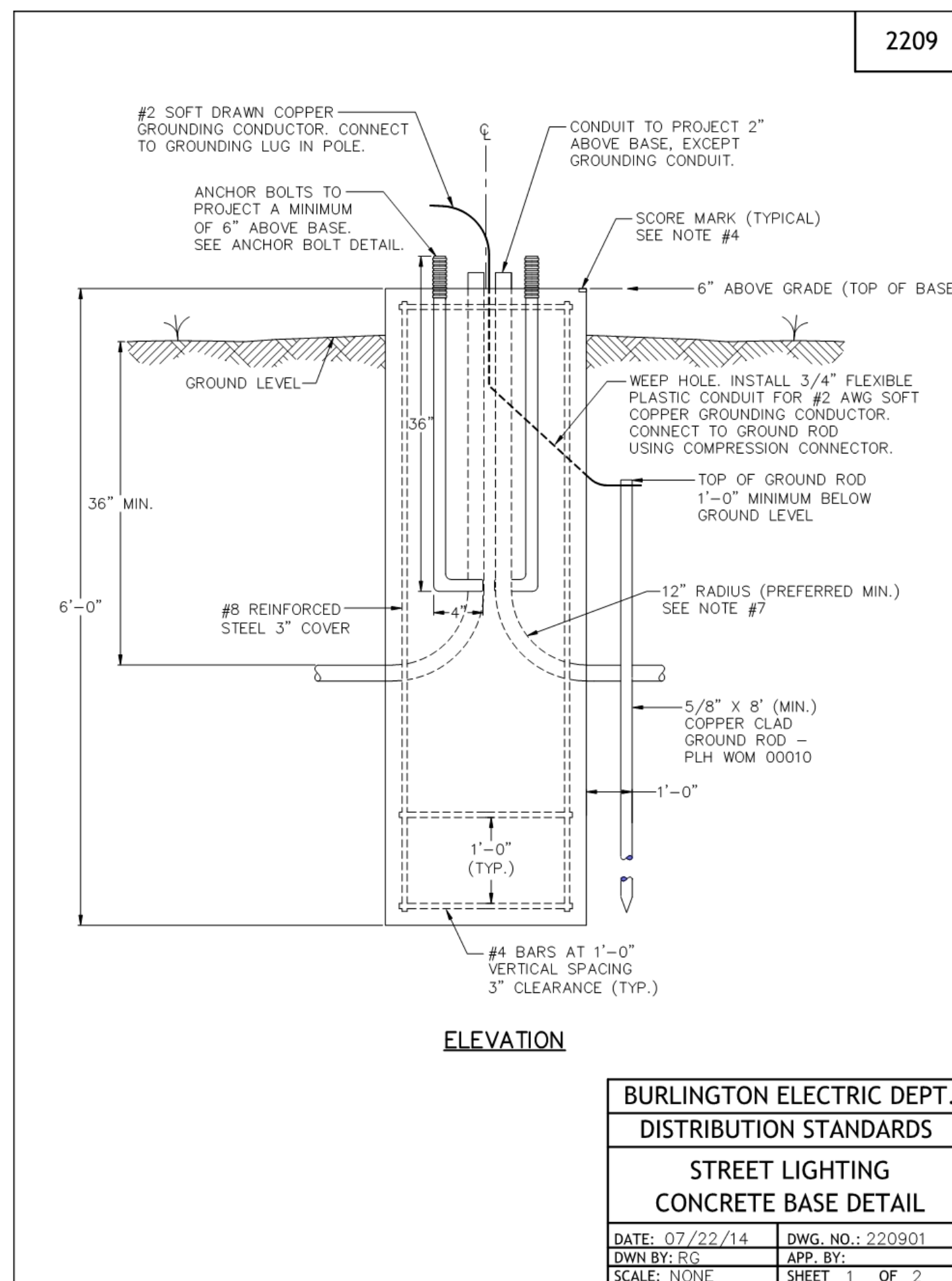
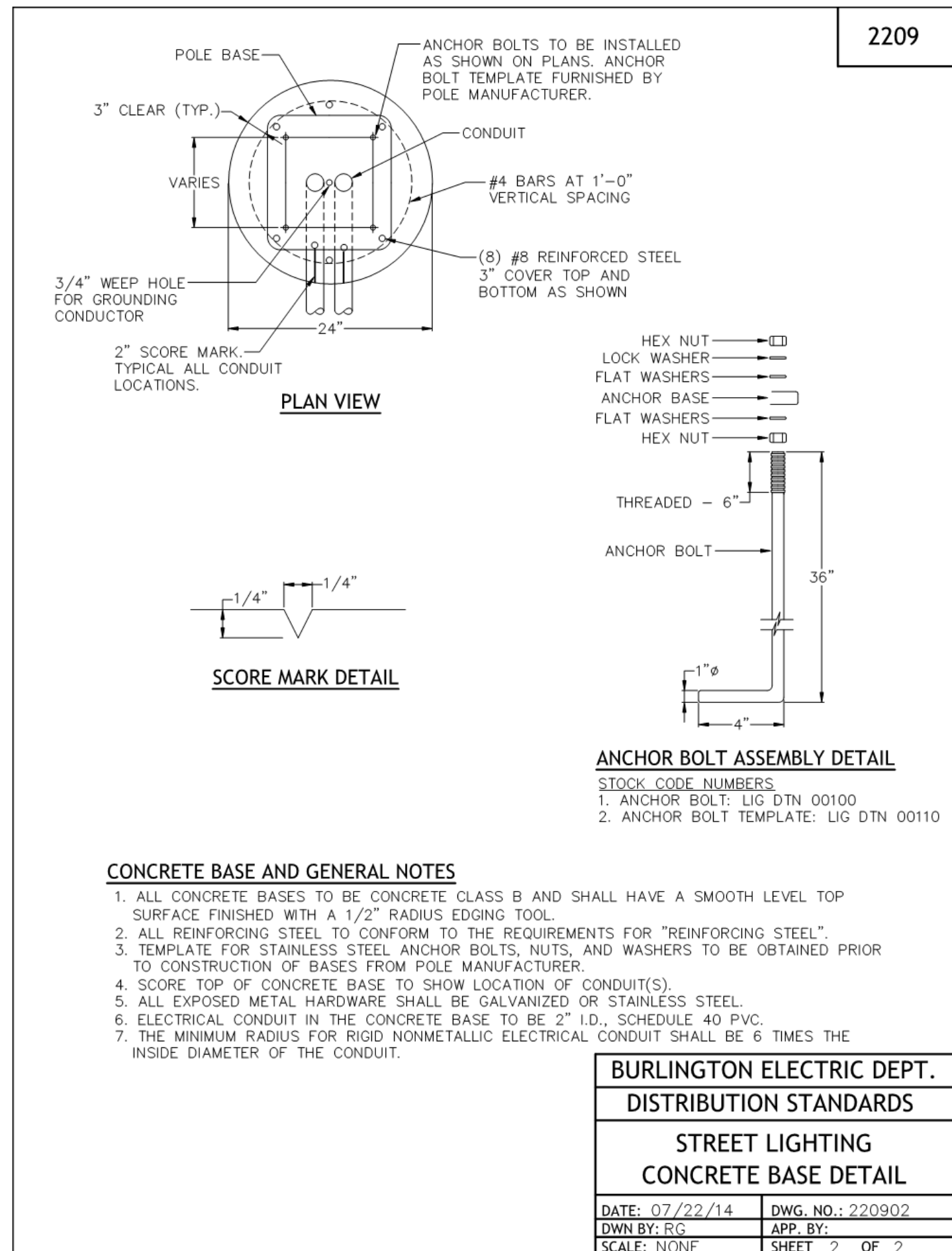
PLAN VIEW

BURLINGTON CENTER GARAGE
BURLINGTON, VT
LEVEL 2 - LIGHTING LAYOUT

GENERATED FOR:
FREEMAN, FRENCH
FREEMAN
SCALE AS SHOWN



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1 LIGHTING CUT CHEETS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0" REF.:

Pine St - heading South 134 points			Pine St - sidewalk East 184 points			Mid Block - Pine 16 points		
Average	1.52	0.16	Average	1.05	0.34	Average	3.93	0.09
Maximum	2.82	0.38	Maximum	5.48	0.31	Maximum	4.59	0.09
Minimum	0.55	0.08	Minimum	0.31	0.09	Minimum	2.98	0.09
Avg. Min	1.72	0.51	Avg. Min	3.40	0.78	Avg. Min	1.32	0.09
Max. Min	3.20	4.75	Max. Min	17.68	0.78	Max. Min	1.54	0.09
Coef Var	0.30	0.51	Coef Var	0.78	0.85	Coef Var	0.09	0.09

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 271.8 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 271.8 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.25

Pine St - heading North 134 points			Pine St - Sidewalk West 235 points		
Average	1.60	0.19	Average	1.05	0.34
Maximum	2.92	0.77	Maximum	5.66	0.31
Minimum	0.82	0.10	Minimum	0.31	0.09
Avg. Min	1.95	1.85	Avg. Min	3.40	0.78
Max. Min	3.56	7.70	Max. Min	18.26	0.85
Coef Var	0.29	0.48	Coef Var	0.85	0.85

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 91.8 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 91.8 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.48

2 PINE STREET LIGHTING CALCULATIONS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"

St Paul St - heading North - Upper Block 56 points			St Paul St - heading North - Lower Block 76 points			St Paul St - sidewalk West 237 points		
Average	0.98	0.16	Average	0.97	0.34	Average	3.71	0.07
Maximum	1.28	0.34	Maximum	3.55	0.31	Maximum	4.15	0.07
Minimum	0.78	0.10	Minimum	0.28	0.09	Minimum	3.31	0.07
Avg. Min	1.26	1.63	Avg. Min	3.46	0.78	Avg. Min	1.12	0.07
Max. Min	1.64	3.40	Max. Min	14.11	0.72	Max. Min	1.25	0.07
Coef Var	0.13	0.44	Coef Var	0.72	0.85	Coef Var	0.07	0.07

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 91.9 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 91.9 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.35

St Paul St - heading South - Lower Block 77 points			St Paul St - heading South - Upper Block 56 points			St Paul St - sidewalk East 167 points		
Average	1.31	0.24	Average	1.35	0.10	Average	0.91	0.34
Maximum	2.28	0.70	Maximum	2.37	0.14	Maximum	2.78	0.31
Minimum	0.52	0.09	Minimum	0.91	0.08	Minimum	0.36	0.09
Avg. Min	2.51	2.72	Avg. Min	1.49	1.31	Avg. Min	2.52	0.78
Max. Min	4.38	7.78	Max. Min	2.60	1.75	Max. Min	7.72	0.85
Coef Var	0.37	0.69	Coef Var	0.23	0.14	Coef Var	0.55	0.85

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 278.1 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 278.1 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.54

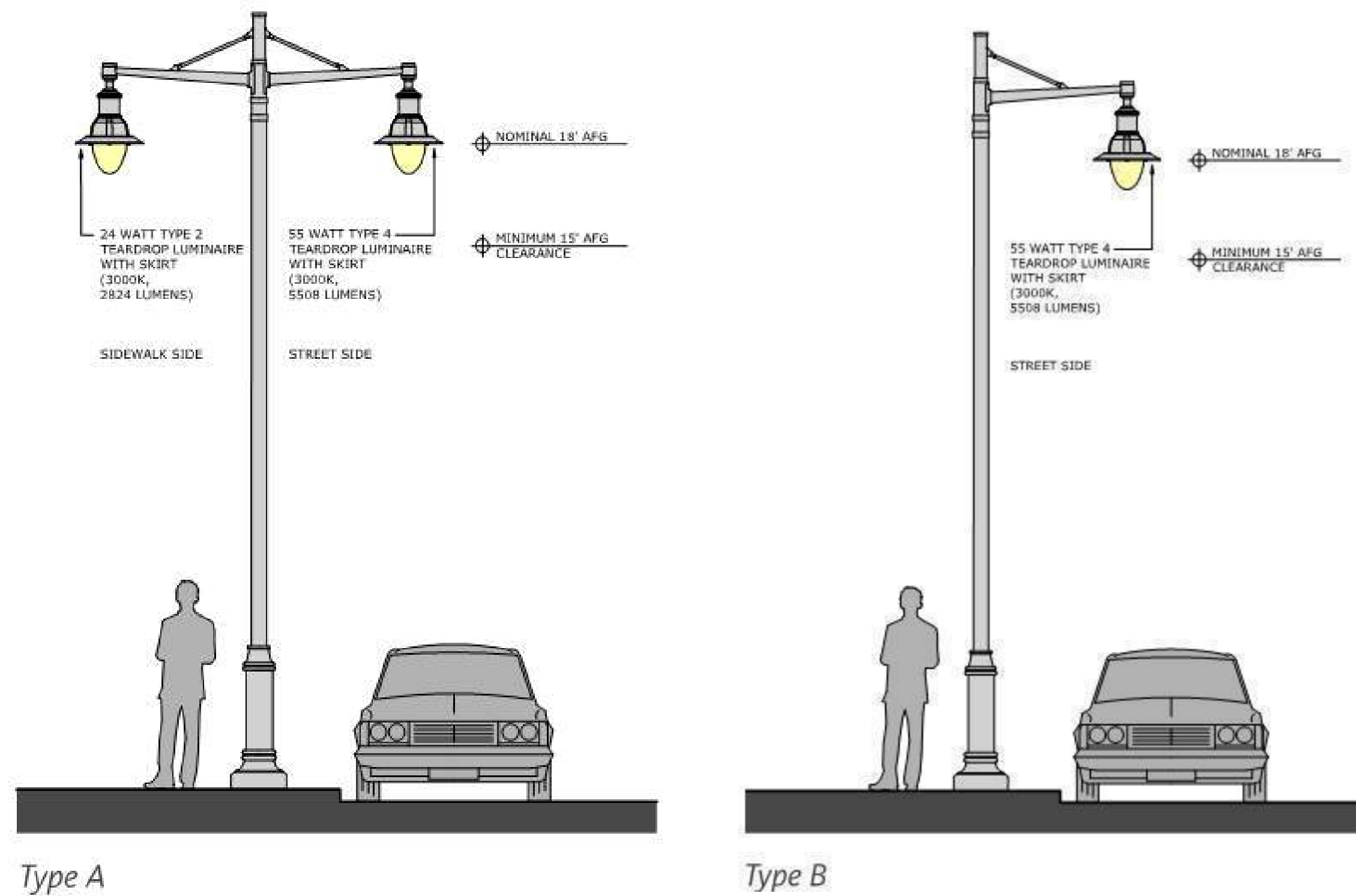
St Paul St - heading South Upper Block

Average 1.35 | 0.10 | Maximum | 2.37 | 0.14 | Minimum | 0.91 | 0.08 | Avg. Min | 1.49 | 1.31 | Max. Min | 2.60 | 1.75 | Coef Var | 0.23 | 0.14 |

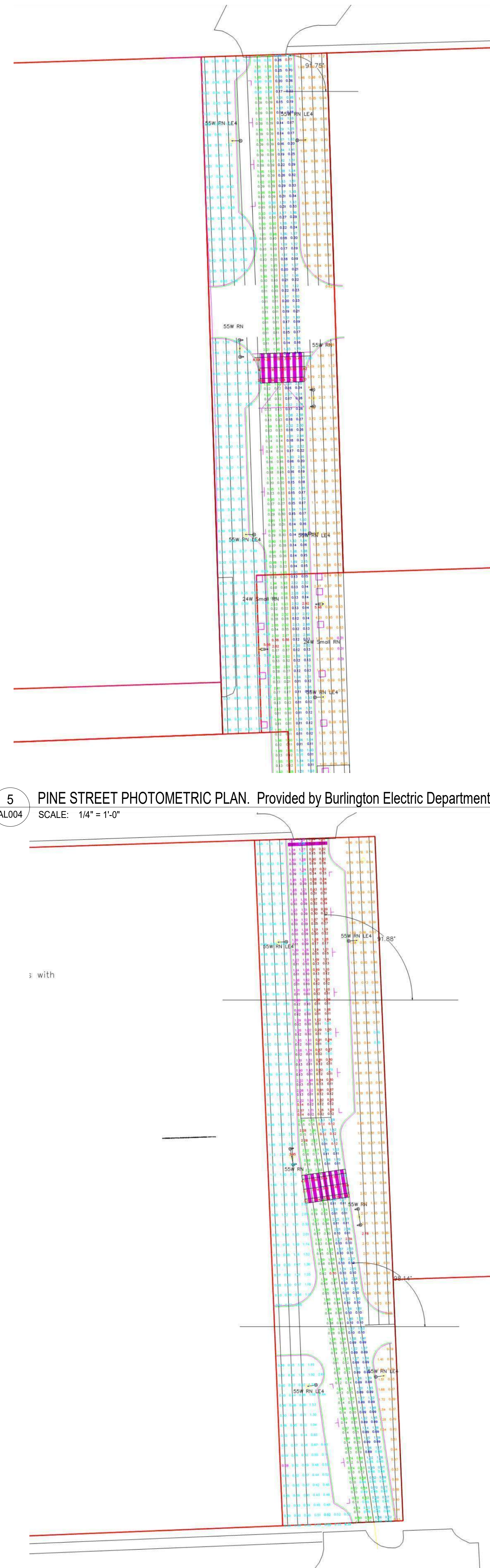
A ROADWAY LUMINANCE (CD/SQ METER) travel direction 271.9 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 271.9 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.10

3 ST PAUL STREET LIGHTING CALCULATIONS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"



4 LIGHTING FIXTURES- From Great Streets Standards
SCALE: 1/4" = 1'-0"



6 ST PAUL STREET PHOTOMETRIC PLAN. Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"



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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

PROJECT NO.:
A1947.00
CONSULTANT PROJ. #:
ORIGINATOR DATE:
02/06/20
SCALE:
1/4" = 1'-0"
DRAWN BY:
Author
CHECKED BY:
Checker
SHEET NO.:
Zoning Submission
04 Feb 2020

SHEET CONTENTS
STREET AND
SIDEWALK
LIGHTING

SHEET NO.:
AL004

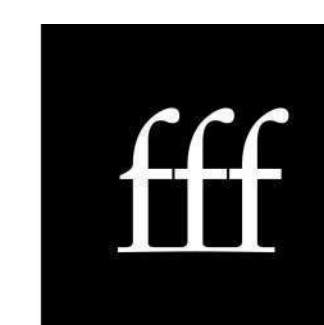
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CITYPLACE BURLINGTON

ZONING SUBMISSION

October 15, 2020

REVISION 2, 15 JAN 2021



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d/b/a BTC Mall Associates, LLC
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COVER, CONTENTS, PLAT	
ID	Sheet Name
-	COVER SHEET
A000.1	INDEX
a	PLAT PLAN

Civil Drawings	
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C102	DEMOLITION PLAN
C103	SITE PLAN
C104	GRADING PLAN
C105	UTILITY PLAN
C106	EROSION PREVENTION & SEDIMENT CONTROL PLAN

C201	ST. PAUL STREET PROFILE
C203	PINE STREET PROFILE
C205	PINE STREET SECTIONS
C206	ST. PAUL STREET SECTIONS
C207	ST. PAUL STREET WATERLINE PROFILE
C208	ST. PAUL STREET & BANK STREET SEWER PROFILE
C300	SITE DETAILS & NOTES
C301	WATER DETAILS & NOTES
C302	SEWER DETAILS & NOTES
C303	STORMWATER DETAILS
C304	STORMWATER DETAILS
C304G	GARAGE STORMWATER DETAILS
C305	EROSION PREVENTION & SEDIMENTATION CONTROL DETAILS
C306	DETAILS
C307	ST. PAUL STREET ROAD SECTIONS
C308	PINE STREET ROAD SECTIONS

Landscape Drawings	
ID	Sheet Name
LA200	MATERIALS PLAN
LA400	PLANTING PLAN

Architectural Drawings	
ID	Sheet Name
A090	OVERALL PLAN- BASEMENT AND P1 PARKING
A100	OVERALL PLAN- GROUND FLOOR AND P2 PARKING
A100.5	OVERALL PLAN- GROUND FLOOR MEZZANINES AND P3 PARKING
A101	OVERALL PLAN- FIRST FLOOR
A102	OVERALL PLAN- LEVEL 2
A103	OVERALL PLAN- LEVEL 3
A104	OVERALL PLAN- LEVEL 4
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A109	OVERALL PLAN- LVL 9 AMENITIES & MECHANICAL PENTHOUSES
A110	MECHANICAL PENTHOUSE
A200	EXTERIOR ELEVATIONS
A201	EXTERIOR ELEVATIONS
A210	RENDERINGS
A211	RENDERINGS
A212	SUN STUDIES
A220	AXONOMETRIC 3D MASSING
A300	BUILDING SECTIONS - NORTH BUILDING
A310	WALL SECTIONS
A410	TYPICAL UNITS
AE100	WEST ELEVATION, CHURCH STREET DETAIL
AE113	ENABLING PLAN - ROOF
AE201	ENABLING EXTERIOR ELEVATION - SOUTH
AL001	LEVEL 1 - GARAGE LIGHTING
AL002	LEVEL 2 - GARAGE LIGHTING
AL003	LEVEL 3 - GARAGE LIGHTING
AL004	STREET AND SIDEWALK LIGHTING

HIGHLIGHTING INDICATES REVISIONS FOR SUBMISSION CLARIFICATIONS (REV 1) 11/9/2020 or REV 2, 1/15/21- SEE INDIVIDUAL SHEET ISSUE LOGS FOR DETAILS.

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A PROJECT BY

DEVONWOOD INVESTORS, LLC

DOAN SANEZ, MANAGING DIRECTOR

FF# PROJECT NO:	CONSULTANT PROJ. #
A1947.00	
ORIGINATION DATE:	SCALE:
03/XX/2020	
DRAWN BY:	CHECKED BY:
NE	JDR
ISSUE LOGS:	
Submission Clarifications	15 Oct 2020
Rev. 2	15 Jan 2021

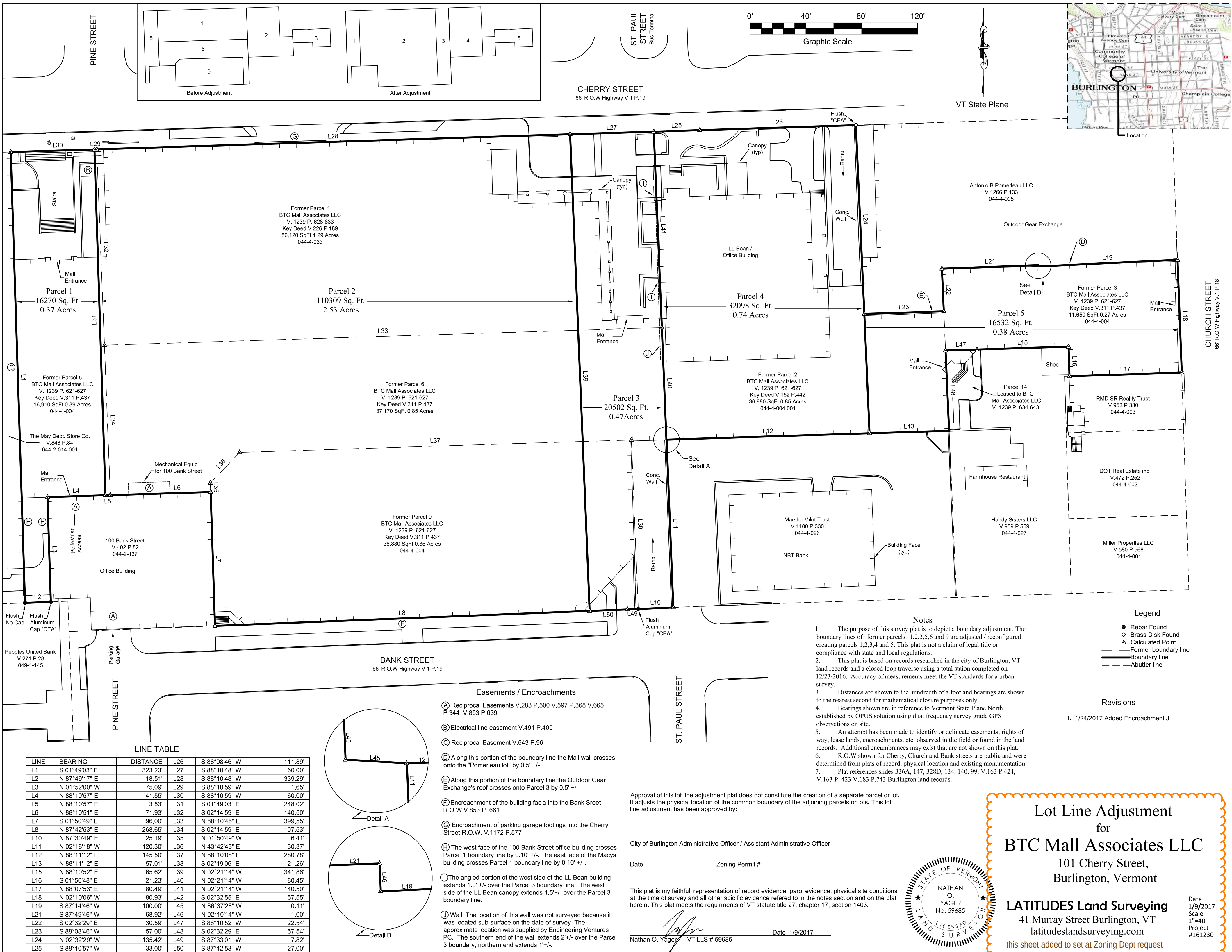
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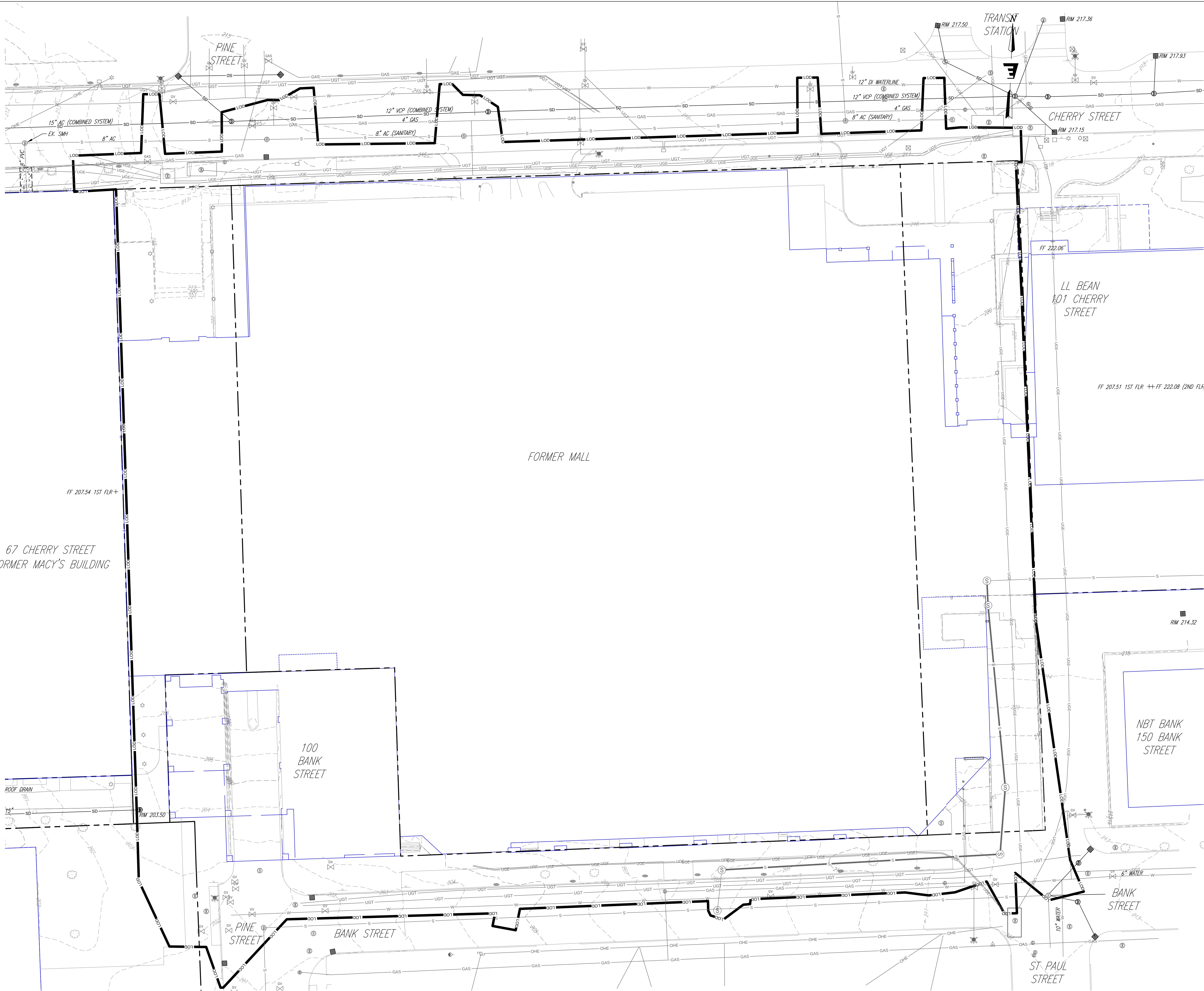
INDEX

SHEET NO:

A000.1

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EXISTING CONDITIONS LEGEND

- BOLLARD
- SN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR
- WATERLINE/GATE VALVE/HYDRANT
- SANITARY SEWER LINE/MANHOLE
- STORM LINE/CATCH BASIN/MANHOLE
- NATURAL GAS LINE/VALVE
- OVERHEAD ELECTRIC/SITE LIGHT
- UNDERGROUND ELECTRIC/PULL BOX
- UNDERGROUND TELECOM/PULL BOX

SURVEY NOTES

INFORMATION DEPICTED ON THIS PLAN HAS BEEN COLLECTED FROM A VARIETY OF SOURCES INCLUDING THE FOLLOWING:

1. TOPOGRAPHIC SURVEYS BY LATITUDES LAND SURVEY, PC, NATE YAGER, LLS OCT. AND NOV. 2016.
2. UTILITY RECORD DRAWINGS
3. CITY OF BURLINGTON RECORD DRAWINGS
4. CITY OF BURLINGTON GIS
5. CITY OF BURLINGTON TAX MAPS

NOT ALL INFORMATION IS ACCURATE OR CURRENT. SUBSURFACE CONDITIONS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL CONDITIONS MAY BE MATERIALLY DIFFERENT.

67 CHERRY STREET
FORMER MACY'S BUILDING

FORMER MALL

LL BEAN
101 CHERRY STREET

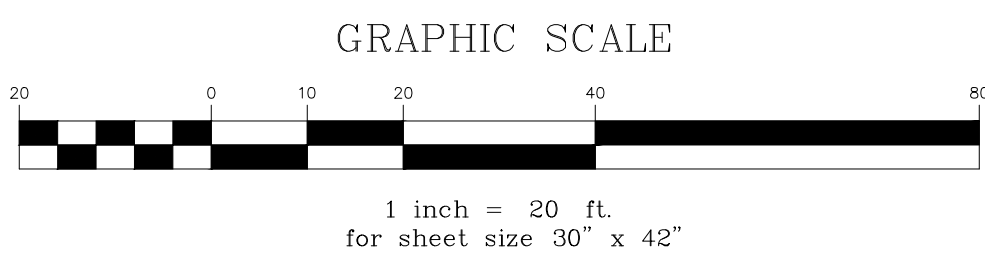
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100 BANK STREET

NBT BANK
150 BANK STREET

BANK STREET

ST. PAUL STREET



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BTC MALL ASSOCIATES, LLC

A PROJECT BY

DEVONWOOD INVESTORS, LLC

DEVELOPER - MANAGING DIRECTOR

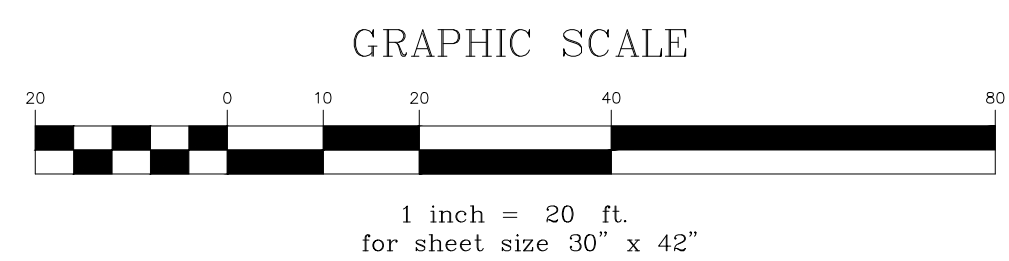
PROJECT NO.	CONSULTANT PROJECT NO.
A1947.00	14660
ORIGIN DATE:	SCALE:
10/15/20	As Indicated
DRAWN BY:	CHECKED BY:
HKW	KW
DATE LOG:	
Zoning Submission	15 Oct 2020

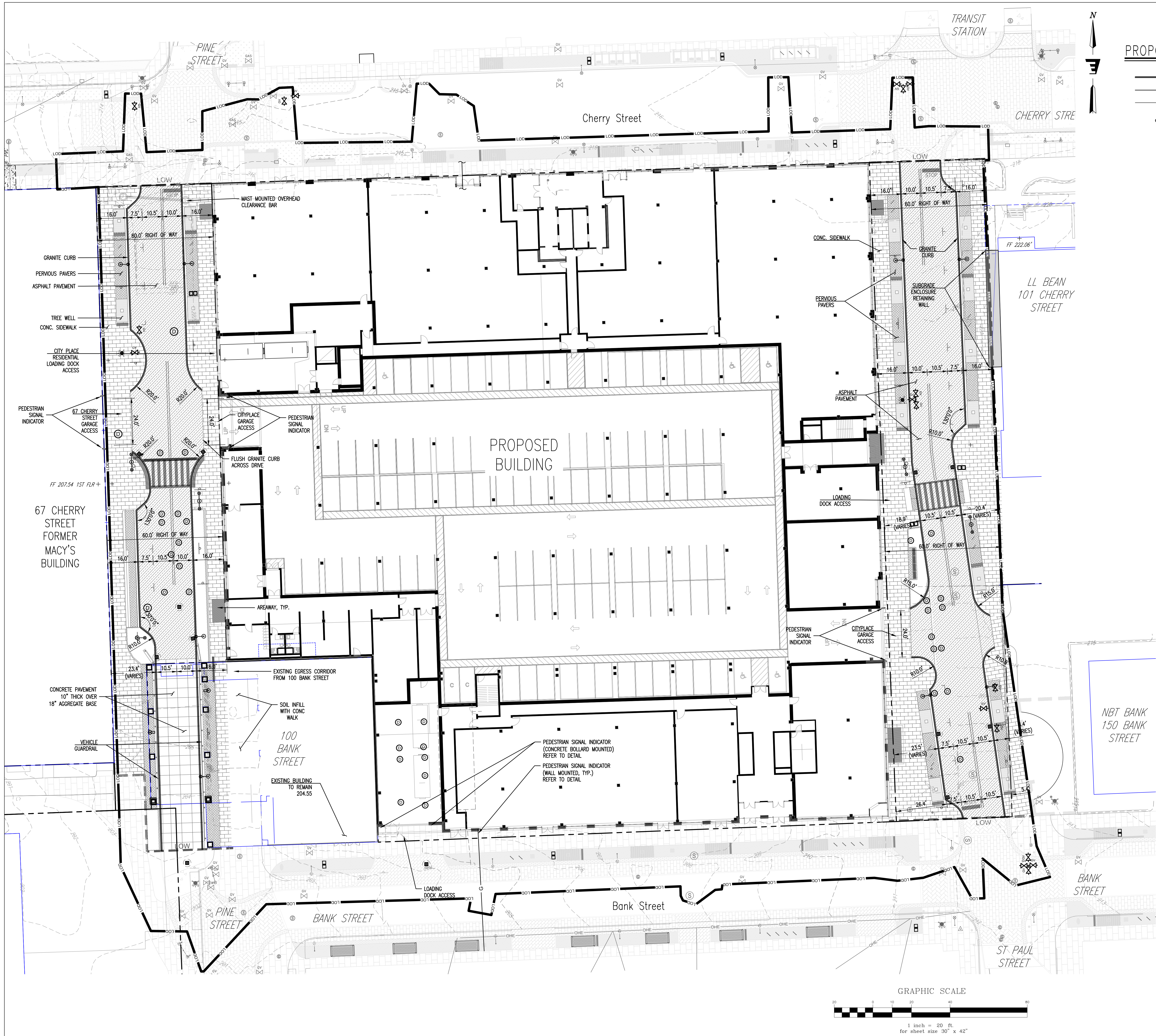
SHEET CONTENTS:

Existing
Conditions
Plan

SHEET NO.

