Downtown Walkability

Brunswick, ME
2011-2012

A ContextSensitiveSolutions.org report

Published on ContextSensitiveSolutions.org in March 2012

Created by:
- Project for Public Spaces (pps.org)

With Support from:
- Federal Highway Administration (dot.fhwa.gov)
- Town of Brunswick, Maine
- Maine Department of Transportation
- Brunswick Downtown Association

Contents

Introduction ›

The CSS Champions Program

The CSS Champions Technical Assistance Program provides transportation practitioners who understand the value of CSS with targeted technical assistance for implementing CSS at key points within the project delivery process.

The Champions program is an outgrowth of the online technical assistance provided by ContextSensitiveSolutions.org, which is a website sponsored by the Federal Highway Administration's Surface Transportation Environment and Planning Cooperative Research Program (STEP) program.

The CSS Champions program, along with ContextSensitiveSolutions.org, are administered by the Project for Public Spaces.

The basis of the Champions technical assistance program is the belief that practitioners in state and local agencies, and non-governmental organizations, are demonstrating exemplary leadership in transportation by applying a CSS approach to a range of transportation policies and projects. Yet, even with their leadership, practitioners continue to face immense challenges that could benefit from technical assistance.

The primary objectives of the CSS Champions technical assistance program are the following:

- support practitioners who are leading change from within
- support projects that can transform transportation project development culture and mindset within communities and agencies
- support projects that are models for collaboration across several levels and silos of government and public involvement

The four projects that are participating in the program are:

- Denver, CO - Denver Department of Public Works - Brighton Boulevard Multi-Modal Corridor.
- Brunswick, ME - Town of Brunswick - Walkable Maine Street, Livable Downtown.
- Delaware - Delaware DOT and Delaware Greenways - CSS for Byways Workshops.
- New Mexico - New Mexico DOT - Livable Communities in Rural Areas.

The Champions program will include, in addition to this report, webinars, articles, and other resources. All content will be available on ContextSensitiveSolutions.org.

Brunswick and CSS

why a workshop, why now?

In Brunswick, the CSS Champions program sought to highlight and further the town's efforts to apply CSS principles to Maine Street, a state route, and its adjoining streets in downtown Brunswick. The town sought to identify improvements to traffic flow and "street-friendliness" on Brunswick's Maine Street and connecting streets, This goal stemmed directly from recommendations made in Brunswick's 2010 Master Plan for Downtown Brunswick and Outer Pleasant Street Corridor (referred to in this report as the "Downtown Master Plan").

The installation of a traffic signal and change in traffic patterns at the intersection of the southbound Route 1 exit ramp and Maine Street in the summer of 2011 gave vehicular traffic direct access into downtown Brunswick via Maine Street. This significant change in traffic flow provided an opportunity to identify and test new traffic-calming measures, offer ideas to improve crosswalks and on-street parking areas, as well as explore techniques for adapting Maine Street to its context and making it more pedestrian-friendly.

The aim of this technical assistance was to advance walkability in downtown Brunswick by:

- evaluating and recommending specific improvements for Maine street
- recommending a palette of improvements for the other streets in the study area that support the recommendations of the Downtown Master Plan and help realize the street types laid out in that plan,
- helping develop a road map for how recommendations can be implemented and made permanent, including possible pilot projects to test the effectiveness of one or more of the proposed improvements.

Master Plan for Downtown Brunswick and Outer Pleasant Street Corridor Vision

Visual Quality

The entire length of Maine Street and inner Pleasant Street is connected harmoniously through sidewalks and landscaping to create a unified, pedestrian friendly whole. The sides of Maine Street are connected with well-landscaped islands or pedestrian refuges. The amenities on the Mall, such as lighting and electrical outlets, are improved, while the natural features of this special place are still protected. Way-finding kiosks and maps, directing pedestrians and drivers to downtown businesses and attractions, are created and installed in convenient, appropriate places. A system of public-private collaboration exists to maintain downtown plantings, public spaces, and commercial areas.

Pedestrian and Vehicular Movement

Downtown is a pedestrian- and bike-friendly area with ample, easy-to-find parking, improved pedestrian crossings, and traffic-calming mechanisms. Together these create a roadway with fewer driver distractions. Through-traffic is minimized by directing it to appropriate alternative streets and highways. With the development of Maine Street Station, downtown is a transportation hub, with service provided by Amtrak and excursion trains, commercial bus lines, a local bus route, taxis, car and bike rentals.

Neighborhoods

Downtown residential neighborhoods are an economic asset to Brunswick, providing tax revenue and pedestrian traffic to downtown businesses and attractions. Housing options are increased, while preserving valued features of neighborhoods. The use of upper story space is enhanced, preserving historic architecture and making new construction and renovations fit the character of the historic downtown. Residential and non-residential development in neighborhoods generates pedestrian traffic and new businesses. It is of an appropriate scale and designed to minimize the impact on the neighborhood. The pedestrian and bicycle connectivity between neighborhoods and around downtown is enhanced by sidewalks, “sharrows”, lighting, and way-finding signage. Cut-through traffic is minimized by improving appropriate traffic arteries. Because of their livability and convenience, downtown neighborhoods are easily marketed and attract new families and individuals.

Marketing

Marketing strategies are aimed at countering the negative effects of the BNAS closing, maintaining the vibrancy of the Downtown, and fostering business retention and attraction. The mix of shops, restaurants and commerce is strengthened through the continued close relationships between the Brunswick Downtown Association and the Town’s Department of Economic and Community Development. Brunswick is designated a Main Street Maine community, increasing access to downtown experts and resources. In addition, close working relationships to promote downtown assets are reinforced between local businesses, college and arts communities, support organizations and neighborhood associations. A stronger, unified web presence is created and maintained, showcasing Town assets. In and out of state tourism is increased, as well as residents’ awareness of the Town’s assets - our “pearls.”

Finance

Financial incentives exist to attract and retain downtown businesses and promote a healthy mix of commercial uses downtown. Funding for downtown infrastructure and improvements are provided through a range of appropriate avenues, such as tax increment financing, grants, impact fees, special tax assessments, and charitable donations.

Brunswick's CSS Champions

Brunswick Town Council

The Brunswick Town Council is the 9-member elected governing body for the Town, consisting of 7 District Councilors and 2 Councilors-at-Large.

The Brunswick Town Council fully supports the recommendations of the Council-adopted 2011 Downtown Brunswick and Outer Pleasant Street Master Plan. The plan set the stage for Brunswick being nominated, then designated a 2011 CSS Champion. In addition, the Council appointed the Master Plan Implementation Committee to oversee the plan's implementation. Margo Knight, District 6 (Downtown area) Councilor, chairs the Committee and John Perreault, District 4 (West Brunswick/Pleasant Street area) Councilor serves as the Committee's Vice-Chair.

During the CSS Champion site visit, several Town Councilors took part in workshop events. The Council looks forward to the recommendations of the Implementation Committee to improve downtown walkability and traffic flow.

Downtown Brunswick and Outer Pleasant Street Master Plan Implementation Committee

The Downtown Brunswick and Outer Pleasant Street Master Plan Implementation Committee was appointed by the Brunswick Town Council in October 2011 as the lead entity to prioritize and suggest recommendations for Town Council's consideration, as well as oversee the implementation of the Master Plan adopted by the Town Council on January 24, 2011.

The Master Plan Implementation Committee is comprised of 10 members representing Town Council, Downtown and Pleasant Street neighborhoods, business owners, the Brunswick Downtown Association, the creative economy and the community at large. The Committee holds televised monthly meetings.

The Master Plan Implementation Committee took the lead on the CSS Champion work with its members providing active support in preparation for and participation in all activities. Since the workshop session, the Implementation Committee is now incorporating the Team's draft recommendations generated by workshop participants into those adopted as part of the Master Plan. The Implementation Committee is committed to moving forward to prioritize and recommend actions to the Town Council for early implementation.

Brunswick Downtown Association

the Brunswick Downtown Association (BDA) is an integral partner in the development of the Downtown Master Plan and its implementation. The BDA is a member-driven, action-oriented organization of businesses and citizens who work together for a better community. Their goal is to develop and maintain a vital, hospitable and lively downtown: a location for congregation, socializing and commerce and a source of pride for residents and neighbors.

The BDA coordinates downtown improvement projects, sponsors public programs and special events. As such, the BDA hosted a CSS Champions-focused breakfast meeting during the CSS Team visit. The Team members

highlighted the walkability workshop results of the day before and had an engaging dialog with over 100 members of the business community. In addition, the BDA utilized their e-list to market a later team presentation/open forum hosted and televised by the Town of Brunswick.

The BDA is governed by a 20-member Board of Directors, has a staff of three, and receives a major portion of their funding from the Town of Brunswick and memberships.

Brunswick Town Staff

The Brunswick Town Manager and Department Directors of Planning and Development, Parks and Recreation, Public Works, Fire and Police, as well as staff members (including Economic and Community Development staff) assisted in the preparation for the CSS Champion site visit and development of this report.

The Planning and Development Department staff and Councilor Margo Knight took the lead in site visit preparations, coordination and follow-up reporting. The Director of Planning and Development staffs the Master Plan Implementation Committee and will continue to utilize the recommendations of the CSS Champion report as the Town moves to implement the Master Plan.

Maine DOT

An ongoing partner of the Town of Brunswick is the Maine Department of Transportation (DOT). The Maine DOT Assistant Traffic Engineer, Stephen Landry, continues to be an active participant in the development and now implementation of the Master Plan with regard to the Town's challenging motorized and non-motorized traffic circulation patterns.

Mr. Landry participated in the planning for the CSS Champion Site Visit. He also participated and gave MaineDOT-specific guidance during the walkability workshop. It is anticipated that MaineDOT will continue to work with the Town of Brunswick during Plan implementation.

The Walk Audit & Workshop

two days on the streets of downtown Brunswick

The Walk Audit and workshop took place on November 3rd, 2011 and brought together a group of approximately twenty stakeholders including local business owners, Town Council members, Town staff, law enforcement, Maine DOT, non-profit representatives, members of the Downtown Master Plan implementation committee, and interested citizens. Led by Dan Burden of the Walkable and Livable Communities Institute, the walk audit got participants out on the streets of Brunswick. The intention of the walk audit was to enable participants to look at the study area through the eyes of various street users and to begin to understand how street improvements could support identified community-wide goals. Expectations and desires expressed by participants at the outset included:

For the workshop:

- Better understand why and where people walk.
- Identify solutions that will generate broad support.
- Prioritize solutions and actions.

Participants on the walk audit.

For Brunswick's Maine Street and other downtown streets:

- Improve the environment for walking, biking, and business on Maine Street.
- Ensure that everyone, particularly children, can get around downtown easily and safely by foot.
- Make it feel safe and convenient to get around town by any mode.
- Make sure that Maine Street can handle the traffic on it.
- Make sure that there are places to park downtown.
- Make Brunswick a better place to live.

At the Downtown Association Breakfast

Following the audit, participants reconvened to hear take-aways and suggestions from Dan Burden of WALC and Gary Toth of PPS and to discuss these preliminary recommendations and their own observations and take-aways in groups. The workshop allowed participants to synthesize and reflect on their observations and findings and develop a prioritized list of recommendations for improving Maine Street and the entire downtown study area.

The results of the workshop were presented the following day at a breakfast hosted by Brunswick Downtown Association as well as a public forum sponsored by the Downtown Master Plan Implementation Committee. Both of these events were recorded on video and are available on Brunswick TV3's website.

Walk audit route.

The walk audit began and ended at Brunswick's Curtis Memorial Library. An important community asset and anchor, the Library provided the facilities for the off-street portions of the workshop to take place.

Recommendations

Recommendations

strategies for improving Brunswick's downtown streets

The over-arching recommendation for Maine Street and Brunswick's downtown street network that resulted from the workshop and reinforced the goals set in the Downtown Master Plan is:

In order to increase comfort for all modes, enhance the commercial environment, foster placemaking while still accommodating automobile travel, emergency service and snow storage, Brunswick should rebalance the level of service on Maine Street to better accommodate all road users, including shop owners.

