

Burlington Conservation Board

645 Pine Street
Burlington, VT 05401
<http://www.burlingtonvt.gov/dpi>
Telephone: (802) 865-7188

Zoe Richards, Chair
Rebecca Roman
Don Meals
Miles Waite
Ryan Crehan
Hannah Brislin
Caryn Connolly
Kyle Tansley
Leslie Spencer
Elizabeth Cunningham, Student



Conservation Board Meeting Public Notice

Monday, September 9, 2024, 5:30 PM

311 North Avenue, Conference Room or Remote via Zoom

Zoom: <https://zoom.us/j/95590052709?pwd=MlhQcTVTNmUydW5qeIBLeFUwZk9LZz09>

Webinar ID: 955 9005 2709

Password: 346560

Telephone: 1 929 205 6099

1. Minutes

- 1.1. Accept minutes from August 5, 2024 meeting
- 1.2. Draft minutes from September 9, 2024 meeting

2. Board Comment

3. Public Comment

4. Project Review

- 4.1. South End Coordinated Redevelopment, 125 & 175 Lakeside Ave and 68 Sears Ln (E-LM/SEID; Ward 5) Ride Your Bike / BCDC / Champlain College
Sketch plan review of proposed mixed-use redevelopment.

5. Update & Discussion

- 5.1. Nature Based Climate Solutions
Review of proposed changes for year 2 of the NBCS grant program
- 5.2. Natural Resource Overlay District
Review of existing ordinance language

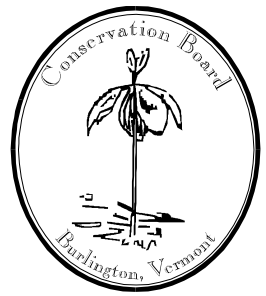
6. Adjournment

7. Informational and Non-Discrimination Statements

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Conservation Board Meeting Minutes

Monday, August 5, 2024 – 5:30 pm

Remote & In Person Meeting

Attendance

- **Board Members:** Zoe Richards (ZR), Caryn Connolly (CC), Rebecca Roman (RR), Leslie Spencer (LS), Kyle Tansley (KT), Elizabeth Cunningham (EC)
- **Absent:** Hannah Brislin (HB), Don Meals (DM), Ryan Crehan (RC)
- **Public:** Eric Farrell, Mike Buscher, Peter Smiar, Dave Marshall, Kristina ____ (311 North Ave)
- **Staff:** Scott Gustin (Permitting & Inspections), Dan Cahill, Daniel Schmidt, Sophie Sauve, Jon Adams-Kolitz, Max Maladanski, Cindi Wight (Parks & Rec)

RR, chair, called the meeting to order at 5:38 p.m.

Minutes

July 1, 2024 minutes

A MOTION was made by CC and SECONDED by LS:

Approve the July 1 minutes as written.

Vote: 5-0-0, motion carried.

Board Comment

SG noted that the second year of the Legacy Fund Grant is coming up. This will be an action item on the Board's September meeting agenda.

RR noted that VHCB is hosting a conservation conference on October 7.

Public Comment

None.

Open Space Subcommittee

No meeting today.

Project Review

1. ZP-24-256, 311 North Ave (RCO-RG; Ward 7) Farrell Properties / City of Burlington

Proposed installation of recreation path, fencing, and associated stormwater improvements.

The programs and services of the Dept. of Permitting & Inspections are accessible to people with disabilities. For accessibility information call 865-7188.

Eric Farrell, Mike Buscher, Peter Smiar, and Dave Marshall appeared for this item.

SG summarized the project, why it's before the Board, and noted the statutorily limited review due to the municipal ownership and operation of the property. The limited review does allow for landscaping and stormwater review, which is much of what the project consists of.

Eric Farrell overviewed the project. The conservation easement holder, VHCB, did a site visit recently and is aware of the project.

Mike Buscher presented the context and background for the project. There's an existing path part way down along Cambrian Way. By the end of this fall, it will be extended to the edge of the development property.

CC, will there be a perimeter fence around the development? Mike Buscher, no.

Mike Buscher, the existing rec path will extend into the proposed path through the city park. There will be another, fully ADA accessible path from the development to the waterfront path through the park on the north side of the development. The path route through the park has been an iterative process. There are steep sections at the northerly end where it connects to the waterfront bike path.

Mike Buscher reviewed the tree protection and proposed landscaping plans. Landscaping will reflect existing conditions with plantings for open meadow areas, wooded areas, and transitional areas. The tree protection plan calls out limits of disturbance and critical root zones. Areas of disturbance within the critical root zones will include root pruning. RR, how do you determine where to prune the roots? Mike Buscher, critical root areas are mapped. The city arborist will be involved decision making.

Mike Buscher, fairly intensive new planting is proposed. Several hundred new plantings are included in the landscaping plan. Black locusts are predominant at the northerly end. Oaks are more abundant south of that.

ZR, what are the big trees on the far north end? Mike Buscher, mostly box elder and one oak.

ZR, there are risks in having dead trees next to a public path. Overall, within the natural area, they are not out of place.

RR mentioned the landscaping suggestions provided by Kate Kruesi. Mike Buscher said the civil plans included boilerplate language. Correct species will be specified on the landscape plans. We will collaborate with Parks as to the remainder of the suggestions.

Kristina ____, what the surface of the path? Mike Buscher, it will be asphalt. The southerly extent of the existing path is natural surface. RR, does the easement stipulate surface type? Dan Cahill, we would have to change the easement provisions in order to change the surface.

ZR, will Parks need to approve the final species mix? Mike Buscher, yes.

ZR, what's happening to the existing path? Mike Buscher, the plan is to close it off and add barriers to allow for establishment of new vegetation.

Peter Smiar overviewed the stormwater management. He noted upstream stormwater infrastructure within the Cambrian Rise development. The existing conditions on the subject property are woods and meadow on sandy soils. There's not a lot of stormwater runoff, except in larger storm events. There is some localized erosion on the bluff due to the existing unmaintained path. There are two stormwater management goals: Treat the runoff from the path itself. The other is to treat runoff from the larger site during larger storm events. Runoff from the path will flow into parallel swales for infiltration. Pre-treatment channels and dry swales will work together in the proposed system. The first 1" of runoff will be captured and infiltrated. Anything more than that will flow into a pipe and be conveyed out to the lake.

Dan Cahill asked if the proposed infrastructure will be an improvement over existing conditions. Peter Smiar, yes, it will be much better.

ZR, what do the swales look like? Peter Smiar, they are about 2' wide. Plantings within them can vary. They are "dry" and won't hold water long term.

Daniel Schmidt, does the conveyance need to go to the lake? Peter Smiar noted the water quality vs. water quantity standards. Water quality is always treated first. Once treatment is provided, then just excess water volume discharges from them.

Daniel Schmidt noted that the stone dust path shoulders may experience erosion similar to those along the waterfront bike path.

LS asked about ongoing maintenance. Peter Smiar noted the annual maintenance, reporting, and certification requirements.

RR, clarify the treatment standard? Peter Smiar, this system is geared towards a 2" storm event (basically 2X the state standard).

Kristina ____, the existing path is steep and eroded. Is there a way to prevent additional runoff from this feature? Mike Buscher said there was discussion of installing a staircase here. Dan Cahill said its not in this proposal but remains something that Parks may do.

Dan Cahill commented this has been a significant journey over the years. Given the site challenges, the version of the plan we're working with now is close to the best it can be. Thanks to everyone who has helped make this happen.

Eric Farrell said that the proposed work will better protect the lake than current conditions.

LS, what's the timeline for this proposal? Eric Farrell, we're supposed to build it this year.

ZR said she's excited that this work will include ADA accessibility.

A MOTION was made by ZR and SECONDED by LS:

Approve the plans as presented with the note that we encourage Parks to make note of the seed suggestions by Kate Kruesi.

Vote: 5-0-0, motion carried.

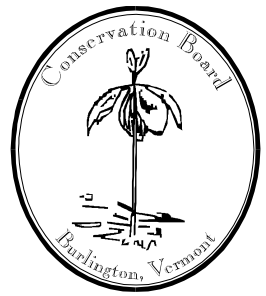
Adjournment

6:31 PM.

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Conservation Board Meeting Minutes

Monday, September 9, 2024 – 5:30 pm

Remote & In Person Meeting

Attendance

- **Board Members:** Zoe Richards (ZR), Caryn Connolly (CC), Rebecca Roman (RR), Leslie Spencer (LS), Hannah Brislin (HB), Don Meals (DM), Ryan Crehan (RC)
- **Absent:** Kyle Tansley (KT), Elizabeth Cunningham (EC)
- **Public:** John Caulo, Todd Seranos, Nic Anderson, Kevin Worden (Lakeside Ave), T Hanson, Braden DeForge (Conservation Legacy Fund grants)
- **Staff:** Scott Gustin (Permitting & Inspections), Dan Cahill, Daniel Schmidt (Parks & Rec)

RR, chair, called the meeting to order at 5:34 p.m.

Minutes

August 5, 2024 minutes

A MOTION was made by ZR and SECONDED by CC:

Approve the August 5 minutes as written.

Vote: 5-0-1, motion carried (no RC yet).

Board Comment

SG noted that the UVM Spatial Analysis Lab work for the Open Space Plan rewrite is underway. Agency Landscape & Planning will start their work on the plan next month.

RR noted that VHCB is hosting a conservation conference on October 7. VLT will have an annual celebration at the Intervale on September 18.

Public Comment

None.

Open Space Subcommittee

No meeting today.

Project Review

1. **South End Coordinated Redevelopment, 125 & 174 Lakeside Ave & 68 Sears Ln (E-LM/SEID; Ward 5) Ride Your Bike/BCDC/Champlain College**

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Sketch plan review of proposed mixed-use redevelopment.

John Caulo, Nic Anderson, Todd Seranos, Kevin Worden appeared on behalf of this item.

SG overviewed the sketch plan process and project concept. This is not an action item. The applicants are seeking Board comment before submitting an application for development in the future.

John Caulo overviewed the project history and collaboration among the various property owners. There are three parcels totaling ~ 13 acres. He addressed the potential block and street grid layout. There is possibly of one or two crossings of the Champlain Parkway. There may be multiple connections to Pine Street. The three parties have agreed to the concepts included in the sketch plans. He referred to the lot and block dimensional requirements in the SEID zoning overlay standards. The project will likely include details as to building area, footprints, heights, and uses. There is potential of up to 1,400 dwelling units on this site. A mobility hub is contemplated as part of the overall development. Parking is anticipated to be centralized within the development.

Dan Cahill asked if community garden space may be possible within this development. We are presently at capacity for community gardens citywide. Maybe there are some areas where we can consider community garden space. Todd Seranos said they've considered rooftop gardens and have also been in touch with folks in Belgium about an indoor garden concept. There's a green space along "Innovation Lane" that may include opportunity for dedicated garden space. John Caulo said the city owns 68 Sears Lane. Affordable housing and open space are goals for this area. Details are not fleshed out at this point.

Kevin Worden mentioned the impact fee credit in the zoning code for community gardens. Nic Anderson noted other green spaces that have potential for community garden space. Dan Cahill reiterated Parks is definitely looking for more community garden space.

DM, in the spirit of Dan's comments about community gardens, he noted opportunity for stormwater improvements. That will be a direct concern of this Board upon application. Consider innovations such as green roofs, pervious pavers, and the like. It seems that proposed parking of 1,000+ spaces may be high given the emphasis on multi-modal transportation options. Todd Seranos said that figure accounts for the mobility hubs included in the project. The project started out as car-free. It remains a car-light design.

DM asked about the mobility centers. How are they different from parking garages? What's novel? Nic Anderson said they will be centralized mobility centers with bus service, bike parking, and car share vehicles.

DM said the first phase doesn't seem to include any affordable housing. John Caulo said that's not the case.

Kevin Worden noted that features like pervious pavers and gravel wetlands will be considered in the stormwater infrastructure design.

LS asked about Hula parking that uses some of the parking in the existing lots. Todd Seranos said that we do not fully utilize the available parking. Its possible that we could fit everything behind Hula.

CC, have you had any discussions with GMT as to public transit? John Caulo, yes, we've communicated with GMT. They are aware of the project, and we will continue to communicate with them.

RC, what are you expecting from a soils contamination standpoint? John Caulo, we've done some analysis. Prior to being a parking lot, it was a meadow. There are two small hot spots to contend with.

RC, what do you expect to include in your permit application? John Caulo said that maximum dwelling units, parking spaces, and uses may be included in the overall PUD application. Subsequent phases

would include more building details. Nic Anderson clarified that they'd likely seek approval of the project size and uses.

RR, whenever you do have your plans finalized, be sure to have your final stormwater management plan details. They will be important for the Board's consideration.

ZR, environmental heat and heat management are growing concerns. Think about cool building designs and incorporation of green spaces within the development. She mentioned the biophilic cities work underway internationally. RR noted these themes are consistent with the Climate Addendum to the Open Space Protection Plan.

RC, be prepared with a detailed planting plan with your application. John Caulo said that will be included in the public realm plan. DM mentioned that its important to pay attention to the species list as to shade tolerance and invasiveness.

Update & Discussion

1. Nature Based Climate Solutions

T Hanson from the VT Garden Network overviewed her organization's grant work this past year. She noted that we have established two new gardens with the help of the Conservation Legacy Fund grant. There were substantial pressures this year between heat, flooding, and mosquitos, but the grant is, in part, aimed at helping communities adapt to climate change. She noted the collective garden space is substantially larger than a typical community garden spot and is managed collectively by a group of residents. Providing access to land is so empowering for our community.

Braden DeForge spoke to the Wildways' grant projects, including enhanced pollinator diversity across the city and providing educational materials to address biodiversity. Wildways offered several educational events, and reached hundreds of folks within the community. We have expanded school programs to two additional schools within the Burlington School District. Our trail stewardship program is seeing higher enrollment this year. The city nature celebration was successful with broad public participation. The Burlington Conservation Newsletter is going to more than 4,000 people now. The Wildways trails are soon getting a brochure.

Daniel Schmidt addressed the VYCC projects. They worked with Parks, Rock Point, and WVPD. Efforts focused on trail work and invasive species management, particularly knot weed and bittersweet.

DM said he was impressed with all three reports and what was accomplished with the funding provided. RR recapped that this is wrapping up year one of the grant program.

Dan Cahill noted that this was a top priority of the Board identified at their June 2023 retreat. The revisions for year two are pretty minimal. Some of the language framing what's eligible has been clarified, and some of the categories have been revised and re-weighted.

DM said he has one big problem with the matrix. It lacks a criterion aimed at measurable outcome so that we can evaluate project success. ZR said she's happy to have that in the matrix, but she feels that they are just estimates. ZR how do we actually measure success?

SG noted that this is the matrix that will guide review of received applications. The actual application does contain a criterion asking for how project success will be measured. He'll defer to the Board as to whether this is adequate or not.

RC agrees with DM. It's easy to drift away from what the grant is intended to support.

Dan Cahill, could we put applicants through a logic model? RR, it seems that DM's point could be included in the project feasibility criterion. Do you feel that the three reports from this year addressed your point about measurability? DM, feels they did a good job.

ZR, it might be interesting to keep some metrics as to dollars invested and outcomes achieved. CC, maybe there could be a way to quantify project results, such as funding awarded versus economic value of projects implemented. ZR said there are several publicly available tools that show this information.

LS noted the Center for Climate Impact Measurement recently launched by the Gund Institute. Daniel Schmidt, the community benefit criterion could be expanded. There could be a measurable component to the project's impact. DM agreed.

SG noted that this is an action item. Deferral to October is possible but pretty tight for the 2nd year launch.

A MOTION was made by DM and SECONDED by HB:

Discussion: RC, only question was, is there any concern with getting the same good project or same bad project being proposed every year? DM said projects should be evaluated on their own each year.

Approve the changes for year 2 and revise the "community benefit" criterion to read: "Community and ecosystem impact: Will the project benefit a large and diverse segment of the community? What are the metrics/measurements of success?"

7-0-0, motion carries.

2. Natural Resource Overlay District

RC overviewed this item. He's just looking for a refresher on the Natural Resource Overlay District standards. By our nature, we're a reactionary body responding to applications that come to us. He noted that the Urban Reserve is its own district with its own set of rules. There has been some interest by the Sailing Center to put boat storage into the adjacent Urban Reserve. He's looking to shine a light on this overlay.

CC noted the call for stormwater details in the standards. Applicants are commonly not prepared with stormwater details. SG noted the need to update applicant guidelines. That will be drafted this coming winter.

ZR appreciates putting this on the Board's radar. DM, we do a lot more proactive stuff now than we did some 15 years ago or before.

Dan Cahill, wants the notes to reflect that our city plans do not reflect what the applicants said about the city not pursuing more Parks' garden spaces.

Adjournment

7:16 PM.

South End Coordinated Redevelopment (SECORD)

7 August 2024

Mr. Scott Gustin, City of Burlington Zoning Administrator
Office of Permitting and Inspections – Zoning Division
645A Pine Street – PO Box 849
Burlington, Vermont 05401

RE: South End Coordinated Redevelopment (SECORD)
PUD Sketch Plan Application

Dear Scott:

On behalf of Ride Your Bike, LLC; Champlain College, Inc.; and the City of Burlington (the respective owners of 125 Lakeside Ave.; 175 Lakeside Ave.; and 68 Sears Lane), please accept this letter and other supporting documentation as a formal filing of a sketch plan permit application for a Planned Unit Development (PUD) proposed for the 3-parcel, 13.3-acre land assemblage. This sketch plan PUD is being submitted under the auspices of the Pre-Development Agreement executed by the three parties, approved by City Council on March 11, 2024.

In addition to the completed online application form, the following documents are referenced here and attached to the online application:

1. Public Realm Design 7/22/24 (Utile / Stantec)
2. Block & Parcel Layout/Conceptual Site Test Fit 8/1/24 (DiMella Shaffer)
3. Sketch Plan Development Program Summary 8/7/24 (DiMella Shaffer)
4. Mobility Framework Memo 7/29/24 (Stantec):
5. SEID Wastewater Concepts 6/17/24 (EV).

Upon review and approval by the DRB, this application would become the PUD Framework under the new SEID Overlay zone district regulations adopted by the City in 2023. This Framework, once approved, would act as a template from which subsequent PUD's for specific parcels would be evaluated.

Consistent with the SEID goals and objectives, SECORD's vision is to create a walkable, sustainable, and vibrant neighborhood by combining a range of uses - mixed-income housing, jobs, education, maker, culture and civic -- to address Burlington's urgently needed residential and economic growth. This new district will bring together mix of professionals, families, seniors, students, entrepreneurs, small business owners, artists, local producers, and other stakeholders reflecting Burlington's future into the 21st century.

A public realm network promoting multi-modal forms of travel is the fundamental organizing principle the SECORD site plan is organized around. The proposed public realm design contains public multi-use paths, sidewalks, dedicated bike lanes and open spaces in addition to vehicular rights-of-ways. Public ROW sections have been dimensioned and detailed by consultants, Utile and Stantec, based on the goals and objectives of Burlington's *Great Streets* Program: "walkable and bikeable / sustainable / vibrant / functional". The public realm design is also a collaborative effort, the product of a study funded, in part, by the SECORD parties with 3rd party grant funding provided under the direction of the City.

The proposed street network is based on the forecasted trips – combining the completed Champlain Parkway, current destination traffic from the neighborhood and the projected trips from future residents

in the South End. The proposed Mobility Framework trip generation analysis has incorporated the development program metrics submitted in this package in order to estimate the potential trips.

