



City of Barre, Vermont

October 26, 2023, 4:00 PM

Special Meeting of the Barre City Planning Commission

## Venue Options: **Site Visit Downtown** (no zoom option)

### **Agenda**

1. Call to order - 4:00 PM (meet at City Hall Council Chambers)
2. N Main to Summer St Plan: Site visit (proceed from City Hall)
3. Adjourn

# NORTH MAIN TO SUMMER STREET MASTER PLAN

CITY OF BARRE, VERMONT



*March, 2012*

# NORTH MAIN TO SUMMER STREET

## NORTH MAIN TO SUMMER STREET MASTER PLAN CITY OF BARRE, VERMONT

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# MASTER PLAN

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# MASTER PLAN



*Rendering of mixed-use building concept for City Place on North Main Street.*

## Introduction

The North Main to Summer Street area encompasses three blocks in the heart of Barre's historic downtown district. This area is a study in contrast with the opposite (south) side of Main Street:

- the commercial buildings have experienced higher vacancy rates;
- the parking is a confusing and inefficient patchwork of lots primarily in private ownership; and
- residential buildings in poor condition exert a negative influence on the area.

The City of Barre has been actively working on several fronts to reinvigorate this lovely traditional downtown district:

- The long planned Main Street reconstruction project which will improve the streetscape of Main Street has begun construction;
- In 2009-2010, the City prepared a plan for the Merchants Row area that will improve the overall image and function of this significant downtown parking resource; and

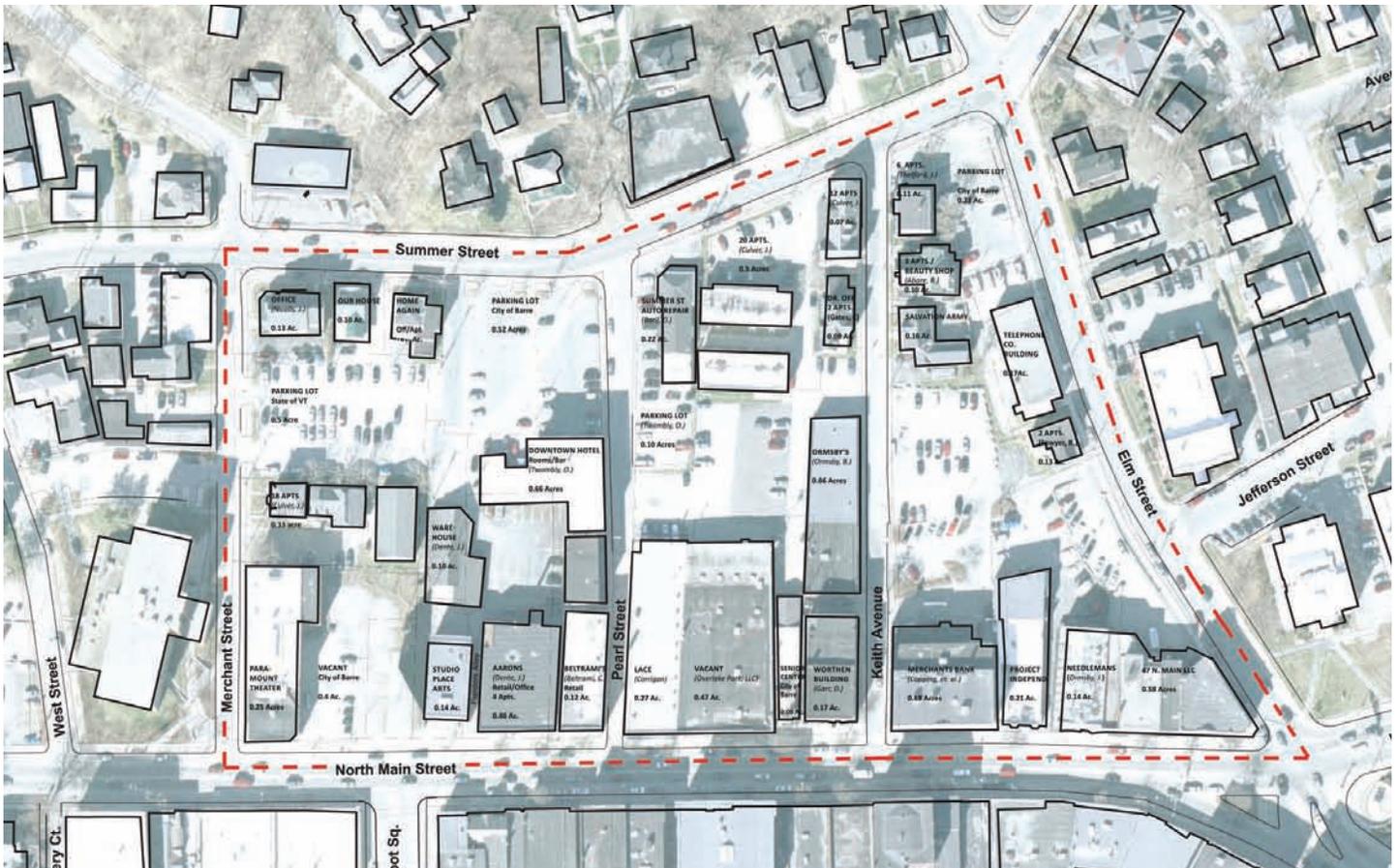
- In 2009, the City purchased a dilapidated property on Main Street across from Depot Square (City Place) for the purpose of developing a mixed-use building that can serve as a catalyst for reinvestment in the downtown.

In 2011, the City engaged ORW Landscape Architects and Planners, Resource Systems Group (RSG) and Black River Design Architects to develop a master plan for this area of the downtown. The purpose of the Master Plan is to:

- Develop a vision for the area;
- Provide a master plan for the organization of land uses, parking areas, vehicular, bike and pedestrian circulation, public spaces and amenities.

This Master Plan provides the overall vision and guidance for the area; as such this plan does not represent detailed construction documents for the area. There is some latitude that the City and property owners have in implementing specific improvements that will remain in keeping with the overall objectives of this master plan framework.

# NORTH MAIN TO SUMMER STREET



**Figure 1: North of Main to Summer Street Plan Area**

## Existing Conditions

As shown in Figure 1, the plan area is bounded by North Main Street, Merchant Street, Summer Street and Elm Street for an area of approximately 10 acres. Two streets, Pearl Street and Keith Avenue bisect the area, running perpendicular to North Main and Summer providing circulation into the plan area from these important streets. In addition there is a remnant right-of-way, Buzzell Place, that runs along the east side of the City's parking lot on Summer and Pearl Street.

The North Main to Summer Street area contains a mix of residential, retail commercial, office and public/non-profit uses, as summarized in Table 1.

**Table 1: Existing Development Inventory**  
*July, 2011*

Land Use	Sq. Ft. / Units	% of Total
Residential		
Apartments	67 apartments 30,000	16%
Commerical		
Retail	30,000	16%
Office	40,000	22%
Commerical Service/Utility/Warehouse	9,000	5%
Hotel	9,000	5%
Vacant	51,000	27%
Public / Quasi Public		
Building	17,000	9%
<b>Total Building Area</b>	<b>186,000</b>	<b>100%</b>

Source: City of Barre Assessment Data

Note: Square footage rounded to nearest 1,000 sf.

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North Main Street includes a variety of retail and mixed use buildings: (clockwise from upper left) the 46 North Main Street under renovation; the Worthen Block; the City Place site; the Merchants Bank building (below) and the recently occupied P&S Furniture building.

**North Main Street.** North Main Street is primarily comprised of traditional retail structures characterized by storefronts at the ground level with offices or apartments above. Buildings on this side of Main Street range from one to three levels. Most of the structures are brick or masonry structures, many dating from the late 19<sup>th</sup> century when Barre experienced a period of rapid growth and development. In addition to banks and retail shops, there is a movie theater at the corner of Main and Merchant Street. Several significant non-profit enterprises are established in the plan area: Project Independence (which provides adult day care); the Barre Senior Center; Central Vermont Community Land Trust; the Central Vermont Council on Aging; and the Studio Place Arts (SPA) gallery and visual art center.



# NORTH MAIN TO SUMMER STREET



*Existing buildings on Merchant Street.*

*Existing buildings on Summer Street.*

Main Street is a two-lane, two-way street with on-street parallel parking on both sides.

Merchant Street is a narrow one-way street with on-street parallel parking on one side.

**Merchant Street.** This minor street is primarily a circulation route between Main and Summer Street; the street frontage is primarily consumed by the side of buildings fronting on Main Street; in addition there is one residential structure in poor condition that has been converted to 18 apartment units<sup>1</sup>; parking for the adjacent Vermont State courthouse; and Victorian house that has been adapted for office use at the corner of Merchant and Summer Streets.

**Summer Street.** Initially developed as detached residential structures, most lots on Summer Street accommodate apartments, non-profit uses, or parking lots. Summer Street Auto Repair is the only commercial building along this stretch of Summer Street (within the plan area). There are 28 apartment units accommodated within three buildings on Summer Street.

<sup>1</sup> All land use data is based on City of Barre Assessment Records.

# MASTER PLAN



*Existing buildings on Keith Avenue.*

**Keith Avenue.** Keith Avenue is a narrow street that provides circulation between Main and Summer Streets. A cluster of residential detached structures at the north end of the street have been converted to various uses including a Salvation Army, a beauty shop with apartments above and a doctor's office with apartments above. A one story brick structure mid-block includes a computer store and warehouse space.

Keith Avenue is a one-way street at the Main Street end, and two-way at the Summer Street end.



*Existing buildings on Elm Street.*

Summer Street is a two-lane, two-way street. On-street parking has recently been removed to accommodate traffic diverted from Main Street for the reconstruction project.

**Elm Street.** The Elm Street frontage includes two parking lots, a brick utility building for the telephone company and a two unit residential structure.

Elm Street is a two-lane, two-way street. Like Summer Street, on-street parking has been removed to accommodate traffic diverted from Main Street for the construction period.

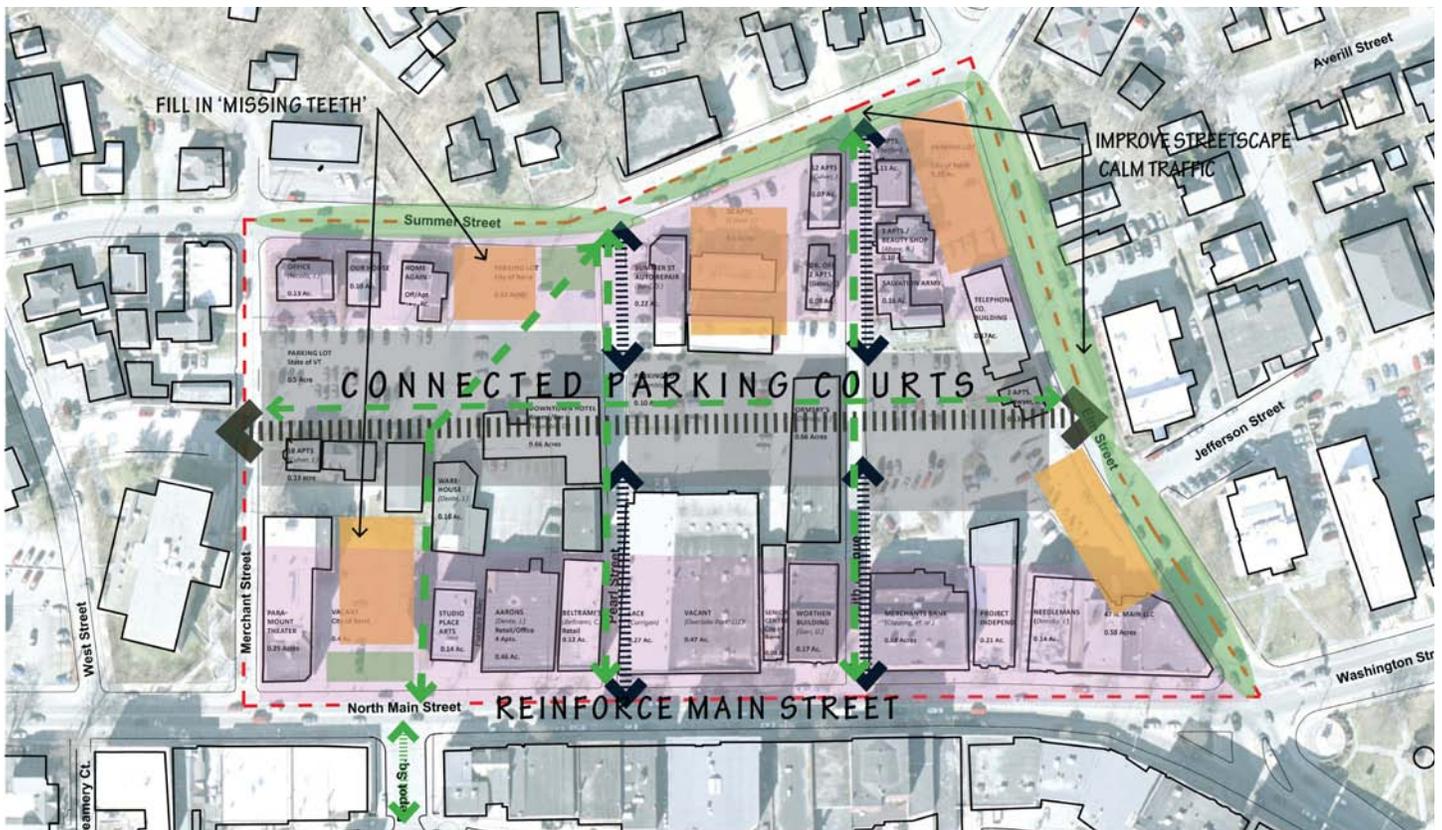


*Existing buildings on Pearl Street.*

**Pearl Street.** Similar to Keith Avenue, Pearl Street is a very narrow street providing circulation between Main and Summer Streets. The Downtown Hotel is the only structure with frontage on Pearl Street.

Like Keith Avenue, Pearl Street is one-way at the Main Street end and two-way at the Summer Street end.

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**Figure 2: Master Plan Strategy Diagram.** This strategy was developed through the public workshops on the master plan.

## Planning Process

This work began in the summer of 2011 with site reconnaissance and informal discussion with area stakeholders to identify issues and opportunities for this area of the downtown. Following on these initial efforts, two broadly noticed public design workshops were held to obtain public input regarding the future of the plan area. Each workshop was very well-attended and yielded important concepts for the direction of this plan. Workshop attendees identified the need to remove negative influences in the area, attract more activities for upper stories of buildings along Main Street, address the need for more landscaping to soften the expanses of asphalt, and strengthen pedestrian and bike connections, and transit stops. (A summary of workshop comments can be found in the Appendix). Based on the discussion at the tables working on the plan, a consensus emerged regarding the organization of the area, as described in Figure 2, and includes the following organizing elements:

- Reinforcing the street frontage of Main and Summer Streets with infill buildings to enliven the streetscape and walking environment;
- Creating a series of connected 'parking courts' behind the buildings;
- Create clear auto circulation routes between streets and parking areas;
- Create attractive pedestrian connections between parking areas and between parking areas and North Main and surrounding streets; and
- Improve the streetscape of Summer and Elm Streets with street tree planting, sidewalks and on-street parking.

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*Historic postcard view of Main Street in the early 20th century. Downtown Barre has a strong sense of place created by the historic fabric of the downtown buildings and streets. Source: Aldrich Public Library.*

## Issues and Opportunities in Downtown Barre

The following summarizes the issues and opportunities that form the basis for the Master Plan strategy for revitalizing downtown Barre:

**Reinforce the Downtown as the Center of Commerce and Culture in Barre.** Main Street is the historic Central Business District of Barre, its heart, its center of commerce, culture and public life. While the nature of retail trade has evolved in through the years since this downtown was established, traditional ‘Main Street’ downtowns still play an important role in commerce, employment, culture and entertainment. Decisions about the future of the North Main Street area should consider first how to support and reinvigorate the commercial uses in its downtown district.

**Strong Sense of Place and Identity.** Barre is fortunate to have a unique image and identity created by its rich architectural heritage and human-scaled street and block patterns. These basic building blocks are significant assets that will be reinforced and enhanced through this Master Plan. Where there are ‘tears’ in the downtown fabric, these area should be ‘mended’ with new infill develop-

ment that is harmonious with the surrounding development and adds to the vitality of the downtown district. Several historic buildings have been renovated or are under renovation currently for new uses. Historic building facades that have been obscured by ‘tacked-on’ treatments should be encouraged to be restored to reveal their historic quality.

**Maintain a Human Scale and an Orientation to the Pedestrian.** New development must enhance the pedestrian-friendly nature of Barre, and should avoid the pitfalls of blank walls adjacent to sidewalks, poorly detailed, ‘throw-away’ architectural quality, and parking lots disrupting the continuity of shops and attractions along the primary streetscapes. Public improvements are important in this realm as well: the overhead highway style signage along North Main Street provides a powerful statement that Main Street is a highway for through traffic rather than a destination unto itself. Signage welcoming people into the downtown and helping them to find parking areas and attractions should be the dominant visual message expressed by signage in Barre.