The current configuration of Brunswick's downtown streets is tuned towards automobile travel and changes will be required to rebalance these streets to promote walking, biking, and greater economic activity downtown. The following section presents a refined list of recommendations for physical and programmatic changes for Maine Street and connecting streets examined in the walk audit in order to achieve this objective. For Maine Street, a series of specific strategies are identified for each recommendation.

In each case, one or more of the strategies described can be used to achieve the goals and recommendations developed through the Downtown Master Plan and this Walkability Workshop. The process for deciding on the particular strategies used and the specific outcomes will need to be done with a broad cross section of stakeholders including residents, shop owners, commuters, police and emergency service providers. The exact methods for rebalancing the street will depend on the results of the stakeholder involvement, but all will involve reallocation of street space to better accommodate other modes and streetscape amenities, reduce crossing distances for pedestrians and encourage slow vehicular travel speeds.

The recommendations are intended to augment and develop in greater detail the recommendations made in the Downtown Master Plan, and should be used in conjunction with that document in planning for a more walkable, livable, and vibrant downtown Brunswick.

Maine Street

Designated in the Downtown Master Plan street typology as a destination street, the desire for Maine street is that it:

- provide a safe and welcoming setting for people to walk, bike, park, and frequent downtown businesses and destinations.
- encourage people to stop rather than speed through, no matter what mode they are using.
- Prioritize users whose destination is downtown, while still accommodating through traffic, particularly in the summers and fall seasons when tourist traffic can be high.

Destination Street. A thoroughfare of moderate capacity and low speed that serves a regional urban destination, such as a Maine street district. Pedestrian and bicyclist comfort is prioritized.

Thoroughfare Type	**Destination Street**
Right-of-Way Width	Varies
Pavement Width	Varies
Land Use Character	**Walkable, Urban Core**
General uses	Offices, Retail, Residential, Civic
Public Frontage Quality	**High**
Drainage Type	Curb
Curb Radius	5 - 15 ft.
Walkway Type	Sidewalk
Landscape Type	Planted
# Vehicular Lanes	**2 - 3**
Traffic Lane Width	10 ft.
Parking Lane Width	7 - 8 ft.
Target Design Speed	20 - 25 mph
Bikeway Type	**Bicycle Lane, Sharrow**
Riding Surface Width	5 - 6 ft.
Movement	Uni-Directional
Bicycle Parking	Rack, Shelter, Locker
Transitway Type	**Regional Bus, Local Circulator, Amtrak**

Examples:

Maine Street, Brunswick

Maine Street, Brunswick

1

Make changes to the travel-way of Maine Street (curb to curb) to increase space for pedestrians and streetscape amenities and encourage slower vehicular travel speeds.

Maine Street is a wide street – 105 to 150 feet from building front to building front in the section covered in the walk audit. While this provides the space for many functions and activities on Maine Street, the current configuration allocates most of the street for the movement and storage of motor vehicles. Changes to the street can be made to use more space, at least at specific moments, for other road users and to make space for walking and lingering downtown.

Northport, NY Photo: Dan Burden

East Lansing, MI Photo: Dan Burden

1.1 **Reduce the width of travel lanes**. Lane widths should be appropriate to the street and its context. Wide lanes are often defended in the name of safety, but it has been shown that 12' wide lanes rarely offer any additional safety over 10' lanes (Potts, Hardwood, and Richard. "Relationship of Lane Width to Safety for Urban and Suburban Arterials", 2007). They can actually enhance safety by increasing driver caution and encouraging slower speeds. Narrowing lanes can also free up space for activities and amenities that support the creation of a destination street.

1.2 **Add a median or islands.** The center of the street separating traffic in opposing directions can be widened and defined using paint, curbs, or landscaping to create a median. Medians can help with access management by limiting turning locations and holding space for turn lanes, as well as in traffic calming, by effectively narrowing the travel-way in each direction. They can shorten crossing distances for pedestrians by creating refuge islands as well. The wide cross section and many turning conditions make Maine Street a strong candidate for a median. Consideration will need to be given to the impact on the number and width of travel lanes, turning movements as well as the benefits of other potential uses of the median including green infrastructure, snow storage, parking, pedestrian refuge, public open space and beautification.

Cripple Creek, CO Photo: Dan Burden

Manitou Springs, CO Photo: Dan Burden

High Street in Pottsdam, PA has bike lanes, back-in angled parking a painted median and turn lanes and one lane of through traffic in each direction. Photo: Michael Ronkin, FHWA Public Roads Website

1.3 **Add sidewalk bump-outs into Maine Street.** Also known as curb extensions, bump-outs are expansions of the curb line into the roadway adjacent to the curb (typically into an on-street parking zone) installed at intersections or mid-block locations. They also create a visual narrowing of the roadway, which typically results in vehicle speed reductions. Consideration should be given to reductions in parking and alterations in street drainage when installing curb extensions.

1.4 **Reduce the number of travel lanes.** Often referred to as a road diet, reducing the number of travel lanes from two lanes of through traffic in each direction to one lane in each direction with a center turning lane can maintain vehicular traffic efficiency while reducing overall vehicular travel-way width and freeing space for cyclists, pedestrians or streetscape amenities.

"When done right, Road Diets create a PLACE not just a SPACE to pass through"

- Dan Burden, WALC Institute

hear more from Dan about road diets and their benefits at http://vimeo.com/35268247

1.5 **Consider changing parking on Maine Street from head-in angled parking to head-out (back-in) angled parking.**

".Head-out parking IS the safest ... when you start the maneuver to get into a head-out angled parking spot ... YOU are in control of the traffic behind you ... when you go to pull out, you are heading out and can see what is coming.

- Dan Burden, WALC Institute

hear more from Dan about the benefits of head-out angled parking at http://vimeo.com/35268340

2

Establish designated space in the travel-way for cyclists, encouraging cycling but discouraging cycling on the sidewalk.

Promoting cycling is a great way to reduce vehicular congestion while increasing residents' mobility around downtown and supporting goals such as more active lifestyles. Most residential streets in the downtown Brunswick grid are already bike friendly by virtue of relatively low automobile speeds and volumes. Providing safe bike accommodations on Maine Street (as well as Inner Pleasant) will provide an important link between Bowdoin College, downtown shops, and residential areas to the east and west of Maine Street.

Cycling on the sidewalk was identified as an issue on Maine Street by workshop attendees; people want cycling, just not on the sidewalk!

Gainesville, FL Photo: Dan Burden

2.1 Create designated on-street bike lanes, either standard or parking protected. Bike lanes create designated space for cyclist either through striping of physical separation. Parking-protected bike lanes use parked cars as the buffer between cyclists and moving vehicles.

Missoula, MT Photo: Dan Burden

Green "sharrow" lanes in Belmont Shores, Long Beach, CA. Photo: Dan Burden.

2.2 Designate the outer travel lanes as sharrows. Sharrows are lanes designated for cyclists and vehicles to share equally. They can be used to create travel routes for cyclists, and calm traffic, improving the safety of the street for all users.

2.3 Designate bike routes on parallel and perpendicular streets. Bicycle connections on adjacent streets in addition to facilities on Maine Street itself, will help expand the bicycle network for Brunswick, enabling and encouraging cycling as a viable mode of transportation. Cyclists need a network, not just a lane.

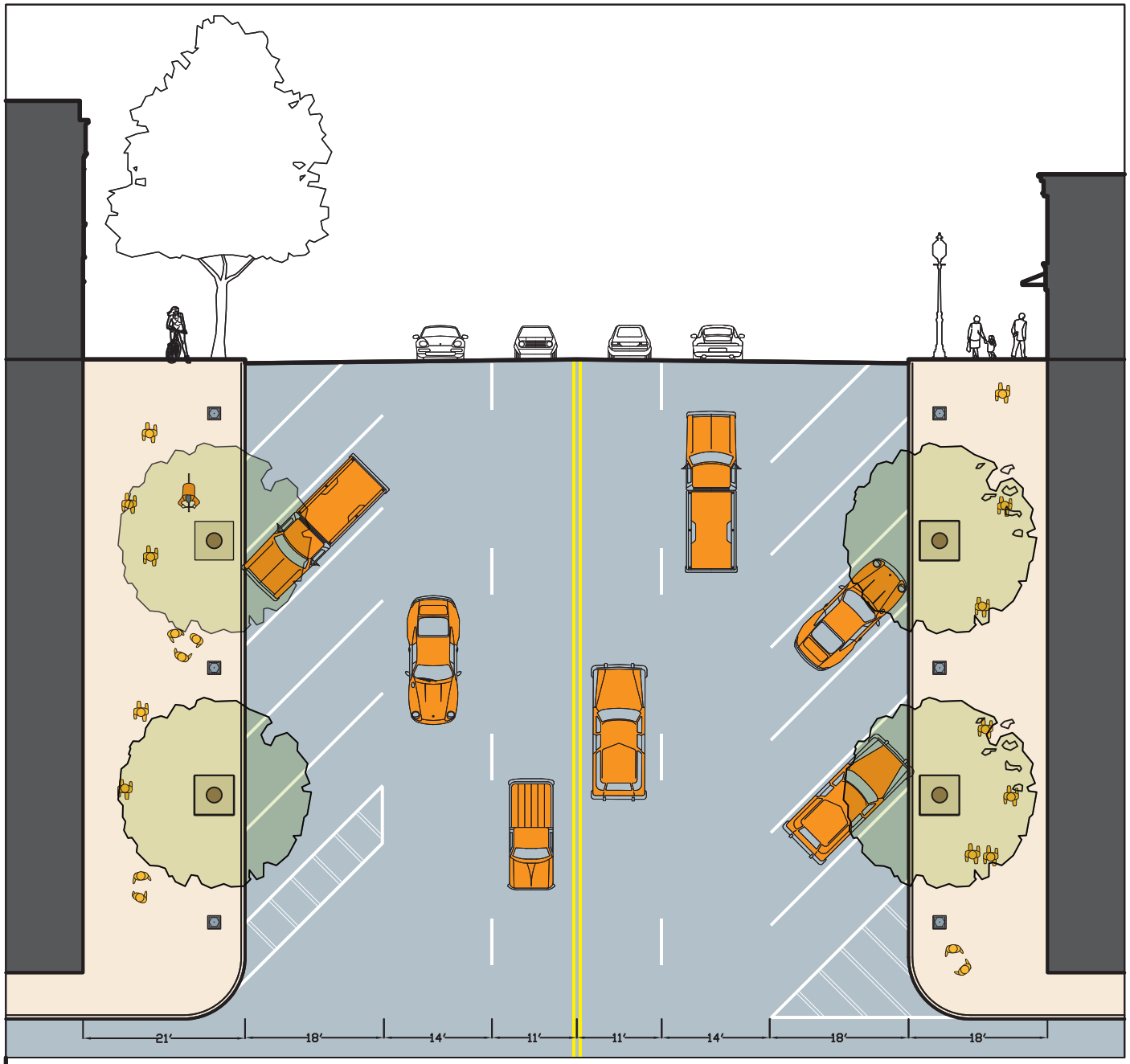
Envisioning Maine Street

The following pages contain a series of cross sections for Maine Street. Each cross section applies recommendations 1 and 2 in different ways, but each represents an opportunity to calm traffic, increase public space, provide space for cyclists, and enhance safety for pedestrians. Each option supports the recommendations of this report and the Downtown Master Plan for directly achieving the town's vision for Pedestrian and Vehicular Movement, and because they are so interrelated with the design and programming of the street, the Visual Quality, Neighborhoods, Marketing, and Financing visions as well.

These opportunities illustrate and present the opportunities and trade-offs of a variety of options for reallocating space on Maine Street, and are intended to be used by the town for further discussion and exploration in planning improvements to Maine Street.