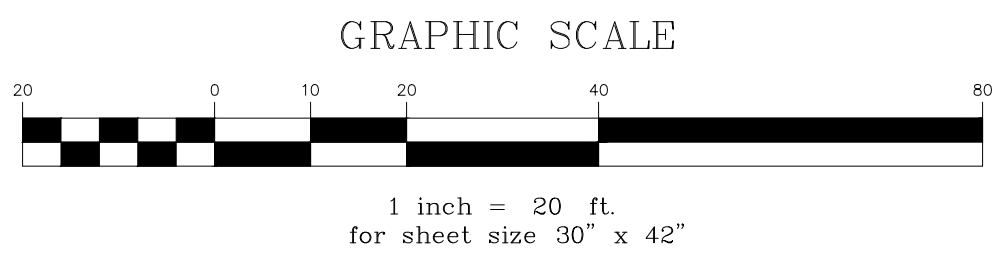
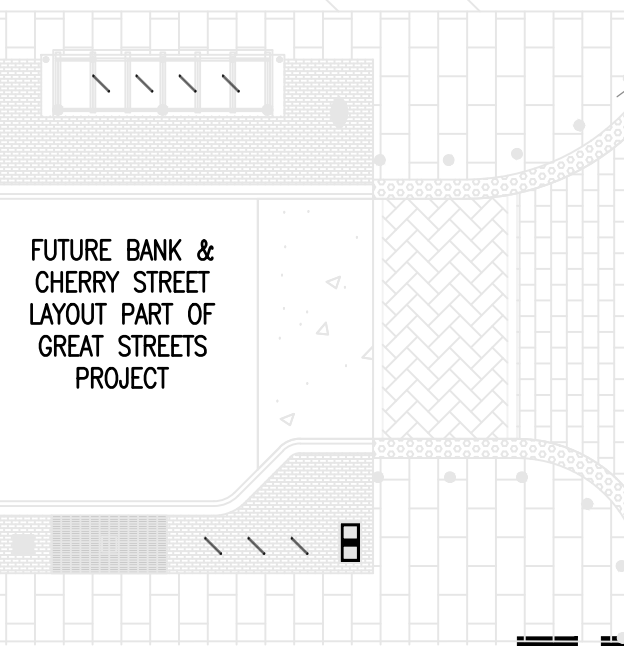
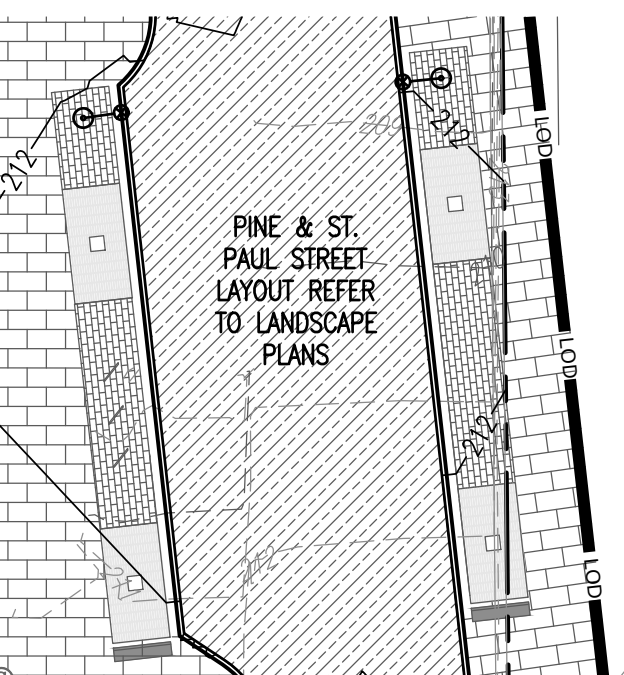
C-101





PROPOSED FEATURES LEGEND

- EDGE OF PAVEMENT/CURB
- 250 MAJOR CONTOUR
- 251 MINOR CONTOUR
- SIGN
- SITE LIGHT
- CATCH BASIN
- DRAINAGE MANHOLE
- WATER VALVE
- HYDRANT
- SEWER MANHOLE



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DEVONWOOD INVESTORS, LLC
DON SHINE, MANAGING DIRECTOR

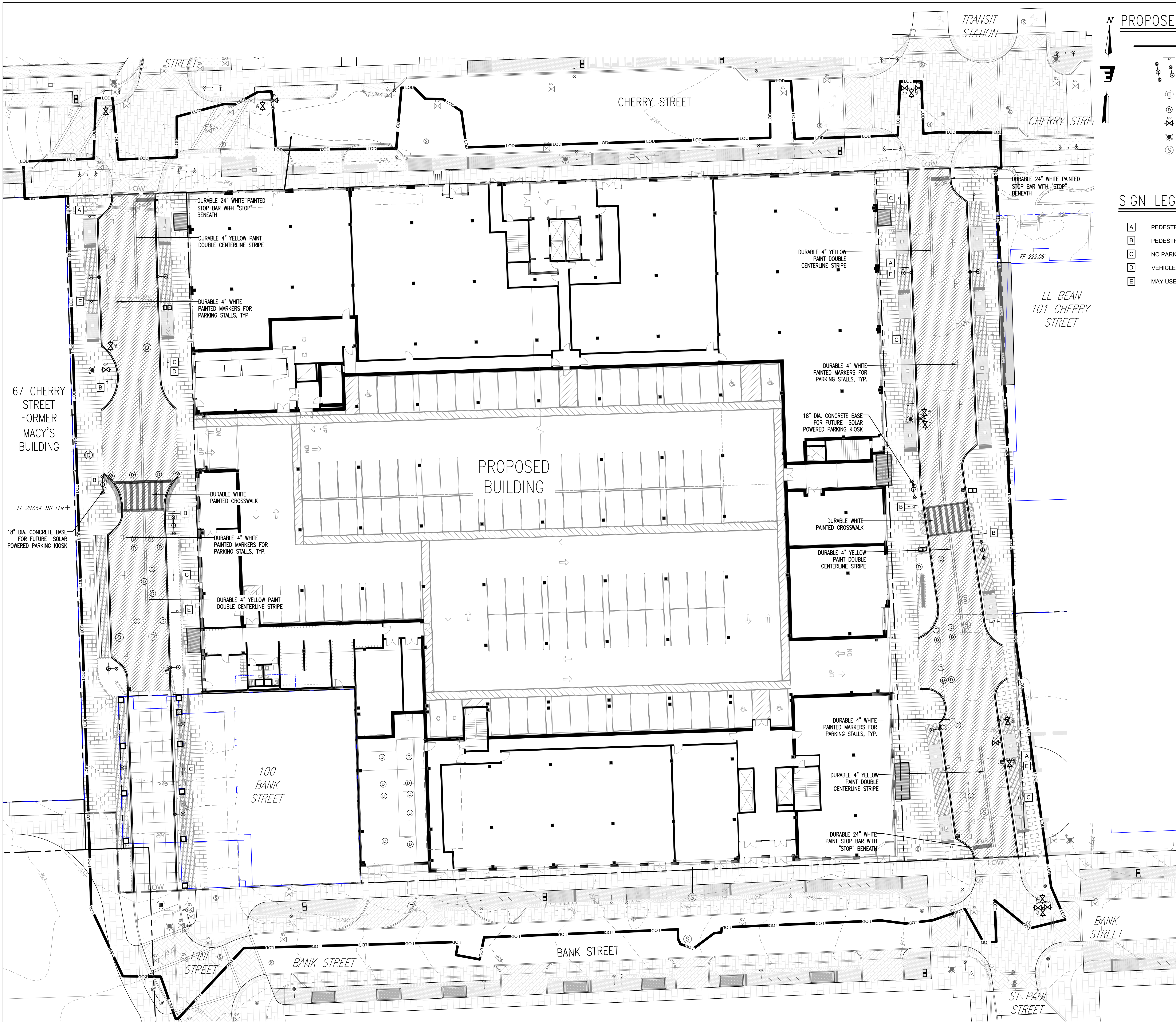
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A1947.00	14660
ORIGINATION DATE:	SCALE:
10/15/20	As Indicated
DRAWN BY:	CHECKED BY:
HKW	KW
ISSUE LOG:	
Zoning Submission	15 Oct 2020

SHEET CONTENTS:

Site Plan

SHEET NO:
C-103

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PROPOSED FEATURES LEGEND

- EDGE OF PAVEMENT/CURB
- SIGN
- SITE LIGHT
- CATCH BASIN
- DRAINAGE MANHOLE
- WATER VALVE
- HYDRANT
- SEWER MANHOLE

EXISTING CONDITIONS LEGEND

- BOLLARD
- SIGN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR

SIGN LEGEND

- A PEDESTRIANS
- B PEDESTRIAN CROSSING, YIELD
- C NO PARKING THIS SIDE OF STREET
- D VEHICLE LOADING/LIMITED PARKING
- E MAY USE FULL LANE/SHARE THE ROAD

GRAPHIC SCALE



1 inch = 20 ft
for sheet size 30" x 42"



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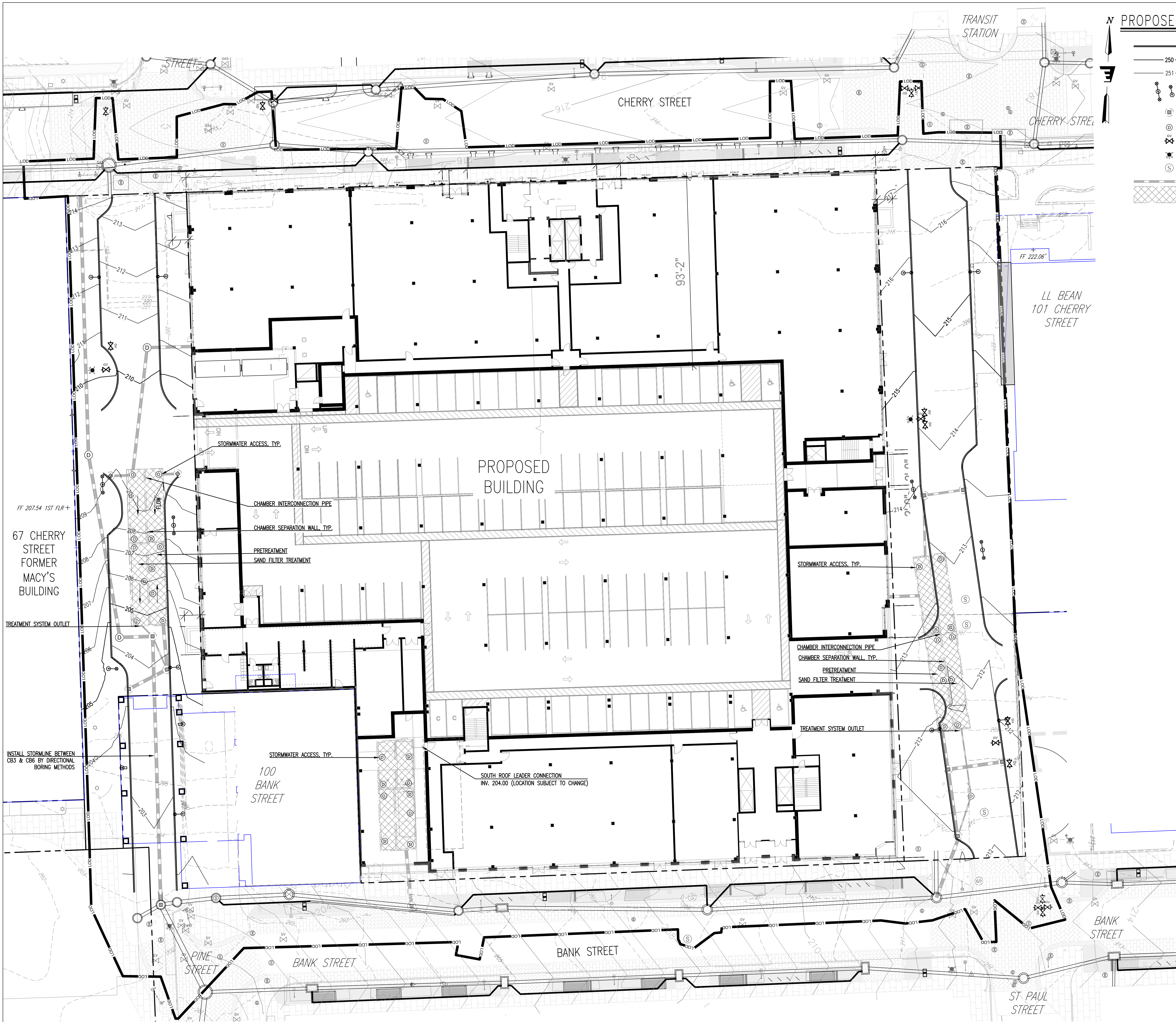
CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DEN SNEY, MANAGING DIRECTOR

HY PROJECT NO:	A1947.00	CONSULTANT PROJ. NO:	14660
ORIGINATION DATE:	10/15/20	SCALE:	As Indicated
DRAWN BY:	HKW	CHECKED BY:	KW
DATE LOG:	Zoning Submission		15 Oct 2020

SHEET CONTENTS:
Sign &
Pavement
Marking Plan

SHEET NO:
C-103B

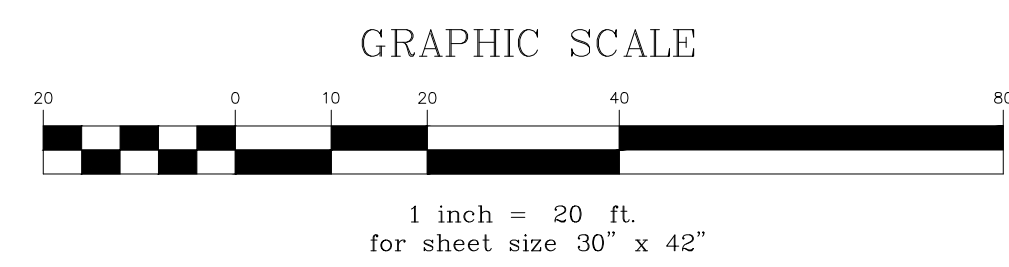


PROPOSED FEATURES LEGEND

- EDGE OF PAVEMENT/CURB
- 250 MAJOR CONTOUR
- 251 MINOR CONTOUR
- SITE LIGHT
- CATCH BASIN
- DRAINAGE MANHOLE
- WATER VALVE
- HYDRANT
- SEWER MANHOLE
- STORM PIPE
- SUBSURFACE STORMWATER TREATMENT AREA

EXISTING CONDITIONS LEGEND

- BOLLARD
- SN
- PARKING METER
- MINOR CONTOUR
- MAJOR CONTOUR



CITYPLACE
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ZONING SUBMISSION - NOT FOR CONSTRUCTION

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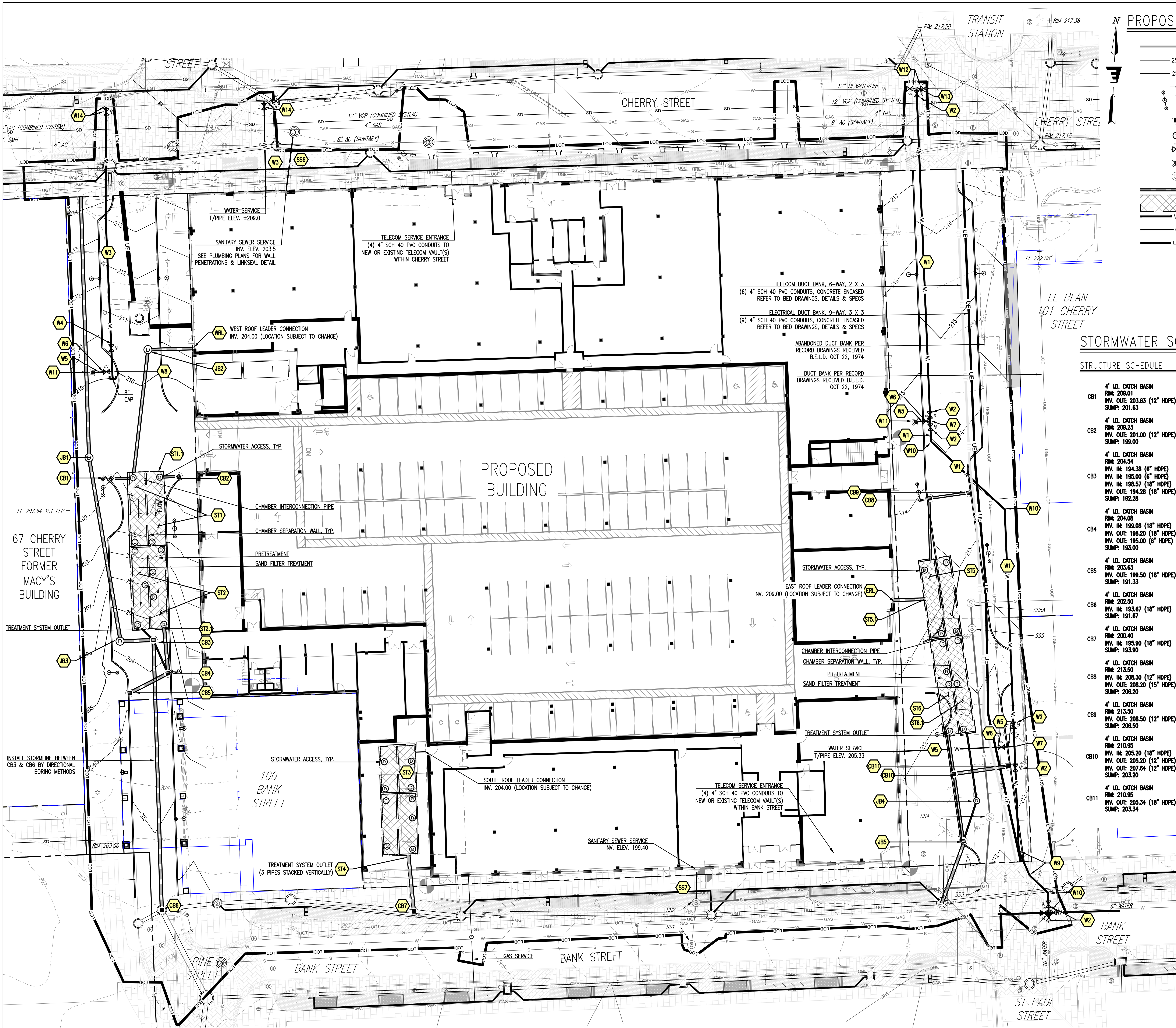
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A1947.00	14660
ORIGINATION DATE:	SCALE:
10/15/20	As Indicated
DRAWN BY:	CHECKED BY:
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Zoning Submission	15 Oct 2021

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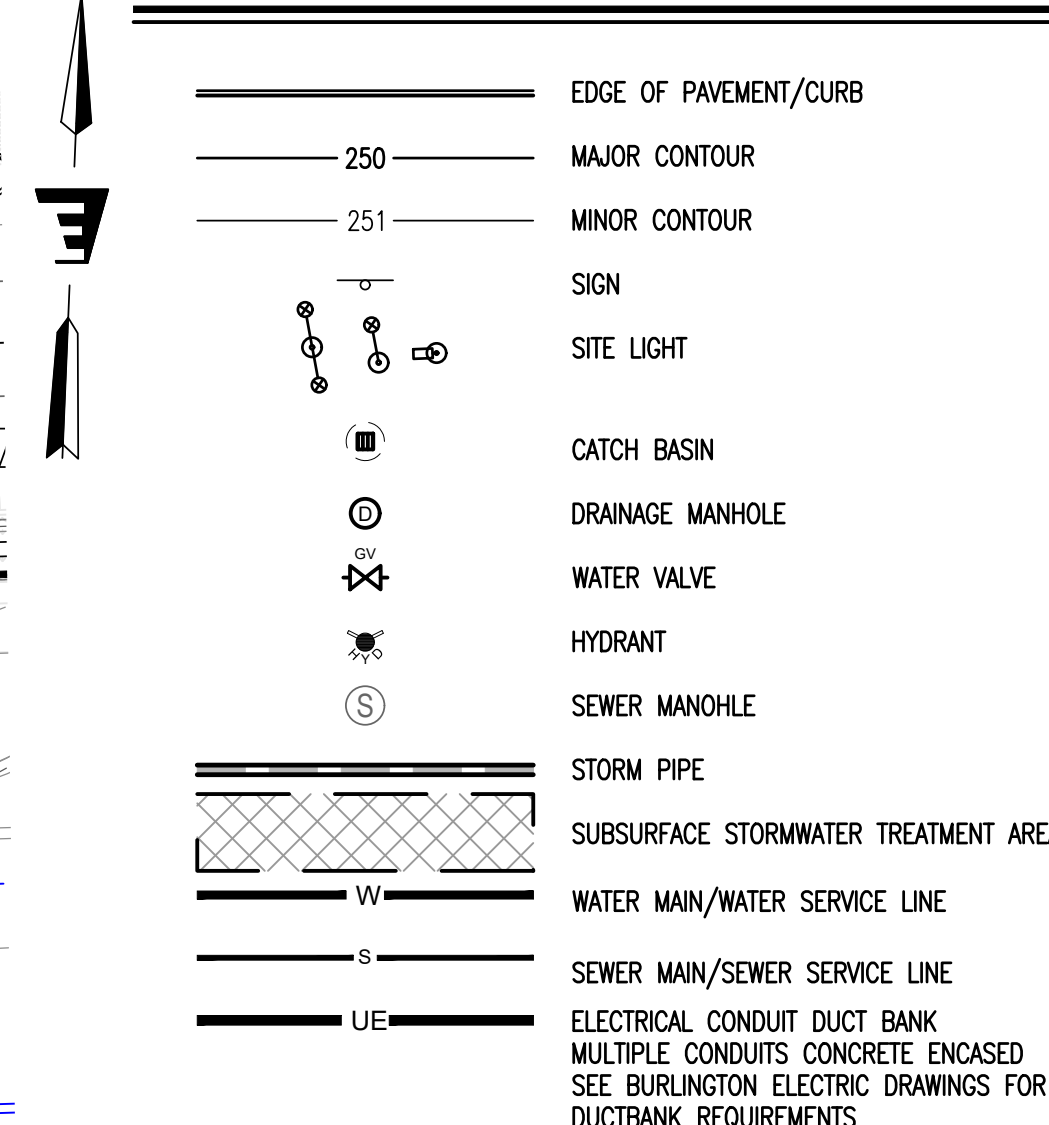
Grading Plan

SHEET NO.
C-104

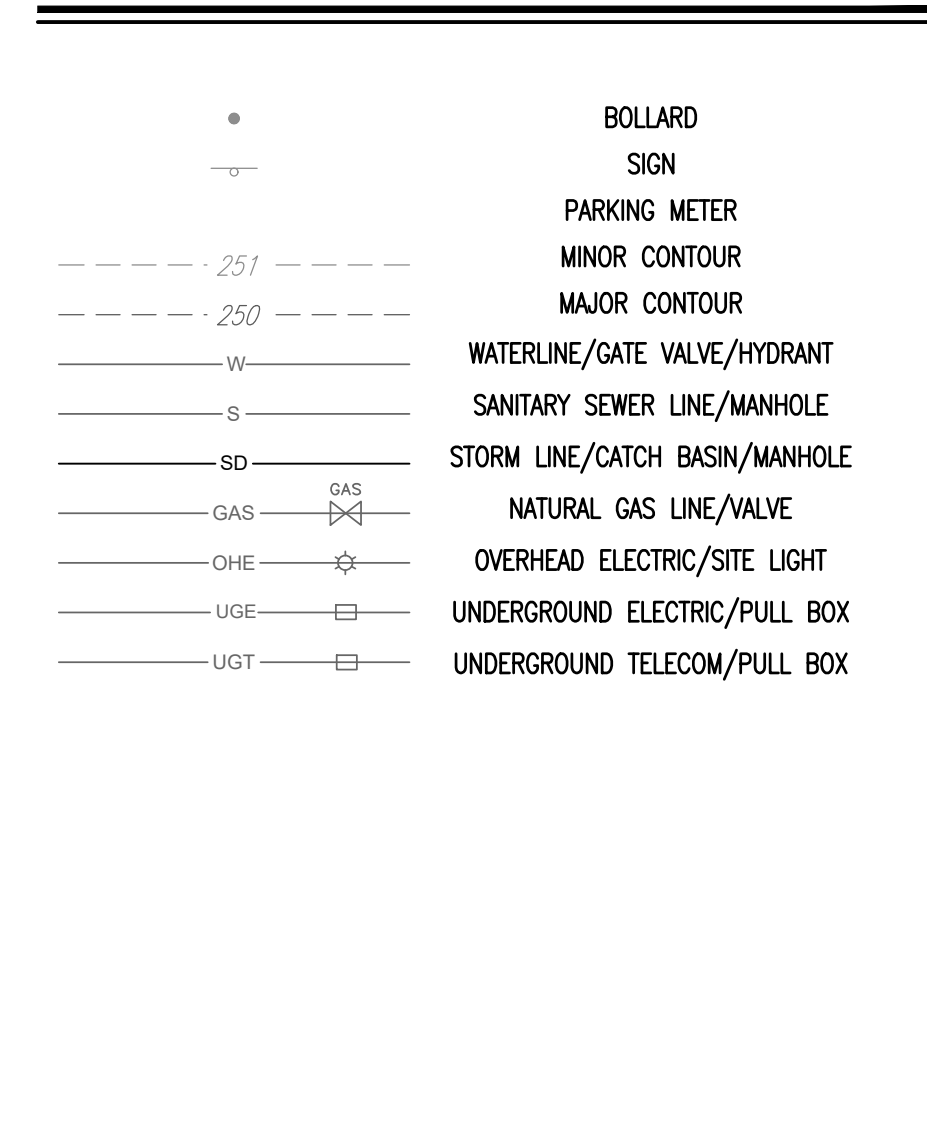
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PROPOSED FEATURES LEGEND



EXISTING CONDITIONS LEGEND



STORMWATER SCHEDULE

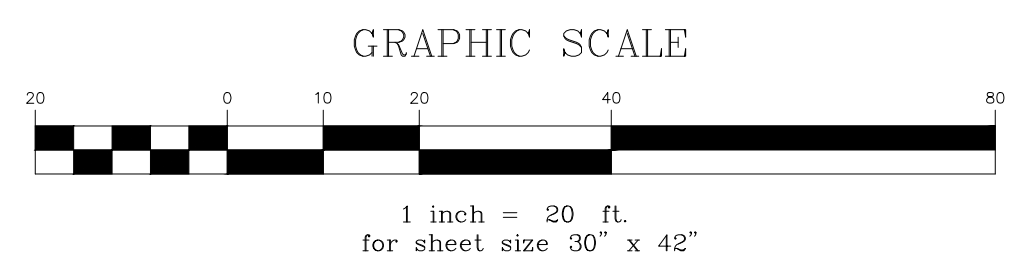
STRUCTURE SCHEDULE	PIPE SCHEDULE
CB1 4" I.D. CATCH BASIN RM: 209.01 INV. OUT: 203.63 (12" HDPE) SUMP: 201.63	4" I.D. MANHOLE RM: 209.54 INV. IN: 205.00 (18" HDPE) SUMP: 203.50
CB2 4" I.D. CATCH BASIN RM: 208.23 INV. OUT: 201.00 (12" HDPE) SUMP: 199.00	4" I.D. MANHOLE RM: 210.80 INV. IN: 203.70 (15" HDPE) SUMP: 202.16
CB3 4" I.D. CATCH BASIN RM: 204.54 INV. IN: 194.38 (6" HDPE) INV. IN: 195.00 (6" HDPE) INV. OUT: 194.28 (18" HDPE) SUMP: 192.28	4" I.D. MANHOLE RM: 204.50 INV. IN: 200.00 (18" HDPE) SUMP: 198.50
CB4 4" I.D. CATCH BASIN RM: 204.08 INV. IN: 198.20 (18" HDPE) INV. OUT: 195.00 (6" HDPE) SUMP: 193.00	4" I.D. MANHOLE RM: 211.47 INV. IN: 201.08 (6" HDPE) INV. OUT: 201.19 (12" HDPE) SUMP: 199.58
CB5 4" I.D. CATCH BASIN RM: 203.63 INV. OUT: 199.50 (18" HDPE) SUMP: 191.33	4" I.D. MANHOLE RM: 209.22 INV. IN: 207.28 (12" HDPE) SUMP: 199.48
CB6 4" I.D. CATCH BASIN RM: 202.50 INV. IN: 193.67 (18" HDPE) SUMP: 191.67	ERL EAST ROOF LEADER
CB7 4" I.D. CATCH BASIN RM: 200.40 INV. IN: 195.90 (18" HDPE) SUMP: 193.90	ST1 ATTENUATION TANK
CB8 4" I.D. CATCH BASIN RM: 213.50 INV. IN: 208.30 (12" HDPE) INV. OUT: 208.20 (15" HDPE) SUMP: 206.20	ST2 SAND FILTER
CB9 4" I.D. CATCH BASIN RM: 213.50 INV. IN: 208.50 (12" HDPE) SUMP: 206.50	ST2.1 PRE-TREATMENT TANK
CB10 4" I.D. CATCH BASIN RM: 210.95 INV. IN: 205.20 (18" HDPE) INV. OUT: 205.20 (12" HDPE) SUMP: 203.20	ST3 ATTENUATION TANK
CB11 4" I.D. CATCH BASIN RM: 210.95 INV. OUT: 205.34 (18" HDPE) SUMP: 203.34	ST4 SAND FILTER
	ST5 ATTENUATION TANK
	ST6 PRE-TREATMENT TANK
	ST6.1 SAND FILTER
	WRL ROOF LEADER

WATER SCHEDULE

W1 10" C900 PVC PIPE WITH TRACER WIRE
W2 10" GATE VALVE
W3 8" C900 PVC PIPE WITH TRACER WIRE
W4 8" GATE VALVE
W5 6" C900 PVC PIPE WITH TRACER WIRE
W6 6" GATE VALVE
W7 10" X 10" X 6" TEE
W8 8" X 8" X 6" TEE
W9 22.5-DEG ELBOW
W10 45-DEG ELBOW
W11 HYDRANT
W12 12" GATE VALVE
W13 12" X 12" X 10" TEE
W14 12" X 8" TAPPING SLEEVE & 8" GATE VALVE

SEWER SCHEDULE

EX. 4" I.D. MANHOLE RM: 207.80 INV. IN: 198.17 (12 inch PVC) INV. IN: 198.36 (8" PVC) INV. OUT: 198.17 (12 inch PVC)
EX. 4" I.D. MANHOLE RM: 208.13 INV. IN: 198.85 (8" PVC) INV. IN: 198.85 (8" SDR35 PVC) INV. OUT: 198.70 (8" PVC)
EX. 4" I.D. MANHOLE RM: 211.27 INV. IN: 200.03 (8" PVC) INV. OUT: 199.87 (8" PVC)
EX. 4" I.D. MANHOLE (RAISE RIM) RM: 211.70 INV. IN: 200.31 (8" SDR35 PVC) INV. OUT: 200.18 (8" PVC)
EX. 4" I.D. MANHOLE (RAISE RIM) RM: 212.47 INV. IN: 201.38 (8" PVC) INV. OUT: 201.27 (8" SDR35 PVC)
EX. 4" I.D. MANHOLE (RAISE RIM) RM: 212.65 INV. IN: 201.51 (8" PVC) INV. IN: 201.69 (8" SDR35 PVC) INV. OUT: 201.51 (8" PVC)



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ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTG MALL ASSOCIATES, LLC

BY PROJECT
DEVONWOOD INVESTORS, LLC

PROJECT NO.
A1947.00

CONTRACT NO.
14660

ORGANIZATION DATE
10/15/20

SCALE
As Indicated

DRAWN BY
HKW

CHECKED BY
KW

ISSUE LOG:
Zoning Submission

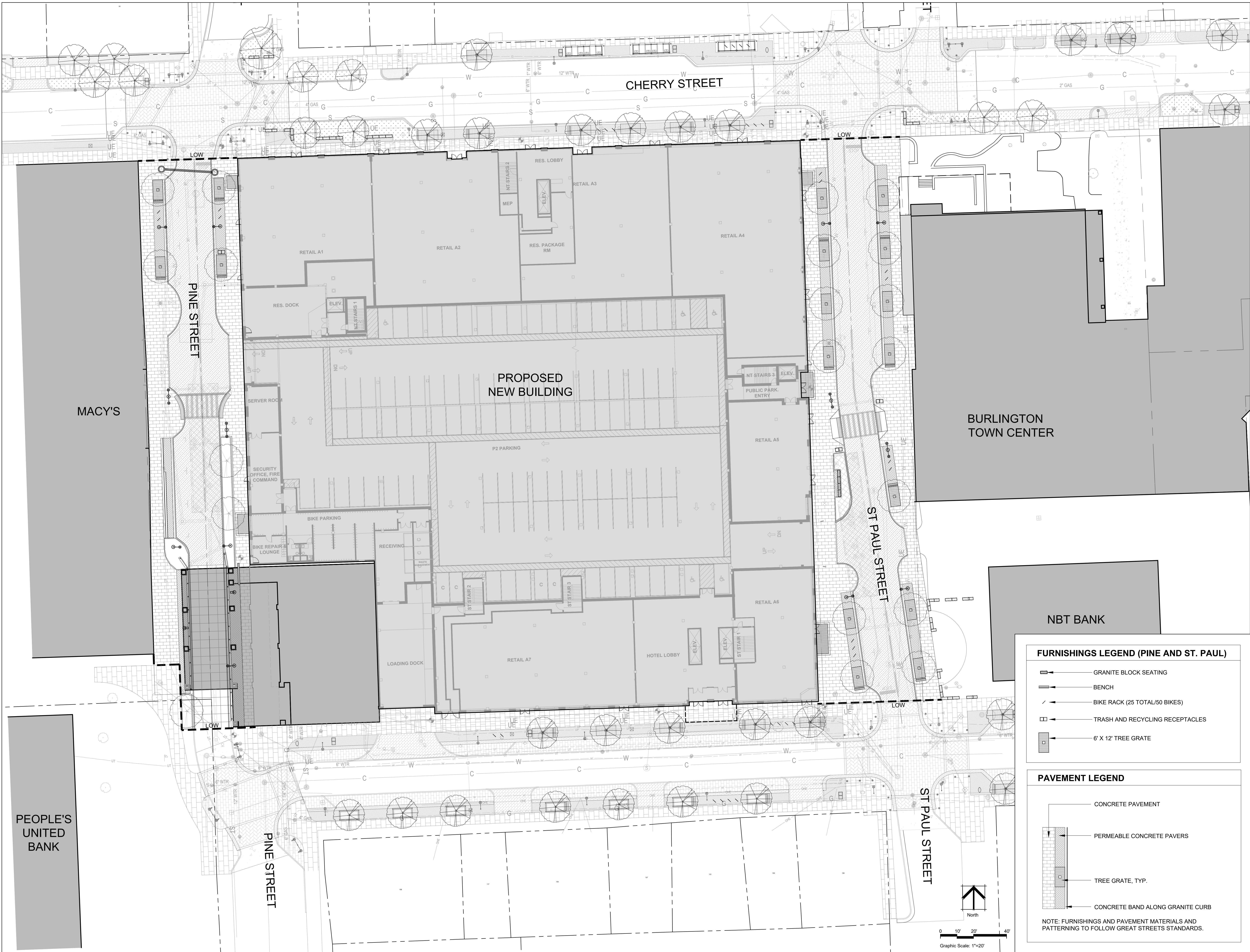
15 Oct 2020

SHEET CONTENTS:

Utility Plan

SHEET NO.
C-105

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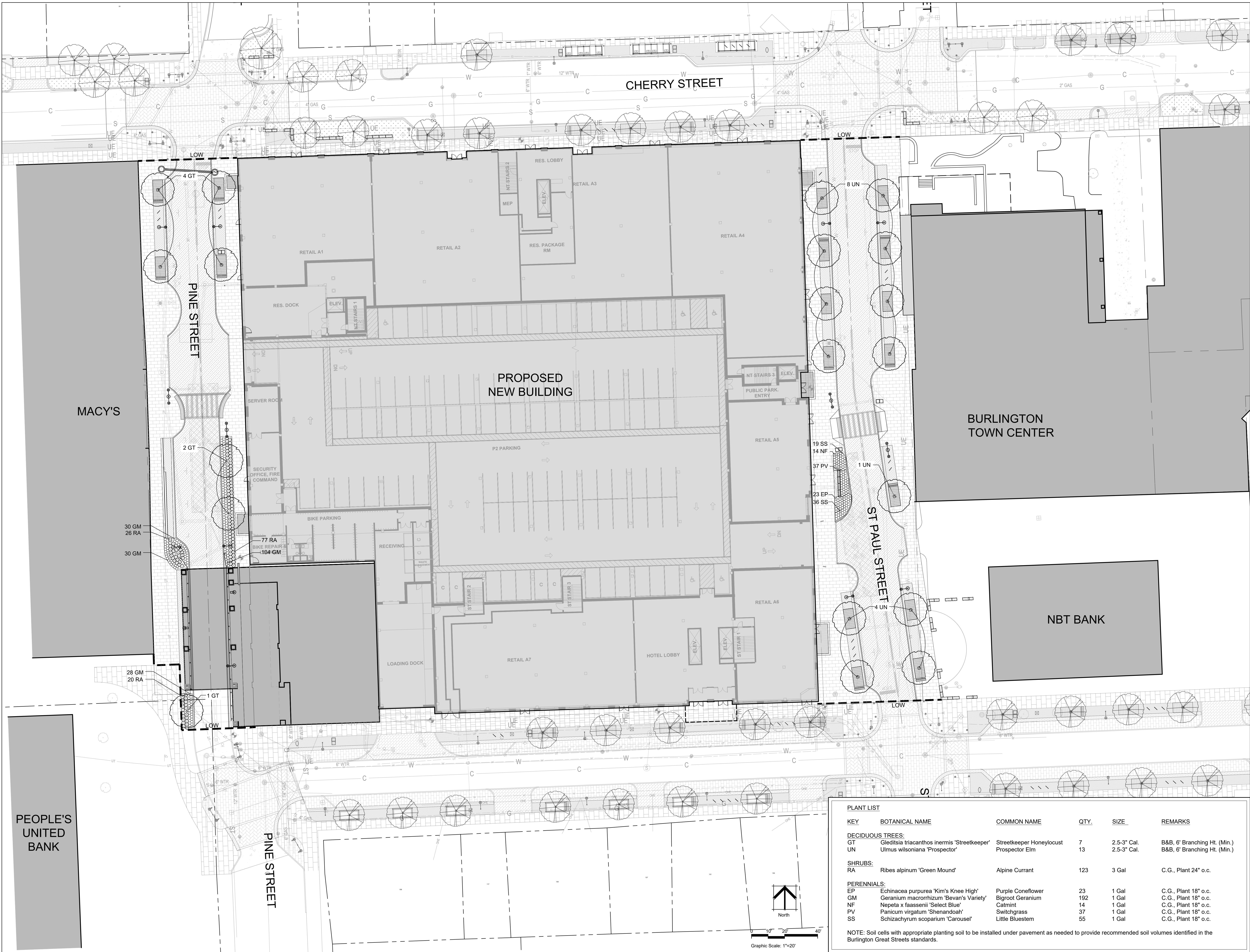
FURNISHINGS LEGEND (PINE AND ST. PAUL)

- GRANITE BLOCK SEATING
- BENCH
- BIKE RACK (25 TOTAL/50 BIKES)
- TRASH AND RECYCLING RECEPTACLES
- 6' X 12' TREE GRATE

PAVEMENT LEGEND

- CONCRETE PAVEMENT
- PERMEABLE CONCRETE PAVERS
- TREE GRATE, TYP.
- CONCRETE BAND ALONG GRANITE CURB

NOTE: FURNISHINGS AND PAVEMENT MATERIALS AND PATTERNING TO FOLLOW GREAT STREETS STANDARDS.



PLANT LIST					
KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
DECIDUOUS TREES:					
GT	Gleditsia triacanthos inermis 'Streetkeeper'	Streetkeeper Honeylocust	7	2.5-3" Cal.	B&B, 6' Branching Ht. (Min.)
UN	Ulmus wilsoniana 'Prospector'	Prospector Elm	13	2.5-3" Cal.	B&B, 6' Branching Ht. (Min.)
SHRUBS:					
RA	Ribes alpinum 'Green Mound'	Alpine Currant	123	3 Gal	C.G., Plant 24" o.c.
PERENNIALS:					
EP	Echinacea purpurea 'Kim's Knee High'	Purple Coneflower	23	1 Gal	C.G., Plant 18" o.c.
GM	Geranium macrorrhizum 'Bevan's Variety'	Bigroot Geranium	192	1 Gal	C.G., Plant 18" o.c.
NF	Nepeta x faassenii 'Select Blue'	Catmint	14	1 Gal	C.G., Plant 18" o.c.
PV	Panicum virgatum 'Shenandoah'	Switchgrass	37	1 Gal	C.G., Plant 18" o.c.
SS	Schizachyrum scoparium 'Carouse'	Little Bluestem	55	1 Gal	C.G., Plant 18" o.c.

NOTE: Soil cells with appropriate planting soil to be installed under pavement as needed to provide recommended soil volumes identified in the Burlington Great Streets standards.

10/15/2020 2:13:14 PM



2 OVERALL PLAN - BASEMENT & P1
A090 SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

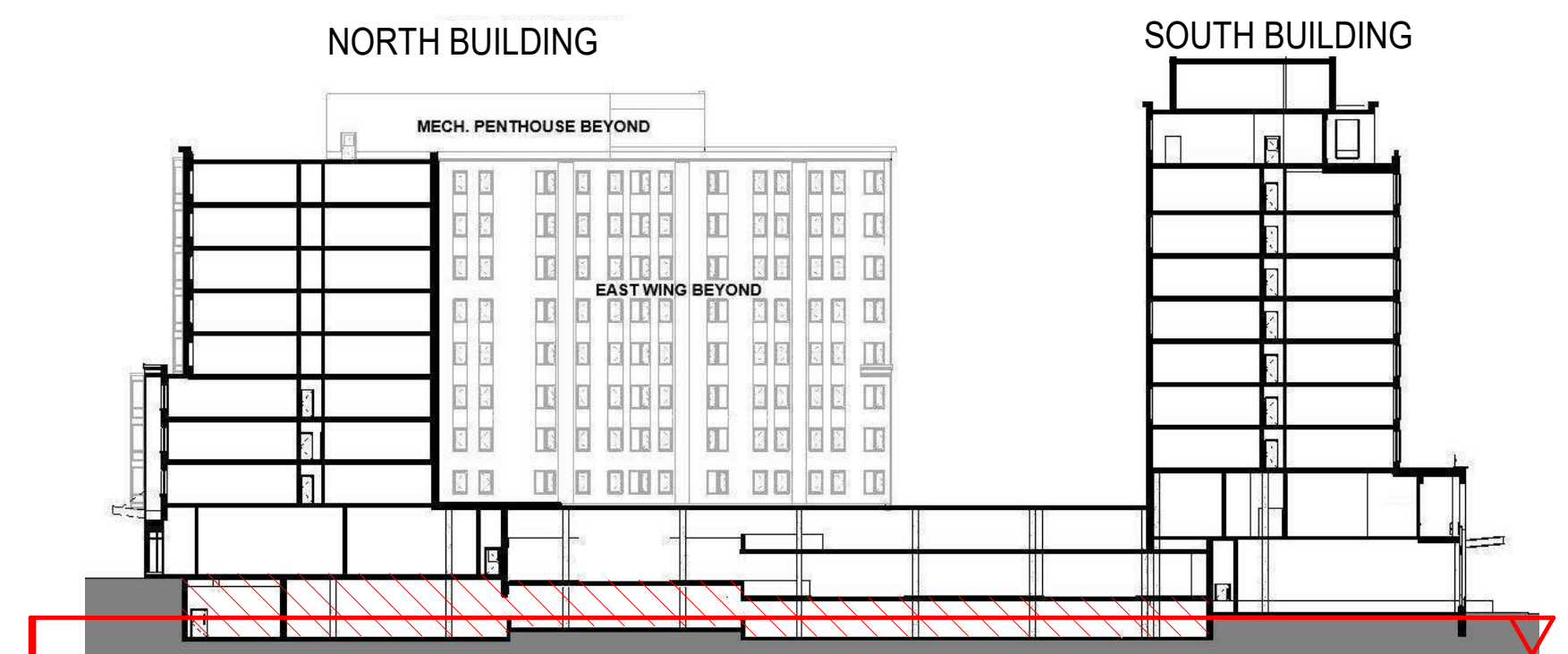
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- PARKING
 - MEP/ BUILDING SUPPORT
 - RESIDENTIAL - STORAGE
 - RES. LOBBY & AMENITY
 - RETAIL
- NORTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - RETAIL
- SOUTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - OFFICE/ CO-WORKING
 - COMMUNITY SPACE
 - MEETING, MTG SUPPORT
- THIS LEVEL (P1): 214 STRIPPED
TOTAL: 422 STRIPPED



N - PROJECT NORTH
N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

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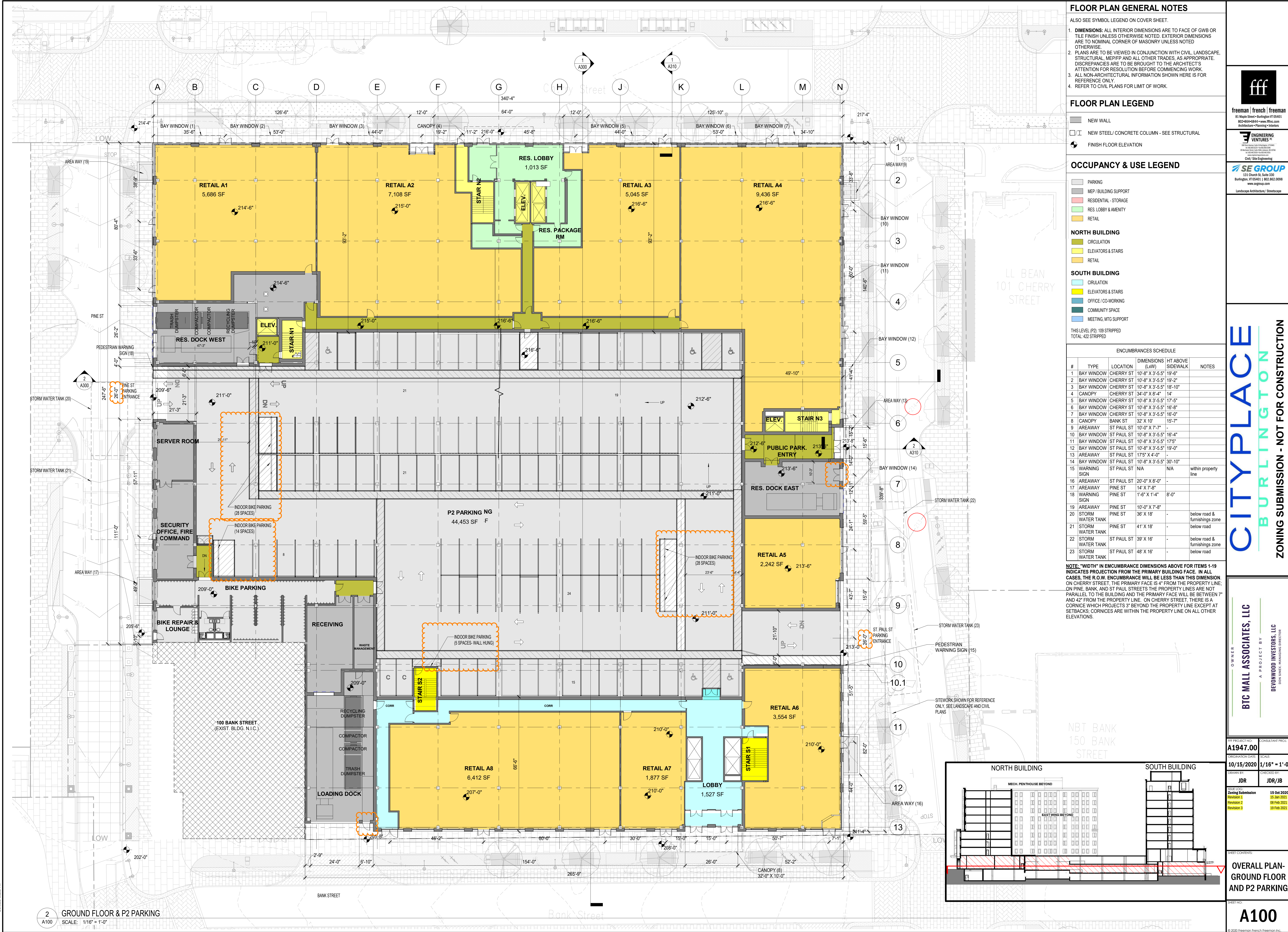
CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

FFI PROJECT NO:
A1947.00
CONSULTANT PROJ. #
ORIGINATOR DATE:
10/15/2020
SCALE:
1/16" = 1'-0"
DRAWN BY:
JDR
CHECKED BY:
JDR/JB
ISSUE LOG:
Zoning Submission
15 Oct 2020

SHEET CONTENTS
OVERALL PLAN-BASEMENT AND
P1 PARKING

SHEET NO:
A090
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FLOOR PLAN GENERAL NOTES

- ALSO SEE SYMBOL LEGEND ON COVER SHEET.
- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- PARKING
- MEP/BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- RETAIL

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RETAIL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- OFFICE/CO-WORKING
- COMMUNITY SPACE
- MEETING, MTGS SUPPORT

THIS LEVEL (P2): 109 STRIPPED
TOTAL: 422 STRIPPED

ENCUMBRANCES SCHEDULE

#	TYPE	LOCATION	DIMENSIONS (LxW)	HT ABOVE SIDEWALK	NOTES
1	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	19'-6"	
2	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	19'-2"	
3	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	18'-10"	
4	CANOPY	CHERRY ST	34'-0" X 8'-4"	14'	
5	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	17'-5"	
6	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	16'-8"	
7	BAY WINDOW	CHERRY ST	10'-8" X 3'-5.5"	16'-0"	
8	CANOPY	BANK ST	32' X 10'	15'-7"	
9	AREAWAY	ST PAUL ST	10'-0" X 7'-7"	-	
10	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	16'-4"	
11	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	17'-5"	
12	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	19'-0"	
13	AREAWAY	ST PAUL ST	17'-5" X 4'-0"	-	
14	BAY WINDOW	ST PAUL ST	10'-8" X 3'-5.5"	30'-10"	
15	WARNING SIGN	ST PAUL ST	N/A	N/A	within property line
16	AREAWAY	ST PAUL ST	20'-0" X 8'-0"	-	
17	AREAWAY	PINE ST	14' X 7'-8"	-	
18	WARNING SIGN	PINE ST	1'-6" X 1'-4"	8'-0"	
19	AREAWAY	PINE ST	10'-0" X 7'-8"	-	below road & furnishings zone
20	STORM WATER TANK	PINE ST	36' X 18'	-	below road
21	STORM WATER TANK	PINE ST	41' X 18'	-	below road & furnishings zone
22	STORM WATER TANK	ST PAUL ST	39' X 16'	-	below road & furnishings zone
23	STORM WATER TANK	ST PAUL ST	48' X 16'	-	below road

NOTE: "WIDTH" IN ENCUMBRANCE DIMENSIONS ABOVE FOR ITEMS 1-19 INDICATES PROJECTION FROM THE PRIMARY BUILDING FACE. IN ALL CASES, THE R.O.W. ENCUMBRANCE WILL BE LESS THAN THIS DIMENSION. ON CHERRY STREET, THE PRIMARY FACE IS 4" FROM THE PROPERTY LINE. ON PINE, BANK, AND ST PAUL STREETS THE PROPERTY LINES ARE NOT PARALLEL TO THE BUILDING AND THE PRIMARY FACE WILL BE BETWEEN 7' AND 42" FROM THE PROPERTY LINE. ON CHERRY STREET, THERE IS A CORNICE WHICH PROJECTS 3' BEYOND THE PROPERTY LINE EXCEPT AT SETBACKS; CORNICES ARE WITHIN THE PROPERTY LINE ON ALL OTHER ELEVATIONS.



