

ABOUT THE SOUTH END

The ever-evolving South End: a scrapbook

The South End has evolved from **NINETEENTH CENTURY INDUSTRIAL HUB**...

to a **HIGH VACANCY PLACE**...

to a **CREATIVE SPACE**...a place where "stuff gets made" and where innovations happen.

The South End emerged as Burlington's industrial hub beginning in the mid-1850s, with a mix of heavy-duty industrial and manufacturing activities. The railroad and barge canal supported the lumber industry starting in 1849, and the Kilbern & Gates furniture manufactory opened twenty years later. A hundred years ago, along Pine Street, Burlington Coal produced gas for cooking and heating, generating the contaminants we're still managing today at the Barge Canal Site. At Howard and Pine, the E.B. and A.C. Whiting Brush Fibre Co. was expanding its factory complex. On Lakeside Ave, the Queen City Cotton Company operated a mill—and the state's first factory housing complex—in what would become the Lakeside neighborhood. Other residential neighborhoods were beginning to emerge as well, particularly east of Pine Street.

The Queen City Cotton Mill and its employees, looking west down Lakeside, circa 1900.



From *Mills & Factories—Lakeside Avenue Manufacturing*, by Kyle Obenauer. Learn more at: <http://www.uvm.edu/~hp206/2013/pages/obenauer/index.html>

Pine Street between Kilburn and Pine Place, looking south, circa 1930, with what is thought to be the E.S. Adsit Coal Company coal yard on the right.



Photo by Louis L. McAllister; from "Depression Era Streetscapes: South End - St. Paul Street, Pine Street, & Lakeside Development," by Caitlin Meives. Learn more at: <http://www.uvm.edu/~hp206/2006/Meives/pine7.html>

Lakeside Avenue at Central Avenue, looking east, 1945. The Queen City Cotton mill, then occupied by Bell Aircraft, can be seen on the left. The homes on the right were built at the turn of the 20th century. The neighborhood also included a barbershop, grocery stores, a nursery, and a meeting hall.



Photo by Louis L. McAllister; from "Depression Era Streetscapes: South End - St. Paul Street, Pine Street, & Lakeside Development," by Caitlin Meives. Learn more at: <http://www.uvm.edu/~hp206/2006/Meives/lakeside1.html>



By the 1950s, the South End was still hard at work but many of its buildings had shifted to new owners and businesses, while new buildings and businesses had become part of the landscape. The Vermont Structural Steel Corporation was at the peak of its success, employing 150 people from its Flynn Street location. On Lakeside Avenue, parts of the old Queen City Mill buildings had been retooled four times over—first as a storehouse for E.B. & A.C. Whiting company, then for government production of wartime materials, then for Bell Aircraft, and then to produce weapons systems for General Electric. Also on Lakeside Avenue, Blodgett Oven produced commercial ovens from their still-relatively-new factory.

Blodgett Oven circa 1948, shortly after construction of their South End factory. Like many manufacturing buildings in the South End, it will soon see reuse.

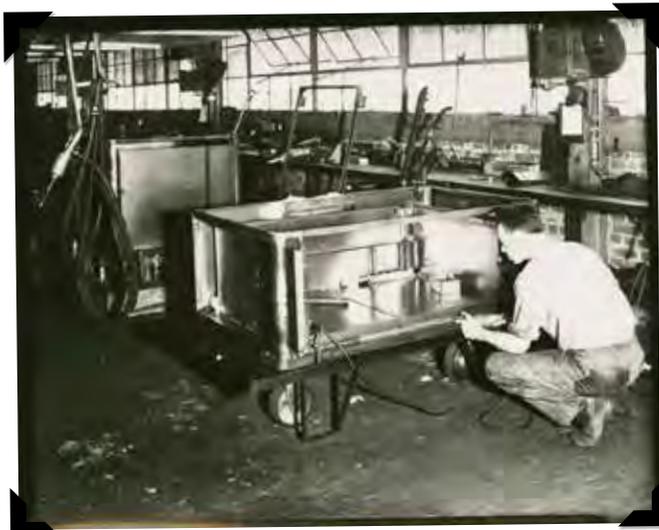


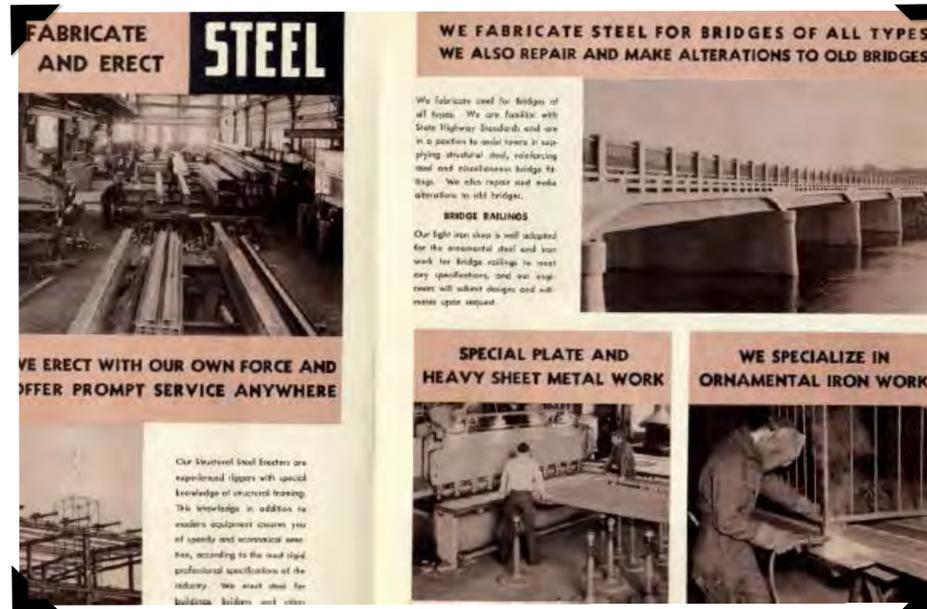
Photo: UVM's Center for Digital Initiatives

Pine Street, looking northwest, circa 1953. The coal gasification plant is the round building on the left side of the Pine Street and the E.B. and A.C. Whiting brush complex can be seen on the right.



From Mills & Factories—From Cereal to Can Openers: Historic Industries along Pine Street, by Karyn Norwood. Learn more at: <http://www.uvm.edu/~hp206/2013/pages/norwood/index.htm>

Vermont Structural Steel brochure.



From Mills & Factories—Flynn Avenue Factories—From Film to Chocolate, by Frances Gubler. Learn more at: <http://www.uvm.edu/~hp206/2013/pages/gubler/index.html>

Want to learn more about the South End's history?