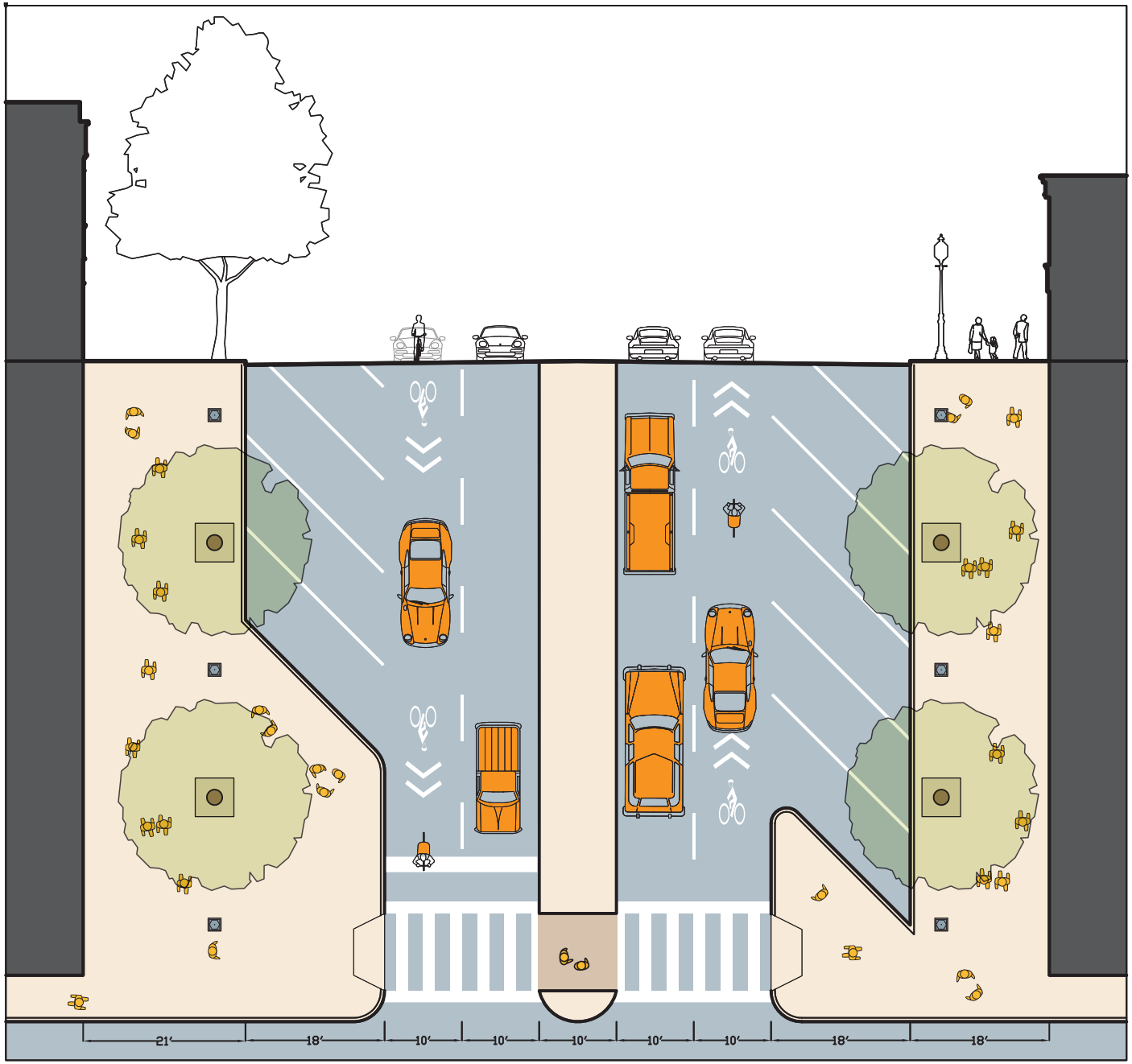
Assumptions / targets for cross section changes

- With the exception of the possible addition of bump-outs, curb-to-curb distances remain the same.
- Reduce pedestrian crossing distances.
- Increase space for amenities and planting in the right-of-way (ROW.)
- Do not drastically reduce parking on Maine Street
- Provide bicycle facilities in the ROW
- If number of lanes are reduced, provide turning lanes
- Accommodate snow removal and incorporate space for snow storage



Existing Conditions

- **Typical Building-face to Building face width:** 125' (ranges from 100' near Route 1 to almost 150' at Pleasant Street)
- **Typical Curb-to-Curb width:** 86' (ranges from 80' near Route 1, to almost 110' by Pleasant Street)
- 2 lanes of traffic in each direction (except near Route 1 where there is only 1 lane in the southbound direction)



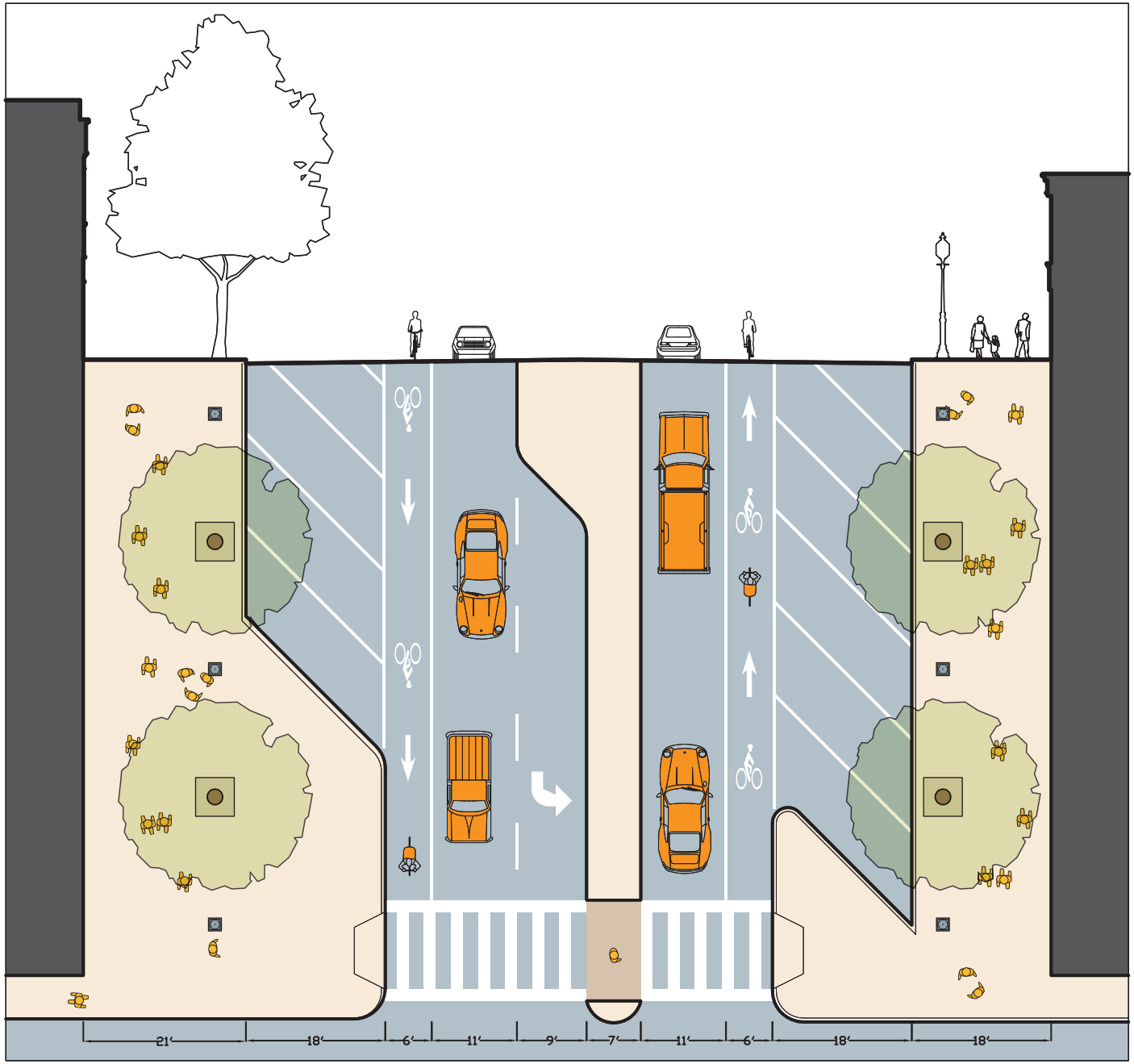
Opportunity 1

Pros

- Narrower lanes encourage slower traffic
- Sharrow lanes accommodate bikes and two lanes of through vehicular traffic.
- Back-in angled parking is safer for cyclists and drivers
- Median can be used for snow storage.
- Painted or flush median can be used for temporary parking for emergency vehicles, delivery vehicles, etc.
- Bump-outs and pedestrian refuge island dramatically reduce pedestrian crossing distances

Cons

- Cyclists must still mix with traffic (not as safe as separated facilities and some cyclists may not use)
- No turn lanes
- Bump outs create some reduction in parking



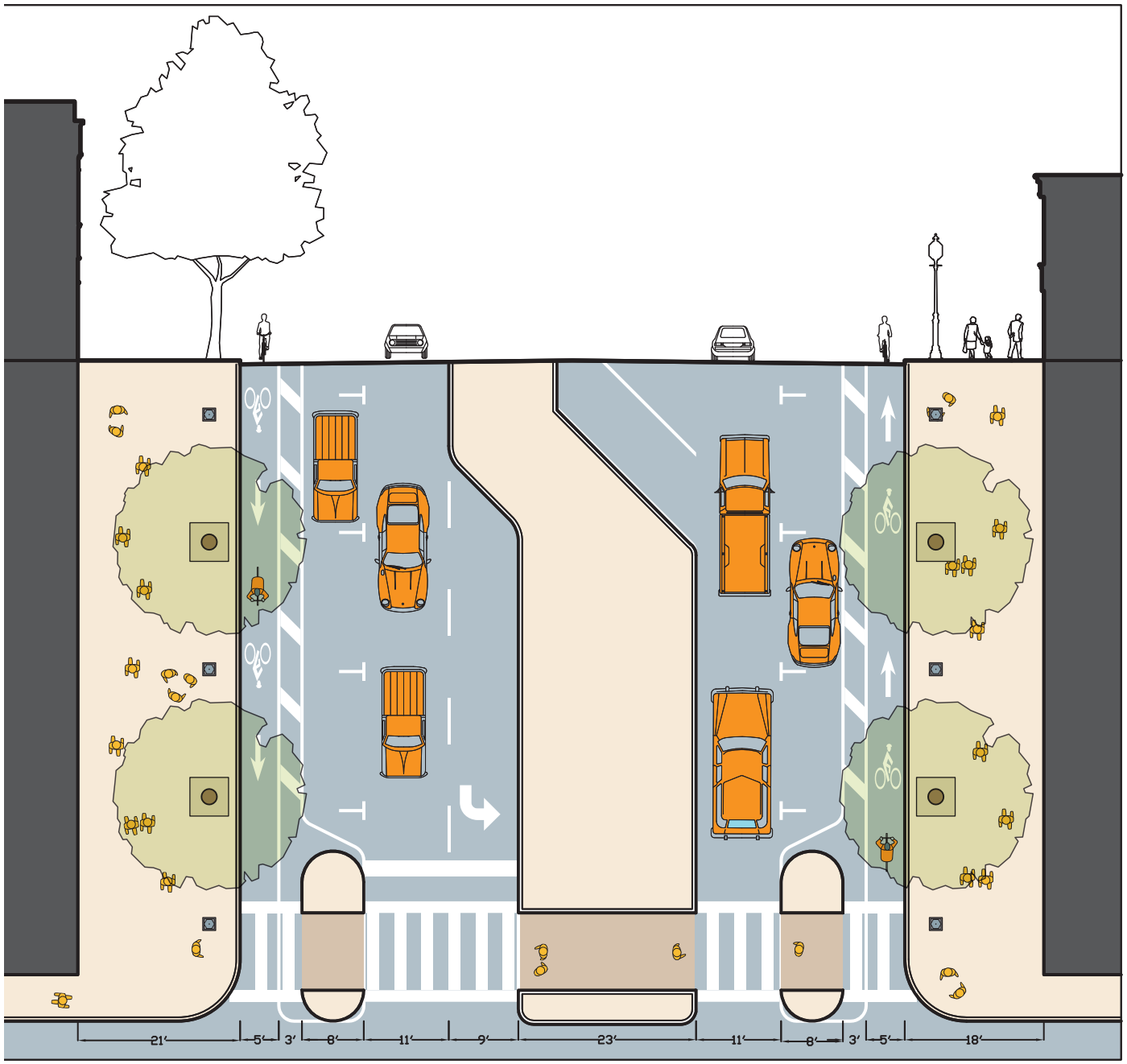
Opportunity 2

Pros

- Narrower lanes encourage slower traffic
- Bump-outs and pedestrian refuge island reduce pedestrian crossing distances.
- Designated space for cyclists
- Back-in angled parking is safer for cyclists and drivers
- Turn lanes allow turning vehicles to que without stopping through traffic
- If flush, median can be used for temporary parking
- Medians and bump-outs can be used for greening, stormwaer infiltration, or pedestrian amenities
- Can store snow in median