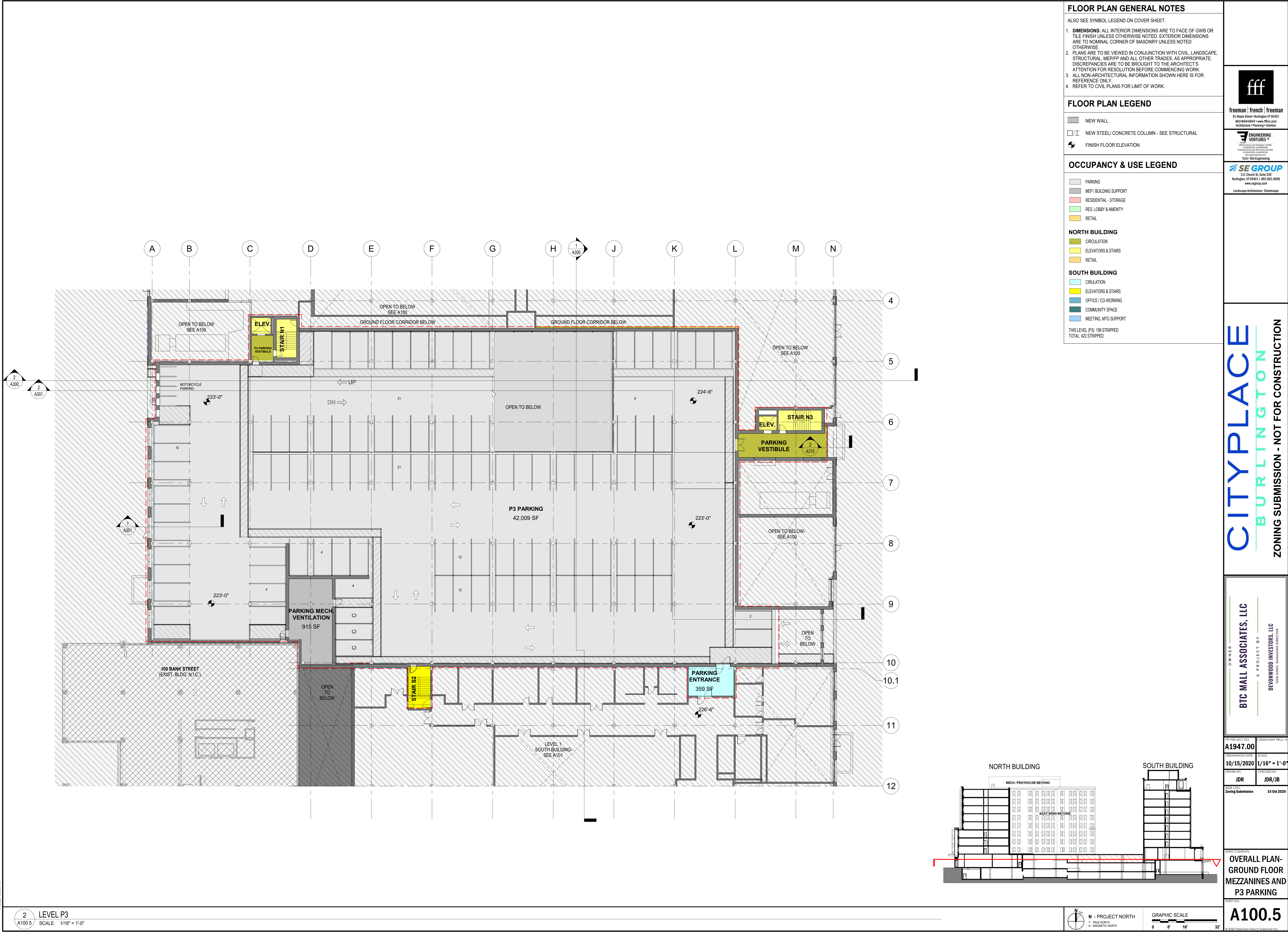
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DON SENEZ, MANAGING DIRECTOR

FFI PROJECT NO: A1947.00
CONSULTANT PROJ. #: 10/15/2020
SCALE: 1/16" = 1'-0"
DRAWN BY: JDR
CHECKED BY: JDR/JB
DATE: 10/15/2020
REVISION 1: 15 Oct 2020
REVISION 2: 15 Jan 2021
REVISION 3: 08 Feb 2021

SHEET CONTENTS
OVERALL PLAN-GROUND FLOOR AND P2 PARKING

SHEET NO: A100
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GRAPHIC SCALE



0 8' 16' 32'

10/15/2020 2:11:34 PM

2 LEVEL 2
A102 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY

NORTH BUILDING

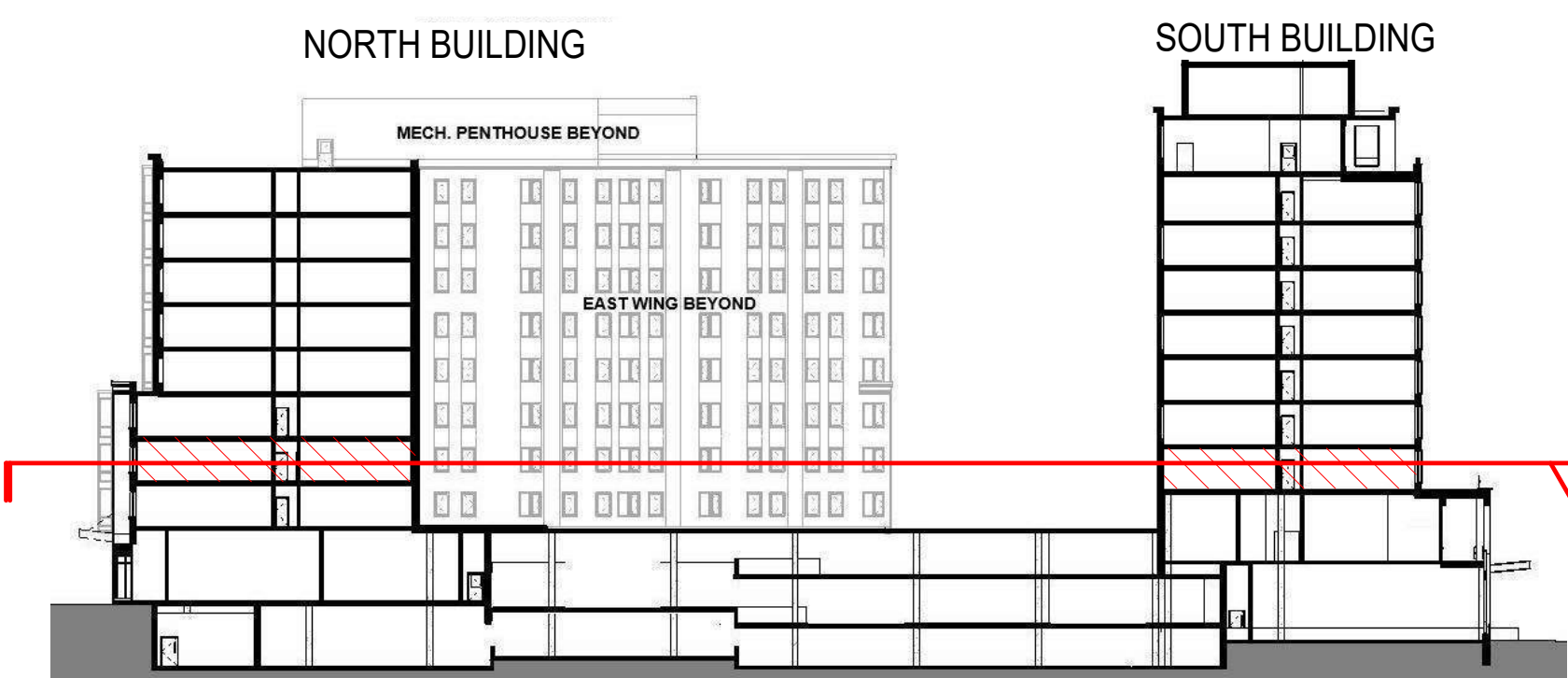
- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 2 & 3 WEST, each:
6 Studios, 4 Jr. 1BR, 7 1BR, 5 Jr. 2BR, 2 2BR: 24 Units
NORTH BUILDING 2 & 3 EAST, each:
3 Studios, 7 Jr. 1BR, 9 1BR, 3 Jr. 2BR, 1 2BR: 23 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units)



N - PROJECT NORTH
7' TRUE NORTH
11' MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

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1/16" = 1'-0"
DRAWN BY:
JR/NE/CL
CHECKED BY:
JR
SHEET NO.:
Zoning Submission
15 Oct 2020

SHEET CONTENTS
OVERALL PLAN-
LEVEL 2

SHEET NO.:
A102
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FLOOR PLAN GENERAL NOTES

- ALSO SEE SYMBOL LEGEND ON COVER SHEET.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
 - RESIDENTIAL - STORAGE
 - RES. LOBBY & AMENITY
- NORTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - RESIDENTIAL STUDIO
 - Jr. 1 BEDROOM RESIDENTIAL
 - 1 BR RESIDENTIAL
 - Jr. 2 BR RESIDENTIAL
 - 2 BR RESIDENTIAL

- SOUTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - 1 BR RESIDENTIAL
 - 2 BR RESIDENTIAL
 - 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 2 & 3 WEST, each:
6 Studios, 4 Jr. 1BR, 7 1BR, 5 Jr. 2BR, 2 2BR: 24 Units
NORTH BUILDING 2 & 3 EAST, each:
3 Studios, 7 Jr. 1BR, 9 1BR, 3 Jr. 2BR, 1 2BR: 23 Units
SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs, 1 3BRs (Total 10 Units)



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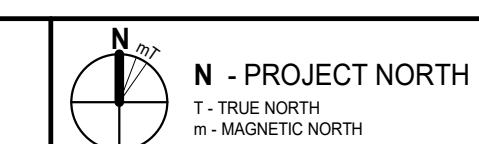
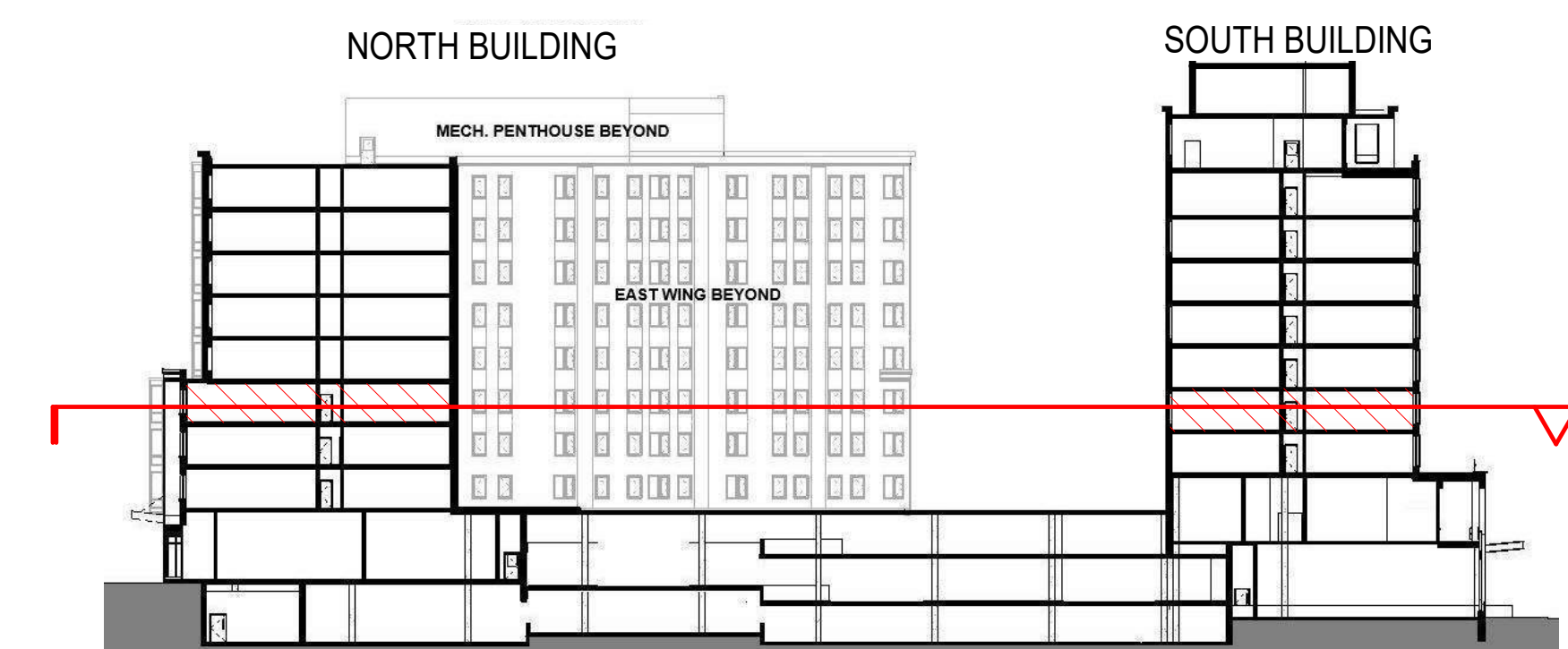
CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DONA SENEZ, MANAGING DIRECTOR

PROJECT NO:
A1947.00
ORIGINATOR DATE:
10/15/2020
SCALE:
1/16" = 1'-0"
DRAWN BY:
JR/NE/CL
CHECKED BY:
JR
DATE:
15 Oct 2020

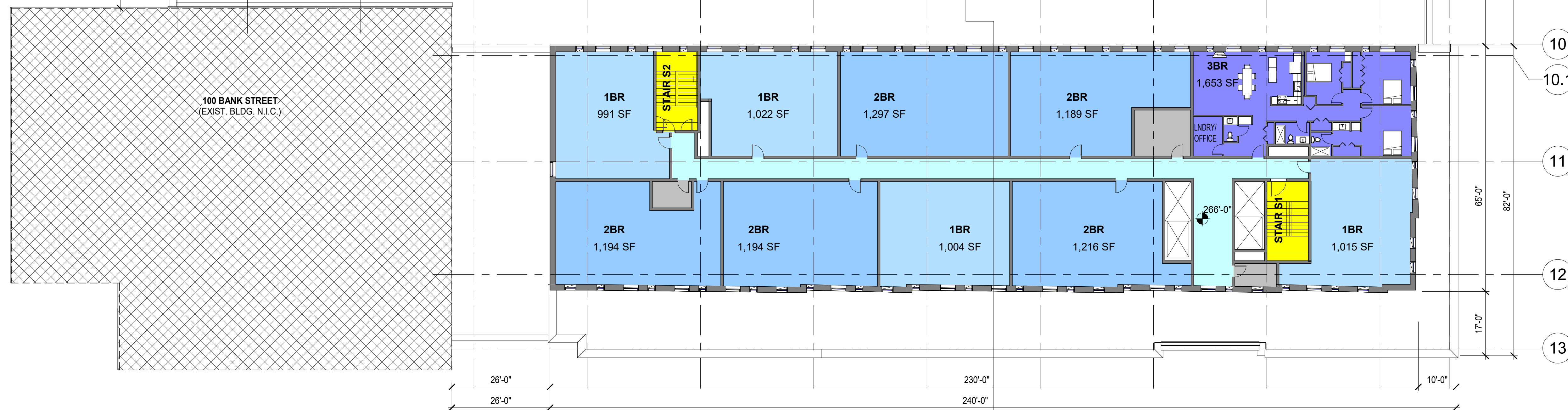
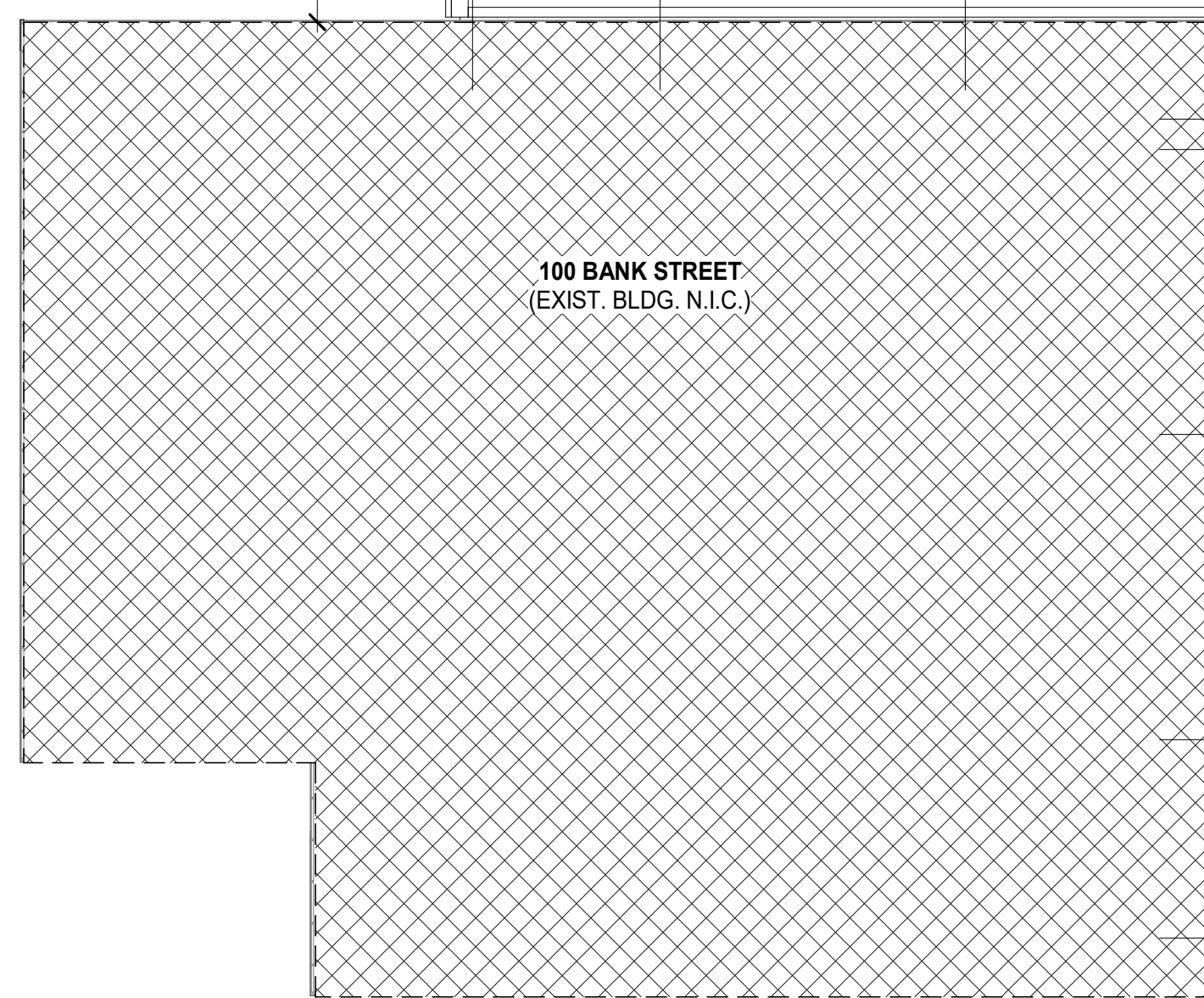
SHEET NO:
A103

OVERALL PLAN-
LEVEL 3



2 LEVEL 3
SCALE: 1/16" = 1'-0"

10/15/2020 11:43 PM



2 LEVEL 4
A104 SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr. 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units

SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



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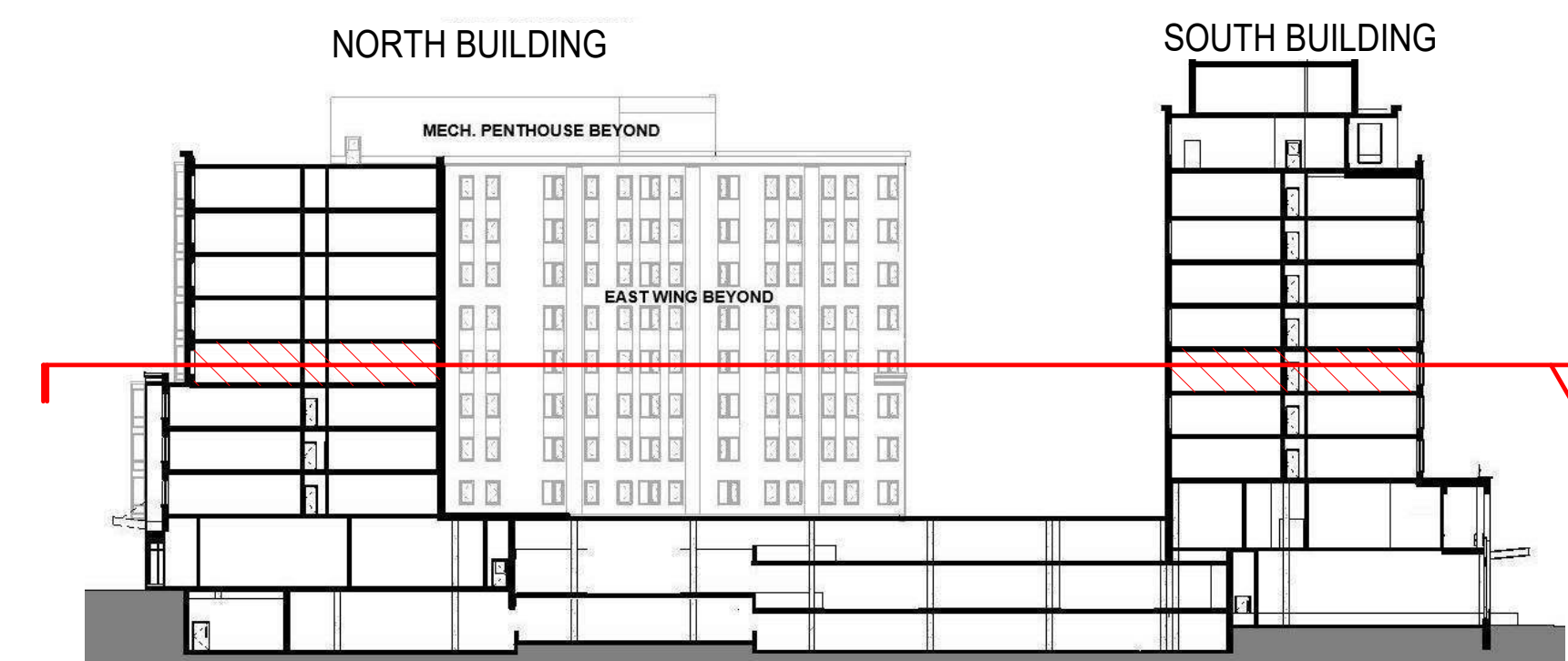
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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEI, MANAGING DIRECTOR

FFI PROJECT NO: **A1947.00**
CONSULTANT PROJ. #:
ORIGINATOR DATE: **10/15/2020** SCALE: **1/16" = 1'-0"**
DRAWN BY: **JR/NE/CL** CHECKED BY: **JR**
DATE LOC: **Zoning Submission** 15 Oct 2020

SHEET CONTENTS
**OVERALL PLAN-
LEVEL 4**

SHEET NO: **A104**
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N - PROJECT NORTH
N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

10/15/2020 11:14 AM

2 LEVEL 5
A105 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

ALSO SEE SYMBOL LEGEND ON COVER SHEET.

- DIMENSIONS:** ALL INTERIOR DIMENSIONS ARE TO FACE OF GWB OR TILE FINISH UNLESS OTHERWISE NOTED. EXTERIOR DIMENSIONS ARE TO NOMINAL CORNER OF MASONRY UNLESS NOTED OTHERWISE.
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FLOOR PLAN LEGEND

- NEW WALL
- NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

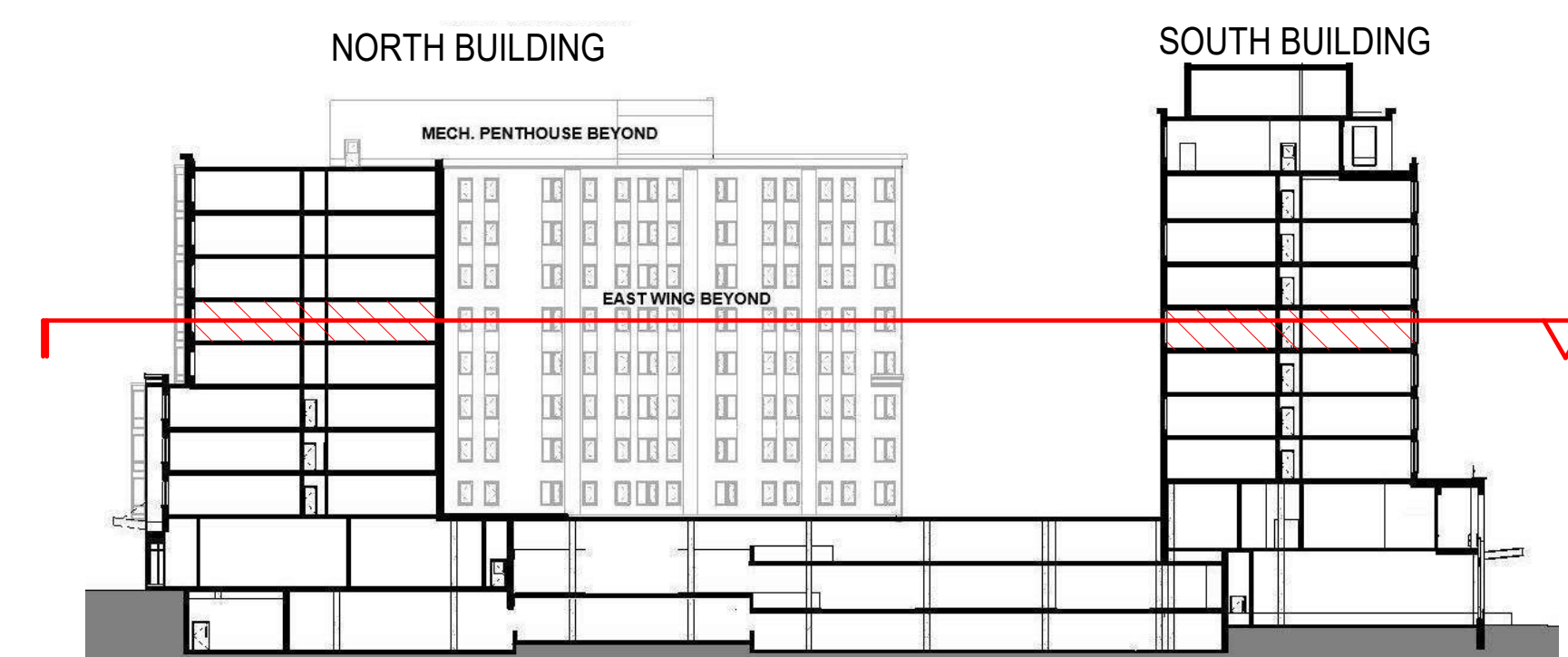
SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

NORTH BUILDING 4-8 WEST, each:
9 Studios, 1 Jr 1BR, 11 1BR, 2 2BR, 23 Units
NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr 2BR, 1 2BR, 22 Units

SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



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N - TRUE NORTH
M - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

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DON SANEI, MANAGING DIRECTOR

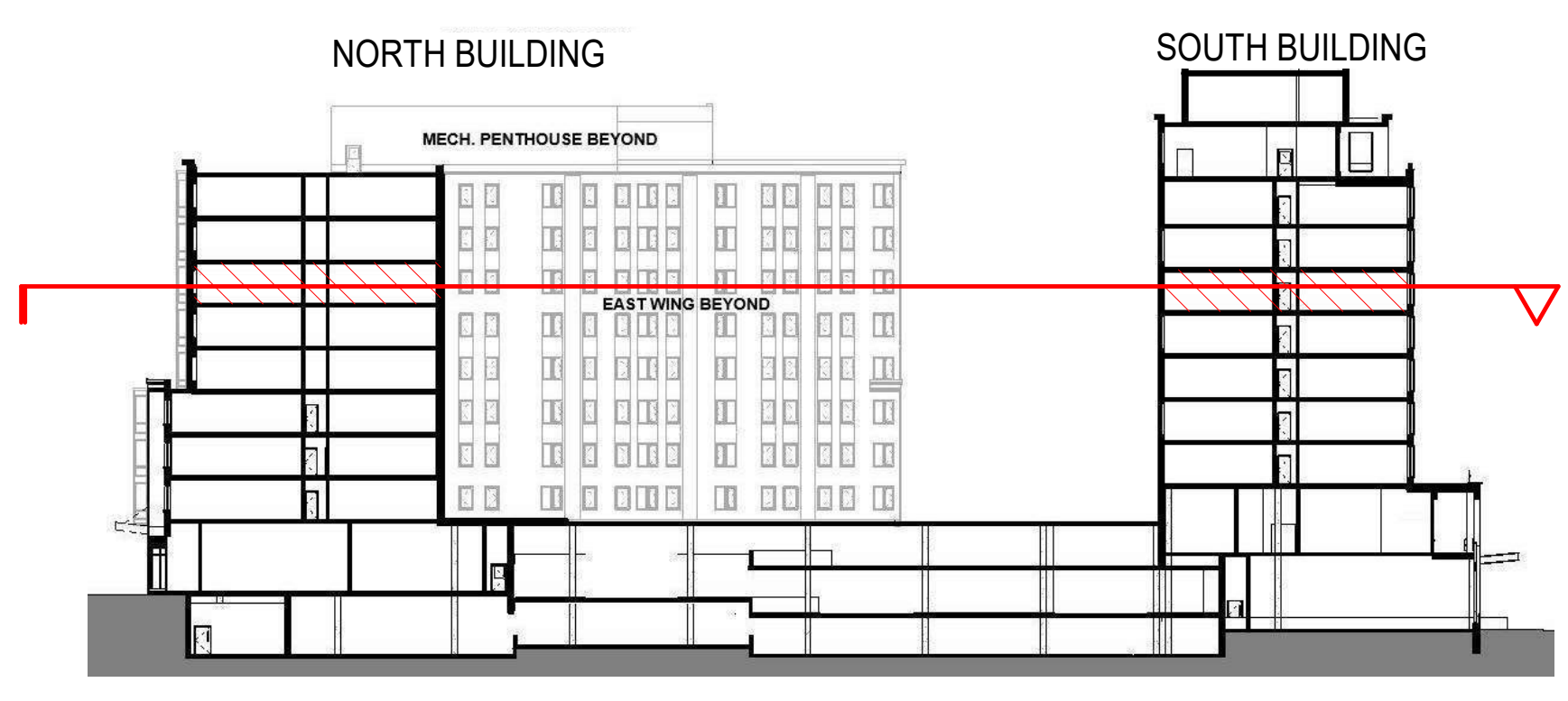
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CONSULTANT PROJ. #:
ORIGINATOR DATE: 10/15/2020
SCALE: 1/16" = 1'-0"
DRAWN BY: JR/NE/CL
CHECKED BY: JR
SHEET NO: Zoning Submission
15 Oct 2020

SHEET NO: A105
OVERALL PLAN - LEVEL 5

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- FLOOR PLAN GENERAL NOTES**
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- FLOOR PLAN LEGEND**
- NEW WALL
 - NEW STEEL/CONCRETE COLUMN - SEE STRUCTURAL
 - FINISH FLOOR ELEVATION
- OCCUPANCY & USE LEGEND**
- MEP / BUILDING SUPPORT
 - RESIDENTIAL - STORAGE
 - RES LOBBY & AMENITY
- NORTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - RESIDENTIAL STUDIO
 - Jr. 1 BEDROOM RESIDENTIAL
 - 1 BR RESIDENTIAL
 - Jr. 2 BR RESIDENTIAL
 - 2 BR RESIDENTIAL
- SOUTH BUILDING**
- CIRCULATION
 - ELEVATORS & STAIRS
 - 1 BR RESIDENTIAL
 - 2 BR RESIDENTIAL
 - 3 BR RESIDENTIAL
- RESIDENTIAL UNITS**
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A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEI, MANAGING DIRECTOR

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DATE: 15 Oct 2020

SHEET NO: A106

10/15/2020 11:13 AM

2 LEVEL 7
A107 SCALE: 1/16" = 1'-0"



FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

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- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP / BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
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- 2 BR RESIDENTIAL

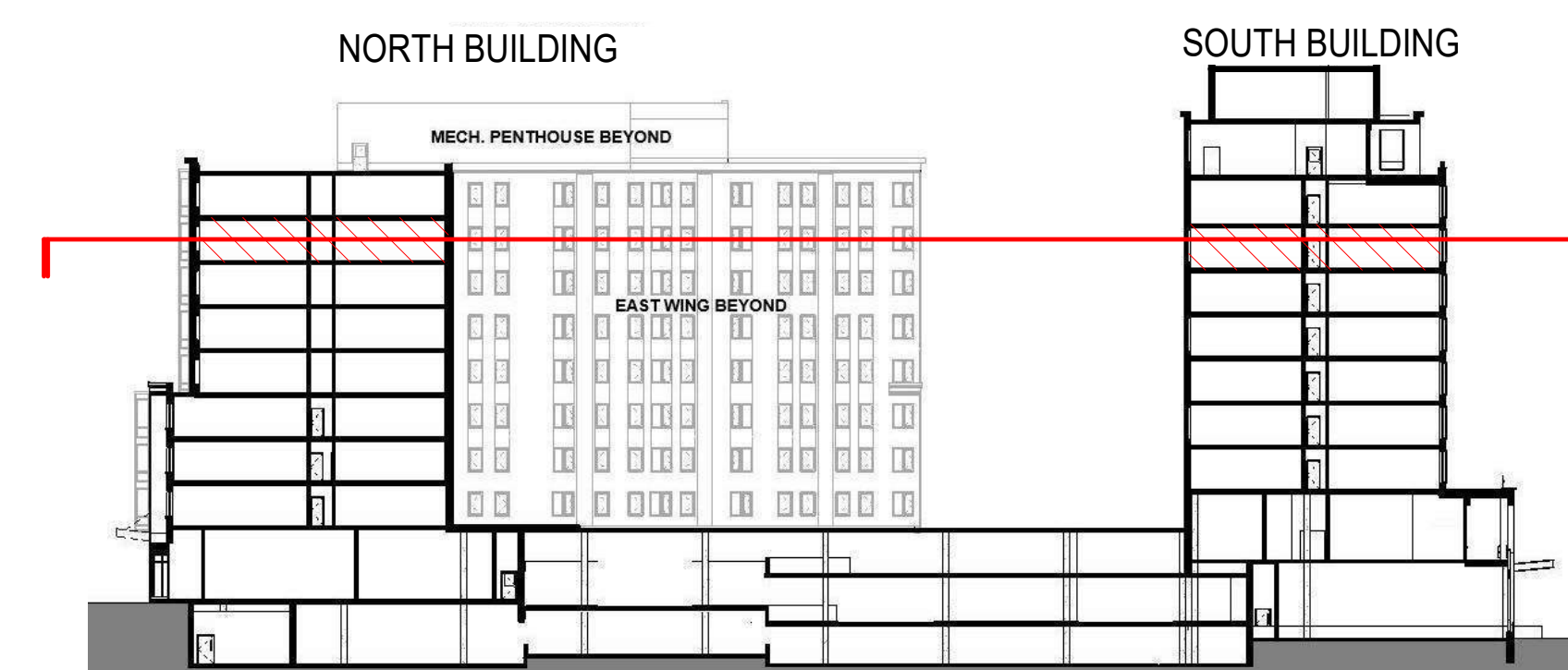
SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- 1 BR RESIDENTIAL
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RESIDENTIAL UNITS

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NORTH BUILDING 4-8 EAST, each:
6 Studios, 12 1BR, 1 Jr. 2BR, 1 2BR, 22 Units

SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
1 3BRs (Total 10 Units per floor)



N - PROJECT NORTH
N - MAGNETIC NORTH

GRAPHIC SCALE
0 8' 16' 32'

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15 Oct 2020

SHEET CONTENTS
OVERALL PLAN -
LEVEL 7

SHEET NO:
A107
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2 LEVEL 8
A108 SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

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- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES LOBBY & AMENITY

NORTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- RESIDENTIAL STUDIO
- Jr. 1 BEDROOM RESIDENTIAL
- 1 BR RESIDENTIAL
- Jr. 2 BR RESIDENTIAL
- 2 BR RESIDENTIAL

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
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- 2 BR RESIDENTIAL
- 3 BR RESIDENTIAL

RESIDENTIAL UNITS

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SOUTH BUILDING, LEVELS 1-8, each: 4 One Bedrooms, 5 2BRs,
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JR

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15 Oct 2020

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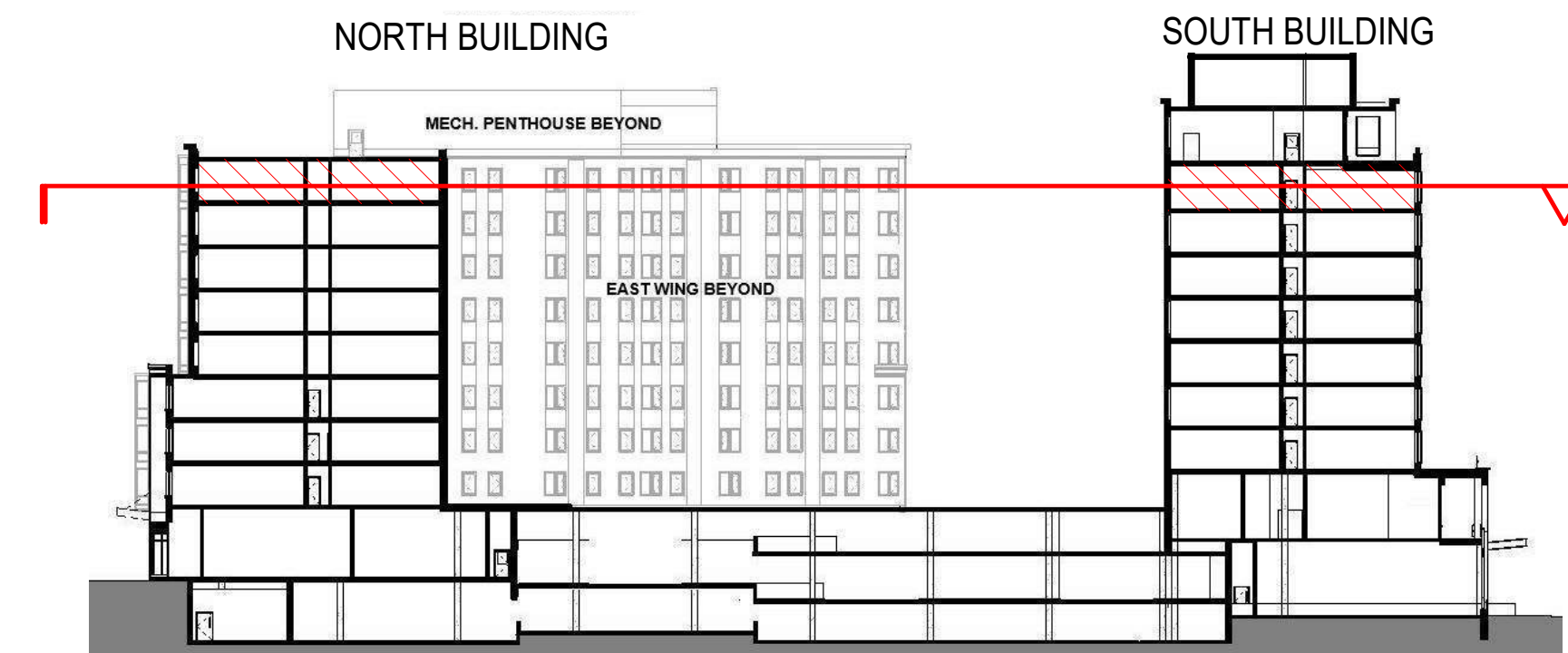
OVERALL PLAN -