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*Multi-use paths, like the one planned for Barre, are popular for commuting and recreational use.*



*Innovative stormwater treatment options can be incorporated into new development.*

**‘Park and Walk’ Parking.** A pool of parking that is user-friendly, understood by visitors to the area, convenient to the center of town and providing a feeling of personal security is important for the success of the commercial environment. Visitors and shoppers need to be able to easily navigate in and out of parking areas to feel comfortable coming to the area. Merchants Row, on the opposite side of North Main Street embodies many of these qualities, and when improved as planned will be more attractive and usable by pedestrians. On-street parking is important too. A pool of parking, ideally owned and operated by the City, where shoppers and downtown patrons can park once and walk around, is the goal. Parking should be managed to reserve space near shops for retail patrons, while employee parking is situated in outlying lots.

**Pursue Opportunities for a More Sustainable Future.** As Barre embarks on reinvesting in its downtown district, there are significant opportunities to ensure a more sustainable future. Barre’s compact and walkable downtown district that is tied to surrounding neighborhoods provides the core of a sustainable community model. This is a good place for growth and investment. Additional efforts related to transportation, energy and stormwater management may include the following:

**Pedestrian Amenities.** There are opportunities in this plan area to provide street tree planting along Summer and Elm Streets that would greatly improve the envi-

ronment for walking (discussed in the Design Guidelines). Tree planting in a tree lawn along the edge of the sidewalk provides numerous benefits: buffering pedestrians from nearby traffic, providing shade and reducing the urban heat island effect, providing a traffic-calming vertical element along the street reduces the perceived width of the street, and trees and tree lawns can absorb and filter stormwater runoff and store snow in the winter months.

**Bicycling:** The Barre Bike Path will connect downtown Barre to Montpelier via the Central Vermont Bike Path. Within Barre there are opportunities to develop additional bike connections to downtown and the Barre Bike Path from surrounding neighborhoods.

**Transit:** Barre is served by the Green Mountain Transit Agency which provides fixed route, demand response and shuttle services from Montpelier, Williamstown and Plainfield. The downtown is a focus for these transit lines. Barre should work with GMTA to provide attractive bus stops on Main Street, including sheltered waiting areas, benches, route and schedule information.

**‘Green’ Energy:** However imperfect our view of the future, we know that oil prices will continue to rise and communities that can incorporate energy efficiency programs and alternative energy sources have a leg up on the future.

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Electric vehicle charging station in the Spokane, Washington area. Photo credit: Avista.

**LED Light Fixtures.** As the parking areas are redeveloped there is the opportunity to replace inefficient light fixtures with energy efficient LED fixtures.

**Electric Car Charging.** These parking areas can also include facilities for plugging in electric cars. Electric cars figure prominently in draft Vermont Energy Plan.

**Car Sharing.** The downtown municipal lots also provide an opportunity for providing spaces for car sharing, i.e., 'zip car.' Downtown Barre is becoming a place for employment, as well as shopping and entertainment. A car sharing program,



Conceptual design for a district heat facility. Credit: Black River Design Architects, ORW Landscape Architects and Planners.

particularly with larger institutional users, such as the State of Vermont, provides an attractive incentive for workers to leave a car at home, or forgo purchase of a car.

**District Energy.** With the redevelopment of both the North Main to Summer internal block areas and the Merchants Row area, there is the opportunity to install the infrastructure for a district heating plant that could furnish the downtown district with a more attractive energy future. With both an active rail line and trucking routes in the core of the downtown, Barre is well situated to pursue alternative sources of energy, distributed through a district heating and cooling plant that can make the downtown more economically competitive as well as more sustainable.

**Stormwater Management:** New development of public improvements can incorporate stormwater management techniques appropriate for an urban setting. Such improvements may include porous paving, rain gardens, bio-retention in landscape areas and green roofs.

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*Sketch of pedestrian walkway and pocket park leading into City Place from Summer Street.*

## Recommended Master Plan

The Recommended Master Plan is illustrated in Figure 3. The overall design strategy is to focus development and activity along Main and Summer Streets, and provide parking within the center of the blocks in a series of connected ‘parking courts’ that are configured to be user-friendly and convenient, but tied to an urban pattern that places parking behind the buildings and preserves streetscapes for walking and human activity.

### North Main Street

North Main Street is the social and commercial heart of Barre. The goal is to revitalize retail activity at the ground level and encourage upper floor residential and office uses that complement the downtown retail district. Major opportunities on Main Street include new development of City Place (discussed below) and renovation of several vacant, or underutilized buildings. It is recommended that the City of Barre and the Central Vermont Community Land Trust work together to replace the blighted housing stock with attractive new affordable housing that better meets the needs of the residents and is managed by the land trust.

### North Main /Merchant /Summer / Pearl

**Existing Conditions.** This is a key block in the downtown with a mixture of retail, cultural and entertainment offerings that provide a rich mix of activities at this end of the street. Along Main Street, there is the Paramount Theater and a mixture of offices and stores in the Zanleoni (Bashara) Block on the corner of Merchant and Main Street. Barre is fortunate to still have a downtown movie theater, and the City should encourage retaining this important entertainment use on Main Street. Adjacent to the theater is the City owned lot ‘City Place’ which will be developed as a vertical mixed-use development including retail at the ground level (ideally a food market or grocery store) with offices above; other complementary commercial or residential uses may be developed as a part of this building as well. Adjacent to City Place is the Studio Place Arts or ‘SPA’ building that provides a home for visual arts through a gallery and studio space in this attractively renovated historic building. The adjoining buildings include strong retail anchors in the area, Aarons Furniture and Beltrami Photography Studio. There are apartments above

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Figure 4: Master Plan Detail: No. Main / Merchant / Summer / Pearl

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*Sketch perspective of Main Street in front of the plaza at City Place.*

Aarons; the upper floor of the Beltrami building is not currently utilized.

The center of the block includes a residential structure with 18 apartments on Merchant Street and the Downtown Hotel and a Tavern, parking for the Vermont State Courthouse (70 spaces) and the City owned Pearl Street Parking lot (57 spaces). Three residential structures on Summer Street have been converted to law offices, and non-profit human services uses (Our House and Home Again with Pride).

This block is bisected by an underground stream which is a consideration for new development.

**Master Plan.** The strategy on this block is to open the center of the block for parking and focus new retail and commercial development on Main Street and new residential development on Summer Street.

The redevelopment of 'City Place' presents the opportunity to create a catalyst development that can energize the downtown district through its introduction of new uses

and activities. The location of City Place across from Depot Square is a visually significant location that requires special considerations. The building should be set back along its Main Street frontage to align with the SPA building, in order to create a continuous active street frontage as well as a wider space that can accommodate a social gathering space (i.e., a plaza or small green space with seating). The primary building entry will be at this location as well.

There are two possibilities for loading routes to the City Place building as shown in Figure 4 in red. These routes should be evaluated as more detailed designs for City Place are developed.

The underground stream is utilized as a passageway for pedestrians to connect from Summer Street into City Place, Depot Square and the future Barre Multi-Use Path. A secondary building entrance from the rear parking area will be provided here as well, similar with the shops on Merchants Row. With the reconfiguration of parking to the center of the block, new infill housing and a small park is planned on Summer Street between the existing structures and Pearl Street. This is important both to create housing in the downtown and add to the vitality of Summer Street.

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Figure 5: Master Plan Detail: No. Main / Pearl / Keith / Elm Street

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*Sketch view of pocket park and pedestrian walkway leading into City Place from Summer Street.*

## North Main/Pearl/Summer/Keith Avenue

**Existing Conditions.** The central block of the study area includes the newly leased P&S Furniture store, the long vacant 'Dollar Store' storefront (Overlake Park LLC), the Barre Senior Center and the underutilized Worthen Block along the North Main Street frontage. The P&S building and the 'Dollar Store' building are both 60's era single-story store front buildings, unlike all of the other buildings on this side of the street. The center of the block includes Ormsby's computers store and offices, warehouse space and a large parking area. The frontage of Summer Street is comprised of Summer Street Auto, 20 apartment units in poor condition and an additional 12 units at the corner of Keith Avenue and Summer Street. On Keith Avenue a medical office with apartments above are accommodated in an attractively maintained Victorian two-family house.

**Master Plan.** The strategy is the same on this block as the others; creating a central municipal parking area at the center of the block, providing infill housing along Summer Street. On Main Street, the Worthen Block is a very attractive historic structure that, once restored, would be an asset to the downtown district. The City should negotiate with the Dollar Store building owners to redevelop and/or get new tenants in the building.

On Summer Street, new housing should be developed in place of the dilapidated 20-unit apartment complex, and the adjoining 12-unit building should be renovated or redeveloped.

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*An attractive mixed-use building on Keith Avenue.*

## **No. Main/ Keith / Elm Street**

**Existing Conditions.** Along Main Street, this block includes the Merchants Bank building, Project Independence, which includes adult day care and apartments, an attractive building with Needleman's formalwear at the ground level and the 47 North Main properties which are under renovation. The center of the block are private parking lots associated with the Merchants Bank building and the 47 North Main building. Toward Summer Street there is a cluster of residential structures that have been converted to a mixed-use configuration or office uses.

**Master Plan.** On this block, there is a significant grade change between Elm Street and Keith Avenue. Aggregation of the two private parking lots could yield better efficiency in the parking layout, and the grade change provides an interesting option for adding a parking deck at this location. With expansion of parking in the center of the block, the city parking lot at the corner of Summer and Elm Street should be considered for infill housing, as it occupies a prominent corner that would be more attractive with the addition of a building. The change in grade appears to make it a viable option to place parking beneath this building.

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*Sketch view of Summer Street (from Keith Avenue, above) to Pearl Street (right) with improved streetscape and infill housing.*

## Design Guidelines

The following design guidelines are set forth in recognition that the overall image and character of the downtown is an important economic asset. New development must be thoughtfully designed to enhance the quality of this downtown district and harmonize with its historic setting. Good quality architecture improves the quality and livability of the neighborhood.

### Residential Development:

- All new development on Summer, Merchant and Elm Streets should respect the historic building patterns of residential development with respect to building setbacks, building proportions, roofli-

nes and building materials. In general, there is a prevailing pattern of wood-framed two to three story detached structures oriented to the street with a small garden transition space between the street and the sidewalk.

- New residential development should be oriented to the street with primary building entries facing the street. The pedestrian entry should be architecturally emphasized through detailing around the doorway, porch elements and soft lighting. Porch light fixtures for multi-family development should be carefully selected so as to be both energy efficient, attractive and residential in character. Fixtures that provide harsh lighting and are institutional in design are prohibited.

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- On Summer Street it is assumed that parking will be placed within the larger central pool of parking behind the buildings. This helps the streetscape and pedestrian environment by eliminating curb cuts across the sidewalk and the fragmentation of land with multiple parking lots. On Elm Street, there is an opportunity to use grades to place parking below the buildings. In every case, parking is behind or below the building and there are not additional driveway curbcuts that degrade the pedestrian environment of Summer Street. Under no circumstances should on-site parking face the street.
- The front of the residential buildings should include a small garden space adjacent to the sidewalk and a porch to provide a gracious transition between the building entry and the street.
- Building setbacks should be in harmony with the setbacks of the original buildings on the street.
- Architectural styles that reflect the vocabulary of houses in downtown Barre should be encouraged. Multi-family housing that reflects a 'big-house' style building with apartments is one approach that would be attractive in this are of Barre.
- Town houses or row house buildings should be articulated into bays to create an attractive streetscape rhythm. These larger buildings should be developed as individual units with separate entries.
- Roof styles and building materials should reflect the styles found in the surrounding neighborhood.
- Space for residents to sit outdoors, such as small porches, balconies or garden spaces should be provided.

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*An example of new higher density housing that incorporates traditional forms and materials into a contemporary development that is compatible with a traditional neighborhood context. Porches, windows and decks provide vitality and 'eyes on the street' adjacent to sidewalks and walkways. Credit: New Urban Images.*

- Windows should incorporate framing and detailing sufficient to create shadowlines and interest in the building facades. Window proportions and overall fenestration patterns should reflect existing neighborhood examples. *Comment: Poor quality infill development often looks to cut costs by using small windows and odd patterning. Such fenestration patterns draw attention in that they look 'wrong' to the eye and reveal the poor design quality of the building.*
- To provide a more gracious transition between the sidewalk and the front entry and reflect the prevailing residential patterns, the front entry should be 12-inches or more above grade.



*These affordable infill apartments in downtown Bennington, Vermont feature individual unit entries, passive and active solar heating accommodated on a 'narrow and deep' downtown lot configuration.*

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## Commercial and Mixed Use Design Guidelines: Traditional Building Example



Top: Cornice and architectural detailing create a clear building 'top.'

Middle: Mid-section differentiated primarily by fenestration patterns and use of materials. Regularly spaced windows create unity, detailing creates interest

Punched window openings create a shadow line and visual interest in the facade.

Beltcourse or detailing: To differentiate between the ground level and upper levels.

Base: Storefront windows, pedestrian entries emphasized with architectural detailing (often recessed), stoops, awnings.

Storefront windows reveal activities within and provide interest for the pedestrian.

## Commercial and Mixed-Use Development:

New development in the downtown district should be respectful of the established patterns of development in the area in terms of building form, massing, height and orientation to the street. Upper floors of buildings higher than the prevailing three-story height should be stepped back at North Main Street and the side property lines to provide a more attractive building massing that complements the existing North Main streetscape.

- Buildings should be oriented to, and open onto, the street. The primary building entrance should be at the sidewalk of Main Street and should be architecturally expressed as the primary building entrance. Secondary entrances located adjacent to the parking area can be provided as well, but should be visually subordinate to the primary building entries on the sidewalk.
- The primary building mass should be parallel to the street and built to the sidewalk to provide a sense of enclosure and define the street edge.
- The ground level of buildings on Main Street should be designed as traditional retail storefronts with a high level of transparency (i.e. glazing) at the ground level, similar to neighboring buildings on Main Street. As a guideline, 70% glazing at the street level is encouraged. Blank walls, glass curtain walls, reflective glass are discouraged along the ground level Main Street frontage.
- Windows should be designed to reflect the activities within. Clear, untinted glass or 'Low E' glass should be used, particularly at ground level to allow maximum visual interaction between the sidewalk and the activities with the building.

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## Commercial and Mixed- Use Building Design Guidelines: Contemporary Building Example



Top: Cornice and architectural detailing.

Middle: Regularly spaced windows and change of materials create the mid-section. Punched window openings create shadows and interest.

Beltcourse or detailing: To differentiate between the ground level and upper levels.

Base: Storefront windows at the base wrap the corner, recessed pedestrian entry, awnings provide color and interest as well as pedestrian comfort.

Transparent glazing reveals activities within, provides visual interest for the pedestrian.

- ‘Punched’ window openings with as much depth as possible to create shadows and visual interest in the building façade are strongly encouraged.
- At the street level, storefront glazing is encouraged to wrap around the corners at public passageways (e.g., the buried stream passageway) and at street intersections (at Pearl Street and Keith Avenue) in order to animate the walking environment and create ‘eyes on the street’ at critical junctures in the pedestrian network.
- Buildings should have a discernable base, middle and top expressed through architectural detailing. All buildings should have a well-defined base, created by fenestration patterns, awnings, textured materials, color at the street level. The base level may be set off by a beltcourse or architectural detailing. Upper levels should incorporate changes in fenestration patterns, use of bay windows, changes in materials, vertical planes or other elements to differentiate it from the base. A recognizable ‘top’ should be created by cornice treatments, roof overhangs, stepped parapets, cupolas, dormers, etc.
- Building materials should be durable, high quality materials that reflect the context of Main Street.
- A transitional space between the pedestrian entry and the sidewalk, such as a recessed entry, canopy or awning, and entry lighting, provides a welcoming environment for pedestrians and help to articulate building entrances.
- Roof mounted mechanical equipment should not be visible from the street. Loading and service areas should be screened from pedestrian walkways to the extent feasible. Trash receptacles should be enclosed.
- Simple building mounted signage that is restricted to the name of the business and relevant information are encouraged. Signs should be integral to the facade and should not detract from its architecture.
- Facade and signage lighting should be shielded and directed onto the building facade or sign.

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Above, signage lighting is shielded and directed onto the building and sign.



Above, bioswale adjacent to parking area at Champlain College collects and retains stormwater from the adjacent parking lot and allows it to infiltrate through the soil.

## Parking Areas:

Parking areas within the plan area should include attractive concrete pedestrian walkways, sufficient lighting, and tree planting for shading and amenity. Tree species that would thrive in this environment include Common Hackberry (*Celtis occidentalis*) and Honeylocust *Gleditsia triancanthos*). As a general guideline, trees should be planted 20 feet on center to create an attractive canopy.

Parking areas should include sufficient illumination for pedestrian safety and nighttime use. Downward focused high efficiency LED fixtures are recommended for energy efficiency and amenity.