Cons

- Potential conflicts between cyclists and parking cars
- If raised or planted, median cannot be used for parking
- Single lane of through traffic could reduce capacity (though this is offset by the addition of turn lanes
- Bump outs create some reduction in parking



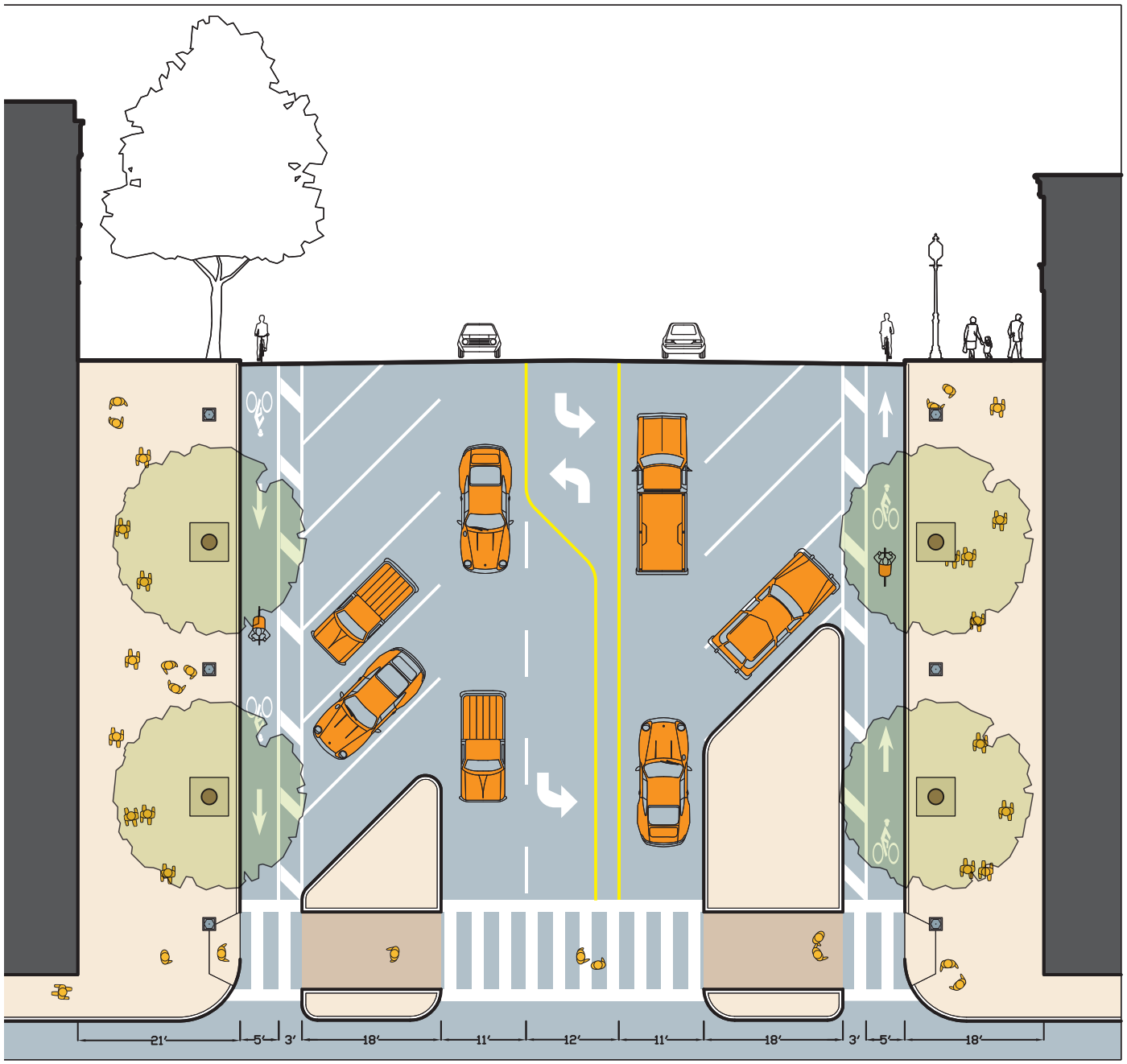
Opportunity 3

Pros

- Narrower lanes encourage slower traffic
- Pedestrian refuge island reduce pedestrian crossing distances.
- Cyclist protected from vehicular traffic by parking
- Parallel parking takes less space in the section and is potentially safer
- Turn lanes allow turning vehicles to que without stopping through traffic
- Wide median can be used for greening, stormwater infiltration, public space, or even parking
- Can store snow in median.

Cons

- Single lane of through traffic could reduce capacity (though this is offset by the addition of turn lanes
- Reduction in number of parking spaces



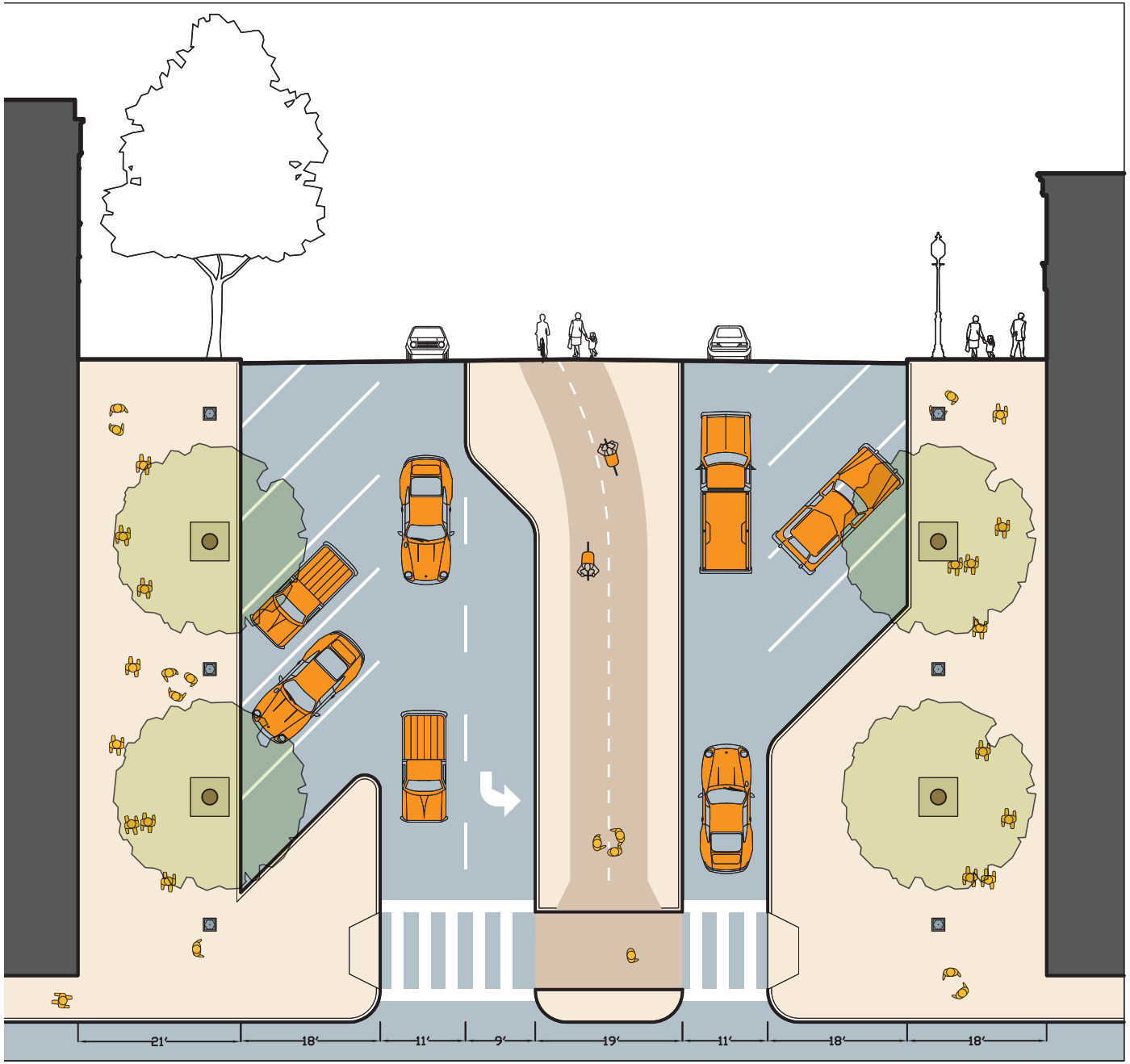
Opportunity 4

Pros

- Narrower lanes encourage slower traffic
- Pedestrian refuge islands reduce pedestrian crossing distances.
- Cyclist protected from vehicular traffic by parking
- Turn lanes allow turning vehicles to que without stopping through traffic
- Center lane can be used for temporary parking
- Can store snow in median.
- Refuge islands can be used for greening

Cons

- Single lane of through traffic could reduce capacity (though this is offset by the addition of turn lanes
- Bump outs create some reduction in parking
- Less space created for pedestrian space, amenities and greening



Opportunity 5

Pros

- Narrower lanes encourage slower traffic
- Pedestrian refuge island reduce pedestrian crossing distances.
- Cyclist protected from vehicular traffic
- Turn lanes allow turning vehicles to que without stopping through traffic
- Wide median and large bump outs can be used for greening, stormwater infiltration, public space, (in addition to bike & ped path)
- Can store snow in median.

Cons

- Single lane of through traffic could reduce capacity (though this is offset by the addition of turn lanes
- Some reduction in number of parking spaces
- Cyclists and pedestrians on path have limited access to buildings / destinations on Maine Street

3

Improve intersections to enhance pedestrian comfort, safety and efficiency as well as improving vehicular traffic flow.

Intersections are spaces where people slow down, stop, speed up, change direction, cross, or meet; they are active places for all modes of travel. This makes them opportune places for placemaking, but activating intersections for people and pedestrians only work when they are safe and comfortable for pedestrians. Intersection design must balance a need to manage vehicular traffic movement efficiently, while creating spaces in which pedestrians and cyclists feel they can safely, comfortably, and enjoyably move about and cross the street.

La Jolla Blvd. Bird Rock neighborhood, San Diego, CA Photo: Dan Burden

3.1 Consider incorporating pedestrian crossing signals into the standard signal timing at signalized intersections rather than using pedestrian activated signals. Currently, crossing signals in downtown Brunswick are pedestrian activated, and not part of the normal signal cycle. This signifies to pedestrians that cars are the priority street users. This can also create long waiting times for pedestrians; some choose to cross without the light when traffic lulls, creating a potential safety hazard and leaving cars waiting at red lights with empty crosswalks when the signal does turn. While traffic studies need to be completed before making such a change, a simple alteration in signal timing can be a strong indicator to all road users that Maine Street is a place for pedestrians.

Brighton, MI Photo: Dan Burden

3.2 Consider a Roundabout at the intersection of Maine and Cabot/ ramp from Route 1, and Mason Street. Current conditions at the grade separated intersection of Maine Street with Route 1 offers a poor environment for pedestrians and creates a significant barrier between the important destinations of Fort Andross and downtown Maine Street. A solution is needed that will handle vehicular traffic flow while providing safe and comfortable facilities for pedestrians and cyclists. A roundabout could achieve this and should considered an option for this intersection in the long-term, even if it has been dismissed in the past. Additionally, consideration should be given, in the long term, to separating the northbound entrance ramp from Mason Street in order to keep downtown's side streets from being used by cut-through traffic.