LEVEL 8

SHEET NO:

A108

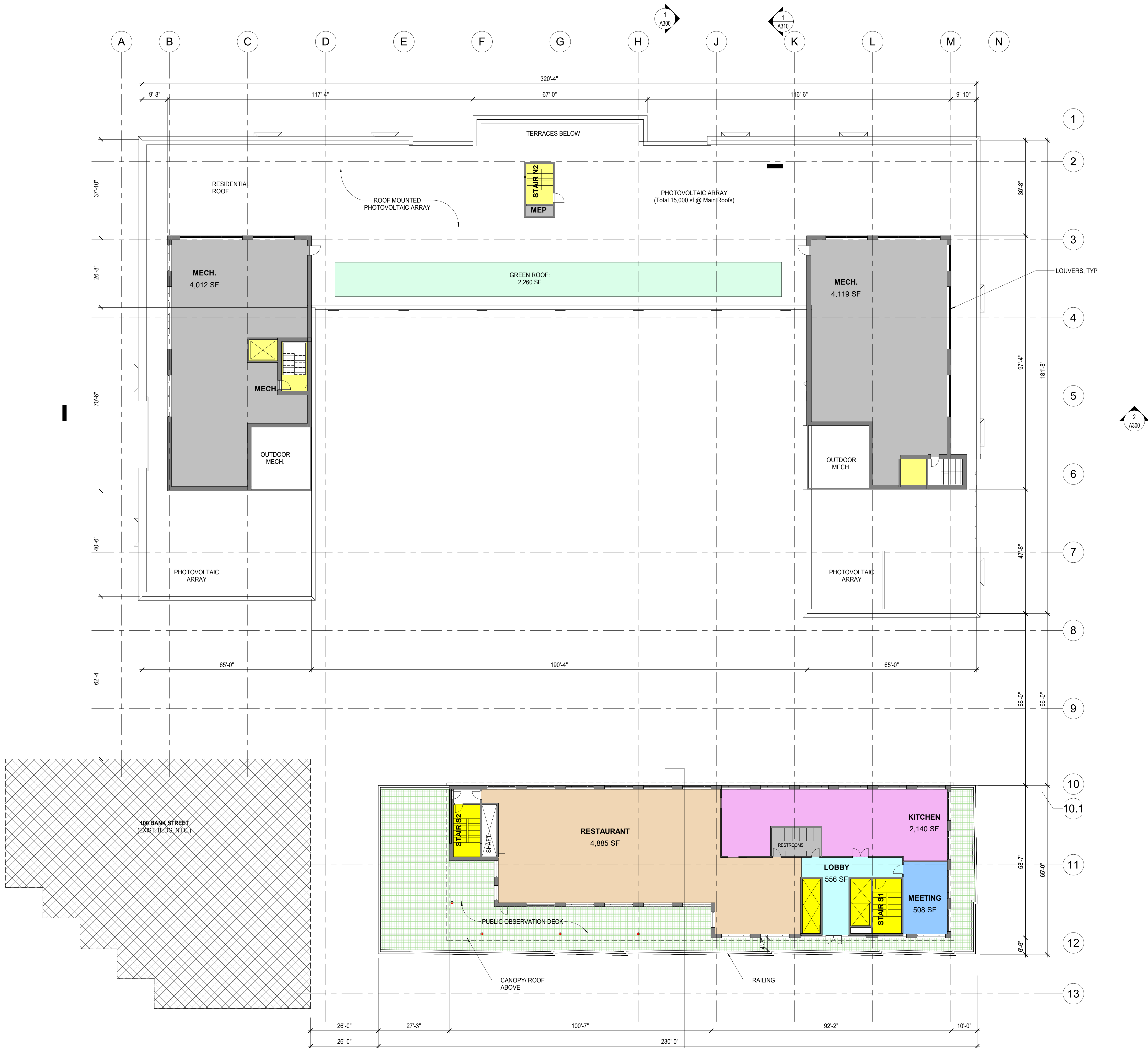
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GRAPHIC SCALE
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2 LEVEL 9
A109 SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

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FLOOR PLAN LEGEND

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- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

- MEP/ BUILDING SUPPORT
- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- ELEVATORS & STAIRS

SOUTH BUILDING

- CIRCULATION
- ELEVATORS & STAIRS
- MEETING, MTG SUPPORT
- KITCHEN
- RESTAURANT



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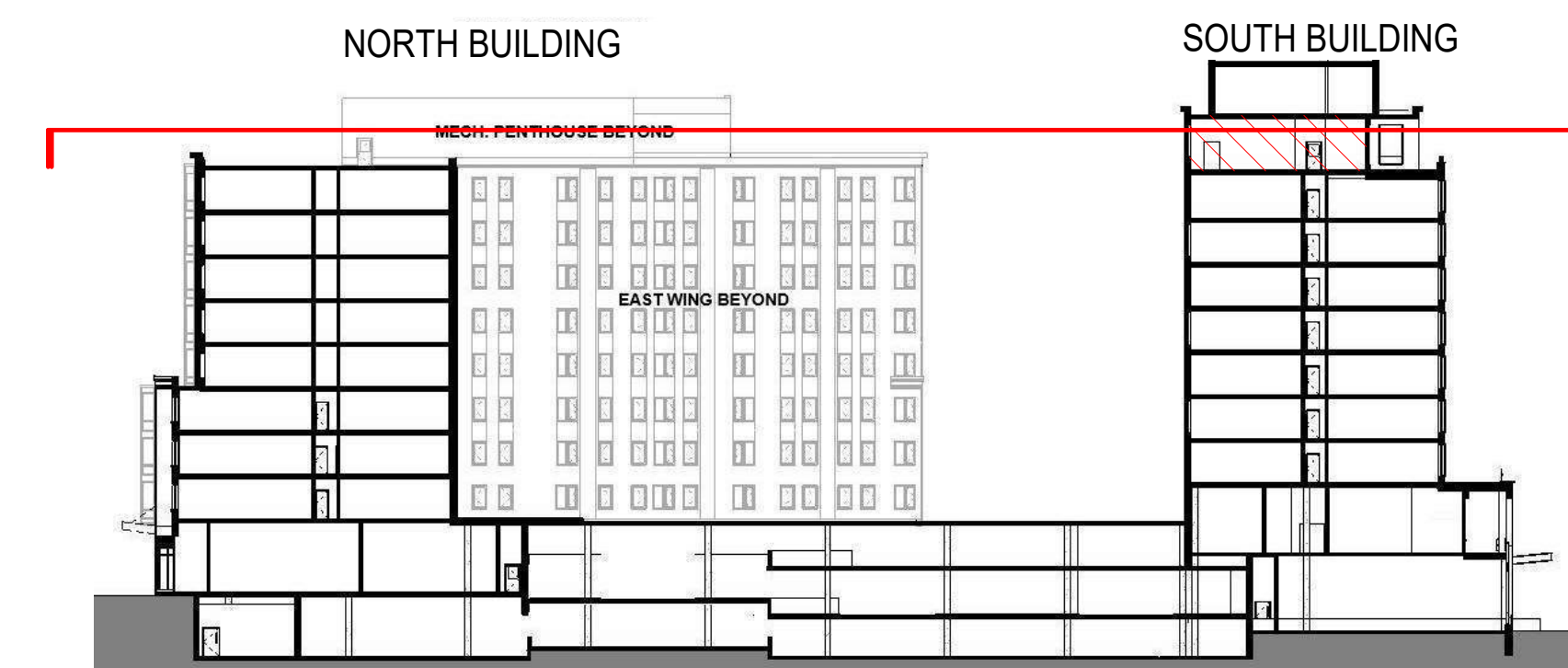
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SHEET NO:
Zoning Submission
15 Oct 2020

SHEET CONTENTS
OVERALL PLAN-
LVL 9 AMENITIES
& MECHANICAL
PENTHOUSES

A109



N - PROJECT NORTH
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M - MAGNETIC NORTH

GRAPHIC SCALE
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- NEW STEEL/ CONCRETE COLUMN - SEE STRUCTURAL
- FINISH FLOOR ELEVATION

OCCUPANCY & USE LEGEND

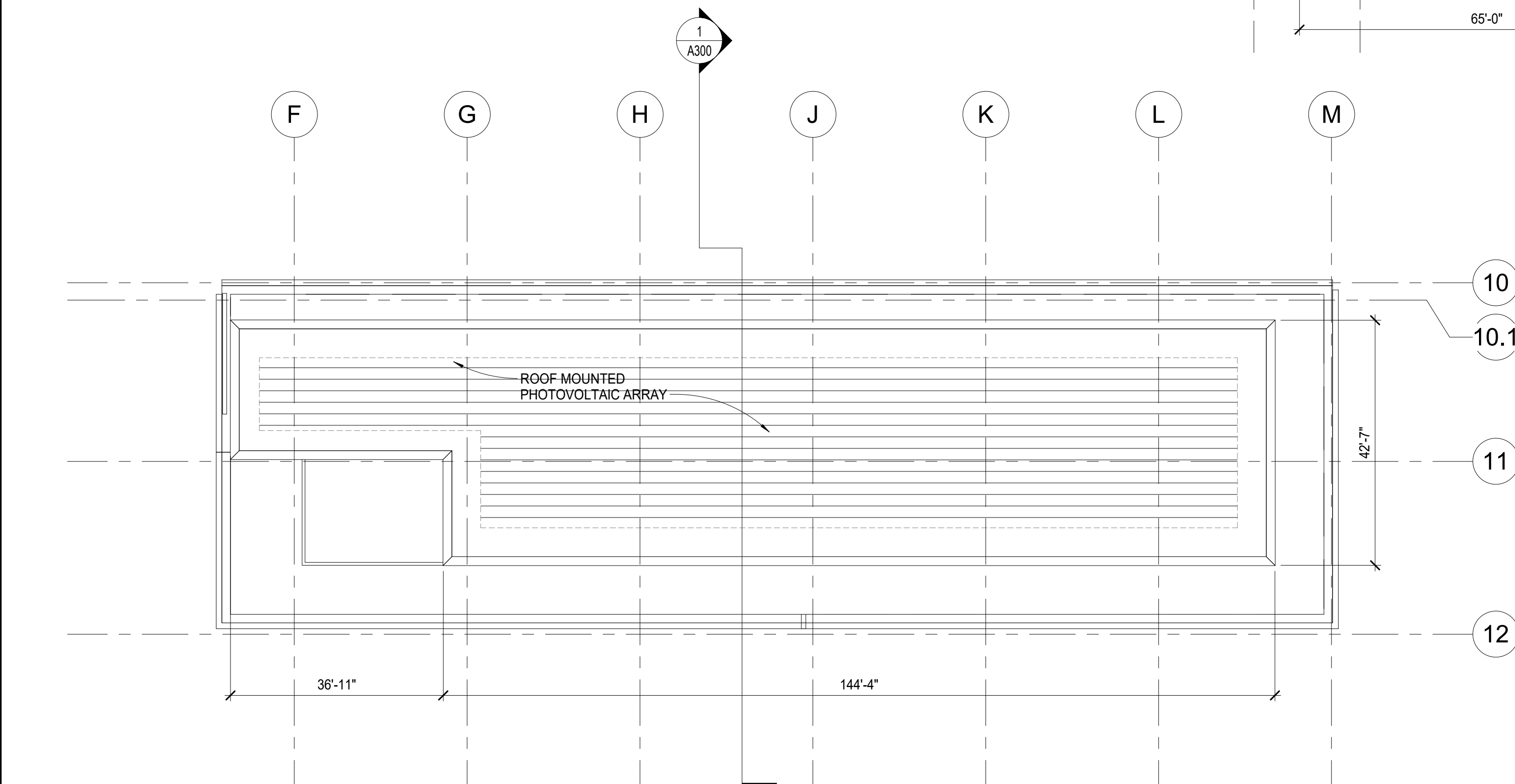
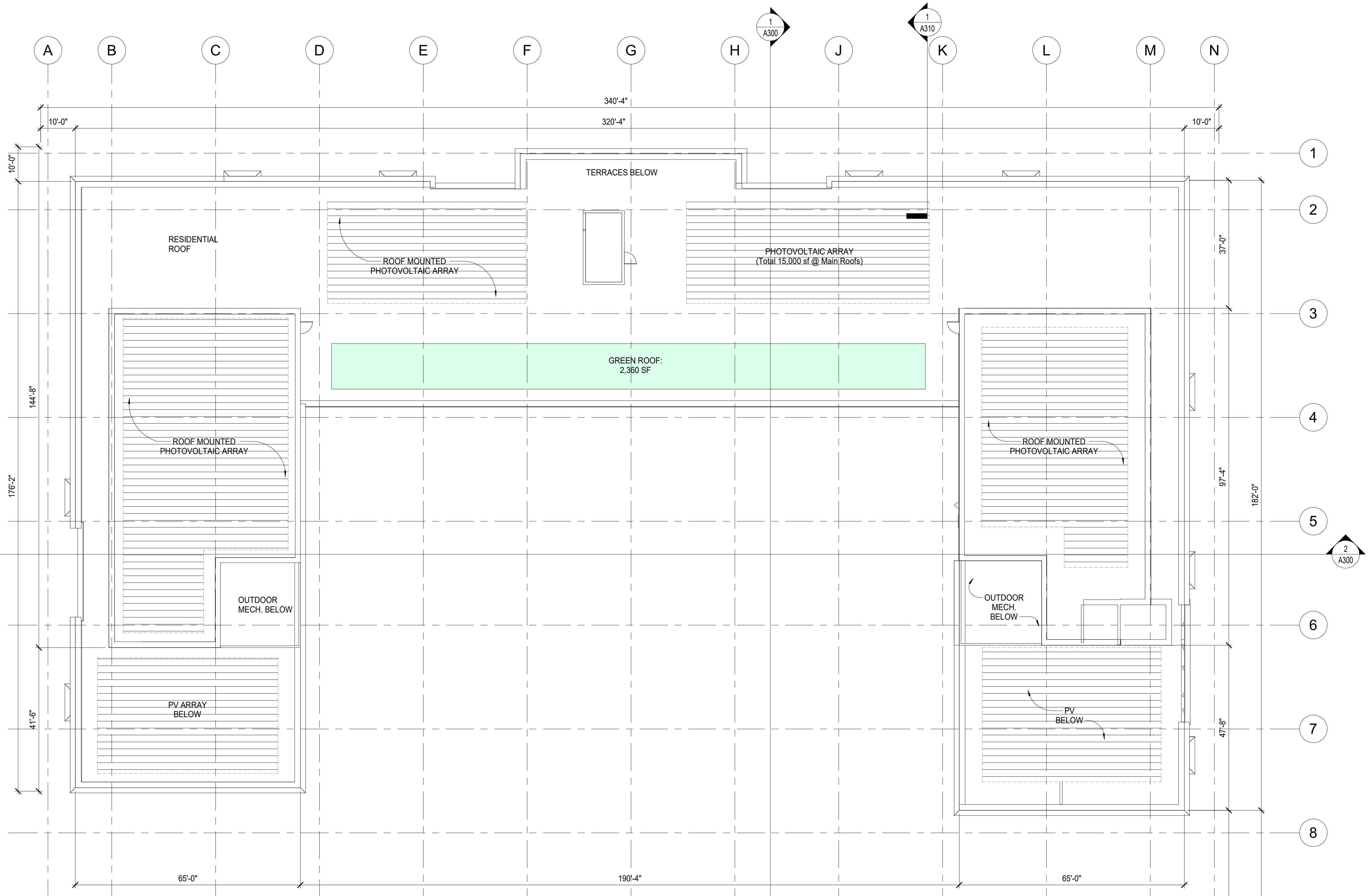
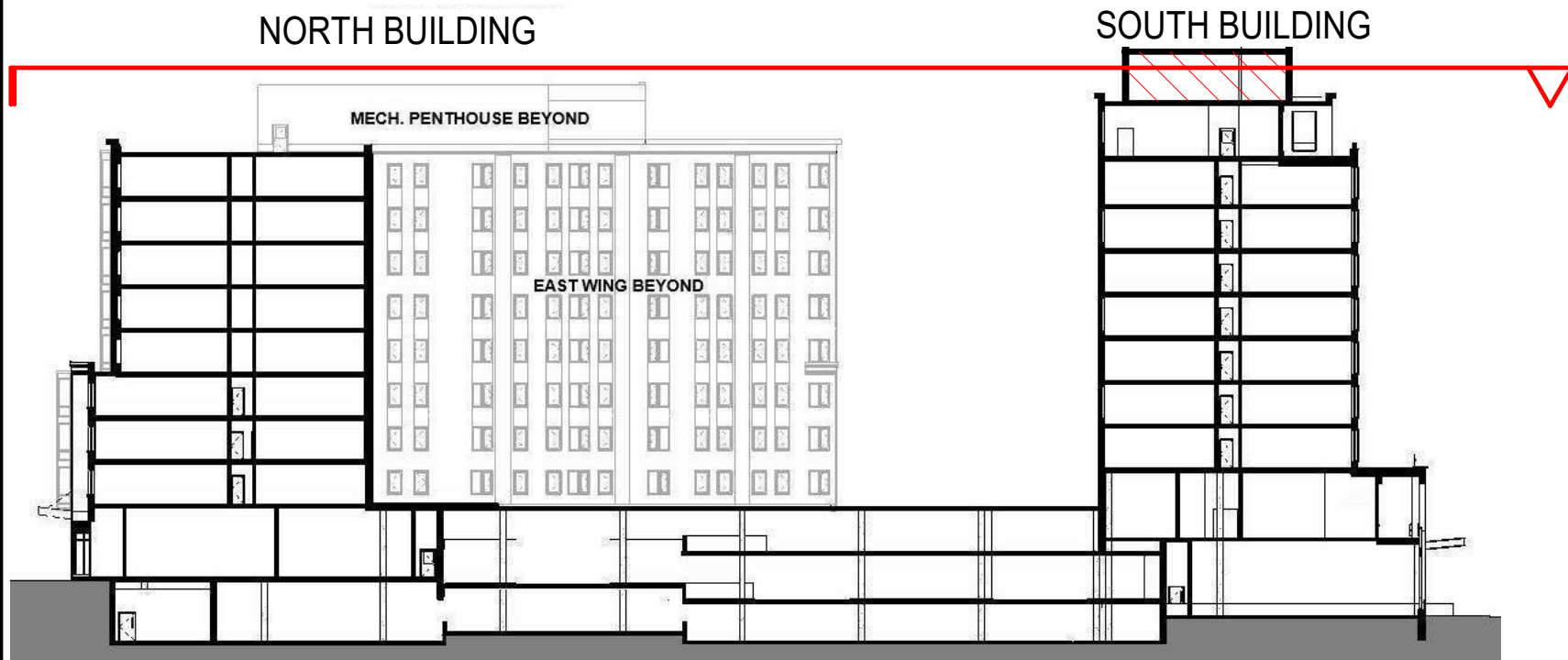
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- RESIDENTIAL - STORAGE
- RES. LOBBY & AMENITY
- ELEVATORS & STAIRS

SOUTH BUILDING

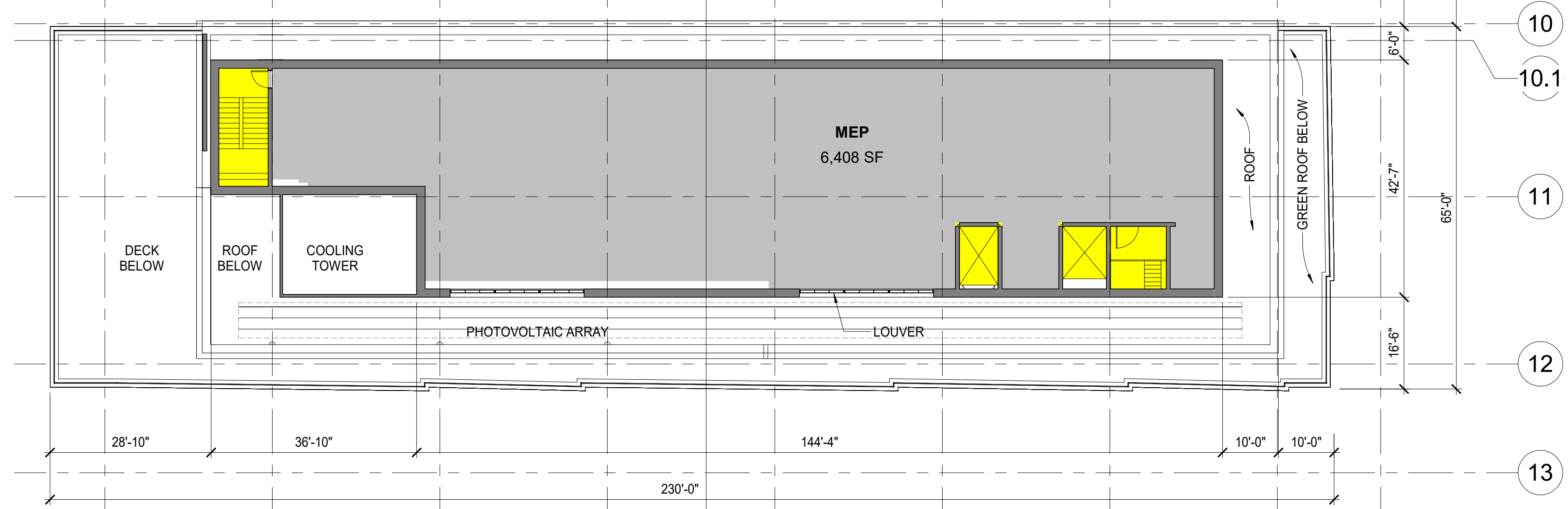
- CIRCULATION
- ELEVATORS & STAIRS
- MEETING, MTG SUPPORT
- KITCHEN
- RESTAURANT

PHOTOVOLTAIC ARRAY TOTAL AREA: +/- 19,250 sf
Effective area w/ rooftop eqpt, stacks, etc.: +/- 14,250 sf
Estimated generation at 12kWh/sf/yr: 171,000 kWh/yr
PV estimates subject to utility agreements and installer/ operator requirements.

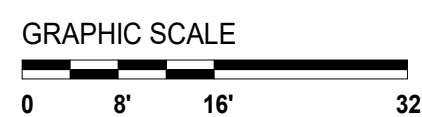
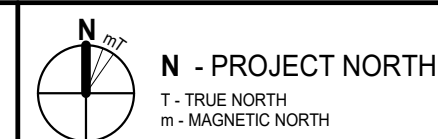
GREEN ROOF TOTAL AREA: +/- 11,000 sf
Level 8 Roof (Level 9), North Building: 2,360 sf
Parking Roof (Level 1), North Building: 5,440 sf
Level 1 Roof (Level 2), South Building: 3,200 sf



2 MECH. ROOF - SOUTH
SCALE: 1/16" = 1'-0"



1 MECH. PENTHOUSE - SOUTH
SCALE: 1/16" = 1'-0"



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CHECKED BY: JR
DATE LOG: Zoning Submission 15 Oct 2020

MECHANICAL
PENTHOUSE

A110



1 NORTH (CHERRY STREET) ELEVATION
SCALE: 1/16" = 1'-0" REF.: A102A

NORTH ELEVATION - MATERIALS LEGEND		
MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	16,784	52
PRIMARY MATERIAL 1B BUFF BRICK	3,406	11
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	7,073	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	3,415	10
SECONDARY MATERIAL 2 GRANITE	402	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	119	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	1,188	3
TOTAL ELEVATION, EXCLUDING WINDOWS	32,387	100
TOTAL ELEVATION, INCLUDING WINDOWS**	38,151	**

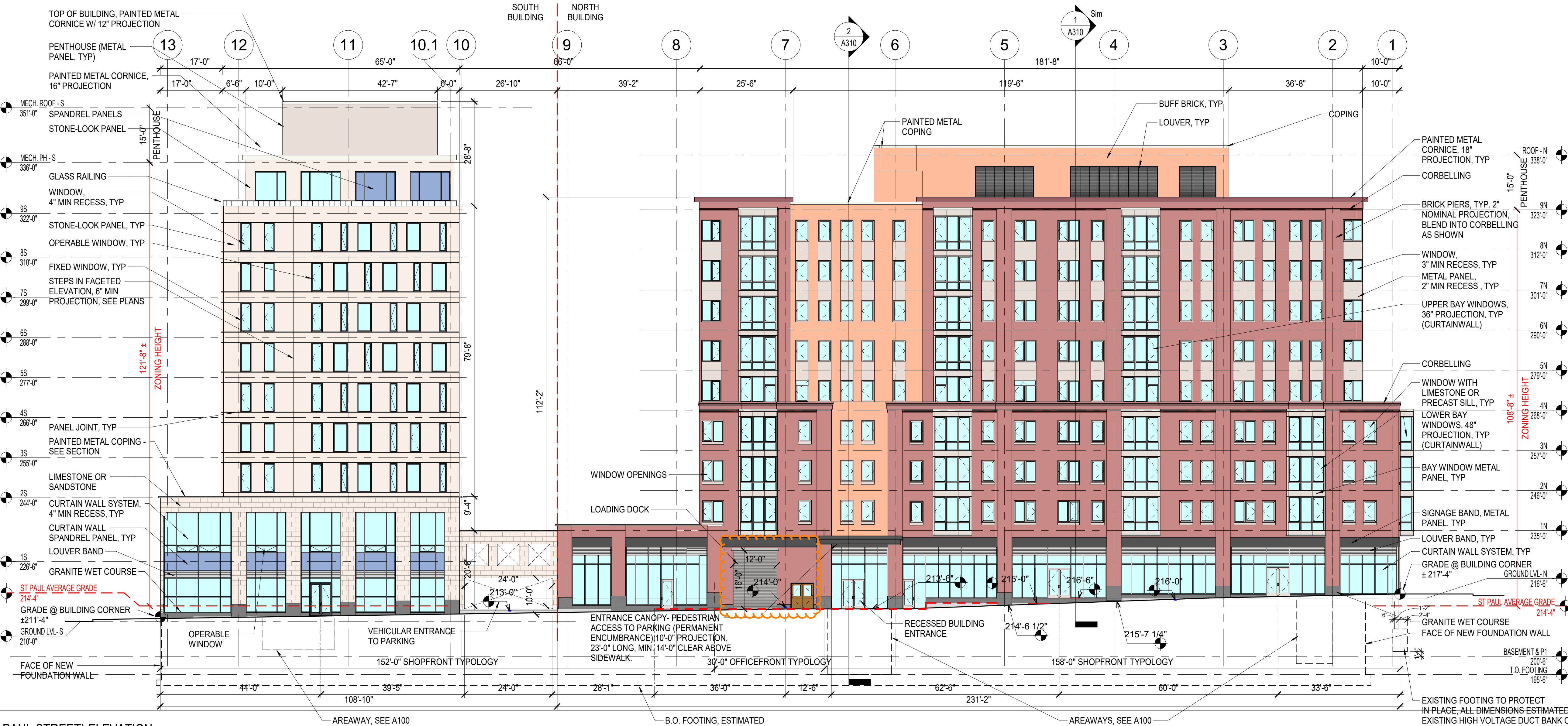
NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

EAST ELEVATION - MATERIALS LEGEND				
MATERIAL	NORTH BUILDING AREA (SQ. FT.)	SOUTH BUILDING AREA (SQ. FT.)	TOTAL AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	9,192	N/A	9,192	34
PRIMARY MATERIAL 1B BUFF BRICK	2,488	N/A	2,488	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	4,410	1,724	6,134	22
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	2,173	N/A	2,173	8
SECONDARY MATERIAL 2 GRANITE	334	140	474	2
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	27	N/A	27	0
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	834	N/A	834	3
PRIMARY MATERIAL 3A STONE-LOOK PANEL	N/A	5,040	5,040	18
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	N/A	1,190	1,190	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,458	8,094	27,552	100
TOTAL ELEVATION, INCLUDING WINDOWS**	23,050	9,581	32,631	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

ELEVATION & SECTION GENERAL NOTE

- BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.



2 EAST (ST PAUL STREET) ELEVATION
SCALE: 1/16" = 1'-0" REF.: A410

CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SENEZ, MANAGING DIRECTOR

PROJECT NO: A1947.00
CONSULTANT PROJ. #: 10/15/2020
SCALE: 1/16" = 1'-0"
DRAWN BY: CL/NE/JC
CHECKED BY: JR
DATE: 15 Oct 2020
24 Feb 2020

EXTERIOR
ELEVATIONS

SHEET NO: A200

2/24/2020 2:56:44 PM

2 SOUTH (BANK STREET) ELEVATION

A201 SCALE: 1/16" = 1'-0" REF.: A090A



SOUTH ELEVATION - MATERIALS LEGEND

MATERIAL	SOUTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 3A STONE-LOOK PANEL	15,000	60
PRIMARY MATERIAL 3B LIMESTONE OR SANDSTONE	3,600	14
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	4,122	17
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,520	6
SECONDARY MATERIAL 2 GRANITE	360	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	480	2
TOTAL ELEVATION, EXCLUDING WINDOWS	25,082	100
TOTAL ELEVATION, INCLUDING WINDOWS**	32,540	**

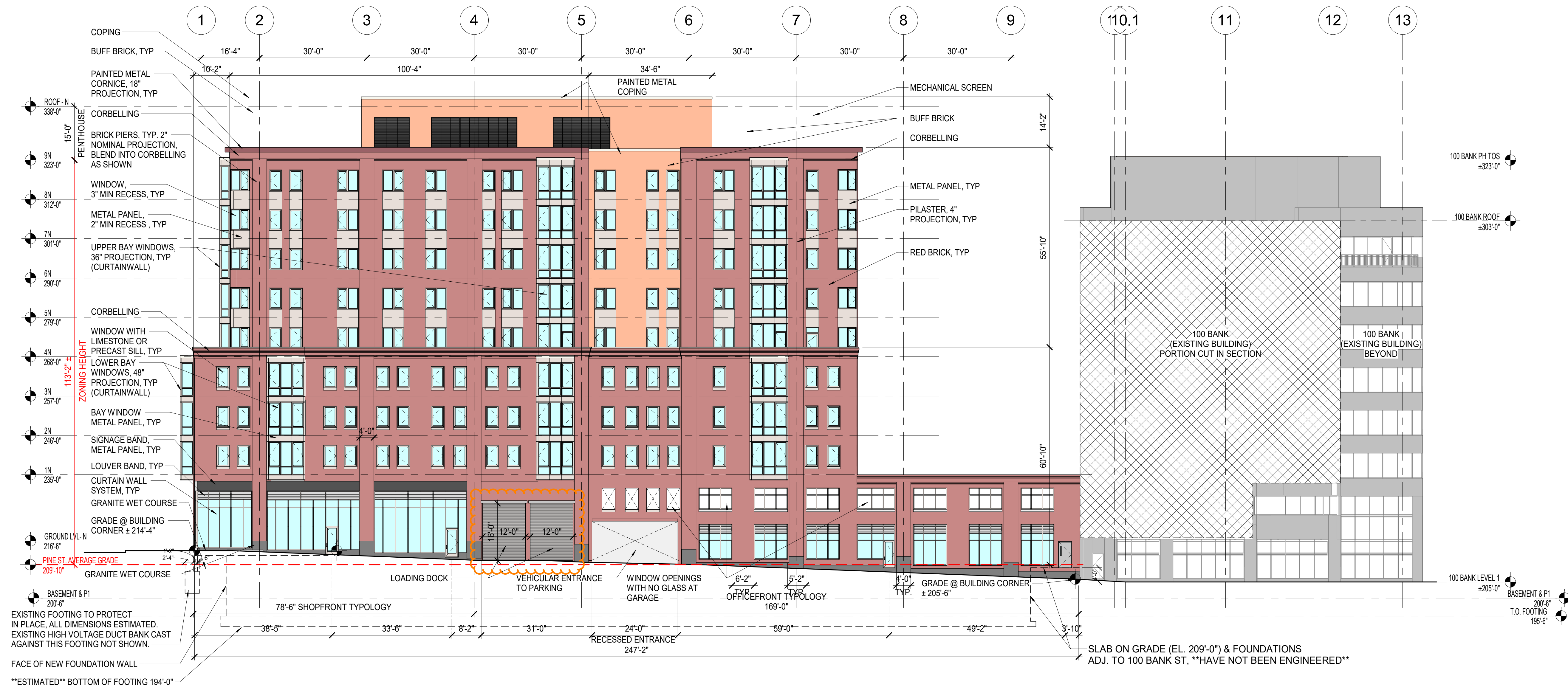
NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

ELEVATION & SECTION GENERAL NOTE

1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.

1 WEST (PINE STREET) ELEVATION

A201 SCALE: 1/16" = 1'-0" REF.: A090A



WEST ELEVATION - MATERIALS LEGEND

MATERIAL	NORTH BUILDING AREA (SQ. FT.)	% OF WHOLE
PRIMARY MATERIAL 1A RED BRICK	11,533	59
PRIMARY MATERIAL 1B BUFF BRICK	1,760	9
PRIMARY MATERIAL 2 - CURTAINWALL GLAZING* (TRANSPARENT/ SPANDREL)	3,717	19
SECONDARY MATERIAL 1 METAL PANEL (COLORS VARY)	1,438	7
SECONDARY MATERIAL 2 GRANITE	344	1
SECONDARY MATERIAL 3 LIMESTONE OR PRECAST SILL	66	1
LOUVERS, PAINTED TO MATCH ADJ. METAL PANEL OR CURTAIN WALL FRAME	769	4
TOTAL ELEVATION, EXCLUDING WINDOWS	19,627	100
TOTAL ELEVATION, INCLUDING WINDOWS**	22,920	**

NOTES:
* METAL PANEL WITHIN CURTAINWALL AREAS IS COUNTED AS METAL PANEL
** EXCEPT FOR CURTAINWALL, GLAZING IS EXCLUDED FROM MATERIALS TAKEOFFS

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BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SENEZ, MANAGING DIRECTOR

PROJECT NO:
A1947.00
ORIGINATOR DATE:
10/15/2020
SCALE:
1/16" = 1'-0"
DRAWN BY:
CL/NE/JC
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JR
ISSUE LOG:
Zoning Submission
Revision 1
15 Oct 2020
24 Feb 2021

SHEET CONTENTS
EXTERIOR
ELEVATIONS

SHEET NO:
A201
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3 CHERRY AND PINE
A210 SCALE: 1/4" = 1'-0"

1 CHERRY AND ST PAUL
A210 SCALE: 1/4" = 1'-0"



4 PINE CLOSE UP
A210 SCALE: 1/4" = 1'-0"

2 ST PAUL CLOSE UP
A210 SCALE: 1/4" = 1'-0"

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OWNER
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PROJECT NO.:
A1947.00
CONSULTANT PROJ. NO.:
ORIGINATOR DATE:
03/XX/2020
SCALE:
1/4" = 1'-0"
DRAWN BY:
CL/NE/JC
CHECKED BY:
JR
SHEET NO.:
Zoning Submission
15 Oct 2020

SHEET CONTENTS:

RENDERINGS

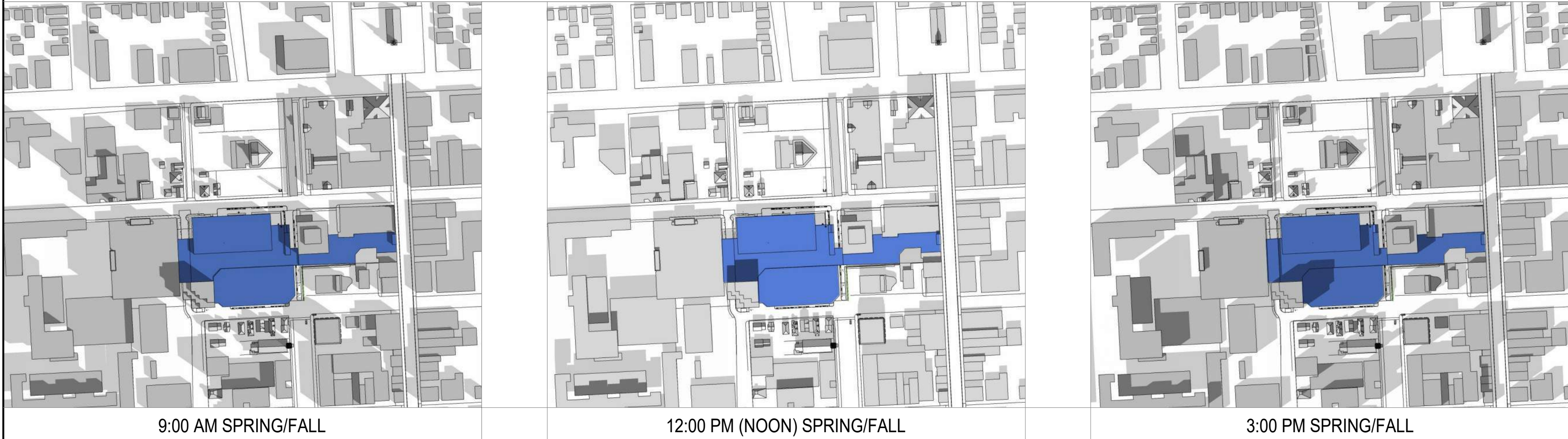
A210



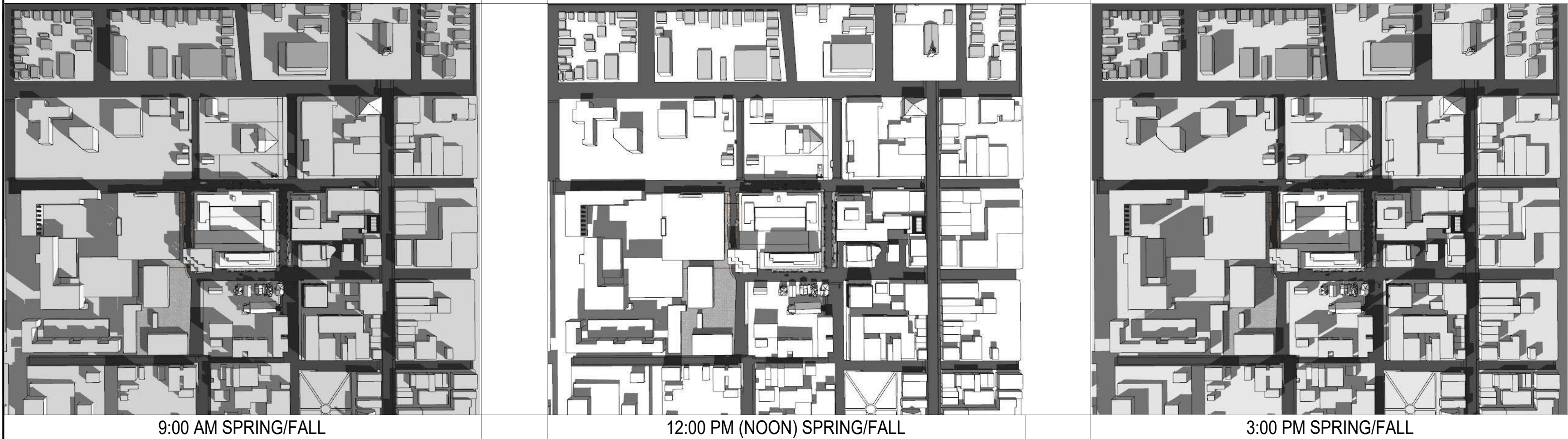
1 BANK AND ST PAUL
A211 SCALE: 1/4" = 1'-0"

2 BANK CLOSE UP
A211 SCALE: 1/4" = 1'-0"

SUN STUDY - VERNAL EQUINOX (SPRING AND FALL EQUINOX)

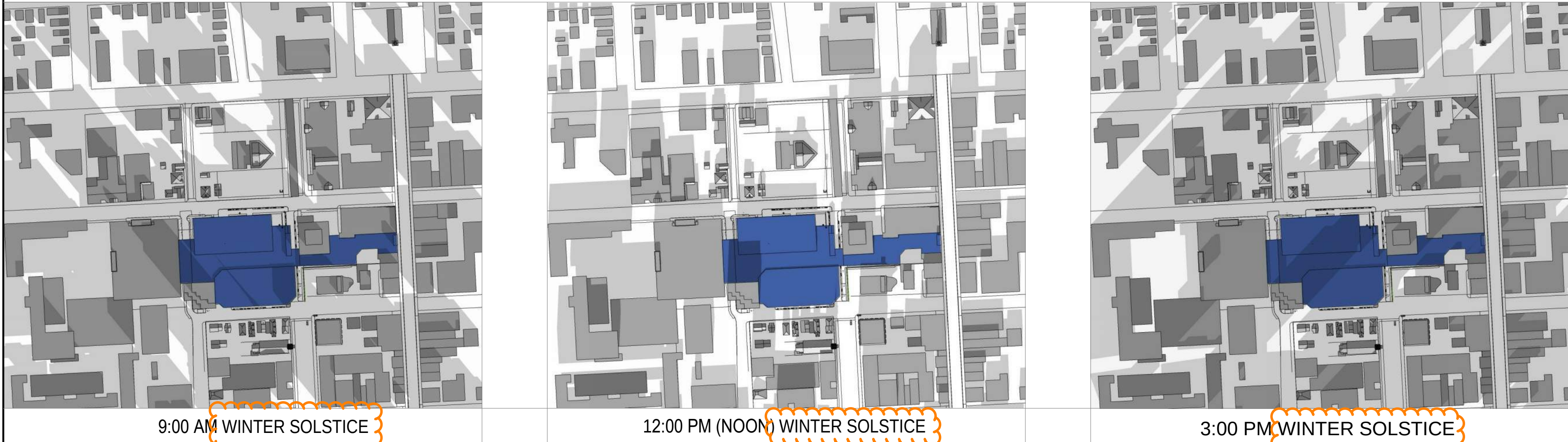


EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.