The Mobility Framework anticipates nominal impact of additional new traffic from the proposed SECORD development – when compared to the “background” trips generated from the Parkway and other destinations. The incorporation of one or possibly two east-west “Cross Streets” will eventually be necessary to support the creation of the desired South End neighborhood -- connecting the City and RYB parcels across the Parkway to the Champlain College parcel, and overtime, to the multiple Pine Street businesses. *The SECORD parties recognize that any new road access connecting to the Champlain Parkway would be conditioned upon the existing EIR, additional detailed traffic analyses, ongoing monitoring of new traffic patterns and reviews by the City and Vermont Transit.*

With the public realm established across the three-parcel, 13.3-acre PUD assemblage, the remaining land has been organized into preliminary blocks and lots per the regulatory requirements of the SEID. Assumed building floorplates and building heights within the SEID zoning have been applied and extrapolated to arrive at a realistic upper limit of cumulative development metrics the proposed SECORD PUD will generate.

Given the overall scope of the Project, we anticipate a phased construction build-out over a 10 to 15-year period, with Phase 1 commencing upon receipt of all necessary permits. When completed, the proposed SECORD development program will contain the following elements *:

- Gross Floor Area (SF): 1,310,100
- Housing Units: range between 1,100-1,400 DU
 - ◇ 20% of housing units (220-280 DU) – per Article 9 of the Burlington CDO, and Vermont “Priority Housing Project” affordability requirements
 - ◇ 80% to be market rate (880-1120 DU)
- Parking Spaces: 1,047 (incl potential Mobility Hub)
- Non-residential ground floor space: approximately 126,740 SF @ 40% of ground floor
- Public Realm Elements, including:
 - ◇ Public ROWs that derive from the “Great Streets” guidelines
 - ◇ Open Space
 - ◇ Dedicated bike lanes
 - ◇ Pedestrian connections to key parks, education places and retail activities

* See SECORD DEVELOPMENT PROGRAM MATRIX dated 8-2-24

Scott, we appreciate your ongoing assistance in reviewing this application and look forward to receiving comments and questions from the TRC and the DRB. If additional information is needed, please advise.

Sincerely,
SECORD

Todd Sarandos
Ride Your Bike, LLC

Jennifer Kennelly
Champlain College, Inc.

Brian Pine
City of Burlington

To:	Laura Wheelock	From:	Jason Schrieber
	City of Burlington, VT		Stantec
Project/File:	SECORD Mobility Framework	Date:	July 29, 2024

Reference: SECORD Mobility Framework

Stantec Consulting Services, Inc. proposes the following course of action to satisfy City of Burlington, VT requirements for the Mobility Framework associated with potential future Phase 1 impacts of the South End Coordinated Development (SECORD) project. The Mobility Framework will satisfy the existing conditions analysis, public realm and streetscape design, alternatives analysis, selection of mitigation measures, and ongoing monitoring of the anticipated transportation impacts of SECORD. This memorandum demonstrates that much of SECORD's mitigation program will be informed by monitoring of travel to and from the site once operational; this monitoring will determine the degree of support that SECORD may need to contribute to transportation improvements that address local travel impacts.

1 Project Background and Design Approach

The full-build project site is bounded by a rail corridor to the west, Lakeside Avenue to the north, Sears Lane to the south, and the new Champlain Parkway or the rear of parcels fronting Pine Street to the east. The project site includes three parcels that are part of a memorandum of understanding (MOU) between three parties: 125 Lakeside Avenue, which is controlled by Ride Your Bike, LLC; 68 Sears Lane, which is controlled by the City of Burlington; and 175 Lakeside Avenue, which is controlled by Champlain College.

The first phase of the development in the northerly portion of 125 Lakeside Avenue is currently planned to bring approximately 35,000 square feet of gross floor area (GFA) containing a mix of non-residential uses along with approximately 490 units of housing, which includes a mix of market-rate, workforce, and student housing, on 2.17 net developable acres. At full buildout, SECORD is estimated to have a total of 121,800 GFA of mixed non-residential uses, plus a total of approximately 1,437 residential units. At this time, Phase 1 is anticipated to be fully-occupied in approximately 2028 and the Full Buildout in approximately 2044. There may be additional phases after Phase 1, prior to full buildout, that are determined in the future and unknown at this time.

The project proposes a streetscape network and public realm which discourages travel by single-occupancy vehicle. The internal roadway network as well as the buildings themselves will be oriented in a manner to slow vehicle speeds and prioritize walking and bicycling. Safe, convenient connections to surrounding streets and land uses will be emphasized to encourage multimodal travel between on-site and off-site uses. A mobility hub is proposed to encourage adoption of micromobility, accommodate local bus services, and provide opportunities for bike sharing and/or car sharing. Finally, the mix of uses themselves will allow for high rates of internal capture to allow residents, workers, and visitors to carry out many different trip purposes on-site that they may otherwise need to drive between destinations to accomplish.

Reference: SECORD Mobility Framework

The project's construction occurs within the context of the design and consideration of Build Alternative 2 (the selected alternative) for the Champlain Parkway south of the site, which includes signal improvements to Pine Street north of the site. The Parkway includes a multi-use path along its length, carrying through the middle of SECORD. Additionally, the project is located at the southern terminus of the Island Line Trail, providing a second protected bike route into Downtown Burlington.

2 Methodology for Traffic Analysis

To assess the Project's multimodal transportation impact, the Mobility Framework will complete for each phase of development an Existing, No Build, and Build Conditions analysis.

The Existing Conditions analysis will be based on available traffic data and new counts in the study area defined below.

The No-Build Conditions analysis will project travel volumes in the study area for a horizon year based on a background growth rate approved by the City plus any expected trips from nearby development projects, accounting for any new transportation infrastructure and services that would impact the study area.

The Build Conditions analysis will be based on the No-Build analysis and incorporate Project-related travel and infrastructure improvements. Each analysis will follow the steps outlined below, unless the City prefers at that time an amended approach agreeable to all parties which better reflects best practice for mixed-use multimodal development analysis.

2.1 Study Area

Each analysis condition will include a study area that is comparable if not identical to that used for previous phases and other analysis conditions in order to compare impacts. The recommended study area includes the following intersections:

- Flynn Avenue & Champlain Parkway
- Flynn Avenue & Pine Street
- Flynn Avenue & Shelburne Road
- Sears Lane & Champlain Parkway
- Sears Lane & Pine Street
- Lakeside Avenue & Champlain Parkway
- Lakeside Avenue & Pine Street
- Locust Street & Pine Street
- Locust Street & Shelburne Road
- Howard Street & Pine Street
- Howard Street & St. Paul Street
- Maple Street & Pine Street

For each location, the most recent, seasonally-adjusted, multimodal turning movement count data will be acquired or collected in dry weather conditions in the months of September, October, May or June on a Tuesday, Wednesday or Thursday from 7am to 10am and 4pm to 7pm, as well as from 11am to 2pm on a Saturday. No data older than 18 months from the time of submitting the Traffic Analysis can be used unless approved by the City. The peak hour of travel will be summarized in both tabular and wireframe graphic formats.

Reference: SECORD Mobility Framework

In order to evaluate daily traffic changes, 48-hour multi-modal volume counts will be conducted during the same weekday of turning movement data collection at the following locations:

- Pine Street, south of Home Avenue
- Pine Street, south of Maple Street
- Champlain Parkway, south of Home Avenue
- Lakeside Avenue, west of Pine Street

Each location will be seasonally-adjusted, and the Average Annual Daily Traffic will be reported in both tabular and wireframe graphic formats. Additional locations may be added by the City, especially where local concerns about significant increases in daily trip-making may arise.

2.2 Trip Generation:

Trip generation estimates for any phase of development should use peak hour rates from the Institute of Traffic Engineers (ITE) *Trip Generation Manual 11th Edition*, or the latest available addition. The trip generation process should follow the recommended steps described in the ITE *Trip Generation Handbook*, for multimodal projects. This process includes the steps and assumptions depicted below:

Trip Generation Step	Data Sources	Notes
1. Initial Trip Generation	Institute of Traffic Engineers (ITE) Trip Generation Manual 11 th Edition.	Fitted curve equations should be used where the data set exceeds 4 studies and the regression fit (R^2) is at least 0.75.
2. Convert to Person Trips	Summary of Travel Trends by the National Household Travel Survey (NHTS), USDOT Federal Highway Administration (Washington, DC), 2017.	The Average Vehicle Occupancy (AVO) ranges from 1.18 to 2.1, based on land use.
3. Apply Internal Capture	National Cooperative Highway Research Program (NCHRP) 684 Internal Trip Capture Estimation Tool.	The current Phase 1 plan has reductions of 31% in AM and 40% in PM.
4. Apply Mode Share	US Census American Community Survey (ACS) 2021 5-year estimates of Journey to Work data Replica location-based survey data for the Spring 2023 season.	This currently results in a 70% auto mode share.
5. Convert Back to Vehicle Trips	Summary of Travel Trends by the National Household Travel Survey (NHTS), USDOT Federal Highway Administration (Washington, DC), 2017.	The AVO for the current Phase 1 program is 1.67.

Person trips by mode should be clearly summarized in a table, with vehicle trips clearly broken out.

2.3 Trip Distribution & Assignment:

Peak hour trips should be distributed to the north, east, south, and near the Project site (withing a 15-minute walkshed) based on regional job locations available in the Longitudinal Employer-Household Dynamics dataset from the US Census Bureau, as well as local network capacity. As opposed to simply distributing trips based on local turning movement patterns, this approach recognizes that development at

Reference: SECORD Mobility Framework

SECORD will have easy roadway access to southerly and easterly destinations via the Champlain Parkway but significant multimodal options to the north, thanks to the multi-use paths, sidewalks, and transit service connecting the development site to downtown Burlington. This methodology arrived at the directional mode splits below for the current Phase 1 program:

Direction	Directional Distribution (share of person trips going in this direction)	Directional Auto Mode Share (share of trips in this direction that are made by driving)
North	44%	55%
East	37%	90%
South	10%	93%
Inside 15 min walkshed	8%	30%

Specific distribution for every phase of the SECORD should be evaluated in close coordination with the City of Burlington. Similarly, assignment of these trips to study area intersections should be approved by the City. Summary tables and maps of trips by each mode should be produced.

2.4 Mobility Analysis

For every analysis condition, the following studies of mobility should be performed:

- **Safety Analysis** – Mapping of known crashes, notable sightline deficiencies, missing crossings, signal deficiencies, cross-section deficiencies, and other relevant evaluations of travel safety across all modes of transportation.
- **Pedestrian Accommodation** – Evaluation of sidewalk sufficiency (width & comfort ratings, such as those used for multimodal Level of Service [MMLOS] methods), ADA compliance, gaps, and crossing delays (preferably using Transportation Research Board’s Highway Capacity Manual [“HCM”], Sixth Edition Highway Capacity Manual measures of crossing delay) on primary access routes between the Project and proximate off-site destinations.
- **Bicycle Accommodations** – Bicycle level-of-stress evaluation for on- and off-road bicycle facilities and streets expecting the majority of Project-related bicycle activity.
- **Transit Accommodations** – Mapping of transit services, stops, boarding & alighting counts where available, and primary walking routes for the stop(s) that are expected to serve the majority of Project transit riders.
- **Vehicle Capacity** – Calculation of delays, volume/capacity ratios, and queues at study area intersections per the HCM, to be summarized in tabular format and on maps.

Results should be summarized in tabular and map formats.

3 Monitoring and Mitigation

A key output of the mobility analysis for each phase of development will be the projected number of daily vehicle trips on sensitive links in Burlington that may have an upper capacity threshold. These include the daily count locations identified in the study area above. The SECORD team proposes to annually monitor daily traffic volumes at all site entry points and at each of the off-site daily count locations to determine if the SECORD-generated traffic is approaching or exceeding traffic thresholds. This proposed monitoring

Reference: SECORD Mobility Framework

program, which should be updated as new opportunities and traffic conditions occur on the Champlain Parkway, includes these elements:

- Collection of 48-hour traffic counter data to derive ADT at site driveway entry and exits and at off-site daily count locations to derive total vehicle demand for SECORD on a typical weekday, as well as changes to local volumes on sensitive links. The date selected for data collection will be shared in advance with the City of Burlington and seek to avoid foreseeable events affecting regional travel (e.g. special events) and may be adjusted in the event of inclement weather.
- Traffic counts will be conducted before initial occupancy of each phase of SECORD, then within one-year of receiving a certificate of occupancy in the same month / season as the initial count. Subsequent monitoring counts will be conducted in the same month / season annually for five years from the occupancy of each phase.
- Comparison tables and maps of total site volume as well as off-site traffic will be produced for each count year to determine whether traffic is similar to predicted trip generation figures or approaching acceptable thresholds at off-site locations. Off-site thresholds should be verified with the City. Preliminary thresholds have been established separately for Pine Street south of Maple and the Champlain Parkway south of Home (see the “SECORD Northerly Trip Generation Memo” of 5/29/2024 and the “SECORD Southerly Trip Generation Memo” of 6/7/2024).
- Where actual counts exceed projections by up to 10% for that phase or approach 10% of acceptable thresholds for the off-site locations, the Project will commit to enhancing the mitigation program outlined in Section 4 below with appropriate measures that are mutually-determined to reduce trip-making in the subsequent count year.
- Where actual counts exceed projections by over 10% for that phase or exceed acceptable thresholds for the off-site locations, further development of future phases of SECORD will be expected to include significant expansion of the mitigation program, as well as contribute to off-site infrastructure improvements that mitigate adverse traffic impacts to sensitive locations. Specific mitigations and implementation timeframes will be negotiated by SECORD and the City prior to any further development of SECORD.

Analysis of traffic impacts on the local travel network will be provided within three months of data collection in a memorandum submitted to the City. As part of this memorandum, SECORD will also detail its transportation demand management (TDM) programming and commit to any modifications based on the program’s effectiveness in supporting travel by means other than single-occupancy vehicle. The City and SECORD will convene following submittal of the memorandum to confirm the ongoing monitoring approach and any needed mitigation expansion.

4 Anticipated Programmatic Support

In addition to a context-sensitive design and rich mix of land uses, the Project will provide a wealth of TDM programming to support travel by means other than single-occupancy vehicle. The TDM program will be profiled in more detail as part of the Mobility Framework. Measures to be considered include, but are not limited to:

Reference: **SECORD Mobility Framework**

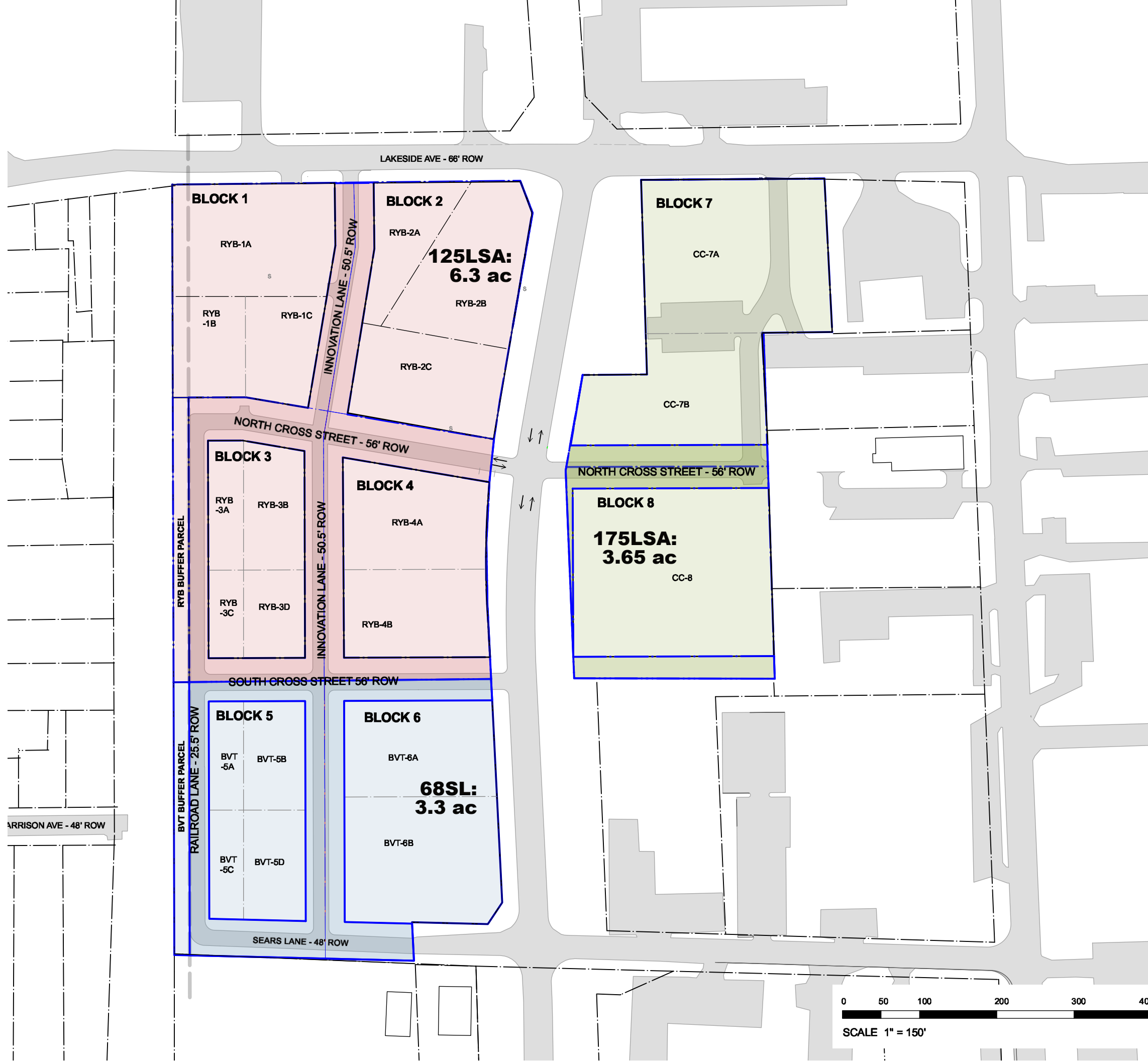
- Provision of an on-site TDM coordinator
- Provision of emergency ride home services
- Unbundled, market-rate parking for tenants
- Market-rate parking for customers
- Subsidized transit passes
- Parking cashout programs
- Public bicycle parking
- Subsidized bikeshare memberships
- On-site carshare vehicles
- Preferential carpool programming

Regards,

STANTEC CONSULTING SERVICES INC.