There are great resources out there! Here are a few that this section draws from:

- Through **University of Vermont's Historic Preservation Program**, graduate students led by Professor Thomas Visser have researched Burlington's history and posted their findings to the web. Resources created through this program with particular relevance to the South End include:
 - > **Mills & Factories: Manufacturing Heritage Sites in Burlington and Winooski, Vermont**, available at: <http://www.uvm.edu/~hp206/2013/index.html>
 - > **Flynn Avenue Factories: From Film to Chocolate**, by Frances Gubler. <http://www.uvm.edu/~hp206/2013/pages/gubler/index.html>
 - > **From Cereal to Can Openers: Historic Industries along Pine Street**, by Karyn Norwood. <http://www.uvm.edu/~hp206/2013/pages/norwood/index.htm>
 - > **Lakeside Avenue Manufacturing**, by Kyle Obenauer. <http://www.uvm.edu/~hp206/2013/pages/obenauer/index.html>
 - > **Depression Era Streetscapes - Burlington, Vermont: South of Pearl Street and Colchester Avenue**, available at: <http://www.uvm.edu/~hp206/2006/>
 - > **South End - St. Paul Street, Pine Street, & Lakeside Development**, by Caitlin Meives. <http://www.uvm.edu/~hp206/2006/Meives/bigmap.html>
- Other resources:
 - > **Sustainable Communities: Creating a durable local economy**, by Rhonda Phillips, Bruce F. Seifer, and Ed Antczak.
 - > **Architectural Historian Britta Tonn**, who helped lead the planBTV South End Guided Photography Tour, an exploration of the South End's rich industrial heritage.
 - > **University of Vermont's Center for Digital Initiatives**, available at: <http://cdi.uvm.edu/collections/index.xql>
 - > **The Landscape Change Program**, at <http://www.uvm.edu/landscape>.

But by the 1970s, the economy had changed again. Many of the South End's early 20th century buildings, along with newer one-story industrial and commercial structures along Pine Street, stood vacant as businesses in search of industrial space left for the suburbs, other regions, or other countries, where goods could be manufactured at lower cost.

Over the next several decades, the slow work of rebuilding the South End as a bustling economic hub would roll forward. The rise of the "New Economy," featuring growth in industries like technology, art and design, and small-scale artisanal and food manufacturing, would draw new businesses to the South End's commercial and industrial buildings.

With hard work and leadership from the Community & Economic Development Office (CEDO), the South End Arts and Business Asso-

ciation (SEABA) and countless entrepreneurs, makers, and artists, South End spaces would fill once again.

Today, the South End's buildings are being retooled to accommodate a new generation of businesses, and vacant space is increasingly hard to find. The old Queen City Cotton Mill houses the Innovation Center of Vermont, a "green" building that provides office space for a dozen businesses and non-profit organizations. Occupants of the Whiting Brush complex now include a coffee shop, SEABA headquarters, an arts event space / bar / restaurant, and dozens of artists' studios and workshops. Employees of Dealer.com enjoy a creatively re-used building as they make websites for clients around the country. And residential neighborhoods continue to thrive. As the world changes, the South End keeps evolving with it.

Modest one-story post-war buildings along Pine Street have been adapted for use by doggie daycare providers, frozen yogurt makers, tortilla purveyors, a commercial kitchen/café, and more.



Other buildings continue to be used for traditional light industrial activities.



Today, the South End is a place where people **WORK AND CREATE.**



Burlington-born Dealer.com is the South End's biggest employer, keeping 800 workers busy. Thousands of other jobs are provided by businesses big and small. In total, the South End's 472 businesses employ 6,300 people.



The Filing Cabinet Sculpture



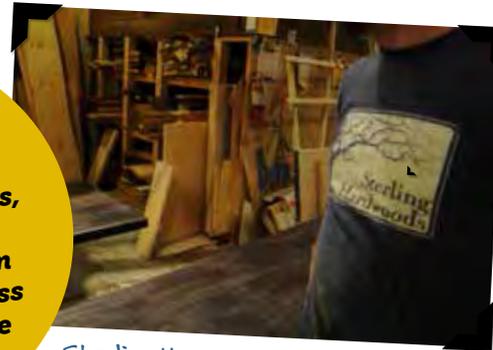
South End Kitchen

The planBTV South End Crawl invited community members to explore places of production, art and innovation across the neighborhood.



Businesses at 180 Flynn Ave.
Photo by Lee Krohn

From snowboards to sculptures, from coffee to can openers, from websites to woodworking, from green energy to glass blowing...that's the South End.



Sterling Hardwoods



Burton Snowboards

The South End is a place where people **LIVE.**

6,400 people live in the South End, from the Five Sisters neighborhood, to the Lakeside neighborhood, to Red Rocks, and beyond.



The South End is a place where people **EAT, DRINK, SHOP, GET FIT, AND COME TOGETHER.**



Speeder & Earl's Coffee



Citizens Cider



REV indoor cycling studio.
Photo by Lee Krohn



Vintage Inspired.
Photo by Lee Krohn



Conant Metal & Light



South End Art Hop

The South End is a place where people
WALK, BIKE, SWIM, AND PLAY.

The South End is a
PLACE OF INFRASTRUCTURE.



The lakefront



Parks



Waste water treatment facility



City streets



The Island Line Trail



The railyard



The beach

What's next for
the South End



Getting to know you... **BETTER.**

What's happening in the South End today?

planBTV South End began with an exploration of existing conditions that captured the lay-of-land related to:

- Land use
- Transportation
- Stormwater
- Brownfields
- Market conditions

Findings are documented in two reports: **The Burlington South End Market Study** (prepared by HR&A) and the **planBTV South End Phase 1 Existing Conditions Report** (prepared by VHB). These studies provided an important foundation for development of planBTV South End. Read highlights from these assessments—and additional info on transportation conditions—in the pages that follow...or read the full reports at www.planbtvsouthend.com.



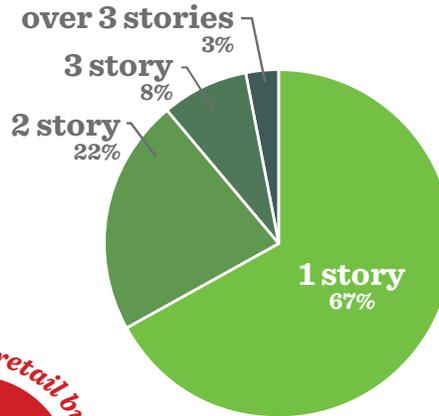
The planBTV South End Focus Area (the Enterprise Zone):

...includes

225 acres

2.6 million GSF
of built space

...is low density; 2/3 of buildings are 1-story tall



...is home to an eclectic mix of uses, including:



What is the Enterprise Zone?