PROPOSED

SUN STUDY - WINTER SOLSTICE

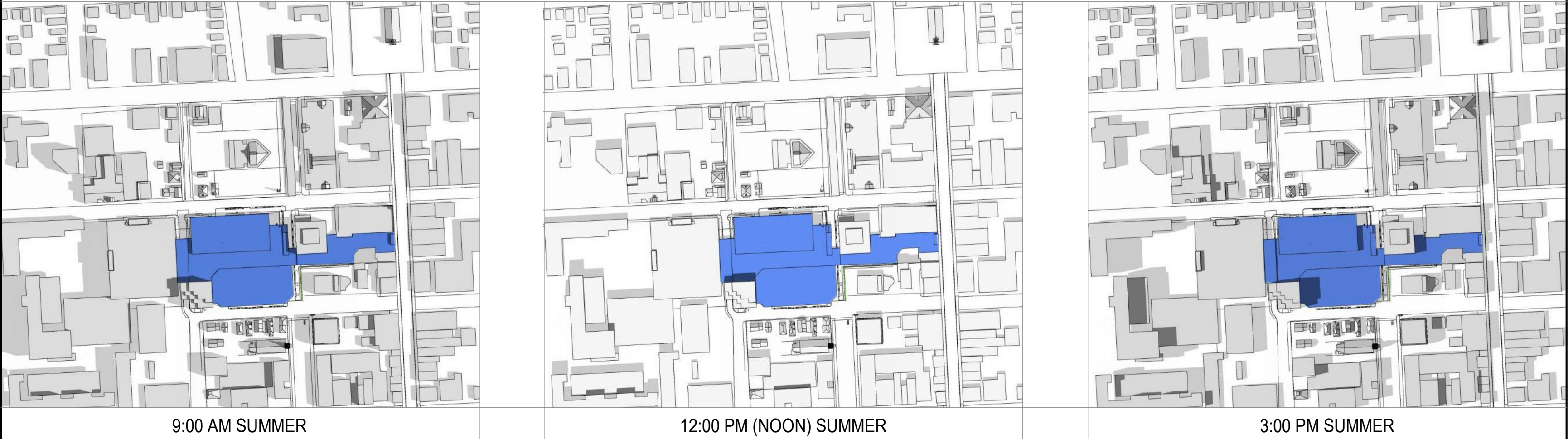


EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.

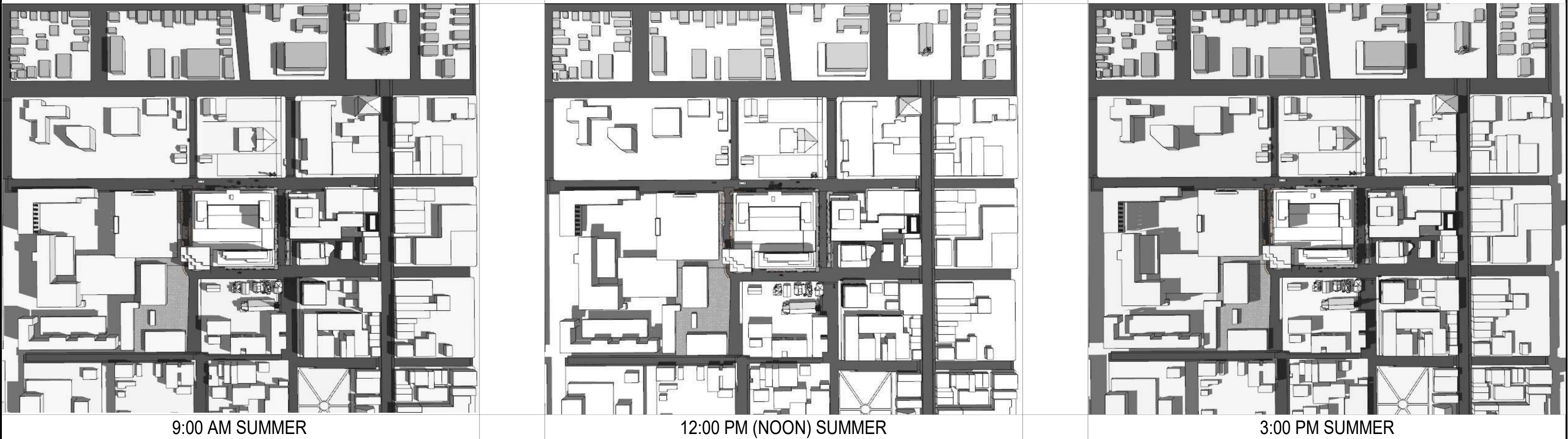


PROPOSED

SUN STUDY - SUMMER SOLSTICE

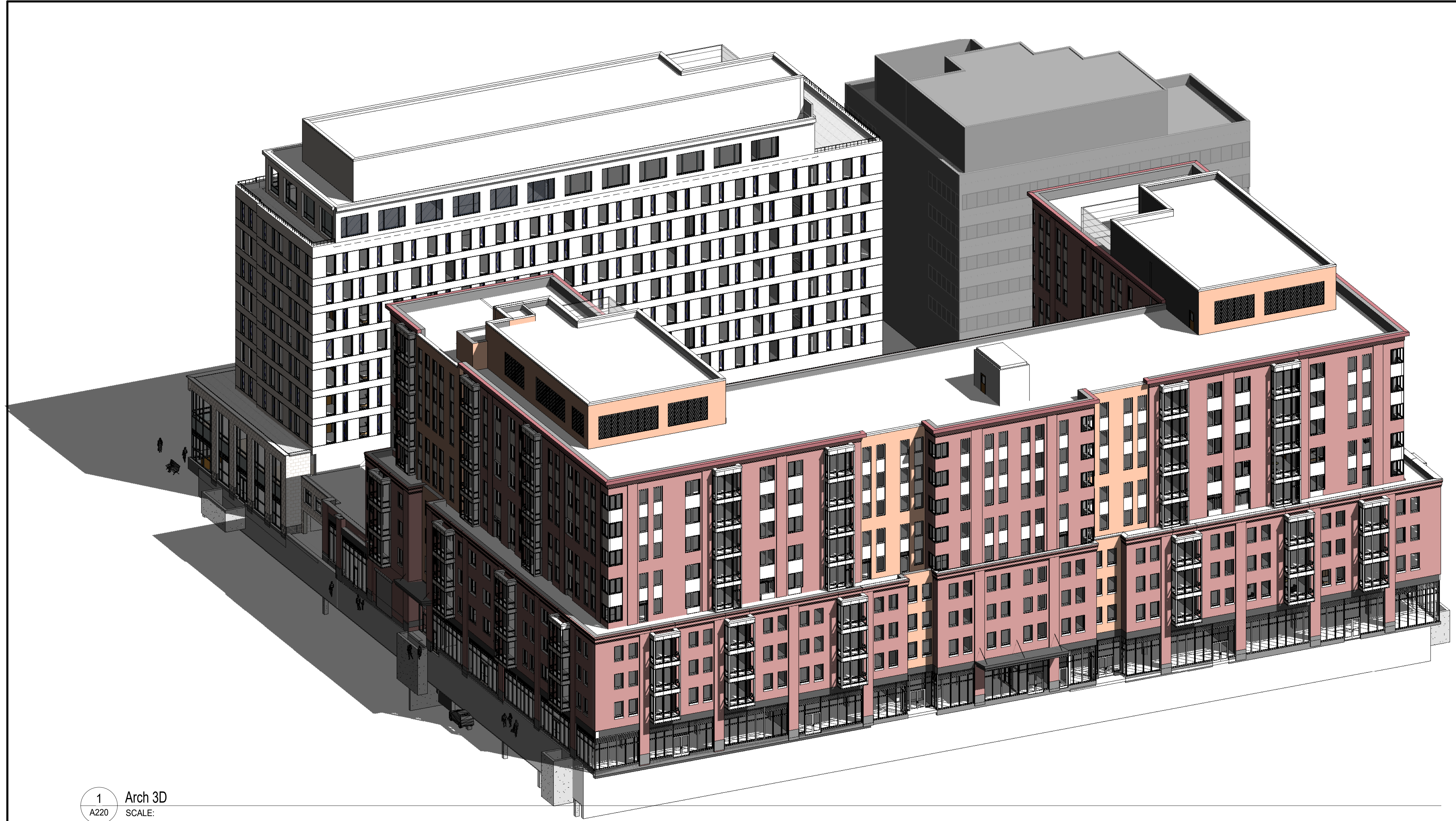


EXISTING
"Existing" Conditions reflect the former parking garage and Burlington Town Center Mall.



PROPOSED

10/15/2020 11:21 PM



1 Arch 3D
A220 SCALE:



3 Arch 3D Cutaway -NS cut looking West Copy 1
A220 SCALE:

2 Arch 3D Cutaway -EW Cut looking north
A220 SCALE:

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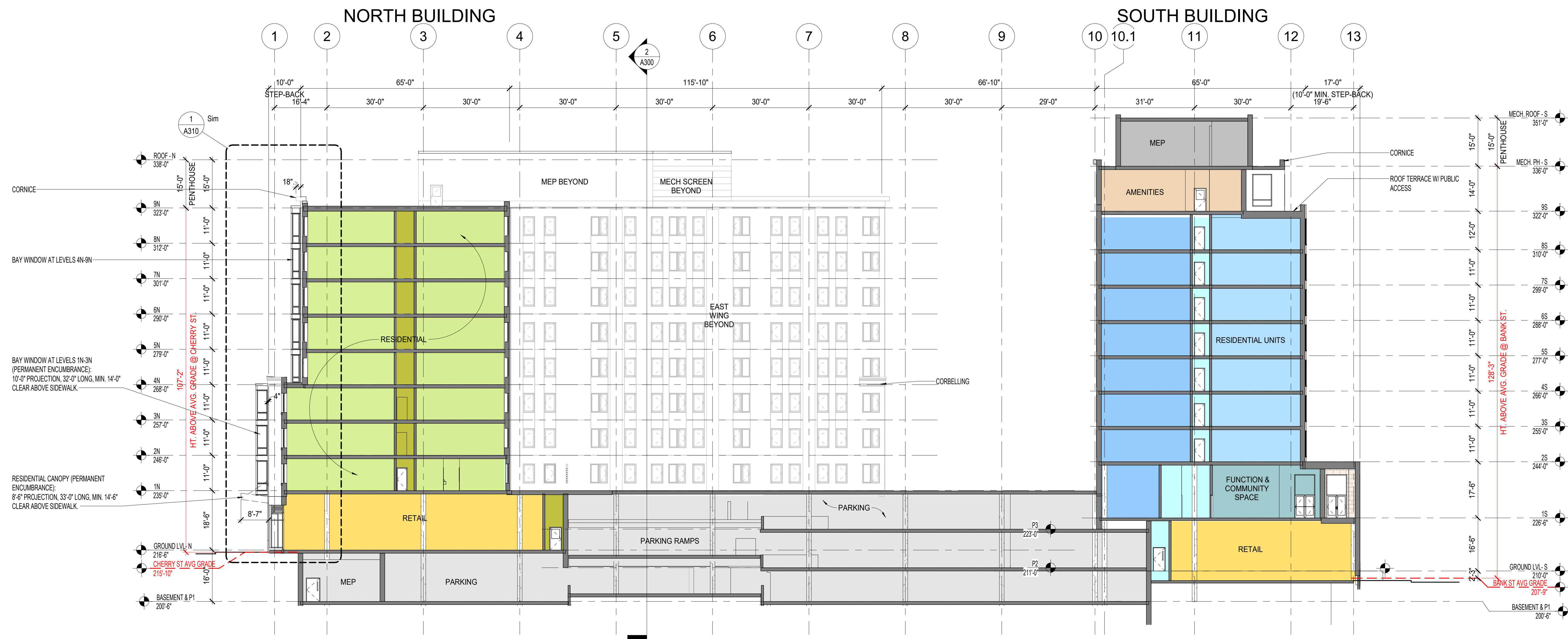
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ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SAREL, MANAGING DIRECTOR

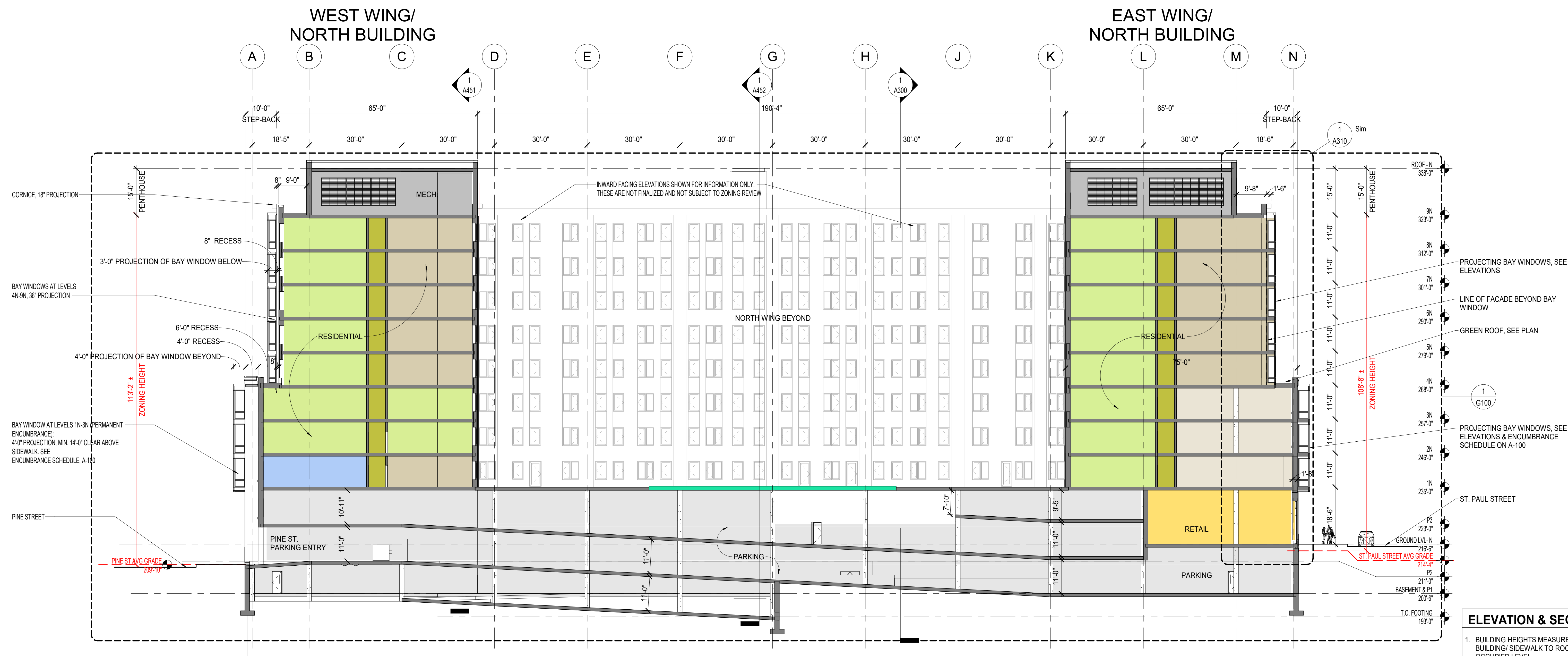
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ORIGINATOR DATE: **02/04/2020** SCALE:
DRAWN BY: **NE/JC/CL/JR** CHECKED BY: **JDR**
ISSUE LOG:
Zoning Submission 15 Oct 2020

SHEET CONTENTS
AXONOMETRIC 3D MASSING

SHEET NO:
A220
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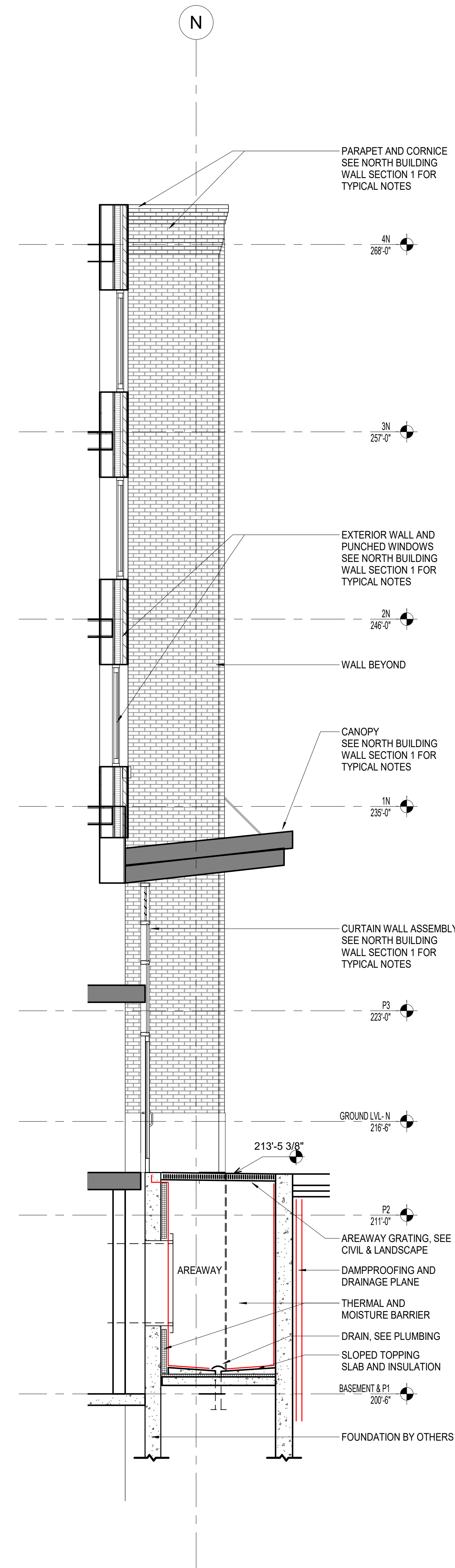
1 NORTH-SOUTH SECTION LOOKING EAST
SCALE: 1/16" = 1'-0"



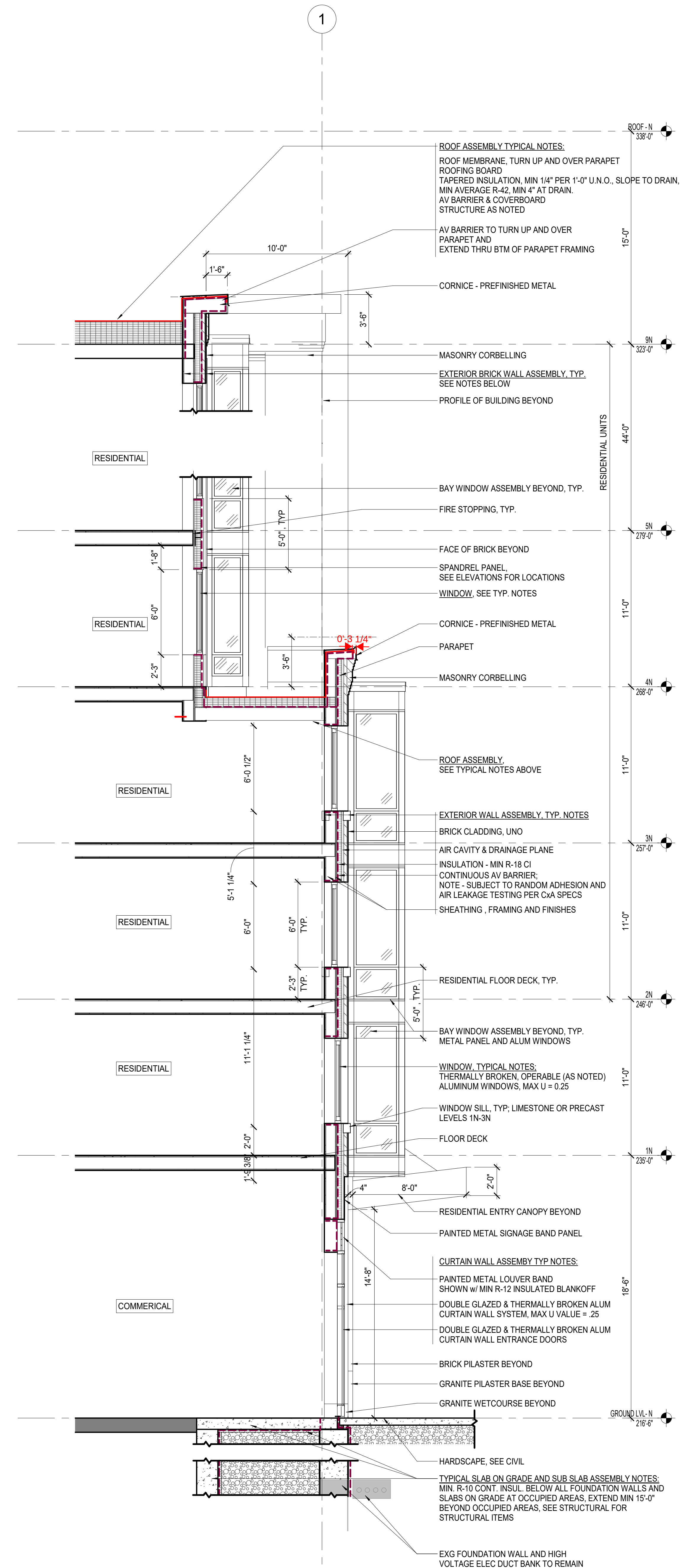
2 EAST-WEST SECTION THROUGH NORTH TOWER LOOKING NORTH
SCALE: 1/16" = 1'-0"

ELEVATION & SECTION GENERAL NOTE
1. BUILDING HEIGHTS MEASURED FROM AVERAGE GRADE AT FACE OF BUILDING/ SIDEWALK TO ROOF DECK ABOVE THE HIGHEST OCCUPIED LEVEL.

10/15/2020 11:24 AM



2 NORTH BUILDNG - WALL SECTION 2
SCALE: 1/4" = 1'-0"



1 NORTH BUILDING - WALL SECTION 1
SCALE: 1/4" = 1'-0"



CITYPLACE BURLINGTON

ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SANEZ, MANAGING DIRECTOR

PRJ PROJECT NO:
A1947.00
CONSULTANT PROJ. #
ORIGINATOR DATE:
10/15/2020
SCALE:
1/4" = 1'-0"
DRAWN BY:
JR/NE
CHECKED BY:
JR
ISSUE LOG:
Zoning Submission
15 Oct 2020

SHEET CONTENTS

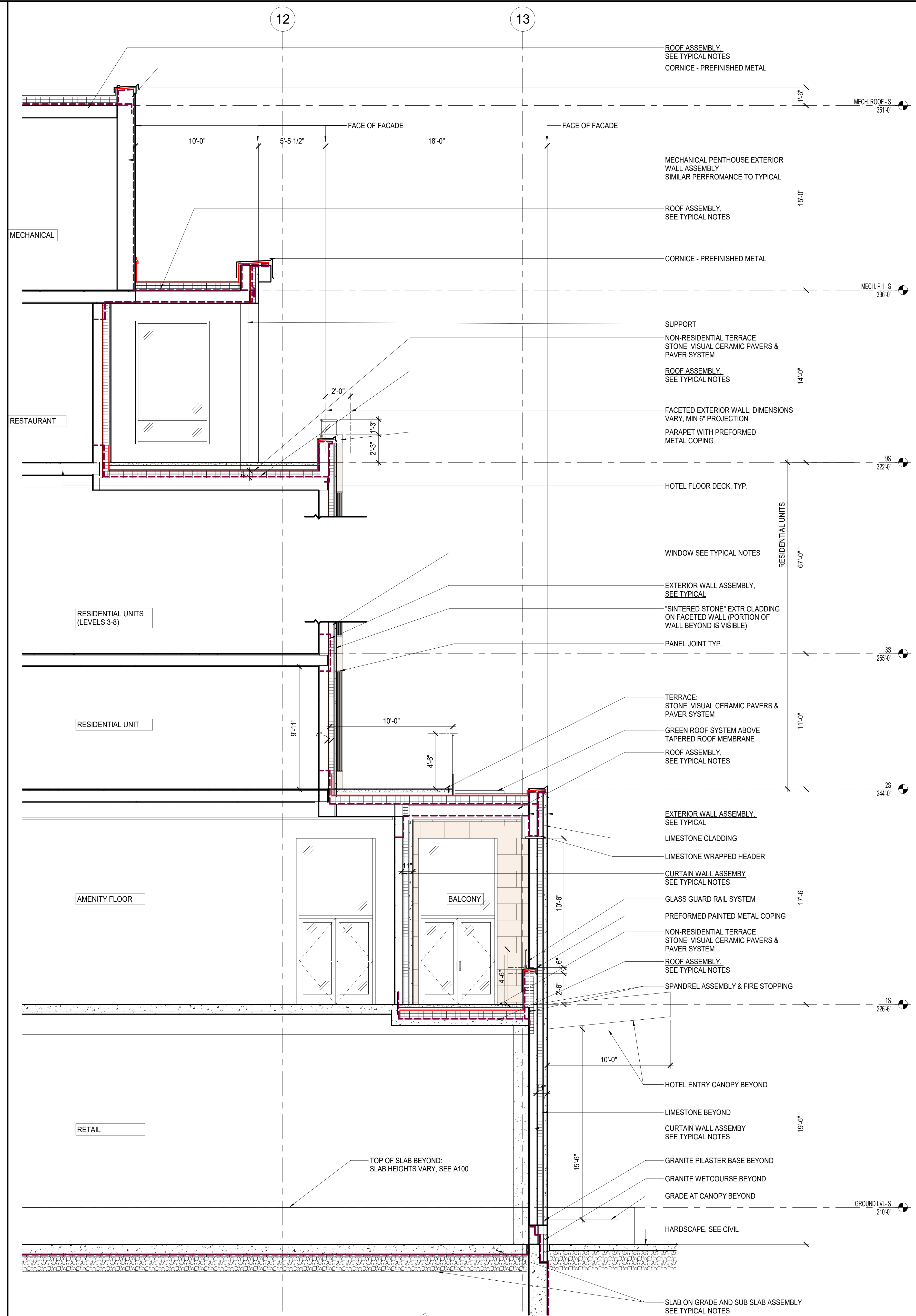
WALL SECTIONS

SHEET NO:

A310

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2/10/2021 4:48:57 PM



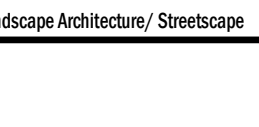
1 ST WALL SECTION - 1
A312 SCALE: 1/4" = 1'-0"



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PROJECT NO.:
A1947.00
CONSULTANT PROJ. NO.:
ORIGINATOR DATE:
04/08/20
SCALE:
1/4" = 1'-0"
DRAWN BY:
JR/NE
CHECKED BY:
JR
ISSUE LOG:
Revision 2
08 Feb 2021

SHEET CONTENTS

WALL SECTIONS

NOTES:
unintentionally omitted from
initial submittal
A312

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3 TYPICAL 2-BR
A410 SCALE: 1/4" = 1'-0"



2 TYPICAL 1-BR
A410 SCALE: 1/4" = 1'-0"



1 TYPICAL STUDIO
A410 SCALE: 1/4" = 1'-0"



2 TYPICAL 1-BR
A410 SCALE: 1/4" = 1'-0"



1 TYPICAL STUDIO
A410 SCALE: 1/4" = 1'-0"



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FF PROJECT NO: A1947.00	CONSULTANT PROJECT NO:
ORIGINATION DATE: 10/15/2020	SCALE: 1/4" = 1' -
DRAWN BY: Author	CHECKED BY: Checker
ISSUE LOG: Zoning Submission	
15 Oct 20	

SHEET CONTENTS:

TYPICAL UNITS

SHEET NO:

A410

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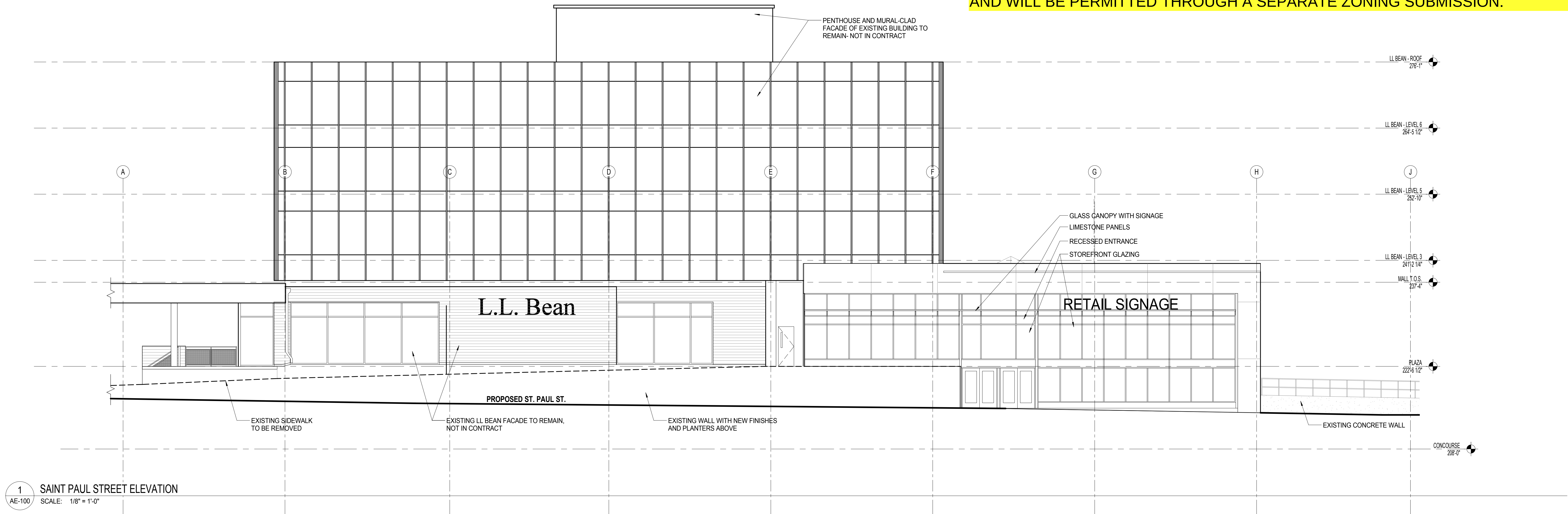
101 Cherry Street
Burlington, VT
05401

PROJECT NO: A1636
DATE: 02/21/17
SCALE: As indicated
DRAWN BY: JDR&W-FFF
CHECKED BY: JH-PKSB
DATE: 10/01/17

SHEET COORDINATES:
WEST ELEVATION,
CHURCH STREET
RETAIL

SHEET NO:
AE-100

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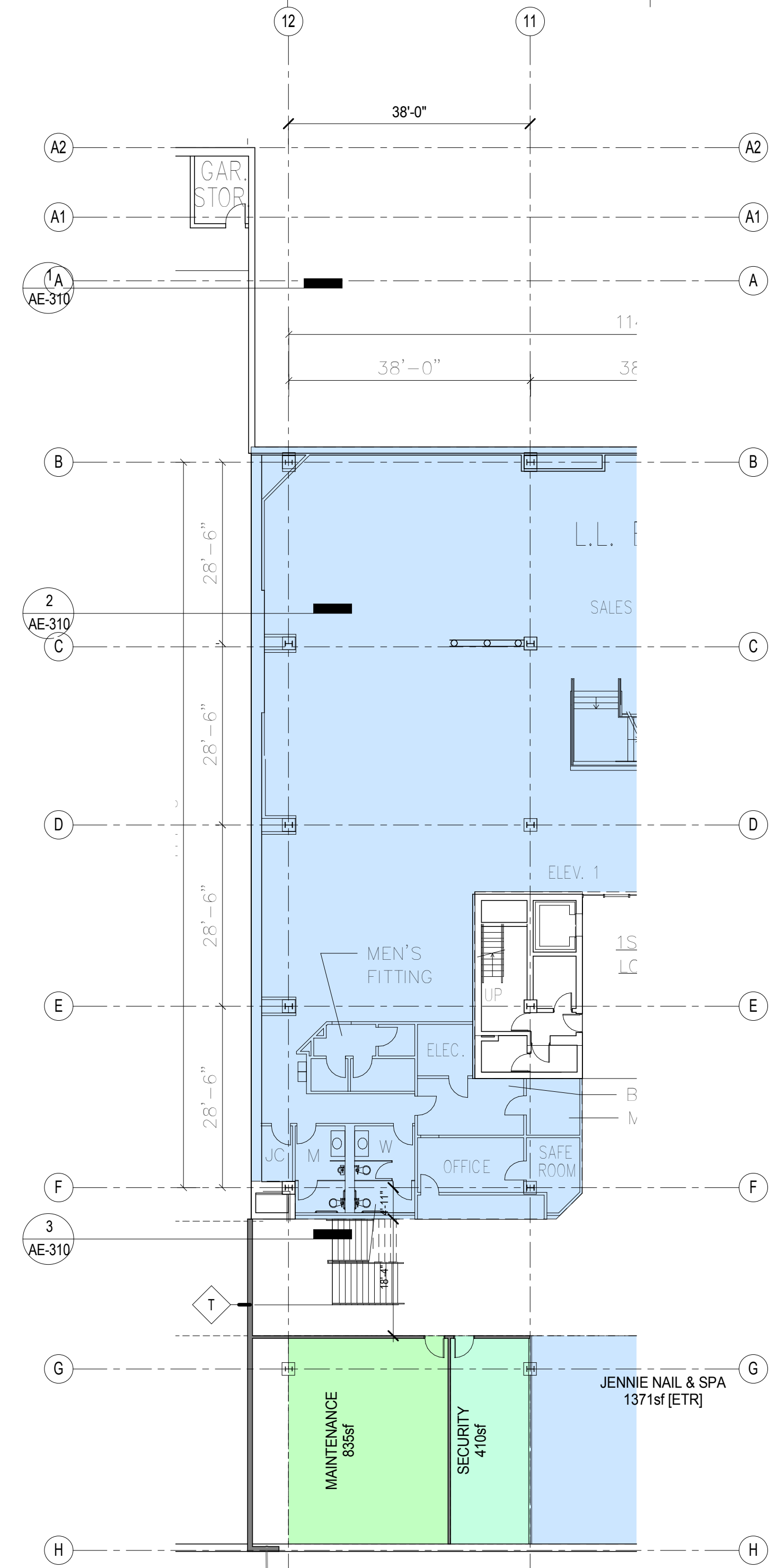
1 SAINT PAUL STREET ELEVATION
SCALE: 1/8" = 1'-0"



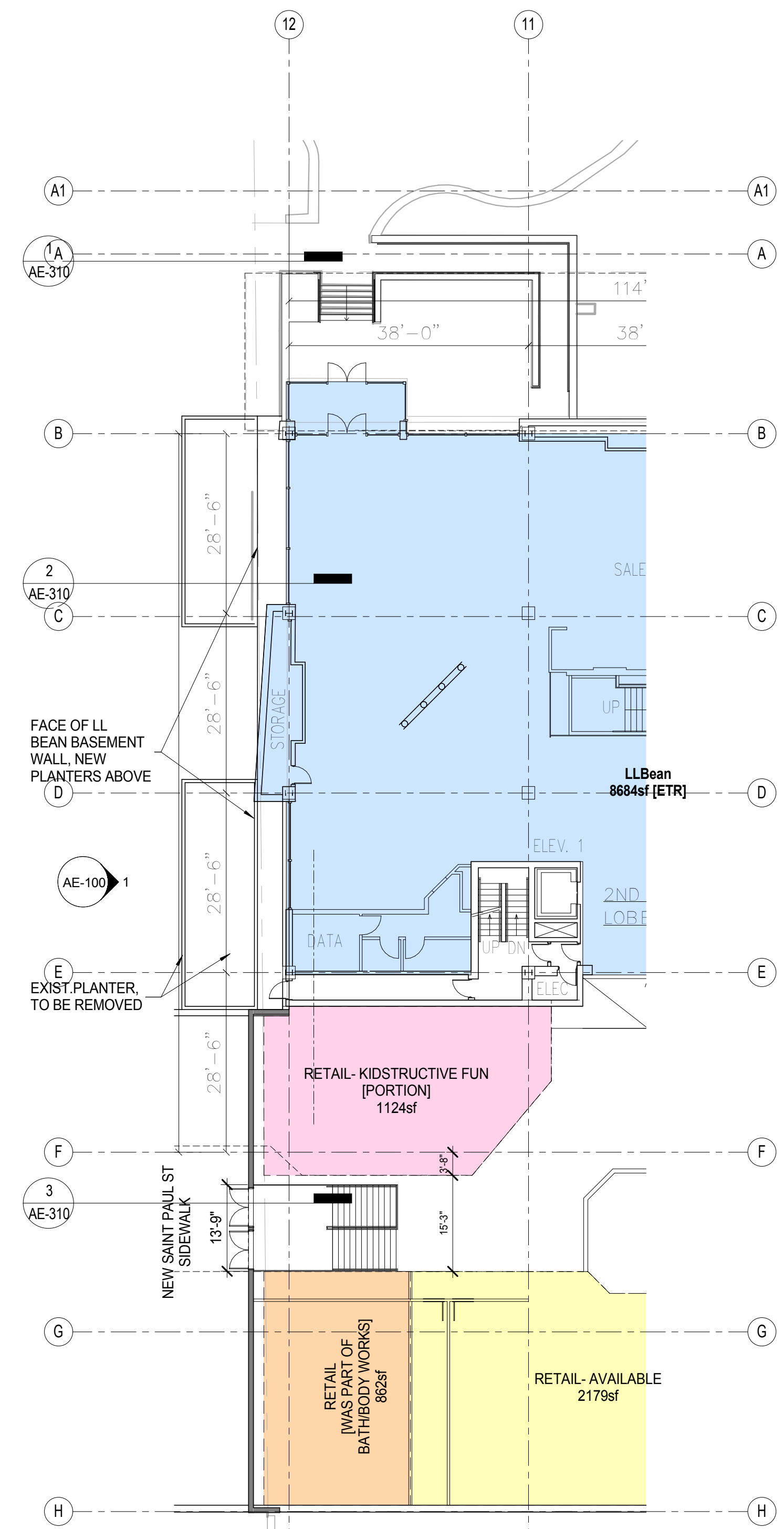
1A SAINT PAUL STREET RENDERED ELEVATION
SCALE: NOT TO SCALE
SEE 1/AE-100 (ABOVE) FOR NOTES



2 SAINT PAUL STREET ELEVATION- 3D VIEW
SCALE: NOT TO SCALE

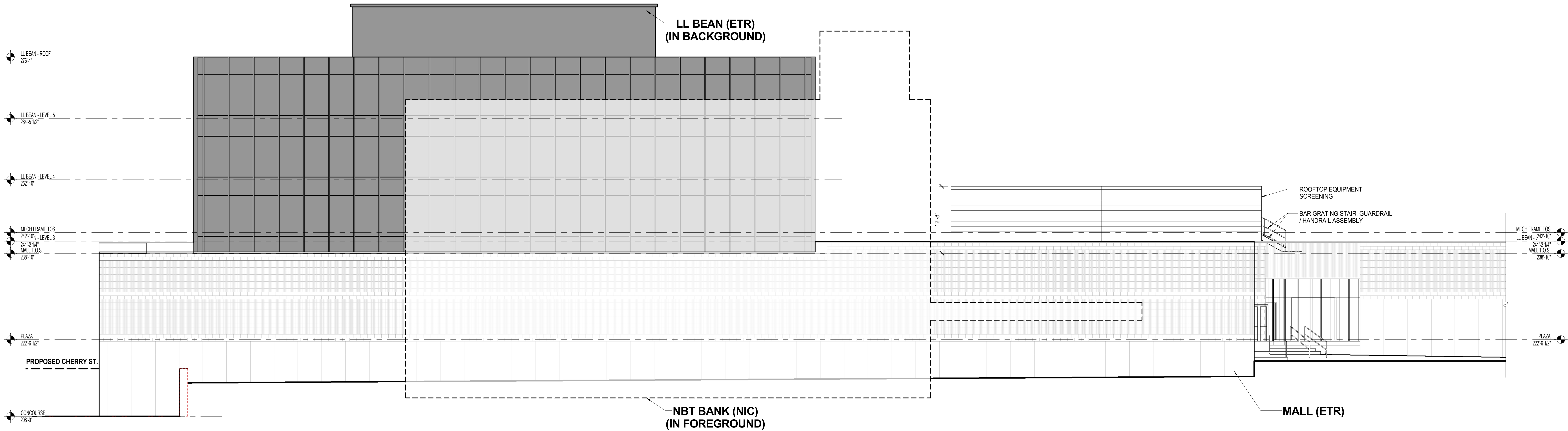


3 PARTIAL FLOOR PLAN AT MALL CONCOURSE (LOWER) LEVEL
SCALE: 1/16" = 1'-0"



4 PARTIAL FLOOR PLAN AT MALL PLAZA (UPPER) LEVEL
SCALE: 1/16" = 1'-0"

PRELIMINARY/ FOR REFERENCE ONLY. WORK SHOWN IS ON A SEPARATE PARCEL AND WILL BE PERMITTED THROUGH A SEPARATE ZONING SUBMISSION.



1 ENABLING EXTERIOR ELEVATION - SOUTH (Column line 12-7)
SCALE: 1/8" = 1'-0"



2 EQUIPMENT SCREEN SAMPLE PHOTOGRAPH
NOT TO SCALE

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BURLINGTON TOWN CENTER REDEVELOPMENT:
ENABLING ROOFTOP EQUIPMENT

Burlington Town
Center,
Devonwood Investors,
LLC

49 Church Street
Burlington, VT
05401

PROJECT NO.: A1636.03	
COORDINATION DATE: 02/03/17	SCALE: 1/8" = 1'-0"
DRAWN BY: BW/SP	CHECKED BY: BW
DATE LOG: 03/27/2017	DEMOLITION PACKAGE ISSUED FOR PERMIT
03/28/2017	DEMOLITION AND ENABLING PACKAGE ISSUED FOR BID
06/22/2017	ISSUED FOR BID

ENABLING
EXTERIOR
ELEVATION - SOUTH

SHEET NO.:
AE-201

ENABLING SCOPE
BASIS OF DESIGN DRAWING

Room Summary	
Room Name	Wall Ht.
LEVEL 2	11

NOTES:

- 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
- 2) CALCULATIONS MAY OR MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE.
- 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
- 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SIMPLY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE.
- 5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AIA ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
- 6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
- 7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

lighting has been updated per zoning comment
DPW suggests further increases to lighting at entries
for driver and pedestrian safety reasons.
This is possible and can be enhanced with daylight
sensitive lighting controls

RES. DOCK
N102
1,565 SF

PARKING LOBBY
N102A
168 SF

SERVER ROOM
590 SF

SECURITY
OFFICE, FIRE
COMMAND
997 SF

TYP DRIVE LANE

P2 PARKING
44,457 SF

RETAIL A5
NG100
3,602 SF

PUBLIC PARK.
ENTRY
N100
562 SF

lighting has been updated per zoning comment
DPW suggests further increases to lighting at entries
for driver and pedestrian safety reasons.
This is possible and can be enhanced with daylight
sensitive lighting controls

**BURLINGTON CENTER GARAGE
BURLINGTON, VT
LEVEL 2 - LIGHTING LAYOUT**

GENERATED FOR:
**FREEMAN, FRENCH
FREEMAN**



SLA
SWANEY LIGHTING
ASSOCIATES, INC.

