

Pennsylvania

Downtown Streetscape Master Plan

July 15, 2010

Erie

Acknowledgements

This Streetscape Master Plan is a compilation of ideas and recommendations from the Consultant Design Team and the City of Erie "Design Review Team". It is the result of a series of collaborative workshops, open public forums and thoughtful design from a group of professionals with extensive experience with Community Design, Planning and Placemaking. The contributing members are as follows:

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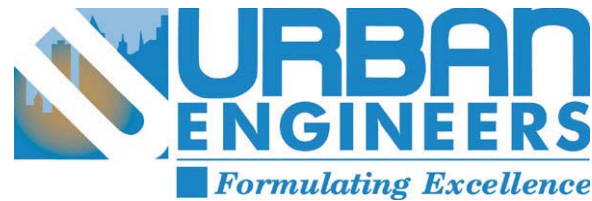
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Table of Contents

Purpose and Vision

Framework Plan	2
Overlay Plans	3
Case Studies	5

Streetscape Master Plan Typologies

Typology Legend	10
 Ceremonial Streets	11
 Park Streets	15
 Two Way Mobility Streets	17
 One Way Mobility Streets	19
 Community Streets	21

Implementation Guidelines

Streetscape Components	24
Street Tree Growth/Maintenance Practices	27
Transit Stops	28
Intersection Conditions	29
Street Tree Master Plan	31
Lighting Standards	33
Furnishings	34
Materials and Finishes	35
Green Streets	36
Cultural Corners	37
Phasing Plan	40
Cost Estimates	41



Purpose and Vision

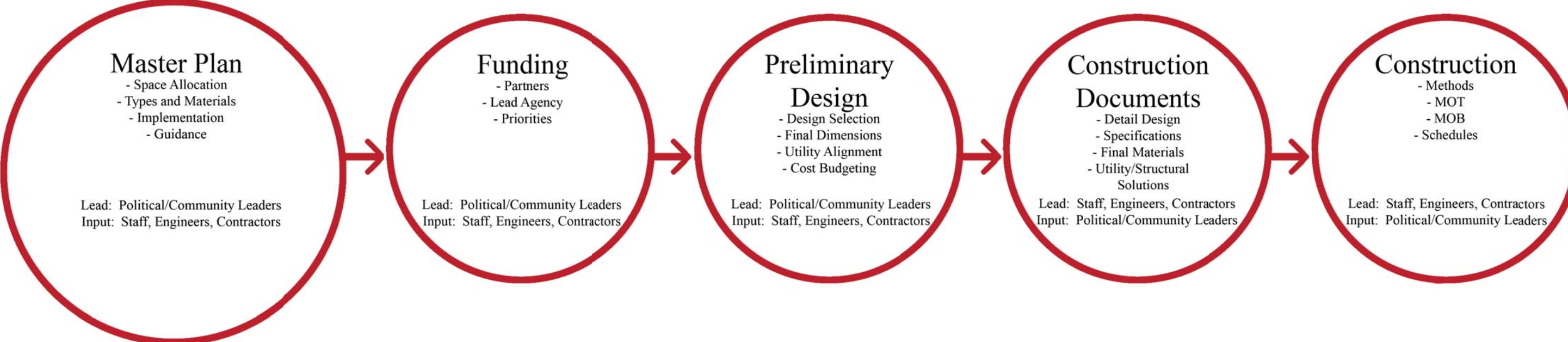
Creating a framework for streetscape development decisions for future design and construction.

The City of Erie has spent the past several years taking a comprehensive look at all aspects of its Downtown. These efforts have been well timed. The “de-industrialization” of the Bayfront and the national trend of in-migration have positioned downtown Erie for dramatic changes and economic growth. The City has wisely built partnerships with the Downtown Partnership, the Redevelopment Authority, the Port Authority, PennDOT and private sector developers among others to develop a vision and a plan for Downtown Erie. Those efforts have set the stage for the implementation that is now beginning with the work included in the Union Station Opportunity Zone and the Downtown Streetscape Master Plan.

Working with the City staff and downtown stakeholders, the Consultant Team assessed the downtown needs to understand the economic and community development objectives, specifically how each street functioned; ultimately organizing the streets into a range of typologies based on the individual function, role, land use, and right-of-way. The final product included the development of a Streetscape Master Plan for the 70-block Downtown District as well as the development of a final design for the Union Station Opportunity Zone Streetscape, within the Downtown District.

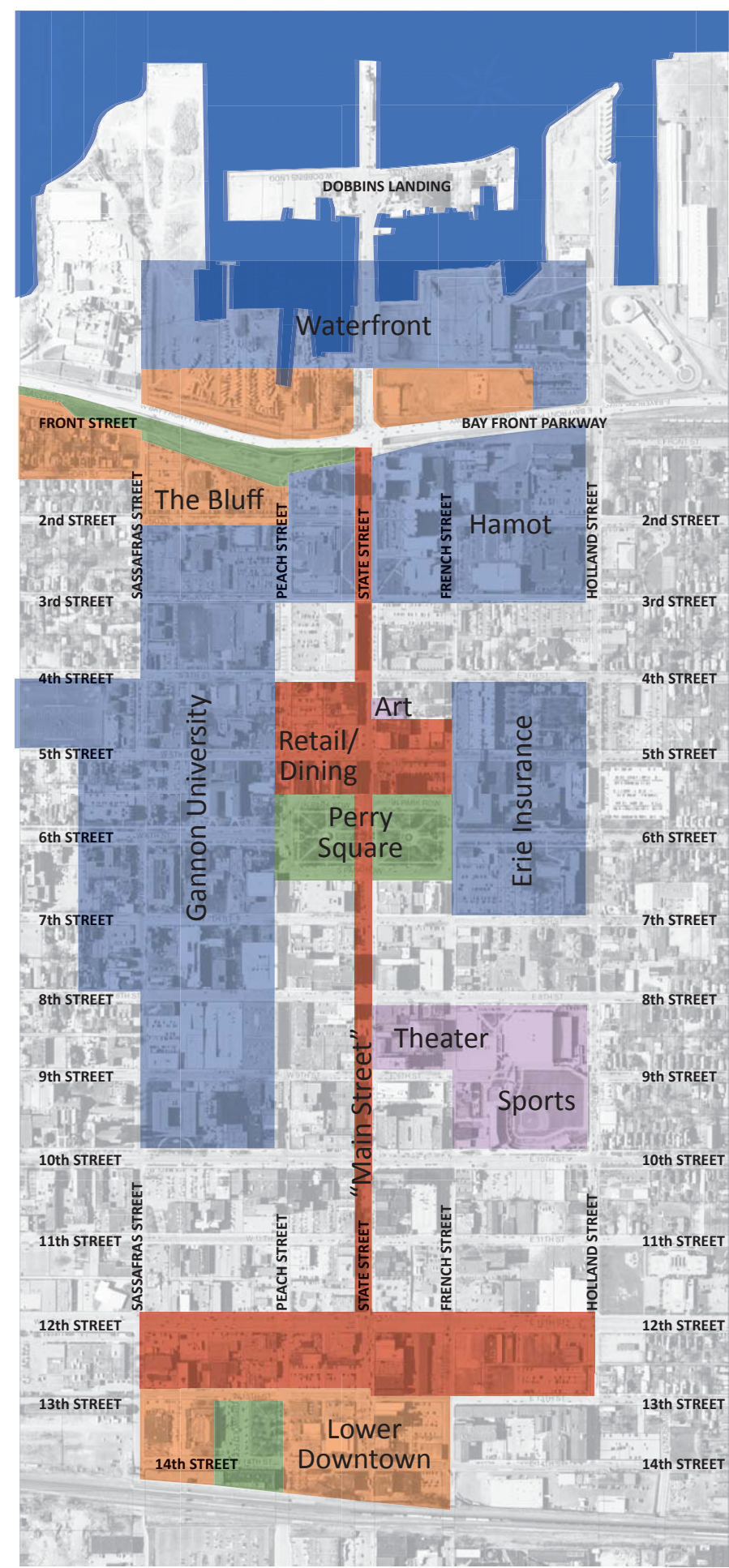
The Consultant Team’s charge was to provide livable transportation solutions to tame the downtown streets by addressing the need for sidewalks, pedestrian accessibility, street trees and landscaping, roadway intersection redesign and traffic calming measures including traffic lane reduction and elimination. The streetscape master plan addresses these issues and is intended to be utilized as the regulating plan or detailed “road map” for all future streetscape development to support future economic development throughout the downtown.

Create a Framework for future decisions while incrementally designing and constructing street modifications.

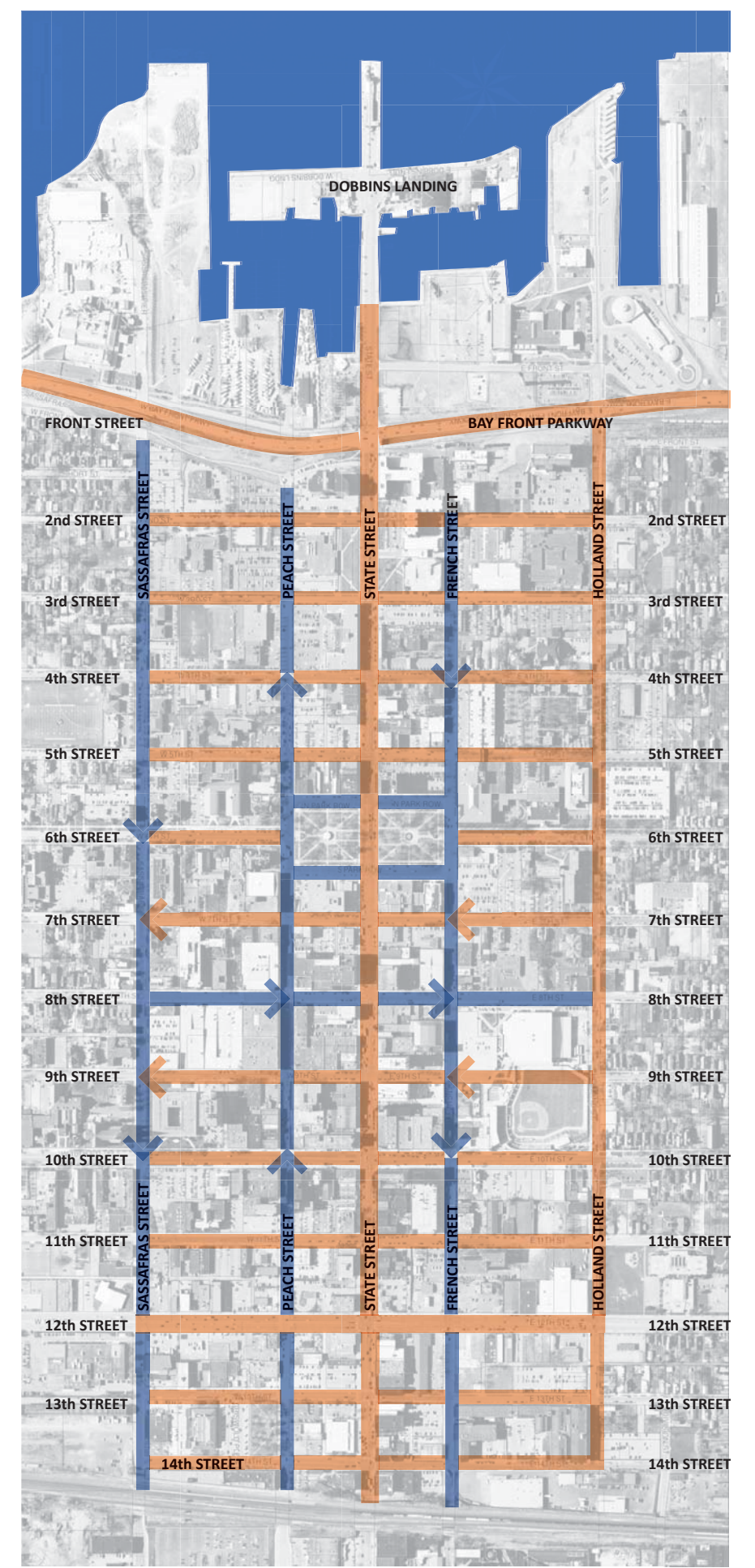


-  Retail
-  Residential
-  Major Employers
-  Entertainment
-  Parks

Existing Districts and Developments



Existing One-Way Streets



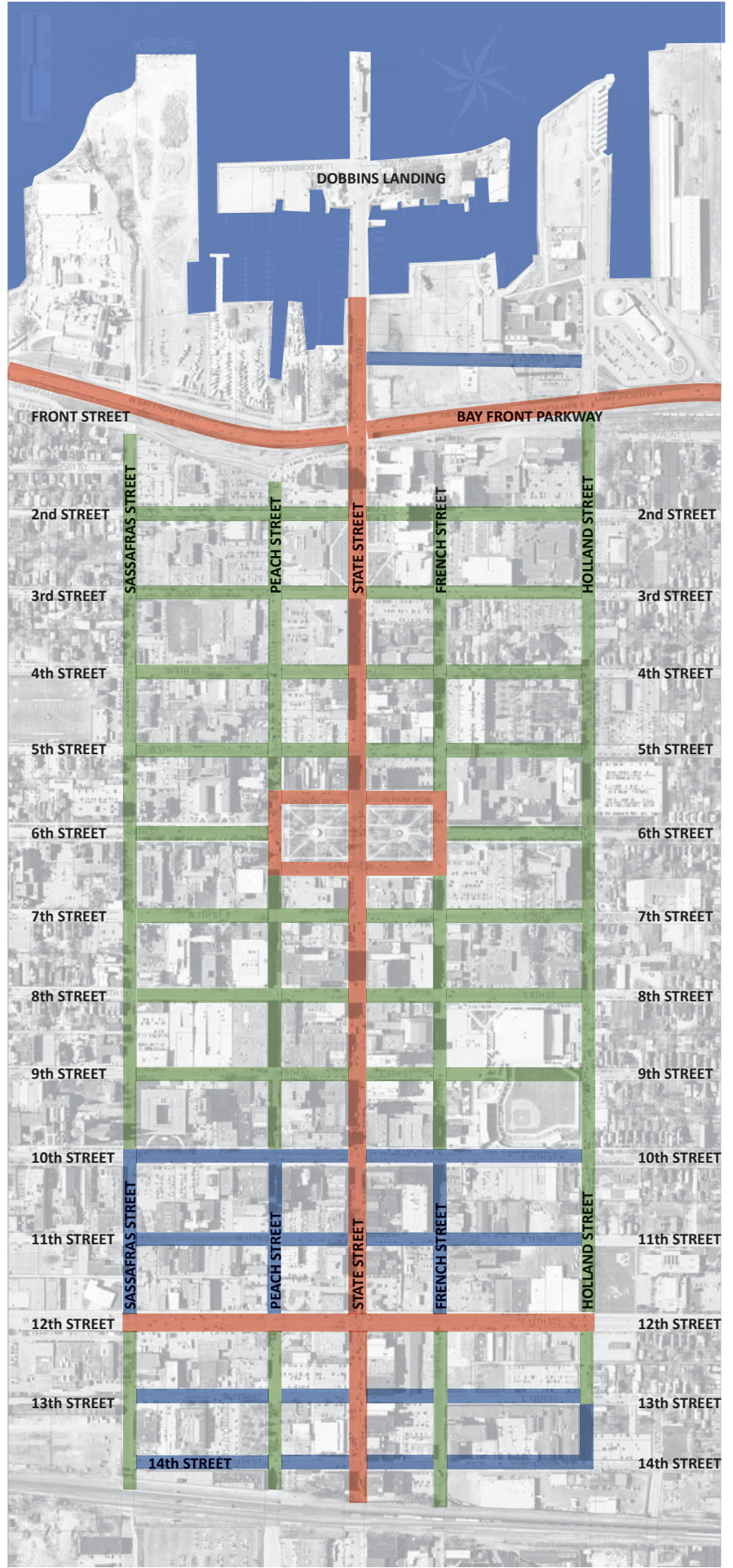
- Total Rebuild
- Moderate Upgrade
- "Paint and Plant"

In determining Proposed Levels of Treatment the above categories were developed.

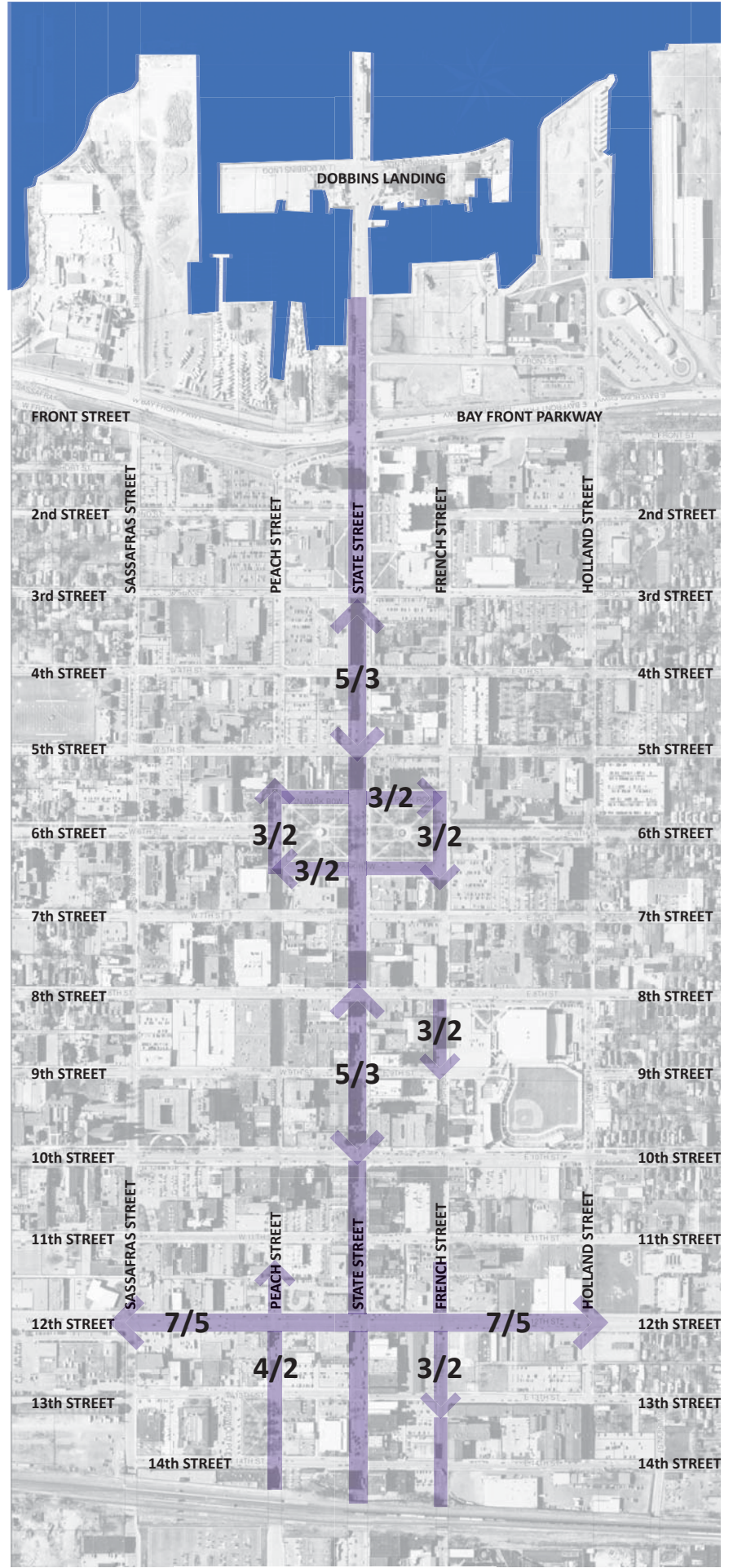
Total Rebuild assumes complete demolition and reconstruction of the street asphalt and curb.

Moderate Upgrade assumes that at least 50% of the street would need to be demolished and reconstructed.

"Paint and Plant" assumes no major demolition and simply re-configuring the roadway striping and planting street trees and landscape.



Proposed Level of Treatment



Proposed Road Diets

What Makes a Great Street?

1. Provides orientation to its users, and connects well to the larger pattern of ways.
2. Balances the competing needs of the street - driving, transit, walking, cycling, servicing, parking, drop-offs, etc.
3. Fits the topography and capitalizes on natural features.
4. Is lined with a variety of interesting activities and uses that create a varied streetscape.
5. Has urban design or architectural features that are exemplary in design.
6. Relates well to its bordering uses - allows for continuous activity, doesn't displace pedestrians to provide access to bordering uses.
7. Encourages human contact and social activities.
8. Employs hardscape and/or landscape to great effect.
9. Promotes safety of pedestrians and vehicles and promotes use over the 24-hour day.
10. Promotes sustainability through minimizing runoff, reusing water, ensuring groundwater quality, minimizing heat islands, and responding to climatic demands.
11. Is well maintained, and capable of being maintained without excessive costs.
12. Has a memorable character.

Source - American Planning Association



West 6th Street



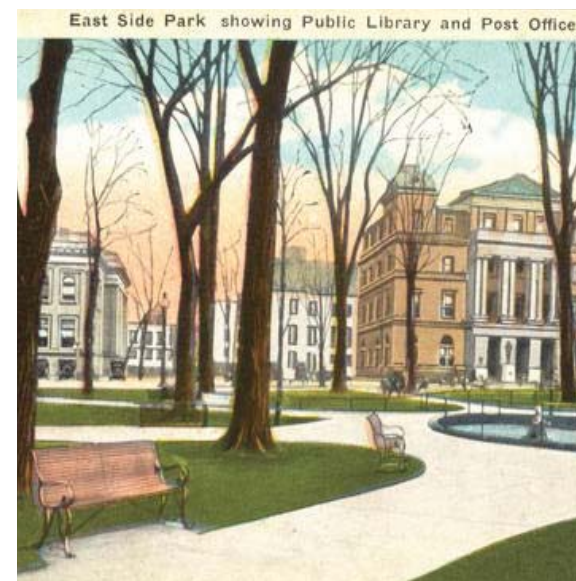
10th Street Looking East from Chestnut



6th Street Looking West from Peach Street



8th Street



East Side of Perry Square



State Street Looking North

Components of a Great Street

A Short Essay on "Great Streets"
by Ian Lockwood

"Great streets" emotionally move people due to the perfect symbiosis between the design of the street (i.e., paved surfaces, landscaping, street furniture, lighting, etc.) and the design of its surroundings (i.e., the buildings, parks, squares, etc.). A great street results in a highly pleasing combination of exchange, comfort, engagement, use, and aesthetics, so much so that the street and the experiences of the street are memorable. The space, from which a great street is perceived, extends from the building face to the building face; and, in the case of a street with an adjacent park or square, the space extends from the building face to the backdrop of the open space. Some people refer to this space as the "public realm."