Jason Schrieber
Senior Principal
Phone: (617) 654-6093
jason.schrieber@stantec.com



BLOCK AND PARCEL LAYOUT

Project Partners:

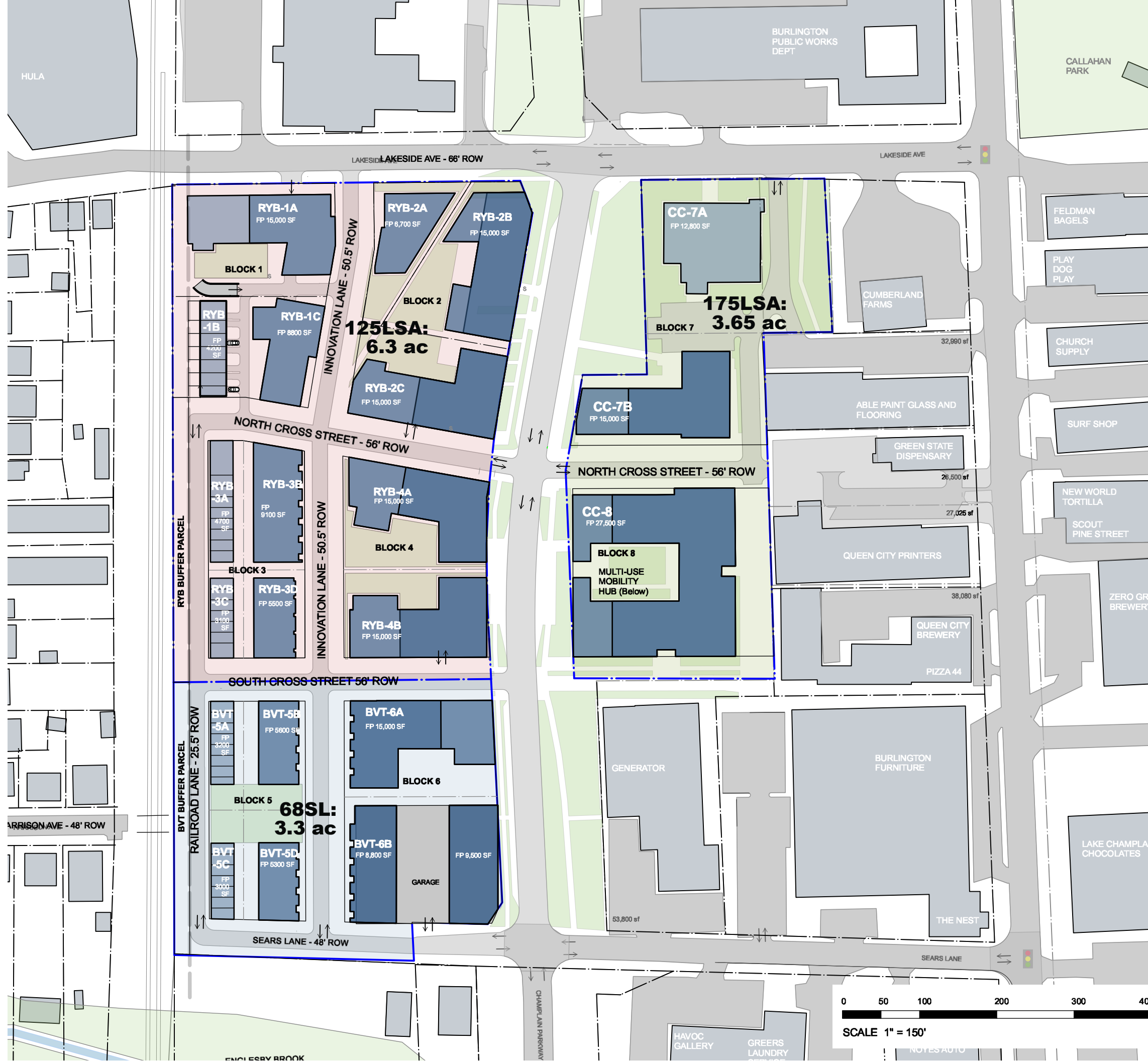


THE CITY
OF BURLINGTON



DIMELLA
SHAFFER

August 1, 2024
Page 17 of 69



CONCEPTUAL
SITE TEST FIT

Project Partners:



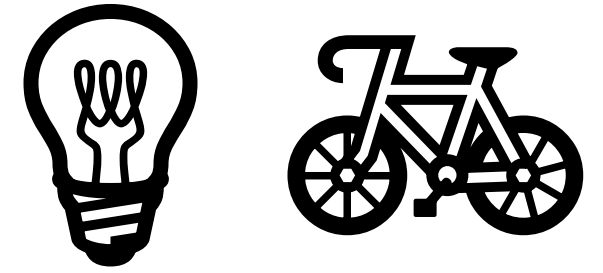
DIMELLA
SHAFFER

An aerial photograph of the Burlington South End area. The image shows a mix of urban and natural landscape. In the upper left, there's a large body of water (Lake Champlain) and a large industrial or commercial building with a flat roof. To the right of this, there are several parking lots filled with cars, some commercial buildings, and a baseball field. The lower half of the image shows a residential area with many houses, trees, and streets. A railway line runs vertically through the center of the image. The overall scene is a typical suburban/urban environment with a mix of housing, commerce, and recreation.

Burlington South End Coordinated Development – Public Realm Design

Update
August 08, 2024

Innovation Lane Material Studies

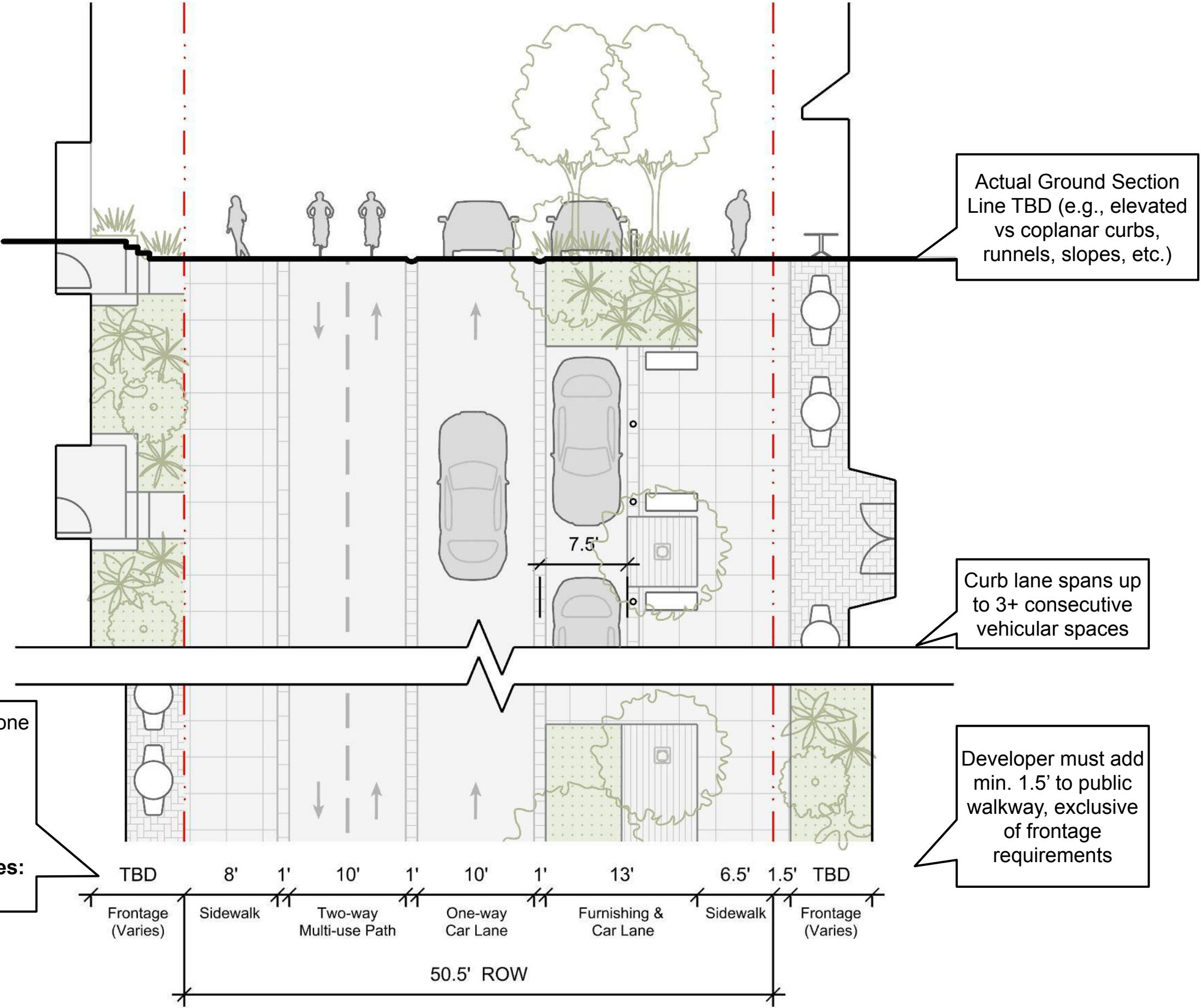
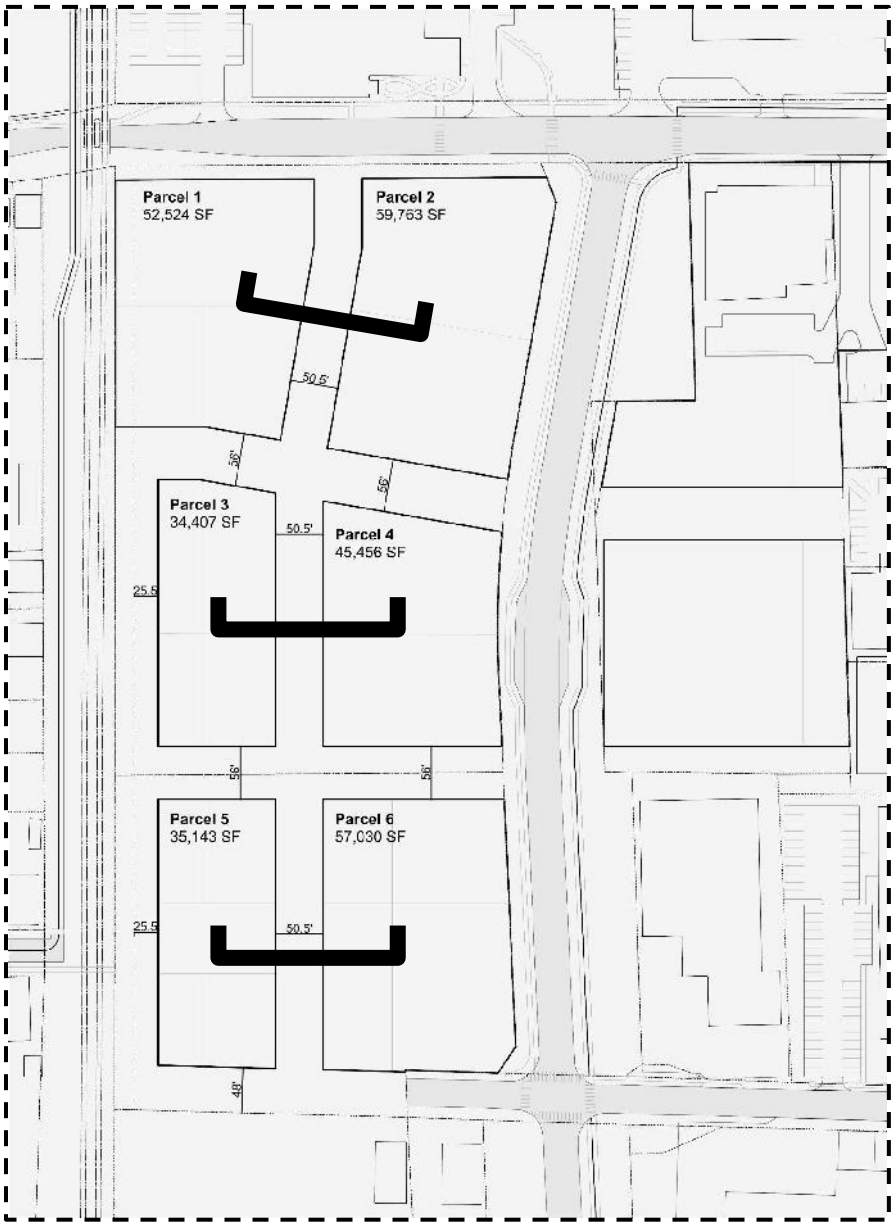


Innovation Lane

Phase II

Pedestrian Focused Slow Main Street

KEY PLAN

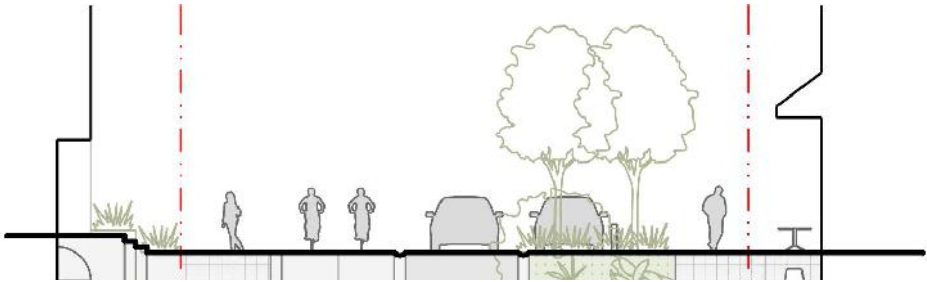


Innovation Lane

Phase II

Option A.1

- + All the same pavement
- + Two drain
- + No Curb



Precedents



Innovation Lane

Phase II

Option A.1

- + All the same pavement
- + Two drain
- + No Curb

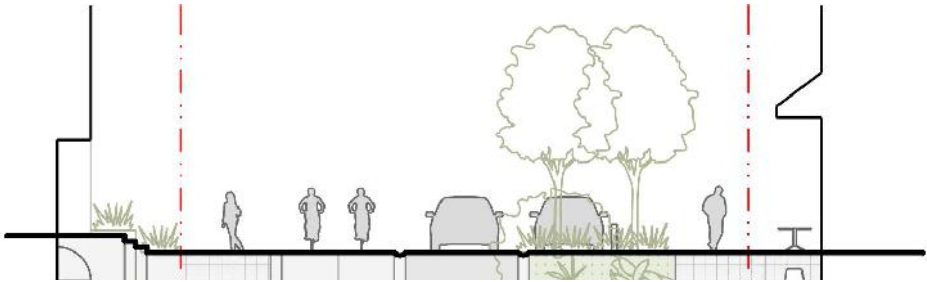


Innovation Lane

Phase II

Option A.2

- + Bike & Car asphalt
- + 2 Drain
- + No Curb
- + Optional Bike Flex Bollards



Precedents



Innovation Lane

Phase II

Option A.2

- + Bike & Car asphalt
- + 2 Drain
- + No Curb
- + Bike Flex Bollards

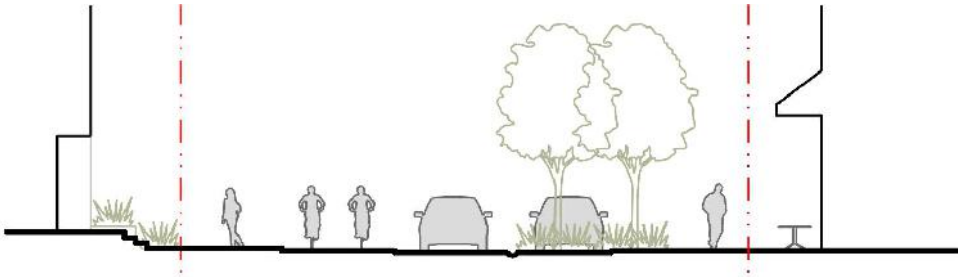


Innovation Lane

Phase II

Option B

- + Center bike & car asphalt
- + Single Drain
- + 3" Curbs to separate all travel



Precedents

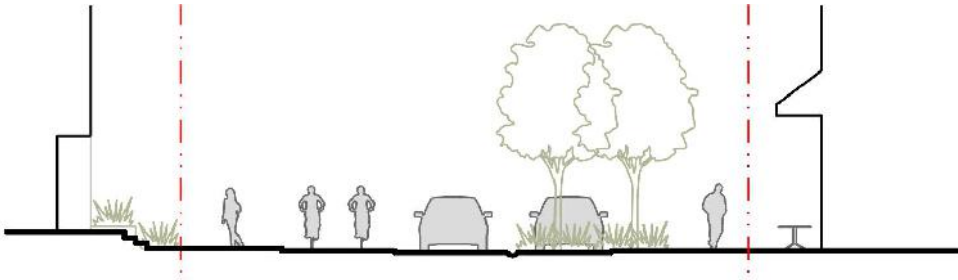


Innovation Lane

Phase II

Option B

- + Center bike & car asphalt
- + Single Drain
- + 3" Curbs to separate all travel



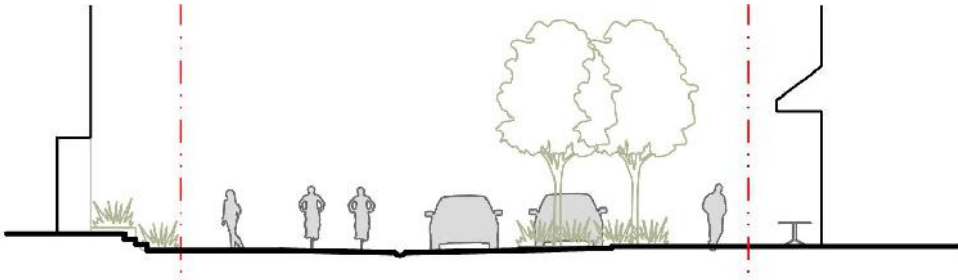
Innovation Lane

Phase II

Option C

- + 2' separation for bike lane
- + Bike & Ped share space
- + Single drain
- + Curb on car side
- + Optional planter or movable protection objects

Precedents

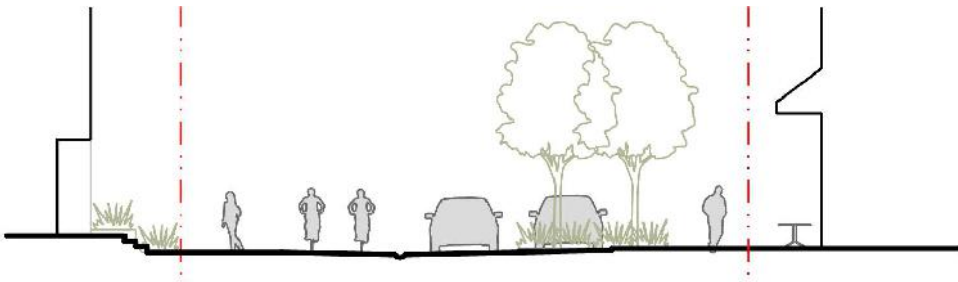


Innovation Lane

Phase II

Option C

- + 2' separation for bike lane
- + Bike & Ped share space
- + Single drain
- + Curb on car side
- + Optional planter or movable protection objects



An aerial photograph of a city neighborhood. In the upper left, a large stadium with a curved roof is visible. To its right are several large parking lots filled with cars. The rest of the image shows a mix of residential houses, trees, and commercial buildings. A road runs vertically through the center, and a river or lake is visible on the far left.

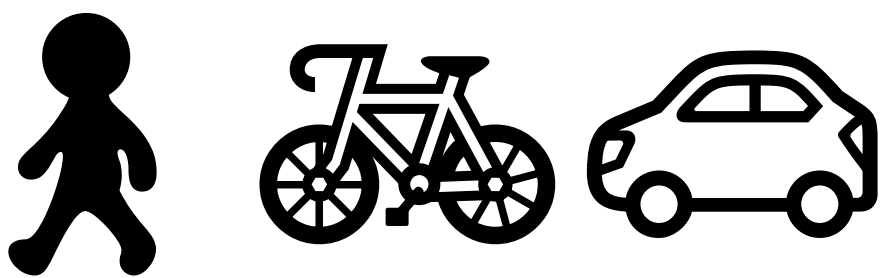
Thank You!

An aerial photograph of the Burlington South End area. The image shows a mix of urban and natural landscapes. In the upper left, there's a large body of water. To the right, there are several baseball fields and soccer fields. The central part of the image features a large, open, sandy area, possibly a construction site or a cleared lot, surrounded by trees and some buildings. To the right of this area, there are several large, white, rectangular buildings, likely industrial or commercial. The bottom right corner shows a residential area with many houses and trees. The overall scene is a mix of developed and undeveloped land.