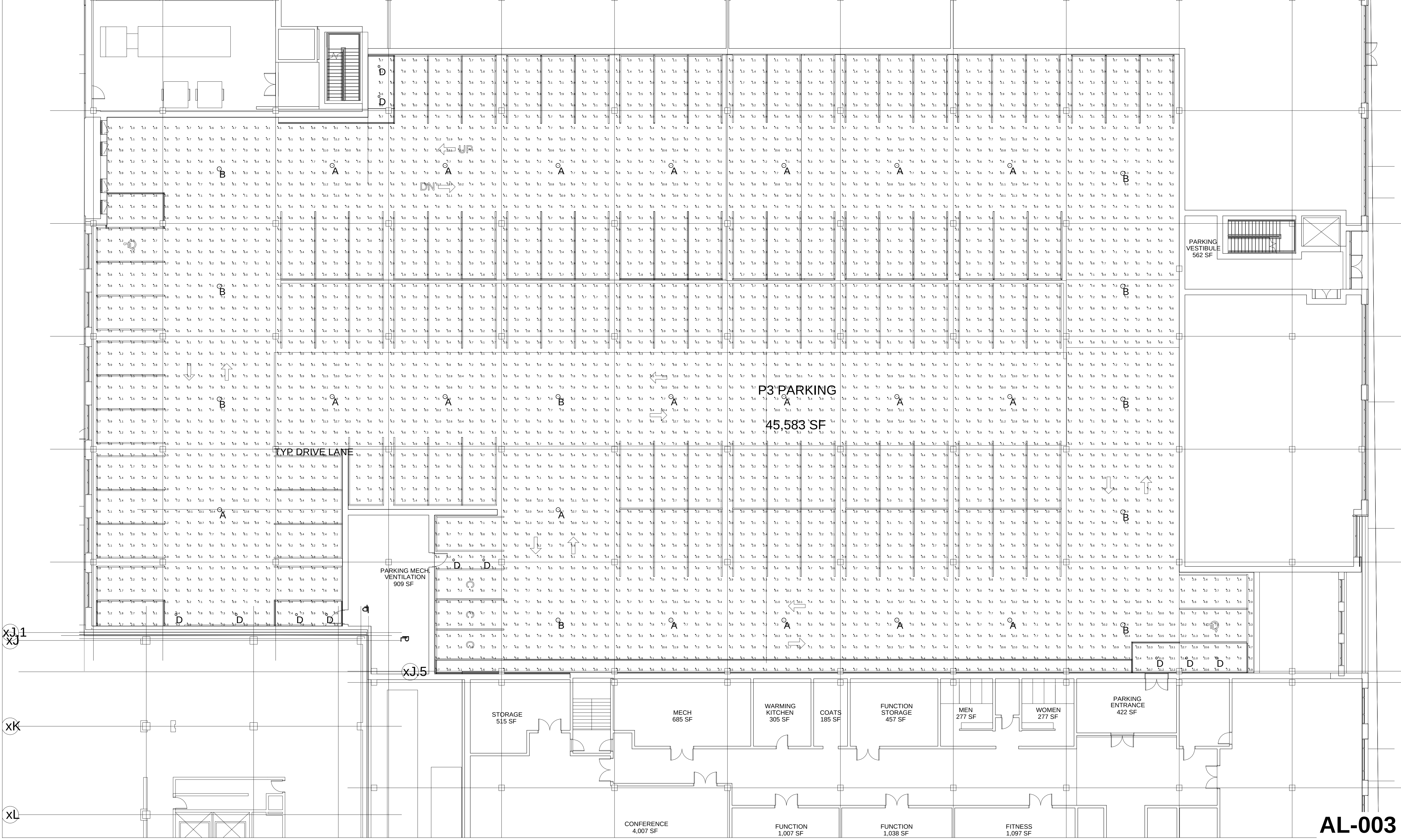
[illegible]

Calculation Summary					
Room Name	Avg	Max	Min	Avg/Min	Max/Min
LEVEL 3 Floor	5.00	14.4	0.4	N.A.	N.A.
TYP DRIVE LANE	6.78	13.0	3.7	1.83	3.51

Room Summary	
Room Name	Wall Ht.
LEVEL 3	11

Luminaire Schedule (note fixture catalogue numbers are not complete)					
Tag	Symbol	Qty	Lum. Lumens	LLF	Lum. Watts
A	⊙	19	8714	0.900	71.2
B	⊙	10	8634	0.900	71.2
D	⊙	11	3769	0.900	34.6

- NOTES:
- 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
 - 2) CALCULATIONS MAY OR MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE.
 - 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES TAKEN AS SHOWN IN CALCULATION SUMMARY UNLESS OTHERWISE INDICATED.
 - 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE.
 - 5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
 - 6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
 - 7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.



PLAN VIEW

TITLE

BURLINGTON CENTER GARAGE

BURLINGTON, VT

LEVEL 3 - LIGHTING LAYOUT

GENERATED FOR:

FREEMAN, FRENCH

FREEMAN

SCALE

AS SHOWN

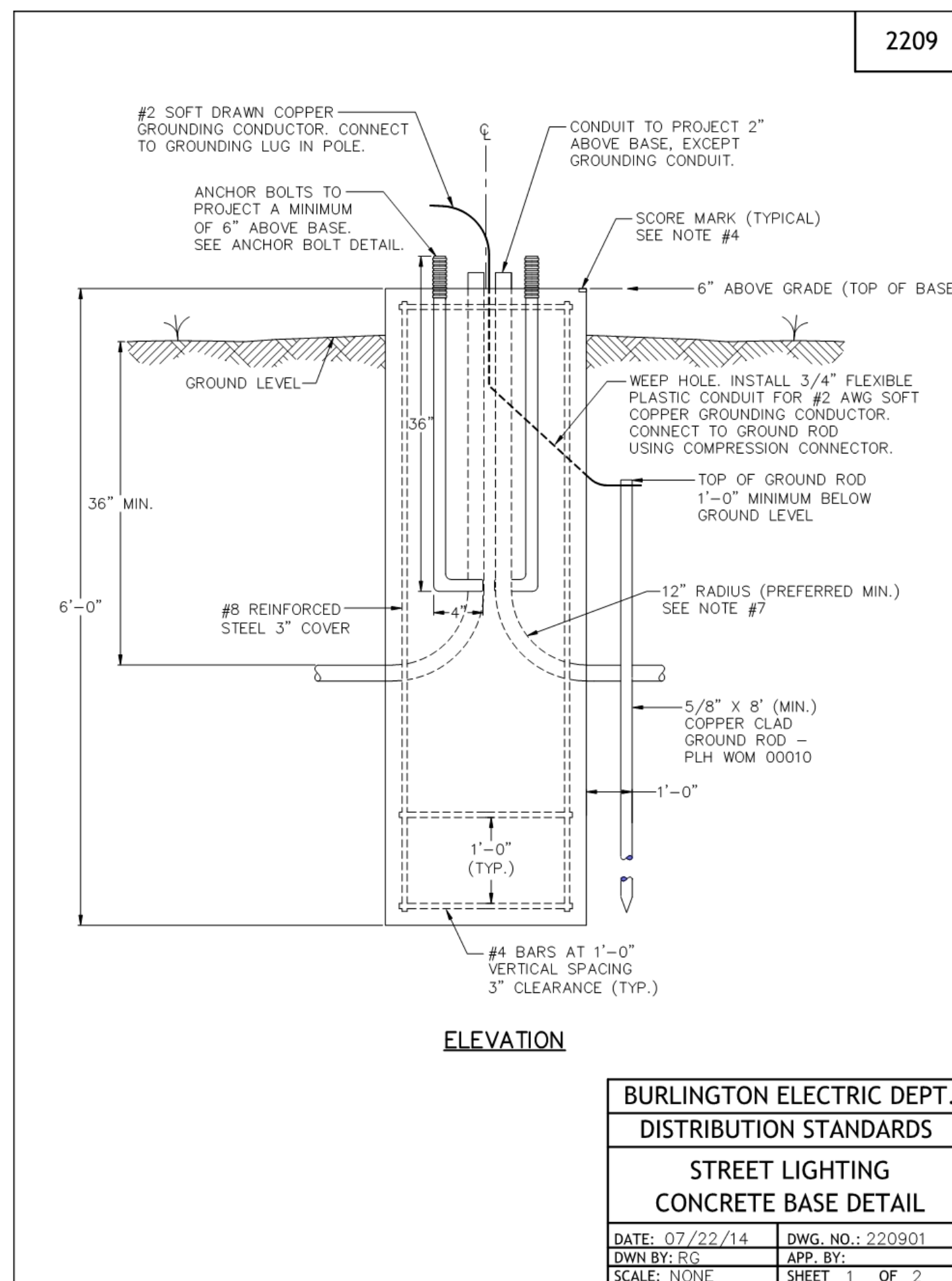
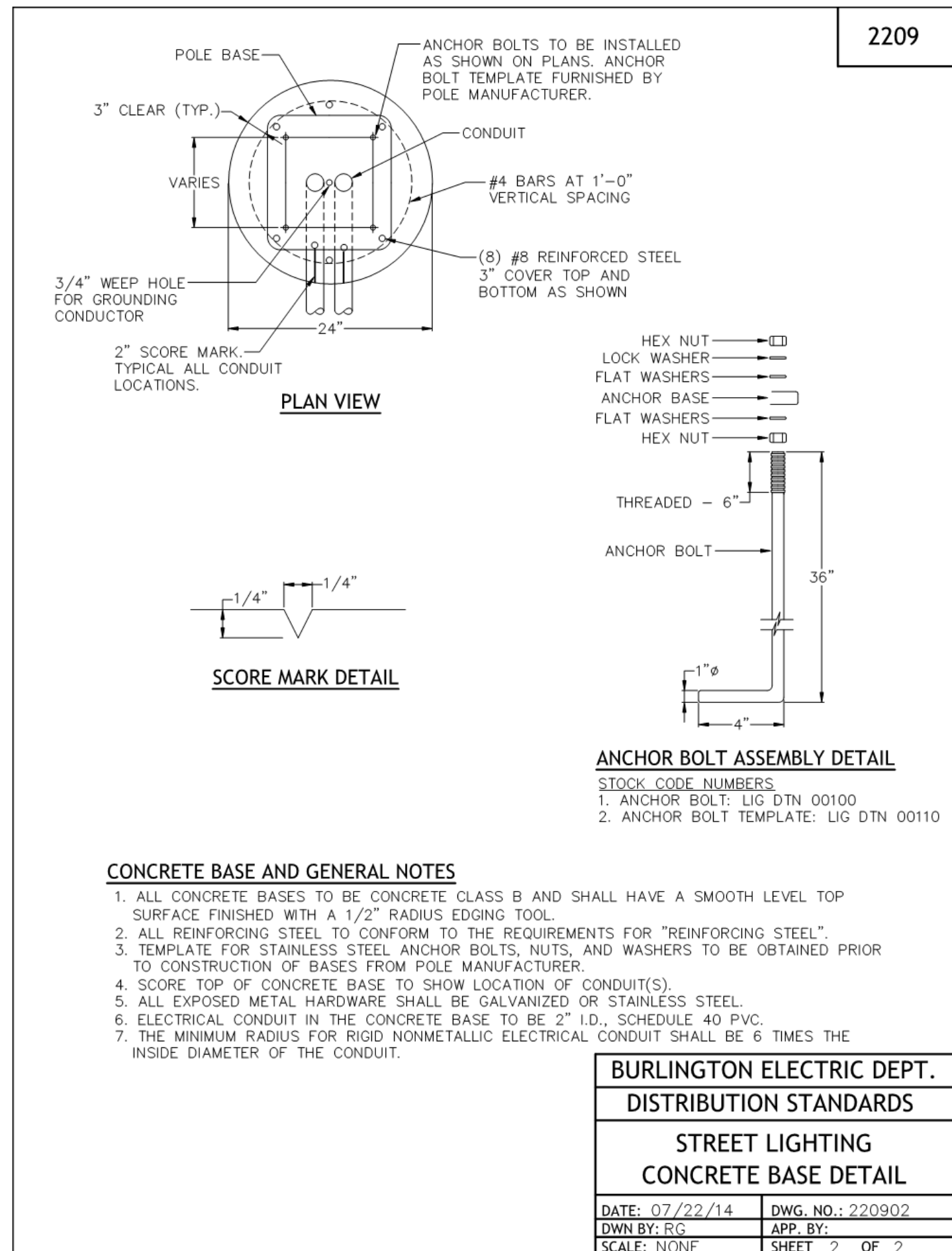
Page 1 of 1

Date:1/30/2020

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1 LIGHTING CUT CHEETS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0" REF.:

Pine St - heading South 134 points			Pine St - sidewalk East 184 points			Mid Block - Pine 16 points		
Average	1.52	0.16	Average	1.05	0.34	Average	3.93	0.09
Maximum	2.82	0.38	Maximum	5.48	0.31	Maximum	4.59	0.09
Minimum	0.55	0.08	Minimum	0.31	0.09	Minimum	2.98	0.09
Avg. Min	1.72	0.51	Avg. Min	3.40	0.78	Avg. Min	1.32	0.09
Max. Min	3.20	4.75	Max. Min	17.68	0.78	Max. Min	1.54	0.09
Coef Var	0.30	0.51	Coef Var	0.78	0.85	Coef Var	0.09	0.09

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 271.8 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 271.8 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.25

Pine St - heading North 134 points			Pine St - Sidewalk West 235 points		
Average	1.60	0.19	Average	1.05	0.34
Maximum	2.92	0.77	Maximum	5.66	0.31
Minimum	0.82	0.10	Minimum	0.31	0.09
Avg. Min	1.95	1.85	Avg. Min	3.40	0.78
Max. Min	3.56	7.70	Max. Min	18.26	0.85
Coef Var	0.29	0.48	Coef Var	0.85	0.85

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 91.8 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 91.8 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.48

2 PINE STREET LIGHTING CALCULATIONS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"

St Paul St - heading North - Upper Block 56 points			St Paul St - heading North - Lower Block 76 points			St Paul St - sidewalk West 237 points		
Average	0.98	0.16	Average	1.49	0.10	Average	0.97	0.34
Maximum	1.28	0.34	Maximum	2.39	0.12	Maximum	3.55	0.31
Minimum	0.78	0.10	Minimum	0.55	0.08	Minimum	0.28	0.09
Avg. Min	1.26	1.63	Avg. Min	2.71	1.20	Avg. Min	3.46	0.78
Max. Min	1.64	3.40	Max. Min	4.35	1.50	Max. Min	14.11	0.72
Coef Var	0.13	0.44	Coef Var	0.32	0.12	Coef Var	0.72	0.85

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 91.9 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 91.9 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.35

St Paul St - heading South - Lower Block 77 points			St Paul St - heading South - Upper Block 56 points			St Paul St - sidewalk East 167 points		
Average	1.31	0.24	Average	1.35	0.10	Average	0.91	0.34
Maximum	2.28	0.70	Maximum	2.37	0.14	Maximum	2.78	0.31
Minimum	0.52	0.09	Minimum	0.91	0.08	Minimum	0.36	0.09
Avg. Min	2.51	2.72	Avg. Min	1.49	1.31	Avg. Min	2.52	0.78
Max. Min	4.38	7.78	Max. Min	2.60	1.75	Max. Min	7.72	0.85
Coef Var	0.37	0.69	Coef Var	0.23	0.14	Coef Var	0.55	0.85

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 278.1 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 278.1 DEG

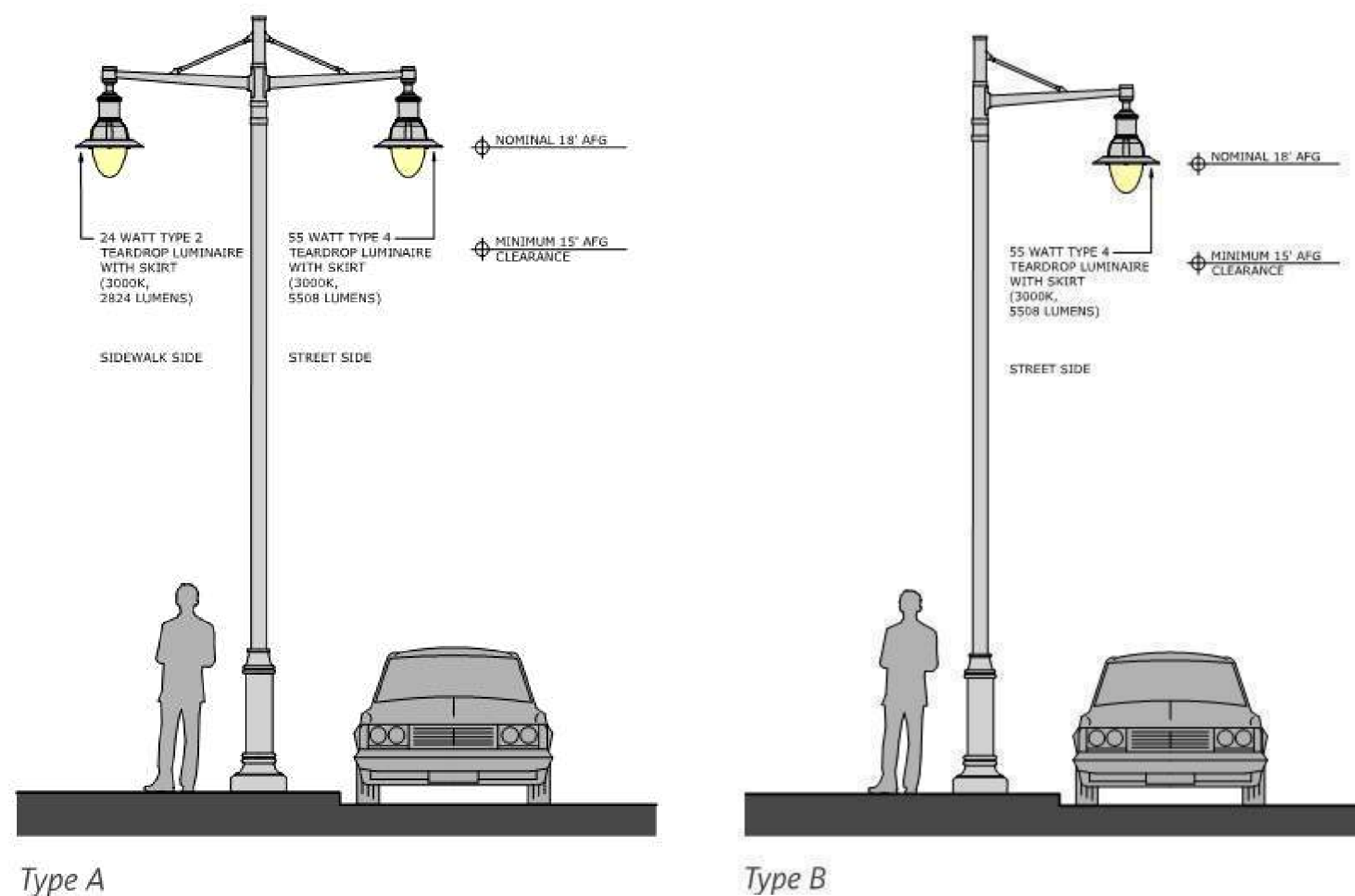
Ratio (Max veiling luminance / Avg road luminance) = 0.54

St Paul St - heading South Upper Block

A ROADWAY LUMINANCE (CD/SQ METER) travel direction 271.9 DEG - CIE_surface_R2 - q0 = 0.070
B VEILING LUMINANCE (CD/SQ METER) travel direction 271.9 DEG

Ratio (Max veiling luminance / Avg road luminance) = 0.10

3 ST PAUL STREET LIGHTING CALCULATIONS Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"



4 LIGHTING FIXTURES- From Great Streets Standards
SCALE: 1/4" = 1'-0"



6 ST PAUL STREET PHOTOMETRIC PLAN. Provided by Burlington Electric Department
SCALE: 1/4" = 1'-0"



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CITYPLACE
BURLINGTON
ZONING SUBMISSION - NOT FOR CONSTRUCTION

OWNER
BTC MALL ASSOCIATES, LLC
A PROJECT BY
DEVONWOOD INVESTORS, LLC
DON SAEZ, MANAGING DIRECTOR

PROJECT NO.: A1947.00
CONSULTANT PROJ. #:
ORIGINATOR DATE: 02/06/20
SCALE: 1/4" = 1'-0"
DRAWN BY: Author
CHECKED BY: Checker
SHEET NO.: 04 Feb 2020

STREET AND
SIDEWALK
LIGHTING

AL004



To: BTC Mall Associates, LLC

Date: February 26, 2021

Memorandum

Project #: 57881.00

From: Jennifer Conley, PE, PTOE

Re: CityPlace Burlington
Response to Comments

VHB completed a Traffic Impact Study (TIS) dated January 2017 for the redevelopment of the Burlington Town Center Mall between St. Paul Street and Pine Street into the mixed use Burlington Town Center (2017 TIS)¹. VHB completed an update to the 2017 TIS in March 2020 for a new building program for the redevelopment of the Burlington Town Center into the mixed use CityPlace Burlington (CPB) (2020 CPB TIS)². The building program for the CPB site had since changes and VHB has completed a Supplemental Traffic Analysis (STA) for the proposed revision to the building program (October CPB STA).³ VHB has received comments from the City's Transportation Peer Review Consultant, CHA on the TIS and STA. Responses to CHA's comments are below.

Response to Comments

Comment 1: *We agree with the trip generation assessment presented for the proposed development plan as described in the March 2020 TIS and for the revised development plan described in the October 2020 memo. This analysis shows that the current revised development plan will generate about 30% fewer new trips during the AM peak hour and 25% fewer new trips during the PM peak hour than what was proposed in the March 2020 study.*

Response 1: No response required.

Comment 2: *The March 2020 and October 2020 development concepts generate fewer site trips than the original development concept that was analyzed in the January 23, 2017 TIS.*

Response 2: No response required.

Comment 3: *The March 2020 study provided mode share and "internal capture" assessments of the site trips to estimate the amount of new vehicle traffic generated by the project during the peak hours. These calculations were not provided for the current revised development plan documented in the October 2020 Trip Gen Update. The change in the mix and density of land uses of the site may affect the amount of internal capture trips, and consequently affect how much vehicle traffic is generated onto the surrounding street network. The calculations of mode share and "internal capture" should be provided for the current development plan to document the estimated net new vehicle trips generated by the project. **A table should be provided comparing the current net vehicle trip generation of the current proposal to the net vehicle trip generation of the former development proposals from March 2020 and January 2017.***

Response 3: A comparison of the net vehicle trip generation of the current building program to the net vehicle trip generation for the former 2017 TIS and 2020 CPB TIS building programs can be found in **Table 1** and **Table 2** respectively below. As shown, the current development proposal is generating significantly fewer (250 to 450 fewer) peak hour vehicle trips than that proposed in the 2017 TIS and approximately 60 fewer peak hour vehicle trips than outlined in the 2020 CPB TIS.

¹ Burlington Town Center Traffic Impact Study, VHB, January 2017.

² CityPlace Burlington Traffic Impact Study, VHB, March 2020.

³ CityPlace Burlington Supplemental Traffic Analysis, VHB, October 2020.

Table 1: Trip Generation Comparison of October 2020 and January BTC 2017 TIS Building Programs

Current Building Program (City Place Block)						January BTC Building Program (Burlington Town Center)						
Total Peak Hour Site Generated Trips						Total Peak Hour Site Generated Trips						Net Difference Net New Vehicle Trips
Total		Bike & Internal		Net New Vehicle Trips	Total		Bike & Internal		Net New Vehicle Trips			
New	Transit	Pedestria	Capture		New	Transit	Pedestria	Capture				
Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)	Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)	
Weekday Morning		5%	25%	11%		Weekday Morning		5%	25%	9%		
Enter	91	7	20	12	52	Enter	440	20	110	40	270	
Exit	138	8	32	12	86	Exit	190	10	50	15	115	
Total	229	16	51	24	138	Total	630	30	160	55	385	
Weekday Evening		5%	25%	30%		Weekday Evening		5%	24%	16%		
Enter	206	11	37	57	101	Enter	470	25	115	75	255	
Exit	176	9	30	57	81	Exit	685	35	170	110	370	
Total	383	20	67	114	182	Total	1,155	60	285	185	625	

Table 2: Trip Generation Comparison of October 2020 and March 2020 CPB TIS Building Programs

Current Building Program (City Place Block)						March CPB TIS Building Program (City Place Block)						
Total Peak Hour Site Generated Trips						Total Peak Hour Site Generated Trips						Net Difference Net New Vehicle Trips
Total		Bike & Internal		Net New Vehicle Trips	Total		Bike & Internal		Net New Vehicle Trips			
New	Transit	Pedestria	Capture		New	Transit	Pedestria	Capture				
Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)	Peak Period	(a)	(b)	(c)	(d)	= (a) - (b) - (c) - (d)	
Weekday Morning		5%	25%	11%		Weekday Morning		5%	25%	13%		
Enter	91	7	20	12	52	Enter	154	7	33	21	93	
Exit	138	8	32	12	86	Exit	177	8	39	21	110	
Total	229	16	51	24	138	Total	331	15	72	42	202	
Weekday Evening		5%	25%	30%		Weekday Evening		5%	25%	33%		
Enter	206	11	37	57	101	Enter	276	10	48	83	135	
Exit	176	9	30	57	81	Exit	232	7	37	83	105	
Total	383	20	67	114	182	Total	508	17	85	166	240	

Comment 4: The March 2020 study used the same source traffic data as the previous January 2017 study. Most of this data was originally collected in 2016-2017, but some of the data is from 2013-2015. It is noted that the traffic volumes for the intersection of Main Street and Prospect Street were updated for the March 2020 study using 2017 counts. Although some of this data is more than five years old, it is acceptable to continue to use this data as the basis of the analysis since most of the data is less than five years old, the study is an update of a formerly approved study and the traffic flows have been adjusted and balanced through the study network to adjust for the different years of the counts.

Response 4: No response required.

Comment 5: The March 2020 study adjusted the base volumes to reflect 2021 and 2026 conditions. However, the 2021 No-Build volumes at some of the study intersections are lower than the 2019 No-Build condition volumes from the 2017 study even though the 2021 No-Build volumes include the previously permitted phase 1 City Place project traffic. At other locations, the 2021 No-Build volumes are significantly higher; for example, the 2021 No-Build volumes at the Pearl/Colchester/Prospect intersection are 28% higher than the 2019 No-Build volumes and are also higher than the previously projected volumes at this intersection for the 2024 Build condition with the former development concept. **Additional supporting documentation should be provided to validate and confirm these calculations of the No-Build and Build volumes. This documentation should include volume diagrams showing the 2021 and 2026 No-Build conditions without the other permitted developments to provide a basis of correlating the volumes from the March 2020 and January 2017 studies.**

Response 5: The variations in the 2021 conditions and the 2019 conditions are primarily due to the adjustment factors applied to reach DHV based on the Red Book data that was available at that time. A number of the DHV adjustment locations resulting in higher adjustments in 2017 than based on the Red Book available in 2020. For example, at ATR ID D096, the DHV adjustment in 2017 was found to be 1.24 and in 2020 it was only 1.14. Other locations resulted in the adjustment increasing significantly between 2017 and 2020. ATR ID D161 included a DHV adjustment of 1.21 in 2017 and 1.43 in 2020. In addition to the DHV adjustments, growth adjustments were also incorporated, but these were much closer for the two different years. The project related traffic added in each analysis year was minimal. The 2021 and 2026 Adjusted Traffic Volumes are provided attached and do not include any specific project developments.

Comment 6: *The site traffic distribution calculations and volume assignments to the street network should be provided for the March 2020 development concept (since this is the basis of the detailed level-of-service analysis).*

Response 6: The trips were assigned based on the distribution provided in the 2020 CPB TIS and are illustrated on diagrams attached to this memorandum.

Comment 7: *The March 2020 analysis shows that two intersections will have operations at LOS E or LOS F during one or both peak hours in the Build condition.*

- Pearl Street/Prospect/Colchester (LOS F: AM & PM)
- Main/Prospect (LOS E PM)

*This is a significant change in the LOS compared to the study of the former development concept. These intersections were shown in the 2017 study to operate at LOS D or better in the 2024 Build condition. **Additional information should be provided explaining the factors contributing to the reduced LOS at these locations and to identify improvement strategies to mitigate for these conditions.***

Response 7: The operations for each of these locations was investigated in detail and the results are provided below.

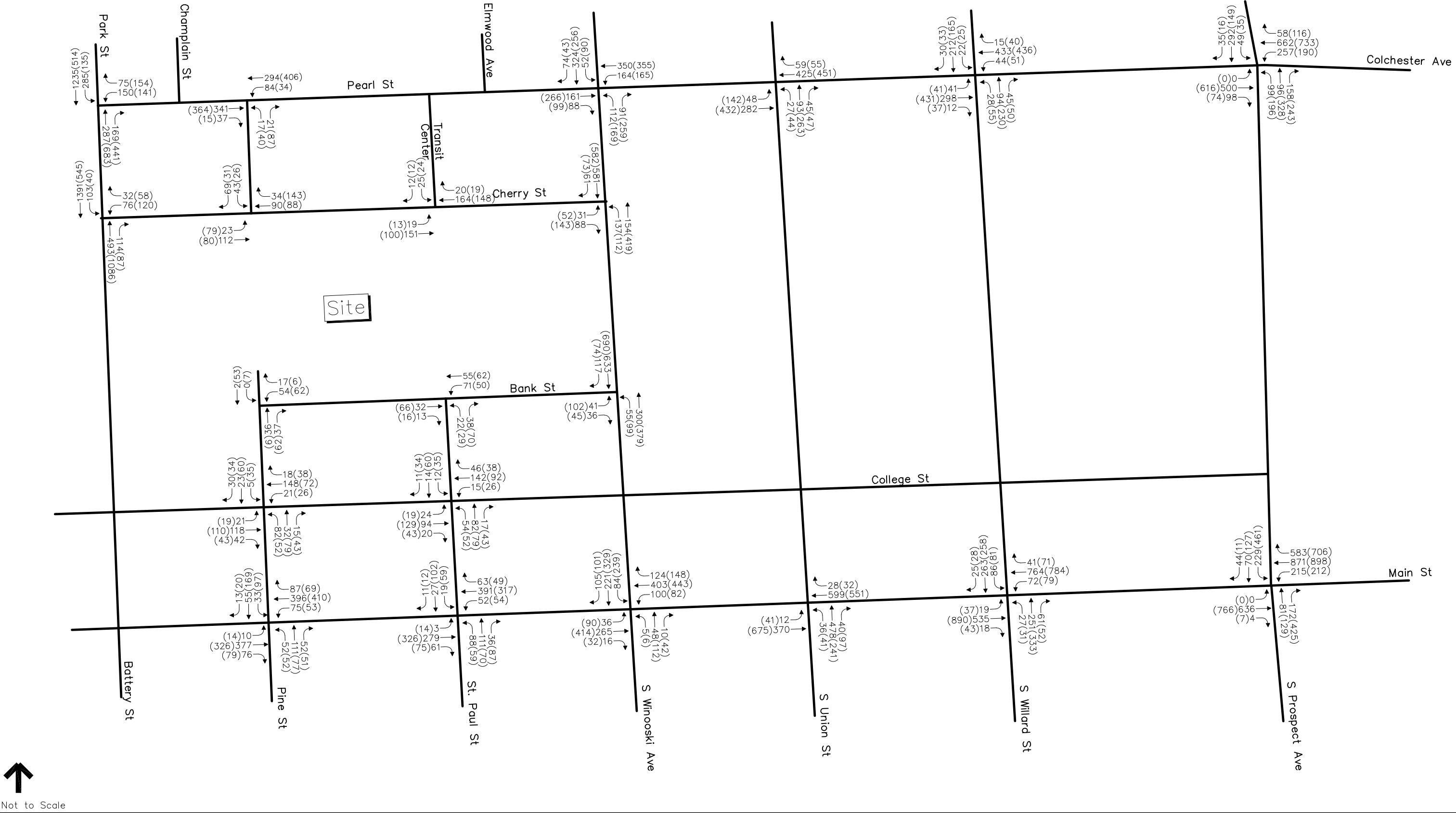
- Pearl Street/Prospect/Colchester (LOS F: AM & PM): *The 2013 scoping study for this intersection did report poor operations for this intersection. This intersection processes a significant volume of traffic during the peak hours (a portion as a result of a 1.51 DHV adjustment). For example, during the 2026 Build Condition PM peak hour, the westbound thru/right lane processes 906 vehicles. This approach is stopped for two phases, when the split phased northbound and southbound traffic are processed, each with a minimum split of 24 seconds, resulting in a LOS F condition. In addition to that red time, the 744 vehicles in the eastbound thru/right lane are also stopped at a red light when the westbound left turn phase receives green time, resulting in LOS F with even longer delays. The synchro analysis indicates that with the current phasing and minimum times, a much longer cycle length (140) would optimally process vehicles. That is not recommended, however, because of the added delay that would be experienced by pedestrians. Even an increase up to 120 seconds results in LOS E operation for vehicles at this volume level. The realignments contemplated in the 2013 Scoping Study would call for the removal of the split phasing and create more efficient operation for all users.*
- Main/Prospect (LOS E PM): *The delay experienced at this intersection can be reduced significantly by adjusting the intersection splits, however, the operation is still an LOS E with just over 55 seconds of delay. Similar to Pearl Street at Prospect and Colchester, the reduction in LOS at this location is primarily caused by the high traffic volumes being processed (967 vehicles in a single westbound thru lane leaves little capacity for other movements). Also similar is the slightly longer cycle length which allows for the splits to be evened out and results in an LOS D condition.*

Comment 8: *The capacity analysis of the intersections along S Winooski Avenue presented in the study are based on the former road configuration (four-lane undivided) of S Winooski Avenue. This analysis does not reflect the current Complete Streets Road Diet improvements that were implemented by the City in October 2020. **Additional documentation should be provided to confirm that the traffic volumes developed for the Road Diet project reflect the permitted volumes for the City Place project and to provide updated analysis of the study intersections along S Winooski Avenue for the 2021 and 2026 conditions.***

Response 8: VHB reviewed the operations of the 2026 Build condition traffic volumes with the geometric conditions resulting from the road diet. For the purposes of this analysis, no modifications were made to traffic signal timing or phasing. A quick review of the operations with the Road Diet yields the following LOS results:

1. South Winooski Avenue at Main Street – LOS D
2. South Winooski Avenue at Bank Street – LOS B
3. South Winooski at Cherry Street – LOS B
4. Winooski at Pearl Street - LOS B

The analysis sheets are provided attached to this memorandum.

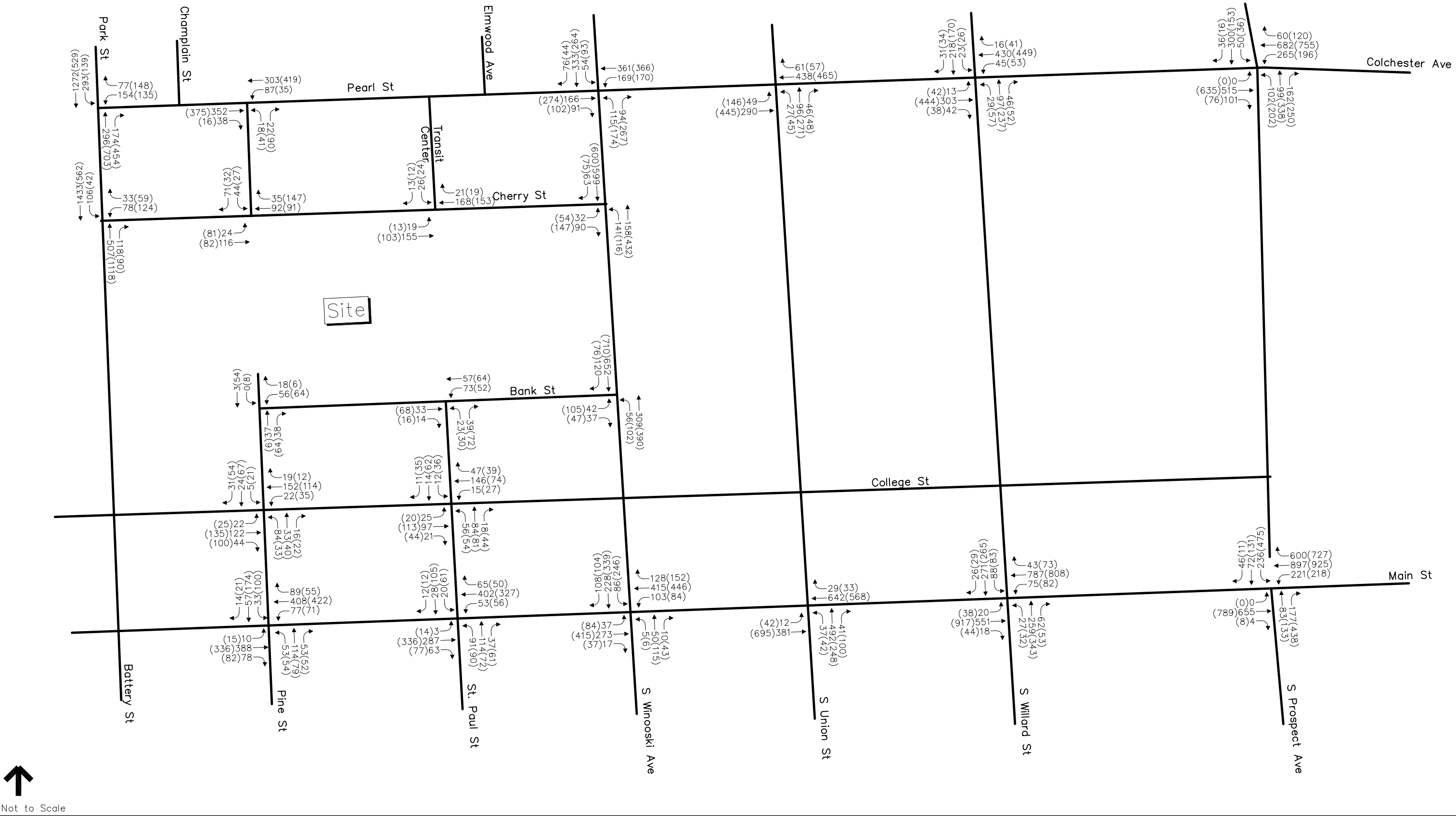


Legend

AM Peak Hour Volume
(PM Peak Hour Volume)



Figure 5
2021 Growth Traffic Volumes
Burlington City Place Block

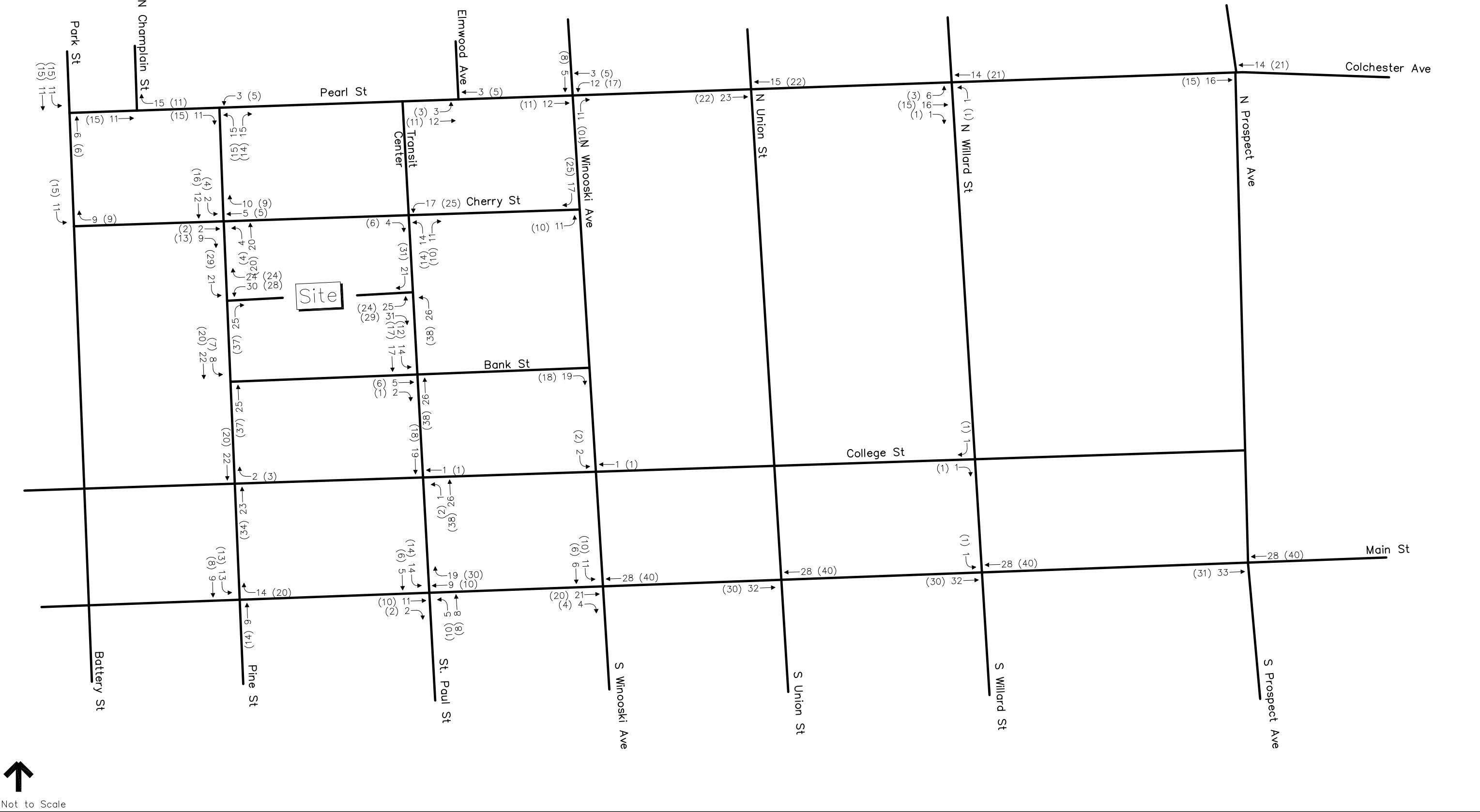


Legend

AM Peak Hour Volume
(PM Peak Hour Volume)



Figure 6
2026 Growth Traffic Volumes
Burlington City Place Block



Legend

AM Peak Hour Volume
(PM Peak Hour Volume)