Consequently, if someone were to wish to build a great street, then both ingredients would need to be designed exceptionally and married perfectly. If the surroundings were exceptional, but the street design was not, then one needs to design and build a context-supportive street; if the street was exceptional, but the surroundings fell short, then the buildings, parks, and squares would need to be redesigned accordingly; and, lastly, if the street and its surrounding both fell short, then both would need to be redesigned simultaneously. In any circumstance, achieving a new great street requires an uncompromising vision of the desired outcomes; a highly skilled design team; and the courage, cooperation, and resources to build it. That combination has always been hard to find and that is why great streets are so rare.

In rural and natural areas, there are "great roads". Exquisite surroundings are the core ingredient for great roads. The surroundings can be preexisting or they can be redesigned or altered to meet their highest potential. The road's main design goals are to meld harmoniously with the surroundings and to maximize the experience of those surroundings.

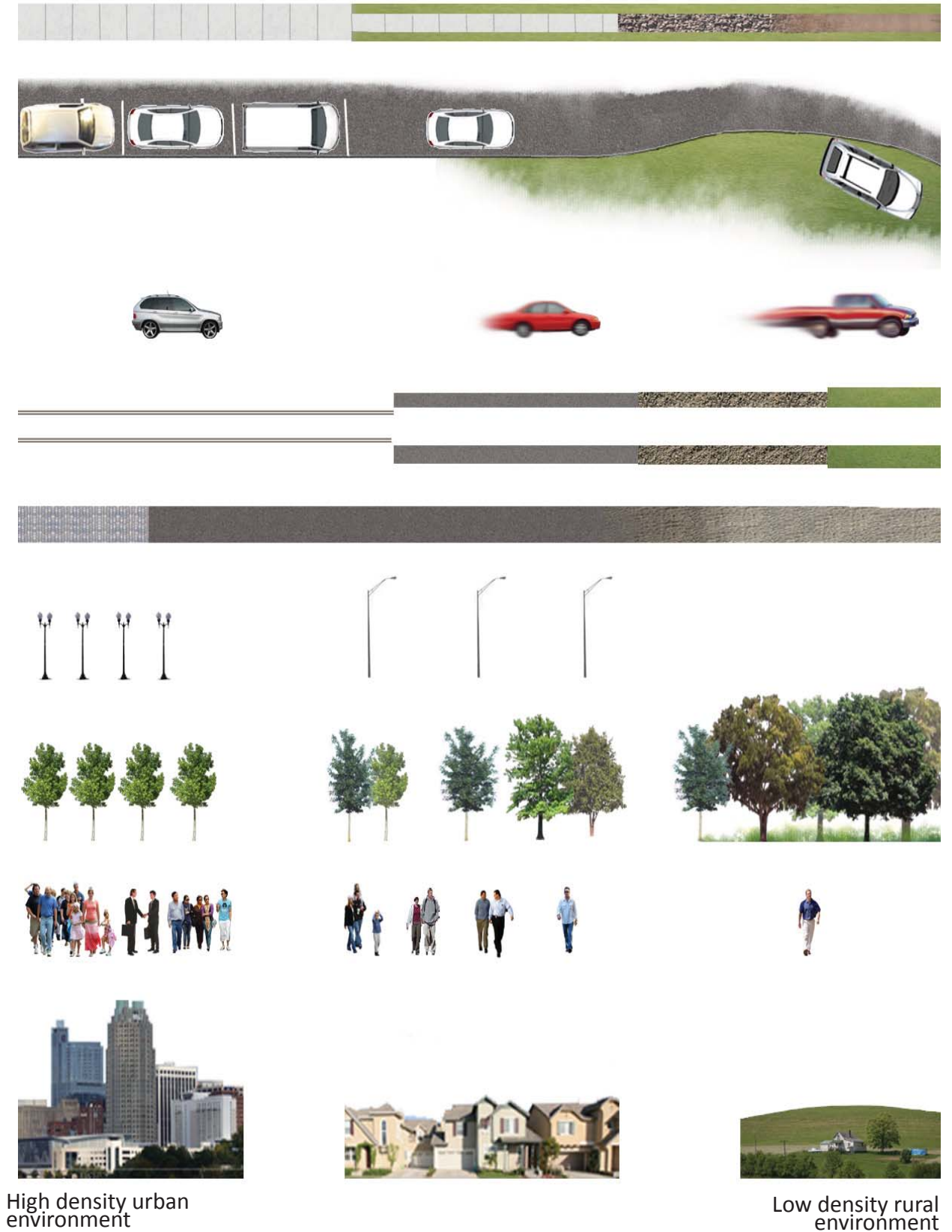
There have been great urban streets and rural roads for many centuries and, undoubtedly, more will be built in the future. The design metric, for the great urban street, is the human being and, for the great rural road, it is something natural. The relatively new category of street is the "suburban street" whose design metric is the automobile. The quality of suburban streets ranges from

poor to very nice (i.e., lusciously landscaped, nostalgic, etc.) but never great. There are no great suburban streets and there never will be any because the suburban design vocabulary is incapable of generating the highly pleasing emotional responses that urban streets and rural roads can.

Fortunately, many suburban streets can be redesigned to be much better than they are currently. The same applies to the majority of urban streets and rural roads; and perhaps a few of these might become great. The keys to bettering the design of the "public realm," on the continuum towards great, are i) having a complete design appreciation of the physical context (i.e.; street/road and its surroundings) as well as the social, economic, and political contexts (i.e., the vision, courage, cooperation, and resources); ii) knowing what needs to be preserved; iii) knowing what needs to be changed; iv) knowing what needs to be created; v) knowing how to plan and design accordingly; and vi) knowing how to implement (i.e. document, regulate, phase, etc.)

Though attaining greatness along a street or road may be rare, it is the quest that is important and laudable; exploiting every opportunity, big and small, to apply the right combination of art and science to advance the social, economic, and environmental utility. Contributing positively to the design of the street or road and its surroundings is the most democratic and noble pursuit for any design professional. The places that they create and support are available for all of society to appreciate, use, and enjoy for generations.

The Urban to Rural Transect



High density urban environment

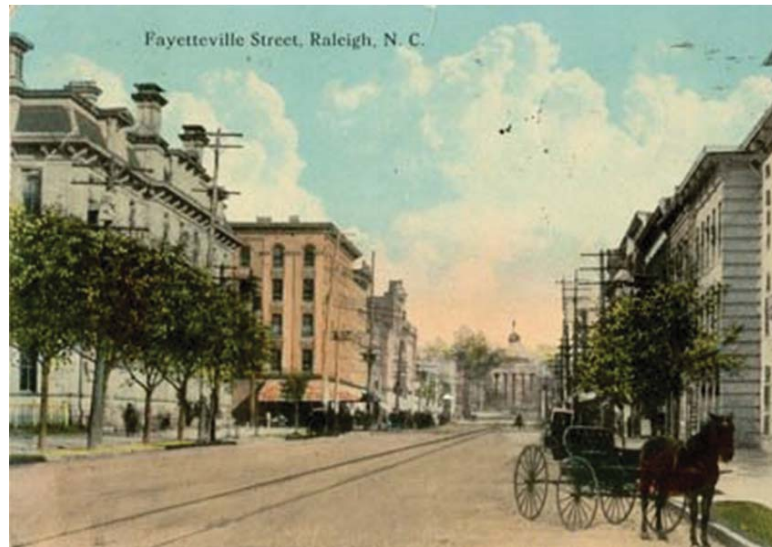
Low density rural environment



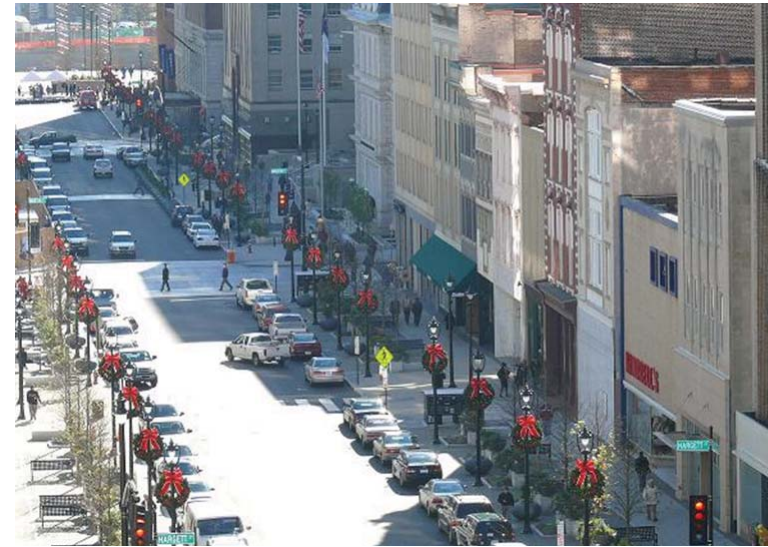
1920s State Street, Erie, PA



Current State Street, Erie, PA



1910s Fayetteville Street, Raleigh, NC



Current Fayetteville Street, Raleigh, NC



1960s Main Street, Greenville, SC



Current Main Street, Greenville, SC

Modernizing Infrastructure Past and Present

The Cause

- Pre 1970 cities focused their development on single Central Business Districts
- Residential development moved to the suburbs
- High speed, oversized roads were built to serve a quantity of development that never occurred

The Fix

- Reposition “Main Streets” as a walkable place that people want to live near
- Make a specific decision to rebalance “Main Street” as a livable street
- Balance access of auto transportation and urban walkability
- Create a quality shopping experience
- Create an attractive environment for economic investment

Modernizing Infrastructure Past and Present

Case Study-Fayetteville Street, Raleigh, North Carolina

Raleigh, like many US Cities, was losing its downtown population base to suburbia, and was adopting a 'Central Business District' approach to downtown with corresponding road widening to accommodate projected rush hour traffic. Erie and State Street have experienced the same effect.

After their downtown "died", the approach was to create an 'attractive' pedestrian mall, ridding the retail pedestrian experience of the unlivable road experience. Predictably, the Mall further damaged retailing because of the complete loss of auto and transit access. As a result, they returned to the ceremonial 2-Lane, on street parking, wide sidewalks, tree canopy downtown promenade, i.e. A Real Main Street.

Raleigh got back to the time tested principles of successful downtowns and reopened Fayetteville Street as a livable, walkable, drivable, park-able...

COMPLETE STREET!



Circa 1910.



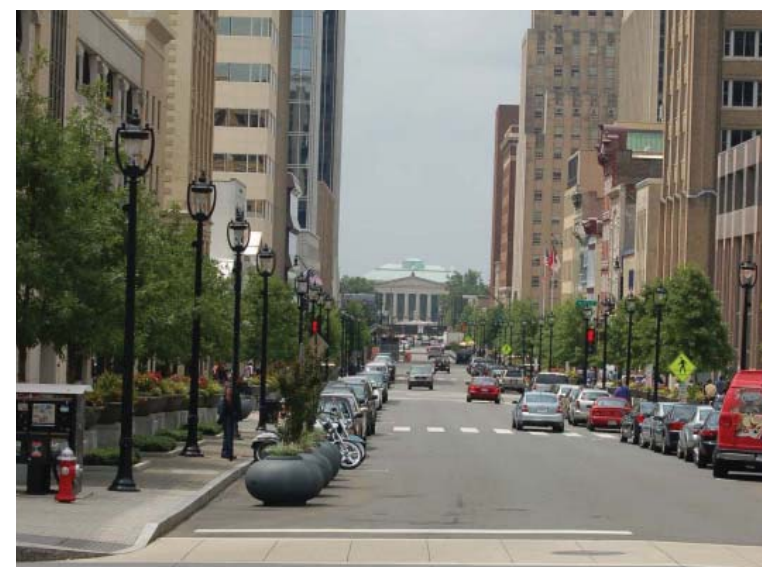
1950s



1972



1997



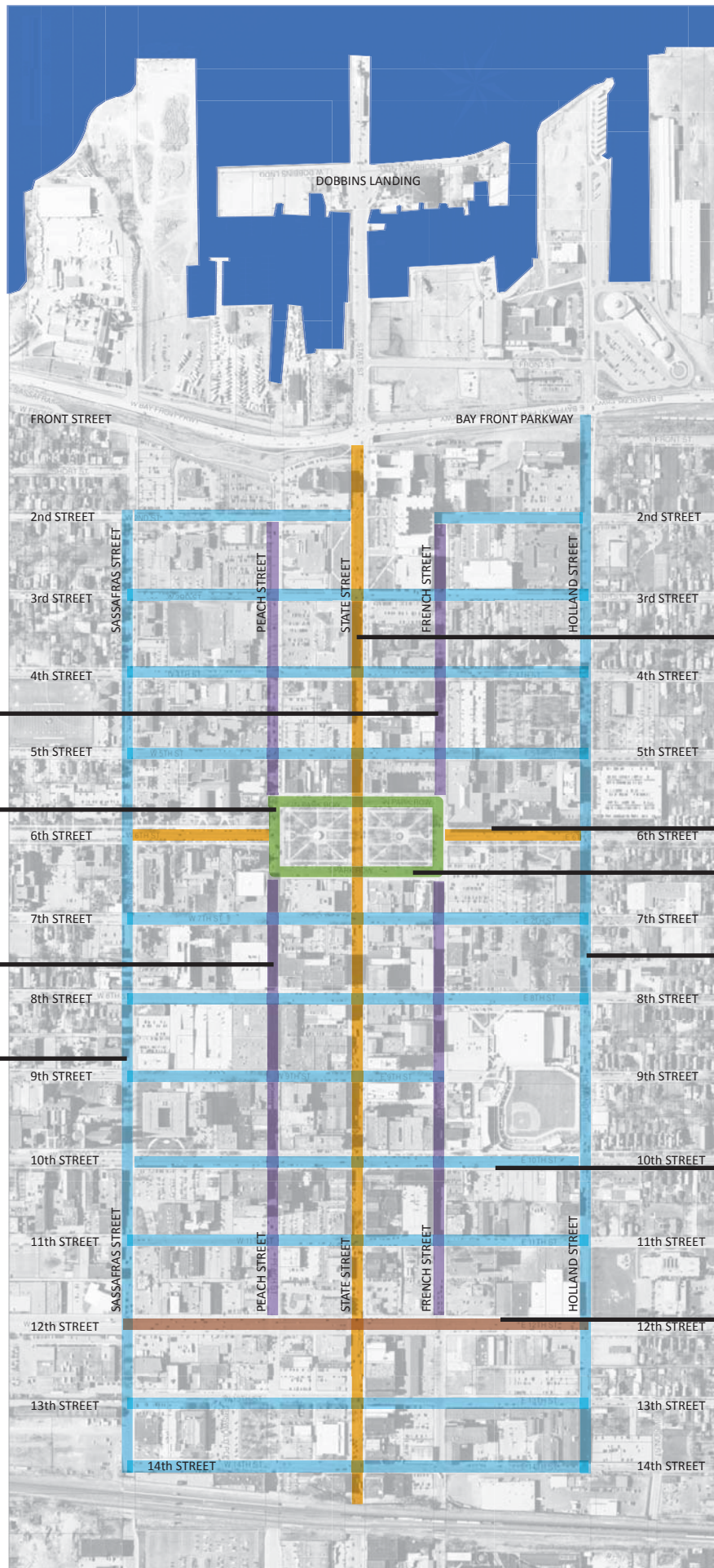
Present Day



Present Day



Streetscape Master Plan Typologies



Civic - Celebrating Arrival and Place



Ceremonial Streets:

“Main Streets” of a community with a high level of civic space and uses.
State and 6th Street



Park Streets:

Streets fronting civic spaces and parks.
North Park Row, South Park Row, French, and Peach Street

Mobility Streets - Moving People



Two-Way Mobility Street:

Framework streets mainly used for moving traffic through an area.
12th Street



One-Way Mobility Streets:

Framework streets moving traffic within an area.
Peach and French Street

Community Streets - Multi-Purpose



Non-Framework Streets:

Streets that form the majority of the network.
SassafRAS, Holland, 2nd, 3rd, 4th, 5th, 7th, 8th, 9th, 10th, 11th, 13th, 14th