Burlington South End Coordinated Development – Public Realm Design

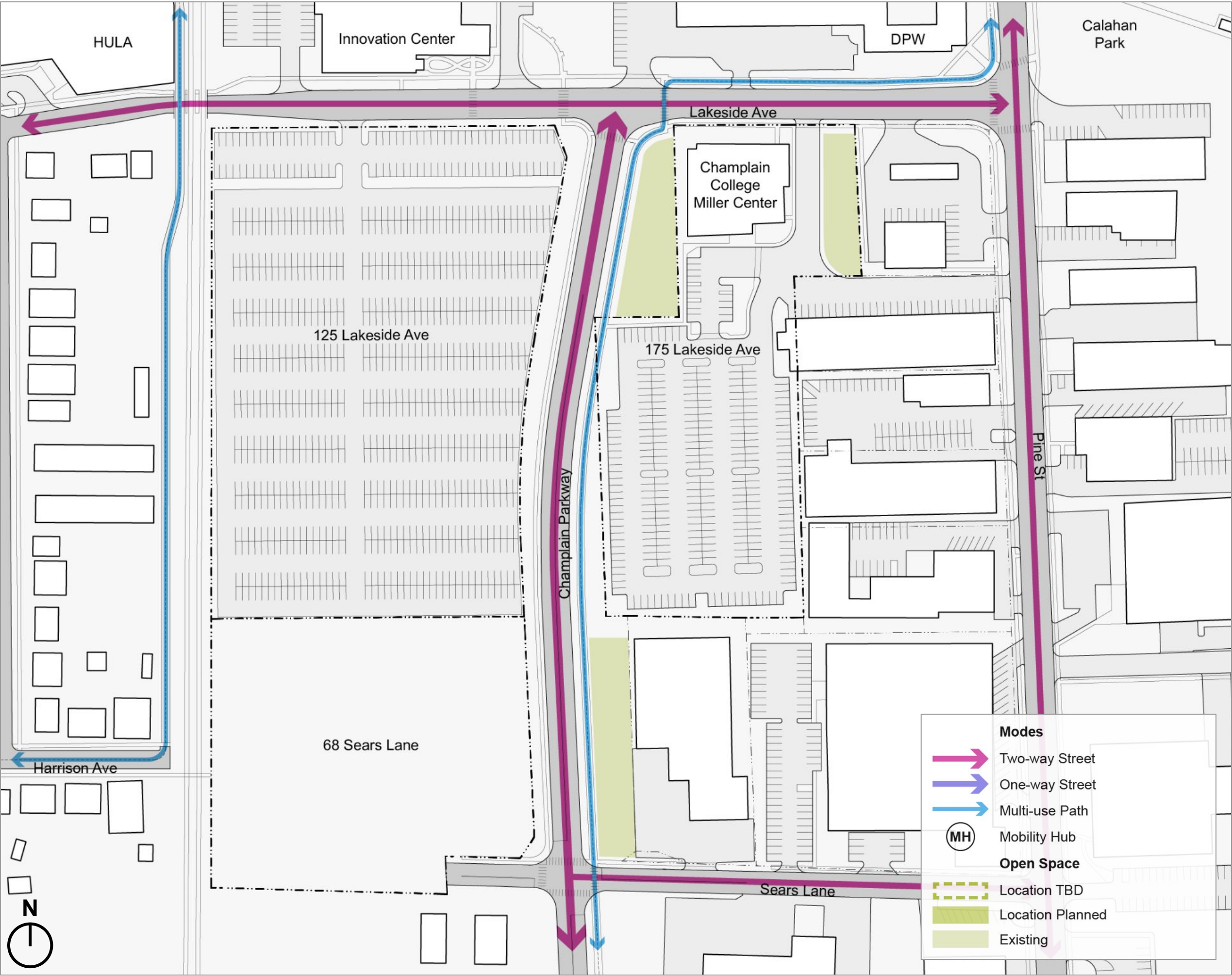
Update
July 22, 2024

Neighborhood Connectivity Diagrams



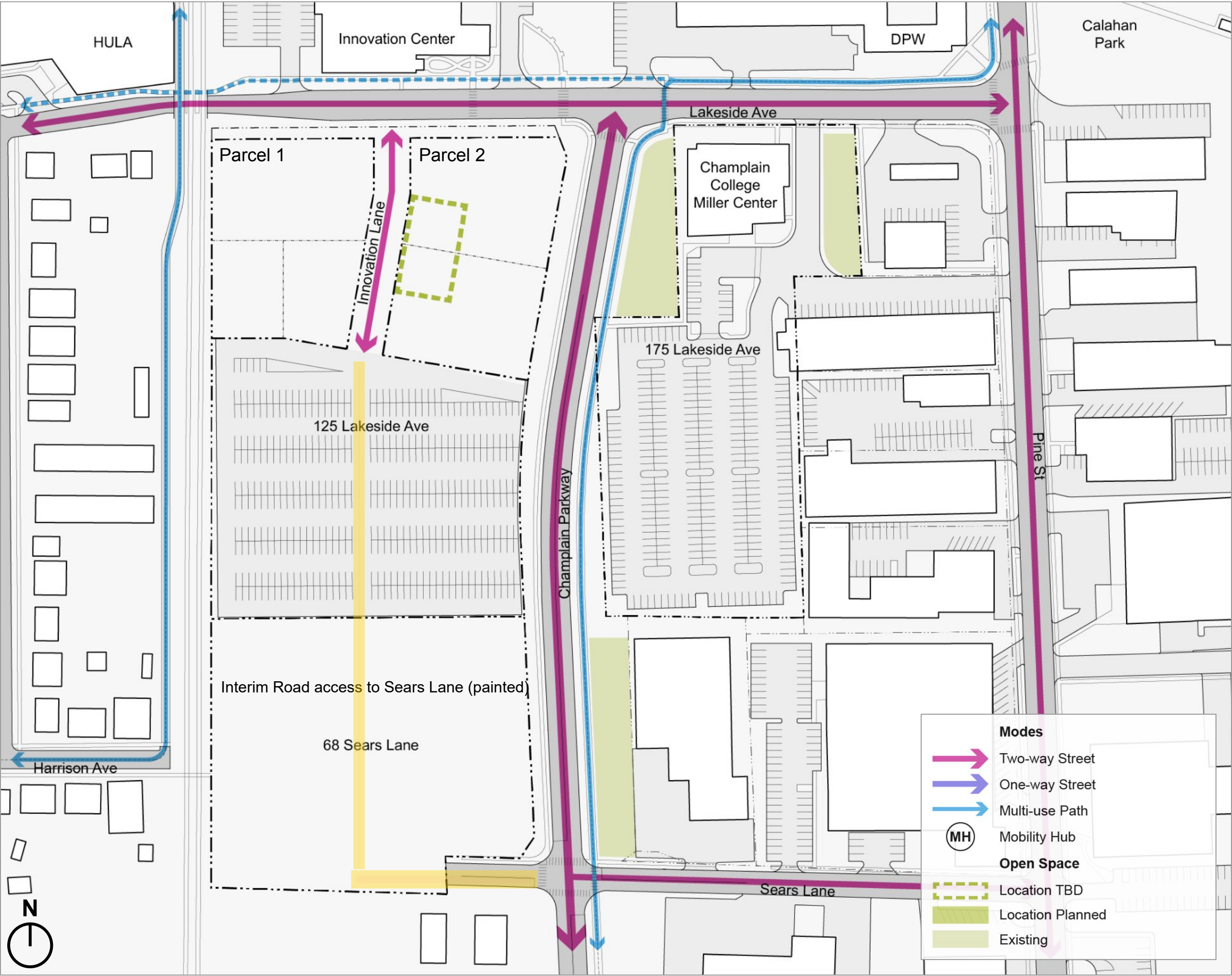
Connectivity Diagram:

Existing Conditions



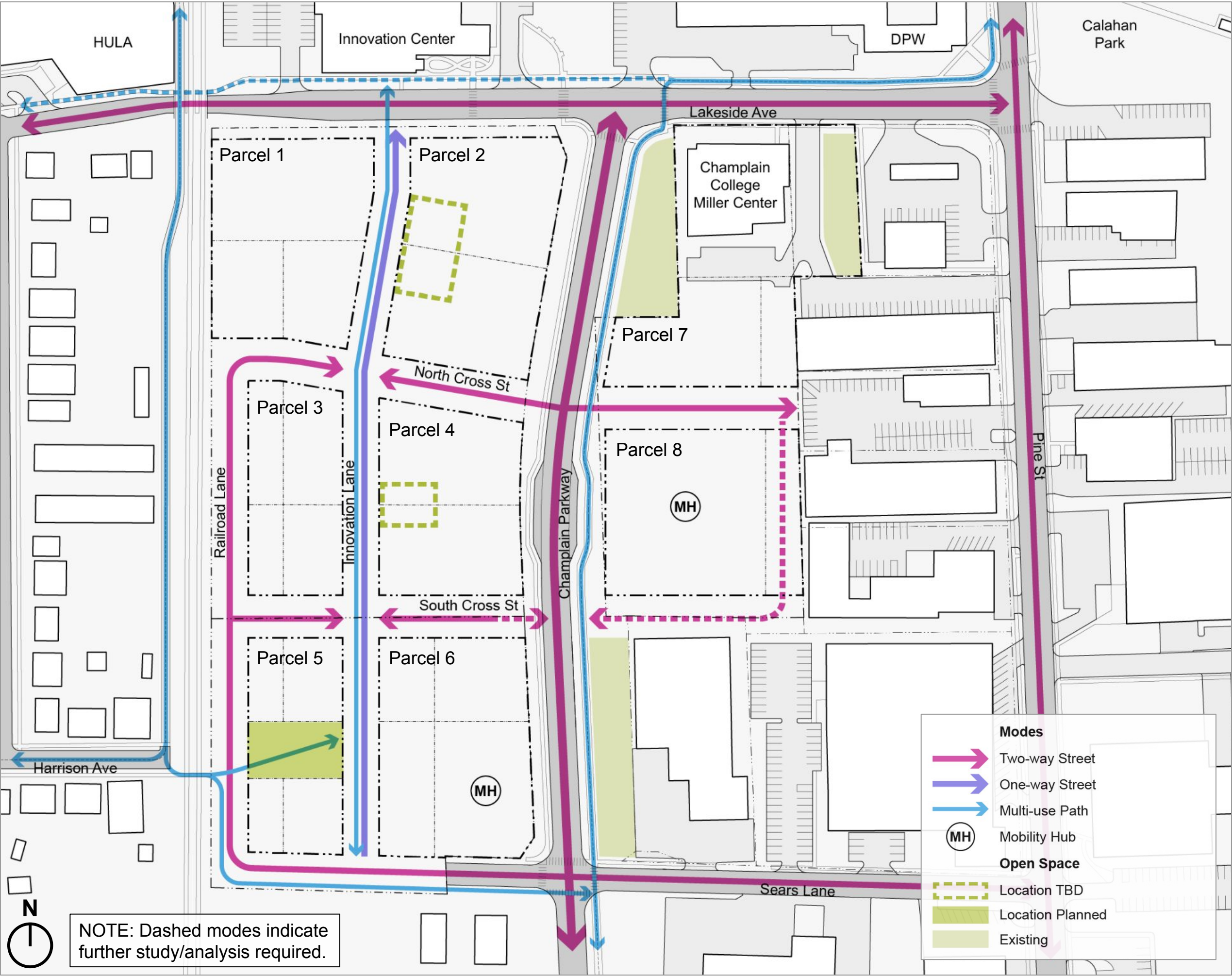
Connectivity Diagram:

Phase I



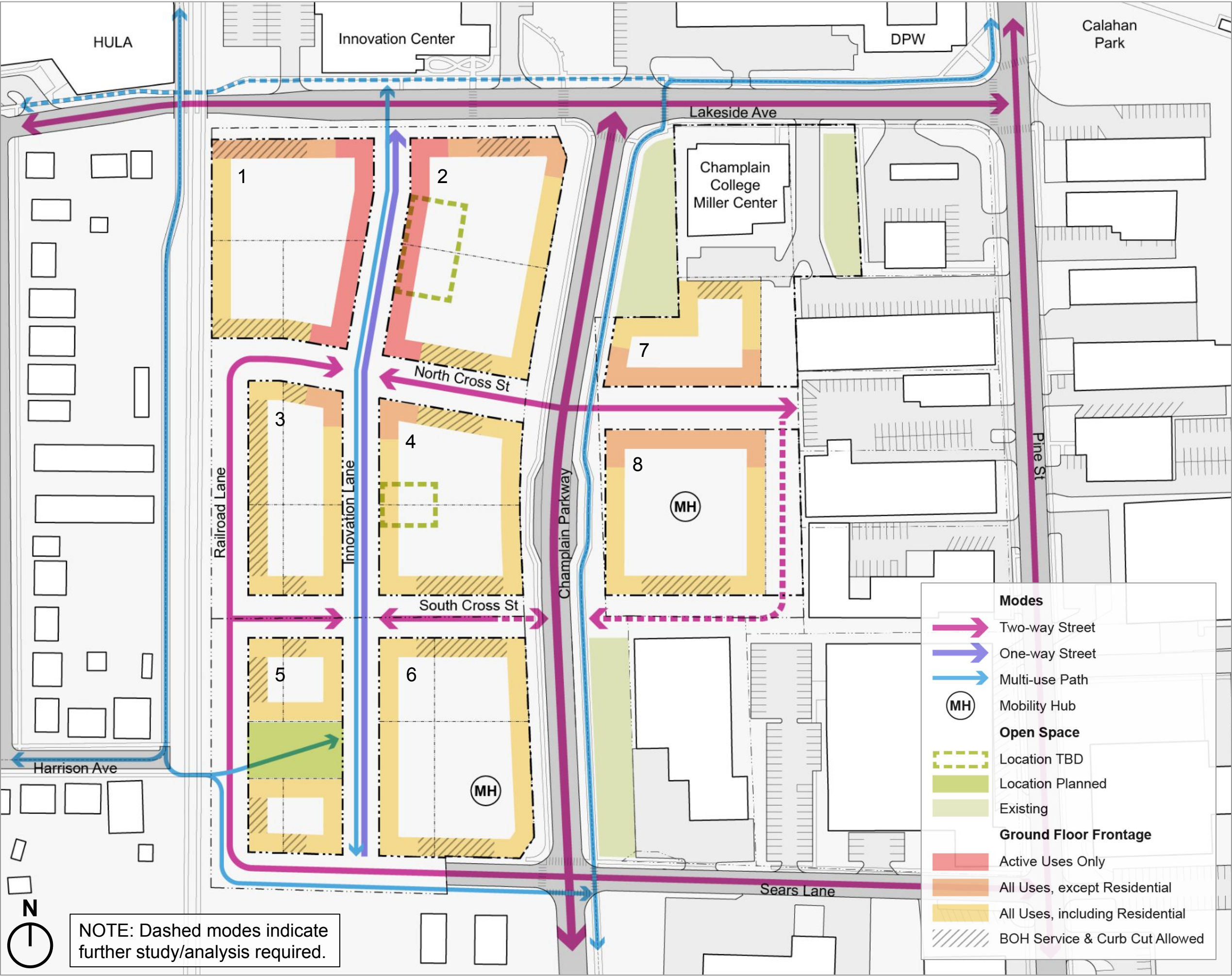
Connectivity Diagram:

Phase II (Full Build-out)



Connectivity Diagram:

Ground Floor Frontage Requirements



Public Realm Street Sections

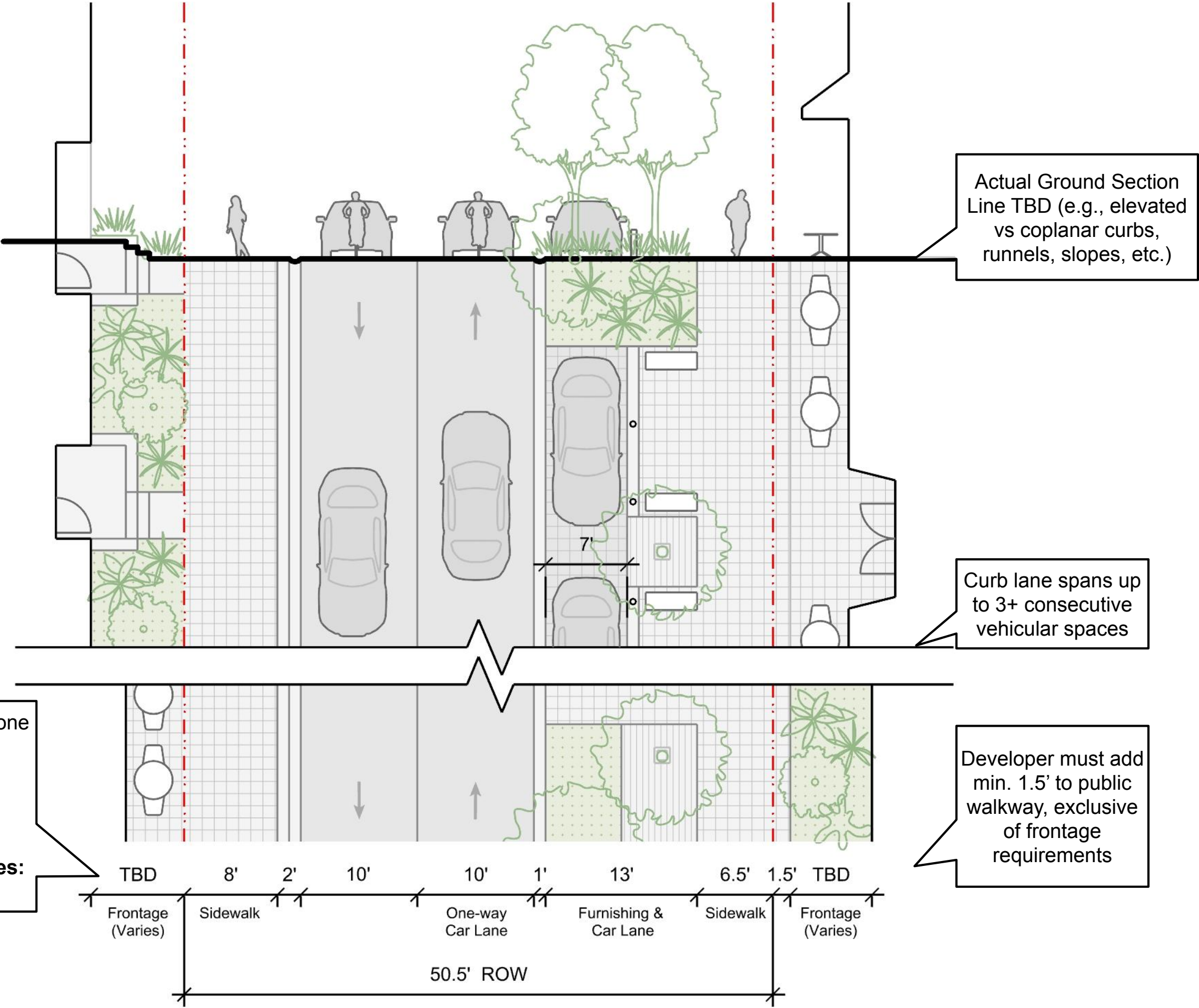
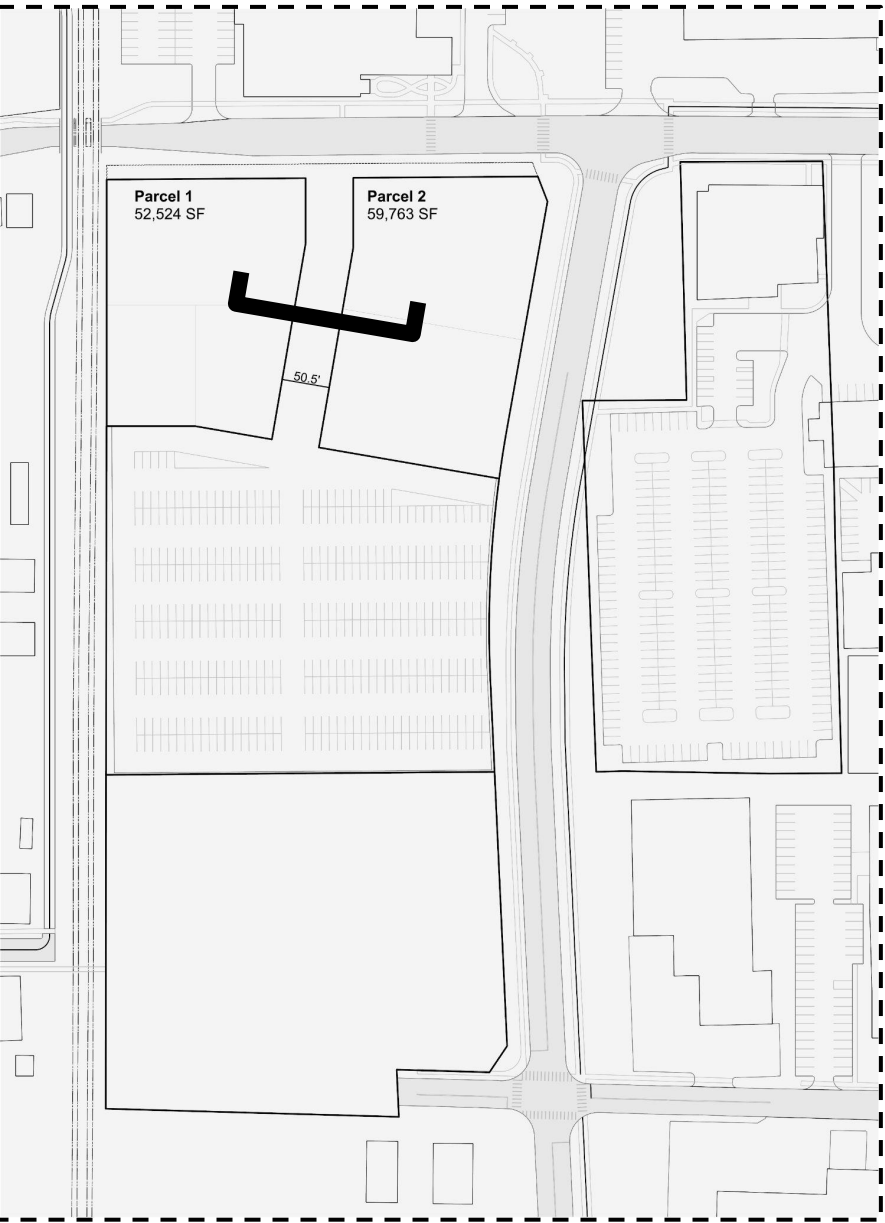