Appendix
Site Generated Trips
Burlington City Place Block

Intersection:	Int. 5 (Battery/Pearl/Park) & Int. 22 (Battery/Cherry)			Int. 10 (Prospect)	Int. 15 (S. Winnoski/)	Int. 17 (S. Willard/Main)			Pearl/S. Williams	Main/Summit
ATR ID:	D096			D047	D411	D161			D162	D155
Report Year:	2021	2021	2017	2021	2021	2021	2017	2017	2017	2017
AADT:	17156	17156	17705	5104	4729	19161	14218	14218	16517	11300
DHV (Red Book):	1700	1700	1858	620	580	1900	1507	1492	1698	1198
Corr. Count:	1497	1411	1497	410	607	1330	1355	1232	1393	1042
DHV Adjust:	1.14	1.20	1.24	1.51	0.96	1.43	1.11	1.21	1.22	1.15
TMC YR adjust:	1.04	1.02	1.03	1.04	1.02	1.03	1.02	1.02	1.05	1.05
Total Adjust:	1.18	1.23	1.28	1.57	1.00	1.47	1.13	1.24	1.28	1.21

7: S Winooski Ave/N Winooski Ave & Pearl St
City Place Burlington Development

2026 PM Full Build

02/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑		↑		↑	↑	↑	↑
Traffic Volume (vph)	0	306	104	190	386	0	177	0	282	94	282	45
Future Volume (vph)	0	306	104	190	386	0	177	0	282	94	282	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Frt		1.00	0.85	1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1801	1531	1711	1801		1711		1531	1711	1763	
Flt Permitted		1.00	1.00	0.57	1.00		0.56		1.00	0.95	1.00	
Satd. Flow (perm)		1801	1531	1021	1801		1003		1531	1711	1763	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	306	104	190	386	0	177	0	282	94	282	45
RTOR Reduction (vph)	0	0	68	0	0	0	0	0	171	0	0	0
Lane Group Flow (vph)	0	306	36	190	386	0	177	0	111	94	327	0
Turn Type		NA	Perm	Perm	NA		Perm		Perm	Perm	NA	
Protected Phases		4			8							6
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Effective Green, g (s)		15.9	15.9	15.9	15.9		18.2		18.2	18.2	18.2	
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.39		0.39	0.39	0.39	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0		6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		621	528	352	621		395		604	675	696	
v/s Ratio Prot		0.17			c0.21							c0.19
v/s Ratio Perm			0.02	0.19			0.18		0.07	0.05		
v/c Ratio		0.49	0.07	0.54	0.62		0.45		0.18	0.14	0.47	
Uniform Delay, d1		11.9	10.1	12.2	12.6		10.3		9.1	8.9	10.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.1	1.6	1.9		3.6		0.7	0.4	2.3	
Delay (s)		12.5	10.2	13.7	14.5		13.9		9.8	9.4	12.6	
Level of Service		B	B	B	B		B		A	A	B	
Approach Delay (s)		11.9			14.3			11.4			11.9	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			46.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			72.3%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

10: S Propsect St/N Prospect St & Pearl St/Colchester Ave
City Place Burlington Development

2026 PM Full Build

02/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	668	76	196	786	120	203	339	251	36	154	16
Future Volume (vph)	0	668	76	196	786	120	203	339	251	36	154	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt		0.99		1.00	0.98		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1776		1711	1765		1711	1801	1531		1766	
Flt Permitted		1.00		0.08	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)		1776		136	1765		1711	1801	1531		1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	668	76	196	786	120	203	339	251	36	154	16
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	155	0	3	0
Lane Group Flow (vph)	0	740	0	196	906	0	203	339	96	0	203	0
Turn Type		NA		pm+pt	NA		Split	NA	Perm		Split	NA
Protected Phases		4		3	8		2	2			6	6
Permitted Phases	4			8					2			
Actuated Green, G (s)		47.0		62.0	62.0		22.0	22.0	22.0		16.6	
Effective Green, g (s)		47.0		62.0	62.0		22.0	22.0	22.0		16.6	
Actuated g/C Ratio		0.40		0.52	0.52		0.19	0.19	0.19		0.14	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		703		190	922		317	334	283		247	
v/s Ratio Prot		0.42		0.08	c0.51		0.12	c0.19			c0.12	
v/s Ratio Perm				c0.46					0.06			
v/c Ratio		1.05		1.03	0.98		0.64	1.01	0.34		0.82	
Uniform Delay, d1		35.8		49.4	27.8		44.6	48.3	42.0		49.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		48.8		73.8	25.7		4.4	53.1	0.7		19.5	
Delay (s)		84.6		123.2	53.5		49.0	101.4	42.7		69.0	
Level of Service		F		F	D		D	F	D		E	
Approach Delay (s)		84.6			65.9			69.4			69.0	
Approach LOS		F			E			E			E	
Intersection Summary												
HCM 2000 Control Delay			72.0			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			118.6			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			137.3%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

15: S Winooski Ave & Main St
City Place Burlington Development

2026 PM Full Build

02/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	434	36	85	480	159	6	118	44	264	346	105
Future Volume (vph)	90	434	36	85	480	159	6	118	44	264	346	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96			0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)	1711	1780		1711	1733			1734		1711	1738	
Flt Permitted	0.20	1.00		0.27	1.00			0.98		0.54	1.00	
Satd. Flow (perm)	360	1780		483	1733			1702		976	1738	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	434	36	85	480	159	6	118	44	264	346	105
RTOR Reduction (vph)	0	5	0	0	20	0	0	21	0	0	18	0
Lane Group Flow (vph)	90	465	0	85	619	0	0	147	0	264	433	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	19.0	19.0		19.0	19.0			18.0		29.0	29.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			19.0		30.0	30.0	
Actuated g/C Ratio	0.33	0.33		0.33	0.33			0.32		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	120	593		161	577			538		561	869	
v/s Ratio Prot		0.26			c0.36					0.05	c0.25	
v/s Ratio Perm	0.25			0.18				0.09		0.19		
v/c Ratio	0.75	0.78		0.53	1.07			0.27		0.47	0.50	
Uniform Delay, d1	17.8	18.1		16.2	20.0			15.3		9.4	10.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	34.5	10.0		11.8	58.5			1.3		0.6	2.0	
Delay (s)	52.2	28.1		28.0	78.5			16.6		10.0	12.0	
Level of Service	D	C		C	E			B		B	B	
Approach Delay (s)		32.0			72.6			16.6			11.3	
Approach LOS		C			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			37.5			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)			15.0			
Intersection Capacity Utilization			90.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

18: S Prospect St & Main St
City Place Burlington Development

2026 PM Full Build

02/25/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑	↑		↑	↑	↑↑	↑	
Traffic Volume (vph)	0	822	8	219	967	728	0	133	439	475	131	11
Future Volume (vph)	0	822	8	219	967	728	0	133	439	475	131	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		1.00	1.00	0.97	1.00	
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3416		1711	1801	1531		1801	1531	3319	1780	
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3416		1711	1801	1531		1801	1531	3319	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	822	8	219	967	728	0	133	439	475	131	11
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	267	0	0	0
Lane Group Flow (vph)	0	829	0	219	967	728	0	133	172	475	142	0
Turn Type		NA		Prot	NA	Prot		NA	Perm	Prot	NA	
Protected Phases		4		3	8	8		2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		30.1		15.0	51.1	51.1		14.5	14.5	13.1	33.6	
Effective Green, g (s)		30.1		15.0	51.1	51.1		14.5	14.5	13.1	33.6	
Actuated g/C Ratio		0.31		0.16	0.53	0.53		0.15	0.15	0.14	0.35	
Clearance Time (s)		6.0		6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1063		265	951	809		270	229	449	618	
v/s Ratio Prot		0.24		0.13	c0.54	0.48		0.07		c0.14	0.08	
v/s Ratio Perm									c0.11			
v/c Ratio		0.78		0.83	1.02	0.90		0.49	0.75	1.06	0.23	
Uniform Delay, d1		30.3		39.6	22.8	20.5		37.7	39.4	41.8	22.4	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.7		18.6	33.5	15.0		1.4	13.0	58.6	0.2	
Delay (s)		36.0		58.2	56.3	35.5		39.1	52.4	100.4	22.6	
Level of Service		D		E	E	D		D	D	F	C	
Approach Delay (s)		36.0			48.6			49.3			82.5	
Approach LOS		D			D			D			F	
Intersection Summary												
HCM 2000 Control Delay			51.3				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			96.7				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			86.4%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	149	117	441	612	101
Future Volume (vph)	65	149	117	441	612	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	6.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.91		1.00	1.00	0.98	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1607		1711	1801	1766	
Flt Permitted	0.99		0.28	1.00	1.00	
Satd. Flow (perm)	1607		500	1801	1766	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	149	117	441	612	101
RTOR Reduction (vph)	105	0	0	0	9	0
Lane Group Flow (vph)	109	0	117	441	704	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.9		21.7	21.7	21.7	
Effective Green, g (s)	6.9		21.7	21.7	21.7	
Actuated g/C Ratio	0.17		0.53	0.53	0.53	
Clearance Time (s)	6.0		6.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	273		267	962	943	
v/s Ratio Prot	c0.07			0.24	c0.40	
v/s Ratio Perm			0.23			
v/c Ratio	0.40		0.44	0.46	0.75	
Uniform Delay, d1	15.0		5.7	5.8	7.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.0		5.2	1.6	5.4	
Delay (s)	16.0		10.9	7.4	12.7	
Level of Service	B		B	A	B	
Approach Delay (s)	16.0			8.1	12.7	
Approach LOS	B			A	B	

Intersection Summary

HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	40.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	106	65	103	397	5	723	77
Future Volume (vph)	106	65	103	397	5	723	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1711	1531	1711	1801	1711	1775	
Flt Permitted	0.95	1.00	0.23	1.00	0.53	1.00	
Satd. Flow (perm)	1711	1531	409	1801	951	1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	65	103	397	5	723	77
RTOR Reduction (vph)	0	55	0	0	0	6	0
Lane Group Flow (vph)	106	10	103	397	5	794	0
Turn Type	Prot	Perm	Perm	NA	Perm	NA	
Protected Phases	4			2		6	
Permitted Phases		4	2		6		
Actuated Green, G (s)	6.8	6.8	24.1	24.1	24.1	24.1	
Effective Green, g (s)	6.8	6.8	24.1	24.1	24.1	24.1	
Actuated g/C Ratio	0.16	0.16	0.56	0.56	0.56	0.56	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	271	242	229	1011	534	997	
v/s Ratio Prot	c0.06			0.22		c0.45	
v/s Ratio Perm		0.01	0.25		0.01		
v/c Ratio	0.39	0.04	0.45	0.39	0.01	0.80	
Uniform Delay, d1	16.2	15.3	5.5	5.3	4.1	7.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.1	6.3	1.1	0.0	6.6	
Delay (s)	17.1	15.4	11.8	6.4	4.2	14.1	
Level of Service	B	B	B	A	A	B	
Approach Delay (s)	16.5			7.5		14.0	
Approach LOS	B			A		B	

Intersection Summary

HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

EXHIBIT #1

SUPERIOR COURT

STATE OF VERMONT

ENVIRONMENTAL DIVISION

Devonwood Investors, LLC 75 Cherry Street

Docket No. 39-4-17 Vtec

PROPOSED JUDGMENT ORDER

This is an appeal from the City of Burlington Development Review Board's ("DRB") decision approving Devonwood Investors, LLC's zoning application to redevelop the site at 75 Cherry Street owned by BTC Mall Associates, LLC (together, "Appellees"), and presently occupied by Burlington Town Center Mall, into a mixed-use project. The DRB approved the mixed-use development in its March 17, 2017 decision ("the Project").

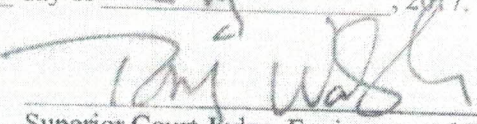
The procedural history of this appeal is as follows. On December 15, 2016, Devonwood Investors, LLC filed a zoning application for the Project. On March 17, 2017, the Burlington DRB granted a certificate of appropriateness and major impact approval for the Project. On April 14, 2017, this appeal was filed on behalf of a group of interested persons ("Appellants"). On June 29, 2017, Appellant and Appellees executed a Settlement Agreement resolving the appeal in exchange for mutual covenants and agreements.

For the reasons stated in the Stipulated Findings of Fact Supporting Final Judgment filed by Appellants, Appellees and the City of Burlington on July 14, 2017, the court approves the Devonwood Investors, LLC 75 Cherry Street Project as approved by the City of Burlington DRB on March 17, 2017 and modified by Exhibit 1, adding parking capacity for approximately 200 automobiles in the Project's basement level. *See* Exh. 1 (Site Plan). The City of Burlington Comprehensive Development Ordinance ("CDO") explicitly exempts "[s]ubsurface site improvements" from both Conditional Use Review and Major Impact Review. CDO § 3.5.3. Moreover, the court finds that the additional parking spaces will not create any significant traffic

impacts beyond those already reviewed by DRB and subject to the conditions of the DRB's March 17, 2017 decision.

We therefore direct the City of Burlington to issue a zoning permit for the Project, consistent with the Stipulated Findings of Fact (including the site plans submitted as Exhibit 1), the conditions approved by the DRB on March 17, 2017, and this order.

SO ORDERED this 17th day of July, 2017.



Superior Court Judge, Environmental Division

SETTLEMENT AGREEMENT

1. This Settlement Agreement is between BTC Mall Associates, LLC and Devonwood Investors, LLC ("Applicant") and
 - Barbara McGrew individually and Steven Goodkind who on his own behalf and on behalf of the group of individuals in Exhibit A have brought an appeal in *Devonwood Investors, LLC (75 Cherry Street)*, Vermont Superior Court, Environmental Division, Docket Number 39-4-17 Vtec;
 - Barbara McGrew individually who has brought the appeal *Devonwood Investors, LLC JO 4-255*; Vermont Superior Court, Environmental Division, Docket Number 63-5-17 Vtec; and
 - Steven Goodkind, Michael Long and Lynn Martin who in Counts I, II, and III of *Long et. al. v. City of Burlington et. al.* Vermont Superior Court, Civil Division, Docket No. 996-11-16 Cncv brought a taxpayer challenge to the Tax Increment Financing (TIF) voted at the Burlington Special City Meeting held November 8, 2016 and who also as individual plaintiffs challenged a denial of a request for public records in Count IV of that action;

(collectively, "Appellants"), and shall be binding upon Applicant's and Appellants' assigns and successors in interest as hereinafter provided.

2. Applicant is proposing to construct a mixed-use Priority Housing Project as approved in a Decision by the City of Burlington, Development Review Board dated March 17, 2017 (the "Project").
3. In the matters of *Devonwood Investors, LLC (75 Cherry Street)*, Vermont Superior Court, Environmental Division, Docket Number 39-4-17, the Applicant and the appellants thereto shall promptly file a *Stipulation for Final Judgment*, along with a *Proposed Judgment Order* to the Court approving the Project consistent with changes to mitigate concerns raised by Appellants by adding subsurface parking capacity for approximately 200 additional automobiles in the Project. They agree that the total number of automobiles accommodated will depend on engineering and other constraints including that the subsurface parking will not extend below one level and will not be included in the buildings constructed at and above ground. The Parties agree to work in good faith to prepare and to promptly file with the Court the *Stipulation for Final Judgment* and *Proposed Final Judgment Order*.

If the *Proposed Judgment Order* is not be approved by the Court in a manner that results in a complete and final adjudication of this matter on terms that materially reflect the *Proposed Judgment Order* then this Settlement Agreement is of no force and effect, and the *de novo* appeal will proceed for hearing, and aim for trial to be completed before the end of October.

4. In the matter *Devonwood Investors, LLC JO-4-255* Environmental Division Docket No. 63-5-17 Vtec, the Applicant and the Appellant thereto stipulate that the project, as amended to include the addition of subsurface parking capacity for approximately 200 automobiles (recognizing as stated above that the total number of automobiles accommodated will depend

on engineering and other constraints including that the subsurface parking will not extend below one level and will not be included in the buildings constructed at and above ground), is not subject to Act 250 jurisdiction, and does not require an Act 250 permit because it is a Mixed-Use Priority Housing Project. The Parties agree to work in good faith to prepare and to promptly file with the Court a *Stipulation for Final Judgment* and a *Proposed Final Judgment Order* to that effect.

If the Court does not approve a *Stipulated Final Judgment Order* resulting in a final adjudication that the Project, as modified by this Settlement Agreement, is exempt from Act 250 regulation, then Ms. McGrew will allow Applicant the time required to seek confirmation that Priority Housing Project eligibility is satisfied by the Project, as modified by this Settlement Agreement, and is exempt from Act 250 regulation. If such confirmation concerning Act 250 is obtained, then Ms. McGrew will promptly dismiss her appeal with prejudice. Ms. McGrew shall not challenge or interfere with any process related to whether the Project, as modified by the terms of this Settlement Agreement is exempt from Act 250. If Applicant elects not to seek further confirmation that the Project, as modified by this Settlement Agreement is exempt from Act 250 regulation, then Ms. McGrew will promptly dismiss her appeal with prejudice.

- 5) Upon the Environmental Division's approval of the *Stipulation for Final Judgment* and *Proposed Judgment Order* in paragraph 3 above, Steven Goodkind, Michael Long, and Lynn Martin will, in the matter *Long et. al. v. City of Burlington et. al.*, Vermont Superior Court, Civil Division, Docket No. 996-11-16 Cncv, promptly move for dismissal with prejudice the taxpayer causes of action Counts I, II, and III challenging the TIF. Steven Goodkind and Lynn Martin will also withdraw their names as the individual plaintiffs in Count IV of that action regarding the Vermont Public Documents Act.
- 6) If (i) the DRB permit appeal is resolved as provided in Paragraph 3, (ii) the Act 250 jurisdictional appeal is resolved as provided in Paragraph 4, and (iii) the individual plaintiffs in *Long et. al. v. City of Burlington et. al.*, Vermont Superior Court, Civil Division, Docket No. 996-11-16 Cncv have concluded their undertakings as provided in Paragraph 5 above, then
 - a. The Applicant will promptly reimburse \$65,000.00 of the Appellants' legal expenses by payment to the order of the IOLTA account of John L. Franco, Jr.
 - b. The Applicant's Project lease with UVMMC will include parking for approximately 160 automobiles, and UVMMC will plan to make arrangements to park approximately 200 automobiles at locations other than at the Project.
 - c. In the event Applicant or its successors and assigns redevelops property currently owned by BTC Mall Associates, LLC located within the Downtown Mixed Use Core Overlay District between Church Street and what will become the re-established section of St. Paul Street at 75 Cherry Street, Applicant agrees that the redevelopment proposal will not involve a structure that exceeds 10 stories, and will include parking for approximately 250 automobiles (either above or subsurface, or some combination thereof), subject to then existing laws and

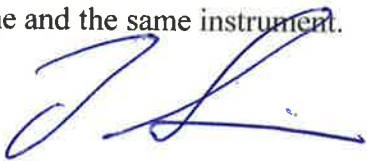
regulations related to parking and reasonable engineering considerations. An appropriate notice of the provisions of this paragraph reasonably satisfactory to the Applicant and Applicant's lender shall be recorded in the land records of the City of Burlington.

- d. Appellants, with the approval of the Applicant, will establish a fund at the Vermont Community Foundation, or similar existing Vermont non-profit organization with 501(c)(3) status, or establish a new fund satisfactory to Applicant. The fund will be used exclusively for charitable purposes, and its activities will exclusively support a mission and purpose to retain the essential character of Burlington advocating for people, programs and projects that promote growth that is consistent with the mission of this fund as described herein including through grants to support small business local arts and culture, public spaces, community centers, preservation of historically significant architecture, and transportation alternatives designed to alleviate vehicle and parking congestion. The fund shall not be used to support any political activities, nor shall it be used to oppose development in the City of Burlington. The Applicant will donate to the fund a total of \$500,000.00 (five hundred thousand dollars). The fund will be established with an initial donation by the Applicant of \$200,000 (two hundred thousand dollars) within ninety (90) days after final judgment is entered in each of the matters identified in paragraph 1 of this Settlement Agreement, and no appeal is filed. The remaining \$300,000.00 (three hundred thousand dollars) will be donated by the Applicant to the fund within sixty (60) days of the conveyance of the Project's right-of-way for St. Paul Street and Pine Street to the City of Burlington is completed.
 - e. Applicant shall not enter into a master lease or comparable agreement with an institution of higher education for student housing within the Project. For the purposes of this Settlement Agreement, an institution of higher education shall mean a traditional accredited college or university such as the University of Vermont or Champlain College.
7. The appellants in *Devonwood Investors, LLC (75 Cherry Street)*, Vermont Superior Court, Environmental Division, Docket Number 39-4-17 Vtec; the appellant in *Devonwood Investors, LLC JO 4-255*; Vermont Superior Court, Environmental Division, Docket Number 63-5-17 Vtec; and the individual plaintiffs in *Long et. al. v. City of Burlington et. al.*; Vermont Superior Court, Civil Division, Docket No. 996-11-16 Cncv, and their counsel, Attorney John Franco, will take all reasonable actions necessary to implement the terms of this Settlement Agreement, and will not oppose any other permits or regulatory or legislative approval that may be required to implement the Project consistent with the terms of this Settlement Agreement.
 8. Other than the payment of attorney fees referenced in Paragraph 6(a) of this Settlement Agreement, each party is responsible for their own fees and costs incurred in each of the matters identified in this Settlement Agreement.

9. This Settlement Agreement is binding on and for the benefit of all the Parties hereto and supersedes all prior agreements or understandings, whether written or oral, between the Parties and/or their respective counsel with respect to the subject matter hereof. This Settlement Agreement may not be amended, modified or terminated except by written instrument signed by all Parties hereto. This Settlement Agreement is contingent upon Applicant entering into a final Development Agreement with the City of Burlington, and if the City of Burlington or State of Vermont objects to the terms of this Settlement Agreement or interferes with Applicants ability to construct the Project in accordance with its terms, then this Settlement Agreement is of no force and effect.
10. Subject to the terms of any agreement concerning a gift that may be entered into between Applicant and the City of Burlington, Applicant will make a gift of Project's right-of-way for St. Paul Street and Pine Street to the City of Burlington contemplated for the Project to the City and the citizens of Burlington. The gift of the two (2) right of ways will be made by the Applicant to the City of Burlington as a charitable gift under all applicable federal and State income tax rules and regulations and its being strictly agreed and understood by all the parties that this gift by the Applicant as outlined herein is not being made by Applicant in consideration of or as a part of this Settlement Agreement and this Settlement Agreement is not conditioned in any way on this gift. Applicant desires only to state its intention to make the gift herein as both the Applicant and Appellants believe that the gift is in the interest of the City and the citizens of Burlington and they wish to state their general support for the gift to be made by the Applicant.
11. The Parties to this Settlement Agreement have cooperated in the drafting and preparation of the Settlement Agreement. Therefore, the Settlement Agreement shall not be construed against either party on the basis that the party was the drafter.
12. Each Party to this Settlement Agreement acknowledges that it has received independent legal advice from its counsel, or has had the opportunity to seek advice from counsel, with respect to this Settlement Agreement.
13. This Agreement may be executed in one or more counterparts (including by means of electronic transmission, such as facsimile or .pdf), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

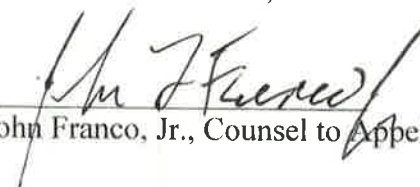
SO AGREED:

Date: 6/29/17



Donald Sinex
BTC Mall Associates, LLC
Devonwood Investors, LLC

Date: 6/29/17



John Franco, Jr., Counsel to Appellants

Date:

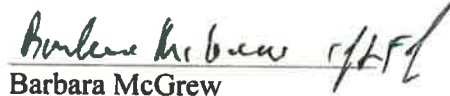
6/29/17



Steve Goodkind, for Himself, as Representative of
the Group Appellants

Date:

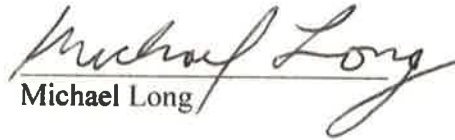
6/29/17



Barbara McGrew

Date:

6/29/17



Michael Long

Date:

6/28/17



Lynn Martin

Exhibit A

(Group Petitioners Represented by Steve Goodkind)

Hannah Babiss	Sage Narbonne
Sandra Baird	Dan Nielsen
Lionel Beasley	Barbara Nolfi
Jeremy W. Bond	Shan Norten
Talia Bosley	Elizabeth Perry
Sara Brown	Theresa Pilch
Montana Burns	Anthony Reddington
Jared Carter	Laurie E. Roberge
Amanda Coggeshall	Gabriela Salazar
Steve Coggeshall	Andrew Simon
Jack Daggitt	Charles R. Simpson
Kimberly Dean	Jess Slayton
Jasmine Dalton	Ibnar A. Stratibus
Nancy W. Dinkel	Lea Turhune
Gregory H. Dinkel	Mary Twitchell
Glenn Eames	Donna Walters
Alex Epstein	
Thomas Fitzgerald	
Monique Ford	
John L. Franco Jr.	
Douglas French	
Meriam French	
Diane Gayer	
Steven Goodkind	
Alora Goodkind	
Gabrielle R. Hall	
John Hanson	
Stephen Hard	
Colleen Hendeny	
Nancy Lee Kirby	
Alex Laven	
Larry Lewack	
Geoffrey H. Leyden	
Caryn Long	
Michael Long	
Jerome E. Mabb, III	
Patrick Maurier	
Lynn Martin	

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Matthew B. Byrne
Shareholder
mbyrne@gravelshea.com

March 2, 2021

E-MAIL AND MAIL

Scott Gustin, AICP, CFM
Division Manager
City of Burlington Zoning Division
P.O. Box 849
Burlington, VT 05402-0849

City of Burlington
Development Review Board
P.O. Box 849
Burlington, VT 05402-0849

Re: Burlington City Center Permit Application – 75 Cherry Street – 21-0414CA/MA

Dear Mr. Gustin:

As a reminder, I represent 100 Bank, LLC (“100 Bank”). 100 Bank is an interested party under Sections 13.1.2 and 12.2.1 of the Burlington Comprehensive Development Ordinance because it is the owner of property next door to the decimated property that used to house the Burlington Mall. It is currently experiencing the physical and environmental impacts of the original permit, the now revoked original permit, and any permit that Burlington will issue in the future. It has an interest in the parking because it has an easement for 100 parking spaces in the property adjacent to it. It also has ingress and egress easements over the property proposed to be developed. It has an interest in the stormwater because it is currently experiencing the effects of BTC Mall’s lack of mitigation of the stormwater on the site and will experience the impacts of any stormwater system that is approved. It also has an interest in the traffic in this area and an interest in insuring that any project is consistent with Burlington’s development plan.

On November 20, 2020, I requested that I receive notice in connection with any application related to the City Place redevelopment including any application having to do with 75 Cherry Street. I did so because of the various different actions and filings that developers are filing. Unfortunately, I did not receive any notice of the current application despite our request. As a result, we have not had a sufficient opportunity to develop a coordinated response to the staff comments, which only recently became available on the DRB’s website. I have attached a copy of that letter as Exhibit 1. The failure to provide notice after having specifically requested that I receive notice is a violation of the Due Process Clause of the United States Constitution, Vermont’s equivalent under its constitution and the statutory requirements for notice.

Scott Gustin, AICP, CFM
City of Burlington Development Review Board

March 2, 2021
Page 2

In addition, I wrote to Mr. Gustin on October 30, 2020 objecting to one of the recent applications by the developers. In substance, I wrote:

BTC Mall is seeking an amendment to a zoning permit issued by the Development Review Board. But it cannot amend what no longer exists. *See, e.g., St. Paul Mercury Ins. Co. v. Circuit Court of Craighead County*, 348 Ark. 197, 204 (2002) (“The *pro se* complaint was not permitted under the statute. Ark.Code Ann. § 16–62–101. Thus, there was no complaint to amend in May 2001.”)

BTC Mall cannot amend its permit because it “abandon[ed], withdr[e]w, and relinquish[ed]” its permit. September 3, 2020 ltr from D. Sinex to Burlington Development Review Board, attached as Exhibit 1.

BTC Mall’s permit also does not exist because it has expired as a matter of law. Section 3.2.9(d) of the Burlington Comprehensive Development Ordinance also treats a permit as expired if the construction is not complete in three years. BTC Mall received its permit on March 17, 2017. It does not appear that BTC Mall sought an extension of the permit. Nor does it appear that the Administrative Officer approved an extension. As a result, the permit no longer exists as a matter of law.

In its permit application, BTC Mall attempts to evade paying the fees by claiming that it is an amendment. City Place Zoning Submission, Section 1.4, 2.1 & 2.2. Under Section 3.2.4(a), “Any application shall be deemed incomplete until such time as all applicable application fees are paid.” BTC has not paid the application fee. Department of Permitting and Inspections, Zoning Permit Application at 1. Until BTC Mall pays the fees associated with a new application, the Administrator should deem the application incomplete.

I have attached a copy of that letter as Exhibit 2.

We have not seen a ruling on the issues 100 Bank raised. As the next door neighbor to City Place, 100 Bank would like to participate in any proceedings related to the redevelopment project. Unfortunately, the proceedings have become complex and it is unclear where actual decisions are going to be made regarding the project. As a result, 100 Bank reiterates its desire to have notice of all proceedings and any opportunity to comment at each.

We have the following preliminary substantive questions and concerns related to the amendment being reviewed by the DRB on Wednesday March 3rd:

Scott Gustin, AICP, CFM
City of Burlington Development Review Board

March 2, 2021
Page 3

1. Stormwater

- a. Construction period stormwater has not been well managed over the time since the former mall was demolished. Major erosion has occurred on the site. Ponding water has created a breeding ground for mosquitoes, posing concerns for public health in the downtown. Additionally, sediment has accumulated in particular near the intersection of Bank and Pine Streets where dust and debris has become airborne on many occasions. Sediment has additionally created a mess within the Bank Street ROW, causing dirt to be tracked by pedestrians and vehicles in the area along with likely flowing into the City's stormwater system.
- b. Post construction stormwater retention tanks are being proposed east and north of the 100 Bank Street building. When these tanks fail and leak in the future, they could create a significant structural issue for the foundations of 100 Bank Street, undermining the structural stability of this existing 8-story commercial building.

2. Traffic

- a. CHA was retained by the City's Department of Public Works to review and comment on the Traffic Impact Study (TIS) commissioned by BTC. They note several concerns and inconsistencies including:
 - i. The TIS is based on data collected in 2013-2015 and 2016-2017, before the 2020 changes were made to Winooski Avenue narrowing the vehicle lanes from 4 lanes to 3 lanes.
 - ii. There are inconsistencies in the "build" vs. "no-build" volumes that do not make sense.
 - iii. Two important intersections will now see failing service levels at "E" and "F" where previous conditions were not nearly as bad.
 - iv. Post pandemic and post Winooski Avenue change data must be collected to understand traffic impacts, this will not likely be possible before 2022 or beyond.
 - v. There is no analysis of the changes on Winooski Avenue.
- b. Traffic impacts cannot be fully understood until we reach a post-pandemic new normal, likely not before 2022 or beyond. Data should be collected at such future time to understand how traffic patterns have changed throughout

Scott Gustin, AICP, CFM
City of Burlington Development Review Board

March 2, 2021
Page 4

the downtown before a massive project on this scale is considered for approval.

- c. The BHS use of the former Macy's building was not considered in the TIS. BHS faculty and student parking needs along with BHS pickup/drop-off needs must be factored in.
- d. With inadequate parking available in the vicinity for residents, workers, shoppers, and visitors of the BTC project, there will be many vehicles circling the blocks of Pine, Bank, Cherry and St Paul surrounding the project site, contributing to vehicular congestion and exhaust in the downtown.
- e. Traffic cannot be adequately understood without a final design for the new St Paul and Pine St being approved. The Pine St right-of-way is not fully established with at least 2 property owners' approval outstanding.

3. Parking

- a. This project is being proposed as an amendment to the previously approved project and as such needs to be considered under the former CDO prior to the elimination of parking requirements in the downtown.
- b. 100 Bank Street parking obligations should be factored into any parking analysis.
- c. Parking requirements for the former Macy's property need to be reviewed to determine if any portion of parking serving that property is required to be covered on the BTC site.
- d. The former mall garage was a critical source of public parking in the downtown. Providing public parking was an important component of the historic approvals for the development of the site. Public parking is a critical element of city infrastructure and needs to be factored into any project on the BTC site. Public parking does not contribute to any calculations of parking maximums under the applicable ordinance.
- e. Construction period parking needs to be better understood. How will construction worker vehicles be accommodated downtown? If utilizing the City garages known as Lakeview and College St, have ongoing priorities

Scott Gustin, AICP, CFM
City of Burlington Development Review Board

March 2, 2021
Page 5

been factored in for the City's existing parking obligations in those garages including with the Hilton hotel, Courtyard Marriott hotel, Hotel Vermont, 77 Pine St/People's United Bank, 100 Bank Street, and the general public?

- f. A Judgment Order issued by Vermont Superior Court, Environmental Division July 17, 2017 mandated that 200 additional parking spaces at the cellar level would be provided for this redevelopment; this requirement remains with the permit as amended. This requirement needs to be factored in above and beyond the practical parking needs and parking minimums required by the applicable ordinance.
- g. CarShare has not been engaged in the project. There should be a condition of approval that CarShare is committed to providing the number of vehicles cited in the TDM plan presented by the applicant.

4. Other items

- a. Changes are shown on the permit drawings on the 100 Bank Street property that have not been reviewed or approved by 100 Bank LLC
- b. The driveway apron to the Bank St loading dock adjacent to 100 Bank Street is encroaching into 100 Bank frontage area and interfering with the existing City loading zone
- c. No compost disposal areas are shown on plans, provisions for compost disposal are required in Burlington and throughout the State of Vermont
- d. More detail is needed to understand the full impacts to the 100 Bank property including:
 - i. Existing easement areas.
 - ii. The North and East facades where BTC project was demolished.
 - iii. Impacts to 100 Bank relative to on-street parking and loading.
 - iv. The former mall had an angled "cut-away" section of the building where it met 100 Bank on the east side to allow more light to infiltrate the windows on the 2nd and 3rd floors of 100 Bank. The new project eliminates that cut-away element, potentially impacting 100 Bank Street.

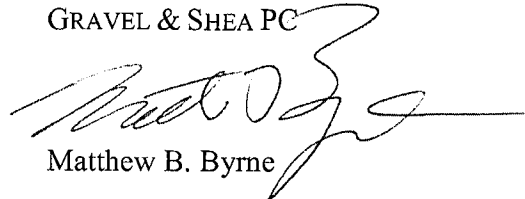
Scott Gustin, AICP, CFM
City of Burlington Development Review Board

March 2, 2021
Page 6

- e. The BTC narrative provided says on page 51 that the number of employees for office and retail cannot be estimated at this time. There are generally accepted standards for employees PSF for commercial uses to estimate the number of employees during the permitting stage of any project.
- f. Housing. The mix of affordability must apply to each unit type, 20% of each unit type per the standards that the HTF Manager has applied to other projects in the City. Based on the total number of each unit type, the project should be required to have the following allocation of affordable units:
 - i. 1 three-bedroom unit
 - ii. 18 two-bedroom units
 - iii. 45 one-bedroom units
 - iv. 22 studio units
 - v. 86 total affordable units

Very truly yours,

GRAVEL & SHEA PC



Matthew B. Byrne

MBB:lbb

Enclosures

cc: Mr. Erik J. Hoekstra (e-mail)
Mr. J. Larry Williams, Jr. (e-mail)
BTC Mall Associates (e-mail)

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Matthew B. Byrne
Shareholder
mbyrne@gravelshea.com

November 20, 2020

E-MAIL AND MAIL

Scott Gustin, AICP, CFM
Division Manager
City of Burlington Zoning Division
P.O. Box 849
Burlington, VT 05402-0849

City of Burlington
Development Review Board
P.O. Box 849
Burlington, VT 05402-0849

Re: Burlington City Center Permit Application

Dear Mr. Gustin:

100 Bank, LLC ("100 Bank") would like to have notice of any proceedings involving the City Place redevelopment, including, but not limited to, 67 Cherry Street, 75 Cherry Street, 101 Cherry Street, 130 Bank Street, and 49 Church Street. 100 Bank sent a letter seeking to appear in the most recent "amended" application that BTC Mall submitted related to City Place. *See* 10/30/20 M. Byrne Ltr. to S. Gustin. We have not seen a ruling on the issue 100 Bank raised, but hear that there are other proceedings going on before you and the Burlington Development Review Board. As the next door neighbor to City Place, 100 Bank would like to participate in any proceedings related to the redevelopment project. Unfortunately, the proceedings have become complex and it is unclear where actual decisions are going to be made regarding the project. As a result, 100 Bank would like to have notice of all proceedings and any opportunity to comment at each.

As a reminder, I represent 100 Bank. 100 Bank is an interested party under Sections 13.1.2 and 12.2.1 of the Burlington Comprehensive Development Ordinance because it is the owner of property next door to the decimated property that used to house the Burlington Mall. It is currently experiencing the physical and environmental impacts of the original permit, the now revoked original permit, and any permit that Burlington will issue in the future. It has an interest in the parking because it has an easement for 100 parking spaces in the property adjacent to it. It also has ingress and egress easements over the property proposed to be developed. It has an interest in the stormwater because it is currently experiencing the effects of BTC Mall's lack of mitigation of the stormwater on the site and will experience the impacts of any stormwater system that is

EXHIBIT

1

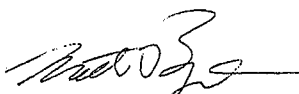
Scott Gustin, AICP, CFM
City of Burlington Development Review Board

November 20, 2020
Page 2

approved. It also has an interest in the traffic in this area and an interest in insuring that any project is consistent with Burlington's development plan.

Very truly yours,

GRAVEL & SHEA PC



Matthew B. Byrne

MBB:lbb

cc: Mr. Erik J. Hoekstra (e-mail)
Mr. J. Larry Williams, Jr. (e-mail)
BTC Mall Associates (e-mail)

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Matthew B. Byrne
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October 30, 2020

E-MAIL

Scott Gustin, AICP, CFM
Division Manager
City of Burlington Zoning Division
P.O. Box 849
Burlington, VT 05402-0849

Re: Burlington City Center Permit Application

Dear Mr. Gustin:

BTC Mall is seeking an amendment to a zoning permit issued by the Development Review Board. But it cannot amend what no longer exists. *See, e.g., St. Paul Mercury Ins. Co. v. Circuit Court of Craighead County*, 348 Ark. 197, 204 (2002) ("The *pro se* complaint was not permitted under the statute. Ark.Code Ann. § 16-62-101. Thus, there was no complaint to amend in May 2001.")

BTC Mall cannot amend its permit because it "abandon[ed], withdr[e]w, and relinquish[ed]" its permit. September 3, 2020 ltr from D. Sinex to Burlington Development Review Board, attached as Exhibit 1.

BTC Mall's permit also does not exist because it has expired as a matter of law. Section 3.2.9(d) of the Burlington Comprehensive Development Ordinance also treats a permit as expired if the construction is not complete in three years. BTC Mall received its permit on March 17, 2017. It does not appear that BTC Mall sought an extension of the permit. Nor does it appear that the Administrative Officer approved an extension. As a result, the permit no longer exists as a matter of law.

In its permit application, BTC Mall attempts to evade paying the fees by claiming that it is an amendment. City Place Zoning Submission, Section 1.4, 2.1 & 2.2. Under Section 3.2.4(a), "Any application shall be deemed incomplete until such time as all applicable application fees are paid." BTC has not paid the application fee. Department of Permitting and Inspections, Zoning Permit Application at 1. Until BTC Mall pays the fees associated with a new application, the Administrator should deem the application incomplete.

EXHIBIT

2

Scott Gustin, AICP, CFM

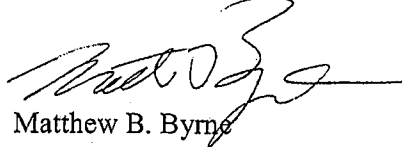
October 30, 2020

Page 2

For the record, I represent 100 Bank, LLC ("100 Bank"). 100 Bank is an interested party under Sections 13.1.2 and 12.2.1 because it is the owner of property next door to the decimated property that used to house the Burlington Mall. It is currently experiencing the physical and environmental impacts of the original permit, the now revoked original permit, and any permit that Burlington will issue in the future. It has an interest in the parking because it has an easement for 100 parking spaces in the property adjacent to it. It also has ingress and egress easements over the property proposed to be developed. It has an interest in the stormwater because it is currently experiencing the effects of BTC Mall's lack of mitigation of the stormwater on the site and will experience the impacts of any stormwater system that is approved. It also has an interest in the traffic in this area and an interest in insuring that any project is consistent with Burlington's development plan.

Very truly yours,

GRAVEL & SHEA PC



Matthew B. Byrne

MBB:lbh

Enclosure

cc: Mr. Erik J. Hoekstra (e-mail)
Mr. J. Larry Williams, Jr. (e-mail)
BTC Mall Associates (e-mail)

BTC Mall Associates, LLC
c/o Donald F. Sinex, Manager
3730 N Ocean Drive, 6-B
West Palm Beach, Florida 33404

September 3, 2020

VERMONT SUPERIOR
COURT

VIA EMAIL FAX FEDERAL EXPRESS

SEP 03 2020

Burlington Development Review Board
645A Pine Street
Burlington, VT 05401

CHITTENDEN UNIT

Re: File No. ZP17-0662CA/MA dated March 17, 2017

To Whom It May Concern:

Please be advised that BTC Mall Associates, LLC, Devonwood Investors, LLC and their associated and affiliated entities ("BTC"), hereby abandon, withdraw and relinquish the submission to the Burlington Planning & Zoning Department for the Burlington Town Center project, as approved by the Burlington Development Review Board decision for File No. ZP17-0662CA/MA, dated March 17, 2017, as modified by the Judgment Order dated July 17, 2018 in the matter captioned *Devonwood Investors, LLC 75 Cherry Street*, Docket No 38-4-17 Vtec.

BTC looks forward to submitting a new project for approval in the near future.

Sincerely,



Manager
BTC Mall Associates, LLC

CC: Mayor Miro Weinberger
City Attorney, City of Burlington
Marc Heath, Esq.
Jeremy Farkas, Esq.