Burlington's zoning code sets the rules for what kinds of development and what kinds of building uses are allowed where. For many years, the core of the South End—including much of Pine Street—has been part of the "Enterprise—Light Manufacturing Zone," often called the Enterprise Zone. This zoning district is intended for industrial and commercial uses. No housing is permitted within this zoning district, although adjacent residential areas contribute to its vitality, and several houses (e.g., along Batchelder Street and off Pine Street) have been "grandfathered in"—meaning they were around before the zoning district was established and owners can continue living there. Here's what Burlington's zoning code says about the purpose of the Enterprise Zone:

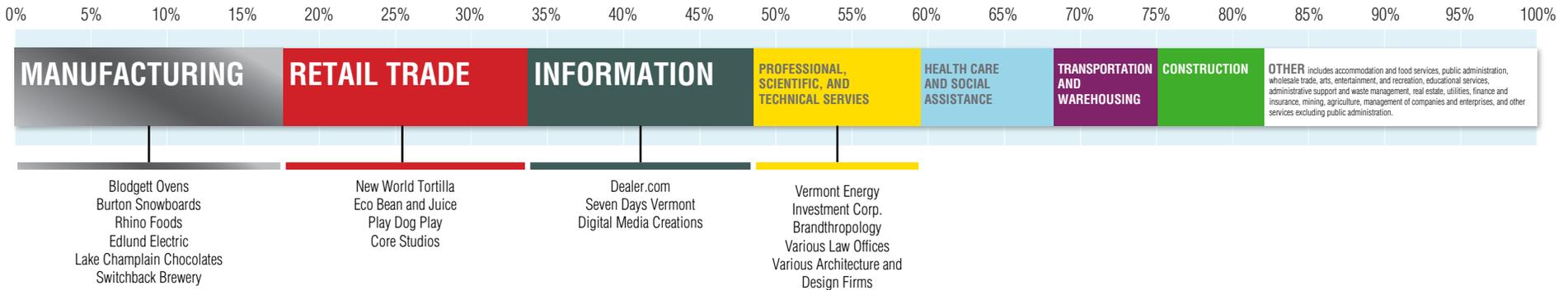
The Light Manufacturing (E-LM) district is the primary commercial/industrial center of Burlington, and is intended primarily to accommodate enterprises engaged in the manufacturing, processing, distribution, creating, repairing, renovating, painting, cleaning, or assembling of goods, merchandise, or equipment without potential conflicts from interspersed residential uses. Other accessory commercial uses are allowed to support a wide range of services and employment opportunities. This district is intended to ensure that sufficient land area is appropriately designated within the city to provide an adequate and diversified economic base that will facilitate high-density job creation and retention. This district is primarily intended to provide for industrial uses suitable for location in areas of proximity to residential development. Development is intended to respect interspersed historic industrial buildings, and reflect the industrial aesthetic of the district's past. Parking is intended to be hidden within, behind, or to the side of structures.

The South End is an important employment center for Burlington

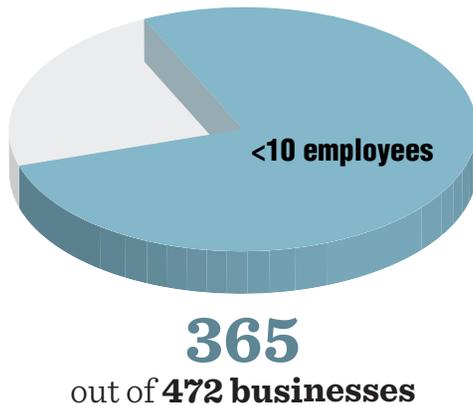
Home to **472 businesses** employing **6,300 people**

Almost half of jobs are in manufacturing, retail trade, & information

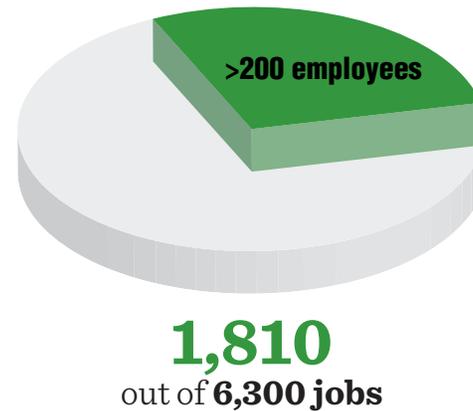
JOBS BY INDUSTRY SECTOR, 2014



Over 3/4 of businesses employ fewer than 10 people



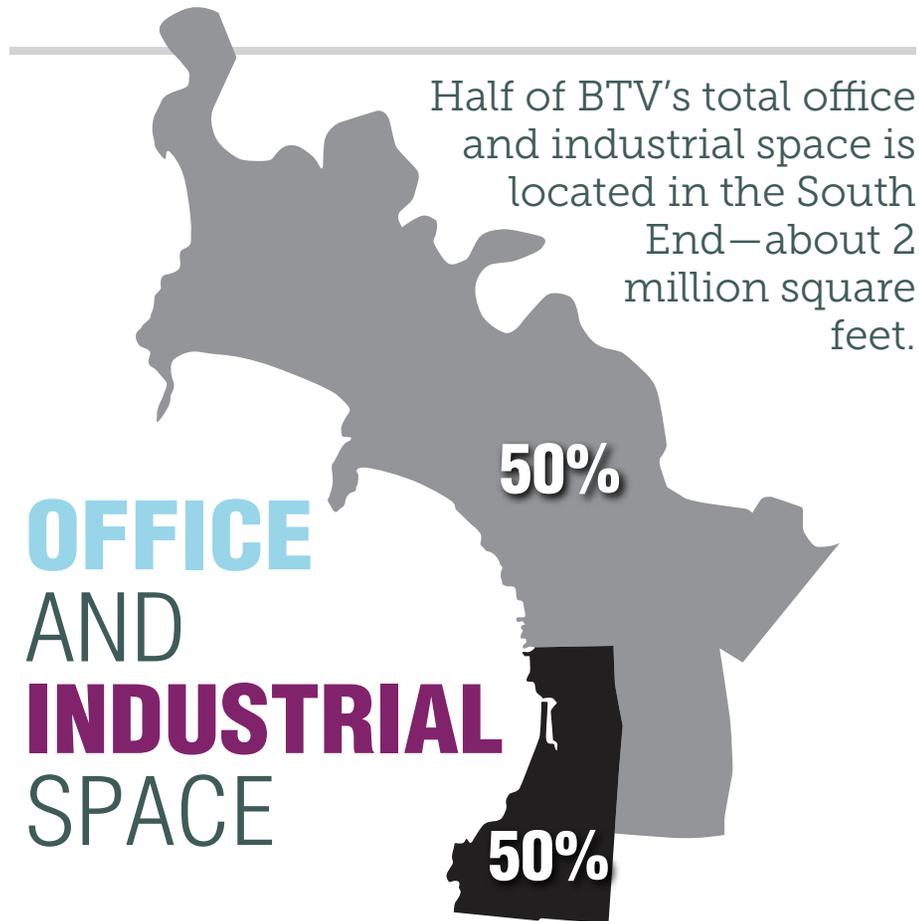
...but the 5 largest employers provide more than 25% of all jobs