French Street

North Park Row

Peach Street

SassafRAS Street

State Street

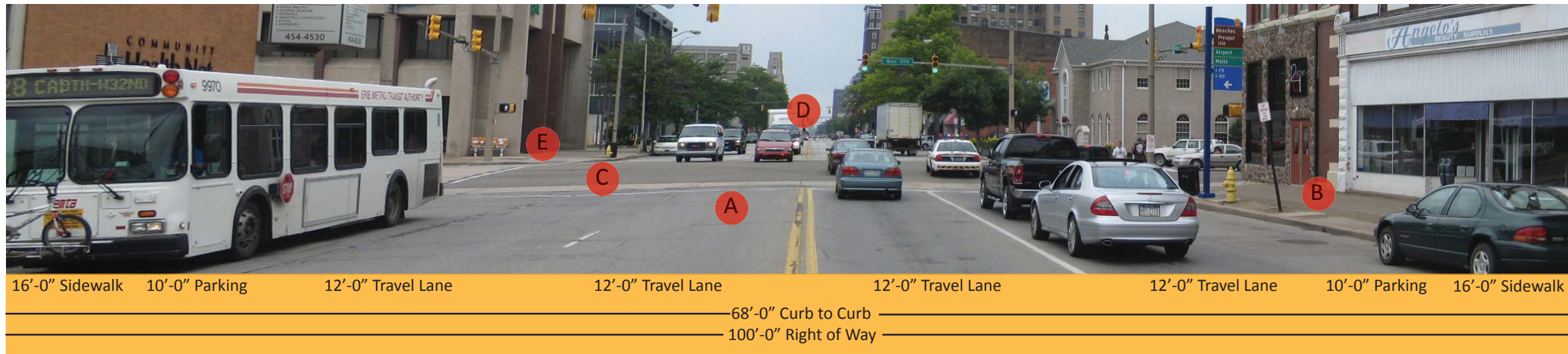
6th Street

South Park Row

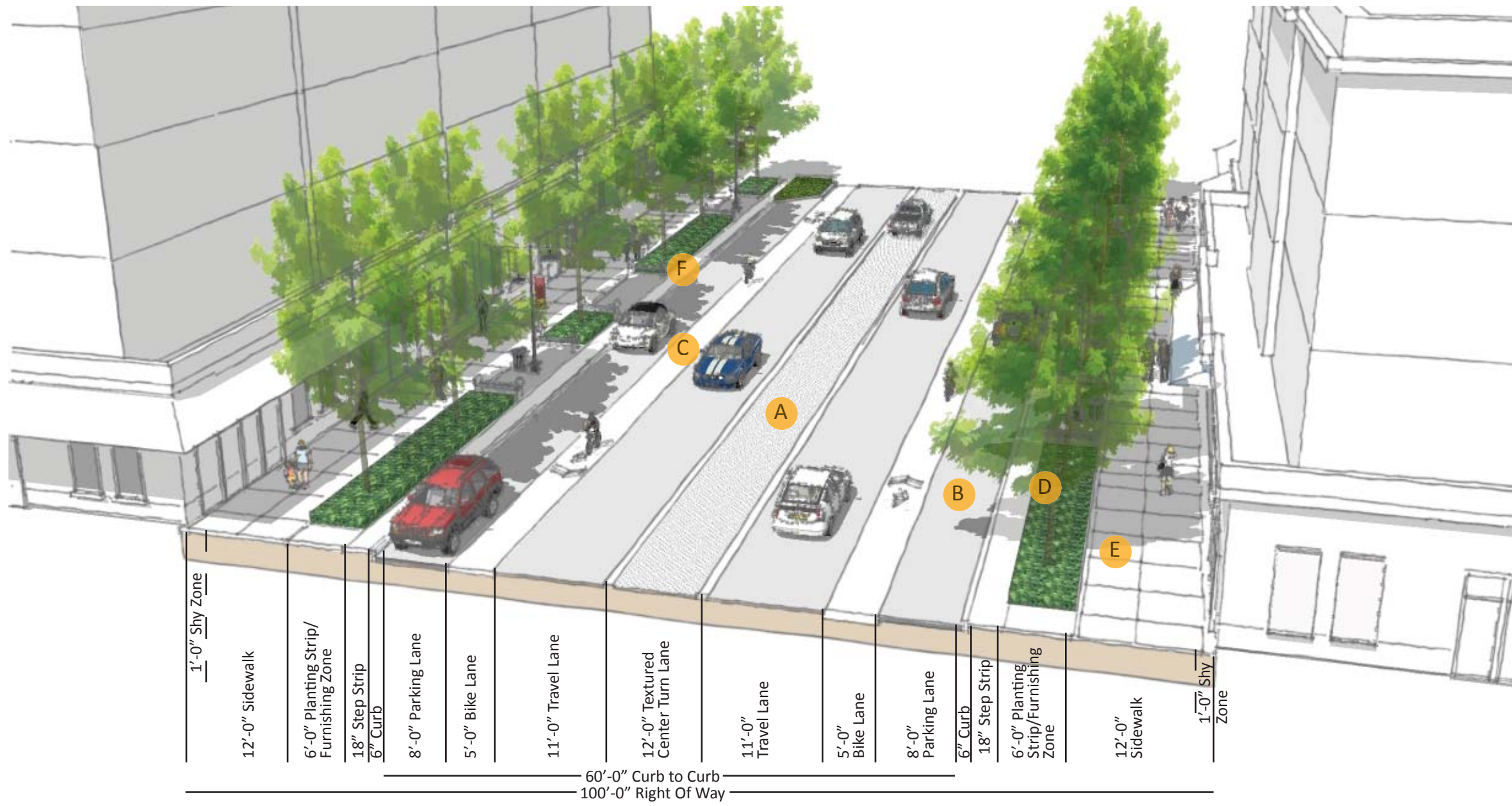
Holland Street

10th Street

12th Street

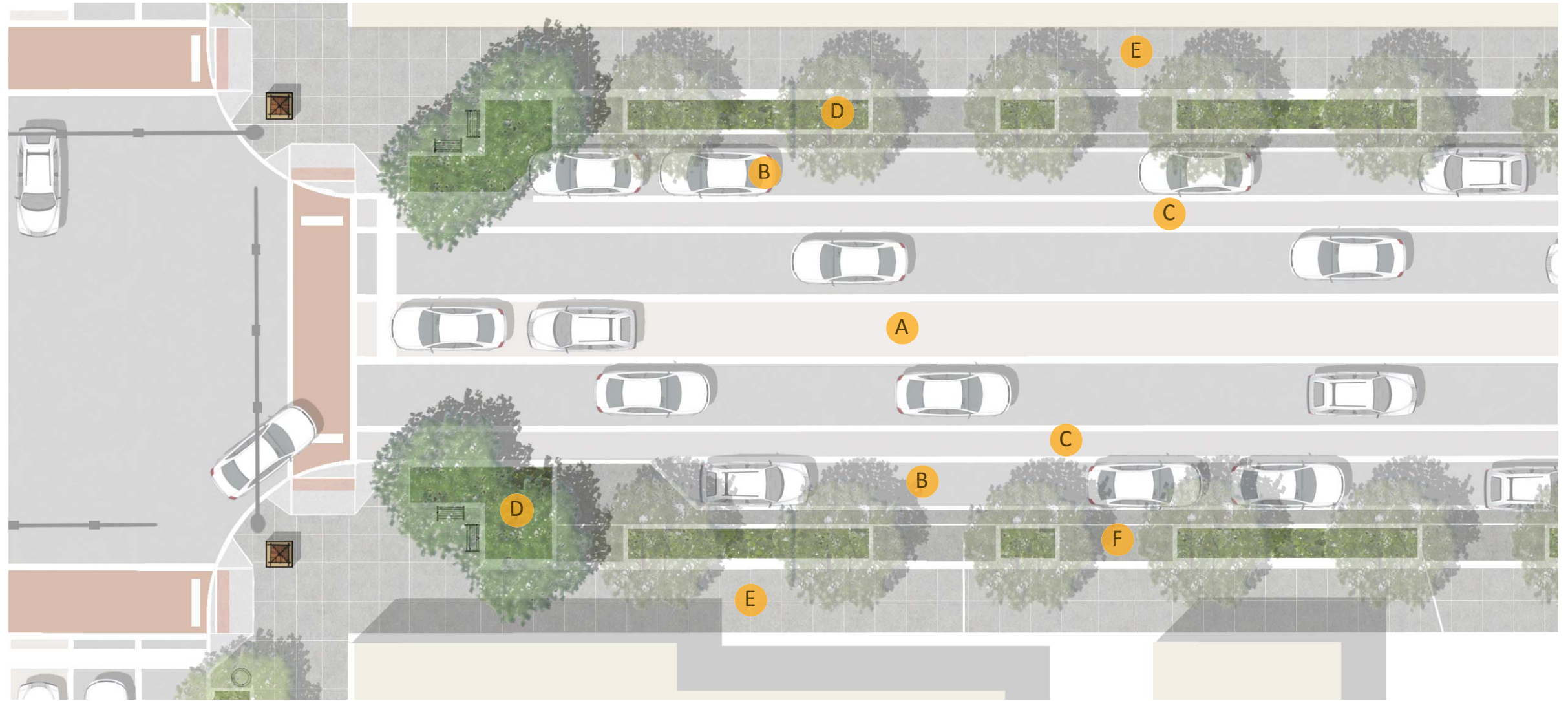


- Existing Conditions:
- A** Excessively wide travel lanes
 - B** Lack of street trees
 - C** Long pedestrian crossing distances
 - D** Unnecessary amount of travel lanes
 - E** Narrow sidewalk widths in some areas

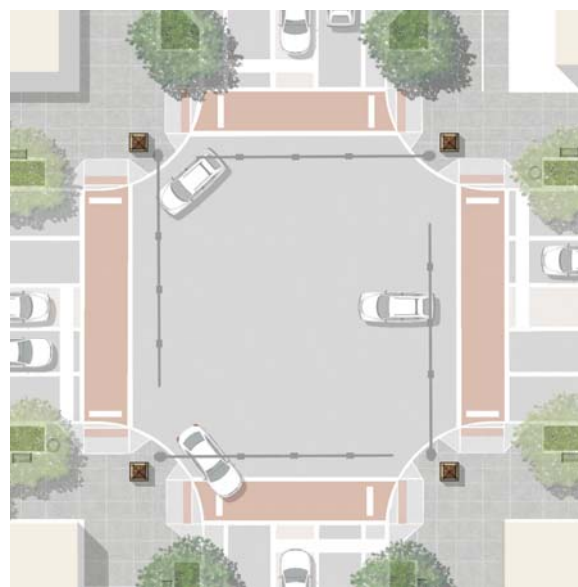


Proposed Improvements:

- A** Center turn lane with brick pavers to provide a tactile driving surface and slow motorists
- B** On-street parking to provide easy access to retail and restaurants
- C** Concrete bicycle lanes
- D** Canopy trees in large open planters to provide shade and comfort to the street environment
- E** Broad concrete sidewalks to facilitate multiple functions: street furnishings, outdoor dining and pedestrian access
- F** Paver or cobble furnishing zone to consolidate benches, trash receptacles, light poles, newspaper boxes, transit shelters, etc.



Eye level perspective view of streetscape



Type 1 pedestrian crossing treatment



Accolade Elm



Red Maple



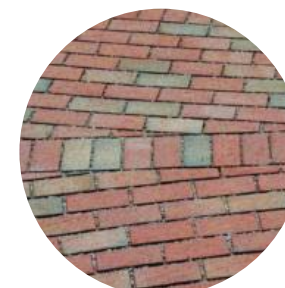
Cultural Corner Street



Vehicle Scale Light



Type A Bench



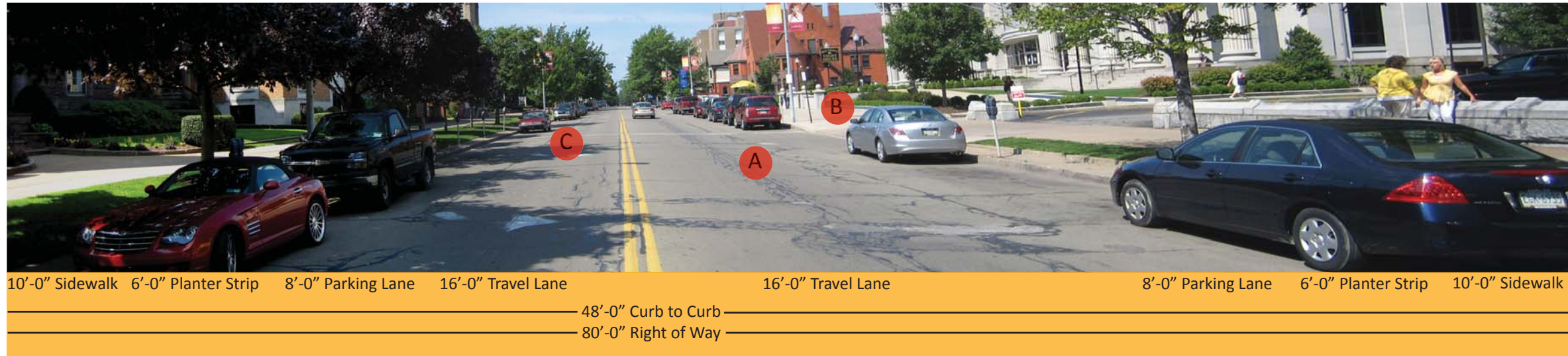
Brick Street Paving



Cobblestone Furnishing Zone



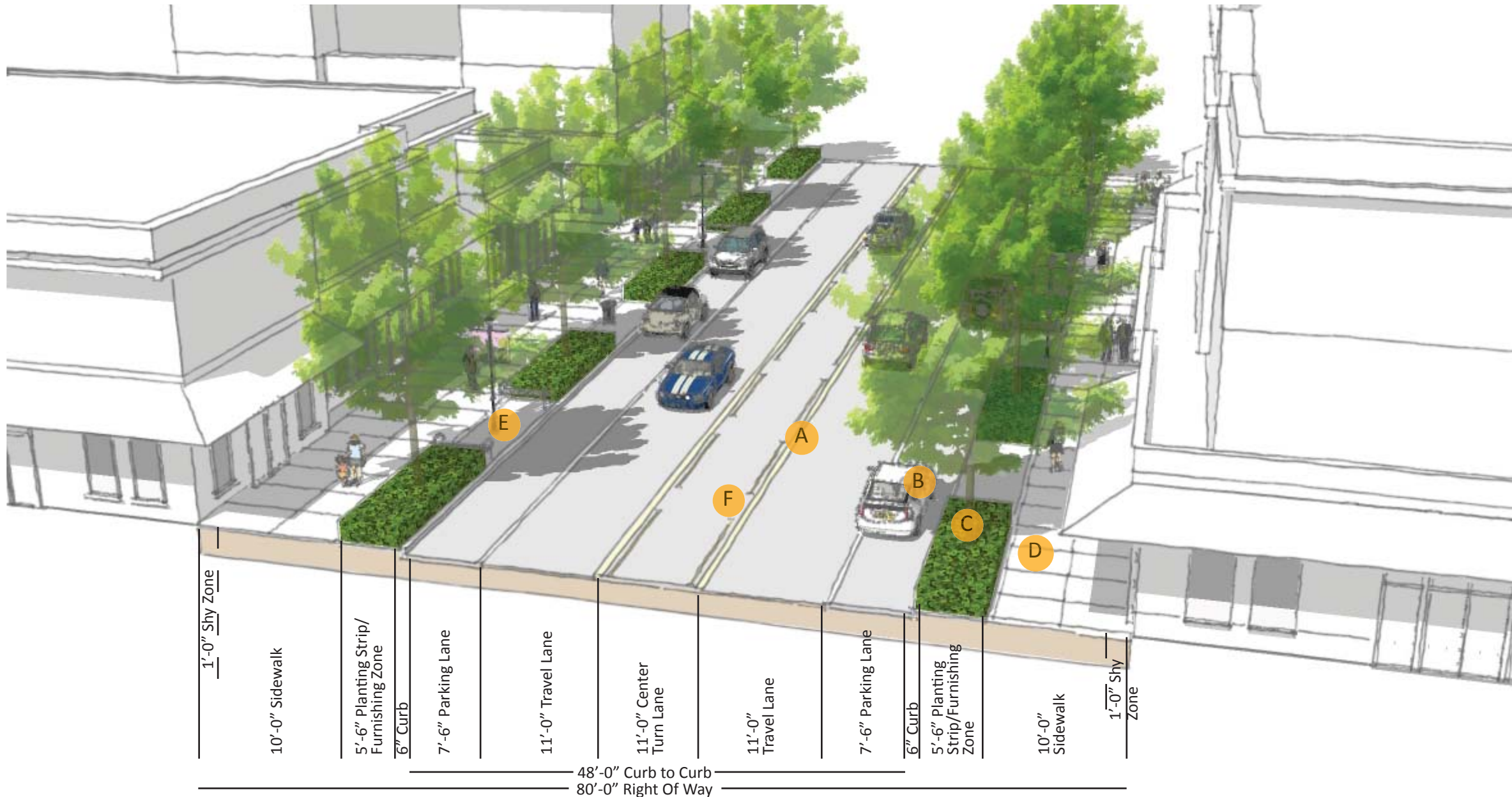
Green Street



10'-0" Sidewalk 6'-0" Planter Strip 8'-0" Parking Lane 16'-0" Travel Lane 16'-0" Travel Lane 8'-0" Parking Lane 6'-0" Planter Strip 10'-0" Sidewalk
 48'-0" Curb to Curb
 80'-0" Right of Way

Existing Conditions:

- A** Excessively wide travel lanes
- B** Lack of street trees
- C** No buffer between traffic and pedestrians



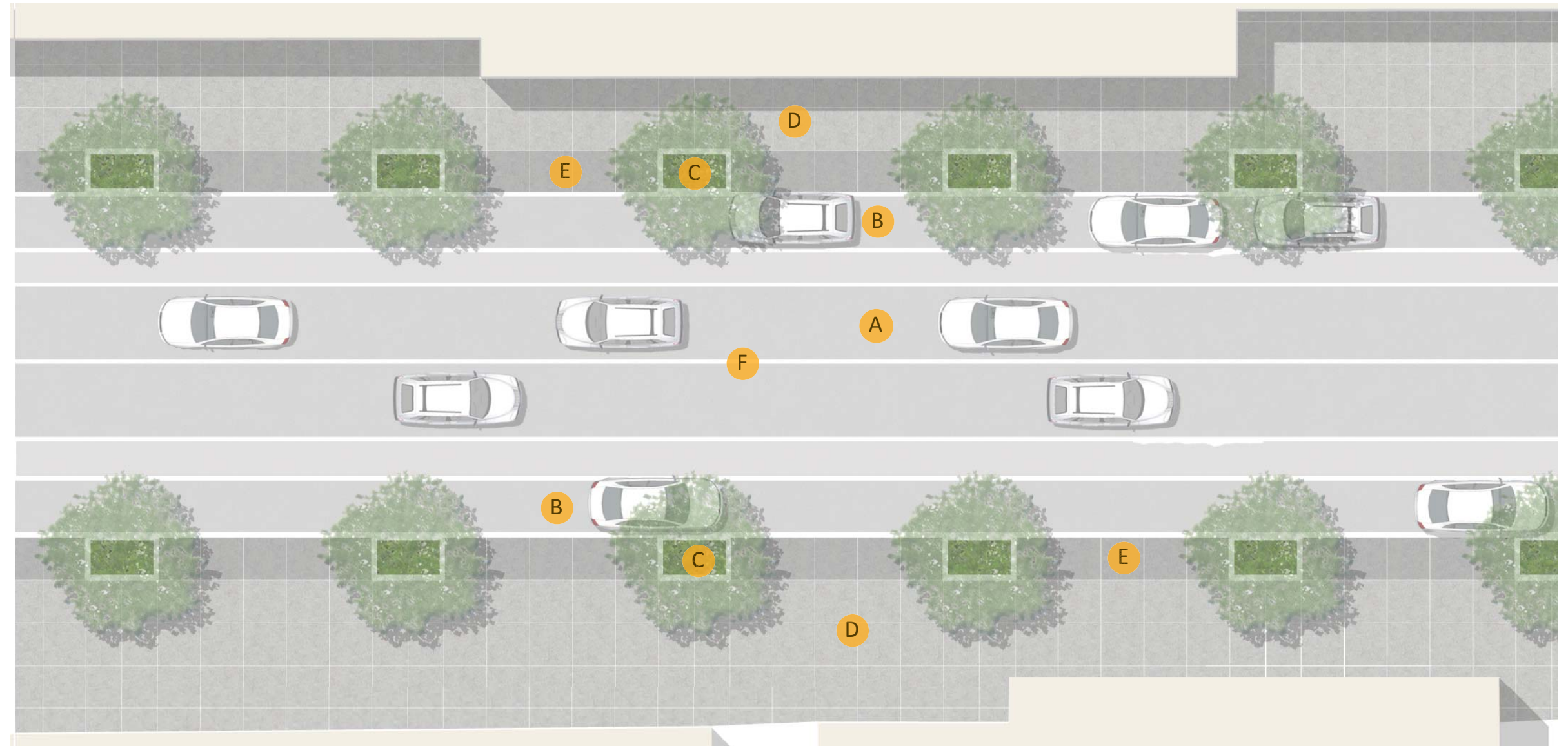
1'-0" Shy Zone
 10'-0" Sidewalk
 5'-6" Planting Strip/Furnishing Zone
 6" Curb
 7'-6" Parking Lane
 11'-0" Travel Lane
 11'-0" Center Turn Lane
 11'-0" Travel Lane
 7'-6" Parking Lane
 6" Curb
 5'-6" Planting Strip/Furnishing Zone
 10'-0" Sidewalk
 1'-0" Shy Zone
 48'-0" Curb to Curb
 80'-0" Right Of Way

Proposed Improvements:



Proposed Improvements:

- A** Reduce travel lane widths to slow traffic speeds.
- B** On-street parking to provide easy access to retail and restaurants
- C** Canopy trees in large open planters to provide shade and comfort to the street environment
- D** Broad concrete sidewalks to facilitate multiple functions: street furnishings, outdoor dining and pedestrian access
- E** Paver or cobble furnishing zone to consolidate benches, trash receptacles, light poles, newspaper boxes, transit shelters, etc.
- F** Middle turn lane to provide a safe left turn and keep traffic lanes flowing



Eye level perspective view of streetscape



Type 2 pedestrian crossing treatment



Pin Oak



Red Maple



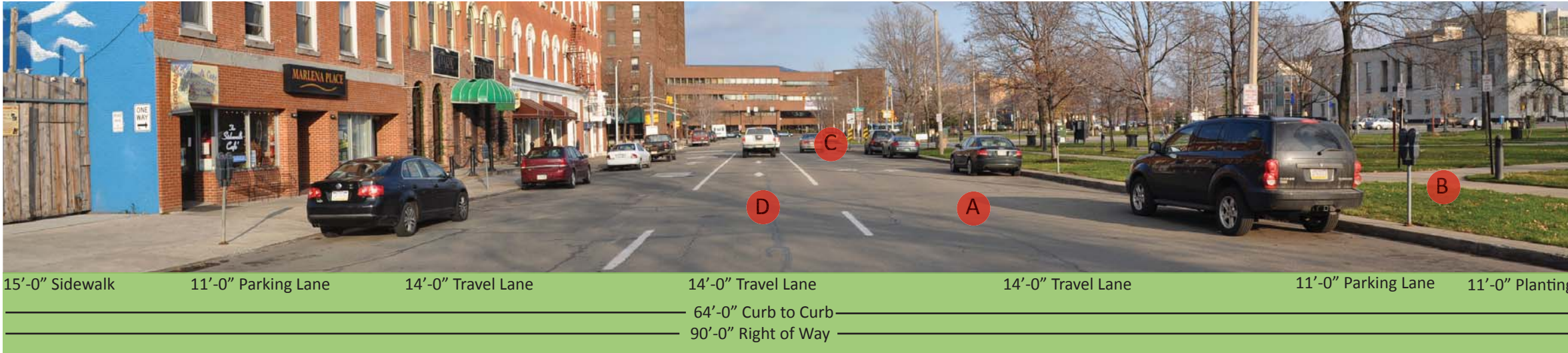
Pedestrian Scale Light



Type A Bench



Cobblestone Furnishing Zone

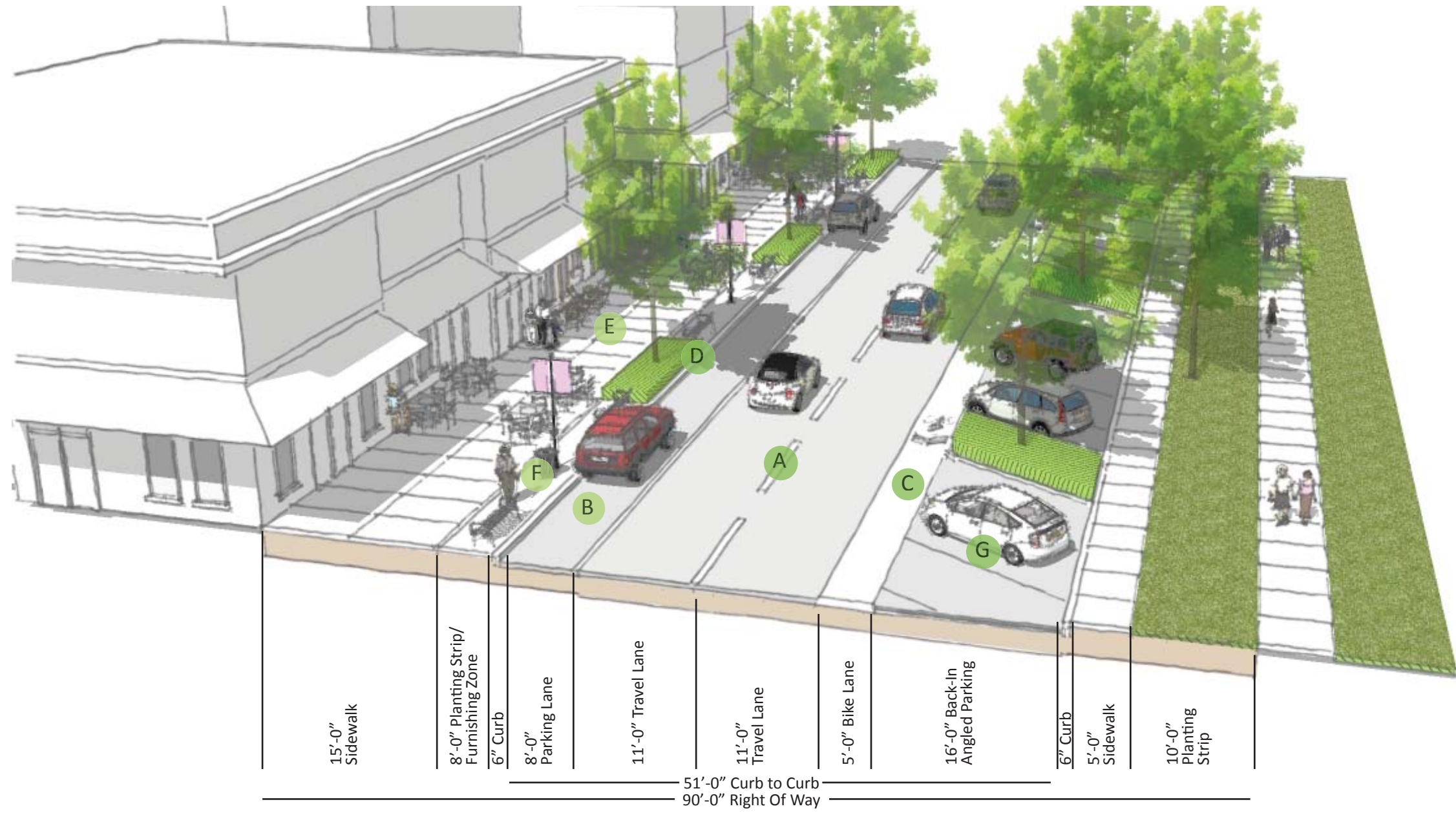


15'-0" Sidewalk 11'-0" Parking Lane 14'-0" Travel Lane 14'-0" Travel Lane 14'-0" Travel Lane 11'-0" Parking Lane 11'-0" Planting