Where parking areas abut a sidewalk, perimeter landscaping should be installed to reduce the impact of the parking area on the pedestrian environment.



Sketch view of parking area with tree planting and stormwater retention.

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Elm St., Barre, Vt.

*Historically, Elm trees graced the city's streets, making them an attractive and pleasant place to walk. Source: Aldrich Public Library.*

## Streetscape Recommendations

**Summer Street and Elm Street.** Summer Street and Elm Street are 2-lane roads that are 38-feet wide curb to curb. Once the Main Street reconstruction project is complete, these streets can be reconfigured for better use of the street space by pedestrians and bicyclists. One option involves reconfiguring the street to include two 11-foot travel lanes plus an 8-foot parking bay on one-side of the street and a 6-foot tree-lawn at the edge of the sidewalk. This is large enough for healthy tree growth. The narrow travel lanes, on-street parking and street trees all would help to calm traffic and create a more attractive pedestrian environment. A second option involves narrowing travel lanes to 10-feet and the addition of two 5-foot bike lanes and on-street parking. Tree planting on the adjacent private properties should be encouraged in either case.

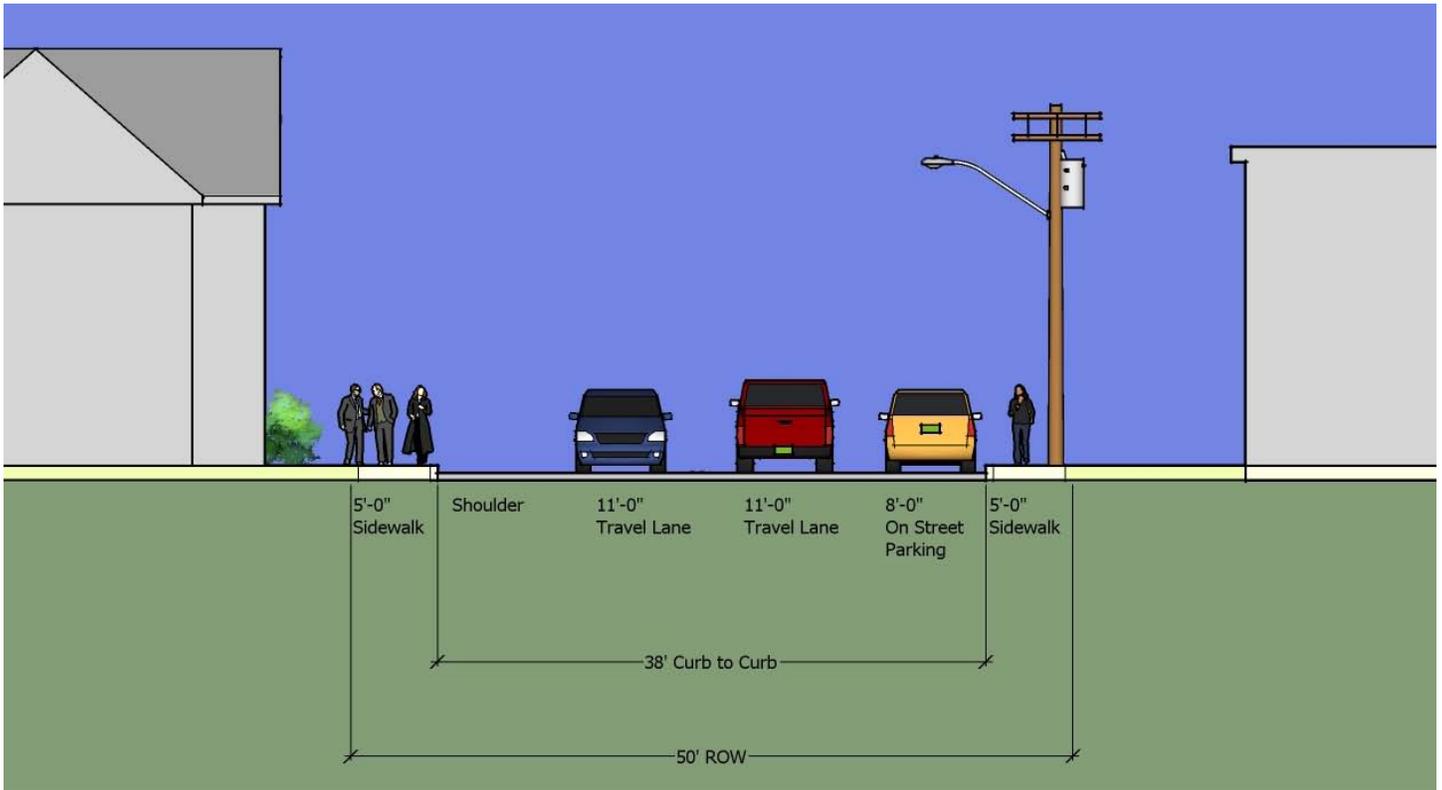
There are a couple of places where enhanced pedestrian crossings may be desirable along these streets, for example at Elm / Summer / Wellington Streets, Elm and Jefferson



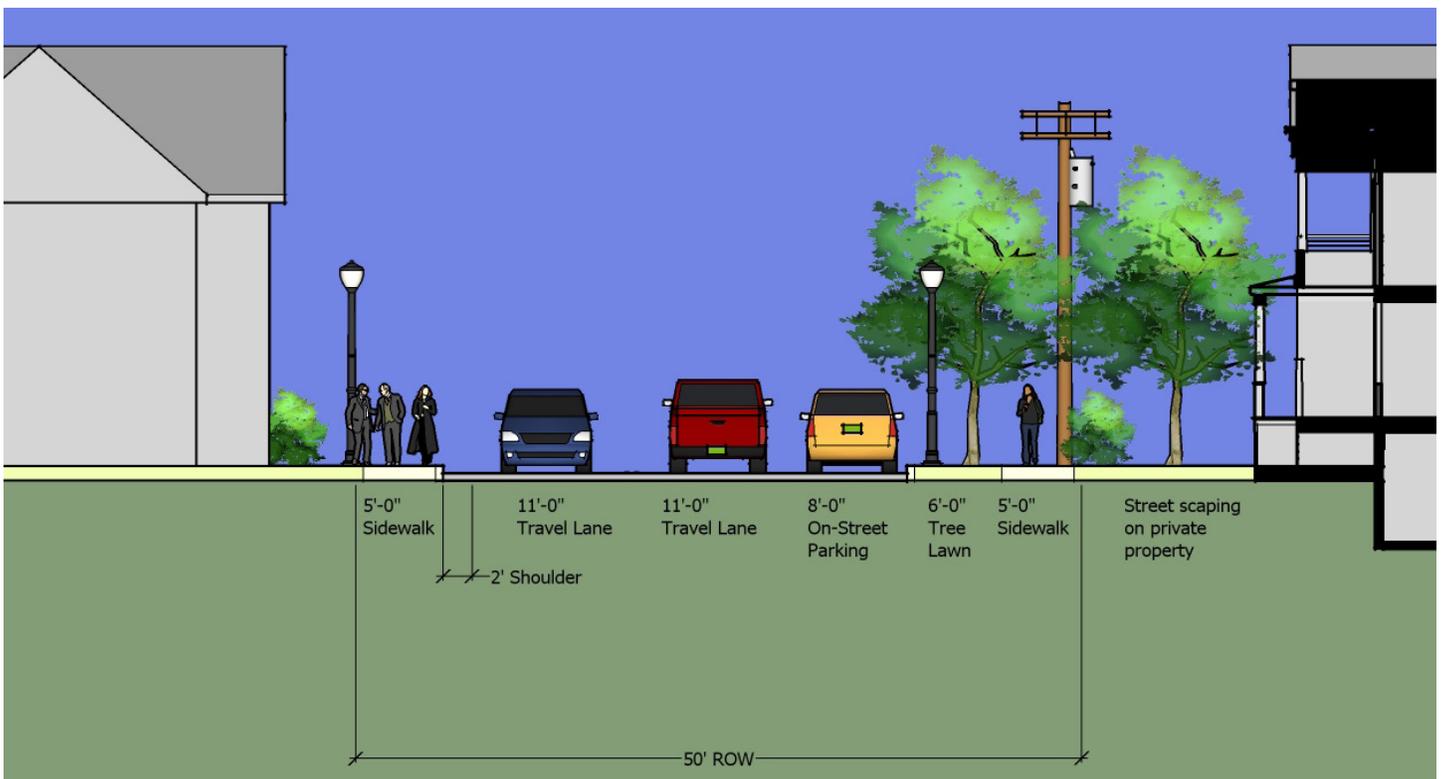
*A similar view down Elm Street today reveals a wider street and a more bleak streetscape lacking street trees on the north side. Street trees on the south side on private property make a much more attractive streetscape.*

# MASTER PLAN

Figure 6: Street Sections



Existing Conditions on Summer and Elm Streets.

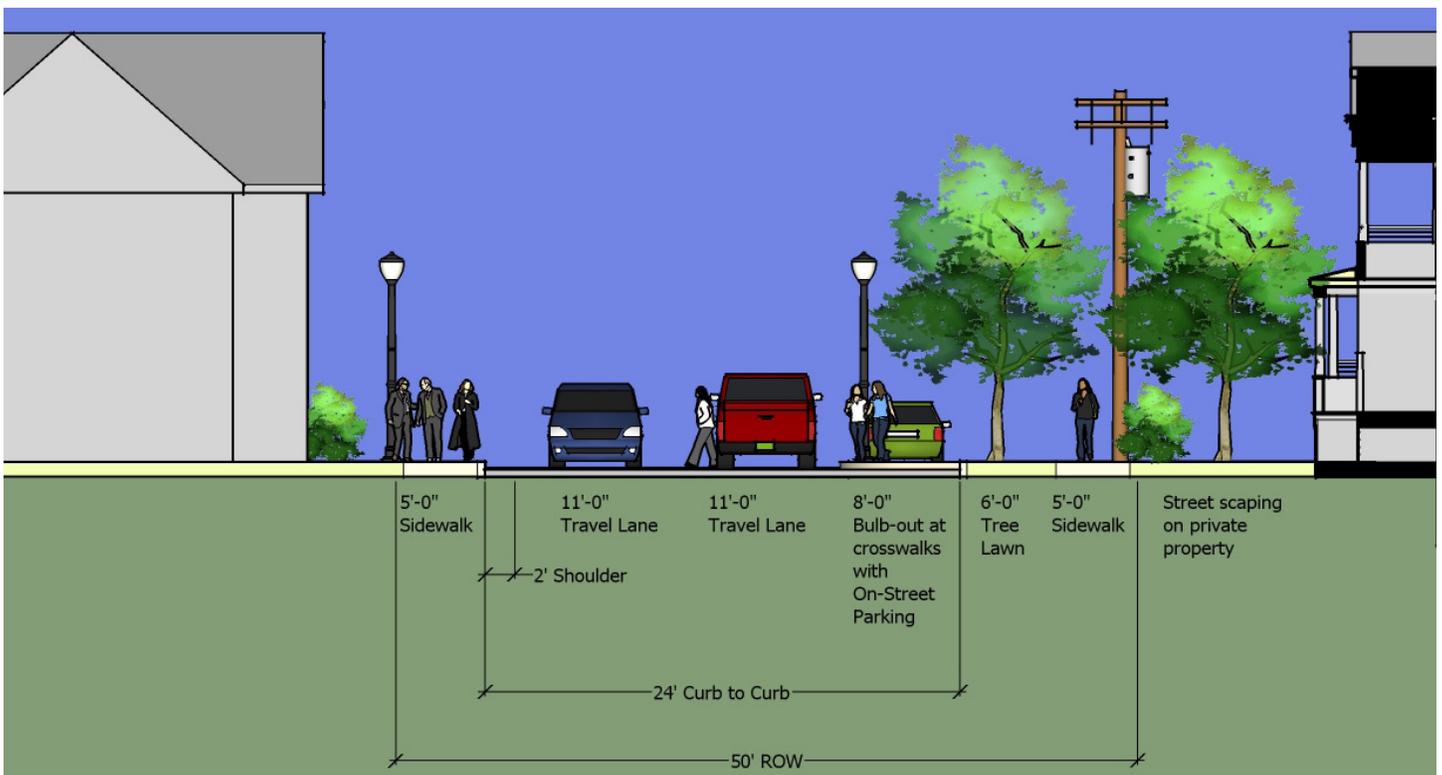


Option 1: Tree Lawn and Street Trees.

# NORTH MAIN TO SUMMER STREET



Option 2: Bike Lanes



Curb Extension at Crosswalk

# MASTER PLAN



Axonometric View of Sidewalk 'Bump-Out' and raised crosswalk.

Street (behind the Aldrich Library) particularly if there is an expanded parking area or parking deck in the plan area, and the corner of Merchant and Summer Street. At these locations, bulb-outs and even a raised speed table crosswalk and signage can improve traffic calming, pedestrian visibility and safety crossing the street.

Along these streets, street trees should be planted to create a continuous canopy, typically 20- to 30-feet on center, depending on the species. Attractive pedestrian-scale lighting, demarcating the downtown district, should be considered along these streets as well. The tree belt can incorporate the granite cobbles that are below North Main Street as an attractive streetscape accent.

A list of recommended street trees for the area is shown in Table 2. These trees were selected for design considerations, i.e. size and shape, as well as cold-hardiness and salt tolerance. It goes without saying that re-establishing new disease resistant Elm species along Elm Street has a certain appeal.

On Summer Street, a different street tree species, such as Red Oak or Freeman Maple would be an attractive choice. Beneath the power lines, a lower height tree, such as a flowering crabapple, would be an attractive choice.

**Minor Streets Guidelines.** The minor streets in the area, specifically Pearl and Keith Street, particularly at the interface with North Main Street present a particular streetscape challenge that requires a more unconventional and creative approach to improve the pedestrian experience.

One of the primary issues is that pedestrians are walking between blank walls, which can feel intimidating. The best treatment for these walkways would be to place street level windows that look out onto these narrow passages; such windows may provide views to shops within the buildings or could be lighted display windows for store merchandise or advertising events.

Other option would include dramatic *trompe l'oeil* or mural painting on the buildings and/or dramatic lighting. Engaging the artist community in some creative ideas and

# NORTH MAIN TO SUMMER STREET



Sketch perspective of typical street crossing condition on Summer or Elm Street.

**Table 2: Street Tree Recommendations**

Street	Tree	Typical Spacing
Elm Street	American Elm, <i>Ulmus Americana</i> , 'Princeton,' Valley Forge,' or 'Liberty'	35' to 40' o.c.
	Northern Red Oak, <i>Quercus rubra</i>	35' to 40' o.c.
Summer Street	Freeman Maple, <i>Acer x freemanii</i> 'Autumn Blaze'	15' to 20' o.c.
	Northern Red Oak, <i>Quercus rubra</i>	
Power Lines	Crabapple, <i>Malus spp.</i>	15' to 20' o.c.
	Japanese Tree Lilac, <i>Syringa reticulata</i> 'Ivory Silk' or 'Summer Snow'	10' to 15' o.c.
Parking Lots	Common Hackberry, <i>Celtis occidentalis</i>	20' o.c.
	Honeylocust, <i>Gleditsia triacanthos</i>	20' o.c.

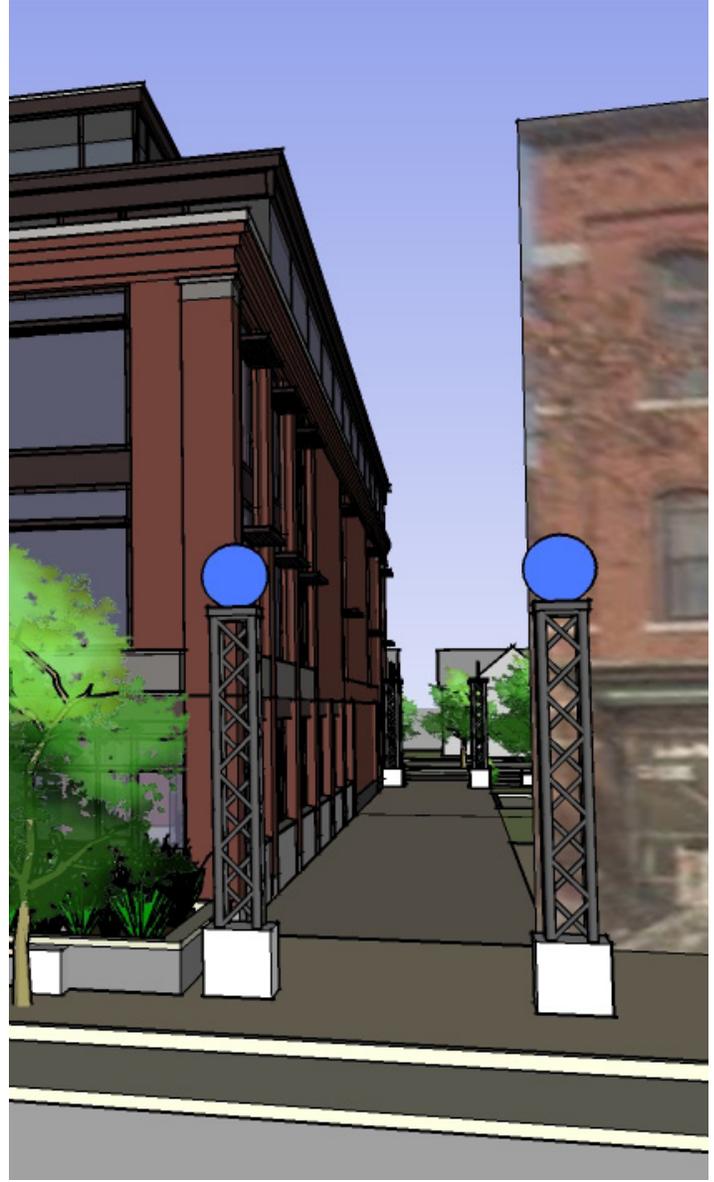
# MASTER PLAN



*Existing condition of Pearl Street at Main Street.*

designs for these alleys could make a nice 'Art in Public Places' type project for the downtown and help to create an identity for the minor streets and public walkways.