Innovation Lane

Phase I

Pedestrian Focused Slow Main Street

KEY PLAN

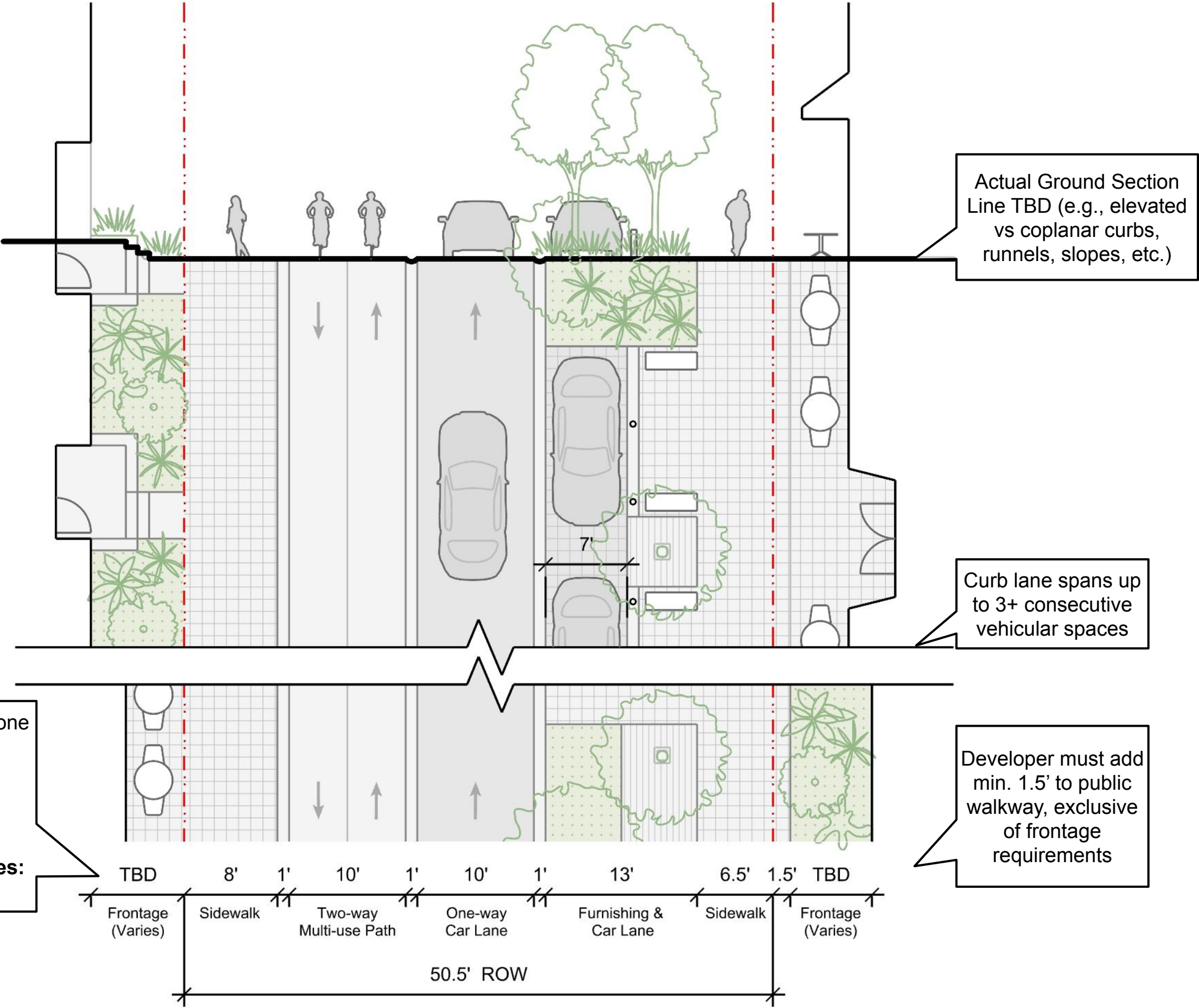
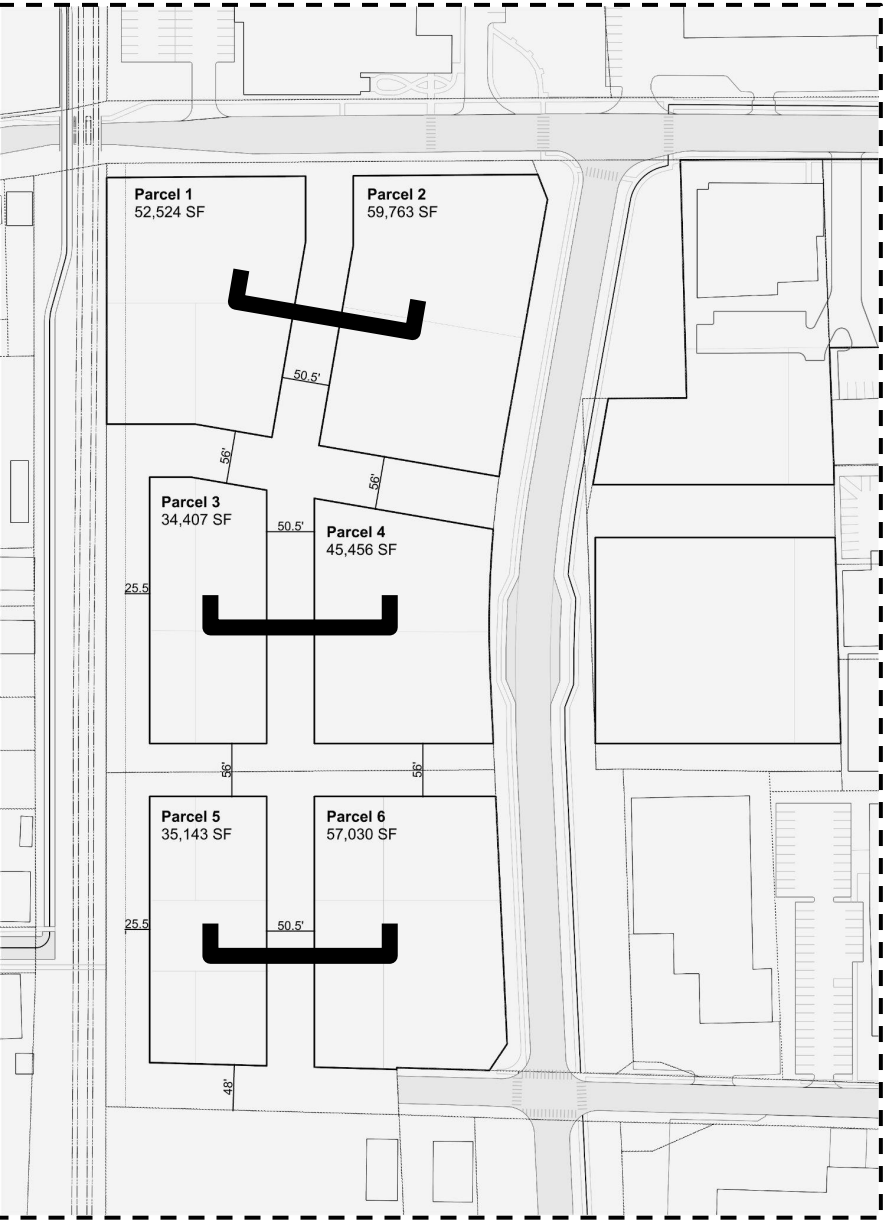


Innovation Lane

Phase II

Pedestrian Focused Slow Main Street

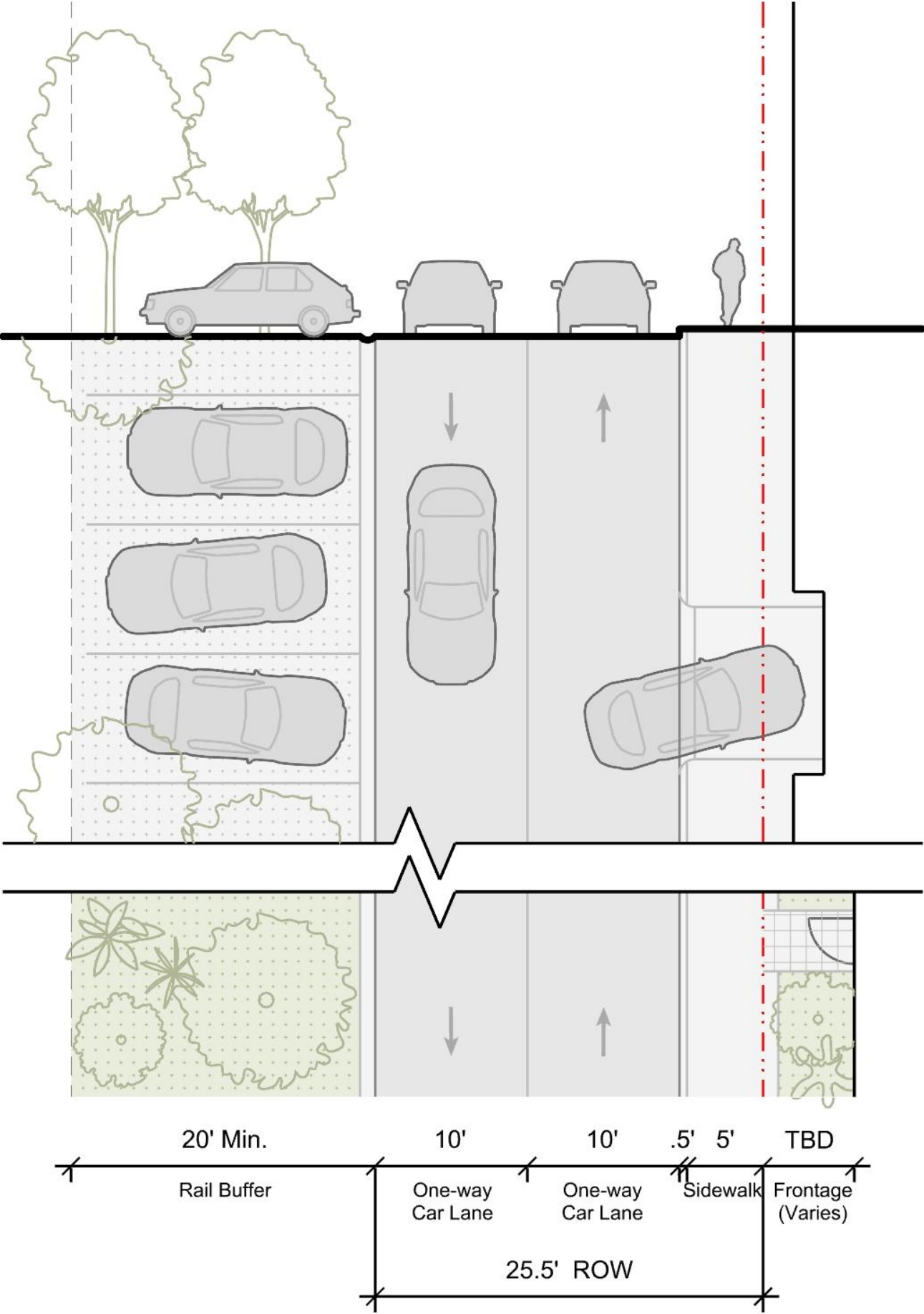
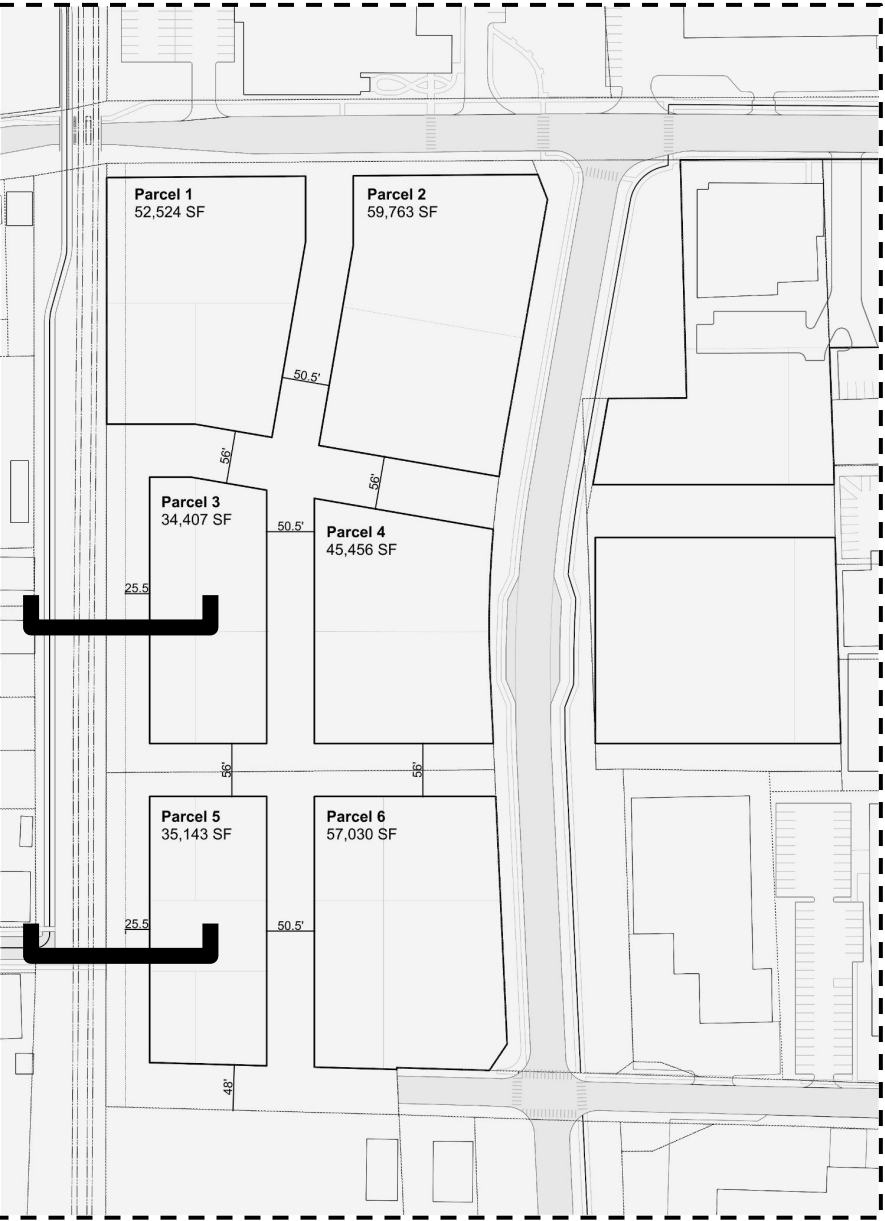
KEY PLAN