64'-0" Curb to Curb

90'-0" Right of Way

- Existing Conditions:
- A** Excessively wide travel lanes
 - B** Lack of street trees
 - C** Long pedestrian crossing distances
 - D** Unnecessary amount of travel lanes



15'-0" Sidewalk 8'-0" Planting Strip/ Furnishing Zone 6" Curb 8'-0" Parking Lane 11'-0" Travel Lane 11'-0" Travel Lane 5'-0" Bike Lane 16'-0" Back-in Angled Parking 6" Curb 5'-0" Sidewalk 10'-0" Planting Strip

51'-0" Curb to Curb

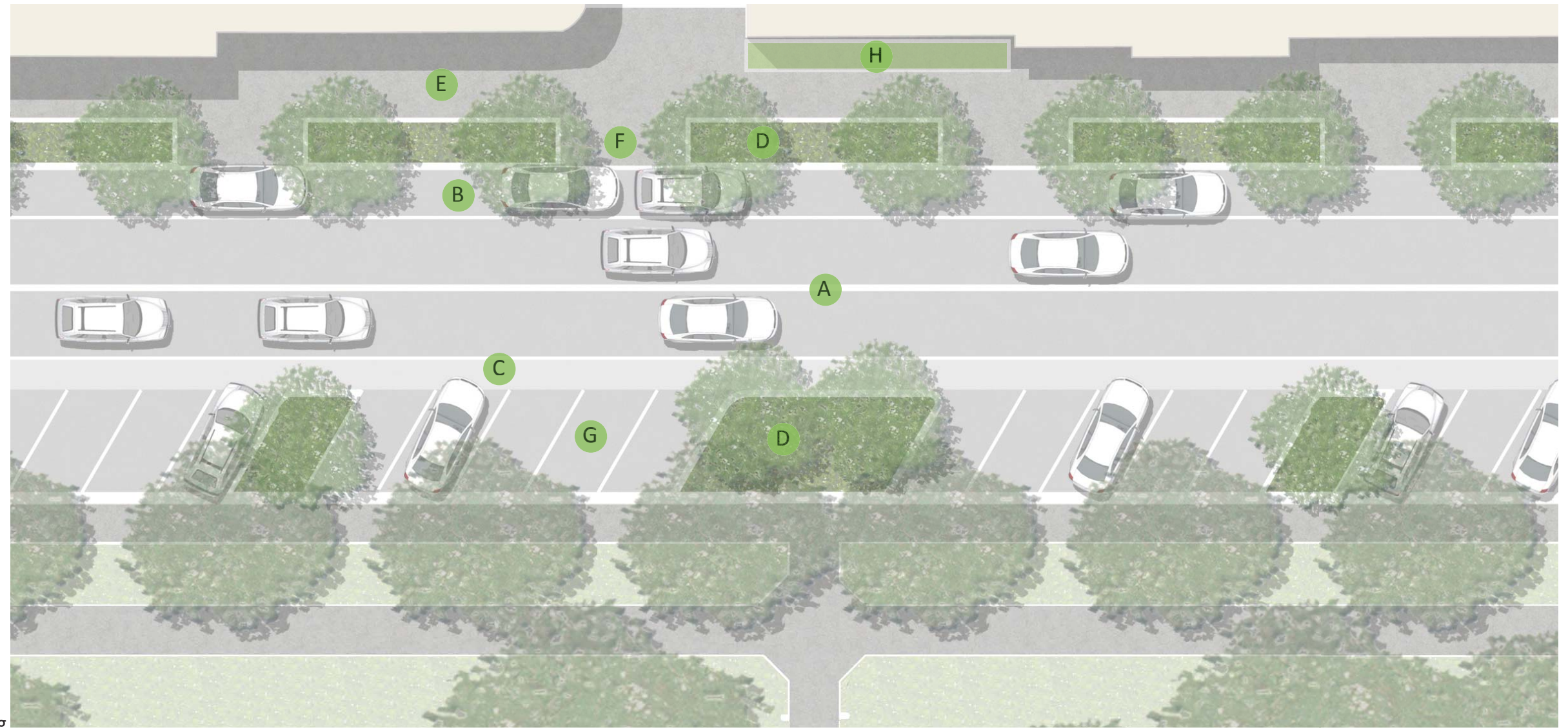
90'-0" Right Of Way

Proposed Improvements:



Proposed Improvements:

- A** Reduce number of travel lanes and reduce their width to accommodate the correct traffic flow and slow traffic speeds.
- B** On-street parking to provide easy access to retail and restaurants
- C** Bicycle lanes
- D** Canopy trees in large open planters to provide shade and comfort to the street environment
- E** Broad concrete sidewalks to facilitate multiple functions: street furnishings, outdoor dining and pedestrian access
- F** Paver or cobble furnishing zone to consolidate benches, trash receptacles, light poles, newspaper boxes, transit shelters, etc.
- G** Back-in angled parking along park edge to accommodate a higher volume of cars during park events and create a safer parking scenario by lessening vehicle and pedestrian conflict.
- H** Optional 5' plant bed in lieu of dining areas where facades are inactive. Planting bed can be utilized to lessen pavement.



Eye level perspective view of streetscape



Type 2 pedestrian crossing treatment



Honey Locust



Red Maple



Cultural Corner Street



Vehicular Scale Light



Type B Bench



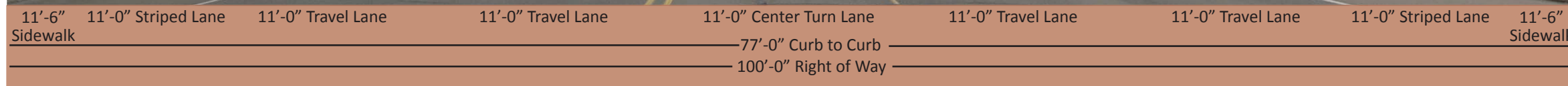
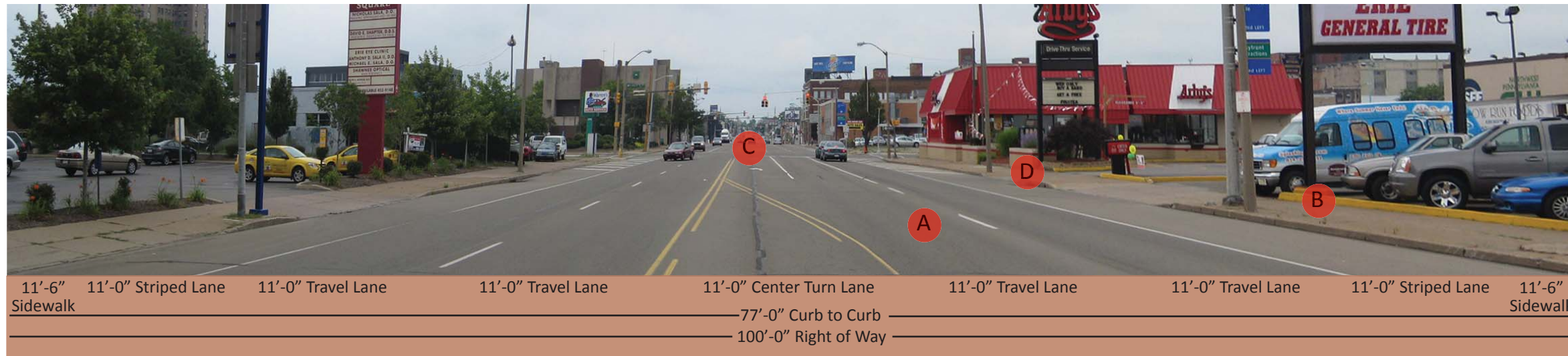
Bike Lane



Cobblestone Furnishing Zone

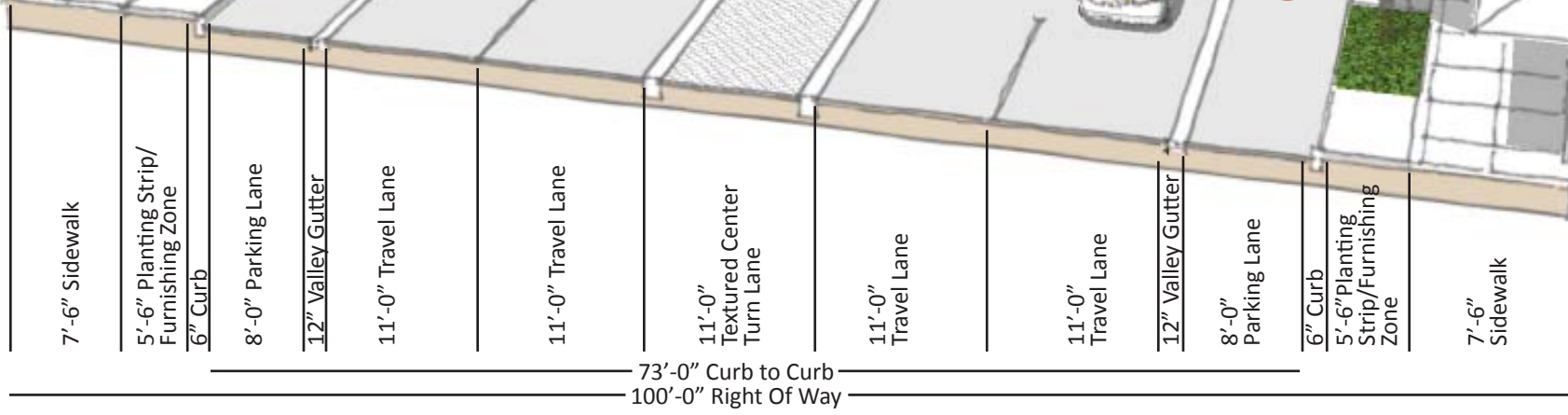
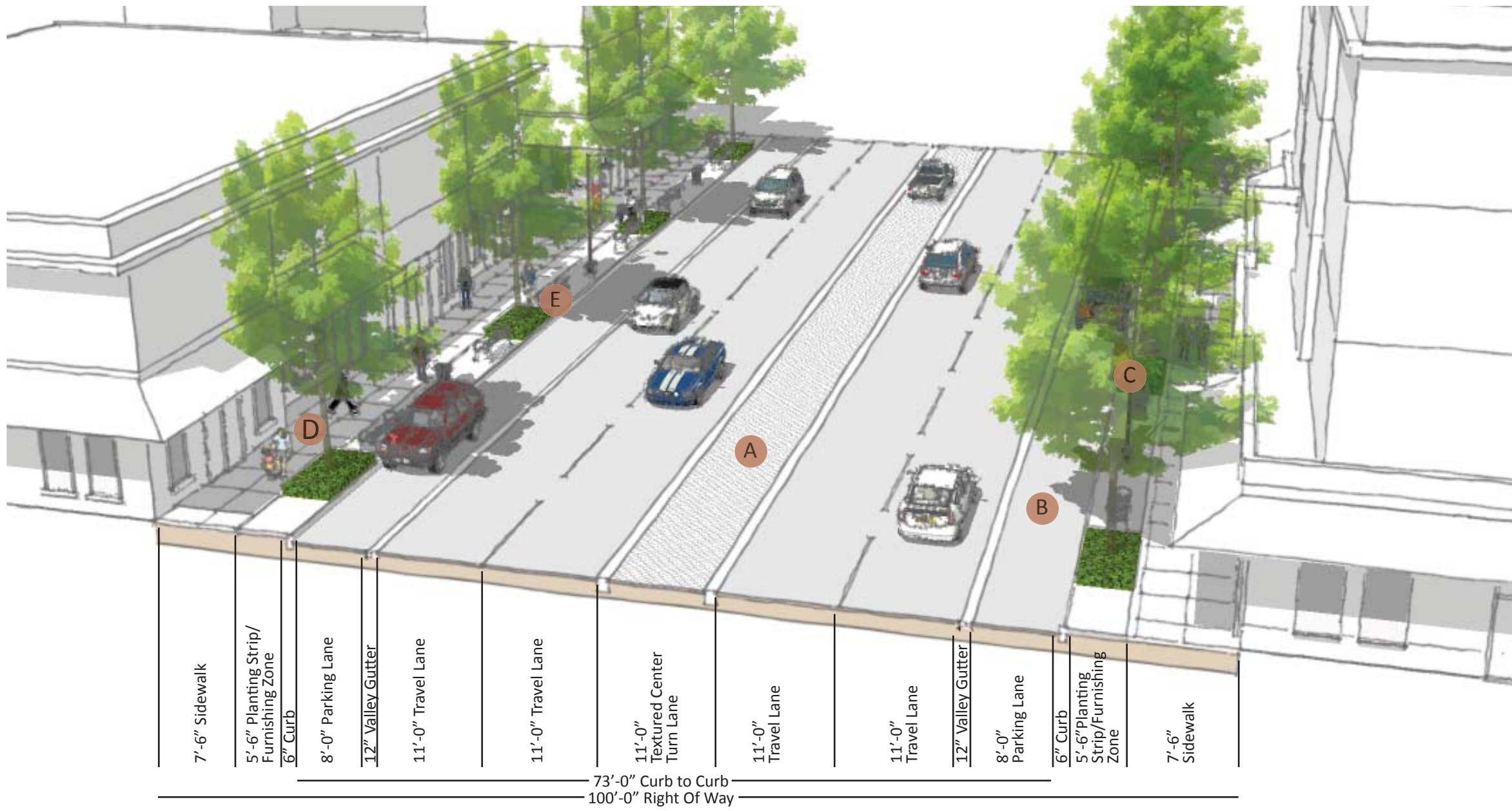


Green Street



Existing Conditions:

- A** Excessively wide travel lanes
- B** Lack of street trees
- C** Long pedestrian crossing distances
- D** Excessive driveway openings

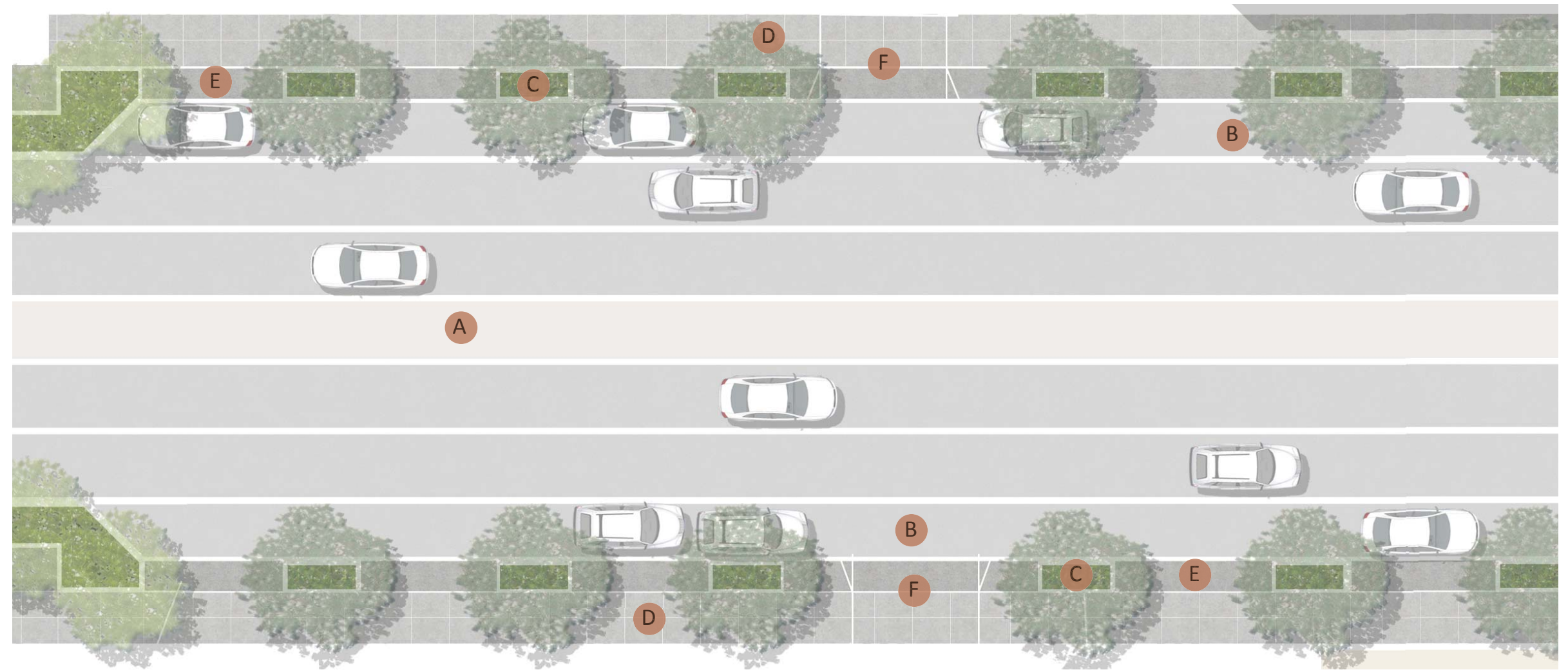


Proposed Improvements:



Proposed Improvements:

- A** Center turn lane with brick pavers to provide a tactile driving surface and slow motorists
- B** On-street parking
- C** Canopy trees in large open planters to provide shade and comfort to the street environment
- D** Broad concrete sidewalks to facilitate multiple functions: street furnishings, outdoor dining and pedestrian access
- E** Dedicated furnishing zone to consolidate benches, trash receptacles, light poles, newspaper boxes, transit shelters, etc.
- F** Combine driveways where possible, maximizing driveway widths to 24'.



Eye level perspective view of streetscape



Type 2 pedestrian crossing treatment



Sweetgum



Ginkgo



Vehicular Scale Light



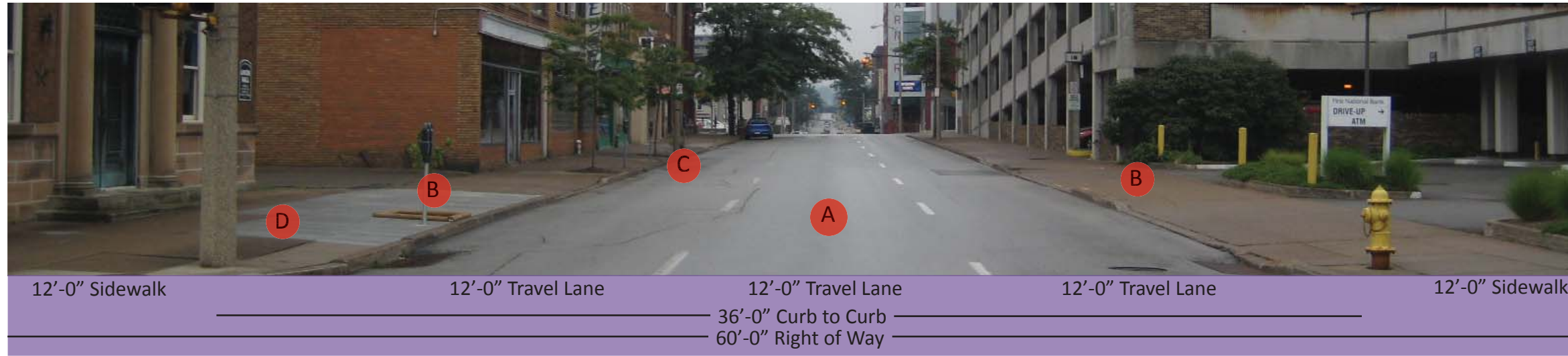
Type A Bench



Specialty Paving Crosswalk

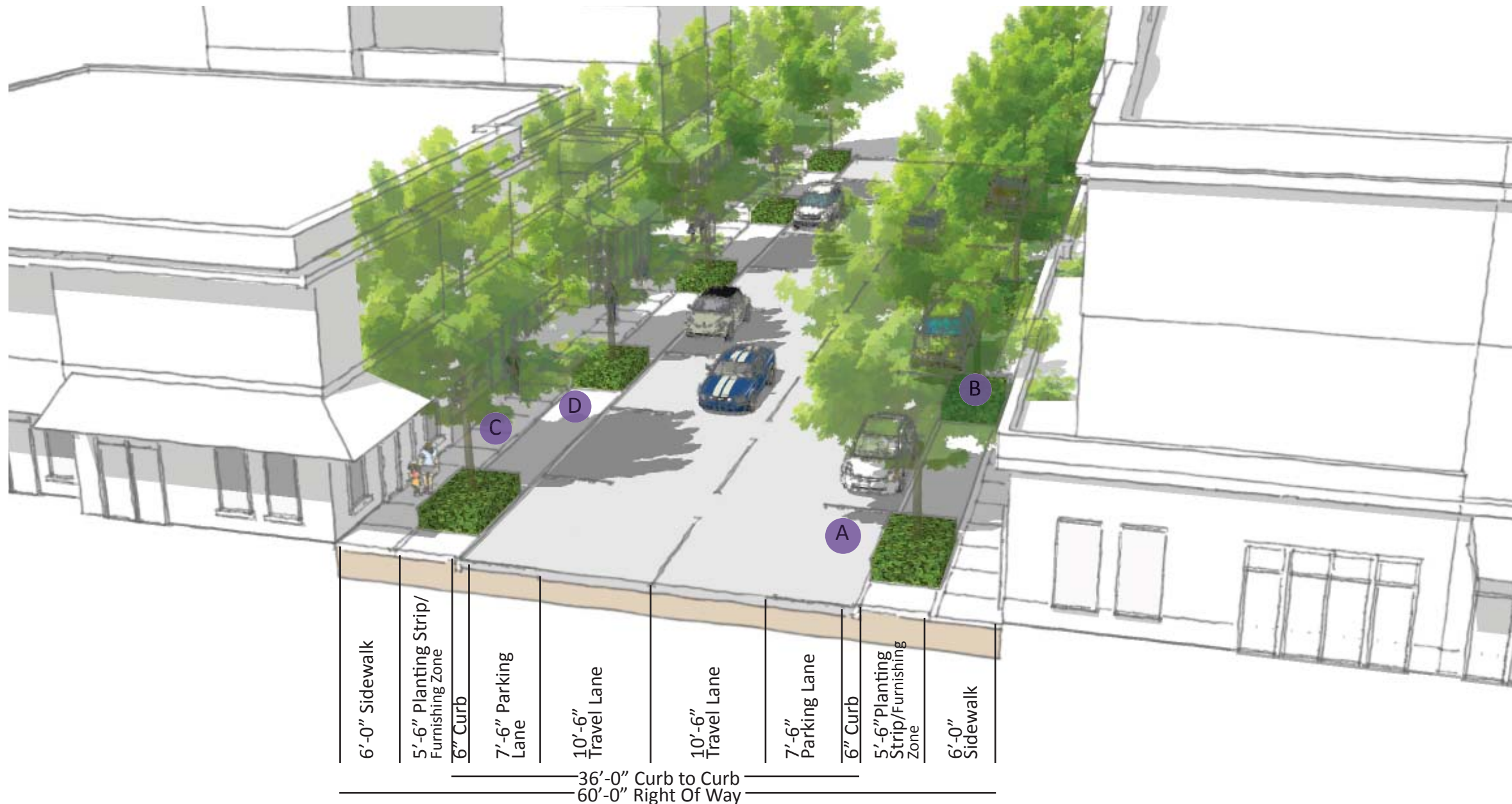


Cobblestone Furnishing Zone

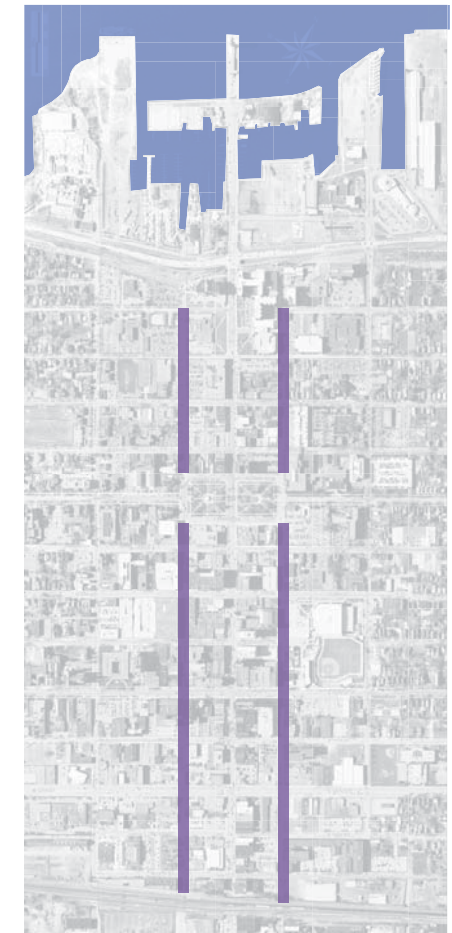


Existing Conditions:

- A** Wide travel lanes
- B** Lack of street trees
- C** Lack of on-street parking
- D** Excessive sidewalk damage



Proposed Improvements:



Proposed Improvements:

- A** On-street parking
- B** Canopy trees in planters to provide shade and comfort to the street environment
- C** Upgraded concrete sidewalks to accommodate pedestrian access
- D** Dedicated furnishing zone to consolidate benches, trash receptacles, light poles, etc.



Eye level perspective view of streetscape



Type 2 pedestrian crossing treatment



Hackberry



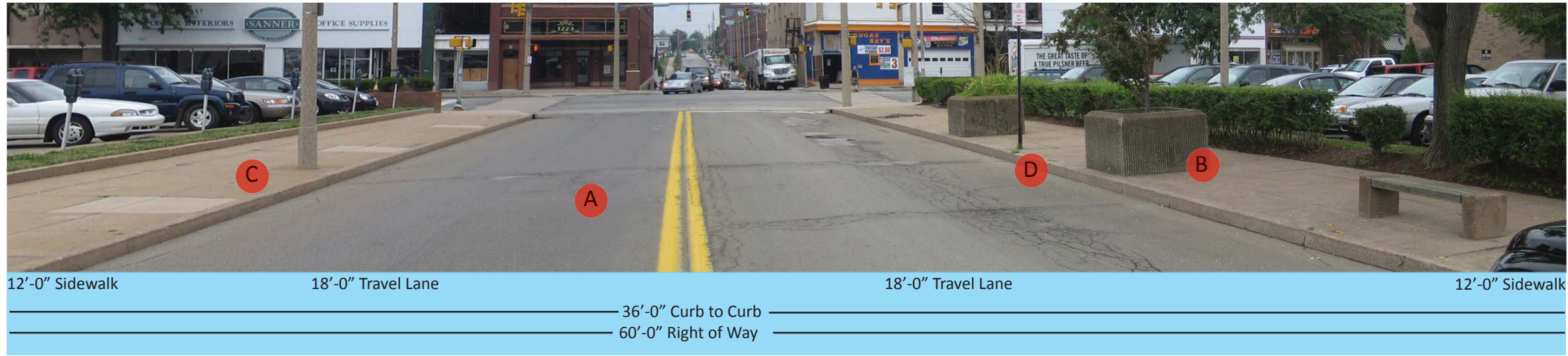
Cobblestone Furnishing Zone



Pedestrian Scale Light

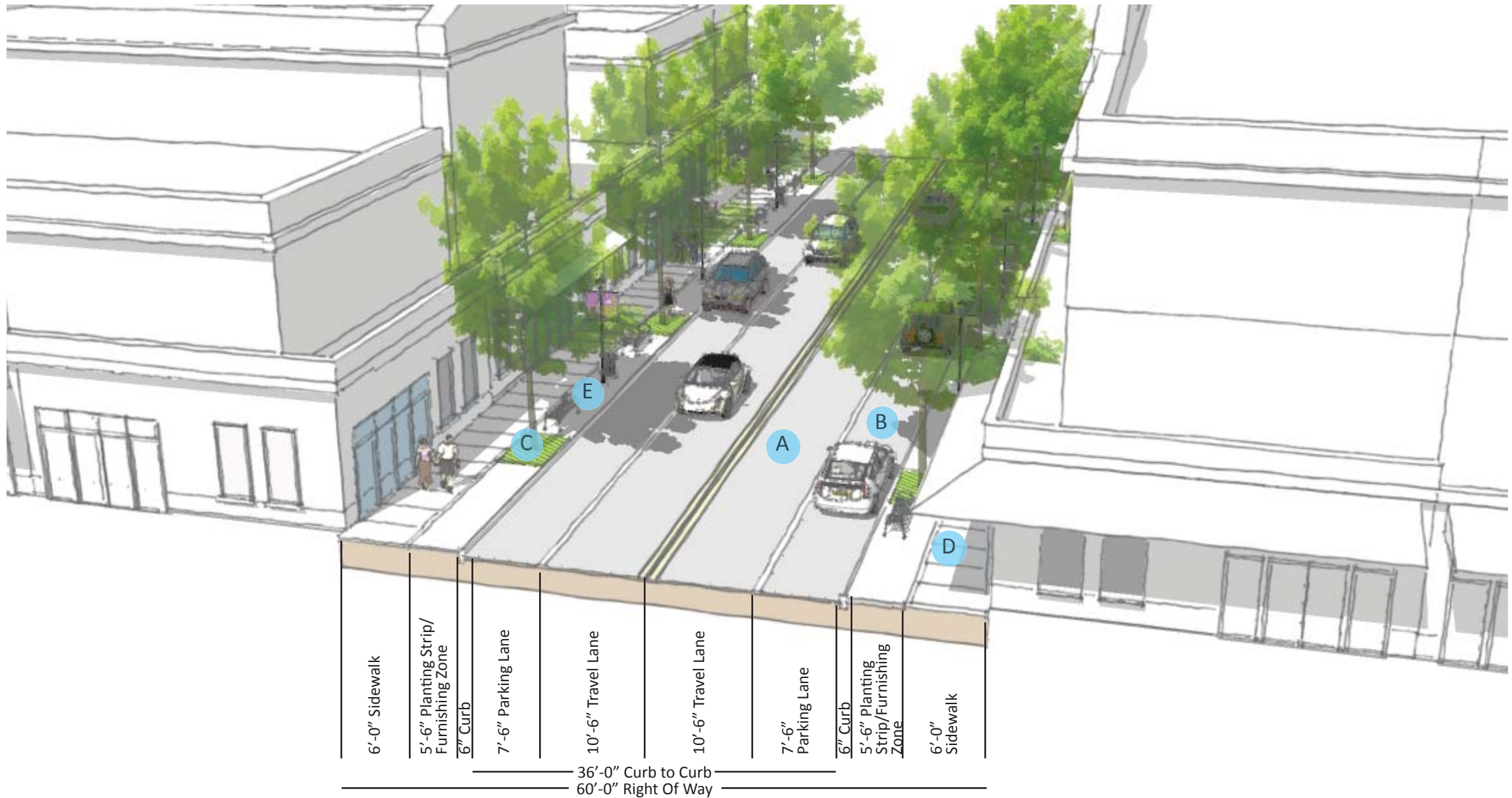


Type A Bench

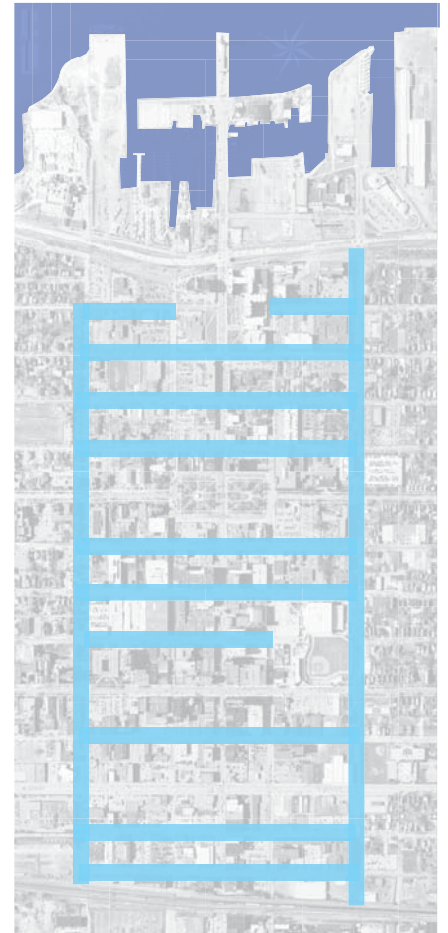


Existing Conditions:

- A** Excessively wide travel lanes
- B** Lack of street trees
- C** No buffer between traffic and pedestrians
- D** No on-street parking

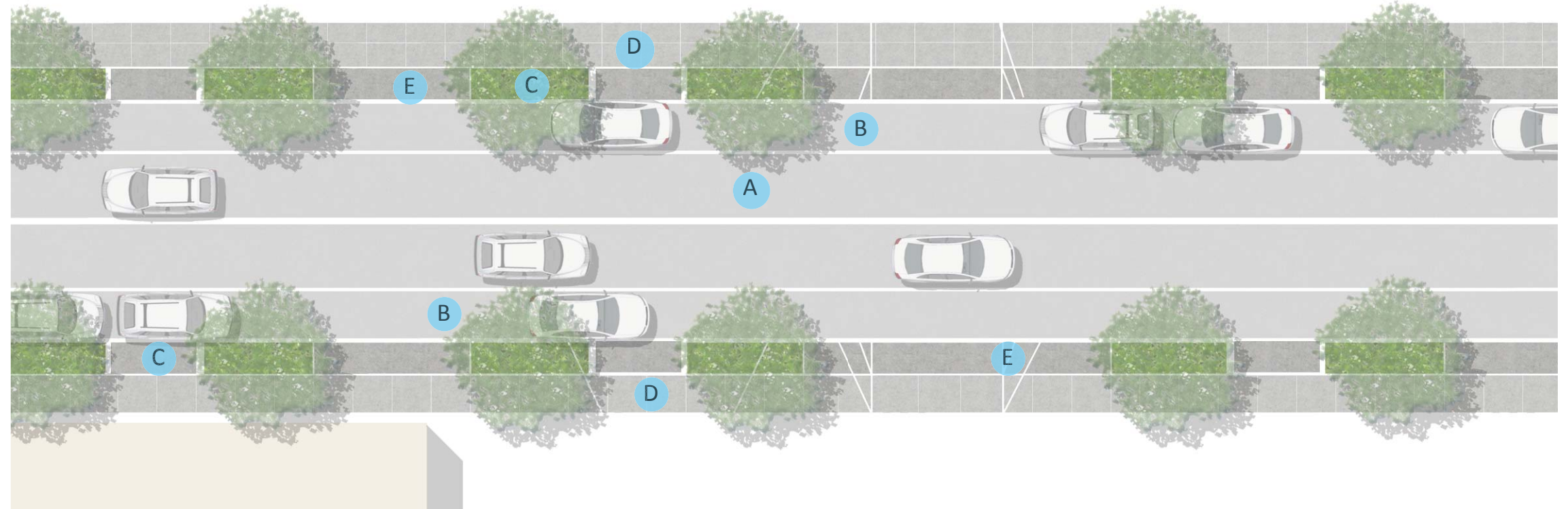


Proposed Improvements:



Proposed Improvements:

- A** Reduce travel lane widths to slow traffic speeds.
- B** On-street parking to provide easy access to retail and restaurants
- C** Canopy trees in large open planters to provide shade and comfort to the street environment
- D** Broad concrete sidewalks to facilitate multiple functions: street furnishings, outdoor dining and pedestrian access
- E** Paver or cobble furnishing zone to consolidate benches, trash receptacles, light poles, newspaper boxes, transit shelters, etc.



Eye level perspective view of streetscape



Type 3 pedestrian crossing treatment



Honey Locust



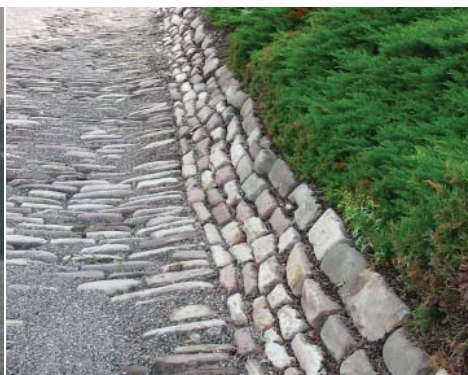
Cobblestone Furnishing Zone



Type A Bench



Pedestrian Scale Light

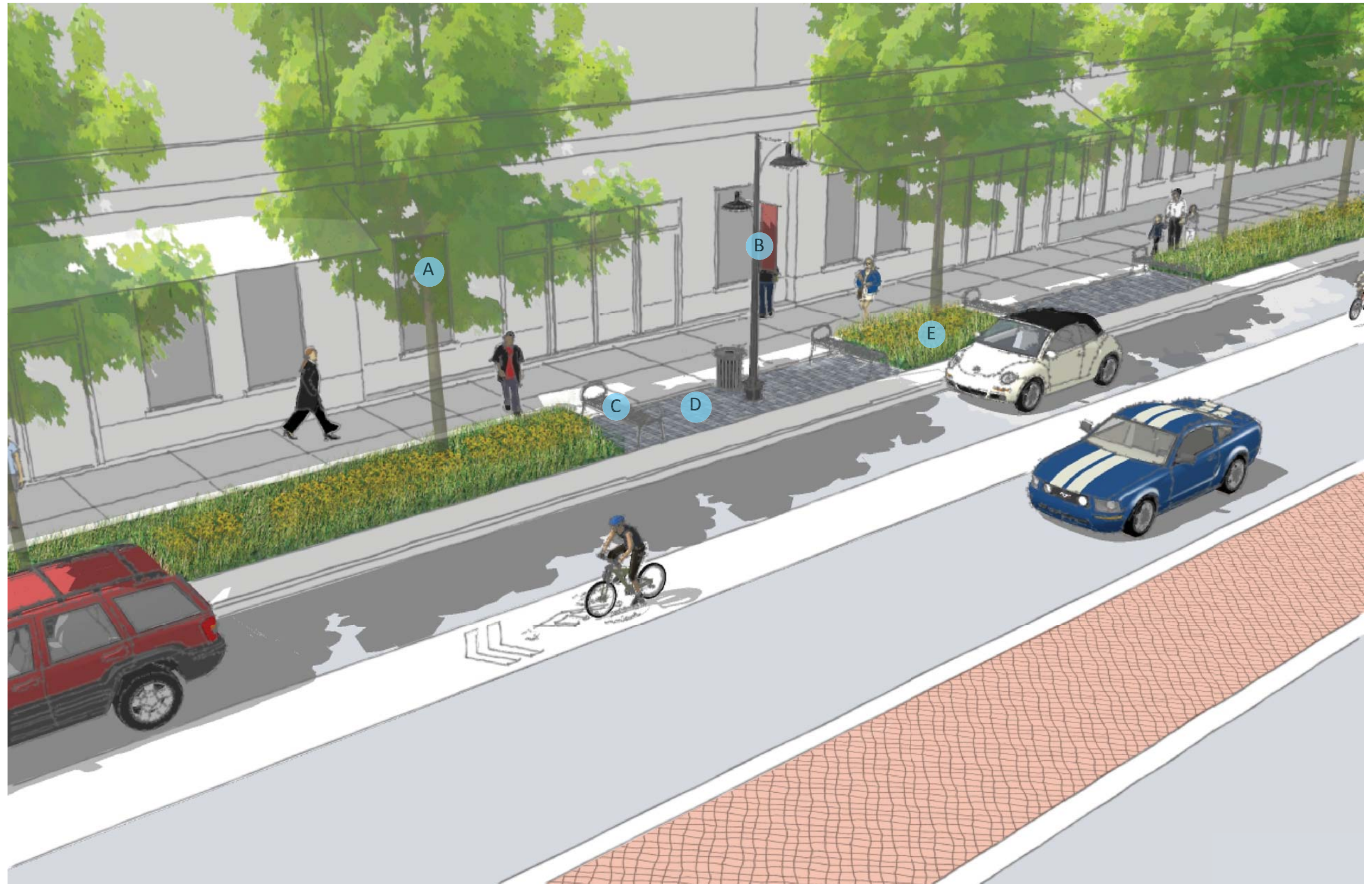


Implementation Guidelines

Streetscape Components:

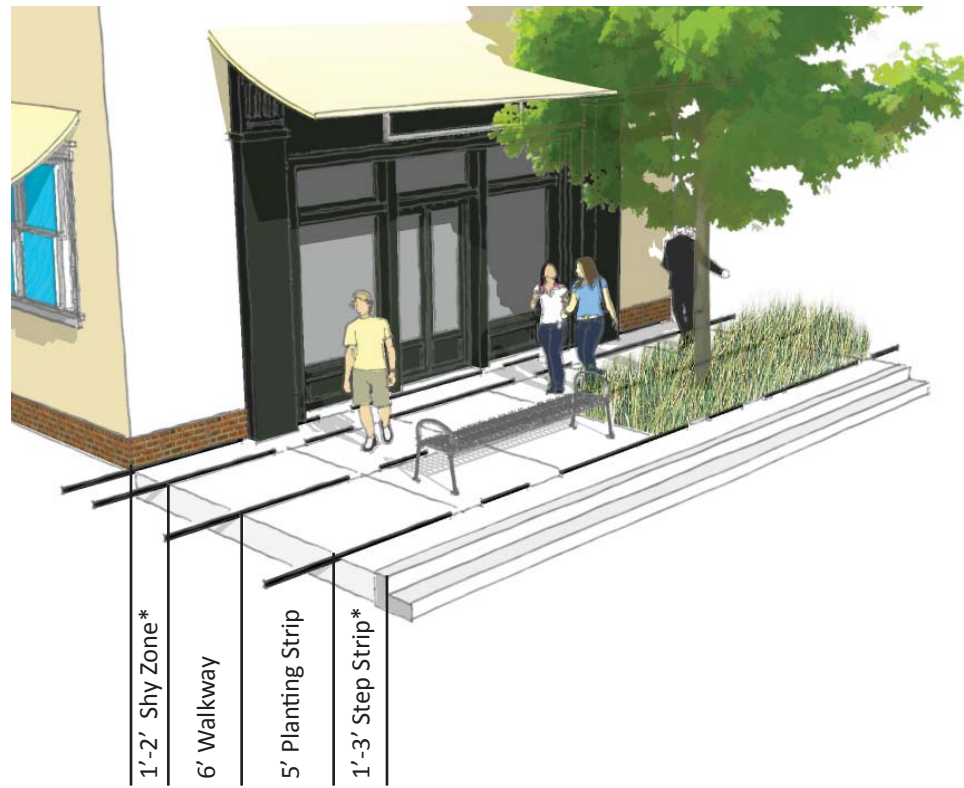
- A Street Trees
- B Lighting
- C Furnishings
- D Materials and Finishes
- E Landscape Planters

A streetscape consists of a variety of components, that when combined properly create a dynamic engaging space. Understanding and providing space for the various components is essential in creating a successful street. These components consist of the pedestrian realm along the sidewalk, providing space for walking, talking and dining, as well as furnishings, lighting, landscape and street trees. On street parking, bicycle lanes, travel lanes, bus loading and unloading zones, all make-up the vehicular realm of the street. The two areas of the pedestrian realm and vehicular realm, and their associated materials and finishes should seamlessly fuse to create a thriving public space.