A series of unique lighting posts, as shown above, that repeat at the entrance to all of the downtown minor streets and pedestrian walkways could contribute to a unique image for the downtown district.



*Conceptual sketch of entry monument markers at Main Street and the City Place pedestrian walkway.*

Using the granite cobbles that will be excavated from below North Main Street to create an attractive and traffic calmed street surface is another option that could be considered at this location. Taken collectively, all of these treatments can help make the environment more appealing for pedestrians, and attract attention of passing traffic on North Main Street as well.

# NORTH MAIN TO SUMMER STREET



*Whimsical mural in Charlotte, Vermont.*



*Attractive durable bike racks should be incorporated into the downtown.*

## Circulation and Parking

**Pedestrians.** The plan area is built upon a downtown network of streets that was originally established when walking was the primary mode of travel. Street and block sizes in the area are at a walkable scale and allow direct travel routes for pedestrians. Improving the streetscapes with street trees and on-street parking, where possible, provides a buffer between the pedestrian and traffic.

The streetscape and building design guidelines are predicated on creating a more attractive pedestrian environment.

A new passageway for pedestrians and bikes from the corner of Summer and Pearl Street through to City Place and Depot Square is incorporated along the alignment of the underground stream. The Depot Square/City Place interface will be the center of gravity of the downtown and an important interchange for pedestrians. Conceptually, this passageway is seen as an urban trail and an important connection to the center of the downtown. If possible, reusing the granite cobblestones (that will be excavated as a part of the Main Street reconstruction) as an accent is encouraged. The granite cobble motif is encouraged in new construction of public spaces in the downtown, including the North Main to Summer and Merchants Row / Enterprise Alley areas.

**Bicycle.** Downtown Barre will be served by the Barre Bike Path, which will be an attractive commute and recreational path and attraction for the downtown. To reinforce use of the bike path, Barre should provide bike parking in the downtown, near significant users, including covered bike racks and bike lockers. Covered bike racks should be provided in association with major public destinations, such as the City Place project, and near the bike path itself. Opportunities for placing some bike lockers or covered bike racks near the bike path should be evaluated. Conventional bike racks should be provided near the depot and along Main Street. Inverted 'U' style racks and post and loop designs work best and are durable racks. As mentioned previously, to the extent that employees can have access to showers and change rooms in the downtown it will encourage commuting by bicycle.

**Transit.** Downtown Barre is well-served by Green Mountain Transit Agency. Particularly as new jobs and housing are developed in the downtown, the City should work with the GMTA to create more attractive bus stops that are friendly and welcoming to potential transit users. Bus stops should be viewed as small social gathering places within the streetscape and include benches, lighting, trees, special planting, shelter, schedule and route information and attractive wayfinding signage as appropriate for the transit patrons at any particular location. Care must be taken, however, to keep street furniture and other items out of the ADA required accessible route between the bus and the sidewalk.

# MASTER PLAN



*Bus stops should be designed as small social gathering spaces within the streetscape.*

## Parking

There are 420 parking spaces within this study area. The majority of these spaces, 60% or 253 spaces, are reserved exclusively for patrons or employees of individual businesses or tenant parking for residential buildings. The remaining 167 spaces are managed by the City of Barre for public parking. The public spaces are either on-street spaces or contained within two parking lots, the Pearl Street lot and the lot at the corner of Elm and Summer Street.

## Parking Utilization

A weekday parking utilization study of the downtown was undertaken by Resource Systems Group in July 2011. The study found the average occupancy for the planning area to be 52%. See Figure 8. The highest utilization was within the City owned vacant lot on Main Street (City Place) at 78%, the Courthouse parking lot at 73%, and the Municipal Pearl Street Lot and the private Merchants Bank lot, both at 68%, and the lot behind 47 North Main Street at 67%. In general, 85% is considered an optimal utilization rate, a point at which parking is well utilized but cruising for parking does not occur. The full parking inventory and utilization study is contained within the Appendix.

## Downtown Parking Strategy

In the plan area, land devoted to parking is inefficiently used; some lots are in the range of 70% utilized, while others are 5% to 25% utilized. In a downtown district, the

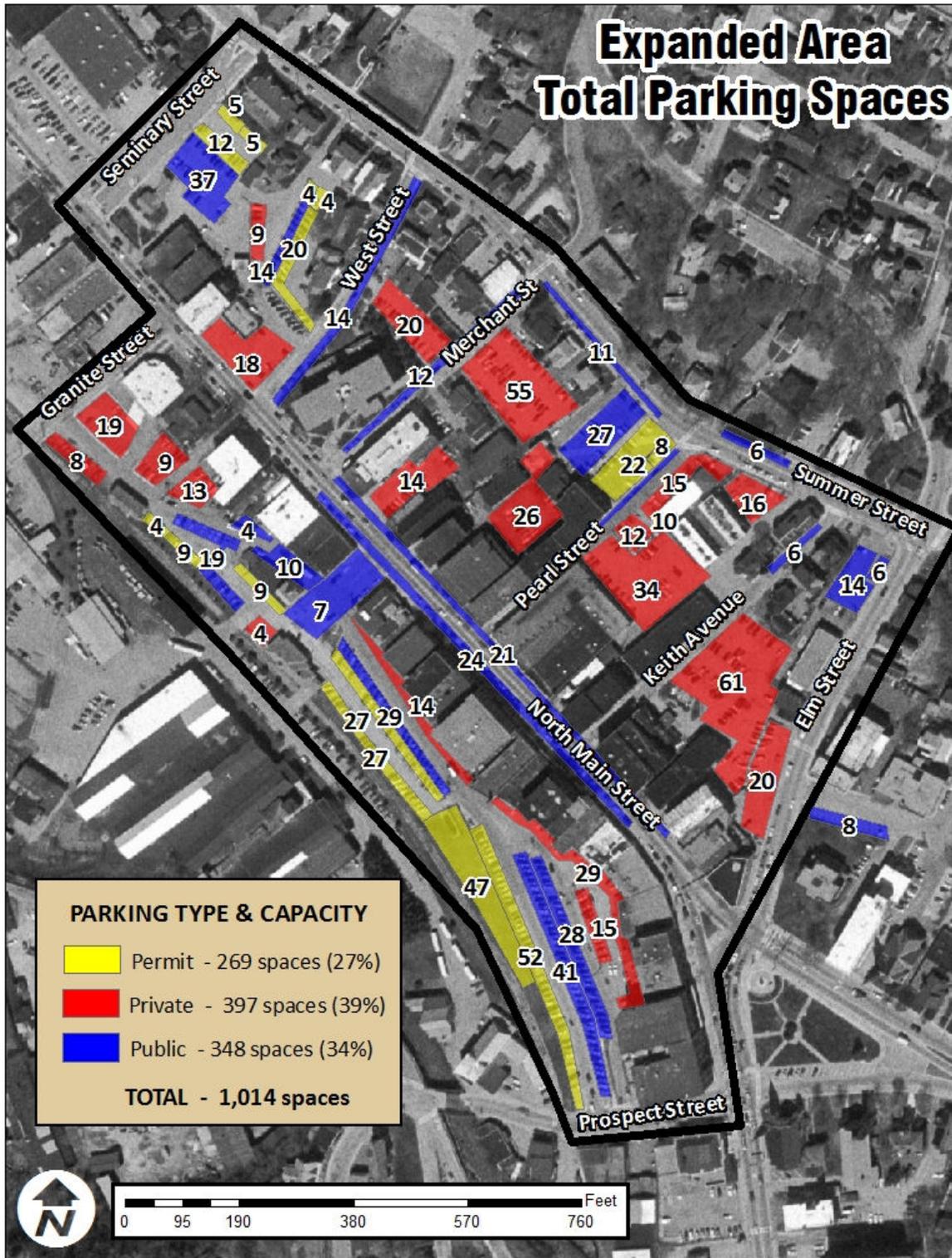
most effective parking supply is one that is a shared pool of parking that is managed by the municipality or parking management district. There are many reasons for this approach:

- A municipal pool of shared parking allows more efficient use of parking spaces. One parking space can accommodate an employee during the day, a restaurant patron at night, and a shopper on Saturday morning, resulting in the need for 30% - 40% fewer parking spaces. Parking consumes land, approximately 300 to 350 square feet per car (including circulation aisles), and land is expensive and valuable for other purposes, particularly in a downtown setting.
- Pooled municipal parking that allow a user to park once and walk reinforces the vitality of the downtown by creating pedestrian activity. Pedestrians can link trips by foot, visiting several shops, and reduce the need for each business to provide its own parking. It is very important that parking areas have attractive pedestrian connections between one another and to Main Street and major destinations.
- A park once and walk system supports businesses by increasing pedestrian traffic in and around shops and businesses in the downtown district.
- Shared parking means less impervious surface area, less polluted stormwater run-off into storm sewers, rivers and waterways.
- A pool of parking adds to the synergy of the downtown district, because it encourages pedestrian activity, and increases communication and coordination between businesses and the business community and the City.
- The parking should be priced appropriately to encourage turnover and generate funding for improvements.

In the area North of Main Street, the City should work with the property owners to configure a municipal parking pool in the center of the blocks as shown in the Illustrative Master Plan. This provides a supply of user friendly, visible accessible parking lots to serve the downtown, similar to the organization of Merchants Row / Enterprise Alley on the opposite side of Main Street. These series of linked

# NORTH MAIN TO SUMMER STREET

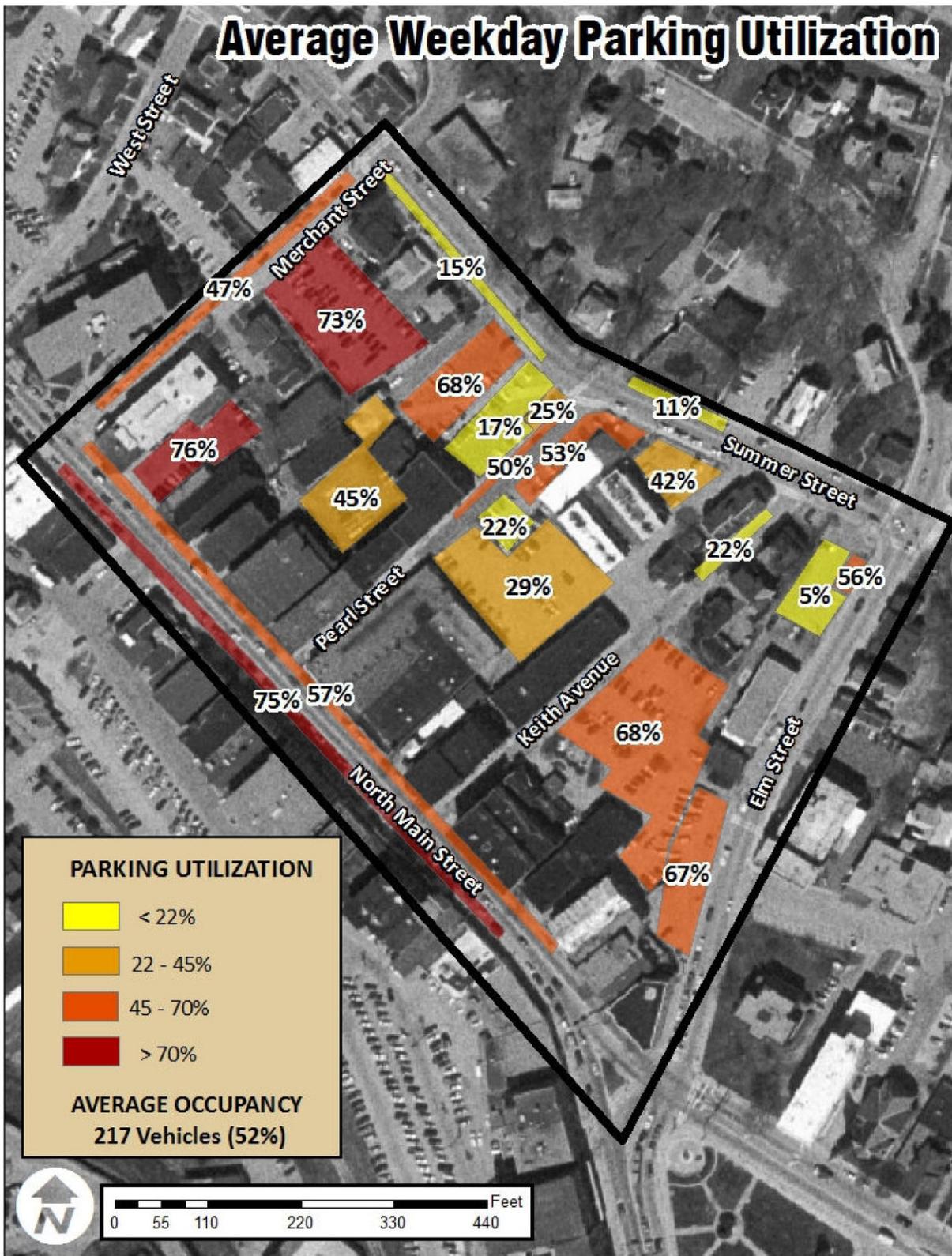
Figure 7: Parking Space Inventory



Source: Resource Systems Group, 2009, 2011

# MASTER PLAN

Figure 8: Plan Area Parking Utilization



Source: Resource Systems Group, 2011

# NORTH MAIN TO SUMMER STREET

**Table 3: Parking Permit Cost Comparison**

Town	Permit Type	Annual Cost (\$)	Permit Type	Annual Cost (\$)
Barre	24 Hour	220	Daily	135
Brattleboro	24 Hour	220-800	(Lot Dependant)	
St. Johnsbury	24 Hour	300	Daily	125
Montpelier	24 Hour	500-840	(Lot Dependant)	

Source: Resource Systems Group, 2009, 2011

parking lots, tied together by pedestrian walkways are easily understood by users (directional wayfinding signs should be placed in the downtown) and allow the City to intensify parking over time through the addition of decks or structures on one or more of the lots. The parking areas allow open access to the rear of buildings for loading, while preserving the pedestrian friendly nature of North Main and Summer Streets. Within the larger pool of parking the City can zone areas for longer term (i.e., 8 hour) vs. shorter term (i.e., 2 hour) parking, taking care to reserve the spaces closest to the shops for short term needs, and directing longer term employee and residential parking further away from the shops.

Over the long term, Barre will need to increase its supply of parking. The future of the downtown is likely to have significantly more employees and entertainment uses in keeping with current trends for downtowns everywhere. More businesses means more long-term employee parking demands. Employee parking shares nicely with evening entertainment uses and weekend retail demands. The peak parking time will tend to be the noon hour on weekdays when employees and restaurants are at peak use and there is some retail related traffic as well.

Barre has several options for increasing its parking supply in the downtown through building decks or structures, reconfiguring lots for greater efficiency, and building satellite employee parking (an employee can walk up to 1200 feet from a parking space to their office) . These are detailed in a separate memo in Appendix B of this report.

Given the expense of parking in a downtown area, Barre must manage its parking to achieve maximum benefit. Some management approaches include the following:

**Shared Parking:** This is discussed above.

**‘Smart’ Parking Allocation:** A number of spaces can be allocated to a group of users; spaces should not be reserved for individual use as this is a very inefficient use of

a valuable (and expensive) resource. As a rule of thumb 100, employees can typically share 60 – 80 parking spaces without it being a problem as on any given day employees are working off-site, sick, on vacation, etc. In addition, a parking supply that is managed through parking, enforcement and demand management to maintain the 85% to 95% percent utilization has a ‘cushion’ to accommodate the special events.

Short term (2-hour) parking spaces should be maintained along the street and closest to the buildings for retail users. Longer-term employee parking can be located further away – again a rule of thumb is that employees can be expected to walk up to 1,200 feet between their parking space and office.