Railroad Lane

Access Alleyway

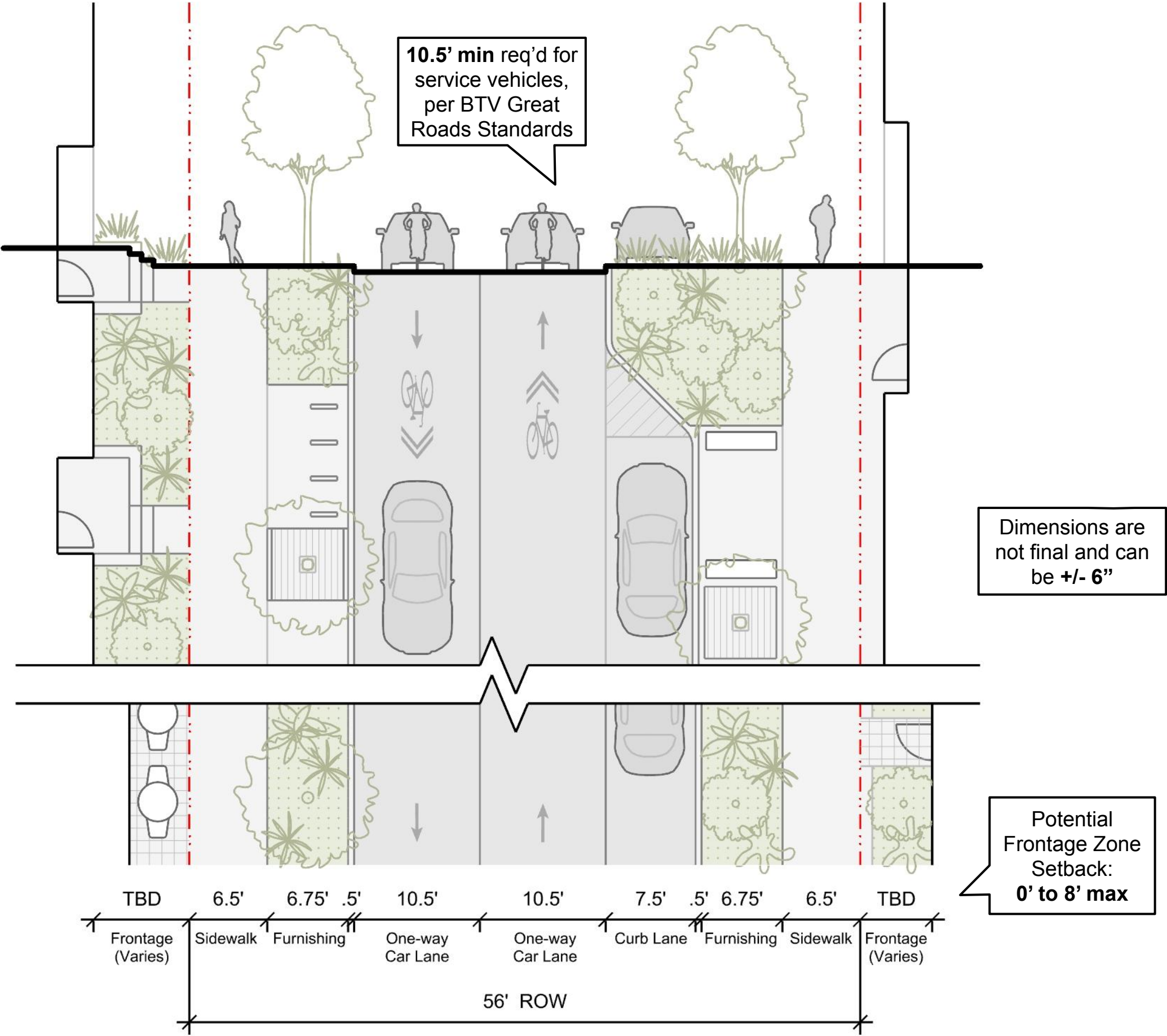
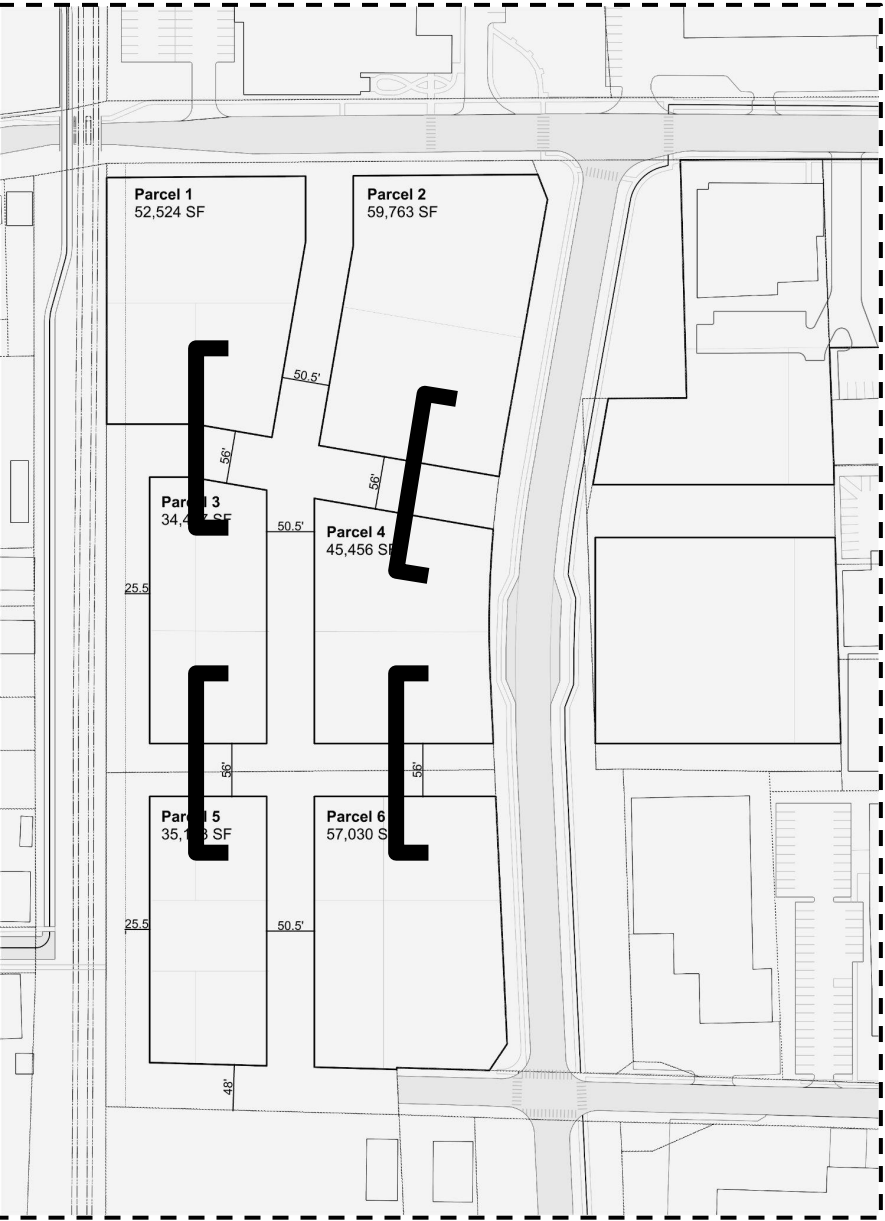
KEY PLAN



N/S Cross Street

Symmetrical Service & Circulation

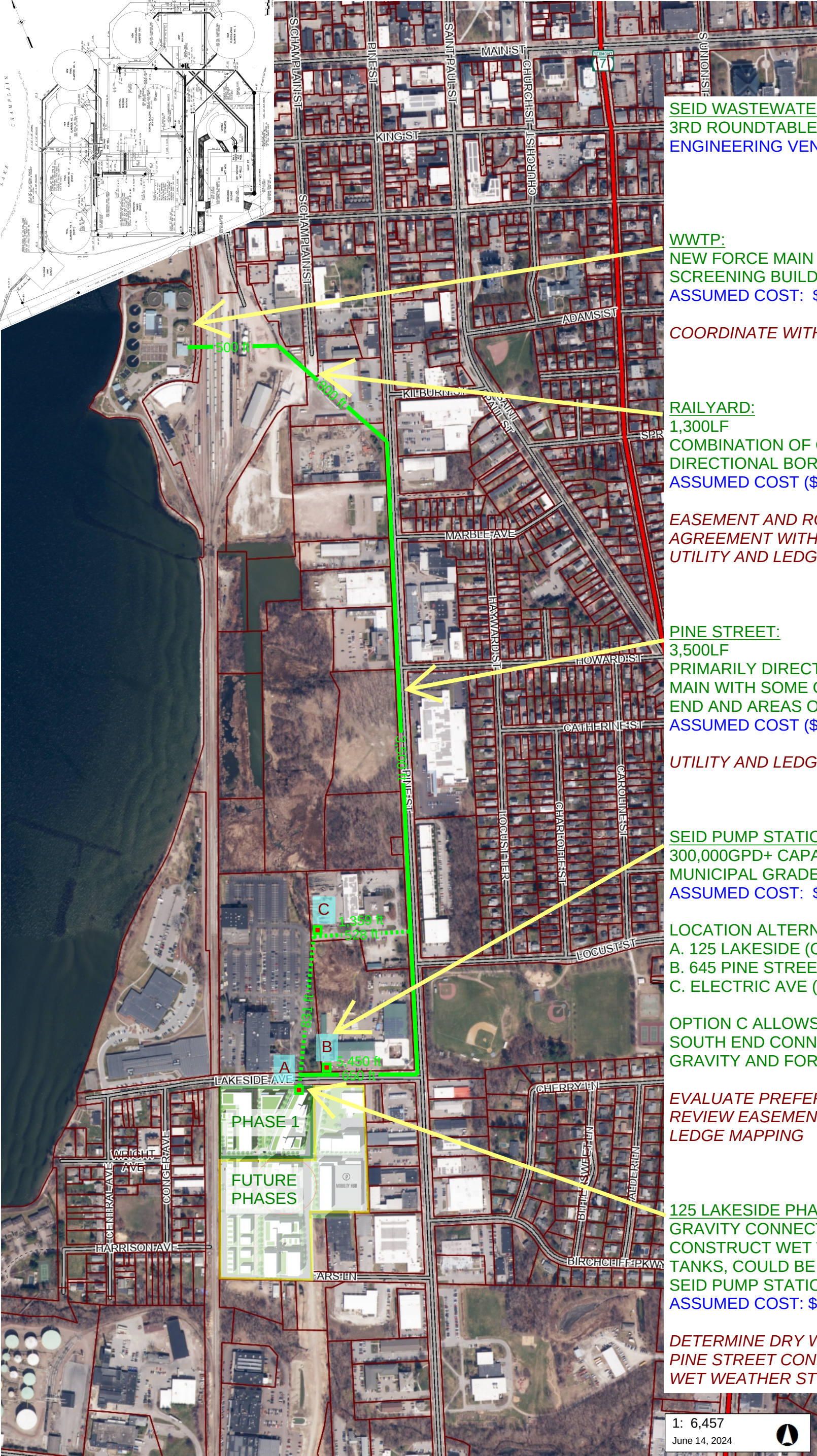
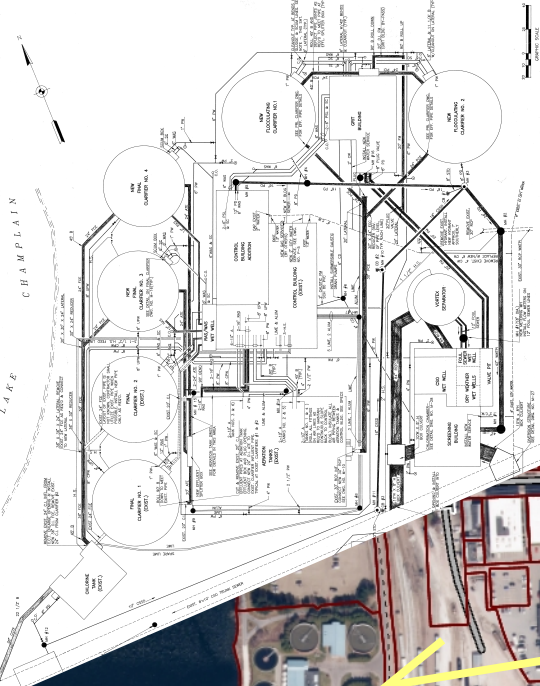
KEY PLAN



An aerial photograph of a suburban neighborhood. The image shows a mix of residential houses, some with large lawns, and several commercial or industrial buildings. There are numerous trees scattered throughout the landscape. A baseball field is visible in the upper right quadrant. A road or railway line runs vertically through the center of the image. The overall tone is dark and somewhat desaturated.

Thank You!

BURLINGTON MAIN WWTP PLAN:



SEID WASTEWATER CONCEPTS
3RD ROUNDTABLE - JUNE 17, 2024
ENGINEERING VENTURES, PC

WWTP:
NEW FORCE MAIN CONNECTION TO
SCREENING BUILDING INLET MANHOLE.
ASSUMED COST: \$100,000

COORDINATE WITH DPW/WWTP UPGRADE

RAILYARD:
1,300LF
COMBINATION OF OPEN TRENCH AND
DIRECTIONAL BORING FORCE MAIN
ASSUMED COST (\$300/LF): \$400,000

EASEMENT AND ROW REVIEW AND
AGREEMENT WITH VTRANS/VT RAIL.
UTILITY AND LEDGE PROBE MAPPING.

PINE STREET:
3,500LF
PRIMARILY DIRECTIONAL BORING FORCE
MAIN WITH SOME OPEN TRENCH AT EACH
END AND AREAS OF OBSTRUCTION.
ASSUMED COST (\$200/LF): \$700,000

UTILITY AND LEDGE PROBE MAPPING.

SEID PUMP STATION:
300,000GPD+ CAPACITY
MUNICIPAL GRADE PUMP STATION
ASSUMED COST: \$2M

LOCATION ALTERNATIVES:
A. 125 LAKESIDE (ON SUBJECT PARCEL)
B. 645 PINE STREET (CITY PARCEL)
C. ELECTRIC AVE (LOW POINT OF SEID)

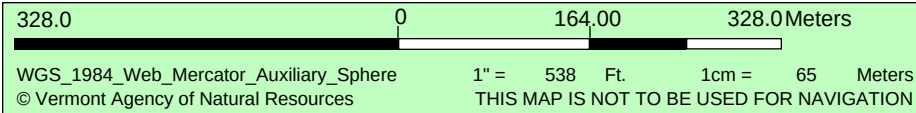
OPTION C ALLOWS FOR ADDITIONAL
SOUTH END CONNECTIONS. ALTERNATE
GRAVITY AND FORCE MAIN ROUTING.

EVALUATE PREFERRED LOCATION AND
REVIEW EASEMENT, ROW, UTILITY AND
LEDGE MAPPING

125 LAKESIDE PHASE 1:
GRAVITY CONNECTION TO PINE STREET.
CONSTRUCT WET WEATHER STORAGE
TANKS, COULD BE USED FOR FUTURE
SEID PUMP STATION (A or B LOCATIONS)
ASSUMED COST: \$300,000

DETERMINE DRY WEATHER CAPACITY OF
PINE STREET CONNECTION AND SIZE
WET WEATHER STORAGE FOR PHASE 1

1: 6,457
June 14, 2024



DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



MEMO

Date: September 5, 2024

To: Burlington Conservation Board & Burlington Parks Commission

From: Dan Cahill, City Land Steward

RE: Conservation Legacy Fund Grant - Final Reports from Grantees and Program Revisions for 2025 Grant Cycle

PURPOSE OF MEMO

Update the Conservation Board and Parks Commission on the 2024 Grant Program via, final reports by grant recipients: Vermont Youth Conservation Corps, Burlington Wildways, and The Vermont Garden Network. Also, this memo includes proposed adaptations to the scoring matrix for the 2025 Grant Round and recommended actions for the Parks Commission and Conservation Board.

BACKGROUND

In the fall of 2023, The City of Burlington initiated the first cycle of the Conservation Legacy Fund Grant Program. This grant program is designed to empower the City, outside organizations, and individuals to participate in Nature Based Climate Actions in Burlington.

With the support of the Parks Commission, Conservation Board and City Council, the City of Burlington awarded three organizations a total of \$151,560. The following amounts were awarded to each organization:

- Vermont Youth Conservation Corp - \$48,000
- Burlington Wildways - \$55,000
- The Vermont Garden Network - \$48,560

See the attached final reports from each respective organization for details of the work that was empowered by the grant awards.

PROGRAM REVISIONS FOR THE 2025 GRANT CYCLE

In the spring of 2024, members of the Parks Commission and Conservation board reviewed the administrative structure of the 2024 grant cycle. This included testimony from grant applicants and discussion with City Staff. Please see the attached “draft scoring matrix” intended to guide the scoring of applications for the 2025 Conservation Legacy Fund Grant applications. Track changes are visible in the attached “proposed scoring matrix.”



Synopsis of adaptations:

Language was added around details of eligible costs and types of projects that are eligible for grants. Also, changes were made to scoring criteria in specific areas.

- “Alignment” weighting was slightly decreased.
- “Community Support” weighting was doubled.
- “timeline” weighting was slightly reduced

Recommended Action:

Review and approve revisions to the 2025 Conservation Legacy Fund Grant Scoring Matrix.

Nature Based Climate Solutions

Grant Application Scoring Matrix

Successful grant applications must specifically address one or more of the six themes of [Nature Based Climate Solutions: An Addendum to the Burlington Open Space Protection Plan](#).

- Forests and Tree Canopy
- Agriculture and Community Gardening
- Water and Wetlands
- Lawns, Fields, and Small Open Spaces
- Green Infrastructure
- Equity, Inclusion, and Relationships

Within one or more of those themes, successful grant applications must achieve one or more of the strategies and actions identified in the Addendum's Implementation Matrix. Acceptable types of grant applications include implementation work, operational work for sustained implementation, and planning work.

The creation of this grant program is connected to the acknowledgment that funding and resources available to NBCS have been limited. While creativity and new concepts are welcome and encouraged, this funding should be equally considered for ongoing NBCS activities in Burlington.

Review Criteria	Weight	Maximum Points	Weighted Points
Demonstration of Need: Does the proposal address urgent environmental challenges included in the framework of the Nature-Based Climate Solutions Addendum?	5	4	20
Alignment: Does the proposal align with the implementation strategies outlined in the Nature-Based Climate Solutions Addendum.	4 5	4	16 20
Project Plan: Does the proposal provide strong evidence of careful planning, thought and research?	4	4	16
Community Support: What partnerships or collaborations strengthen your proposal? Do you have matching funds or other evidence of community support?	4 2	4	16 8
Community Benefit: Will the project benefit a large and diverse segment of the community?	3	4	12
Project Feasibility: What is the likelihood of successful project planning, implementation, and completion?	3	4	12
Timeline: Will the project be completed within the grant time limit?	2 3	4	8 12
Total			100

Burlington Youth Crew 2024

Two four-week Burlington Youth Crews operated during the summer of 2024 providing summer jobs and training to 12 youth members from the greater Burlington area. The crews were led by VYCC Crew Leader, Mac. Mac brought previous VYCC experience to the role which helped Mac create an engaging learning environment for crew members. The crew members had the opportunity to explore conservation work, connect with local natural areas, and contribute to increased community resilience. The crews completed eight weeks of projects partnering with various partners, which gave wide exposure for members to different careers within conservation.



Session 2 Burlington Youth Crews poses at a rocky overlook.



Session 2 Burlington Youth Crew takes their final photo together on the last day of work. Each member holds up a recognition award given out by Mac, crew leader.

The crew members all lived in the greater Burlington area. Members were interested in serving in their local communities, learning about conservation, and having a meaningful summer job. Members built new friendships, transferable job skills, and enjoyed their time together as a crew. One member called it “the best summer of my life”. Several members expressed interest in returning to VYCC next summer to continue to take action, learn new skills, and connect with their local communities.

Season Summary:

- 4 weeks with Burlington Parks, Recreation & Waterfront
- 2 weeks with Winooski Parks District
- 2 weeks with Rock Point
- Amounting to over 1,800 hours of work

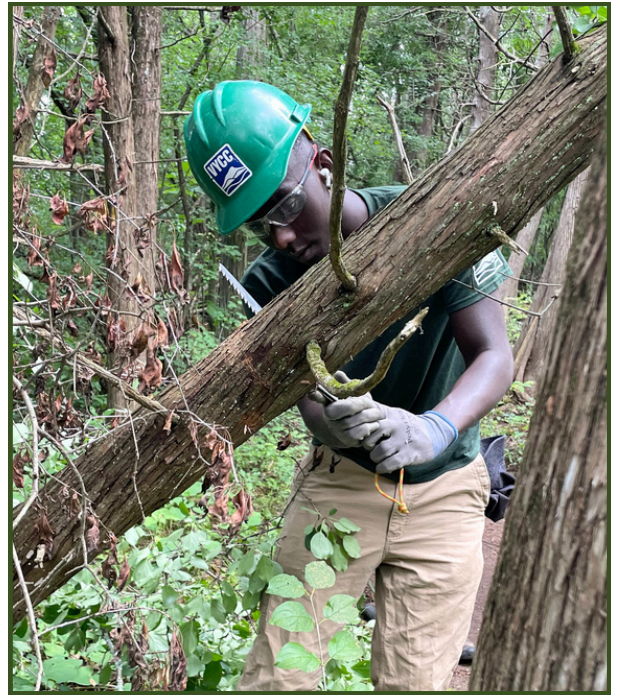


Burlington Youth Crew 2024

Burlington Parks, Recreation & Waterfront

Arms Forest received both trail maintenance and invasive species removal. The crew removed bittersweet vine, buckthorn, burning bush, and knotweed. The crew constructed turnpike to elevate the tread across a 40-foot section of muddy trail. Ten logs were used for the sides of the turnpike. Landscape fabric was laid in between the logs and gravel fill was added on top. The crew also brushed in a social trail, cleared four existing drains. Six new drainage dips were added to the trail and 40-feet of trail tread was re-benched.