EXHIBIT

1

From: Joyce Cellars <joyce.cellars@googlemail.com>
Date: March 1, 2021 at 4:39:53 PM EST
To: Kienan Christianson <kchristianson@lynnlawvt.com>
Subject: Development Review Board

Hi Kienan,

I'm a community member and fellow NNE resident and noticed that you are on the DRB. As a neighbor, I wanted to put in a plug for the proposed project at 251-253 S. Union Street that will be discussed at Wednesday's meeting. The property would be changing from an attorney's office to a therapy center. I am a yoga student of Rebecca Weisman's and have been part of her teaching community for 10 years. I can assure you that this therapy center will be a boon for our community, creating jobs, promoting health and well being, and benefiting the core downtown Burlington business community. With the business community reeling from the pandemic, now seems like the right time to support community centered small businesses that generate positive activity like this therapy center.

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

Many thanks,
Joyce

--

Joyce Cellars
Cell: 408.500.5304

March 3, 2021

By Email

Scott Gustin, Principal Planner & Asst. Administrative Officer
City of Burlington Development Review Board
Office of City Planning
City Hall, 3rd Floor
149 Church Street
Burlington, VT 05401
sgustin@burlingtonvt.gov

Re: Permit Amendment Application No. 21-0414CA/MA, 75 Cherry Street, BTC Mall Associates, LLC

Dear Board Members:

I write on behalf of BTC Mall Associates, LLC (“BTC”) in response to the February 17, 2021 letter submitted by Barbara McGrew, Steven Goodkind, Michael Long, and Lynn Martin (collectively, the “Opponents”). In their letter, the Opponents challenge the permit amendment BTC seeks in this proceeding on several grounds. All of those grounds are meritless.

By way of background, the Board issued to BTC Permit No. 17-0662CA/MA which covers the mixed-use redevelopment of the Burlington Town Center Mall located at 75 Cherry Street (the “Project”) on March 17, 2017. The Opponents appealed that decision to the Vermont Superior Court, Environmental Division, along with other challenges to the redevelopment. The Opponents and BTC subsequently entered into a Settlement Agreement resolving all litigation. In that Settlement Agreement, the parties agreed to a consent judgment in the Environmental Division modifying Permit No. 17-0662CA/MA. That order was entered on July 17, 2017.¹

In response to changing conditions, BTC reduced the scale and impact of the Project, and now seeks a further amendment to the permit. In the reduced Project, square footage is decreased by approximately 25% and residential units now replace the previous office space component. BTC’s application will require a full review under the Comprehensive Development Ordinance’s (“CDO” or the “Ordinance”) Major Impact Review criteria, and complies with all parking requirements set forth in CDO § 8, as revised on October 21, 2020. Indeed, under the new parking ordinance, the Project is not *required* to provide any parking, but the current design nonetheless includes parking space for 422 vehicles, which is only 25 short of the maximum *allowed* under the Ordinance.

¹ That matter was captioned *Devonwood Investors, LLC 75 Cherry Street*, Docket No. 39-4-17 Vtec. The permit was subsequently modified by the Zoning Administrator on February 23, 2018 (Permit No. 18-0648CA), and by the DRB on April 17, 2018 (Permit No. 18-0768CA).

The Opponents have offered no valid reason why the DRB should not consider BTC's permit amendment application on its merits. Indeed, as the DRB, the Environmental Division, and in fact the Opponents all approved a larger project, the current, reduced-scale Project should certainly conform to all applicable standards.

First, the Opponents' argument that the terms of the Settlement Agreement itself—a private contract between the parties—somehow bars the DRB's consideration of this amendment application is plainly meritless. The DRB has no jurisdiction over the Settlement Agreement. The Board's role here is solely to consider whether the proposed development conforms to the applicable provisions of the CDO. *See* 24 V.S.A. § 4460; CDO § 2.4.4. It may not consider the contractual issues related to the Settlement Agreement.

Moreover, even if the DRB could consider the Settlement Agreement, that agreement on its face does not bar BTC from changing the Project or seeking to amend the original permit.² It is revealing that the only citation the Opponents make to the Settlement Agreement—¶ 9—is a routine modification clause that prohibits modifications to the *terms of the Agreement*. BTC's permit amendment application does not seek to modify *any* term of the Agreement. In fact, the Settlement Agreement contains a term prohibiting the Opponents from *opposing* “any other permits or regulatory or legislative approval” necessary to implement the Project. Thus, if anything, the Settlement Agreement actually prohibits the *Opponents* from challenging BTC's application here.³

But again, those contractual issues are simply not at issue here, and the DRB should disregard the Opponents' claims based on them.

Second, contrary to the Opponents' claims, the doctrine of *res judicata* does not preclude BTC from seeking a permit amendment. The principles of claim and issue preclusion embodied by the doctrine allow the Board the flexibility in land use cases to consider a subsequent application, especially where, as here, the application involves a substantially reduced project subject to a full review under the CDO and any resulting new conditions that the DRB may deem appropriate. *See, e.g., In re Lathrop Limited P'ship I*, 2015 VT 49, ¶ 66 (“If the board . . . concludes that there is a substantial change from the permitted project, review should proceed.”). And that is true even where the earlier permit arose as part of a stipulated judgement. *In Re Dunkin Donuts S.P. Approval (Montpelier)*, 2008 VT 139, ¶ 12 (mem.). As discussed above, BTC's current application involves a substantially reduced Project, and the Board is entitled to proceed with its review.

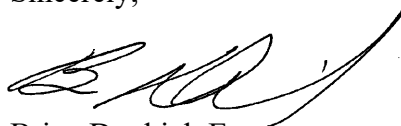
² Instead of explaining how the Settlement Agreement bars the DRB's review, the Opponents repeat their argument from that resolved appeal that the Project's parking is not consistent with Burlington's Municipal Development Plan. This argument ignores the fact that the CDO—which implements the aspirational, qualitative goals of the Development Plan—provides the enforceable standard. *See, e.g., Kalakowski v. John A. Russell Corp.*, 137 Vt. 219, 225 (1979) (“Although the [municipal] plan may recommend many desirable approaches to municipal development, only those provisions incorporated in the bylaws are legally enforceable.”); *In re Walsh*, No. 122-6-09 Vtec, 2009 WL 6043898 (Vt. Super. Ct. Env'tl. Div. Dec. 9, 2009) (broad objectives in zoning ordinances “are not independently enforceable just as the provisions of a municipal plan are not independently enforceable.” (quoting *Appeals of Perrine, et al.*, No. 221-12-03 Vtec & 38-3-04 Vtec, 2004 WL 5232389, slip op. at 6 (Vt. Env'tl. Ct. Nov. 30, 2004))).

³ BTC reserve its rights to assert additional claims for the recurring breach.

Finally, the Opponents argue that the DRB should review the Project under the parking ordinance in effect at the time of the original application, not the current ordinance, which was adopted in October 2020, before the current amendment application was filed. That position is based on an absurd construction of Vermont’s vested rights doctrine—which holds simply that the regulations in effect when an *application* is filed govern review of that application. Indeed, Courts have recognized that new applications involving substantial changes are reviewed under current regulations even if the application involves a previously permitted project. *See, e.g., In re Taft Corners Assocs., Inc.*, 160 Vt. 583, 593–94 (1993).⁴ The Opponents’ construction of the vested rights doctrine conflicts with those decisions, and would have the effect of freezing outdated bylaws in place, notwithstanding changing community standards and circumstances. BTC has filed a new application proposing a substantially downsized and lower-impact Project. The bylaws in effect at the time of its application—including the parking standards—plainly govern its application.

Please contact me if you need additional information or have any questions.

Sincerely,



Brian Dunkiel, Esq.
Dunkiel Saunders Elliott Raubvogel & Hand, PLLC
Counsel for BTC Mall Associates, LLC

cc: Don Sinex, BTC Mall Associates, LLC

⁴ *See also In re Stonybrook Condominium Owners Association*, DR No. 385, 2001 WL 548428 at *15 (Vt. Env’t Bd. May 18, 2001) (“[The vested rights doctrine] does not stand for the proposition that the rules or facts in place at the time of an original Act 250 application or permit issuance are those which will control all subsequent events at the project—including events that trigger the need for permit amendment applications.”). The cases cited by the Opponents do not establish that a vesting applies the regulations in place during the original permit to a subsequent amendment. *In re Times and Seasons, LLC*, 2011 VT 76, for example, involved an Act 250 applicant’s request for reconsideration after a change in law which was only a continuation of the original proceeding and sought to “simultaneously take advantage of the laws in effect at the time of the initial application and those in effect at the time of the reconsideration application.” *Id.* at ¶ 11. There is no such two-way street here—BTC’s application will be reviewed solely, and in full, under the regulations in place at the time of this most recent filing.

Ryan Morrison

From: Medash, Kyle <Kyle.Medash@vermont.gov>
Sent: Wednesday, March 03, 2021 11:08 AM
To: Ryan Morrison
Subject: RE: DEC - Floodplain Notification - 2-14 King Street - Spot on the Dock remodel/new bathroom structure

[WARNING]: This email was sent from someone outside of the City of Burlington.

Hi Ryan,

Thank you for the additional information on the flood vents, this is exactly the detail that is needed to document the use of engineered flood openings. When the DRB is considering the project, another item I would recommend confirming with the applicant is to make sure that any utilities, mechanical, and electrical systems are located above the BFE and protected from flooding in accordance with design specifications outlined in 4.5.4(f). Currently there is not much detail on this in the plans, so I wanted to raise this as an item for the DRB to confirm with the applicant. For this particular proposal, this would include check valves for backflow protection on all water lines to ensure floodwaters cannot infiltrate the water lines, in addition to elevating any mechanical or electrical systems servicing the building above BFE. Should the applicant have any questions on protecting building utilities from flood damage, FEMA has published this guidance document outlining various measures on how to achieve this (link below).

https://www.fema.gov/sites/default/files/2020-07/fema_p-348_protecting_building_utility_systems_from_flood_damage_2017.pdf

Please let me know if you have questions or need further assistance with this project. If built as proposed and the above information is confirmed, no further information is needed by the DEC Rivers Program.

Thanks,



Kyle Medash | Western Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
450 Asa Bloomer State Office Building, 88 Merchants Row | Rutland, VT 05701-5903
802-490-6154 cell
kyle.medash@vermont.gov

Due to the coronavirus (COVID-19), the Agency of Natural Resources is taking additional safety measures to protect our employees, partners and customers. We anticipate we will be working remotely until at least March 31, 2021 and encourage you to communicate electronically or via phone to the greatest extent possible. Thank you for your patience and understanding that responses may occasionally be delayed.

From: Ryan Morrison <rmorrison@burlingtonvt.gov>
Sent: Tuesday, February 23, 2021 9:10 AM
To: Medash, Kyle <Kyle.Medash@vermont.gov>
Subject: Fw: DEC - Floodplain Notification - 2-14 King Street - Spot on the Dock remodel/new bathroom structure

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.
Good morning Kyle

March 3, 2021

By Email

Scott Gustin, Principal Planner & Asst. Administrative Officer
City of Burlington Development Review Board
Office of City Planning
City Hall, 3rd Floor
149 Church Street
Burlington, VT 05401
sgustin@burlingtonvt.gov

Re: Permit Amendment Application No. 21-0414CA/MA, 75 Cherry Street, BTC Mall Associates, LLC

Dear Board Members:

I write on behalf of BTC Mall Associates, LLC (“BTC”) to correct a typographical error in BTC’s letter submitted this morning in response (“BTC Response”) to objections raised by Barbara McGrew, Steven Goodkind, Michael Long, and Lynn Martin (collectively, the “Opponents”).

BTC’s Response noted that the 75 Cherry St. redevelopment project’s (the “Project”) designed parking for 422 vehicles is only 25 spaces short of the maximum allowed under the Comprehensive Development Ordinance (“CDO”). This should have read 45 spaces short of the maximum allowed. Please accept this correction when considering our prior Response.

Please also note Opponents’ argument to subject this permit amendment application to the parking requirements of the prior zoning ordinance version is not supported by law and directly conflicts with the CDO, which expressly authorizes the Board to review this Project under the current parking requirements.¹ The Board must evaluate the Project under the current Ordinance.

Please contact me if you need additional information or have any questions.

Sincerely,



Brian Dunkiel, Esq.
Dunkiel Saunders Elliott Raubvogel & Hand, PLLC
Counsel for BTC Mall Associates, LLC

cc: Don Sinex, BTC Mall Associates, LLC

¹ CDO § 8.1.3(c) (“With respect to permits issued with parking requirements in this [Multimodal Mixed-Use] Parking District prior to the effective date of the amendment to eliminate minimum onsite parking, an administrative permit amendment may be requested to remove the parking requirement based upon the change in regulation.”).

EILEEN M. BLACKWOOD, ESQ.
City Attorney
KIMBERLEE J. STURTEVANT, ESQ.
Assistant City Attorney
JUSTIN ST. JAMES, ESQ.
Assistant City Attorney
JOY A. HOVESTADT, ESQ.
Assistant City Attorney
TIMOTHY P. DEVLIN, ESQ.
Assistant City Attorney



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CITY OF BURLINGTON, VERMONT
OFFICE OF
THE CITY ATTORNEY
AND
CORPORATION COUNSEL

MEMORANDUM

TO: Burlington Development Review Board
FR: Kimberlee Sturtevant, Assistant City Attorney
DT: March 3, 2021
RE: Permit Amendment Application No. 21-0414CA/MA, 75 Cherry Street

I am writing with respect to legal issues raised by a letter dated February 17, 2021 from John L. Franco, Jr. regarding concerns with your review of the above-referenced pending application.

As indicated, the application before the board is an application to amend the project originally approved under ZP 17-0662CA/MA. ZP 17-0662CA/MA was issued after an appeal to the Vermont Superior Court, Environmental Division (*Devonwood Investors, LLC 75 Cherry Street*, Docket No. 39-4-17 Vtec). During that appeal, the Appellants and the Applicant entered into a settlement agreement. Certain terms were incorporated into the Court's Order, however, the pending application is substantially different and the law has changed. As a result, it is proper for you to review the application before you, not the prior Court Order.

With respect to arguments that the City is applying the wrong parking standards to the current application, new applications that involve substantial change to a previously permitted project are reviewed under current regulations. *See, e.g., In re Taft Corners Assocs., Inc.*, 160 Vt. 583, 593-94 (1993). To the extent that the arguments extend to the City's Municipal Development Plan (PlanBTV), the argument is misplaced. PlanBTV is a guiding document which is implemented through the Comprehensive Development Ordinance (CDO). *See Kalakowski v. John A. Russell Corp.*, 137 Vt. 219, 225 (1979).

Attorney Franco also raises a concern regarding a 2018 amendment to the permit, however, that will be moot upon the issuance of a new permit.

I will be present during the hearing if there are additional questions regarding these issues. Thank you.

Burlington Development Review Board

Department of Permitting & Inspections
645 Pine Street
Burlington, VT 05401
www.burlingtonvt.gov/DPI/DRB
Telephone: (802) 865-7188
Fax: (802) 863-0466

Brad Rabinowitz
AJ LaRosa
Springer Harris
Geoff Hand
Brooks McArthur
Kienan Christianson
Caitlin Halpert
Sean McKenzie, (Alternate)
Ravi Venkataraman, (Alternate)



BURLINGTON DEVELOPMENT REVIEW BOARD **Wednesday, March 3, 2021, 5:00 PM** **REMOTE MEETING**

Zoom: <https://us02web.zoom.us/j/84346105661?pwd=dTJLb3UrcDFyNWVM5VkZqOU9FSWNVZz09>

Webinar ID: 843 4610 5661

Password: 842557

Telephone: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782

Video recording link: <https://www.cctv.org/watch-tv/programs/burlington-development-review-board-353>

Draft Minutes

Board Members Present: Brad Rabinowitz, AJ LaRosa, Springer Harris, Geoff Hand, Brooks McArthur, Caitlin Halpert, Sean McKenzie (Alt)

Board Members Not Present: Kienan Christianson, Ravi Venkataraman (Alt)

Staff Present: Scott Gustin, Mary O'Neil, Ryan Morrison, Alison Davis, Laura Wheelock (Dept of Public Works), Norm Baldwin (DPW),

I. Agenda

B. Rabinowitz: No changes to the agenda.

II. Communications

B. Rabinowitz: Asks if there are additional communications.

S. Gustin: All communications for the items have been posted. There were recent additions for 75 Cherry Street and 2-14 King Street.

III. Minutes

S. Gustin: The minutes from the last meeting are posted.

IV. Public Hearing

1. 21-0638CU; 251-253 South Union Street (RL, Ward 6S) Two Fifty Three South Union Street Realty LLC, Rebecca Weisman and Christopher Wright Cronin

Change of general office use to neighborhood commercial use (health studio and medical office). No site or exterior building changes. (Project Manager: Scott Gustin)

Tom Higgins, Rebecca Weisman, and Alex spoke on behalf of application
Joseph McNeil provided public testimony

B. Rabinowitz: Invites applicant to address questions that were brought up for application

R. Weisman: Gives overview of application and why this item is being reviewed again. Explains that through further investigation, realized that there has been no residential space unit in this space since at least the 1980s. The entire building is being used as a law

office. They are proposing to convert the general office use to a neighborhood commercial use to be more in accordance with the Zoning Ordinance. The sq footage is above the amount of neighborhood commercial use allows, so hoping that this would be approved by Board.

T. Higgins: Testifies that he has been working in building since 1989 and there have been no changes made to the building since than besides repairs and upkeep. Explains that when he began working there, there was never a residential unit in the building.

B. Rabinowitz: Asks if Staff was able to find any permits for changing the residential unit.

S. Gustin: There was a zoning permit to establish the office and then there was a zoning permit subsequent to that in 1977 to expand the office space, and they got a permit for it. With that permit, they still had a single apartment remaining in addition to the office. What is in front of the Board tonight is that the applicant is seeking approval to convert the nonconforming office to a neighborhood commercial use. Should this be approved, there should be an apartment in the building because there is no permit to have gotten rid of it.

R. Weisman: In our proposal we are asking to use the entire building and to not have to include a unit in the building. What use we are asking for is not differently impacting the surrounding area any different than the current use.

Alex: Has been used as a general commercial use for the last 30-40 years, so they are requesting if there is a space for a conditional use to take it over as a health studio, neighborhood commercial use with same shape and form, with no modification to the outside.

B. Rabinowitz: Asks to clarify that health studio is a different use than office.

S. Gustin: Correct, health studio and medical office. Aside from missing apartment, there are three problems. The entire space is too big, more than 4,000 sq ft. Another is, they are proposing more than just the street level, which is a requirement for neighborhood commercial. And the other is that, to convert to a neighborhood commercial use, you need to have one currently, and they do not. I spoke with applicants a few times beforehand and it seems maybe that is what they hope to get approved for, in terms of the use. One could argue that we are changing a non-conforming use to something that could conceivably be conforming. The problem is what was just said, the zoning code does not say you can change a nonconformity to one of these, but they went ahead with the application anyhow.

Alex: The reason we wanted to move ahead with the application was because of the idea of if this was a proposal to put law offices in here instead of the health studio that is proposed, we wouldn't even need to talk with Zoning, and it could go in as the same use.

B. Rabinowitz: One would assume that this would increase the traffic than the current use of the property. Could have a different impact on traffic and activity on property.

R. Weisman: Was informed that when that building was fully occupied, there were 20 employees and clients coming and going all day. We would not have that many employees for our company. Anyone coming and doing counseling or therapy, we have to have a lot more space per person, so that is why we do feel like we need all that space. The coming and going of clients would be about the same. There is plenty of parking in the back of the lot so there would not be a need for street parking.

B. McArthur: Asks what hours the business would be open.

R. Weisman: We are thinking that if we are able to have five "suites", those would be separate practitioner's. Those would be 9am-5pm regular hours. The yoga therapy, that could potentially be more of an evening time, but pretty much regular business hours.

Alex: Clarifies that yoga therapy is much different than a yoga class.

R. Weisman: Explains that what they do is small and public classes, but also a lot of one-on-one, therapeutic work.

B. McArthur: Asks to confirm the hours because on application it was proposing that the business would be open until 11pm.

R. Weisman: Not sure where that was, we would not be operating that late at night.

B. Rabinowitz: Asks to clarify that the applicant is requesting to be designated as neighborhood commercial use to be the use they are proposing to be, health studio.

S. Gustin: Correct. Neighborhood commercial use is predicated on there being that use there already. The alternative is that the building was originally constructed for commercial and is historic, but that is not the case here.

B. Rabinowitz: Asks to clarify the grandfathering rule, 15-year statute of limitations, surrounding uses.

S. Gustin: Yes, the 15-year statute of limitations applies to use and physical things.

B. Rabinowitz: So the idea of this not having an apartment is to some extent not an issue with not having a permit that we can't find for that use.

S. Gustin: That is possible, but we would have to demonstrate/prove that it has been 15-years. What we heard tonight suggests that, all I can say is that there is no evidence to have removed that residential unit.

B. Rabinowitz: Asks if that changes anything what applying to the neighborhood commercial use.

S. Gustin: On the fly, I would say I don't think so because the overall sq footage is more than you can permit tonight anyway.

C. Halpert: Asks why this would have to be neighborhood commercial use and what makes the proposal not an office.

S. Gustin: Health studio and medical office are separate uses in the use-table in the CDO as compared to general office. The office right now is general office, and that could not just be a law office, but any sort of general office without doing anything with zoning.

C. Halpert: Clarifies if that the only thing that is making this a health studio/medical studio is the yoga therapy. Asks to confirm that counseling falls under health use as well.

R. Weisman: That is a good question. When you look at the neighborhood commercial uses, they are many different types of uses. My understanding is that mental health counseling is medical and physical therapy is medical. We also have massage therapy, but not sure where that falls. Yoga does fall under health studio use.

S. Gustin: Explains that with yoga studio applications, they have been falling into the health studio category.

B. Rabinowitz: Invites member of public to comment.

J. McNeil: Explains relationship with property. Owners buildings to the south. We do not oppose this application, but we are somewhat confused by it and wanted to get clarification. From the presentation, it sounds like it is in practical terms, it is going to be leased out to five separate organizations for utilization as health studios or yoga studios or therapy. That concerns us with traffic and the unknown patterns with that. There is an emergency easement to use our space for easement and access. We would like to know what the use pattern would be in the back lot. What we have experienced with the law office has not been any problems.

B. Rabinowitz: Asks if there are any other questions from the Board or if there is anyone from public to speak on item.

None

B. Rabinowitz: Closes public hearing

2. 21-0647CU; 428 South Winooski Ave (RM, Ward 6S) Jill Badolato

Establish short-term rental (bed and breakfast) within existing dwelling unit. (Project Manager: Ryan Morrison)

Jill Badolato appeared on behalf of item

No public appeared to provide comment

B. Rabinowitz: Has question for Staff Member, Ryan Morrison. Asks to clarify that a short-term rental is allowed in an owner occupied building, but this application is going to be used as a short-term rental when the owner is not occupying the building, seems like a conflict.

R. Morrison: Explains that for the owner to be occupying the building, they technically have to be there 6 months and 1 day.

S. Gustin: Resident does not have to be in the building when it is being short-term rented.

S. Harris: It feels like in the past many applications have required the owner to be present and operating the short-term rental. Asks to clarify.

S. Gustin: General rule is the primary residence qualifies as owner occupied, I know in fairly common instances where people are needing to do stacked parking because of a parking requirement, there is usually a requirement to have the owner to primarily deal with parking. In this case, the owner would not be there.

G. Hand: That is my recollection as well. The parking would raise the question about being present.

B. Rabinowitz: Asks how they would be managing the short-term rental if you are not present and something is needed.

J. Badolato: Explains that when guest stay, she will plan to stay at her partner's residence outside of Burlington, so if anything is needed, she would travel to help out.

B. Rabinowitz: Asks to confirm that the guests would have access to the unit when you are not there, a hidden key or code of some sort.

J. Badolato: Correct.

B. Rabinowitz: Asks if there are any other questions from Board or members of public.

None

B. Rabinowitz: Closes public hearing.

3. 21-0414CA/MA; 75 Cherry Street (FD6, Ward 3C) BTC Mall Associates, LLC

Mixed use redevelopment of the former Burlington Town Center mall site. (Project Manager: Scott Gustin and Mary O'Neil)

AJ LaRosa and Geoff Hand recused from item

Jesse Beck (Freeman French Freeman), Jessie Robbins (Freeman French Freeman), Kevin Worden (Engineering Ventures), Jenn Conley (VHB), William Fellows (Devonwood Investors), Dave Farrington (Farrington Construction), Brian Dunkiel (Dunkiel Saunders) and others appeared on behalf of application.

John Franco, Myer Dana, Steve Goodkind, Barbara McGrew, and Sharon Bushor, Caryn Long, provided public testimony

B. Rabinowitz: Invites applicant to present.

J. Beck: Explains that this is an amended permit to reduce the size of the project. The look and feel of the project is very similar from what has been permitted before, with same

materials, same City block. Walks through project application and the changes. Explains that project is more about housing and less about office space as previously permitted. Explains program and slight program change as there is no more office space in the south building. It is primarily 426 units of housing with 20% inclusionary housing. Reduced total amount of sq footage and amount of retail sq footage. Parking garage meeting zoning code requirements with 422 parking spaces. 348 bike parking spaces. Displays plans regarding building cross-section interior levels, and floorplans of different floors. Runs through renderings of the façade of buildings.

S. Harris: Asks if co-working space in a level of the building is for residents only or if it will be managed as a public co-working space.

J. Beck: It would be managed as a space to lease.

S. Harris: Asks if the community space would operate the same way or just a residents only space for activities.

J. Beck: Explains that the community space is for City use and public use to be scheduled, when not scheduled for public use, it can be used for private use.

S. Harris: Asks if the restaurant space will be able to be leased like any other commercial restaurant.

J. Beck: Correct. Adds that the elevator core has doors so the public does not have to go through the restaurant to access the public observation deck.

S. Harris: Asks if the public has access to the residential halls/residential parts of the building through same access.

J. Beck: The public would be limited to taking the elevator up to the public observation deck or the community space floor.

S. Harris: Asks if the resident halls are secure for residents living on that floor.

J. Beck: Correct.

S. Harris: Asks if the cover on parking structure is accessible to the public.

J. Beck: That space will not be a public accessible place. It is for the residents and the green-roof area. There will also be some screened/fenced mechanical areas. It is a private space.

S. Harris: Asks to clarify that it is accessible to the residents who live there.

J. Beck: Yes, correct.

S. Harris: Asks what the materials are on roof. Refers to rendering on page 32 of plans.

J. Beck: Explains that there is a combination of materials. There will be an open terrace with pavers that people can walk on. There will be a green-roof area of sedum, it is not to be walked on, it is to collect rainwater, but a person can walk through it using walkways, similar to what was done at the Airport. The rest of the roof will be a membrane roof which we will not want people to walk on because it is to manage rainwater and keep the rain out of the parking structure.

B. Rabinowitz: Asks about parking access from Pine St and Saint Paul St. Asks about Saint Paul St pedestrian walkway through garage and how it looks like it doesn't come out to the street to that entrance. Asks about access and layout.

J. Beck: Explains that is one of the relief area that the applicant is asking for from the Board. Explains the form based code requirements regarding garage entrance width. Applicants are asking for 20% relief on that to get a larger opening so you do not have conflict between pedestrians and two lanes of traffic.

B. Rabinowitz: Asks to clarify that the applicant is looking for them to be larger.

J. Beck: Correct. The form based code limits the entrance to 24 ft and in our application and in comments from Planning and Zoning, we have requested the enlargement of that.

B. Rabinowitz: Asks to what size.

J. Robbins: Showing between 26 and 27 feet and the increase in width at the request of the Dept of Public Works Staff who reviewed documents, they were concerned about the egress/ingress of the garage, so the extra width is to accommodate traffic management.

B. Rabinowitz: Asks that the lower level of garage has 214 parking spaces.

J. Beck: Correct.

B. Rabinowitz: Inquires about question from Dept of Public Works regarding the area-ways/sidewalks.

J. Beck: It is being looked at. Ongoing conversations.

B. Rabinowitz: Asks if they will be flushed with sidewalk.

J. Beck: Correct. Similar to what is around Burlington currently.

B. Rabinowitz: Asks about LED certification and commitment. Lots of solar panels on roof. Asks if the heat/coolant for the building are fossil fuels or electric.

J. Beck: Have commitments to LED goals. In the new development agreement, there is a request to look an electric based system. Once we move beyond this step and into detailed design, we are going to pursue how we can do so.

B. Rabinowitz: Asks about how building is going to manage compost for residents.

J. Beck: Explains the three loading docks. Has had conversations with Casella and DPW on what equipment is going to be in docks, and we are committed to composting for this facility. We are committed to compactors for trash and recycling to reduce to number of truck trips.

B. Rabinowitz: Asks about phasing, and asks about the East side of the initial building and what that is going to look like.

J. Beck: Explains flat surface, which is the wall that splits the elevator shafts and how that will have a panelized system on it. Mentions that the retail and parking will be built. Explains that the side of the retail at grade will have a panelized blank wall, which goes up the other levels of housing, temporarily, until we create the other section of building.

B. Rabinowitz: Asks about timeline.

M. O'Neil: Answers that it lists 18-months for that panelized wall on the applicant's timeline submittal.

B. Rabinowitz: Asks for clarification about the form-based code if there are regulations for having a blank façade, nine-stories tall.

M. O'Neil: Answers that the project would still be considered under construction, allowing for that.

J. Beck: The intent is that from the start of construction to the end of the fourth space in a sequence, it is yet to be determined how quickly we are able to make it through those four phases. Right now, there is a start date, and an end date.

B. Rabinowitz: Asks about progress of the questions from DPW.

J. Beck: Explains that they have had two sessions and have three more scheduled. Have responded to list of comments zoning department had. Have created spreadsheets addressing each of those items. As well as traffic concerns.

B. Rabinowitz: Asks if any other Board members have questions for the applicant. *None.* Opens item for public comment.

E. Hostra: Representing 100 Bank Street. Wanted to make sure the Board saw the letter from their attorney at Gravel & Shea. Explains that they are part of the downtown neighborhood and that they are excited about the potential for the revitalization. We think there are a number of issues that need to be more closely looked at like traffic, Stormwater, parking, and a variety of other items. Encourages Board to look through letter and look at items/issues that were brought up. Asks to clarify what Ordinance applies to this application because this is an amendment to an existing application and new elements of a new Ordinance is being reviewed that is not applied at the time of the original application.

S. Gustin: Explains that we are handling this as an amendment because it is basically what was proposed beforehand but is downsized. But it is a new application. That is why you are seeing it and why the Design Advisory Board and Conservation Board saw it.

B. Rabinowitz: Asks if the issues is mainly about the parking.

E. Hostra: That is one major element, yes.

B. Rabinowitz: Mentions that there has been major changes to the Ordinance the last few years.

E. Hostra: There is a big legal question here. Explains opinion that this should either be an amendment or a new application, not both.

J. Robbins: We have been advised by the Staff that we are complying with the full Zoning Ordinance as it stands currently and we are not picking and choosing elements in the different Ordinances.

S. Gustin: Explains that it is an amendment to the original application, but is under a new application submission.

J. Franco: Is present to represent four individuals who were involved in the appeal of this original zoning permit back in 2017. Explains the appeal and history of settlement agreement. No comment or objection to project. Problem is that the overall size of project is reduced by one third, which is good. The bad is that the parking has been reduced by almost 60% and the non-parking elements have been reduced to almost 18%. Our position is that that does not comply with either the settlement agreement that we had with the developer or the consent judgement that was filed by the Superior Court led by the Environmental Division. The case law in Vermont is very clear with a number of cases, that you don't get to disregard previous permit conditions when you have an amendment. There are certain things you have to show and certain things you have to do, we have outlined those in our letter. For the claim that the parking is limited by the new Ordinance is not true. The current ordinance does not put any cap on public parking. We are asking for mitigation for the loss of public parking spaces from the demolition of the Cherry Street parking garage. That was demolished in reliance upon the permit that was granted by the settlement and the consent judgement issued by the Environmental Division in 2017. They acted on that. This application is out of balance with the amount of parking that should be provided here. Explains the Taft Corner's case and how it relates to this application. Our appeal was based not on the minimum parking requirements of the Ordinance, it was based on the Major Impact provision of the Zoning Ordinance. The impact created by the downtown off-site parking capacity by the demolition of the old parking garage.

M. Dana: Explains that family owns the building adjacent to mall entrance on Church St and another location. Asks about the amount of public parking spaces proposed. Asks if the existing mall entrance will remain as the one story building as opposed to being a highrise.

B. Rabinowitz: Answers that the entrance is not changing at this time.

M. Dana: Asks to clarify the public parking question. Issue with the Cherry St parking garage being demolished and then not being replaced with an adequate amount of spaces. Asks if apartments are going to be market rate or student housing.

J. Beck: Answers that the apartments will be market rate, with the 20% of inclusionary housing. If students want to and are able to rent here, they are able to. For the parking questions, the parking garage proposed is a private parking garage. The first spaces to be leased will be given/offered to the occupants of the building, whether that be the dwelling units or the retail leases. There is a commitment to parking spaces for 100 Bank Street. Spaces that are left over will be offered to the public either on an hourly or daily basis.

B. Rabinowitz: Asks to clarify that there is no commitment to any spaces being available to the public.

M. Dana: Asks about commitment to the public parking spaces after the public parking garage was torn down.

J. Beck: There has never been a commitment to create a public structure.

B. Rabinowitz: Asks to clarify if the parking numbers were in excess of what was required for what was being constructed.

J. Beck: Was always based on the requirements of the Zoning formulas.

M. Dana: Asks how many parking spaces were going to be built under the original plan.

B. Rabinowitz: Rough estimate around 900 spaces for the high estimate.

M. Dana: Mentions that the parking has been reduced significantly compared to the scope of the project, which has not been reduced as much as the parking.

J. Beck: Explains that they are meeting the parking requirements in the Ordinance. Housing and retail uses have no parking requirements, so with 422 spaces, we are building close to the maximum number of spaces allowed.

S. Goodkind: Mentions that the parking plan that exists as approved, the parking spots in that plan did not meet the size/dimension requirements. Questions the approval process for that plan. Asks if the parking spaces have been confirmed to meet size and dimension requirements.

M. O'Neil: Confirms that the parking dimensions have been reviewed and are conforming to the Ordinance. It is discussed in the Staff Report.

S. Goodkind: Asks if any of them are tandem spaces.

J. Beck: Very limited amount of tandem.

S. Goodkind: Mentions and agrees with the comment earlier about public parking and the demo of Cherry Street parking garage.

B. McGrew: Repeats and reiterates what Steve Goodkind said. They are here for the parking discussion, worried about the number of public parking spaces for the Church St Marketplace.

S. Bushor: In support of application. In support of the reduction in height and the removal of the hotel. Happy to see the TDM proposal, bus passes, CarShare, etc. Happy to see that the cost of parking is not included in the rent being charged. Has been following application since the beginning and thinks that this is going in a good direction. In support of the green roofs and likes that the parking has a cover on it so the residents will not be looking onto cars. The things that continue to concern me is that the form-based code is so limited. It is a loss that the commercial space is not a part of this project and the UVM component is gone. Concerned with the shrinking retail. Frustrating that this was once called our "Marketplace" and now the retail component is hardly visible. Unfortunate that this project and this size of a project is during this pandemic and we are doing meeting virtually. The first application that was reviewed, there were to scale models, so it is also lacking that detail and access to the public. Still multipurpose, and enjoys that. Likes to see the housing included, but does think that it is detrimental to the Marketplace. Tried to read through all the materials and was concerned in the reduction of parking spaces. Did believe that there were going to be enough spaces for the public to use and access the

retail. Believes it will put added pressure on the merchants. Hopeful that the applicant will remember the legal agreement and hear the comments of people who want to use the retail of these two buildings. People are going to need to park to take advantage of what they are going to offer. Disappointed that it has been down-played. We have to realize that we have a robust public transportation system and people do drive to get to Burlington, and they do have to park their cars somewhere.

C. Long: Asks about the 100 spaces that are reserved for 100 Bank Street. Asks to clarify which building that is.

S. Gustin: 100 Bank Street is the brown office building at the end of Bank Street.

J. Beck: Answers those 100 spaces will be offer at market rate to that building with full access to our building

B. Rabinowitz: So they could take 100 but they could take less. Asks about proposed parking garage structure and number of spaces and how they've changed from the previous proposal.

J. Robbins: Gives details and explains the reductions and changes regarding parking garage.

B. Dunkiel: Representing project. Wants to remind DRB of role and jurisdiction. Role is primarily to review the application before them under the current zoning ordinance, and the zoning ordinance instructs you to interpret the ordinance literally. The DRB has no jurisdiction over private disputes. Several of the issues raised regarding 100 Bank St involves issues over private property owners. Mentions Attorney Franco's public comment and how the law he read is not applicable in this case. The applicant concurs with the City Attorney's analysis regarding this, which is in the packet materials. Wanted to note the proper terminology for this application. This is an amendment application proposing a substantial change to what was previously permitted. This DRB does not have jurisdiction to evaluate the settlement agreement. Many of the public comments were regarding that matter. Responds to public comments regarding public and public parking. Explains that this has always been proposed private parking garage and always has been. Responding to public comments, sounds like people do not like the policies that have been put in place in regards to parking management under the Zoning Ordinance passed by the City Council. Explains parking requirements in the Ordinance and explains that the Ordinance is very clear what the requirements are for this project applicant.

J. Beck: Have reviewed all the Staff comments. Feels like we have met the Ordinances in place and are willing to accept comments as written. Only request is relief on the two items, which is the width for the garage entrance and the material for façade.

L. Wheelock: Followed up with Staff regarding Staff comments and comments with applicants, but DPW have not yet had a chance to review and respond. Concern regarding loading docks and obstruction of the City sidewalk when trucks and vehicles are accessing dumpsters/trash compactors. Recommendation for that to be a time limited activity. The areaways are something that has been an ongoing conversation with the applicant and still working on removing the areaways within the City right-of-way. Wants to acknowledge that the streets for Pine and St. Paul are in an interesting condition and they were in original application and could become public rights-of-way sometime this year, they are in the middle of a settlement agreement. Regarding traffic, the comments to initial questions came back late in the day Monday and we have not had a chance to thoroughly review some of those comments. Some larger concerns that need to be addressed is the level of service at intersections of Main St/Prospect St, and Colchester Ave/Prospect St.

B. Rabinowitz: Asks to elaborate on the comment about the loading dock relative to truck access.

L. Wheelock: One of the sketches that they provided us shows the compactors inside the loading docks, which closely resembled a trash and recycling facility based on how full

they are. The estimated size for the vehicle to handle those will obstruct the City sidewalk during accessing those.

B. Rabinowitz: Asks if it would be for other deliveries too if it is just the compacting/trash haulers that would be blocking the sidewalk.

J. Beck: Answers that the loading docks are two-bays wide so the trash/recycling compactors are on one side and the other side is open. When the truck backs up to grab impactors, the drivers cab would be the only thing that is on the sidewalk just at those times for pick up. When people are moving into the building, box trucks will be able to use the second bay and be out of the way of the pedestrian right-of-way. The South loading dock is a much larger dock, which can accommodate a tractor-trailer.

B. Rabinowitz: Asks if there could be time restrictions on the pick-up of the trash. Casella prefers early morning in the downtown area, so it would most likely be early morning. With the compactors, it limits it to how many times a week they would have to pick up trash and block the sidewalk.

N. Baldwin: There is a transit center adjacent to this project. Has expectations that St. Paul St is going to be a primary route that the transit center will service, as a result it's important that the sidewalk is not obstructed during those early morning hours when the transit center is very active. There should be clear conditions besides just time of day. We need to look closely when CCTA starts.

B. Rabinowitz: Asks if there are any other questions from the Board, the applicant, or public.

None

B. Rabinowitz: Closes public hearing.

V. Certificate of Appropriateness

1. 21-0641CA; 2-14 King Street (DW-PT, Ward 3C/5S) Lake Champlain Transportation Co., Spot on the Dock

Renovation to existing building to demo bathrooms to increase outdoor bar within existing footprint and add interior partitions to create new office and storage room. Construct new bathroom building with stairs and access ramp. (Project Manager: Ryan Morrison)

Geoff Hand recused from item

Jay Buermann and Kelly DesRoches, and Shannon Lipkin appeared on behalf item

No public provided testimony on item.

B. Rabinowitz: Invites applicant to present.

K. DesRoches: Gives brief overview of item. Walks through plan and explains changes. Explains current siteplan and walks through the proposed changes to the property.

B. Rabinowitz: Asks how the public enters the proposed bathrooms.

K. DesRoches: Shows the path that the public would take to get to the bathrooms.

B. McArthur: Asks if the bathrooms are for the general public or for patrons of the restaurant.

K. DesRoches: Open to the patrons of the restaurant.

B. McArthur: Asks if it is open to the public and if it is locked.

K. DesRoches: It is not intended for public use and will be locked during closed hours.

B. McArthur: Asks if the bathroom will be locked (from the public) when the restaurant is open.

K. DesRoches: Believes that the bathrooms will be open and you will not require a key to use the bathrooms.

S. Lipkin: We would keep it unlocked during business hours.

B. McArthur: Asks if there would be any signage or prohibition of public using these restrooms.

S. Lipkin: This issue and signage was not an issue when thinking of the application and proposal. Would like to not have to install signage for this if possible.

B. Rabinowitz: Mentions that if someone is sitting at the bar, they would have to walk around the entire restaurant and then out into the public space and then come back inside just to use the bathroom.

S. Lipkin: We had to do that this past season due to covid and it was actually better for the business and customers because of how the building is conformed to not have customers accidentally walking into the kitchen or interrupting flow of service and did not seem like an issue.

K. DeRoches: We looked at having the ramp and access located in a different spot, but having that access squeezed in between the buildings seemed like a negative experience and space instead of having it more open and visible. Walks through elevation plans and how exterior and height will change. Explains changes in roofline. Walks through renderings.

B. Rabinowitz: Asks about façade materials.

K. DesRoches: Explains the current façade and the proposed material changes.

B. Rabinowitz: Asks about floodplain comments that applicant is working on with State Department.

K. DesRoches: Correct. Do have flood vents in four locations to locate and size. Other comment has to have any mechanical/electrical/plumbing one foot above the floodplain level. We will be following up with those plans.

B. Rabinowitz: Asks if applicant has anything else to add and if any Board members have any questions.

None

B. Rabinowitz: Closes public hearing

VI. Adjournment

Meeting adjourned at 7:20PM



Bradford L. Rabinowitz, Chair of Development Review Board

July 6, 2021

Date



Alison Davis, Zoning Clerk

3/15/2021

Date

Plans may be viewed upon request by contacting the Department of Permitting & Inspections between the hours of 8:00 a.m. and 4:30 p.m. Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/dpi/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

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