**Pricing:** Parking should be fairly priced to manage the supply, keep a healthy turnover rate and encourage the use of alternative modes of transportation (discussed below). Currently, Barre’s permit parking fees are low relative to other communities including St. Johnsbury, Montpelier and Brattleboro as summarized above in Table 3.

At the present time Barre is not charging for downtown parking as a good will measure during the ‘Big Dig’ disruption. Following the reconstruction of North Main Street, Barre should consider establishment of the newer Electronic Parking Payment System which allows patrons to pay with cash or credit/debit cards, and the meters can read permits issued by the city. The system also allows the City to adjust parking rates by time of day or day of the year to reflect changes in demand. Finally, the electronic parking payment kiosks are more attractive and reduce the visual clutter of individual parking meters and make plowing easier.

**Enforcement:** Enforcement will be needed to ensure that the parking supply is effectively utilized.

**Encouraging Alternative Modes of Transportation:** As touched on previously in this report, downtown Barre is a

# MASTER PLAN



*Zipcars at Vermont Law School.*

transit, bike and pedestrian friendly location. Barre should encourage employees to use alternative modes through incentives such as:

- **Bicycling.** Providing bike parking, including covered bike parking associated with new developments; new development should include showers and changing area for employees (given the proximity of the Barre Multi-Use path, bicycling is a particularly attractive option in this location).
- **Transit.** Given the cost of providing parking, larger employers can offer to 'cash out' parking by covering the cost of transit passes for employees rather than paying the permit or lease cost for parking spaces. This works particularly well if parking is 'unbundled' from the office space lease and employers pay to lease a specific number of parking spaces separate from their office space lease. Providing a guaranteed ride home program also helps employees make the switch to riding transit, knowing that if they must stay late at work, or leave early to get a sick child, a ride home is guaranteed.
- **Walking.** Downtown Barre is surrounded by attractive neighborhoods within a short walking dis-



*Wayfinding signage directing visitors to parking areas contributes to a user-friendly downtown.*

tance of downtown. Barre should work to ensure that pedestrian routes and street crossings are attractive and safe in order to encourage walking.

- **Carpooling.** Given the increasing cost of fuel, carpooling is a commute option that is experiencing increased popularity. With new social media and relatively simple technology, there are emerging programs and 'apps' that provide carpool matching services. Preferential parking for carpools should be accommodated in downtown parking for employees to encourage carpooling.
- **Shared Vehicles.** The City should explore options to work with employers to accommodate a shared vehicle program (e.g., ZipCar) that provides an incentive for employees and residents of Barre to rely less on driving.

# NORTH MAIN TO SUMMER STREET



*As underutilized properties on North Main Street are revitalized there will be addition parking demand,*

## Future Parking Demand

Within the plan area, there are several buildings that have vacant space that would be attractive for new uses and activities and would add to the parking demand of the downtown. Setting aside future development of City Place, these areas include:

- Second floor of Needleman's building (Ormsby, J.)
- Worthen Block (Garr, D.)

- Dollar Store (Overlake Park, LLC)

There are underutilized properties on the opposite side of North Main Street as well, most notably the Lasch building.

Reuse of these properties would benefit from additional municipal parking capacity. Under current conditions, all of these buildings would rely on existing parking lots and street spaces.

# MASTER PLAN

**Table 4: Summary of Capital Costs  
North Main to Summer Street**

Project Area	Project Components	Estimated Cost
Merchant to Pearl Street	Rebuild Parking Sidewalks Landscaping Lighting Main St Plaza Walkway Enhancements	\$ 930,000
Pearl Street to Keith Avenue	Rebuild Parking Sidewalks Landscaping Lighting Pearl St. Enhancements	\$ 465,000
Keith Avenue to Elm Street	Rebuild Parking Sidewalks Landscaping Lighting Pearl St. Enhancements	\$ 595,000
Grand Total		\$ 1,990,000

## Cost Estimates

A preliminary estimate for the cost of constructing the North Main Street streetscape and surface parking lot improvements described in this plan are summarized in Table 4. The cost estimate includes allowances for 'soft costs' including a design and engineering, project management fee of 20 percent, as well as a contingency allowance of 20 percent. These costs DO NOT include the cost of land or parking structures.

The costs include demolition, repaving, striping landscaping and lighting of the parking areas and sidewalks, landscaping of the pocket park at Summer and Pearl Street, and enhancements of the walkways and alleys (Pearl Street and Keith Avenue) including the monument/entry markers, ambient lighting and paving. The costs also assume a contribution to the plaza in front of City Place.

# NORTH MAIN TO SUMMER STREET

Appendix A: Summary of Workshop Comments



## Summary of Workshop Comments

August 11, 2011

### Missing from Area

- Evening Attractiveness
- Fitness/Social/Rec. Activity
- Intergenerational Fitness
- Adult Education
- Nice Hotel – Supports BOH and Tourism
- Grocery Store
- Family Retail
- Restaurants
- Bakeries / Mfg. (w/Aromas)
- Green Space

### Problem Areas

- No Walk Zone (Pearl Street)

### Assets

- Historic Buildings
- Park in Vacant Lot
- Clean Streets
- Bees

### Ideas

- Pedestrian Only Streets
- Economic Mix of Housing
- Remove / Replace Buildings
- More Attractive Streetscape
- Park in Vacant Lot
- More Attractive Welcoming Bus Stop
- Improve crossings
- Façade Restorations of Main St. Historic Buildings
- Utilize Upper Floors of Buildings
- Access to Bike Path
- Need More stores on Main St.
- Need More Employment in Upper Stories
- Improve Wayfinding
- Relocate parking areas to the middle of the block
- Senior Housing / Sr. Center / Project Independence





MAP FROM AUGUST 11, 2011 WORKSHOP



## Barre North Main to Summer Street

### Workshop #2 Comments

September 22, 2011

- Pay attention to how to improve walkways on side streets (Pearl and Keith) to be more attractive and pedestrian friendly.
- A+ on the plan 😊
- Consider “lateral” access points into the parking areas from Elm Street. Deck there? Could help Aldrich Library which needs more parking.
- What is the time-frame for this plan?
- Connections to Merchants Row is important. Bicycles and pedestrians.
- Why didn't you redevelop the Jacobs building?
- Parking options:
  - What do decks look like?
- Another park on Summer Street?
- Elm Street loop?
- Need to draw people into areas.

November 10, 2011 Workshop

- What about traffic impact of new development?
- What about narrowing Church Street?

# NORTH MAIN TO SUMMER STREET

Appendix B: Parking Inventory and Assessment



## MEMORANDUM

---

To: Carolyn Radisch, ORW  
From: David Saladino, PE; Erin Parizo, EIT  
Subject: *DRAFT* Parking Inventory and Assessment for Downtown Barre  
Date: 18 August 2011

This technical memorandum summarizes our parking assessment of the area included within the Downtown project study area in Barre, Vermont. This region includes the parking facilities located within the blocks bordered by North Main Street, Summer Street, Elm Street, and Merchant Street.<sup>1</sup>

This memorandum includes the following sections:

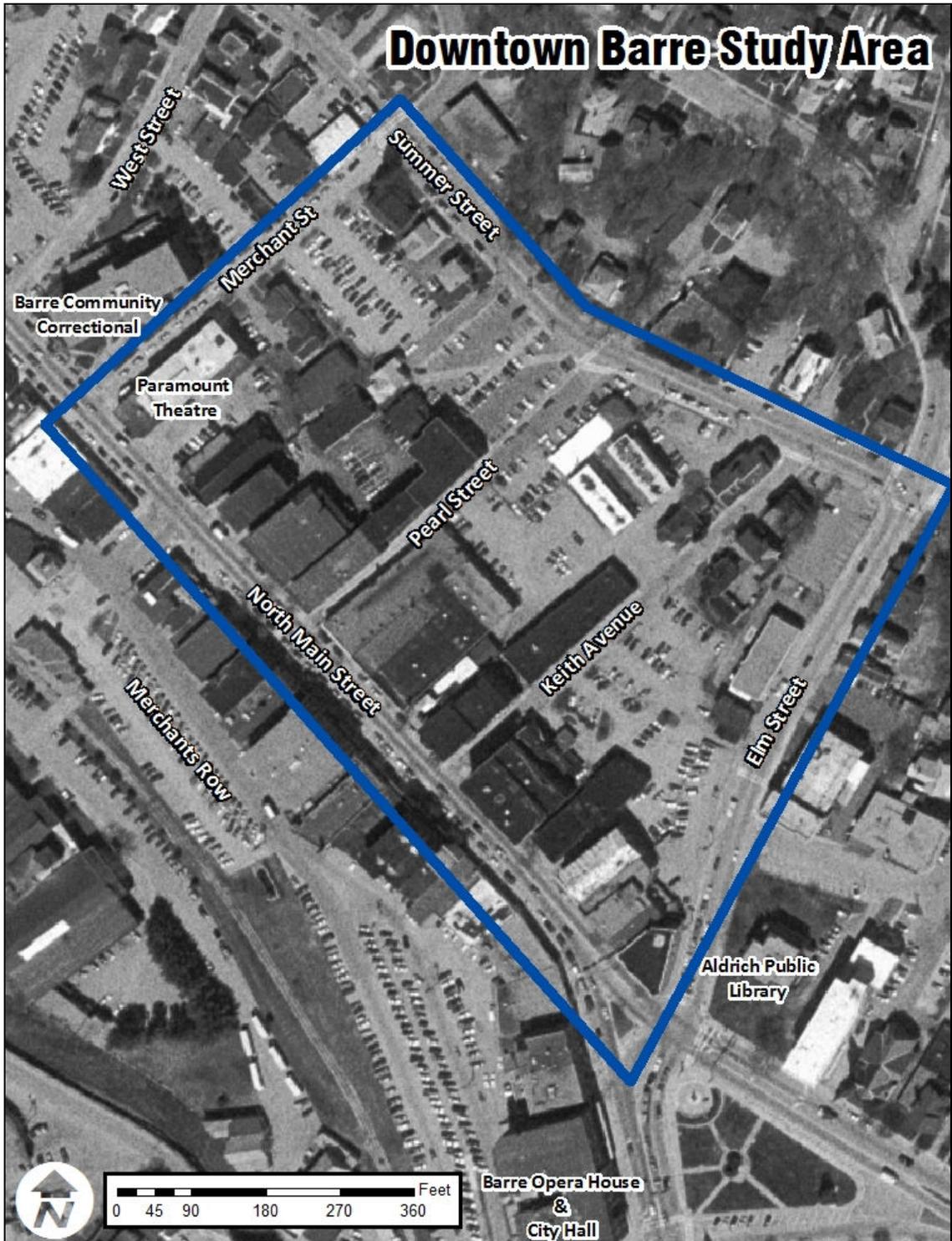
- Inventory of Existing Parking Spaces and Parking Control Type
- Summary of Average Parking Utilization
- Traffic Circulation
- Parking Management Options
- General Observations and Recommendations

Figure 1 on the next page outlines the boundaries of the primary study area.

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<sup>1</sup> Parking data was collected for an area that extended beyond the project study area. The details of the parking assessment from the extended study are attached in Appendix A.

Figure 1: Downtown Barre Study Area



## Inventory of Existing Parking Spaces and Parking Control Type

We conducted our inventory of parking spaces in the Downtown project study area on Tuesday, June 14<sup>th</sup>, 2011. This inventory included an assessment of the current parking supply, parking control types (public, private, and permit), and parking occupancy at three times during the day (9 AM, 12 PM, 4 PM).

The parking inventory identified parking spaces based on one of the following three control types:

- 1) Public: *Parking spaces that are owned by the City of Barre where the public can park at their discretion. It may be controlled by parking meters or be free of charge.*
- 2) Private: *Parking that is available on a restricted basis. The spaces are typically reserved for residents of adjacent housing units or employees/customers of particular businesses. These spaces are typically restricted by signage denoting the terms.*
- 3) Permit: *Parking spaces that are owned by the City of Barre which requires a municipal parking permit to utilize.*

There are 420 total parking spaces available in the study area. Figure 3 3 on the next page illustrates the distribution of these 420 parking spaces, color-coded by parking control type and labeled with total capacity.

Figure 3 reveals that 60% of the parking supply (253 spaces) in the project area is reserved exclusively for patrons or employees of individual businesses, or tenant parking for residential buildings.

Public parking spaces in the Downtown are divided into two distinct control types. The first type is non-metered and offers free parking up to two hours. These spaces are located along Main Street, Keith Avenue, and several lots distributed throughout the study area. The remaining public spaces are controlled with parking meters.

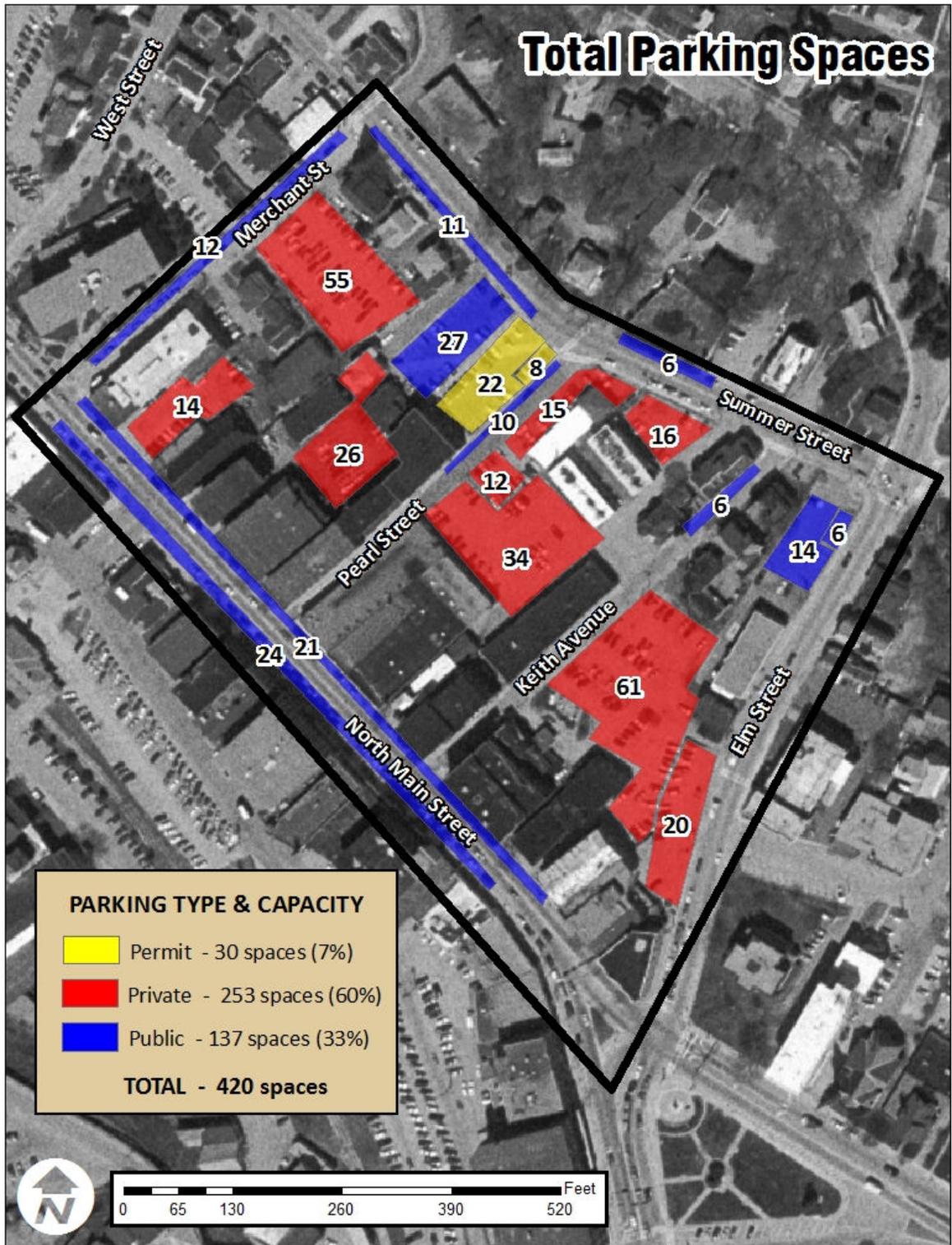
The City currently issues two types of parking permits: 24-hour and daily permits. The 24-hour permits currently cost \$220 per year and are typically issued to downtown residents, 49 of which were issued as of the drafting of this report. The daily permits cost \$135 per year and there were 316 issued as of the drafting of this report. A comparison of costs with parking permit pricing in similar towns is shown in Figure 2.

Figure 2: Parking Permit Cost Comparison

Town	Permit Type	Annual Cost	Permit Type	Annual Cost
Barre	24 Hour	\$220	Daily	\$135
Brattleboro	24 Hour	\$220-\$800 (Lot Dependent)		
St. Johnsbury	24 Hour	\$300	Daily	\$125
Montpelier	24 Hour	\$500-\$840 (Lot Dependent)		



Figure 3: Total Parking Spaces and Capacity



## Summary of Average Parking Utilization

To establish a sense of the utilization and distribution of parking within the study area, we conducted parking utilization counts during a weekday (June 14, 2011) at 9 AM, 12 PM, and 4 PM. Based on this data, we found that the average utilization over a typical weekday was 48%, with the highest utilization occurring during the midday period (56%). Figure 4 shows the total number of spaces occupied during each study time period.