Roundabout in Keene, NH Photo: NH DOT

3.3 **A roundabout at Maine and Inner Pleasant is recommended.** The feasibility of replacing this signalized intersection at Maine and Pleasant Street should be further explored. A roundabout here would simplify vehicular movements and reduce potential conflicts between vehicles and pedestrians, providing greater priority to pedestrians while sustaining a more steady flow of traffic. It is also an opportunity to create an entrance or focal feature for downtown. The minimum recommended outside diameter for an urban roundabout of 90 feet can be accommodated within the current travelled way. Installation of the desirable outside diameter of 120 feet would require some relocation of parking. Careful attention will need to be paid to how the roundabout handles travel for all modes. Tradeoffs should be analyzed in collaboration with all stakeholders.

Existing conditions at the intersection of Maine and Pleasant Street. Compare the aerial of this intersection above, with that of downtown Glens Falls, NY (see the following page) where roundabout was installed in 2007.

Centennial Circle, Glen Falls, NY

Prior to the construction of Centennial Circle, the intersection of State Routes 9, 9L, 32, and Hudson Avenue in downtown Glens Falls was crowded and dangerous. With an accident rate three times the state average, it was to be avoided by both cars and pedestrian. Now, with $9 million of locally administered Federal Aid Highway funding, a new roundabout as well as streetscape and utility improvements have transformed this downtown intersection, bringing enthusiastic positive responses and testimonials from local residents and business owners.

Glens Falls, is a 3.9 square mile city of 14,700 (2010 Census) in upstate New York. The construction of a roundabout in the city's historic downtown necessitated strong respect of the surrounding context and community and careful coordination among the City of Glens Falls, the NY State DOT, the design lead, Creighton Manning Engineering LLP (CME), and the New York State Historic Preservation Office.

CME, the city and the state engaged the community with significant outreach efforts throughout the process: 3D simulations comparing traffic flow at the intersection to the future roundabout were developed for a skeptical public at community meetings, months of announcements preceded the five-week construction period in which the intersection was closed off entirely, and requests were taken to adjust sidewalk elevations, eliminating steps and enhancing handicap accessibility.

The benefits witnessed since the opening of the roundabout have been impressive: slower vehicle speeds and shorter crossing distances have greatly improved pedestrian safety, 75% shorter delays automobile delays despite an increase of 20% in traffic volume, and both Glens Falls and Warren County report increased investment resulting from the improved streetscapes and traffic.

Hear what Glens Falls residents have to say about their new roundabout! http://www.youtube.com/watch?v=jZNkzgzPeOg

The aerial image above shows the roundabout in Glens Falls at the same scale as the Maine and Pleasant intersection in Brunswick is shown on the previous page. The image to the left is a street view of the downtown roundabout in Glens Falls. NY. aerial source: bing maps; image credit: wikipedia user JBC3, http://en.wikipedia.org/wiki/File:Centennial_Circle_Glens_Falls_New_York.jpg

4

Encourage sidewalk, building and amenity design and layout that support a continuous and vibrant sidewalk space that is welcoming, comfortable, and usable for pedestrians.

Active streets need activities. To help achieve this, the street design needs to create a welcoming space for such activities to take place, whether that be for people shopping or strolling, or for business owners who want to attract patrons. In doing this, particular attention must be paid to edges and corners - those spaces where buildings and activities touch the street which are entrances and exits from one condition to another – where the street must engage these adjacent spaces and activities.

4.1 **Encourage building façade improvements that increase enclosure, transparency, human scale, imageability, and complexity.** These "qualities of a great sidewalk" help make the sidewalk an inviting space for people to walk, talk and linger, and a place onto which businesses and activities want to open their doors.

Enclosure is the degree to which streets and other public spaces are visually defined by buildings, walls, trees and other elements. Spaces where the height of vertical elements is proportionately related to the width of the space between them have a room-like feel to them. Enclosure is fostered by having on-street parking, lines of trees and lamps, awnings and canopies, etc. Continuous edges create a strong sense of enclosure.

Holland, MI Photo: Dan Burden

Transparency refers to the degree to which people can see or perceive what lies beyond the edge of the sidewalk or right-of-way. Physical elements that influence transparency include walls, windows, doors, fences, landscaping and openings into midblock spaces. Generally, buildings at grade should have anywhere from 70-90-% glazing; that includes doors/windows. In places with 10% or less glazing people are reluctant to walk due to the lack of transparency.

Concord, MA Photo: Flickr user TalkingTree, CC

Human scale refers to the degree to which the size, texture, and articulation of physical elements match the size and proportions of the human body and, equally important for sidewalks, correspond to the speed at which humans walk. Building details, pavement texture, street trees, and street furniture are all physical elements that contribute to the perceived scale. Once there is human scale, different functional "rooms" can be created on the street.

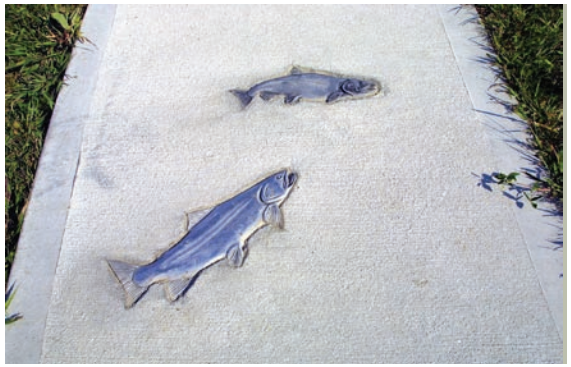
Kingston, WA Photo: Dan Burden

Imageability is the quality of a place that makes it distinct, recognizable, and memorable. A place has high imageability when specific physical elements and their arrangement capture attention, evoke feelings, and create a lasting impression. Sidewalks filled with people, many signs, and strong landmarks make for a very imageable place.

Rockland, ME Photo: PPS

Complexity refers to the visual and functional richness of a place. Complexity depends on the variety in the physical environment, including the numbers and kinds of buildings, architectural diversity and ornamentation, landscape elements, street furniture, signage, and human activity. Creating unpredictable elements, such as incorporating art into common objects, can catch visitors by surprise, engaging them and making them want to return.

Portland, ME Photo: Dan Burden



Playful art, like these fish in the sidewalk in Sunderland, VT, can make exploring downtown by foot more fun. Photo: Dan Burden

4.2 **Incorporate art and design into standard streetscape elements such as lights and trash receptacles.** Artistic elements and details create variety and interest which help enliven the streetscape. The inclusion of art, or specially designed elements, are opportunities to engage local constituencies in the creation of the street, and encourage local investment in the maintenance of the streetscape. Attention to these details conveys to residents and visitors alike that there is a high level of thoughtfulness and care in the place, making it stand out as unique and special.

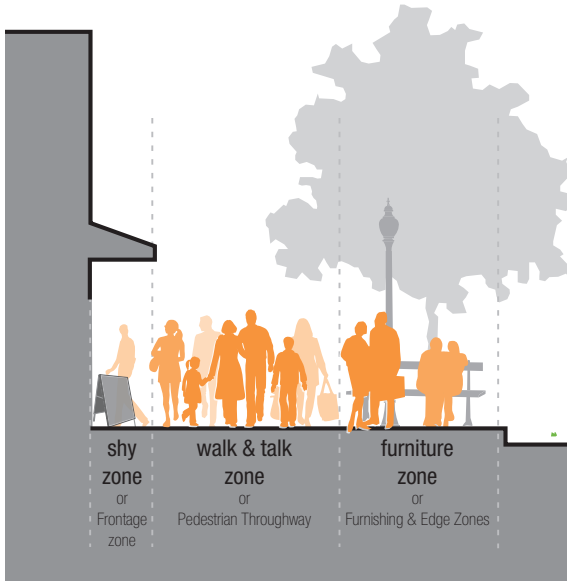
Bump outs provide space for amenities and improve connections for pedestrians Northville, MI Photo: Dan Burden

4.3 **Narrow entrances to side streets using bump-outs or other design features where they meet Maine street.** This can help create 'gateways' between Maine Street and the adjoining neighborhood and create a more continuous sidewalk and pedestrian experience along Maine Street.

Examining an existing entrance to Maine street from a side street during the Walk Audit.

Bump-outs at side streets and driveways, like this parking area in Northville, MI, reduce crossing distances for pedestrians and help establish a continuous feel to the sidewalk. Photo: Dan Burden

Bump outs can also create space for plantings and other amenities, for beatification and stormwater management. Continuation of the sidewalk through the crossing also signals that pedestrians have priority. Photo: PPS



4.4 **Place amenities on the sidewalk to respect human scale and use of the sidewalk.** Well designed streetscape amenities such as benches, lightposts, banners, and plantings are important, but they must also be located so that they augment rather than interfere with people's use of the sidewalk.

Dan Burden demonstrates appropriate placement of signboards during the Walk Audit.

5

Ensure that changes enhance the street's function and experience in all seasons.

Street improvements need to work successfully in all seasons; in Brunswick, this means that attention must be paid to how a street works with feet of snow on the ground in winter, as well as in summer.

Minneapolis, MNPhoto: Janellie FlickrCC

5.1 **Enable snow removal and storage of snow in all design options for Maine Street.** Given the often severe winter season's heavy snowfall, changes to the street must not interfere with snow removal, and where possible, should offer space for snow storage.

6

Improve access and wayfinding to parking and destinations on adjacent streets

Brunswick has a downtown with many historic and cultural destinations including the Armory, the historic Roebling Bridge, the library, the town green, and Bowdoin College. Unfortunately, there is very little on Maine Street (or other streets in downtown) drawing visitors from just passing through on Maine Street to the many destinations in and around downtown. Enhancements to both wayfinding and connectivity can work together to improve access and circulation downtown.

These downtown wayfinding signs in Brooklyn, NY are simple, packed with information and can be installed without footings in the existing sidewalk. Photo: PPS

6.1 **Install pedestrian-oriented wayfinding signs that direct people to and inform people of key downtown destinations.** Wayfinding signs can provide visitors and residents alike with information on and directions to downtown destinations

Simple changes like flowers, sidewalk repair, and limiting vehicle access as on this street in Victoria, BC Canada can vastly improve the likelihood of pedestrians using these connections. Photo: Dan Burden

6.2 **Enhance pedestrian connections between Maine Street and adjacent streets.** Signs alone aren't enough to draw pedestrians to nearby destinations; the route to get there must be safe, comfortable, convenient, and even fun for pedestrians.

When people know where parking is, they are more likely to park and walk around your downtown! Carmel by the Sea, CA. Photo: Dan Burden

6.3 **Install signs that direct drivers to convenient parking off Maine street.** Even when most people downtown are walking, it is still likely many of those people will arrive downtown by car. Well designed, accessible parking areas with clear directions to and from these locations can provide parking with minimal detriment to the pedestrian environment.

In the diagram above, purple represents existing parking areas adjacent to Maine Street.

7

Create several gathering places along Maine Street; capitalizing on opportunities to build off of existing destinations and create new destinations of a variety of types along Maine Street.

It helps to start with project you know will make a difference: find your "100% destination" and build from there says Dan Burden. Maine Street has a variety of existing strong destinations in addition to spaces that are currently underutilized. Lighter, quicker, cheaper improvements at critical destinations can combine over time and along Maine Street to create improvements to the public realm that are greater than the sum of each enhancement and catalyze longer term improvements. Many such opportunities were identified in the Downtown Master Plan as a result of a Power of 10 exercise undertaken during the planning process. The recommendations for Maine Street can be implemented incrementally by putting short-term improvements in the ground to establish new or enhance existing destinations and then adding to these enhancements over time as resources become available. For information on the Power of 10, see *http://www.pps.org/articles/the-power-of-10/.*

New York City Photo: streetsnyc Flickr CC

Buffalo, NY Photo: PPS

7.1 **Focus initial improvements around existing destinations.** Street improvements can enhance the user experience of existing places on Maine Street and are likely to be effective at building enthusiasm and support for further improvements. The Downtown Master Plan did an excellent job of working with community stakeholders to identify people's favorite destinations downtown.

7.2 **Consider obtaining the now vacant lot at Maine and Mason to convert it to public space.** Vacant land, often seen as an eyesore, can be an opportunity to rethink space and create new places on Maine Street. New destinations can create new activity and interest, and fill in 'gaps' in activity on Maine Street. There was strong interest in the possibility of the town purchasing this site and converting it to a public park. Other creative suggestions for this site and the surrounding streets included fitting an exit ramp onto route one on the north side of the site so that Mason Street no longer needed to serve as an entrance to northbound Route 1.