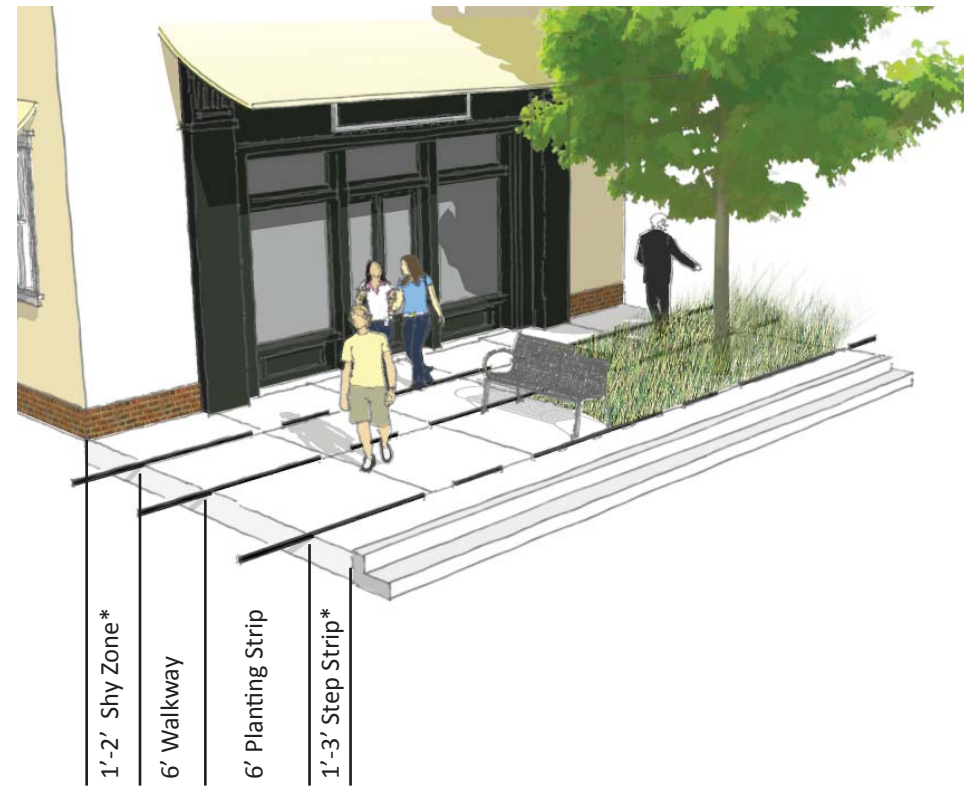


Streetscape Components

Outdoor Dining/Furnishings

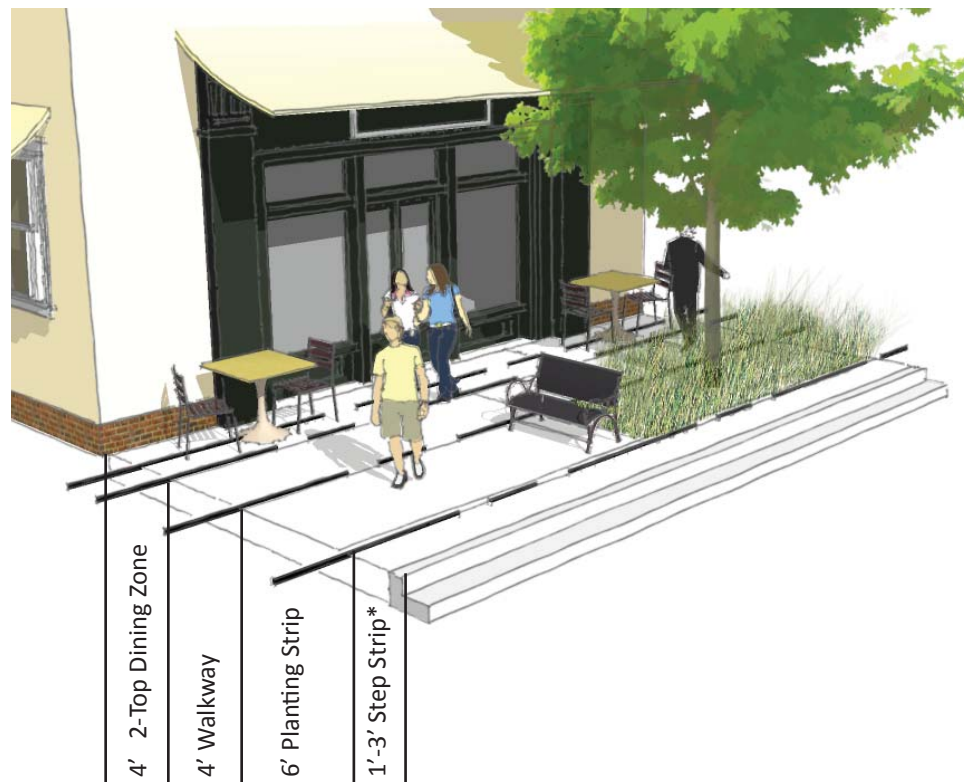


Horizontal Bench

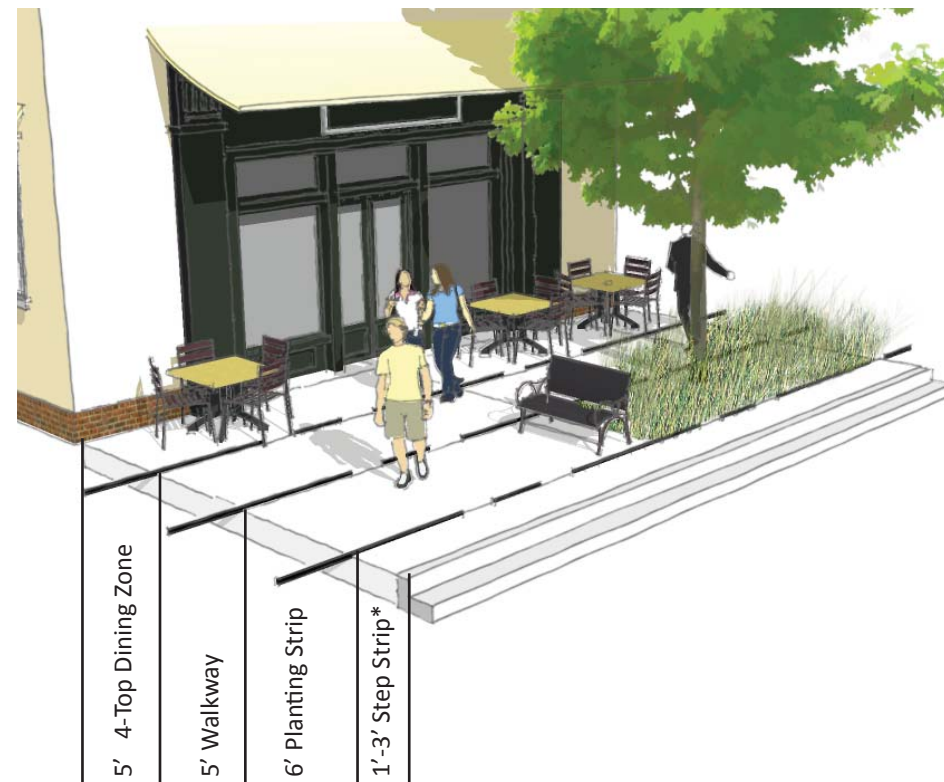


Perpendicular Bench

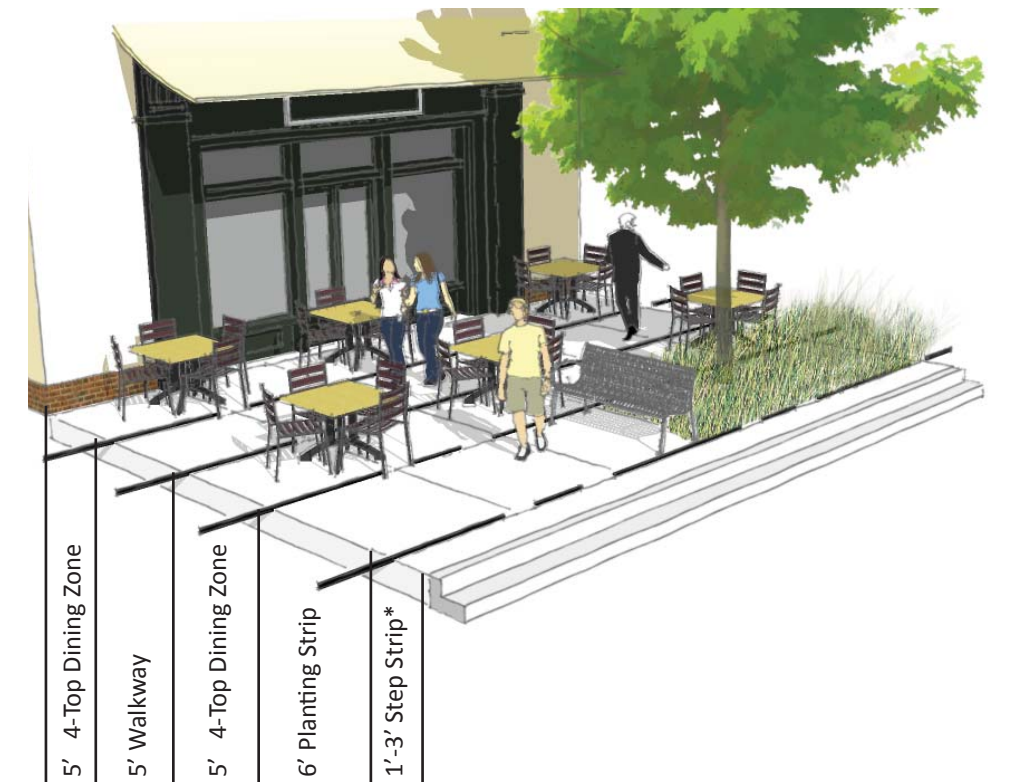
Spatial configurations need to be considered to provide for a comfortable accessible pedestrian realm. These configurations can vary from dining and walking areas, to the proper location of benches along a street. This page identifies the minimum space needed for various street furnishing scenarios, and should be used as a guideline for creation of these spaces.



2-Top Tables



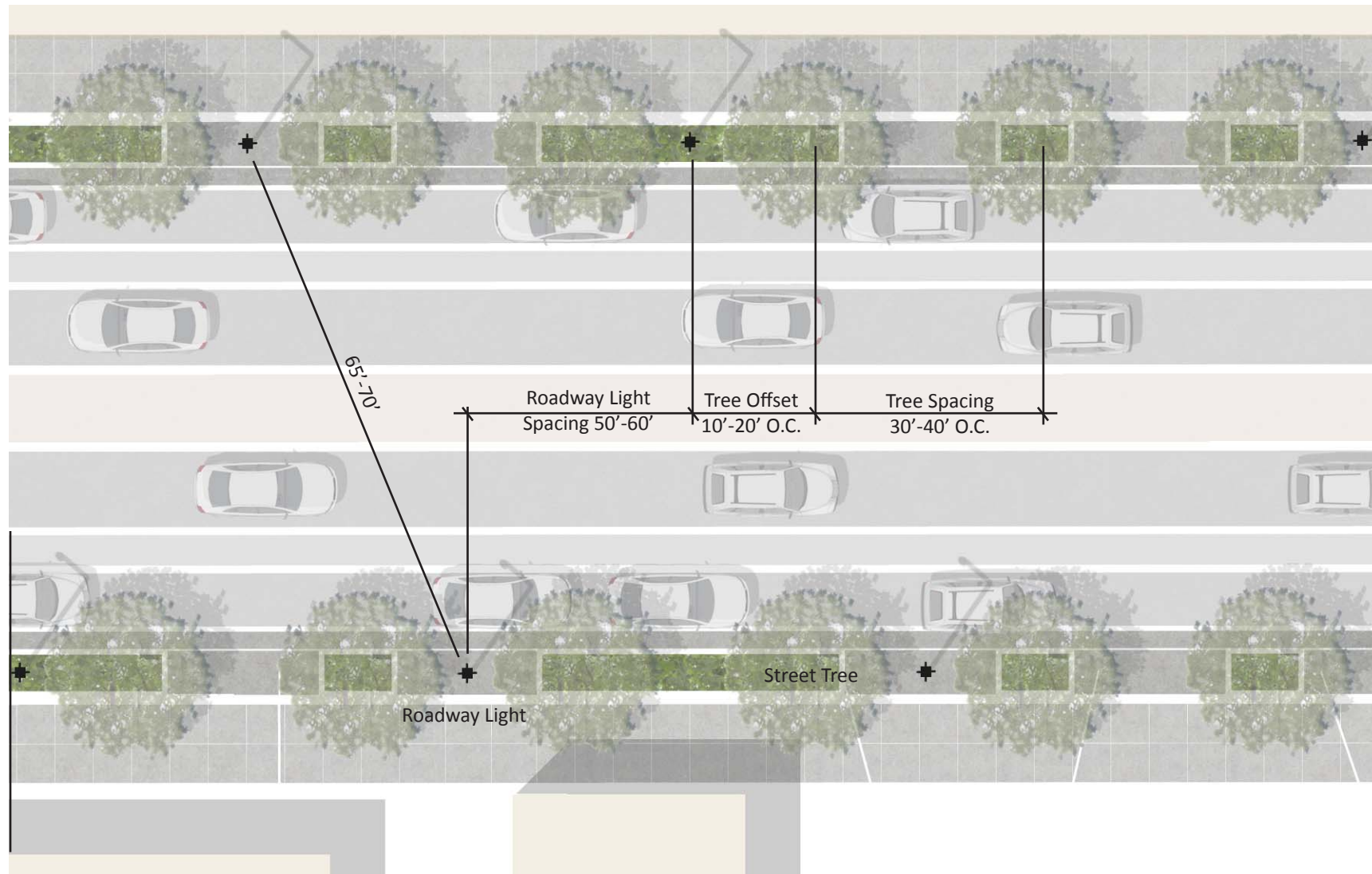
4-Top Tables



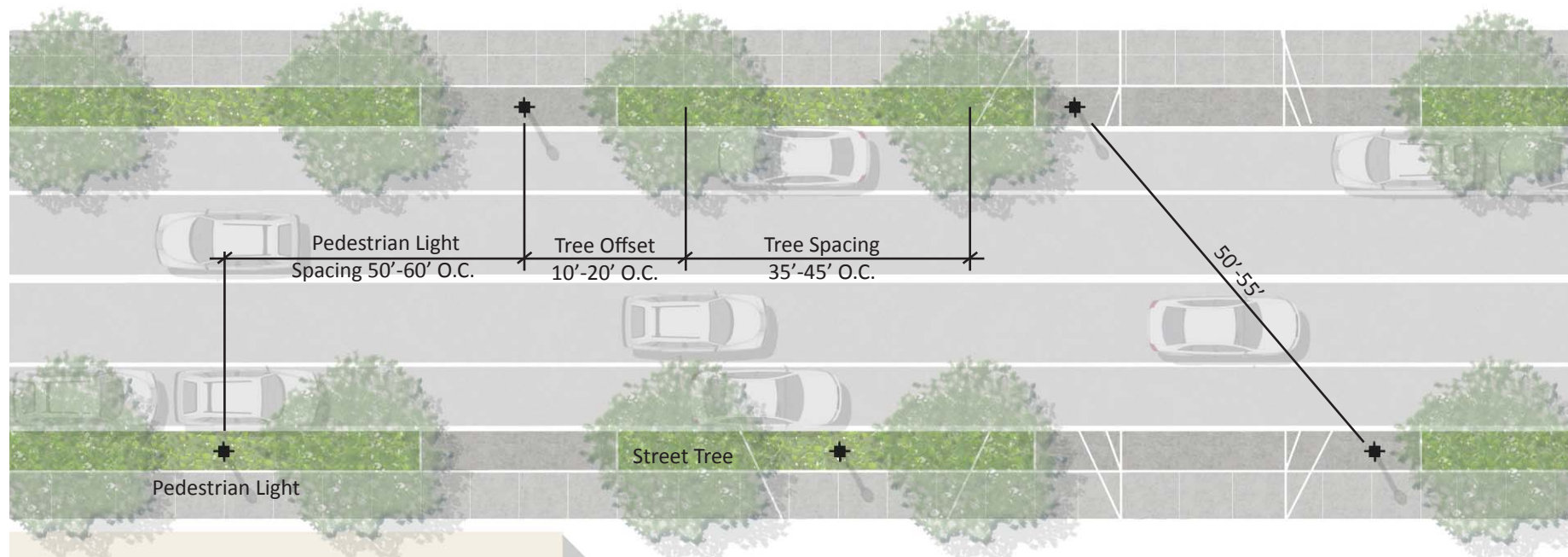
Dual 4-Top Tables

Note: All dimensions are minimum standards for treatment.

*Step Strip and Shy Zone areas may vary depending upon available right of way widths.



Roadway Light and Street Tree Layout



Pedestrian Light and Street Tree Layout

Note: Diagrams are to be used as a guide for light and tree spacing. Final spacing is contingent on photometric requirements. Trees are to be adjusted based upon final light locations.



Street Tree Approximate Size From Time of Planting to 5 Years

- Tree canopy to remain clear from ground level to 7', to allow visibility along the sidewalk and to storefronts.



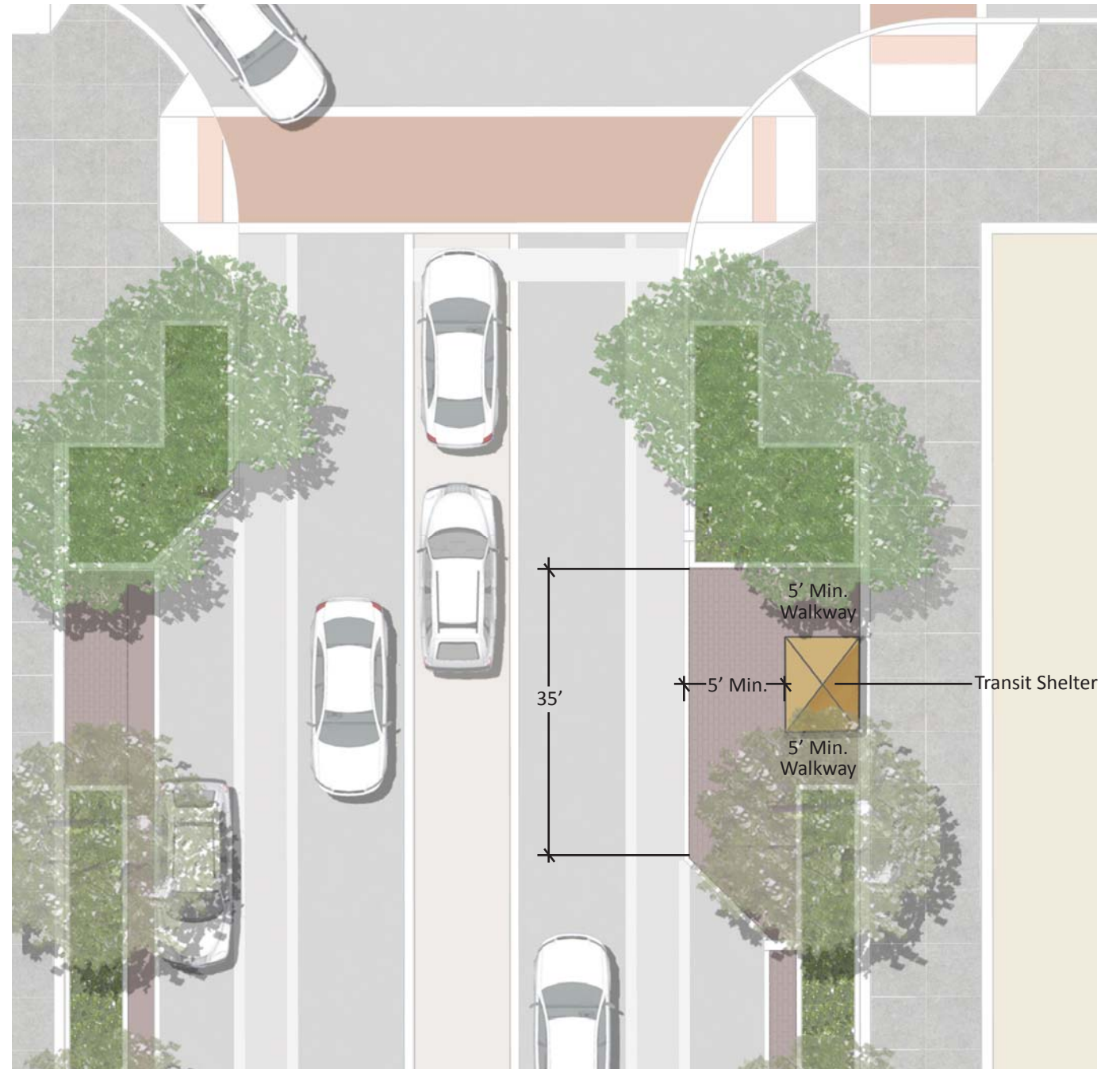
Street Tree Approximate Size at 5-15 Years

- Tree canopy to remain clear from ground level to 7'-10', allowing visibility along the sidewalk and to storefronts.