Countywide, “New Economy” sectors grew 8%

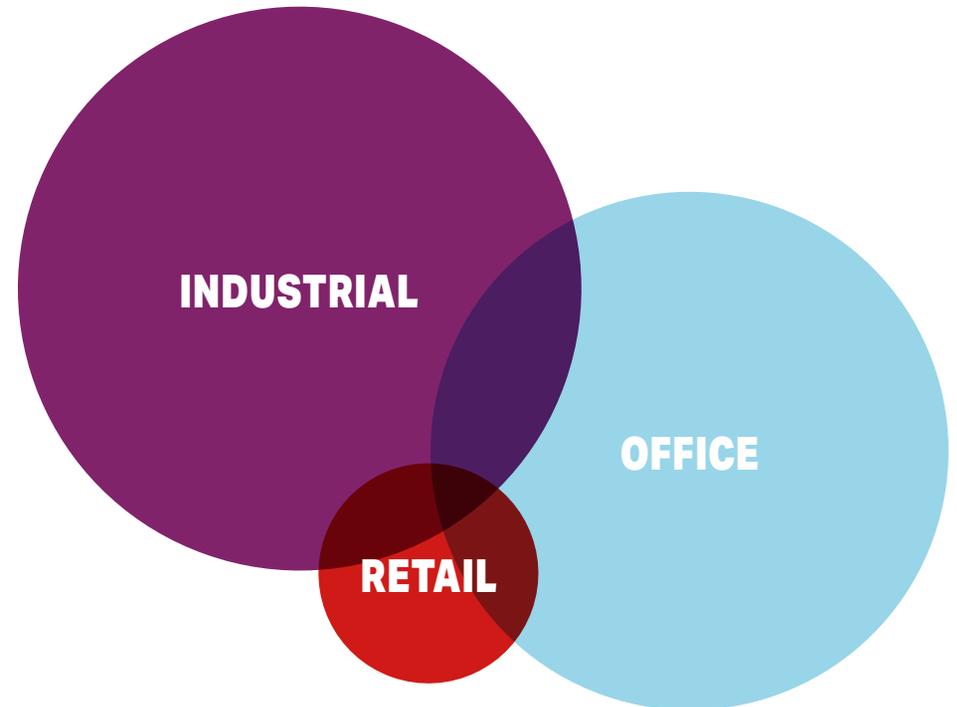
“New Economy” refers to industries like technology, arts & design, small-scale artisanal manufacturing, and food production.

The South End is an attractive location for companies seeking industrial and office space.



SOURCE: BURLINGTON SOUTH END MARKET STUDY, BY HR&A

Increasingly, South End buildings and businesses include a mix of industrial, office, and/or retail space.



Trends:

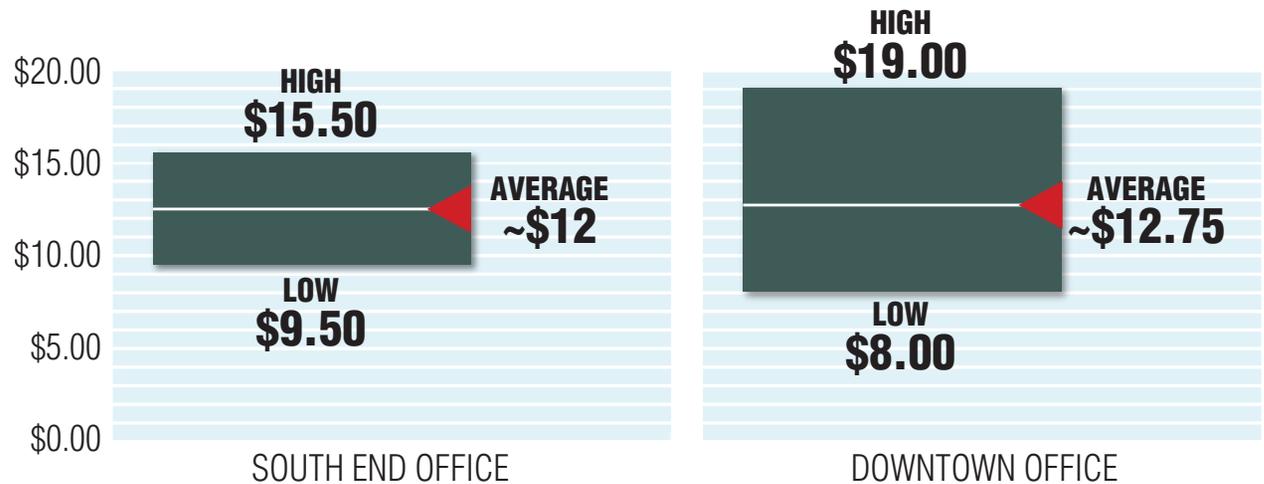
- Many old industrial buildings now house businesses that combine industrial AND consumer-facing operations (e.g., breweries with tap rooms, prototype facilities that offer public tours, some artist studios/galleries)
- Other old industrial buildings are attracting new businesses that require office, research and “maker” type space.

SOURCE: BURLINGTON SOUTH END MARKET STUDY, BY HR&A

Over time, the South End has become a more attractive place for businesses seeking office space and a less attractive place for businesses seeking traditional industrial space. As a result of rising rents caused by market demand, the South End is becoming increasingly unaffordable for traditional commercial-industrial business and small start-ups.

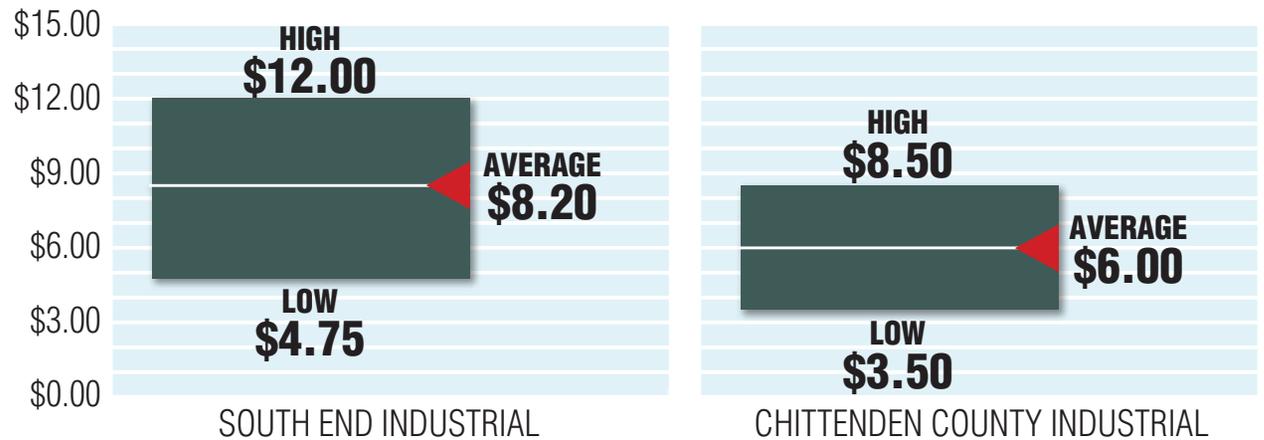
Average **office rents** in the South End are generally comparable to downtown.