Putnam Triangle, NYC Photo: Vaidila Kungys NYCDOT

Brooklyn, NY Photo: PPS

7.4 **Transform the municipal parking lot at the intersection of Maine and Pleasant Streets into a temporary plaza to serve as a gathering point in this well-traveled area.** (Downtown Master Plan) At a highly visible and well-traveled location downtown, this space, currently used for parking has a variety of potential 'higher and better uses'.

7.5 **Town Hall Place with a temporary garden plaza featuring outdoor seating.** (Downtown Master Plan) This street, leading off Maine Street to parking can also be enhanced to provide a better pedestrian environment and create a destination off Maine Street.

In addition to improving walkability, the strategies presented for Maine Street will help improve safety for all users of Brunswick's streets!

In early 2012, the Federal Highway Administration's (FHWA) Office of Safety released its updated list of proven safety countermeasures. Three of these countermeasures: **Roundabouts**, **Road Diets**, and **Medians and Pedestrian Crossing Islands** are included in the strategies recommended for Maine Street!

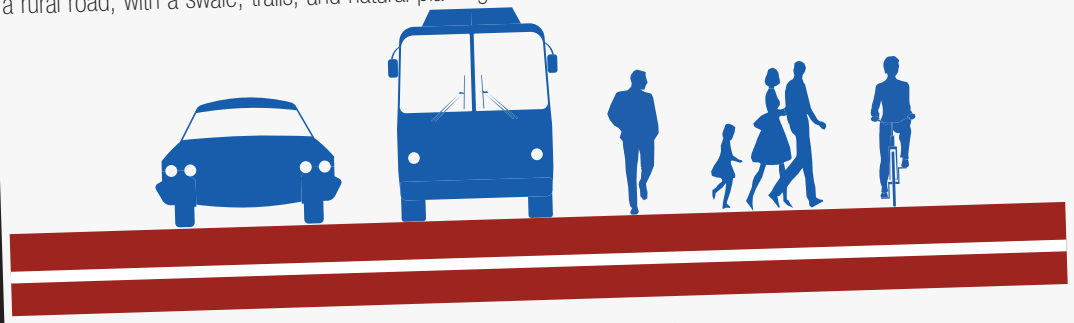
For more information on these countermeasures, see the Proven Safety Countermeasures Website:

http://safety.fhwa.dot.gov/provencountermeasures/

Mill Street

Designated in the Downtown Master Plan street typology as a drive, this segment of Mill street is dominated by its adjacency to Route 1, which is sunken as you move closer to Maine Street. While it currently functions for vehicular traffic as an exit from Route 1 to downtown, the street is also a connector between Maine Street and parallel neighborhood streets and is lined on the south side with interesting, human-scaled buildings which house neighborhood destinations including a recently opened restaurant. There was strong interest in supporting these neighborhood uses and pedestrian activity on Mill Street, rethinking it as a walkable destination as well as a vehicular connector.

Drive. A thoroughfare of moderate or high capacity that forms a boundary between an urbanized and a natural condition, usually along a waterfront, park, or promontory. One side has the urban character of a thoroughfare, with curb, sidewalk, regular street tree plantings, and buildings, while the other has the qualities of a rural road, with a swale, trails, and natural plantings.



Thoroughfare Type	Drive
Right-of-Way Width	Varies
Pavement Width	Varies
Land Use Character	**Walkable, General Urban**
General uses	Residential, Recreational, Civic
Public Frontage Quality	**High**
Drainage Type	Curb, swale
Curb Radius	5 - 15 ft.
Walkway Type	Sidewalk, Shared Use Path
Landscape Type	Planted, Naturalistic
Vehicular Lanes	**2 - 3**
Traffic Lane Width	10 - 11 ft.
Parking Lane Width	n/a
Target Design Speed	25 - 35 mph
Bikeway Type	**Shared Use Path, Bike Lane**
Riding Surface Width	8 - 12 ft. (path), 5 ft. (lane)
Movement	Bi-Directional, Uni-Directional
Bicycle Parking	Rack, Shelter
Transitway Type	**Regional Bus, Local Circulator**

Examples:

Mill Street, Brunswick

Mill Street, Brunswick

8

Implement streetscape improvements on the eastbound section between Cushing and Maine Streets.

Although this section of Mill Street functions as an off-ramp for vehicular traffic on Route 1 entering downtown from the south, local activities and destinations exist and are growing along this stretch of street. Situated at an entrance to downtown, highly visible, with excellent views of Fort Andross, and an easy walk from Maine Street and the residential neighborhoods to the south, this is an excellent location for businesses and community destinations. Such development here should be encouraged, The street design needs to calm traffic and support the safety and comfort of pedestrians and cyclists to further encourage people to frequent destinations on Mill Street. Changes should include narrowing the width of the traveled way and using the space gained for on street parking, a bike lane, a wider sidewalk area, or other right-of-way change that buffer pedestrians from vehicular traffic and encourages drivers to travel more slowly.

Walk audit participants check out existing conditions on Mill Street. Photo: PPS

Destinations and good streetscape design work together to encourage activity. Northampton, MA Photo: PPS

Walk audit participants examine the intersection at Mill and Cushing. Photo: PPS

9

Enhance the intersection of Mill and Cushing street where Mill Street diverges from Route 1 to create a gateway, slow traffic and make it easier and safer for pedestrians to cross Route 1.

This entrance to downtown is where vehicles coming from the south make a decision to go *to* or *through* downtown. It is also where Route 1 separates an access point to residential neighborhoods (Cushing Street) from a pedestrian bridge over the river (the historic Roebling footbridge). Enhancements to this intersection must signal drivers to slow down and let them know they are entering or exiting downtown, and improve the comfort and safety of pedestrians accessing the water and Roebling Bridge. A signalized crosswalk will be installed at this location in the spring as a short-term measure. Longer-term, a roundabout is one recommended strategy to achieve these objectives. Careful consideration of the traffic movements and volumes of all modes must be considered, but a roundabout would offer the pedestrian and traffic calming enhancements desired without compromising vehicular flow. Combined with the other recommendations, this can help Placemaking on Mill Street to flourish.

Cushing Street

Cushing Street is identified in the Downtown Master Plan street typology as a residential street, a street that has low vehicular capacity and speed that provides access to residential land uses and prioritizes the safe movement of pedestrians and bicyclists over motor vehicles. There are currently complaints from residents about cut-through traffic on Cushing Street, that the town hopes will be reduced with the installation of the new traffic signal at Maine Street and Route 1, allowing drivers to turn off of Route 1 directly onto Maine Street, rather than driving through residential streets. This provides an opportunity to rebalance Cushing Street to slow traffic and support Placemaking and pedestrian activity.

Residential Street

A thoroughfare of low vehicular capacity and low speed that provides access to residential land uses and which prioritizes the safe movement of pedestrians and bicyclist over motor vehicles.

Thoroughfare Type	**Destination Street**
Right-of-Way Width	Varies
Pavement Width	Varies
Land Use Character	**Walkable, Urban Core**
General uses	Residential, Civic, Corner Store
Public Frontage Quality	**High**
Drainage Type	Curb, Swale
Curb Radius	5 - 15 ft.
Walkway Type	Sidewalk, Shared Use Path
Landscape Type	Planted, Natural
# Vehicular Lanes	**2**
Traffic Lane Width	9-10 ft.
Parking Lane Width	7 - 8 ft.
Target Design Speed	20 - 25 mph
Bikeway Type	**Bicycle Lane, Sharrow**
Riding Surface Width	9-11 ft. (shared lane)
Movement	Bi-Directional
Bicycle Parking	n/a
Transitway Type	**n/a**

Examples:

Federal Street, Brunswick

Federal Street, Brunswick

10

Improve and widen the sidewalks for pedestrians.

The neighborhoods adjacent to Cushing Street are relatively dense and close to local destinations – those on Maine Street and Inner Pleasant, but also small restaurants and shopping on Cushing Street itself. Widening and improving paving and maintenance of the sidewalks will create an easier, more comfortable walking experience, encouraging local residents to walk rather than drive. Using strategies that also narrow, or appear to narrow, the vehicular travel way will have the benefit of calming traffic on Cushing Street as well, discouraging people from speeding through this largely residential area.

Winter Garden, FL. Photo: Dan Burden

11

Cushing street shopping center: turn a strip mall into a neighborhood village.

The current shopping area, set back from the street by a parking lot, is designed to serve shoppers arriving by car, even though there are many potential patrons within easy walking distance. Re-envisioned as a village shopping center, this commercial area could increase its square footage of retail, improve shopping opportunities for the neighborhood and enhance the streetscape for walking.

This row of shops in Kingston, WA was created as infill between an existing strip mall and the street. Where there was formerly just a large surface parking lot, now there is retail, an active street-front; and there is still parking! Photo: Dan Burden

12

Improve connections and wayfinding for pedestrians and cyclists to surrounding neighborhood destinations, particularly Davis park.

Davis park, a quality recreational and scenic destination for Brunswick is a short walk over the rail line from Cushing Street, but even though it is visible from the street, if feels cut-off and inaccessible. Improving wayfinding as well as pedestrian paths or sidewalks between Cushing Street and Davis Park, would improve residents access to and potentially increase use of this community resource.

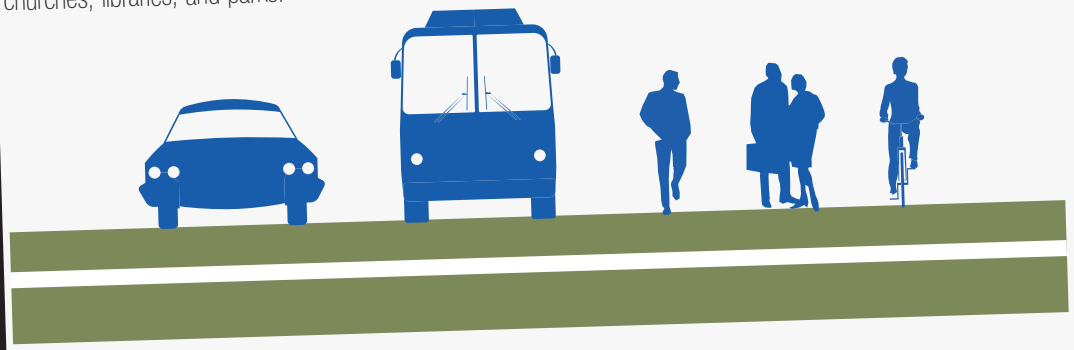
Wayfinding signs and information boards can help visitors and residents alike navigate downtown neighborhoods, as shown here. Photo: Dan Burden

Inner Pleasant Street

The Downtown Master Plan identifies Inner Pleasant Street as a **Community Street**, providing access to residential, civic and commercial land uses and prioritizing bicycle and pedestrian traffic. Both the workshop and the Downtown Master Plan identified high vehicular speeds, impeded access to adjacent streets and land uses (because vehicular traffic is only one-way), and traffic behavior that did not suit or enhance the mixed use and downtown character of the built form as issues on Inner Pleasant Street. As a community street, Pleasant street should prioritize walking and bicycling and encourage drivers to look out for and respect more vulnerable road users.

Community Street

A thoroughfare of moderate vehicular capacity and low to moderate speed that services numerous community and civic uses, including schools, hospitals, churches, libraries, and parks.