Street Tree Approximate Size In 20+ Years

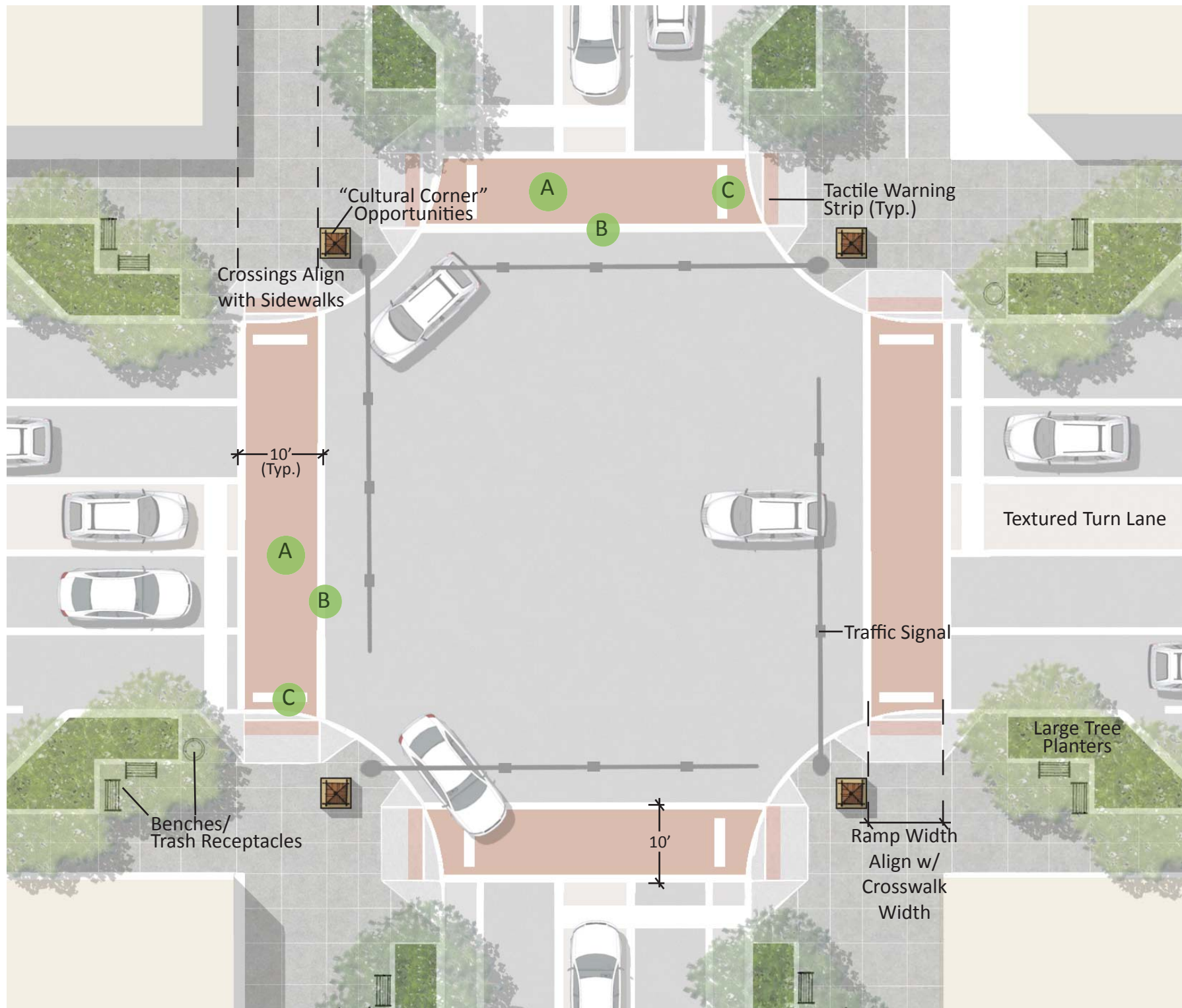
- Tree canopy to remain clear from ground level to 12'-15', allowing visibility along the sidewalk and to storefronts.



Concept
Transit Stops

Intersection Conditions

Proposed Conditions



Type 1 Pedestrian Crossing Treatment

Proposed Conditions:

- A** Brick Paver crosswalks
- B** Concrete Banding
- C** Street Name Pavers/Markers



Crosswalk Texture-Brick/Pavers/Banding

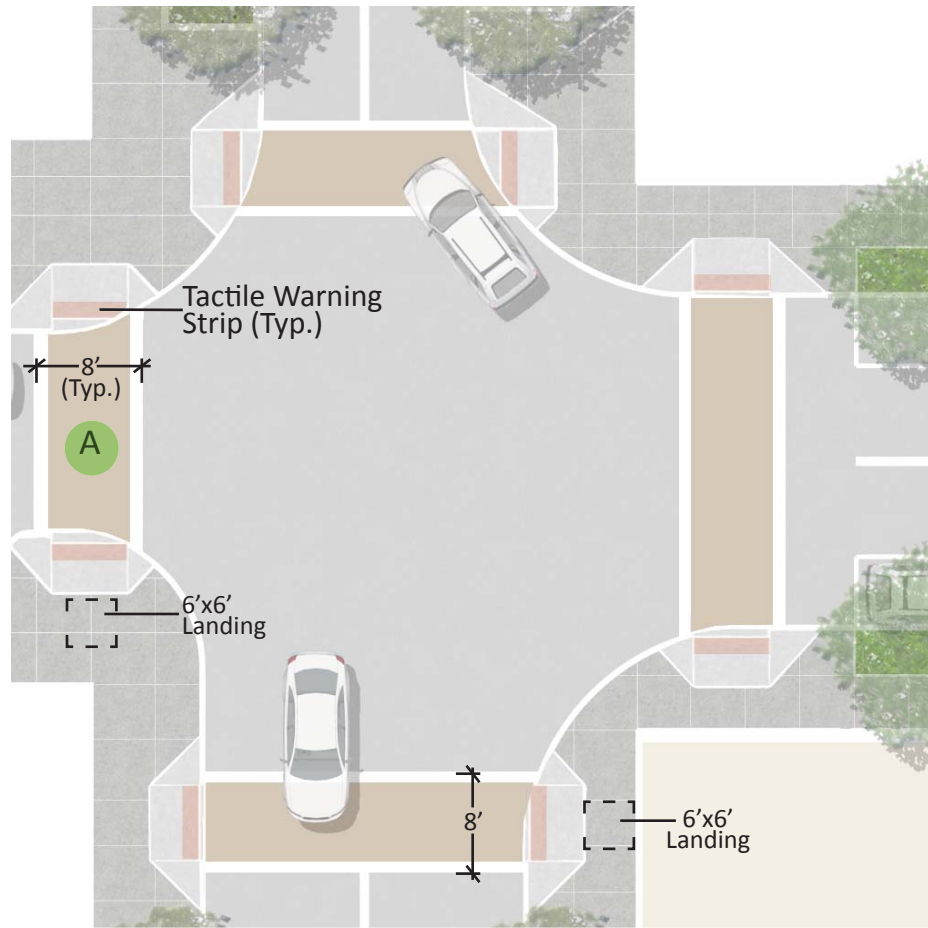


Crosswalk Texture-Brick/Pavers/Banding



Street Name Markers





Type 2 Pedestrian Crossing Treatment

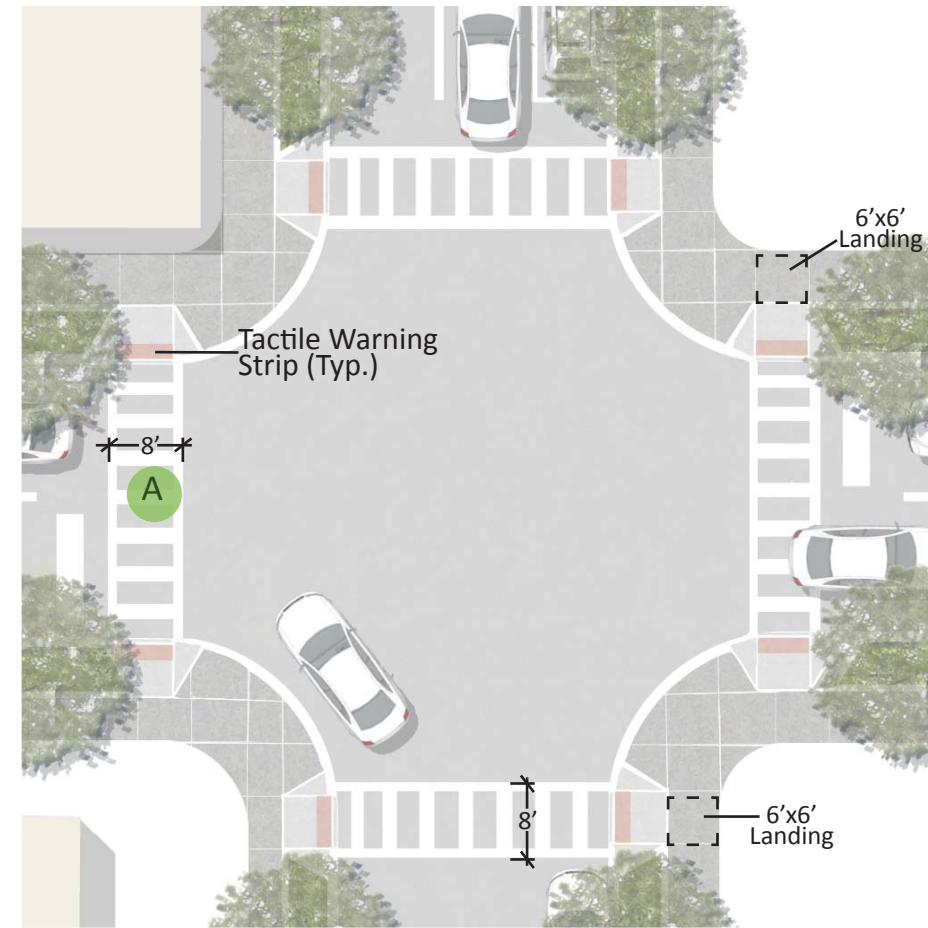
Proposed Conditions:

- A Colored Concrete Crosswalks

Note: All crossings should align with sidewalks. In cases where crossings can't align with sidewalks because of buildings or other street element conflicts, position ramp and crossing where 6'x6' ADA landing can occur before ramp.



Concrete Crosswalks



Type 3 Pedestrian Crossing Treatment

Proposed Conditions:

- A Thermoplastic striped crosswalks

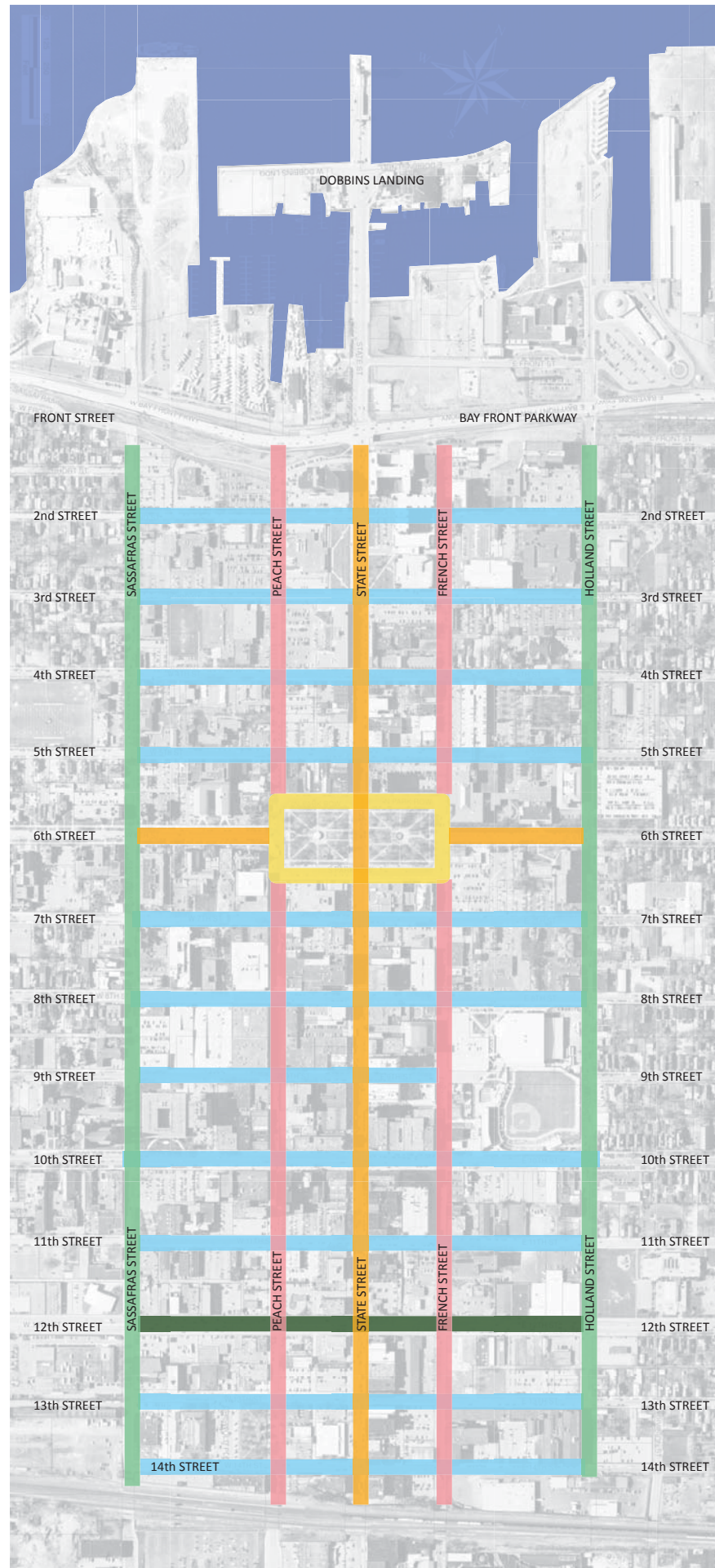
Thermoplastic band patterning based on PennDOT requirements.



Thermoplastic Crosswalks

Street Tree Master Plan

Concept



Fast growth, upright rounded form, disease and insect resistant, attractive leaves and yellow fall color

50'-75' Mature height

8'-16' Clear Trunk

(A) Accolade Elm
Ulmus japonica x Wilsoniana

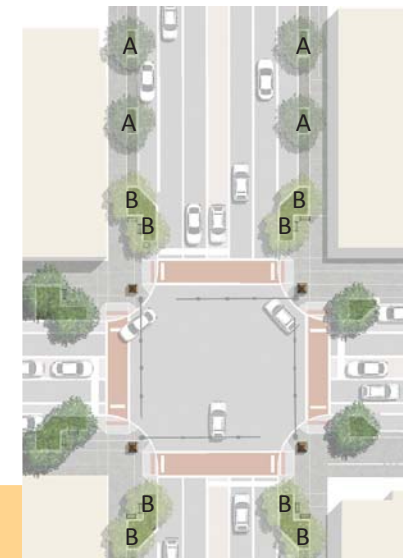


Rapid growth, oval to rounded form, attractive leaves, brilliant red fall color, tolerant of wet and dry soil conditions

50' Mature height

8'-15' Clear Trunk

(B) Autumn Blaze Red Maple
Acer x freemanii 'Autumn Blaze'



Fast growth, upright rounded form, red-gold fall color

65'-100' Mature height

10'-20' Clear Trunk

(A) Red Oak
Quercus borealis x Rubra

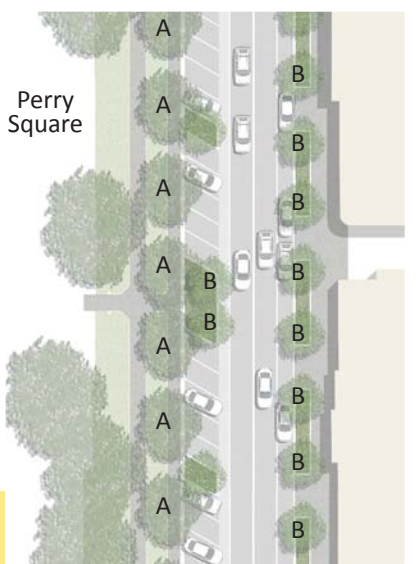


Rapid growth, symmetrical compact form, attractive leaves, red and gold autumn color

45' Mature height

8'-15' Clear Trunk

(B) Celebration Red Maple
Acer x freemanii 'Celebration'

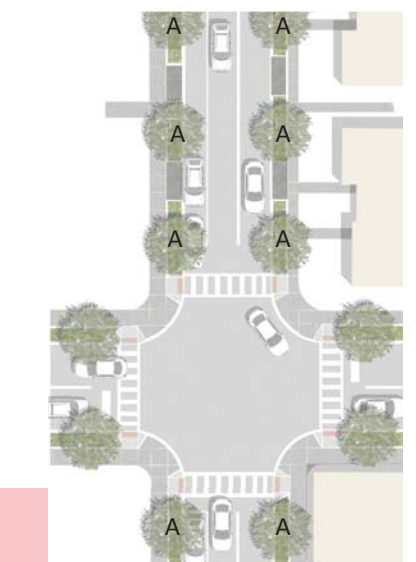


Fast growth, rounded vase form, attractive leathery leaves, yellow fall color

40'-80' Mature height

10'-20' Clear Trunk

(A) Hackberry
Celtis occidentalis



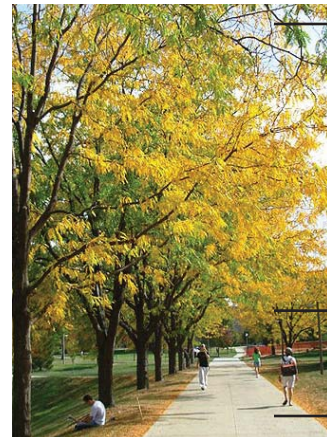


Rapid growth, oval to rounded form, attractive leaves, brilliant red fall color, tolerant of wet and dry soil conditions

50' Mature height

8'-15' Clear Trunk

(A) Autumn Blaze Red Maple
Acer x freemanii 'Autumn Blaze'

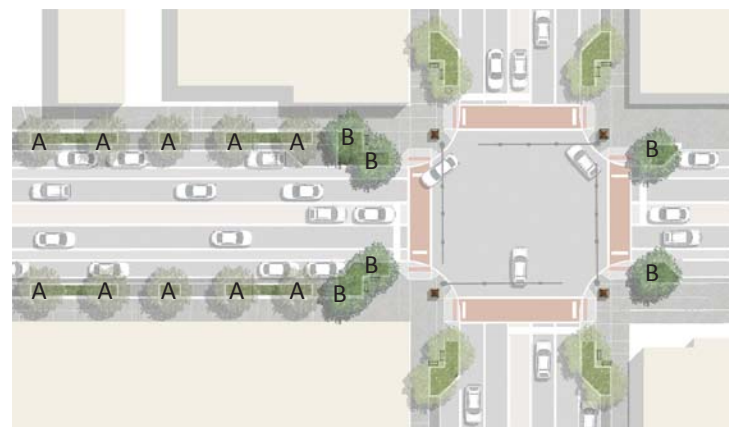


Fast growth, open plumelike form, very tolerant of urban conditions attractive leaves and fragrant spring flowers, yellow fall color

40'-80' Mature height

8'-16' Clear Trunk

(A) Honey Locust
Gleditsia triacanthos



Moderate growth, upright columnar to oval form, fan shaped leaves, clear yellow fall color

80' Mature height

10'-20' Clear Trunk

(A) Ginkgo
Ginkgo biloba

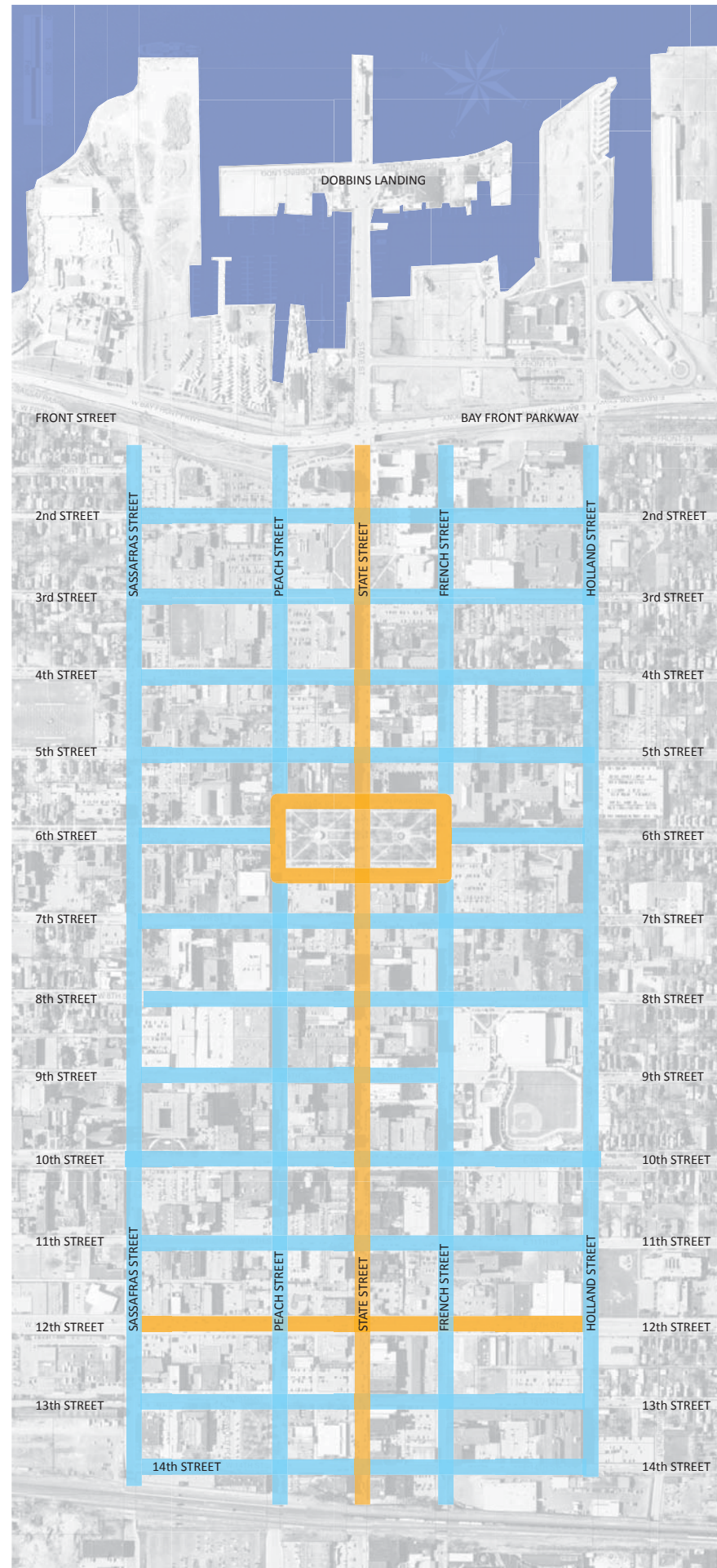


Moderate growth, narrow pyramidal form, star shaped leaves, red, purple, yellow and orange fall color