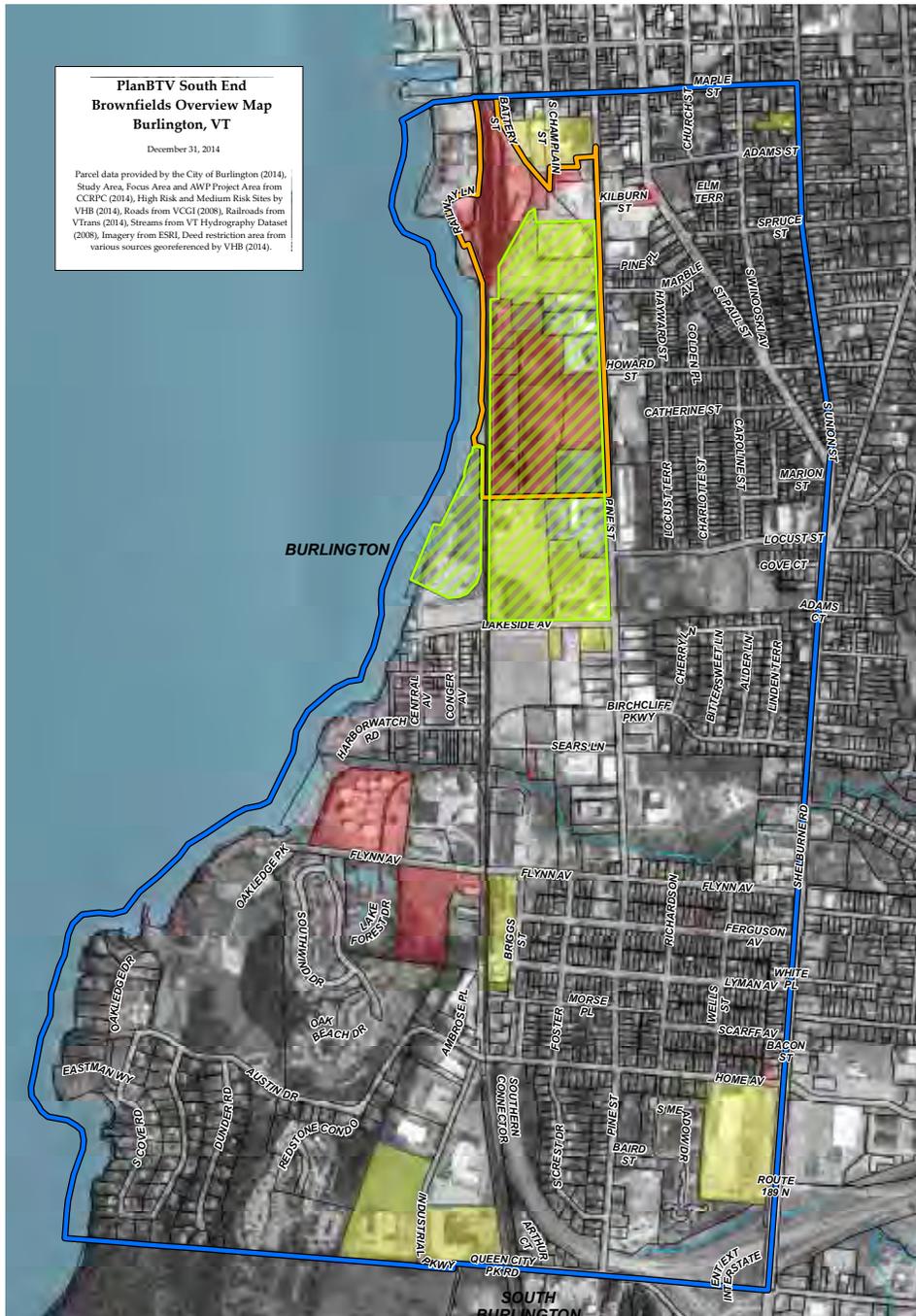
SOURCE: BURLINGTON SOUTH END MARKET STUDY, BY HR&A



Average **industrial rents** in the South End are higher than elsewhere in Chittenden County. This reflects the appeal of the South End to businesses that combine industrial with consumer-facing operations—and are therefore willing to pay higher rents for industrial space.

SOURCE: BURLINGTON SOUTH END MARKET STUDY, BY HR&A





**PlanBTV South End
Brownfields Overview Map
Burlington, VT**
December 31, 2014

Parcel data provided by the City of Burlington (2014), Study Area, Focus Area and AWP Project Area from CCRPC (2014), High Risk and Medium Risk Sites by VHB (2014), Roads from VCGI (2008), Railroads from VTTrans (2014), Streams from VT Hydrography Dataset (2008), Imagery from ESRI, Deed restriction area from various sources georeferenced by VHB (2014).

As a neighborhood that has seen many decades of industrial activity, the South End has a number of brownfields sites.

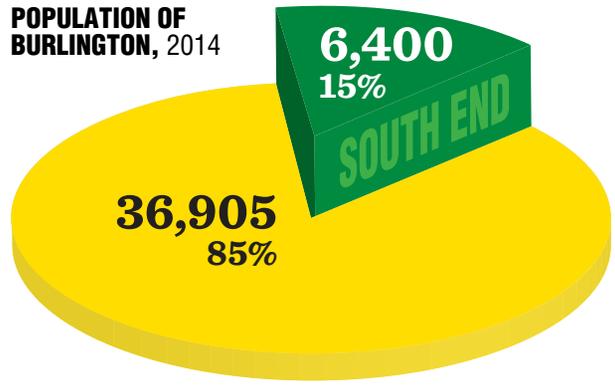
Brownfields are properties where future use may be impacted by real or perceived environmental contamination.

LEGEND

- planBTV South End Study Area
- AWP (Area-Wide Planning) Project Area*
- Barge Canal Deed Restriction Area
- High Risk Sites**
Those sites where there is a documented presence or likely presence of any hazardous substance or petroleum product which poses a threat of a future release to the environment. This risk category includes sites with on-going investigations, sites with data gaps identified by consultants VHB, and sites with regulatory restrictions on land use or on-site activities.
- Medium Risk Sites**
Those sites where a past release of hazardous substances or petroleum products has occurred, but the release and resulting contamination has been addressed to the satisfaction of the applicable regulatory authority. This risk category includes sites where hazardous substances have been allowed to remain in-place and may be subject to the implementation of required controls, such as deed restrictions, land use restrictions, activity use restrictions, or engineering controls.
- Parcel Boundary**
- River/Stream**
- Railroad Tracks**
- Waterbody**

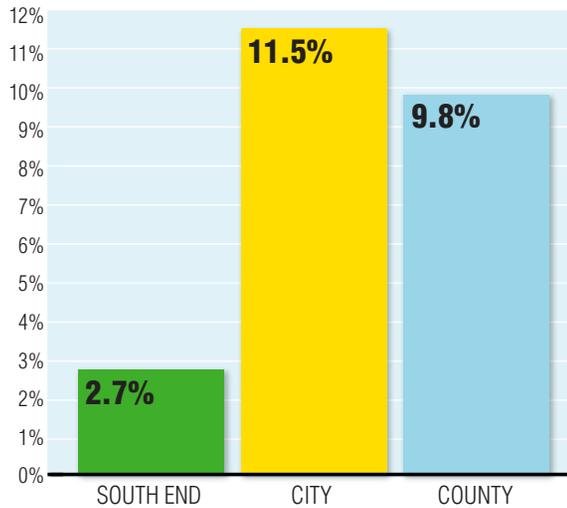
*Brownfields Area-Wide Planning is an EPA grant program which provides funding to conduct research, technical assistance and/or training that will result in an area-wide plan and implementation strategy for key brownfield sites, which will help inform the assessment, cleanup and reuse of brownfields properties and promote area-wide revitalization. Burlington's AWP funds are supporting the PlanBTV South efforts overall, and work in the area's brownfield specifically.