Thoroughfare Type	**Destination Street**
Right-of-Way Width	Varies
Pavement Width	Varies
Land Use Character	**Walkable, Urban Core**
General uses	Offices, Retail, Residential, Civic
Public Frontage Quality	**High**
Drainage Type	Curb
Curb Radius	5 - 15 ft.
Walkway Type	Sidewalk
Landscape Type	Planted
# Vehicular Lanes	**2**
Traffic Lane Width	10-11 ft.
Parking Lane Width	8 ft.
Target Design Speed	25 - 30 mph
Bikeway Type	**Bicycle Lane, Sharrow**
Riding Surface Width	5-6 ft. (shared lane)
Movement	Uni-Directional
Bicycle Parking	Rack
Transitway Type	**Regional Bus, Local Circulator**

Examples:

Inner Pleasant Street, Brunswick

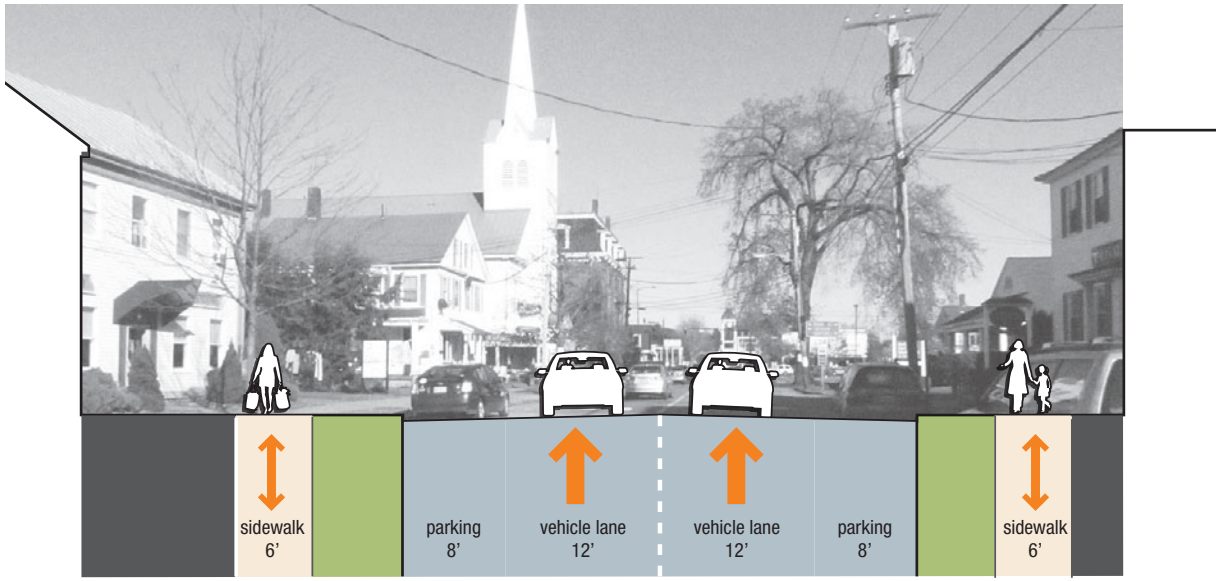
Inner Pleasant Street, Brunswick

CSS Champions: Brunswick, ME

13

Return Inner Pleasant Street to two-way traffic.

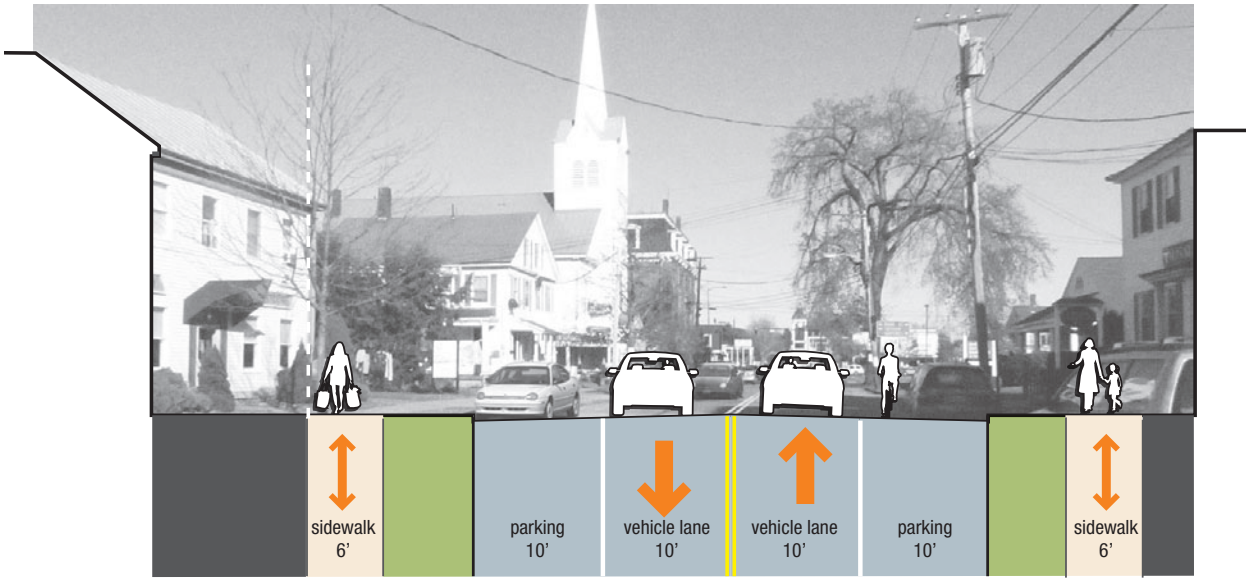
There was resounding support among workshop attendees for exploring this option, and it is recommended as a high priority by the technical assistance team. Restoring two-way traffic and better defining on-street parking and/or bicycle routes would help increase access to destinations along Inner Pleasant Street for all street users while calming vehicular traffic. A slower, perceptually narrower street will signify to drivers that they are entering a historic downtown where they should slow down, look out for pedestrians and cyclists, but also maybe stop in and frequent local businesses and other destinations. While traffic studies to analyze the actual vehicular impacts would be required to make the long term change, temporary pilot changes could help explore the options for how to make this happen. This can be achieved by restriping of the roadway, without changes to curbs and other hard infrastructure, and thus is an inexpensive, high-impact improvement.



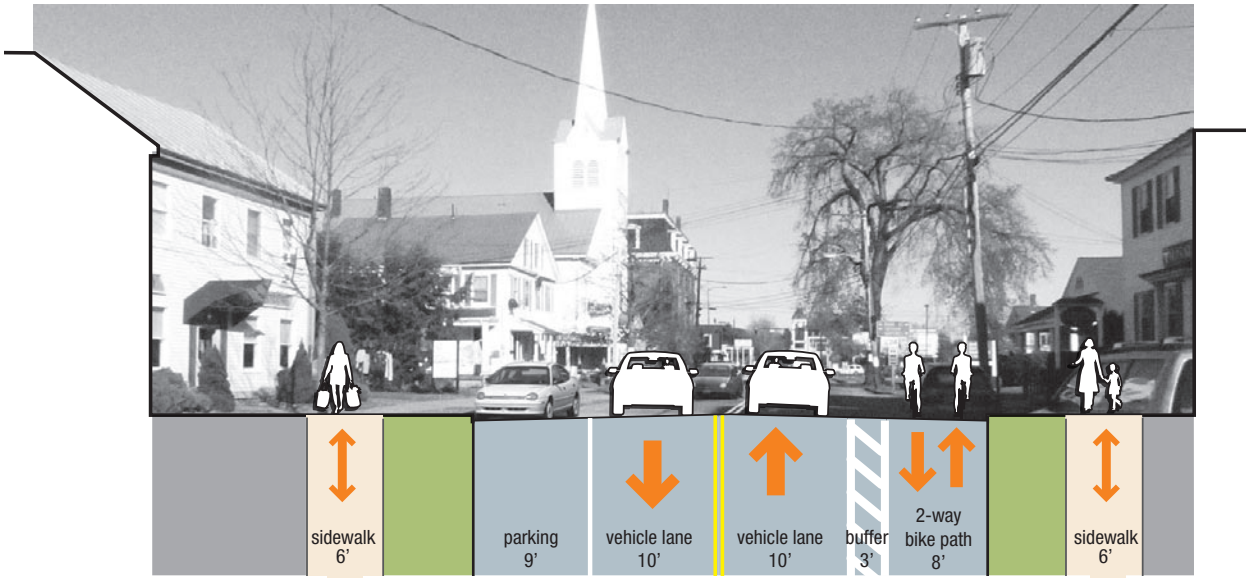
Existing conditions on Inner Pleasant Street including one-way traffic flow and wide lanes encourage speeding and tune the street to vehicular through-traffic rather than local drivers, cyclists, or pedestrians.

Existing conditions on Inner Pleasant Street of wide lanes and one-directional traffic combined with long views that encourage speeding.

Walk Audit participants explore Pleasant Street. The scale and speed of travel on the street is out-of-synch with the combination of religious, civic business, and residential destinations.



The sections above and below illustrate potential changes to Inner Pleasant Street that incorporate recommendations 13 (above) or 13 and 14 (below). Both are intended to calm traffic and improve the environment for pedestrians and cyclists on Inner Pleasant Street, prioritizing access to downtown destinations over movement through downtown.



14

Explore ways to incorporate and improve facilities for pedestrians and cyclists on Inner Pleasant Street.

The wide vehicular travel-way, often narrow sidewalks, and lack of bicycle facilities make Inner Pleasant Street a place where vehicular travel is given high priority over other modes. Drawing on strategies such as those described for Maine Street, the town should explore and use strategies to rebalance the modal priority on Inner Pleasant Street. Strategies such as a simple striping of bike lanes in combination with the one-way to two-way conversion of Inner Pleasant Street would help calm traffic and create more space for non-motorized modes of travel.

While there are marked crossing on Inner Pleasant Street, neither the street section nor the crossing designs are very inviting to the pedestrian.

15

Consolidate driveway entrances where possible.

Every driveway or street entrance is a possible conflict point between various road users. Frequent driveway entrances reduce the safety of the sidewalk for pedestrians by increasing potential conflicts with vehicles. They also break up the street frontage and reduce the space where buildings or activities can front the sidewalk. By minimizing driveways, you can enhance safety and increase the potential for activity along the street.

16

Keep Driveways as narrow as possible and minimize curb radii at their entrances.

Simple improvements such as keeping driveways narrow, using small curb radii at entrances, and extending the sidewalk material over the driveway, rather than the road material over the sidewalk material indicates to drivers that they should slow down and yield to other road users and informs everyone that pedestrians and sidewalk activities are being prioritized in the street.

17

Improve signage and Wayfinding.

Pleasant Street is the primary approach to downtown and Maine Street for people arriving or passing through Brunswick from the south or west, yet there is little indication of, or direction to, the variety of destinations that Brunswick has to offer. Such destinations include Bowdoin College, Fort Andross, the Library, shops, inns and Maine Street itself. Whether it be actual signs, or a system of designed elements for Maine Street, better direction to downtown destinations for drivers, cyclists and pedestrians is needed.

Photo: PPS

18

Explore the benefits and costs of putting utilities on Inner Pleasant Street underground.

Many participants noted the proliferation of overhead utilities on Pleasant Street as undesirable. This is a common complaint in many communities; in addition to being an eyesore, they can interfere with street trees and poles can take up valuable space in the right-of-way. However, removing overhead utilities is costly. A rule-of-thumb cost estimate for putting existing utilities underground is about $1 million per mile. This varies greatly by location depending on issues including, but not limited to: existing underground utilities, right-of-way ownership, and water tables. The technical assistance team recommends that the Town of Brunswick invest in higher impact, less costly recommendations before it tries to raise funding for burying utilities. Also, there are a few initiatives outside the study area that may be more worthy of investment. Creating a street with no overhead wires is an attractive prospect, but if after the project, the cross section and operating speeds of the streets remain fundamentally unchanged, the gains will be only cosmetic.

Looking beyond the study area

While the focus of this workshop was the streets covered in the Walk Audit, particularly the northern section of Maine Street, Brunswick's street network is an integrated system and these segments cannot be considered in isolation. Many of the recommendations and strategies identified for the streets covered in the walk audit can be applied to streets throughout Brunswick, as long as the particular context of each street is taken into consideration. In addition, two specific recommendations outside the study area came out of the workshop:

19

Extending walkability improvements to Outer Pleasant

In the downtown study area, buildings generally frame the street and there is density and a mix of land uses sufficient to foster walkability. On these streets, increasing walkability primarily relates to improving the cross section of the streets to complement and support surrounding development. The context of Outer Pleasant is more suburban, with large setbacks, frequent driveways, street-front parking lots, and a generally lower density than is found downtown. Investing in bike and pedestrian infrastructure will have limited return until fundamental issues of land use and urban design are addressed. The PPS team recommends that Brunswick coordinate with Maine DOT with the goal of initiating an Integrated Transportation and Land Use study. The estimated cost would be between $100 and $200k. In the meantime, Brunswick should support many of the elements of the recommendations outlined in the Naval Air Station Brunswick (NASB) Transportation Feasibility Study. The roundabouts and bike-ped infrastructure described in that study are not incompatible with any later land use evolution, although it would be ideal for both to be integrated.