Figure 4: Parking Occupancy by Time of Day

Time Period	# Spaces Occupied	% Occupied
9:00 AM	174	41%
12:00 PM	235	56%
4:00 PM	198	47%

Figure 5 shows the spatial distribution of the average parking utilization observed during the three time periods, with the highest utilization rates occurring around the courthouse and along Main Street.

Figure 5: Average Weekday Parking Utilization

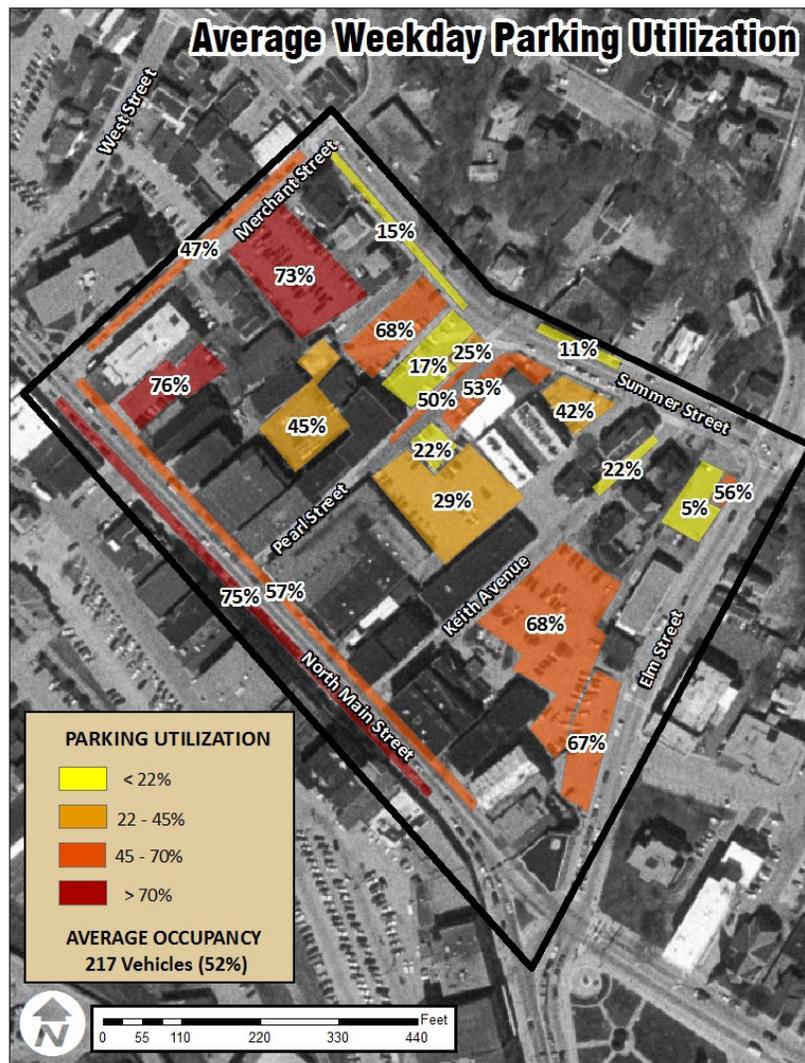


Figure 6 illustrates the average occupancy rates based on the parking control type. Looking deeper into the data, we find that the highest occupancy rates were found in the private spaces (53%) over the course of the day and only 6 of the 30 permit parking spaces were occupied.

Figure 6: Average Weekday Parking Occupancy by Type of Parking Control

Control	# Spaces Occupied	% Occupied
Private	134	53%
Public	56	41%
Permit	6	21%

Even during the peak parking periods of the day, we observed that nearly half of the parking inventory within the study area was empty. Over the course of the day, the average occupancy of all lots was approximately 52%. Factoring this figure up to account for weekly and monthly peaking, we arrive at an *peak* occupancy rate projection of approximately 60%, based on existing supply and land uses. According to many parking management professionals, a sign of optimal parking circumstances occurs with a utilization rate of around 85%<sup>1</sup>. This rate typically implies that parking is easily available and well managed, but not over-built.

## Traffic Circulation

The majority of traffic seen in Downtown Barre was observed using North Main Street as the primary route. The main intersection to the north of the study area is that of Route 62 and Route 14, state routes that both see heavy vehicle traffic during peak hours. On the southern end of the study area there is the intersection of Route 302 and Route 14, which also experiences heavy volumes of traffic. Cut through streets between North Main Street and Summer Street are either fully one-way or have sections that are limited to one-way vehicle traffic as shown in Figure 7 on the next page. West Street is limited to northbound traffic, while Merchant Street (see photo below), only allows for southbound vehicles. The other two connecting streets in the study area permit two-way traffic flow except for small segments, depicted in Figure 7, adjacent to North Main Street.

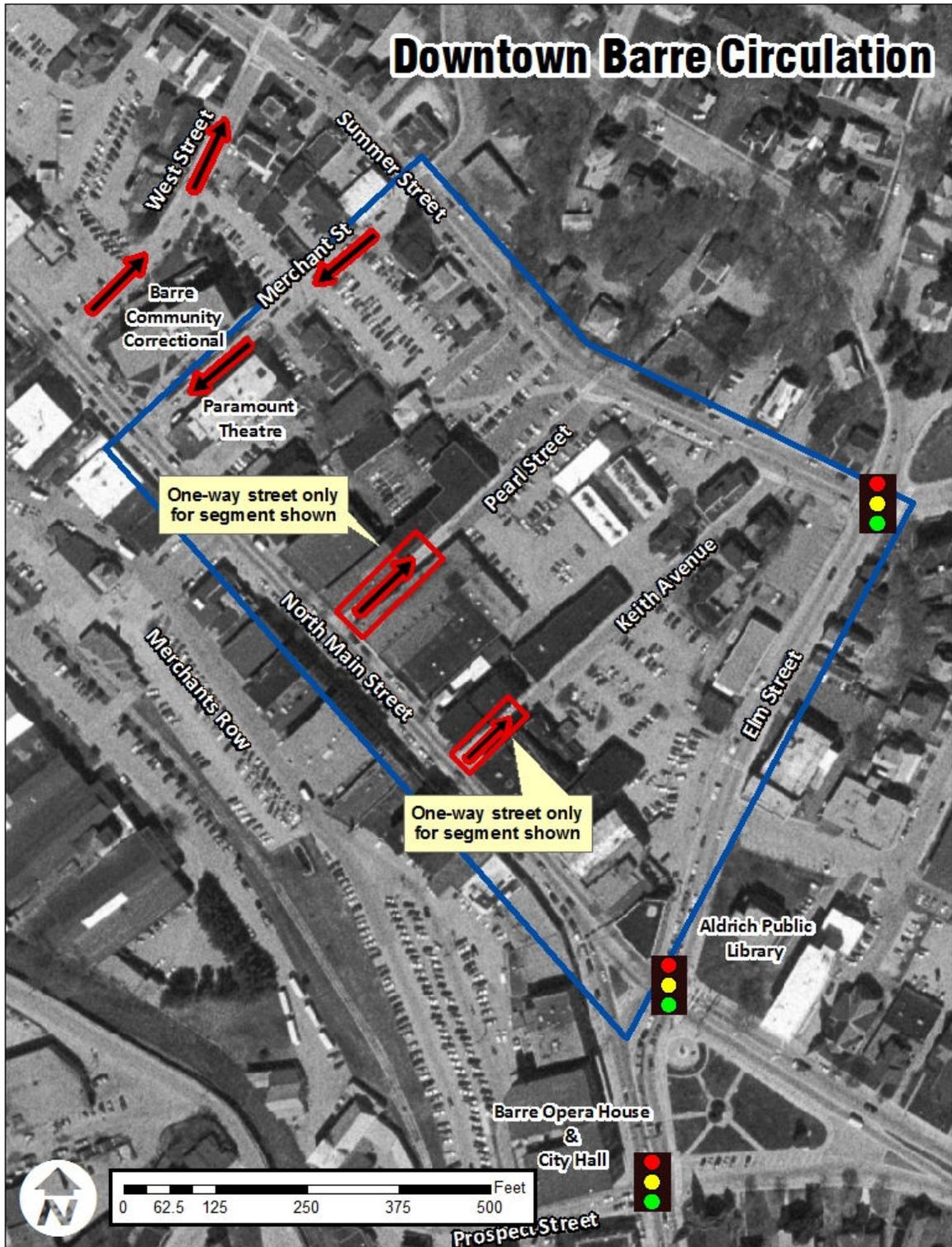


Due to upcoming construction during the North Main Street Reconstruction project, there has been a newly implemented traffic signal that is located at the intersection of Elm Street and Summer Street. When North Main Street is closed to vehicular traffic over the next one to two years, Summer Street will likely see a large increase in vehicle flow. In addition to the new traffic signal, neighboring signals will also be retimed to allow vehicle flow to be as efficient as possible.

<sup>1</sup> Two sources include: Shoup, D. (2005). *High Cost of Free Parking*. APA Planners Press; Litman, T. (2011). *Parking Solutions*. *TDM Encyclopedia*.



Figure 7: Downtown Barre Circulation



## Options for Parking Management

As described previously in this memorandum, the current parking supply is controlled as either private, permit, or public spaces. The private spaces are signed as such, the permit spaces are signed as either daily (6 AM – 6 PM) or 24-hour, and the public spaces are metered individually or open, free of charge.

Based on our site assessment and discussions with City officials, the following parking management options should be considered as part of this planning process:



- **Electronic Parking Payment System:** Many municipalities are migrating from individually-metered spaces to electronic parking payment units to simplify maintenance and enforcement, increase revenue (by adjusting rates by time of day or day of year), and decrease visual clutter. Many of the units incorporate solar panels and cellular technology so additional power or communications infrastructure is not needed. There are two primary options for electronic parking payment in surface lots: 1) pay and display and 2) pay by space. Both systems are fairly similar in operation and can be set up to accept payment by cash and credit card and read permits issued by the City.
  - **Pay and Display:** With a pay and display system, the user parks, pays an appropriate amount for their expected duration, receives a receipt card from the unit, and then displays the card on their dashboard. This is the system currently in place behind the Capital Plaza hotel in Montpelier.
  - **Pay by Space:** With a pay by space system, the user parks and notes which numbered space they are in then enters that parking space into the payment unit and pays an appropriate amount for their expected duration.
- **Alternate Approach to Permitting:** It is our understanding that a previous parking permit system allowed parking permit holders to park in any space, including metered spaces. As long as their parking pass was visible, they did not need to feed the meter. This system would basically allow all spaces to be metered and could increase the potential for parking revenue by increasing the total supply of metered spaces. This system would also help minimize the amount of duplicate parking spaces being provided in the City. One disadvantage of this system is that a permit holder would not be guaranteed a space. However, given the current parking demand in the project area, it would appear that excess capacity would be available at most, if not all times.

## Other Observations and Recommendations

A further observation that we noted during our site inventory was the lack of clarity in on-street parking regulations. There were few signs designating which sides of the streets vehicles were allowed to park on. Some of the curbing, on Keith Avenue for example, was painted yellow, which typically represents a “No Parking” zone. We observed however, that occasionally there were vehicles parked next to a yellow curb. This may have been due to inconsistent signage, the deterioration of the yellow paint on the curb, or a combination of both that lead to confusion among drivers. After speaking with City officials, it was made clear to us that the yellow curbing does in fact suggest that there is no parking on that section



of the street. We recommend adding signs, similar to what's pictured below, on streets where parking is not allowed, along with repainting the curbs in "No Parking" zones to make it clearer.

As a result of the upcoming North Main Street Project, there have been a couple of temporary parking related changes. These changes will be in affect only during the duration of construction for the project. The first of which is that on-street parking on Summer Street will no longer be allowed. With Summer Street experiencing the flow of traffic that Main Street would typically receive, there must be sufficient right of way for traveling vehicles. The second is that numerous parking meters, in Merchant's Row as well as in parking lots between Main Street and Summer Street, have been emptied so no money can be inserted. This was done so that while North Main Street is closed for construction, shoppers and visitors will still have some refuge in free parking. After the construction is finished, the meters will be returned to normal and parking will remain as it was.

There is also an opportunity to provide a more comprehensive parking messaging and wayfinding system to help drivers locate public and permit parking lots throughout the downtown. Consistent signing, placed at strategic locations (i.e. gateways to downtown, lot entrances, etc) would help drivers unfamiliar with the downtown to locate parking. Signs similar to the ones pictured to the right can be used in order to convey a clearer message of the location of parking facilities. Newer technology that is still progressing is that of real time parking information. Through the use of smart phones and mapping applications, the user would be able to view their current location in reference to nearby parking facilities. These could be as simple as showing a map with parking areas highlighted, along with they intended use (permit/public), or they could be more detailed and reveal specific parking spaces that are currently available. The technology to do the latter would be much more comprehensive than the simple parking map, but both options would significantly increase the ease at which visitors can find available parking.



## APPENDIX A – BROADER STUDY AREA CONTEXT

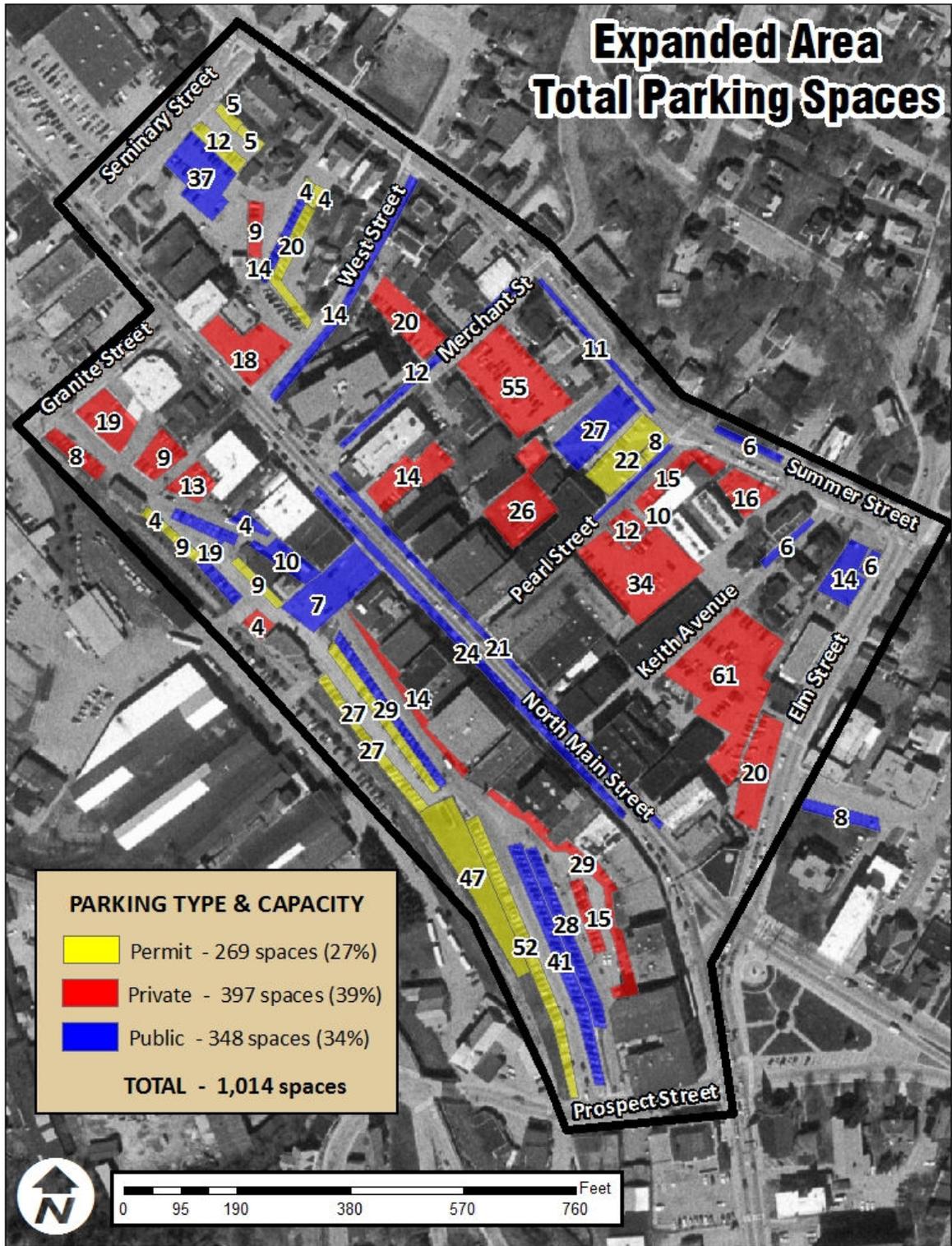
Parking data collection was conducted in an area that extended beyond the current project study area to cover the area shown in Figure 8 below.