The South End is a desirable neighborhood to live in and near.



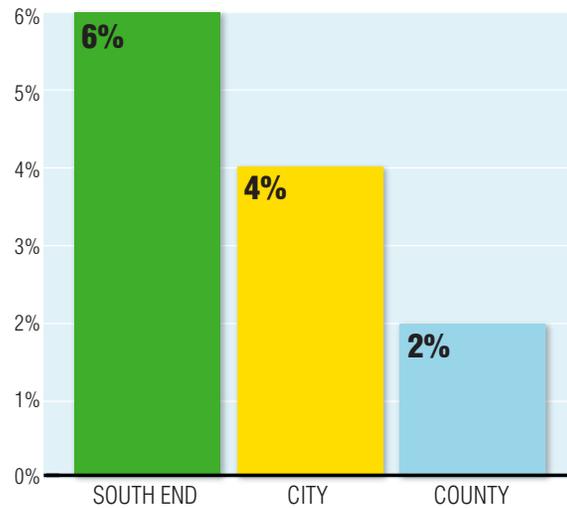
While the South End experienced slower overall population growth than either the city or county since 2000...

POPULATION CHANGE, 2000–2014



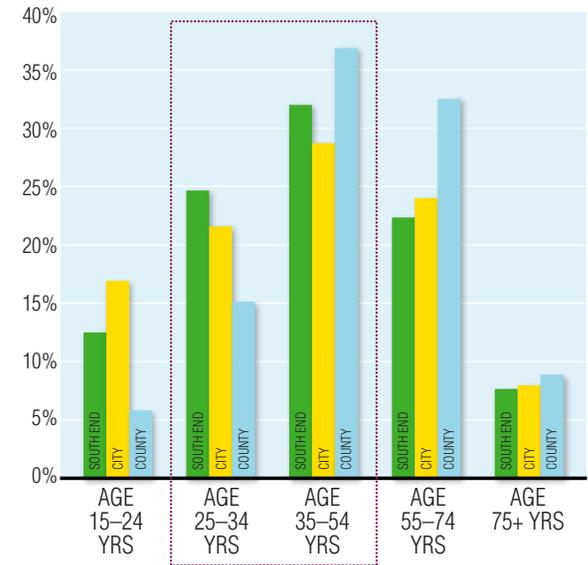
...it has seen a faster rate of growth among young professional households recently...

% CHANGE IN YOUNG (AGE 25–34) HOUSEHOLDS, 2010–2014



...and today has a larger share of young professionals and families.

DISTRIBUTION OF HOUSEHOLDS BY AGE OF HOUSEHOLDER, 2014



- Factors include:**
- Enterprise District prohibits residential uses
 - Existing residential areas are largely built-out

SOURCE FOR ALL DATA: BURLINGTON SOUTH END MARKET STUDY, BY HR&A

There is considerable unmet demand for housing citywide
—and a resulting affordability crisis.

SYMPTOMS

- Burlington's lack of housing supply in the face of considerable demand is driving up the cost of available housing.
- New housing that has been developed has largely been condominiums and townhomes at high price points, or subsidized affordable rental housing. Very little has been developed for households "in the middle" that do not meet income requirements for subsidized units but still cannot afford housing at higher price points.
- This lack of available housing is negatively impacting the city's ability to attract young professionals and companies seeking to hire young professionals, and is therefore compromising efforts to promote economic development.
- It's also creating traffic and parking demand impacts in areas like the South End, where jobs are being created but people have to drive to get to them.

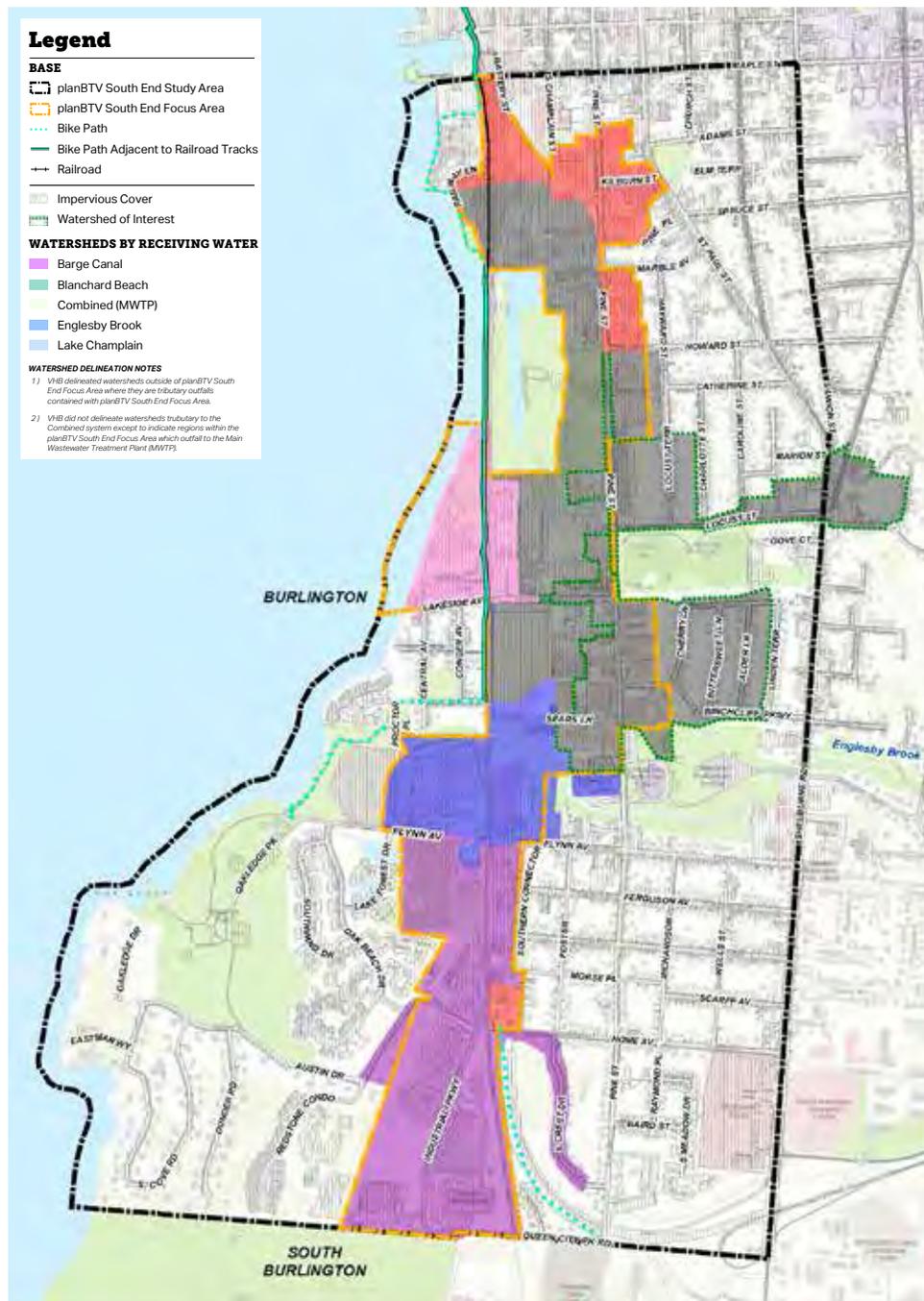
CAUSES

- There are relatively few suitable locations available to build new multifamily housing in the city.
- High fees and parking requirements, a lengthy and uncertain permitting process, affordable housing requirements and other development policies impose a suite of additional costs on new construction.