20

Roundabout at Outer Pleasant & Mill

While the intersection of Outer Pleasant and Mill Streets is outside the scope of this study, the PPS team visited the site with Brunswick officials. This intersection serves as a Gateway to downtown Brunswick. Installation of a roundabout at this location will set the right tone for what Brunswick wants to accomplish everywhere. While there is not currently funding to conduct traffic studies to verify our conclusion, the PPS team believes, based on experience with roundabouts around the country, that a roundabout at this location will improve the transportation function of the intersection as well as yield community benefits: decreased congestion, increased safety, and slower speeds during off peak hours. Brunswick is currently seeking to relocate their Police Station to a parcel southeast of the intersection. The PPS team recommends that Brunswick carefully consider the location of the Station so as to not preclude the installation of a roundabout. If Brunswick cannot secure the funds to bring a roundabout specialist, then we recommend that they consider a site design for the building and essential elements set back from the intersection as far as possible.

Process and Policy recommendations

The recommendations above have primarily addressed physical and programmatic improvements to the streets. In addition, Workshop participants also identified procedural recommendations that should be used to help advance walkability and street improvements downtown.

21

Establish a parking and traffic committee for Downtown

Parking, both on-street and off-street, as well as the speed and accommodation of different travel modes are important and sensitive issues downtown. Parking and vehicles are important for creating vibrant downtown streets, but so are walking and biking. Many questions still remain regarding existing and future traffic and parking downtown, and further discussion and study of alternatives is needed. It is important that the relative priority of each travel mode and how they are accommodated in the context of a vibrant downtown continues to be examined as downtown planning proceeds. The parking and traffic committee could be the same as or a subcommittee of the Master Plan Implementation Committee, but it should commit to the exploration of opportunities and alternatives for downtown streets, and to moving forward solutions that support the Downtown Vision and receive support from users.

22

Continue education & outreach to the public, business owners, and town council members

Critical to achieving these recommendations will be fostering a community of well-informed supporters. The implementation committee, town staff and council, attendees of the walkability workshop, and any residents who seek a walkable, livable, and vibrant downtown, should commit to sharing the vision and lessons learned during the Walk Audit and presented in this report. Only through communication and education, will the benefits of walkability and how to achieve it be shared broadly in the community and build community-wide understanding and support of walkability and livability for downtown Brunswick.

Priorities and Next Steps

Priorities and Phasing

The walkability workshop generated specific recommendations for improving walkability on Maine, Mill, Cushing and Inner Pleasant street. All of the recommendations presented in the previous chapter will, if implemented, enhance walkability, promote a sense of place, and increase the economic vibrancy of downtown Brunswick. The Town of Brunswick's next step will be to prioritize these recommendations and develop a plan to refine and implement them. In doing this, the town should aim to be honest in their assessment of the internal capacity and external resources that will be required and are available for implementation. That said, the town should keep the vision for downtown foremost in their mind, retaining the flexibility to take advantage of opportunities and funding that present themselves for implementing any and all of the recommendations.

Lighter, Quicker, Cheaper

These are the assistance team's recommendations (based on the feedback received from stakeholders in Brunswick, and the team's observations on the ground) for short-term, low-cost, high-impact actions that can be take in the next year to move priority recommendations along. What we call "lighter, quicker, cheaper" strategies, these activities will put improvements on the ground, allow options to be tested and feedback from users to be gathered, and help maintain momentum and enthusiasm for walkability improvements in downtown Brunswick across stakeholder groups. Often described as "pilot projects," they allow the town to temporarily test changes and study their impacts, enabling them to make adjustments to the designs and help decide if, where, and how to implement them. Pilot projects also give all stakeholders a chance to see outcomes of the proposed changes, and in doing this, convince skeptics and win more supporters. The following are recommended for the next year; additional pilot project opportunities are identified in the table below.

Pilot one or more of the recommended roadway reconfigurations for a limited time period during the spring or fall.

Traffic reconfiguration pilot projects should take place for limited period of time: a month, a series of weekends over a season, or a weekend. The busy summer/fall season should be avoided at first. Road reconfigurations could be completed with materials as simple as traffic cones and barrels, but the PPS team recommends using more contextually-appropriate materials including planters, street furniture, and if longer pilots are deemed feasible, paint. The PPS team recommends the following two pilot projects:

- Return Inner Pleasant Street to two-ways. (recommendation 13)
- Convert Maine street from two lanes in each direction to one lane in each direction with center turn lanes. (recommendations 1 & 2)

Hold community events in the underutilized spaces identified as placemaking opportunities in this report.

These events can engage the downtown community in fostering better public space downtown, attract visitors, and help people envision better use of these locations as public spaces. (recommendation 7)

Prioritizing and phasing

In addition to these "lighter, quicker, cheaper" activities to begin the process of implementation, the PPS team has made a preliminary assessment of the relative priority, impact, and cost of the recommendations and strategies made in this report in order to help the town integrate them into their Downtown Masterplan Implementation process:

Priority: during the site visit in Brunswick, walkability workshop participants and attendees at the Breakfast and Council meeting voiced their priorities for these projects. Stated priorities of stakeholders is important to consider in the overall prioritization and phasing of projects. Street users and other stakeholders want to see results on what they care about and what will make the most difference to them. Addressing the prioritized needs and desires of stakeholders can also grow the community of users of and advocates for a walkable downtown.

H = almost everyone who voiced an opinion identified this as a priority and it was ranked as a high priority by walkability workshop participants.

M = many people who voiced an opinion identified this as a priority.

L = while this came up as a recommendation or desire in the walkability workshop, it was not repeated as a priority.

Impact: Different recommendations and strategies have varying levels of potential impact on increasing walkability and actual walking and biking downtown the overall goal to "increase comfort for all modes, enhance the commercial environment, foster placemaking while still accommodating automobile travel, emergency service and snow storage." Implementing improvements that show rapid and significant improvements to community issues are critical. They show results and help sustain enthusiasm and involvement of key stakeholders. Without high-impact improvements, support for overall walkability improvements and projects that, by their nature, may have long planning periods can languish.

H = likely to show large and immediate positive impacts .

M = likely to show significant impacts, but they may be more subtle and take more time to emerge.

L = impacts will likely be small, and may take time to be visible.

Cost: is incredibly hard to estimate and is highly dependant on the specific techniques used to implement a recommendation or strategy. Many of the recommendations in this report have both low and high cost variations. For instance: center medians can be painted in the roadway and achieve many of the safety and transportation improvements at a relatively low cost; constructed medians, while much more costly because they would require construction rather than simple re-striping, could bring added safety, public space, aesthetic, and if designed to, stormwater management benefits. These options will need to be weighed with impacts, priorities and available resources. But, in many cases, they can also represent phases, where lighter, quicker, cheaper versions of the improvement can be implemented first and more involved or costly versions can be completed as funding, resources and community and political will emerge.

H = require new or fairly large-scale reconstruction of infrastructure (reconstruction of curbs, roadbeds, and likely relocation of utilities), or significant private investment or redevelopment.

M = requires some construction or reconstruction of infrastructure, and will entail a fair amount of agency coordination and permitting.

L = requires little or no construction or reconstruction of infrastructure and can be negotiated with relative ease.

Summary of recommendations

		pilot project opportunity?	complete in 1-2 years?	priority	impact	cost	partners (to be completed)
Maine Street .							
1	Make changes to the travelway of Maine Street (curb to curb) to increase space for pedestrians and streetscape amenities and encourage slower vehicular travel speeds.	Y	Y	H	H	M	
	Reduce the width of travel lanes.	Y	Y	H	H	L	
	Add a median or islands.	Y	Y	H	H	M/H	
	Add sidewalk bump-outs into Maine Street.	Y	Y	H	H	M	
	Reduce the number of travel lanes.	Y	Y	H	H	L	
2	Improve intersections to enhance pedestrian comfort, safety and efficiency as well as improving vehicular traffic flow.			H	H	H	
	Consider incorporating pedestrian crossing signals into the standard signal timing at signalized intersections rather than using pedestrian activated signals.		Y	M	H	M/H	
	Consider a Roundabout at the intersection of Maine and Cabot/ramp from Route 1, and Mason Street.			M	H	H	
	A roundabout at Maine and Inner Pleasant is recommended.			H	H	H	
3	Establish designated space in the right-of-way for cyclists in order to encourage cycling but discourage people from cycling on the sidewalk.	Y	Y	M	H	L	
	Create designated on-street bike lanes, either standard or parking protected.	Y	Y	H	H	L	
	Designate the outer travel lanes as sharrows (shared bike and vehicular lanes).	Y	Y	M	H	L	
4	Encourage sidewalk, building and amenity design and layout that support a continuous and vibrant sidewalk space that is welcoming, comfortable, and usable for pedestrians.		Y	H	H	varries	
	Encourage building facade improvements that increase enclosure, transparency, human scale, imageability, and complexity.				H	varries	
	Incorporate art and design into standard streetscape elements such as lights and trash receptacles.	Y	Y	M	H	M/H	
	Narrow entrances to side streets using bump outs or other design features where they meet Maine street.	Y	Y	H	H	M/H	
	Place amenities on the sidewalk to respect human scale and use of the sidewalk.	Y	Y	H	H	L	
5	Ensure that changes enhance the street's function and experience in all seasons.		Y	M	M	M	
	Enable snow removal and storage of snow in all design options for Maine Street.		Y	M	M	M	
6	Improve access and wayfinding to parking and destinations on adjacent streets			M	H	M	
	Install pedestrian-oriented wayfinding signs that direct people to and inform people about key downtown destinations.	Y	Y	M	H	M	
	Enhance pedestrian connections between Maine Street and adjacent streets.			M	H	M/H	
	Install signs that direct drivers to convenient parking off Maine street.		Y	M	M	M	
7	Apply Power of Ten principles to create several gathering places along Maine Street. Capitalize on opportunities to build off of existing destinations and create new destinations of a variety of types along Maine Street.	Y	Y	H	H	varries	
	Focus initial improvements around existing destinations.	Y	Y	H	H	varries	
	Consider obtaining the now vacant lot at Maine and Mason to convert it to public space.	Y	Y	M	H	varries	
	Transform the municipal parking lot at the intersection of Maine and Pleasant Streets into a temporary plaza to serve as a gathering point in this well-traveled area.	Y		M	H	varries	
	Town Hall Place with a temporary garden plaza featuring outdoor seating.	Y	Y	M	H	varries	

		pilot project opportunity?	complete in 1-2 years?	priority	impact	cost	partners (to be completed)
Mill Street							
8	Implement streetscape improvements on the eastbound section between Cushing and Maine Streets.		Y				
9	Enhance the intersection at Mill and Cushing street where Mill street diverges from route 1 to create a gateway, slow traffic and make it easier and safer for pedestrians to cross Route 1.			H	M	H	
Cushing Street							
10	Improve and widen the sidewalks for pedestrians.		Y	M	M	M	
11	Cushing street shopping center: turn a strip mall into a neighborhood village.			M	H	H	
12	Improve connections and wayfinding for pedestrians and cyclists to surrounding neighborhood destinations, particularly Davis park.		Y	M	M	L	
Inner Pleasant Street							
13	Return inner Pleasant Street to two-way traffic.	Y	Y	H	H	L	
14	Explore ways to incorporate and improve facilities for pedestrians and cyclists on Inner Pleasant Street.	Y	Y	H	H	varries	
15	Consolidate driveway entrances where possible.			M	M	M/H	
16	Keep Driveways as narrow as possible and minimize curb radii at their entrances.			H	M	M	
17	Improve signage and Wayfinding.		Y	M	M	M	
	Explore the benefits and costs of putting utilities on inner pleasant street underground.			L	M	H	
Looking beyond the study area							
18	Extending walkability improvements to outer Pleasant	Y		H	H	varries	
19	Roundabout at Outer Pleasant & Mill			M	H	H	
Process and Policy recommendations							
20	Establish a parking and traffic committee		Y	H	H	L	
21	Continue education & outreach to the public, business owners, and town council members		Y	H	H	L	