Figure 8: Expanded Downtown Barre Study Area



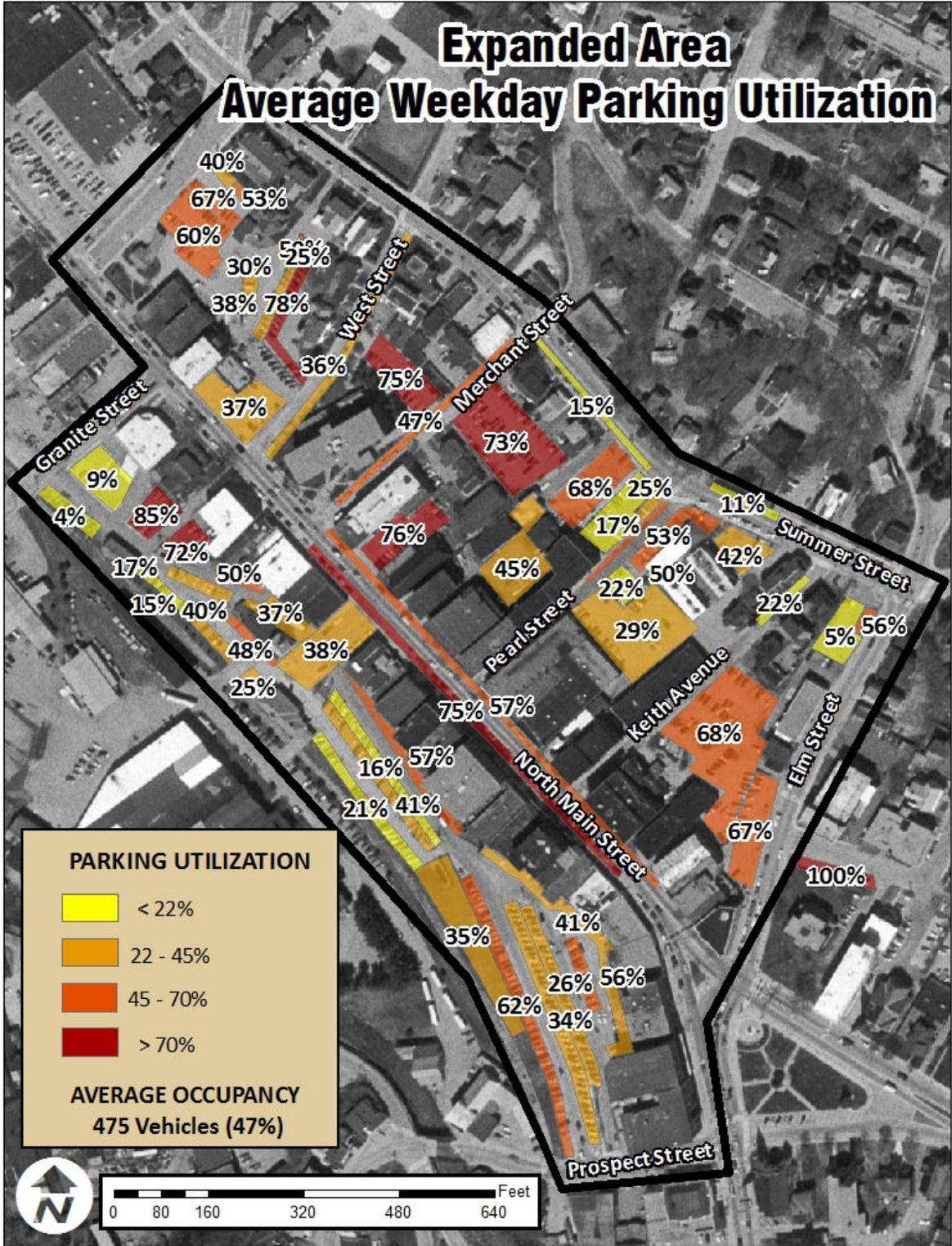
Figure 9 represents the parking facilities in the broader region by type and capacity. Similarly to the smaller study area, the most prominent category of parking is privately owned or used..

Figure 9: Expanded Area Total Parking Spaces and Capacity



Shown below in Figure 10 is the average occupancy for each facility during the observation period in the larger study area. This area has an average occupancy of 47%. With an objective utilization of 85%, this is even more so below the goal and can be explored for improvements.

Figure 10: Expanded Area Average Weekday Parking Utilization



Summarized in Figure 11 are important data from the larger region of study in the Downtown area. The supply is the number of spaces of that parking type in the area, along with the percentage of the supply that that type makes up. The occupancy is the average number of vehicles that were observed in each type of facility during the count period.

*Figure 11: Parking Supply and Occupancy for Expanded Area*

<b>Parking Type</b>	<b>Total Supply #/%</b>	<b>Average Occupancy #/%</b>
Private	397/39%	186/47%
Public	348/34%	146/42%
Permit	269/27%	113/42%



# MASTER PLAN

## Appendix C: Downtown Parking Alternatives



To: Mike Miller, AICP  
Director of Planning and Zoning

From: Carolyn Radisch  
ORW Landscape Architects and Planners

Date: January 26, 2012

RE: Downtown Parking Capacity Schematic Alternatives

## **INTRODUCTION**

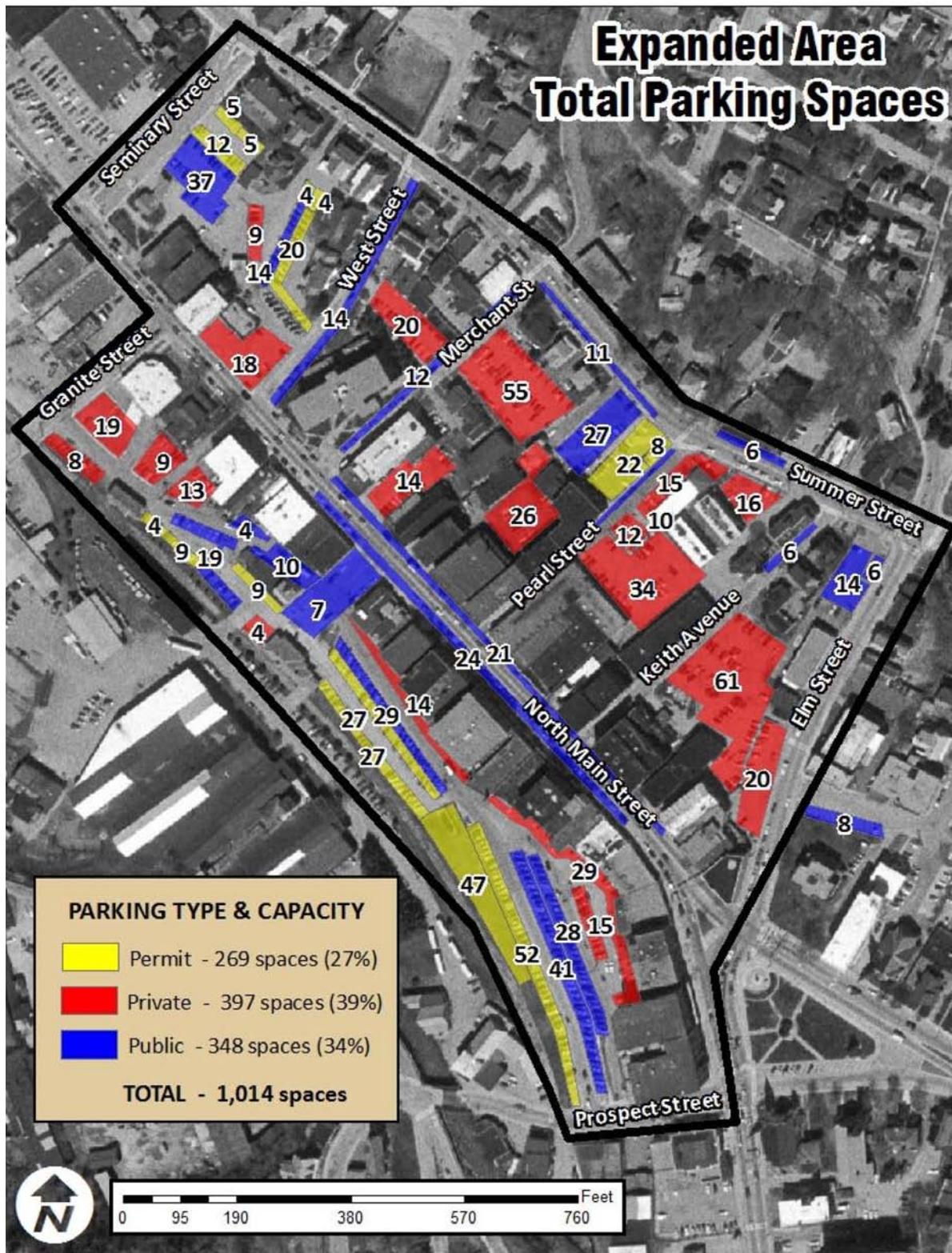
With the proposed development of City Place for new employment and retail uses, as well as the renovation of other underutilized properties in Barre's North Main Street downtown district, there will be demand for additional parking in the downtown. This memo reviews the existing parking supply in the downtown and provides an assessment of future parking capacity with the addition or reconfiguration of surface parking lots, decks and a garage.

### **OVERVIEW OF EXISTING DOWNTOWN PARKING FACILITIES**

The parking supply in downtown Barre is comprised of a combination of public and privately owned lots and on-street parking spaces. A downtown parking inventory and parking utilization study was undertaken by Resource Systems Group, Inc. for the Merchants Row and North Main to Summer Street Master Plans. The following description of the existing parking and utilization summarizes the pertinent information from that study.

As shown in Figure 1, there are 1,014 parking spaces in the downtown area (the area including both sides of North Main Street, Granite / Seminary Streets to the north and Elm / Prospect Streets to the south), including 611 spaces in public (City of Barre) lots, 397 spaces on privately owned parcels that typically are available only to employees or customers of a particular business, and 180 on-street spaces on North Main, Summer, Pearl, Merchant, and West Streets (Note: on-street spaces on Elm and Summer Street were removed to accommodate traffic flows for the 'Big Dig' on Main Street at the time of this inventory. These spaces will be replaced after the completion of the Main Street project and will add approximately 25 on-street spaces into the supply). Spaces in public lots may be either open for general use or controlled by a permit issued to specific users for a fee. There are 269 permit spaces within the City of Barre lots. In summary:

FIGURE 1: PARKING INVENTORY AND TYPE



Source: Resource System Group, August 2011

- Public Lots
  - Metered/Open: 254 spaces
  - Permit: 269 spaces
  - On-street : 94 spaces
- Private Lots 397 spaces
- TOTAL 1,014 spaces

**WEEKDAY PARKING UTILIZATION**

The utilization of the downtown parking during the weekday was assessed in June 2011 for the North of Main to Summer Street area, and in October 2009 for the Merchants Row / Enterprise Alley area. Parking occupancy counts were manually collected at three times during the day, specifically, 9 AM, 12 PM, and 4 PM. Weekday counts are of particular concern because that is when spaces are used by office workers. Occupancy rates at or close to 100 percent are generally considered undesirable as motorists must hunt for parking, can become frustrated and are tempted to park illegally. In addition, at 100 percent, there is not an adequate allowance for special events. A system will operate most efficiently when it is no more than 85 to 95 percent full, depending on the type of parking. The goal for higher turnover on-street or short term spaces should be 85% (for a typical weekday) while the target for longer-term employee or off-street parking can be higher, in the range of 90%. Ideally the parking supply is managed and priced to maintain these occupancy rates.

The average parking occupancy within the downtown study area is 47%. In general, utilization is highest during the noon hour, at 55%.

**Table1: Parking Occupancy by Time of Day**

Time Period	Spaces Occupied	% Occupied
9:00 AM	422	43%
12:00 PM	538	55%
4:00 PM	422	43%

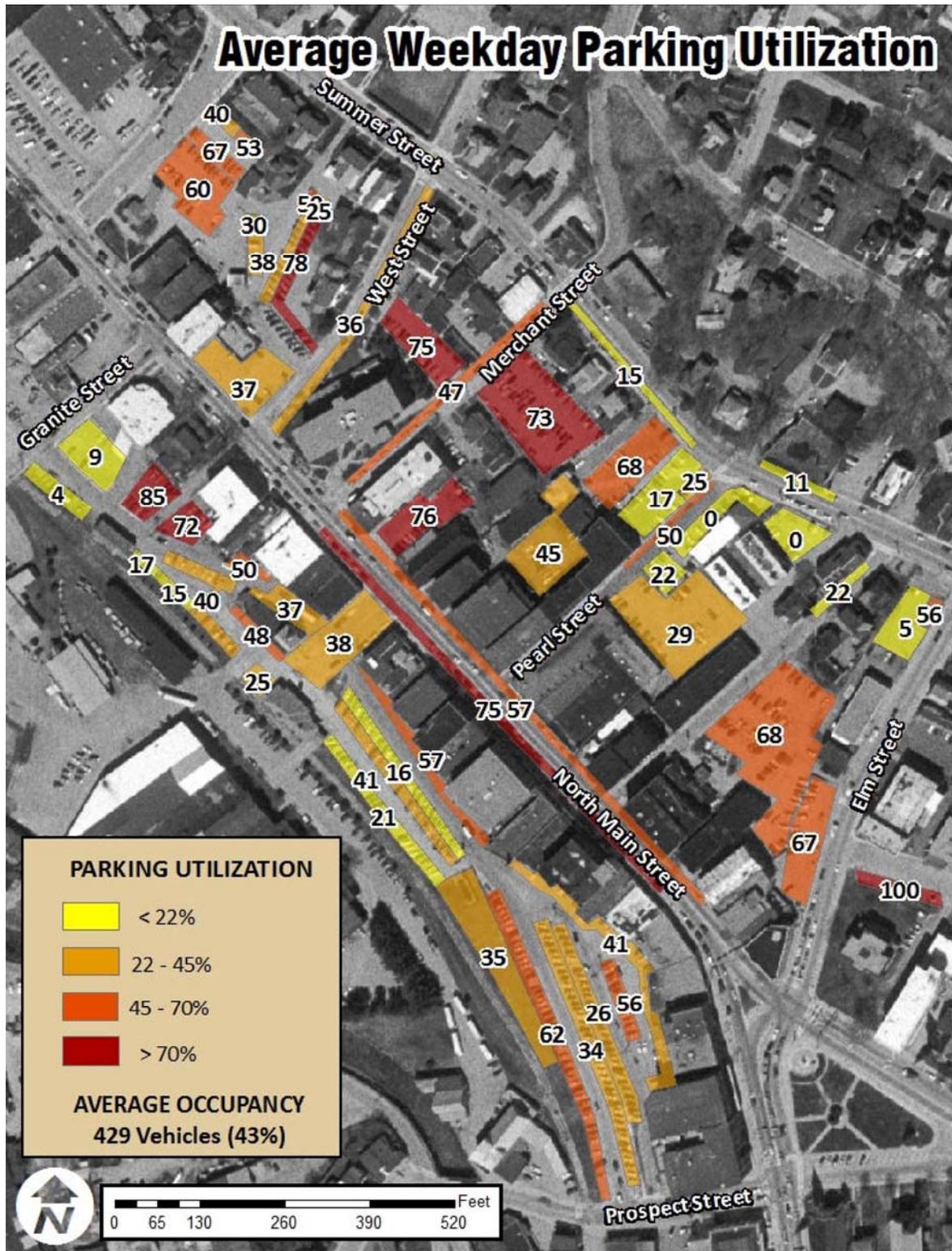
Source: Resource Systems Group, August 2011

The average weekday occupancy of various parking lots in the downtown is shown in Figure 2. There is excess capacity in Merchants Row and within various private lots in the North of Main Street area. Overall, the parking occupancy by type parking control type is similar on average, as shown in Table 2, however, a review of Figure 2 reveals that some permit spaces have a low utilization during the weekday (these are likely residential spaces that must be available for residents at any time) is offset by employee permit spaces (which would have lower utilization during evenings and weekends).

**Table 2: Parking Occupancy by Parking Type**

Parking Type	Total Supply	Average Occupancy #/%
Private	397	186/47%
Public	348	146/42%
Permit	269	113/42%

FIGURE 2: AVERAGE WEEKDAY PARKING UTILIZATION



Source: Resource System Group, August 2011

## ESTIMATE OF AVAILABLE PARKING CAPACITY IN PUBLIC LOTS

For the municipal parking lots in the downtown (excluding the on-street spaces) the available parking capacity is estimated to be 157 spaces at weekday peak, assuming that a target occupancy of 85% is maintained in the retail district. There are 523 City of Barre municipal parking spaces in off-street lots; at a peak weekday occupancy of 55%, there is an unused capacity of 30% of the spaces, or 157 spaces. In addition, the State of Vermont lots have unused weekday capacity of approximately 20% or 15 spaces (employee parking lots have a higher assumed target occupancy of 95%).