CURES

- Aligning market opportunities with specific neighborhoods and development sites.
- Addressing regulatory constraints and improving the use of existing tools to incentivize private investment.
- Linking the creation of new housing to broader economic development goals of job creation and innovation.

Countywide, **multifamily housing vacancy rates declined from 2.1% in 2009 to 0.9% in 2014.** Housing production has not met the need, and most new housing that has been built is located outside the city of Burlington.



SOURCE: CITY OF BURLINGTON

Impervious surfaces directly impact stormwater, water quality, and climate resilience.

A 1" storm event can generate **up to 27,000 gallons of stormwater runoff** per acre of impervious surface (like parking lots, drives, and roofs).

SOURCE: NYC DEP

Fifty-seven percent of the South End watershed area studied in the VHB Phase I Existing Conditions Report is covered by impervious surfaces.

That means that **up to 5 million gallons of stormwater runoff** has to be dealt with in these watersheds after a 1" storm—that's a lot of water!

A more climate-resilient Burlington will need to find creative ways to address issues like stormwater runoff and water quality. The South End is a great place to model green infrastructure and other proven approaches.

Impervious Cover Summary

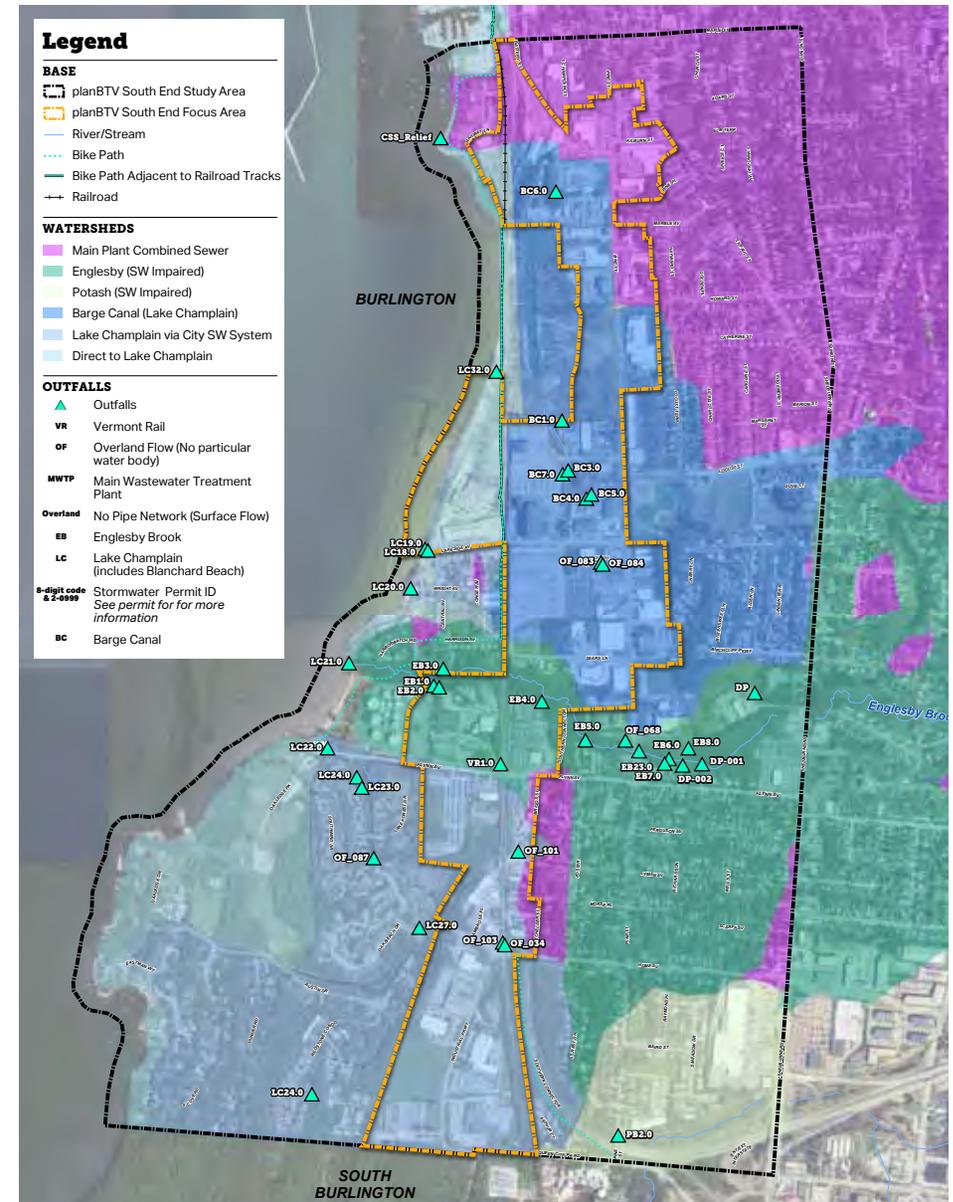
WATERSHEDS	TOTAL AREA (ACRES)	IMPERVIOUS AREA (ACRES)	PERCENT IMPERVIOUS
Barge Canal	148.2	81.7	55%
Blanchard Beach	84.7	40.8	48%
Combined	30.7	25.9	84%
Englesby Brook	37.4	21.9	58%
Lake Champlain	22.5	13.6	60%
Grand Total	323.6	183.7	57%

Stormwater issues affecting the Focus Area are related to runoff quantity, runoff quality, or both.