At **Crescent Woods** the crew added 11 embedded stepping stones in the trail tread and 9 stepping stones at various points across the creek bed. One large base step was added to a future stone staircase at the bank of the creek. The crew leader reported that an estimated 500lb of rock was turned to crush to set the stepping stones and base step. Mineral soil was added to tread surface around the terrestrial step stones.



Aiden of Session 2 Burlington Crew saws through a log for the turnpike structure at Arms Forest.



Along the **Burlington Greenway**, the crew focused on removing non-native invasive species. Buckthorn, bittersweet, burning bush, and knotweed were the target species. The crew also performed some corridor maintenance and weeded two rain gardens along the Greenway.

Session 1 Burlington Crew digs a drain across trail tread at Crescent Woods.



Burlington Youth Crew 2024

Winooski Valley Parks District

About a half mile of trail at **Ethan Allen Homestead** was resurfaced with gravel and stone dust to make a hard, compacted tread for bikers and hikers. This involved crew members shoveling gravel into trucks, then into wheelbarrows, and then transporting it down the trail. The crew dumped piles from the wheelbarrows all along the trail, for their crewmates to spread, shape, and tamp the surface into the trail with McLeods and tampers. There were also two short reroutes in this trail system; one that was 40-feet near the south side of the park where you can connect to the Intervale, and one that was 25-feet on the north side of the park by a canoe launch at the Winooski river. Twenty willow starts were installed in a clearing near the canoe launch reroute.

At **Salmon Hole**, the crew focused on trail improvements and soil retention. The crew maintained an existing retaining wall that was starting to lean downhill. The crew excavated the soil behind the wall to reset the wall and added three posts on the downhill side to reinforce the structure. The crew also constructed eight puncheon sections and eight check steps that were secured into the earth with rebar. Some existing puncheon and stairs received shingles to increase traction for hikers. Nine willow starts were installed in the riparian buffer of the Winooski River.



Session 2 Burlington Crew and their supporting project partner pose during a tread maintenance project.

Rock Point

Rock Point focused on non-native invasive species removal. Target species included: Phragmites, bittersweet, knotweed, and buckthorn. The crew learned to identify the invasive plants and by their second day on the project, learned a more methodical approach to removing invasives in lines to avoid missing plants. The crew was shown some rare plants to avoid that were in the area.

The crew then cleaned up trash surrounding an abandoned encampment.



Burlington Conservation Legacy Grant Progress report 2: September 2024

Funding Area 1: Grow Wild

Funds have allowed for increased staffing capacity to host events, share and create educational materials and better achieve biodiversity goals through successful native plantings.

Public walks & bike rides have attracted 39 participants while tabling events have reached hundreds of community members.

Educational resources improved through website redesign (to be completed by fall/ winter 2024), and 4 sets of "how-to" graphics for native habitat by Christine Hill in progress.



Funding Area 2: School-Based Tree Nurseries

Project expanded to two additional district schools, now serving 511 students who added ~400 plants to campuses.

C.P. Smith Elementary School "pocket forest" planted in spring 2024, and live-stake tree nursery started summer 2024 at Sustainability Academy with 80 initial trees.

Native tree and perennial nurseries planned expansion for fall 2024.



Funding Area 3: Trail Stewardship Program

Burlington Highschool students getting involved in Burlington natural areas as Trail Stewards.

Development of invasive plant management training to be offered to stewards with a pilot starting fall 2024.

Program enrollment up to 430 from 360 individuals at the start of the year.



Funding Area 4: City Nature Celebration

This year's celebration welcomed 600+ participants for two weeks of engaging events, talks, guided walks and more.

Participants restored the floodplain forest with 300+ plants, and identified 676 species during the City Nature Challenge bioblitz.

Partnered with numerous community organizations and others around the state such as VT Center for Ecostudies to offer many ways for community members to learn about and get involved in nature-based climate solutions and the natural world.



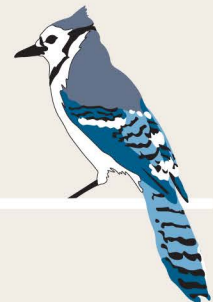
Funding Area 5: Strategic Planning & Outreach

Strategic planning for partnership has helped us to better reach the Burlington community. This year, Burlington Wildways' began sending the Burlington Conservation Newsletter to keep the community informed about and engaged with conservation opportunities in the city.



Funding Area 6: Burlington Wildways Trail

Trail and natural areas brochure in design phase. This resource will help to make our connected natural areas more widely known and accessible for the community to benefit from.



Climate Resiliency and Collective Gardening

This growing season has been exceptionally challenging for gardening in Burlington. In the past two months alone we have experienced not one, but two, unprecedented climate catastrophes - the July flood and the August public health announcement on the mosquito-borne virus. Harvests have been impacted by extreme heat, excessive rainfall, high humidity and the resulting increase in plant diseases. Gardener morale is low.

As we walk around the three City of Burlington community gardens where VGN manages educational program sites - at Tommy Thompson, Winooski Valley Park District and Starr Farm - we reaffirm our belief that this model of collective gardening is a viable and innovative nature-based solution. Collective gardens are thriving despite many challenges. We are actively mitigating and adapting to climate change through our gardening practices and we are building a more resilient community.

Action 1 - Offer educational opportunities for Burlington residents to expand their knowledge and practical skills in small-scale food production by organizing a workshop series on climate resilient gardening.

Pivoting after a flood and public health announcement

Twice this season we have cancelled Garden Like a Farmer workshops due to climate-related circumstances. In July, we pivoted to flood recovery at VGN program sites directly impacted by flooding. In August, due to mosquito pressure at community garden sites, especially during the hours when community members have discretionary time to garden or attend a workshop, VGN has cancelled early morning and evening garden programming at Seedsong, Starr Farm, and Family Room Collective Gardens for the remainder of the season. Our garden mentor leadership teams are coordinating weekend midday work shifts to keep up with garden maintenance and much anticipated fall harvests.

Our last workshop in the Garden Like a Farmer series is an invitation to a Zoom meetup to reflect upon our lived experiences gardening through a very challenging growing season and an opportunity to discuss garden-scale strategies for mitigating and adapting to climate change. This final workshop will be scheduled in October.

Climate Resiliency and Collective Gardening

Action 2 - Expand collective gardening to increase access to gardening space and offer a nature-based solution toward social cohesion and well-being.

Starr Farm Collective Garden

New garden prep methods and communication systems have contributed to VGN's experience in managing a collective garden. In response to high weed pressure and an intentional desire to reduce tillage, VGN trialed "lasagna gardening" in 1/4 of the growing space at Starr Farm. Four months later, the potatoes, squash, sweet potatoes, and tomatoes planted in sheet mulch are thriving. The collective management of the garden has been facilitated by a WhatsApp group constantly updated with task lists, photographs, and ongoing communication to include all garden members in the day-to-day needs of the collective garden.

"The success of this new collective can be seen in the transformation of the space. To take a once abandoned, overgrown piece of land and transform it into a highly productive garden that regularly feeds thirteen people has been a great achievement."

- Angela DeBettencourt, Garden Manager

Climate refugee gardeners in Burlington

At the end of July we welcomed three community gardeners displaced from flooding at the Intervale to join the Starr Farm Collective Garden for the remainder of the growing season.

"I joined the Starr Farm Collective Garden after losing my gardens at Tommy Thompson Community Garden for the second year in a row. Gardening is a huge part of my identity and is something that brings me tremendous joy and purpose, and being welcomed into Starr Farm was incredibly beneficial for my mental health and quality of life in Burlington. I am so grateful that this space to grow and enjoy nature exists in this city I love." - Carrie Marr

Climate Resiliency and Collective Gardening

Family Room Collective Garden

After three months of a busy summer season facilitating biweekly garden activities for families with young children, the Family Room Collective Garden has shifted into harvest season. The garden has provided immense joy for all ages and several pounds of nourishing food. VGN is assessing the extent to which this garden embodied a collective model since we could not rely upon a consistent group of garden members to keep up with tasks on a weekly basis. Much of the physical labor to upkeep the highly productive garden became the responsibility of VGN staff and interns. We look forward to further discussing challenges, successes, impact and next steps for collective gardening at our next community of practice gathering in October.

“The Family Room families and program have benefited greatly from this collective garden. The children have gotten so many wonderful gardening experiences from digging in the dirt, planting corn, beans and potatoes and caring for many other familiar and new vegetables. Parents really loved spending time learning gardening techniques and talking with the staff about different vegetables. Later in the season everyone was excited about taste testing the veggies and harvesting for Family Room lunches. And families were also so happy to harvest veggies for home both those they already liked and some new to them they wanted to experiment with.

In all there was so much learned, loved and appreciatively eaten from this wonderful productive garden project. And the staff made it a rich and connected experience for all of us -including the staff at the Family Room who learned a lot as well- Thank you!”

- Sarah Sinnot, Family and Community Engagement Director



Top: Culturally meaningful crops at the Family Room Collective Garden - a Mexican landrace ear of corn, arms full of molokhia greens, and bitter melon hanging from a garden arch.

Middle: VGN Interns and Garden Mentors leading hands-on activities at the Family Room and holding harvest baskets and succession planting trays; weigh station at Starr Farm to track garden harvest and celebrate beefsteak tomatoes.

Bottom: Garden members at Starr Farm Collective garden harvesting carrots and building soil with the lasagna gardening method, layering cardboard, straw, and compost.

Permitted Uses:	
Automobile Body Shop	Museum Small
Automobile/Vehicle Repair	Museum Large
Café	Performing Arts Center
Community Center	Performing Arts Studio
Community Garden	Recreational Facility- Indoor
Conference Center	Recreational Facility- Outdoor
Composting	Recycling Center- Large
Daycare (See Sec. 5.4.1)	Recycling Center- Small
Health Club	Research and Development Facility
Library	Research Lab
	Park

Sec. 4.5.3 Natural Resource Protection Overlay (NR) District

(a) Purpose and Authority:

The Natural Resource Protection Overlay District is intended to:

- Protect surface waters and wetlands from encroachment by development, and from sources of non-point pollution;
- Preserve natural lakeshore vegetative cover where reasonably possible consistent with the Vermont Shoreland Protection Act, and the protection of native plants and vegetative cover that provide lake shoreland wildlife habitat, to the greatest extent possible;
- Protect the functions and values of Burlington's wetlands;
- Protect and enhance water quality near public beaches and other water-based recreation areas from sources of non-point pollution;
- Preserve natural features and communities, geologic features and cultural sites for education and research.
- Provide opportunities for public access where feasible and appropriate;
- Facilitate connections and corridors for wildlife between areas of publicly protected sites.
- Ensure that development that occurs within a Flood Hazard Area conforms to the requirements of the National Flood Insurance Program.
- Minimize and prevent the loss of life and property, the disruption of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding and other flood related hazards; and

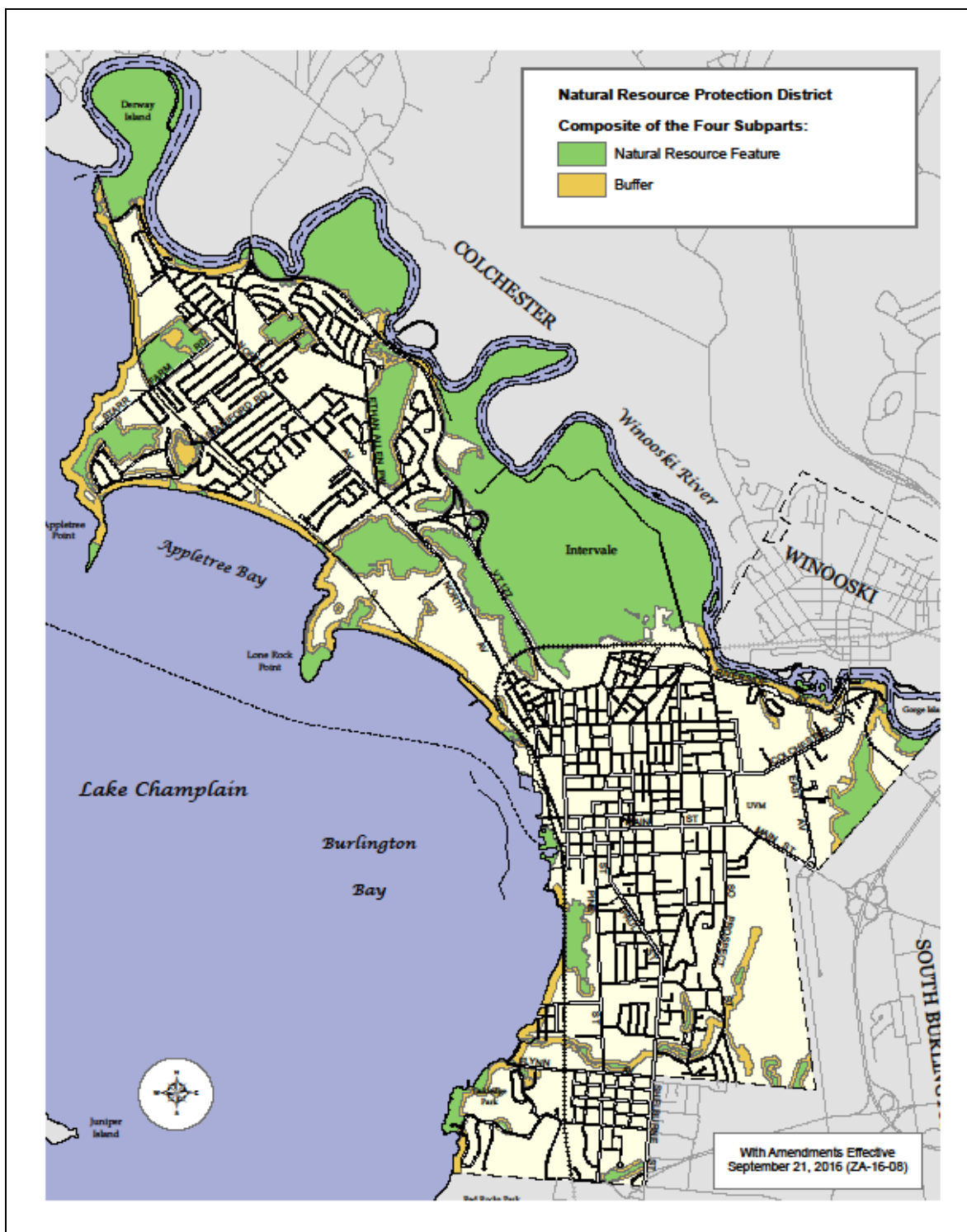
- Ensure that the design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood and loss or damage to life and property; and
- Manage all flood hazard areas designated pursuant to 10 V.S.A. § 753; and
- Make the City of Burlington and its residents eligible for federal flood insurance and other federal disaster recovery and hazard mitigation funds as may be available.

(b) Areas Affected

This overlay district consists of all areas delineated on Map 4.5.3-1-Natural Resources Protection Overlay (NR) District and is divided into four (4) subparts:

1. A **Riparian and Littoral Conservation Zone** which consists of all surface water and a corresponding upland buffer area, and specifically includes the following areas:
 - A. Uplands within 250 feet of the Lake Champlain lakeshore (measured at 95.5 feet above mean sea level per National Geodetic Vertical Datum 1929) with the exception of that portion of the shoreline between the northern extent of the Interim Development Area north of the former Moran Generating Station and the most westerly extent of Roundhouse Point described as the “Urban Waterfront” in the *2000 Open Space Protection Plan*;
 - B. Uplands within 250 feet horizontal distance measured from the top of the slope where the channel runs adjacent to a valley wall or high terrace, or top of the bank where the channel has access to its floodplain, of the Winooski River;
 - C. Uplands within 100 feet horizontal distance measured from the top of the slope where the channel runs adjacent to a valley wall or high terrace, or top of the bank, where the channel has access to its floodplain, of Engelsby Brook, Potash Brook or Centennial Brook; and,
 - D. Uplands within 50 feet horizontal distance measured from the top of the slope where the channel runs adjacent to a valley wall or high terrace, or top of the bank where the channel has access to its floodplain, of all other minor streams, or the mean shoreline of all other minor ponds;
2. A **Wetland Conservation Zone** which consists of wetlands and a corresponding upland buffer area for the following areas:
 - A. Uplands within 100 feet of all wetlands depicted in Map 4.5.3-1, Natural Resource Protection Overlay District except in cases where the State of Vermont has established a greater buffer zone width; and.
 - B. Uplands within 100 feet from all vernal pools.
3. A **Natural Areas Zone** which consists of all areas identified as Significant Natural Areas in the City’s *Open Space Protection Plan* and a corresponding buffer area of 100 feet; and,
4. A **Special Flood Hazard Area** which consists of all areas in the City of Burlington, Vermont identified as special flood hazard areas in and on the most current flood insurance studies and maps of the Department of Homeland Security (DHS), Federal

Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), as provided by the Secretary of the Agency of Natural Resources pursuant to 10 V.S.A. § 753, which are hereby adopted by reference and declared to be part of these regulations.



Map 4.5.3-1: Natural Resource Overlay District

(c) District Specific Regulations: Riparian and Littoral Conservation Zone:**1. Permitted Uses:**

Except where otherwise noted herein, only the following uses are permitted within the Riparian and Littoral Conservation Zone and its associated buffer subject to the requirements and limitations set forth below under subpart 4.

- A. Normal maintenance of existing lawns and maintained grounds including mowing, trimming of vegetation and the removal of dead or diseased vegetation around a residence, decorative landscaping and planting, vegetable and flower gardens, and the repair of existing private landscaping structures such as walkways and walls;
- B. “Accepted agricultural and silvicultural practices” as defined under 24 VSA Ch 117;
- C. Normal maintenance of constructed wetlands and stormwater systems, provided that naturally occurring wetlands are not disturbed in conjunction with the maintenance;
- D. Normal maintenance of existing docks, roads, rail lines, bridges, and culverts provided that disturbance to any shoreland is minimized in conjunction with such maintenance;
- E. Selective cutting of less than 25 percent of the trees six inches or more in diameter at breast height over any 10 year cycle; and,
- F. Recreational and educational activities such as hiking, walking, fishing, nature study, and bird watching and associated boardwalks and unimproved trails.

2. Prohibited Uses:

Except where noted herein, the following uses shall be prohibited within the Riparian and Littoral Conservation Zone and its associated buffer.

- A. The deposition or introduction of organic and inorganic chemicals, including herbicides and pesticides, except when the application of pesticides is reviewed and approved by the BCB and DRB, and performed by an applicator certified by the Vermont Department of Agriculture for the sole purpose of controlling invasive species and subject to the requirements of the City’s pesticide application ordinance (Burlington Code of Ordinances, Chapter 17, Section 9); and,
- B. The off-road use of any motorized vehicles including ATVs or dirt bikes (the temporary use of motorized vehicles used to construct and maintain permitted or regulated activities are specifically exempted from this prohibition);

3. Regulated Uses:

Except where otherwise noted herein, all uses permitted or conditionally permitted in the respective underlying zoning district, including any construction of buildings or other structures, and roads, parking areas or any other impervious surface, may be approved only within the Riparian and Littoral Conservation Zone and its associated

buffer after review and approval pursuant to the requirements and limitations below under Subpart 4.

4. Requirements

1. Any land disturbing activities (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) shall include a stormwater management, erosion prevention and sediment control plan pursuant to the requirements of Sec 5.5.3 to be reviewed by the conservation board and approved by the city engineer.