## ALTERNATIVES FOR EXPANDING DOWNTOWN PARKING CAPACITY

While there is some parking capacity in Merchants Row and within various public and private lots, with the anticipated growth of new employees in the downtown represented by City Place as well as the renovation of various underutilized properties in the downtown, additions and management of the parking supply will be required. There are several options to expand the downtown parking supply, as discussed below.

There are a couple of considerations regarding these plans:

- These are schematic plans developed to produce an estimate of parking capacity and, as such, should be considered as approximate estimates of parking yield for planning purposes. Actual yields of parking spaces will vary as more detailed designs are developed.
- All parking plans assumed parking on surface or above ground. Due to hydrologic conditions in the area, no assumptions were made regarding parking below grade.

TABLE 3: SUMMARY OF DOWNTOWN PARKING SUPPLY EXPANSION ALTERNATIVES

Location	Parking Space Gain (Net New Spaces)
<b>Metro Way / Williams Lane</b>	
Surface Lot	128
Garage	79 per level
<i>Subtotal Lot + 1 Level</i>	<i>207</i>
<b>Keith Avenue</b>	
Lease Spaces	20
Reconfigure Parking	68
Parking Deck	154
<i>Subtotal Reconfigure + Deck</i>	<i>222</i>
<b>Pearl Street Lot</b>	
Deck	43
Reconfigure Parking	40
<b>West and Seminary Street</b>	
Reconfigure Parking	29
<b>Barre Civic Auditorium</b>	
Existing Parking Spaces	125

## METRO WAY / WILLIAMS LANE

Accommodating parking in the Metro Way area represents one opportunity to provide a large number of parking spaces within a short walk of the downtown center of gravity at North Main Street and Depot Square. This parking could be accessed via Granite Street and Depot Square/Williams Lane.

A surface lot at this location would accommodate **128 spaces**. A parking structure at this location would accommodate **79 spaces per level**. Both of these options are shown in Figures 3 and 4.

FIGURE 3: METRO WAY / WILLIAMS LANE SURFACE PARKING



FIGURE 4: METRO WAY / WILLIAMS LANE PARKING STRUCTURE



Parking at this location would require an attractive pedestrian connection to Depot Square, including a walkway, landscaping and lighting so that parkers feel good about walking to Main Street from this location which is convenient, but in an industrial area. Parking at this location would likely also require on-site stormwater management, which can be attractively accommodated on this site as shown in the attached diagram.

#### KEITH AVENUE

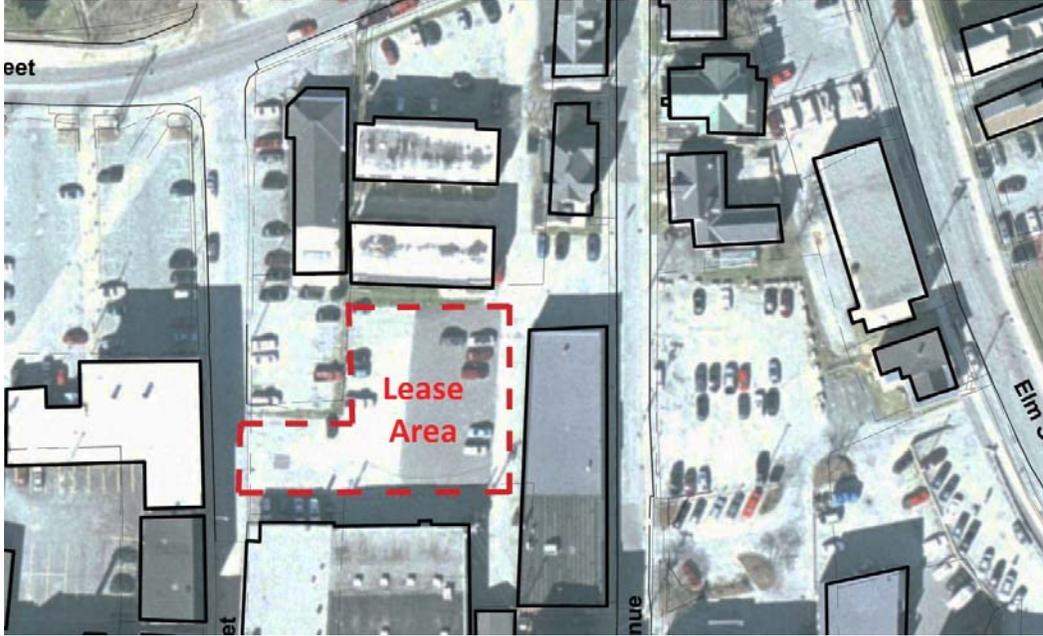
This option considers three options:

1. Lease of existing spaces
2. An improved layout of parking behind the Main Street buildings in the center of the block; and
3. A deck over these parking spaces

**Existing Parking Spaces:** Currently there are 127 spaces in privately owned lots between Pearl and Elm Streets. These spaces range from 22% utilized to 68% utilized.

**Lease Spaces:** In the short term, Barre may be able to lease some spaces that are currently underutilized. We estimate this could add **20 spaces** to the supply. See Figure 5.

FIGURE 5: KEITH AVENUE LEASED SPACES



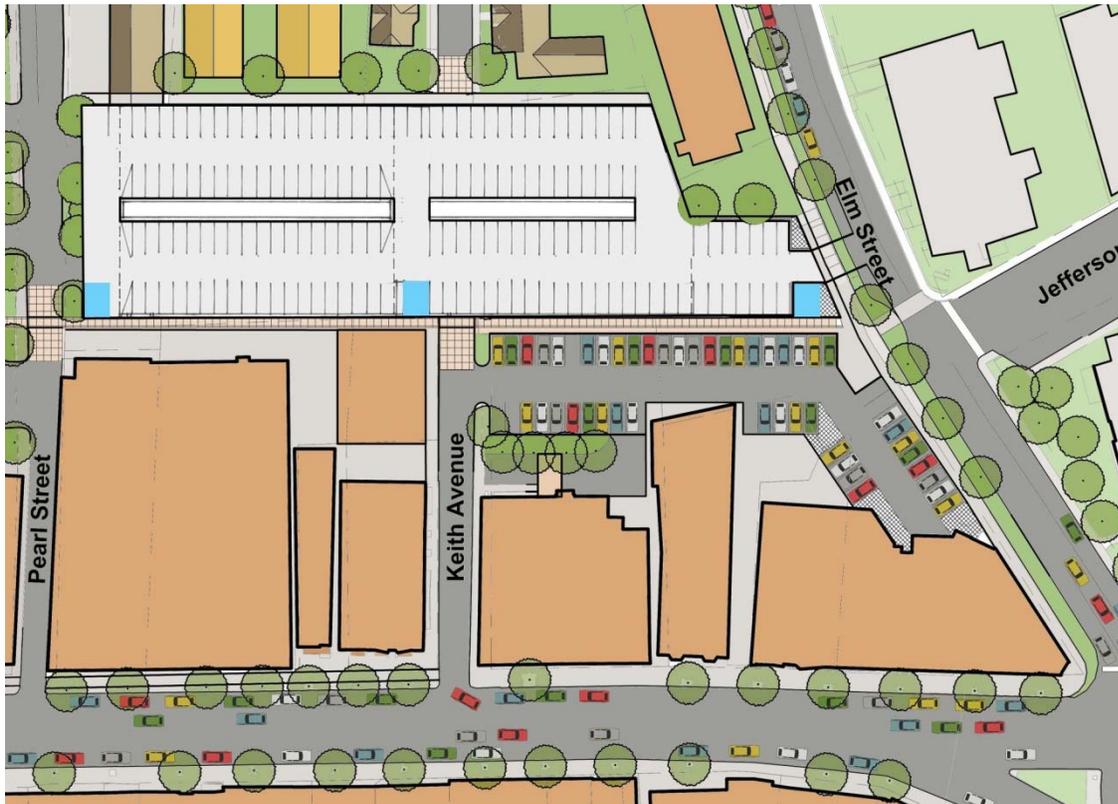
**Reconfigured Parking Lots:** With the reconfiguration of underutilized lots and the Merchants Bank and North Main Street Associates lots, an estimated 195 spaces could be accommodated, an increase of **68 spaces**. This configuration of parking includes many benefits in addition to more parking: the drive through at Merchant Bank is maintained, parking lots are safer, more visible to motorists as well as pedestrians. A continuous walkway from Elm Street through the parking areas to Pearl Street and City Place makes this configuration easily navigated for the first-time user as well as those familiar with the area. This also provides more parking near the Aldrich Library and Elks Club, both facilities that could use more parking at certain times. See Figure 6.

FIGURE 6: KEITH AVENUE PARKING LOT RECONFIGURATION



**Deck over Reconfigured Lots:** A deck over the reconfigured lots from Elm Street to Pearl Street would add **154 spaces**. This deck would take advantage of the change in grade between Elm Street and Keith Avenue by meeting Elm Street at grade and extending across the parking areas. It is assumed in this configuration that the deck is accessed only at Elm Street, and the lower level (surface parking below) is accessed via Pearl Street and Keith Avenue. See Figure 7.

FIGURE 7: KEITH AVENUE DECK

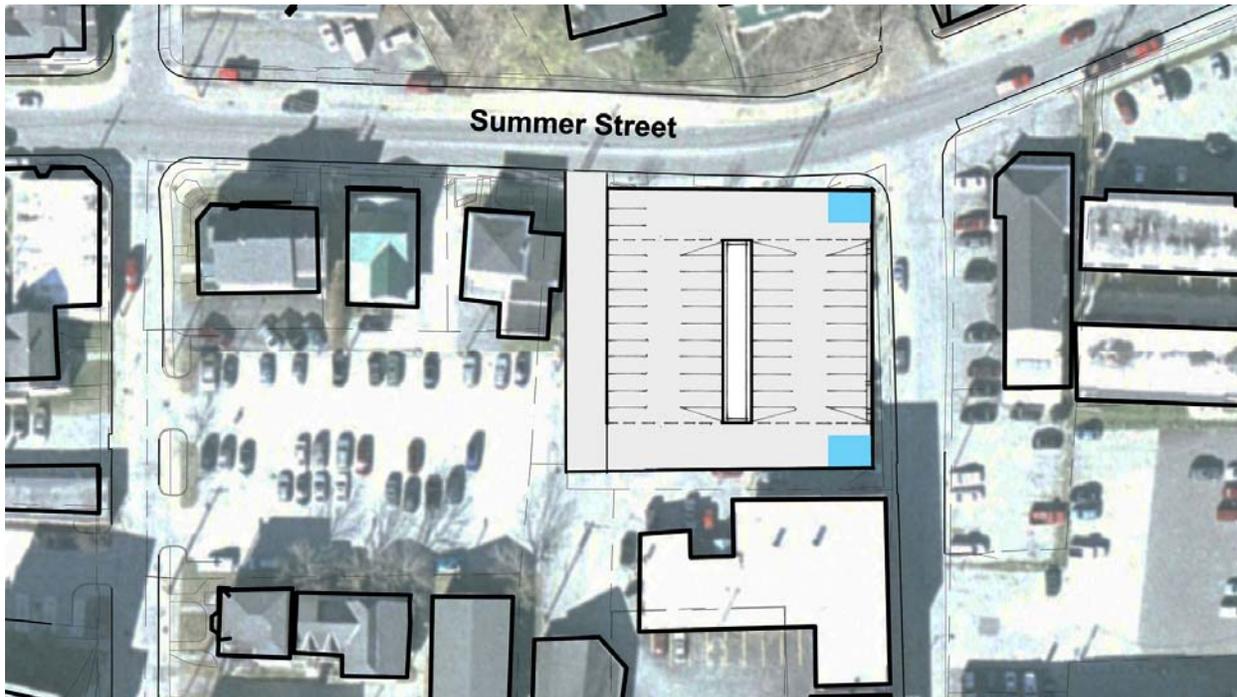


#### PEARL STREET / VERMONT COURTHOUSE LOT

**Existing Parking Spaces:** There are 112 spaces on these lots; 55 are within the State of Vermont lot and 57 spaces are within the City of Barre Pearl Street lot. This State of Vermont lot is right behind City Place and will need to be relocated for City Place to work. In the short term swapping this lot with the Pearl Street lot is one solution; in the long term these spaces can be picked up in any number of reconfigured downtown lots.

**Deck over Pearl Street Lot:** A deck over the Pearl Street lot would yield **43 spaces**. One consideration with this option relates to the underground stream beneath the Pearl Street lot. The deck would need to be designed and configured to avoid structural piles on the stream and it would need to remain accessible to trucks and equipment for maintenance. See Figure 8.

FIGURE 8: PEARL STREET DECK



**Reconfiguration of Parking:** With the redevelopment of this block with City Place, the parking lots should be reconfigured to better accommodate new parking demand, user-friendly parking and a more attractive downtown. Reconfiguration of the parking will yield 150 to 155 spaces depending on how loading at City Place is handled. This represents an increase of **38 to 43 spaces**. As a note, this option allows for the construction of new housing on Summer Street as well as a green space and pedestrian walkway in addition to new parking. See Figure 9.

FIGURE 9: PEARL / STATE LOT RECONFIGURATION



## WEST AND SEMINARY STREET LOTS

The City of Barre owns two public lots between West and Seminary Streets that accommodate 97 parking spaces. These two lots are bisected by a private lot which limits the efficiency of the parking layout.

**Reconfiguration of Parking.** With cooperation between property owners, the parking on these lots could be reconfigured to provide more parking spaces while still accommodating the drive through parking facilities at the Northfield Savings and Key Banks on this block. A reconfiguration of the parking on this lot would yield 126 spaces, an increase of **29 spaces**. See Figure 10.

FIGURE 10: WEST SEMINARY LOT RECONFIGURATION



## BARRE CIVIC AUDITORIUM

**Existing Parking Spaces.** The Barre Civic Auditorium off of Seminary Street is another parking resource for the downtown. There are approximately **125 parking spaces** at this location that would be available for weekday use. See Figure 11.

FIGURE 11: BARRE CIVIC AUDITORIUM PARKING



## CONCLUSIONS

All of these options provide for a significant expansion of the parking supply in downtown Barre; some options can be developed in the short term, others are longer term in nature.

In addition to the expansion of supply, Barre should manage its parking supply for maximum benefit. Some management approaches include the following:

**Shared Parking:** A pool of public parking that is shared between complementary users would hold many benefits, not the least of which is the most effective use of the resource and return on a significant investment. Parking that is used by employees during the day should be managed to be available for evening users (e.g., Barre Opera House, restaurants, Paramount Theater) and retail shops on the weekend. Public parking can achieve this optimal sharing of parking and reduce the overall parking demand for parking spaces in the downtown.

**'Smart' Parking Allocation:** A number of spaces can be allocated to a group of users; spaces should not be reserved for individual use as this is a very inefficient use of a valuable (and expensive) resource. As a rule of thumb 100 employees can typically share 60 – 80 parking spaces without it being a problem as on any given day employees are working off-site, sick, on vacation, etc. In addition, a parking supply that is managed through parking, enforcement and demand management to maintain the 85% to 95% percent utilization has a 'cushion' to accommodate the special events.

Short term (2-hour) parking spaces should be maintained along the street and closest to the buildings for retail users. Longer-term employee parking can be located further away – again a rule of thumb is that employees can be expected to walk up to 1,200 feet between their parking space and office.

## Demand Management:

**Pricing:** Parking should be fairly priced to manage the supply, keep a healthy turnover rate and encourage the use of alternative modes of transportation (discussed below).

**Enforcement:** Enforcement will be needed to ensure that the parking supply is effectively utilized.

**Alternative Modes of Transportation:** Downtown Barre is a transit, bike and pedestrian friendly location. Barre should encourage employees to use alternative modes through incentives such as:

- **Bicycling.** Providing bike parking, including covered bike parking associated with new developments; new development should include showers and changing area for employees (given the proximity of the Barre Multi-Use path, bicycling is a particularly attractive option in this location).
- **Transit.** Given the cost of providing parking, larger employers can offer to ‘cash out’ parking by covering the cost of transit passes for employees rather than paying the permit or lease cost for parking spaces. This works particularly well if parking is ‘unbundled’ from the office space lease and employers pay to lease a specific number of parking spaces separate from their office space lease. Providing a guaranteed ride home program also helps employees make the switch to riding transit, knowing that if they must stay late at work, or leave early to get a sick child, a ride home is guaranteed.
- **Walking.** Downtown Barre is surrounded by attractive neighborhoods within a short walking distance of downtown. Barre should work to ensure that pedestrian routes and street crossings are attractive and safe in order to encourage walking.
- **Carpooling.** Given the increasing cost of fuel, carpooling is a commute option that is experiencing increased popularity. With new social media and relatively simple technology, there are emerging programs and ‘apps’ that provide carpool matching services. Preferential parking for carpools should be accommodated in downtown parking for employees to encourage carpooling.
- **Shared Vehicles.** The City should explore options to work with employers to accommodate a shared vehicle program (e.g., ZipCar) that provides an incentive for employees and residents of Barre to rely less on driving.