PRIMARY STORMWATER ISSUE	TYPICAL STORMWATER MANAGEMENT MEASURES TO ADDRESS GOAL
<p>Water Quality Treatment</p>	<p>Flow through practices like sand filters; bioretention or tree system filters with unrestricted underdrain; permeable pavements with unrestricted underdrain; downspout disconnection to vegetated area</p>
<p>Runoff Reduction</p>	<p>Infiltration type practices including subsurface infiltration, bioretention, tree system filters or permeable pavements without underdrain, increasing urban tree canopy coverage over impervious surface, residential downspout disconnection, removal of impervious surface, stormwater capture for reuse; green roofs</p>
<p>Peak Rate Control</p>	<p>Any of the runoff reduction methods, as well as, subsurface storage in tanks or pipes with slow release; bioretention or permeable pavement systems with restricted underdrain; green roofs or blue roofs.</p>

SOURCE: PLANBTV SOUTH END PHASE 1 EXISTING CONDITIONS REPORT, BY VHB

Watersheds by receiving water

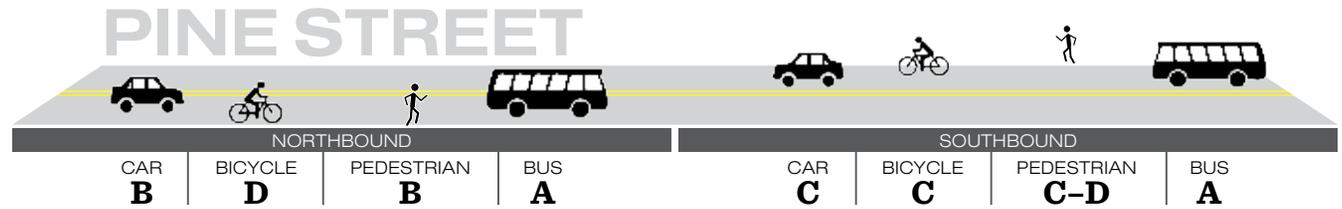


SOURCE: CITY OF BURLINGTON

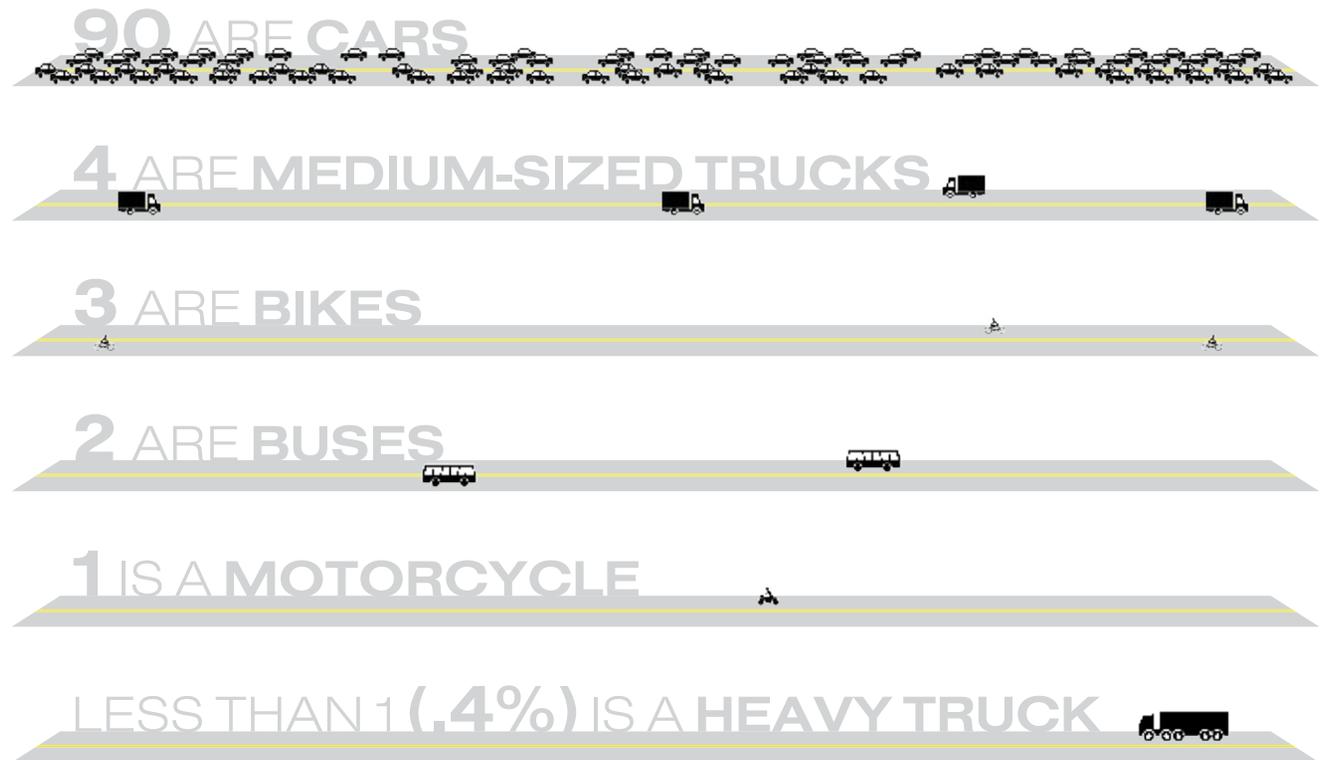
For an urban arterial, Pine Street performs relatively well in moving traffic across modes.

The planBTV assessment graded travel along Pine Street during the morning and evening rush hours from level of service "A" to "F". The target vehicular level of service for vibrant urban areas like the South End is a "C" or "D," which indicates an efficient use of the system with speeds appropriate for a bicycle- and pedestrian-friendly environment.

SOURCE: PLANBTV SOUTH END PHASE 1 EXISTING CONDITIONS REPORT, BY VHB



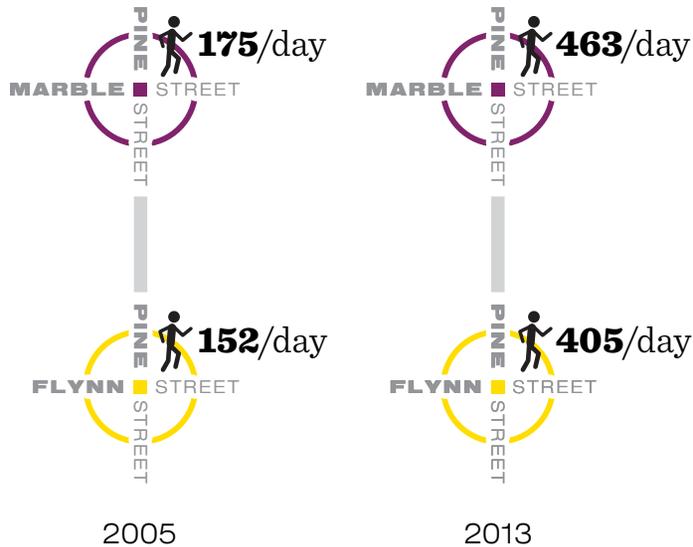
Out of 100 vehicles on Pine Street near Kilburn...



SOURCE: CCRPC AND DUBOIS & KING (2014)

More people are walking on Pine Street: while the number of pedestrians has more than doubled in the past 8 years...

(counts taken at intersections of Pine & Flynn and Pine & Marble)



SOURCE: CITY OF BURLINGTON, DUBOIS & KING

...the number of crashes along Pine Street involving injuries to pedestrians or bicyclists has also increased.

SOURCE: CITY OF BURLINGTON, DUBOIS & KING



The South End is served by...



The busiest bus route is **Route #6: Shelburne Road**, with **982 riders/average weekday** in 2013 (across the whole route).

SOURCE: PLANBTV SOUTH END PHASE 1 EXISTING CONDITIONS REPORT, BY VHB

The planBTV Focus Area has:

Off-street parking spaces are privately-owned and dedicated to a specific property or land use; none are "public" parking.



SOURCE: PLANBTV SOUTH END PHASE 1 EXISTING CONDITIONS REPORT, BY VHB