In making determinations and decisions required herein, the city engineer shall consider the requirements of the most recent State of Vermont Stormwater Management Rules and Guidance document. The city engineer shall require the best practicable means be used to manage stormwater, prevent erosion, and control sedimentation. The city engineer is hereby authorized to develop performance standards to ensure conformance with these state stormwater management rules.

For properties with frontage along Lake Champlain or the Winooski River, development that includes 400 square feet or more of new or redeveloped lot coverage shall establish a low-mow zone along the shoreline. A low-mow zone is a new or existing vegetated area that is not mowed more than once per year and allows vegetation to grow and mature. (Refer to Shoreland Best Management Practices established by Vermont Department of Environmental Conservation.). A low-mow zone shall be at least 15 ft. wide as measured inland from the 100 ft. elevation and shall be of a size equivalent to, or greater than, the new or redeveloped lot coverage, except that in no event shall a low-mow zone be required to extend more than 50 ft. wide as measured inland from the 100 ft. elevation or extend along more than 80% of a property's shoreline frontage.

For properties with frontage along Lake Champlain or the Winooski River, development shall be located no closer to the shoreline than existing development wherever reasonably possible.

2. Agricultural and silvicultural activities shall follow Best Management Practices for the Protection of Water Quality;
3. Installation of any seawalls, rip-rap or other shoreland retention structures shall be submitted for review by the conservation board who shall consult with the city engineer prior to issuance of a recommendation to the DRB; and,
4. No new stormwater outfall shall directly discharge into any surface water without approval and implementation of a stormwater management plan approved by the city engineer.

(d) District Specific Regulations: Wetland Conservation Zone:

1. Additional Application Requirements

The following information shall be submitted in addition to the applicable requirements of Article 3 for any development involving a wetland or wetland buffer zone:

- A. Boundary Determination: The boundaries of a wetland shall be determined in the field by a qualified professional with expertise in wetland delineation and surveyed by a licensed land surveyor or other qualified individual. The boundary between wetland and upland shall be delineated by the methodology set forth in the Vermont Wetland Rules. The identification and delineation of wetlands for a proposed project must be performed within a five-year period prior to submission and acceptance of a complete zoning application;
- B. A report addressing the project's impact on the wetland functions and values, and the measures that the applicant has incorporated into the project to avoid and minimize wetland impacts shall be prepared by a qualified professional with expertise in wetland delineation and evaluation;
- C. A site plan for a project that will impact a wetland or buffer zone shall include delineated wetland boundaries, buffer zone boundaries, erosion control measures, and all components of the proposed project, including, but not limited to all structures, driveways, parking areas, lawns, utilities, and the overall footprint of the construction area/zone of disturbance; and,
- D. As part of their application, applicants must submit a complete stormwater management, erosion prevention and sediment control plan pursuant to the requirements of Sec 5.5.3, and successfully demonstrate how the project will prevent adverse impacts to surface water and groundwater quality before, during, or after construction. At a minimum, an applicant should demonstrate how a project will meet the standards outlined in the latest edition of the Vermont Soil Erosion Handbook.

2. Permitted Uses:

Except where otherwise noted herein, only the following uses are permitted within a wetland and its buffer zone subject to the requirements and limitations set forth below under Subpart 6.

- A. Normal maintenance of existing lawns and maintained grounds including mowing, trimming of vegetation and the removal of dead or diseased vegetation around a residence, decorative landscaping and planting, vegetable and flower gardens, and the repair of existing private landscaping structures such as walkways and walls;
- B. "Accepted agricultural and silvicultural practices" as defined under 24 VSA Ch 117.
- C. Normal maintenance of constructed wetlands and stormwater systems, provided that naturally occurring wetlands are not disturbed in conjunction with the maintenance;
- D. Normal maintenance of existing roads, rail lines, bridges, and culverts provided that disturbance to naturally occurring wetlands and shorelands is minimized in conjunction with such maintenance;
- E. Selective cutting of less than 25 percent of the trees six inches or more in diameter at breast height over any 10 year cycle; and,

- F. Recreational and educational activities such as fishing, walking, hiking, nature study, and bird watching.

3. Prohibited Uses:

Except where noted herein, the following uses shall be prohibited within a wetland and its buffer zone.

- A. The deposition or introduction of organic and inorganic chemicals, including pesticides, except when the application of pesticides is reviewed and approved by the BCB and DRB, and performed by an applicator certified by the Vermont Department of Agriculture for the sole purpose of controlling invasive species and subject to the requirements of the City's pesticide application ordinance (Burlington Code of Ordinances, Chapter 17, Section 9); and,
- B. The off-road use of any motorized vehicles including ATVs or dirt bikes (the temporary use of motorized construction vehicles used to construct permitted or regulated activities in the wetland are specifically exempted from this prohibition) ;

4. Regulated Uses:

Except where noted herein, all uses permitted or conditionally permitted in the respective underlying zoning district, including the list of activities below, may be approved within a wetland and its buffer zone after review and approval pursuant to the requirements and limitations set forth below under Subpart 6 below.

- A. The construction of buildings or other structures, and roads, parking areas or other impervious surface;
- B. Any form of drainage, dredging, excavation, or removal of material either directly or indirectly;
- C. Alteration or modification of natural drainage patterns, natural features and contours;
- D. Installation of docks, rip-rap or other shoreline stabilization features;
- E. Installation of utility poles or utility service lines, underground pipes or cable conduits, and wells;
- F. Cutting of greater than 25 percent of the trees six inches or more in diameter at breast height over any 10 year cycle;
- G. Construction, expansion or placement of any structure;
- H. Construction or expansion of roads, rail lines parking areas, trails, and sidewalks;
- I. Introduction of any form of pollution, including but not limited to the installation of a septic tank, the running of a sewer outfall, or the discharge of sewage treatment effluent or other liquid wastes into or so as to drain into a wetland;
- J. The construction of a stormwater outfall as part of a stormwater management plan approved by the city engineer. In making determinations and decisions required herein, the city engineer shall consider the requirements of the most recent State of Vermont Stormwater Management Rules and Guidance document. The city

engineer shall require the best practicable means be used to manage stormwater and prevent erosion and control sediment and the city engineer is hereby authorized to develop performance standards to ensure conformance with these state stormwater management rules; and,

- K. Application of pesticides performed by an applicator certified by the Vermont Department of Agriculture for the sole purpose of controlling invasive species and subject to the requirements of the City's pesticide application ordinance (Burlington Code of Ordinances, Chapter 17, Section 9). In no other cases shall pesticides be applied.

5. Prohibited activities in a vernal pool and buffer zone:

Except where noted herein, the following uses shall be prohibited within a vernal pool and its respective buffer.

- A. Any activities which disturb the area within 100 feet of a vernal pool, including, but not limited to timber harvesting, disturbance of the understory vegetation, pesticide or herbicide application, the erection of fences or other barriers to amphibian dispersal, barriers and any other type of human activities that disturb the vegetation or water quality in the pool and buffer.

6. Criteria for Review

In granting, denying, or conditioning any permit involving a wetland, vernal pool or respective buffer zone, the DRB, in consultation with the conservation board, will consider the project's impact on the functions and values of the wetland, and the measures that the applicant has incorporated into the project to avoid and minimize impacts. The DRB shall only approve a project having an impact on a wetland or wetland buffer zone if an applicant can demonstrate that any adverse impact is de minimus on the significant functions and values of the wetland including:

- A. Water storage for floodwater and stormwater;
- B. Erosion and sedimentation control through binding and stabilizing the soil or shoreline;
- C. Surface water and groundwater protection, including sediment and toxicant retention, nutrient retention and transformation, and groundwater discharge and recharge;
- D. Fisheries habitat;
- E. Wildlife habitat;
- F. Examples of natural community types that are exemplary, rare, or make an important contribution to the natural heritage of Burlington and Vermont;
- G. Habitat for rare, threatened and endangered species;
- H. Education and research in natural sciences;
- I. Recreational and economic benefits; and,
- J. Open space and aesthetics.

In addition, the review of a project having involving a wetland or wetland buffer zone shall also be subject to the following requirements and limitations:

- K. Any land disturbing activities (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) shall include a stormwater management, erosion prevention and sediment control plan pursuant to the requirements of Sec 5.5.3 to be reviewed by the conservation board and approved by the city engineer;
- L. No new stormwater outfall shall directly discharge into surface water without approval and implementation of a stormwater management plan approved by the city engineer;
- M. No installation of docks, rip-rap or other shoreline stabilization features shall be installed without review approval by the city engineer;
- N. Agricultural and silvicultural activities shall follow Best Management Practices for the Protection of Water Quality; and,
- O. Stormwater management, erosion, and sedimentation control plans shall be submitted for review by the conservation board who shall consult with the development review board and city engineer prior to issuance of a recommendation to the city engineer who shall render a final decision on such plans.

In making determinations and decisions required herein, the city engineer shall consider the requirements of the most recent State of Vermont Stormwater Management Rules and Guidance document. The city engineer shall require the best practicable means be used to manage stormwater and control erosion and sedimentation and the city engineer is hereby authorized to develop performance standards to ensure conformance with these state stormwater management rules.

(e) District Specific Regulations: Natural Areas Zone:

1. Additional Application Requirements

The following information shall be submitted in addition to the applicable requirements of Article 3 for any development involving a natural area or associated buffer zone:

- A. The boundaries of a Natural Area shall be determined in the field by a qualified professional field naturalist with expertise in feature delineation and surveyed by a licensed land surveyor or other qualified individual. The identification and delineation must be performed within a five-year period prior to submission and acceptance of a complete zoning application;
- B. A report shall be prepared addressing the proposed project's impact on the natural areas functions and values, and the measures that the applicant has incorporated into the project to avoid and minimize impacts; and,
- C. A site plan that shall include delineated Natural Area boundaries and the associated buffer zone with respect to the overall footprint of the construction area/zone of disturbance.

2. Permitted Uses:

Except where otherwise noted herein, only the following uses are permitted within a natural area and its buffer zone subject to the requirements and limitations set forth below under subpart 5.

- A. Normal maintenance of constructed wetlands and stormwater systems, provided that naturally occurring wetlands are not disturbed in conjunction with the maintenance;
- B. Normal maintenance of existing roads, bridges, and culverts provided that disturbance to naturally occurring wetlands and shorelands is minimized in conjunction with such maintenance;
- C. Selective cutting of less than 25 percent of the trees six inches or more in diameter at breast height over any 10 year cycle; and,
- D. Recreational and educational activities such as fishing, walking, hiking, nature study, and bird watching.

3. Prohibited Uses:

Except where noted herein, the following uses shall be prohibited within the Natural Area and its associated buffer.

- A. The deposition or introduction of organic and inorganic chemicals, including pesticides, except when the application of pesticides is reviewed and approved by the BCB and DRB, and performed by an applicator certified by the Vermont Department of Agriculture for the sole purpose of controlling invasive species and subject to the requirements of the City's pesticide application ordinance (Burlington Code of Ordinances, Chapter 17, Section 9); and,
- B. The off-road use of any motorized vehicles including ATVs or dirt bikes (the temporary use of motorized construction vehicles used to construct permitted or regulated activities in the wetland are specifically exempted from this prohibition) ;

4. Regulated Uses:

Except where noted herein, all uses permitted or conditionally permitted in the respective underlying zoning district, including the list of activities below, may be approved after review and approval pursuant to the requirements and limitations set forth below under subpart 5.

- A. The construction of buildings or other structures, and roads, parking areas and any other impervious surfaces;
- B. Land disturbing activities (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) not associated with a permitted or conditionally permitted use. Land disturbing activities which expose 5,000 or more square feet of soil (i.e., vegetation has been removed, or the landscape has been graded or filled resulting in bare soil surfaces) are prohibited except where a stormwater management, erosion prevention and sediment control plan has been reviewed by the Burlington Conservation Board and approved by

the city engineer;

- C. Any form of drainage, dredging, excavation, or removal of material either directly or indirectly;
- D. Alteration or modification of natural drainage patterns, natural features and contours;
- E. Installation of docks, rip-rap or other shoreline stabilization features;
- F. Installation of utility poles or utility service lines, underground pipes or cable conduits, and wells;
- G. Cutting of greater than 25 percent of the trees six inches or more in diameter at breast height over any 10 year cycle;
- H. Construction, expansion or placement of any structure;
- I. Construction or expansion of existing roads, parking areas, trails, and sidewalks;
- J. Introduction of any form of pollution, including but not limited to the installation of a septic tank, the running of a sewer outfall, or the discharge of sewage treatment effluent or other liquid wastes into or so as to drain into a wetland;
- K. The construction of a stormwater outfall as part of a stormwater management plan approved by the city engineer. In making determinations and decisions required herein, the city engineer shall consider the requirements of the most recent State of Vermont Stormwater Management Rules and Guidance document. The city engineer shall require the best practicable means be used to manage stormwater and prevent erosion and control sediment and the city engineer is hereby authorized to develop performance standards to ensure conformance with these state stormwater management rules;
- L. Application of pesticides performed by an applicator certified by the Vermont Department of Agriculture for the sole purpose of controlling invasive species and subject to the requirements of the City's pesticide application ordinance (Burlington Code of Ordinances, Chapter 17, Section 9). In no other cases shall pesticides be applied; and,
- M. Agricultural and silvicultural activities following Best Management Practices for the Protection of Water Quality including but not limited to housing of livestock, manure storage, pasturing livestock, growing crops, and compost storage, but excluding residential backyard compost storage.

5. Criteria for Review

In granting, denying, or conditioning any permit, the DRB, in consultation with the Conservation Board, will consider the significant functions and values of the natural area, the project's impact on the significant functions and values, and the measures that the applicant has incorporated into the project to avoid and minimize impacts. The DRB shall only approve a project having an impact on a natural area or its associated buffer zone if an applicant can demonstrate that any adverse impact is de minimus on the significant functions and values of the natural area including:

- A. Water storage for floodwater and stormwater;
- B. Erosion and sedimentation control through binding and stabilizing the soil or shoreline;
- C. Surface water and groundwater protection, including sediment and toxicant retention, nutrient retention and transformation, and groundwater discharge and recharge;
- D. Fisheries habitat;
- E. Wildlife habitat;
- F. Examples of natural community types that are exemplary, rare, or make an important contribution to the natural heritage of Burlington and Vermont;
- G. Habitat for rare, threatened and endangered species;
- H. Education and research in natural sciences;
- I. Recreational and economic benefits; and,
- J. Open space and aesthetics.

(f) District Specific Regulations: Special Flood Hazard Area:

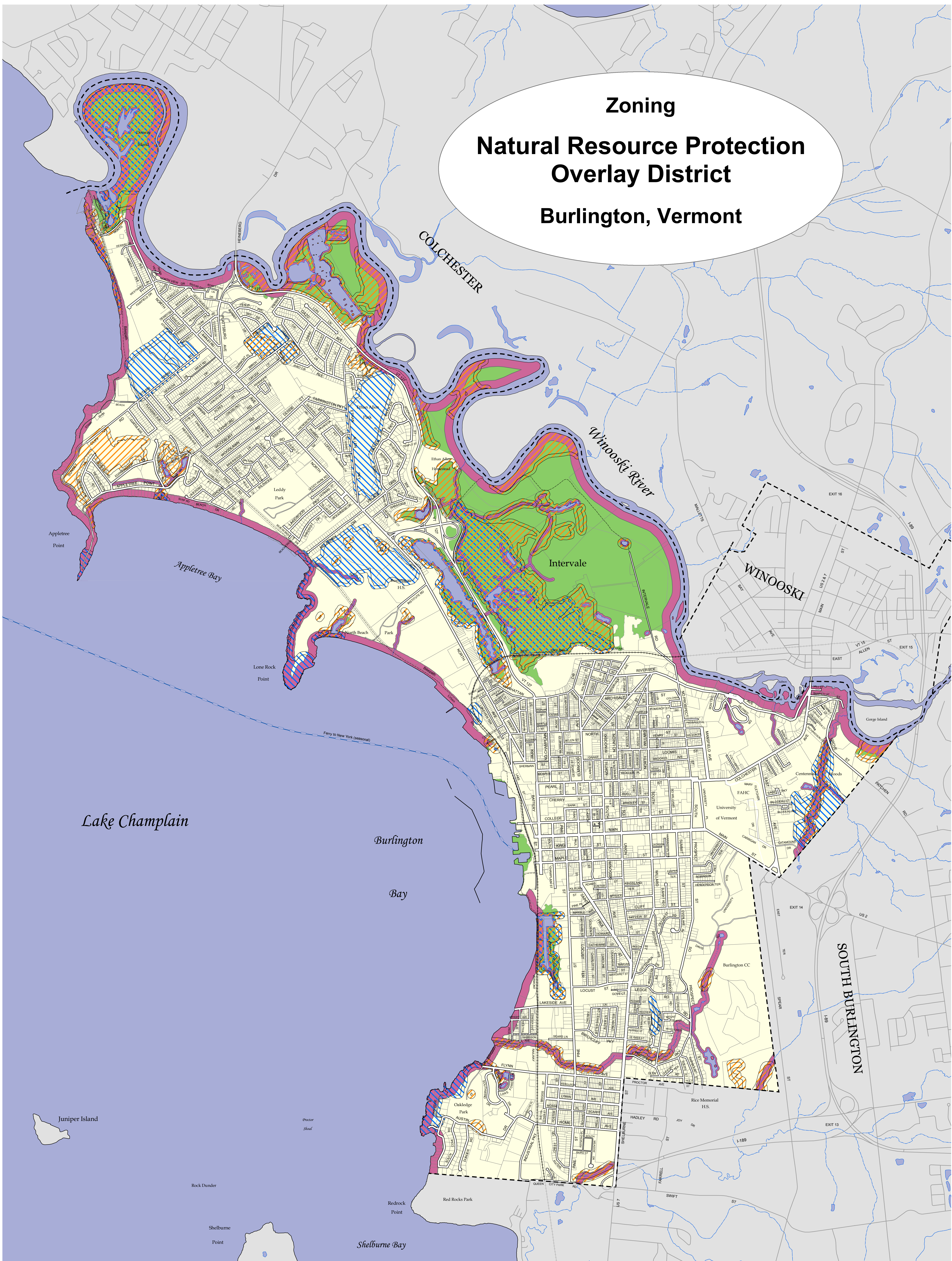
1. Additional Application Requirements

The following information shall be submitted in addition to the applicable requirements of Article 3 for any development proposed within a Special Flood Hazard Area:

- A. Base flood elevation data for all subdivision proposals and other proposed new developments containing more than fifty (50) lots or covering more than five (5) acres;
- B. The elevation, in relation to mean sea level, of the lowest floor, including basement, of all new construction or substantial improvements of structures;
- C. Confirmation if such structures contain a basement; and
- D. The elevation, in relation to mean sea level, to which any structure has been flood proofed.
- E. A Vermont Agency of Natural Resources Project Review Sheet for the proposal should be filled out. The Project Review Sheet should identify all State and Federal agencies from which permit approval is required for the proposal, and shall be filed as a required attachment to the City permit application. The identified permits, or letters indicating that such permits are not required, shall be submitted to the Administrative Officer and attached to the permit application before work can begin.

In addition, the applicant may be required to provide any of the following information deemed necessary for determining the suitability of the particular site for the proposed use:

- F. Plans in triplicate, drawn to scale, showing the location, dimensions, contours and elevation of the lot; the size and location on the site of existing and/or proposed



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**Overlay Districts Effective January 30, 2008
With Amendments Effective September 21, 2016 (ZA-16-08)**

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Legend

- Wetland Conservation
- Natural Areas
- Riparian and Littoral Conservation Zone
- Special Flood Hazard Area
- Lake, River or Pond
- Stream

City of Burlington GIS
<http://www.burlingtonvt.gov/>

Map Date: 2/27/2018
MXD Date: 12/27/2016