75' Mature height

10'-20' Clear Trunk

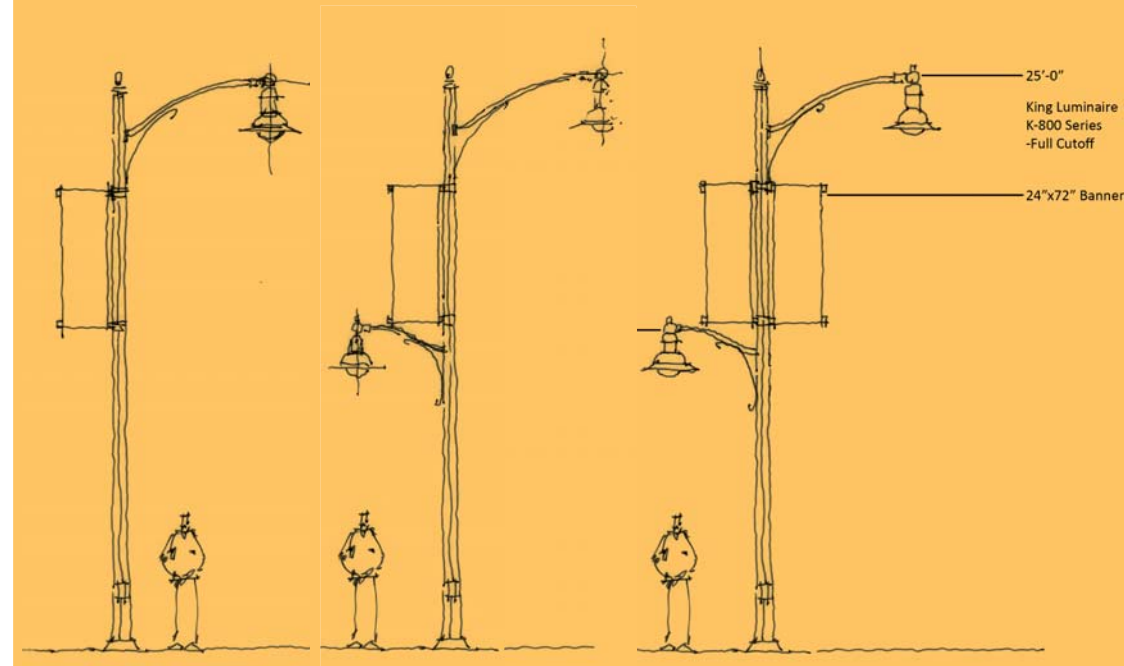
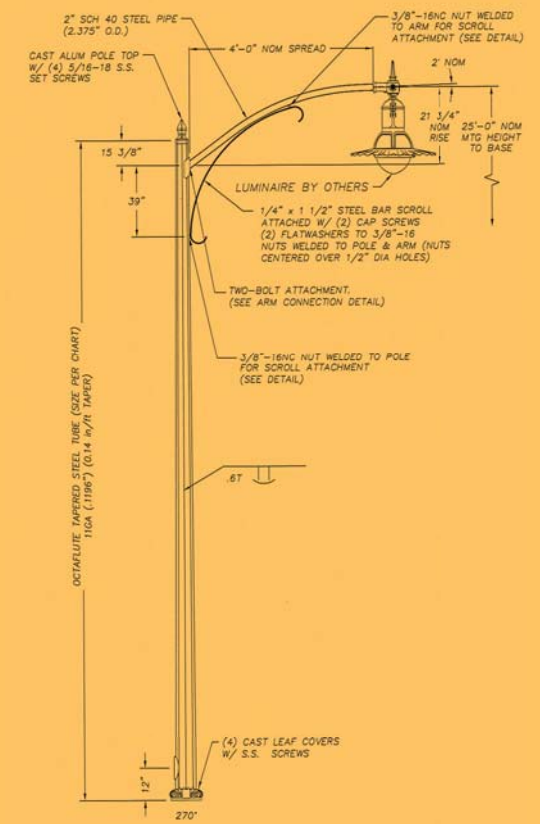
(B) Sweetgum
Liquidambar styraciflua



King Luminaire:
K807 Series fixture for large scale roadway lighting applications



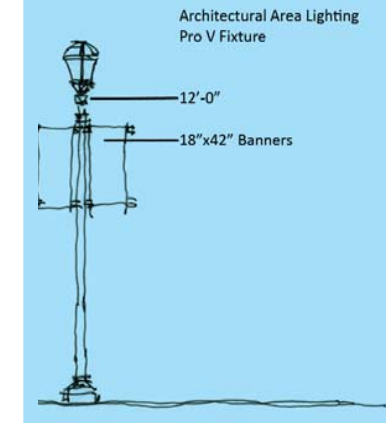
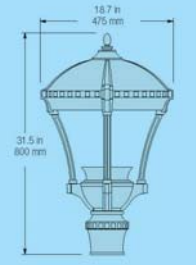
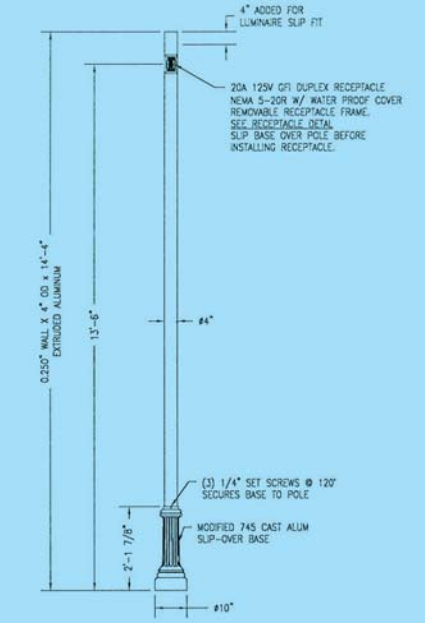
King Luminaire:
K707 Series fixture for small scale roadway and pedestrian lighting applications



← Less intense pedestrian/retail zones - More intense pedestrian/retail zones →
Range of Lighting and Banner Options



Architectural Area Lighting:
Providence fixture for pedestrian and small scale roadway lighting applications



Architectural Area Lighting
Pro V Fixture



Type A - Landscape Forms Scarborough Series
Furnishings recommended for use along all other streets as shown

Victor Stanley, Iron Sites Series, S-42 Receptacle
Recommended use on all streets and parks

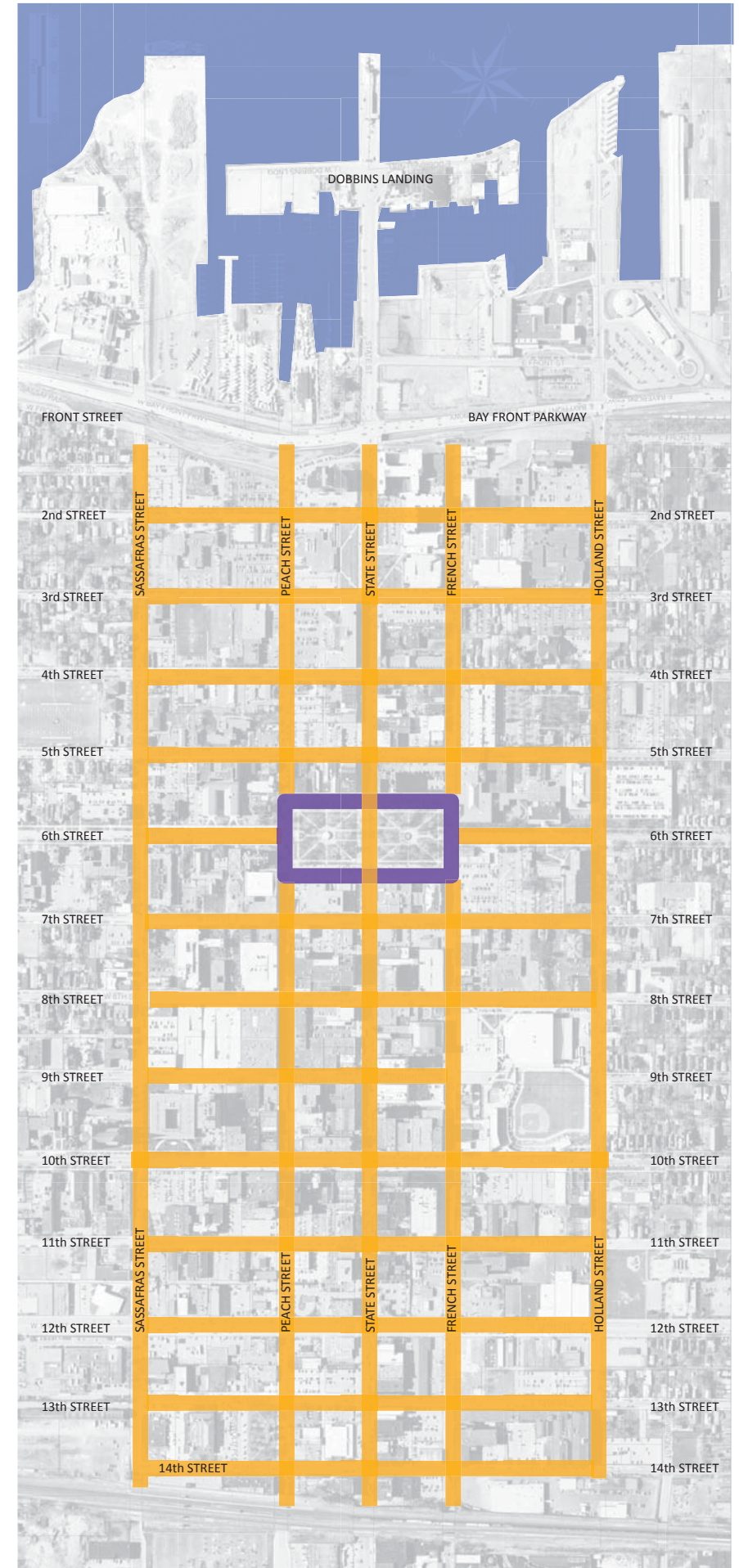


Type B - Landscape Forms Parc Vue Series
Furnishings recommended for use along Perry Square on North and South Park Row



Rubbermaid Traditional Smoking Receptacle, 9W33-BLA
Recommended use on all streets and parks

Note: All street furnishings should be black.



Furnishing Zone

- Natural Stone Pavers (Sandstone or Granite)
- Concrete Pavers

Note: All paving options should be designed to be pervious.



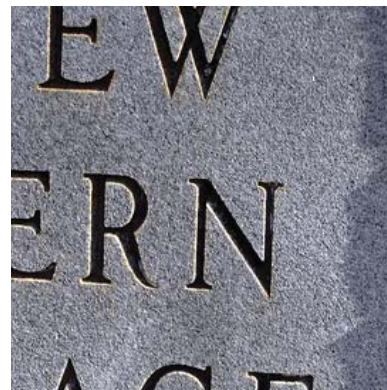
Crosswalks

- Brick Pavers
- Colored Concrete
- Thermoplastic Striping



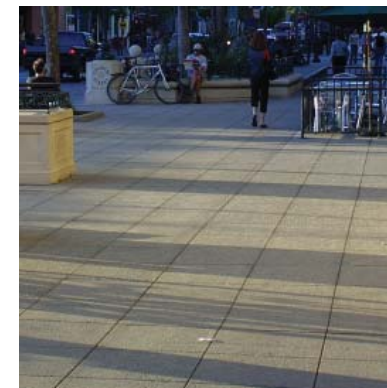
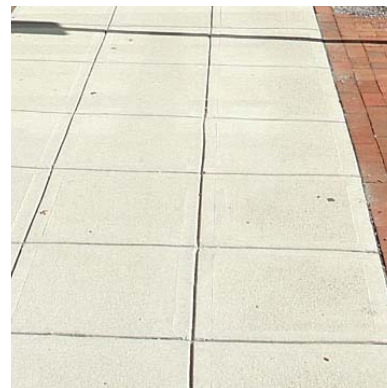
Street Name Options/ Interpretative Elements

- Metal Plaques
- Engraved Stone
- Engraved Pavers



Sidewalks

- Scored Concrete



Description

A stormwater planter is a small, contained vegetated area that collects and treats stormwater using bio-retention. These systems collect and filter stormwater through layers of mulch, soil, aggregate, and plant root systems, where pollutants such as bacteria, nitrogen, phosphorous, heavy metals, oil and grease are retained, degraded and absorbed. Treated stormwater is then infiltrated into the ground as groundwater (infiltration planter) or, if infiltration is not appropriate, discharged into a traditional stormwater system (flow-through planter). Stormwater planters do not require a large amount of space and can add aesthetic appeal and wildlife habitat to city streets, parking lots, commercial and residential properties. Native grasses, shrubs and trees are typically used in stormwater planters.

Sources: Charles River Watershed Association-Low Impact Best management Practice Information Sheet, City of Portland (OR) Environmental Services-Green Streets Stormwater Management for Clean Rivers



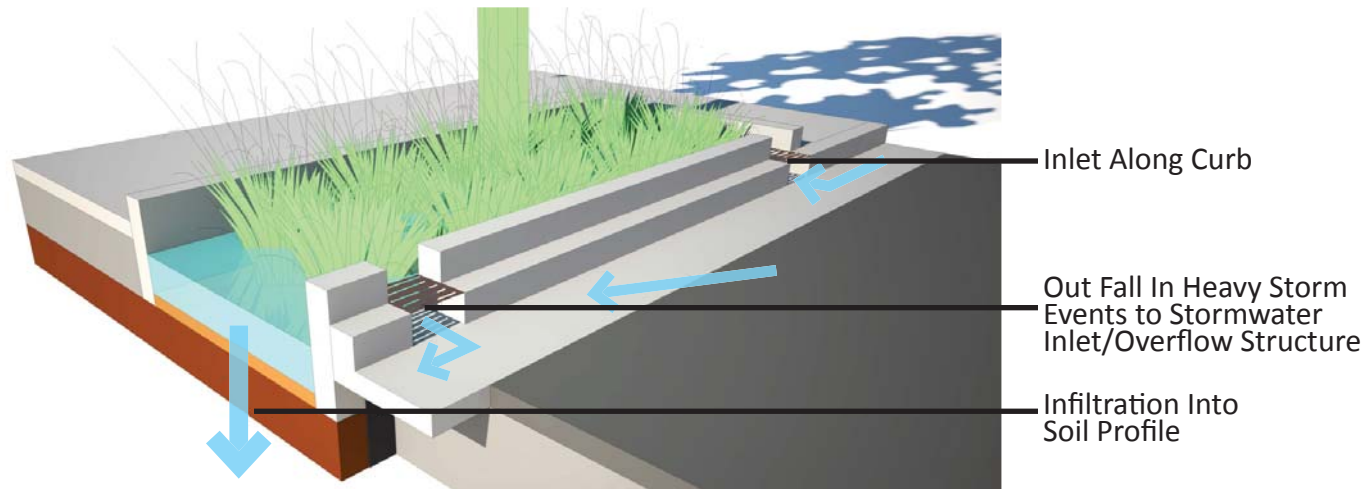
Stormwater Planter w/ Constructed Weirs



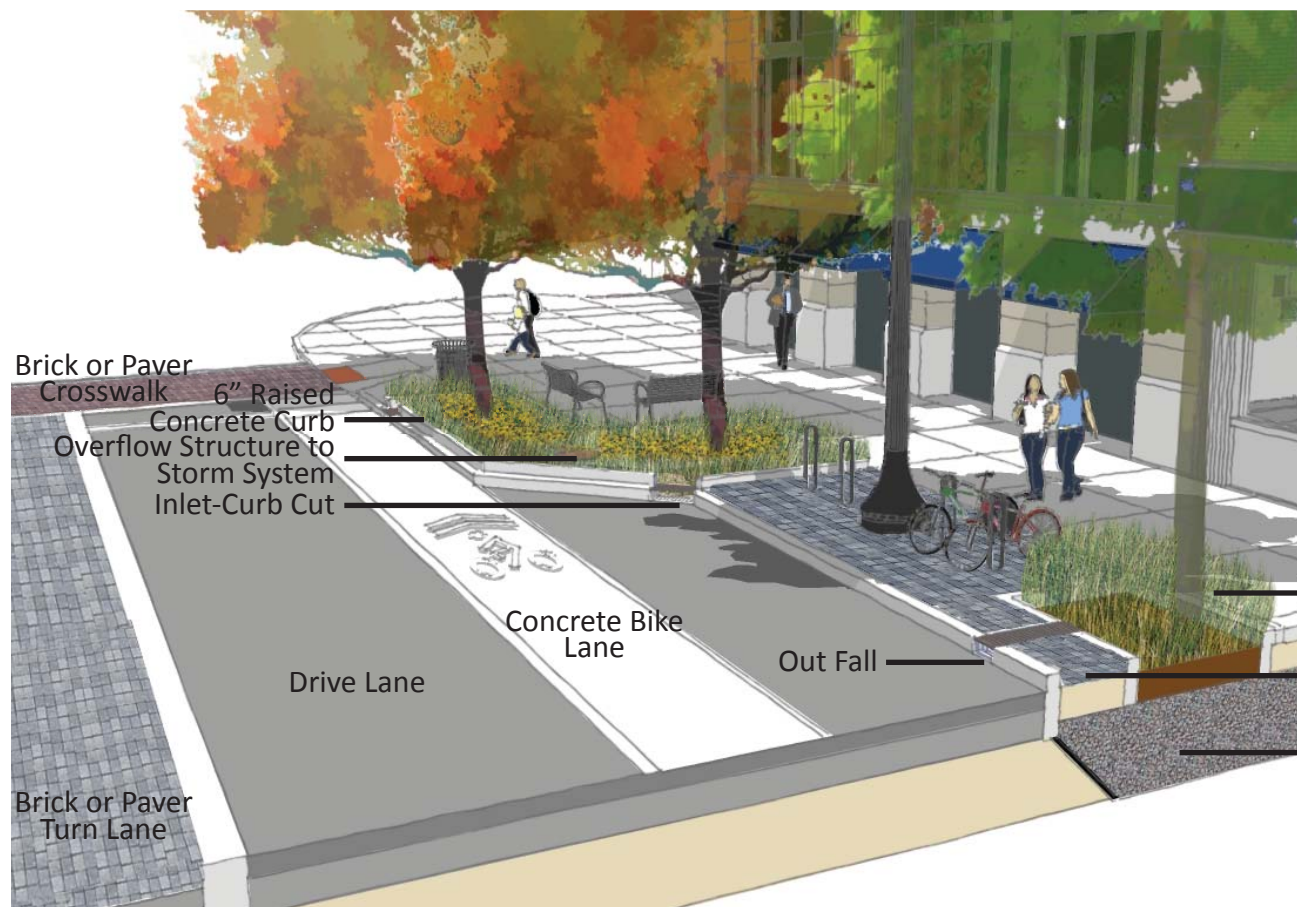
Stormwater Planter



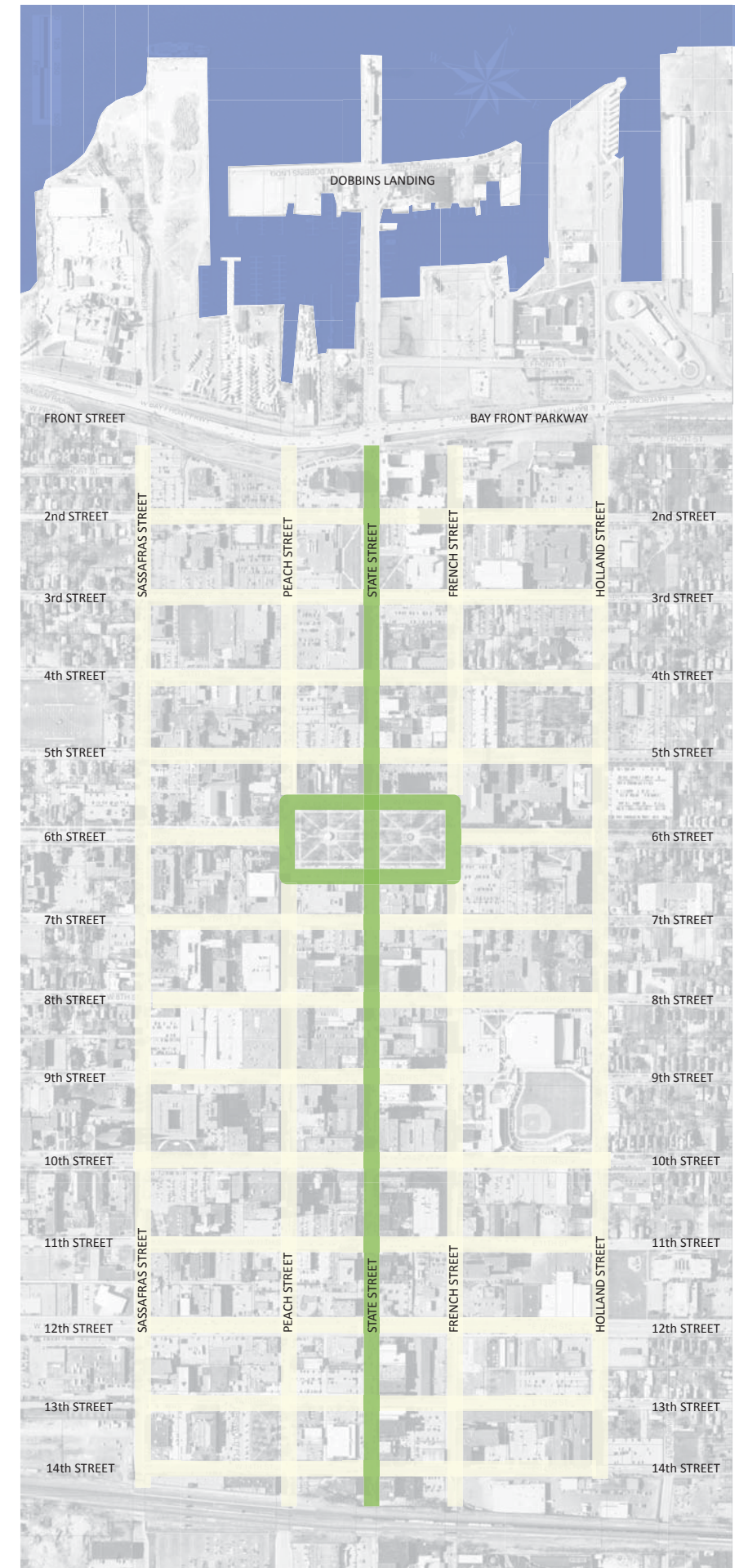
Cover Over Stormwater Planter Curb Inlet



Typical Stormwater Planter Detail



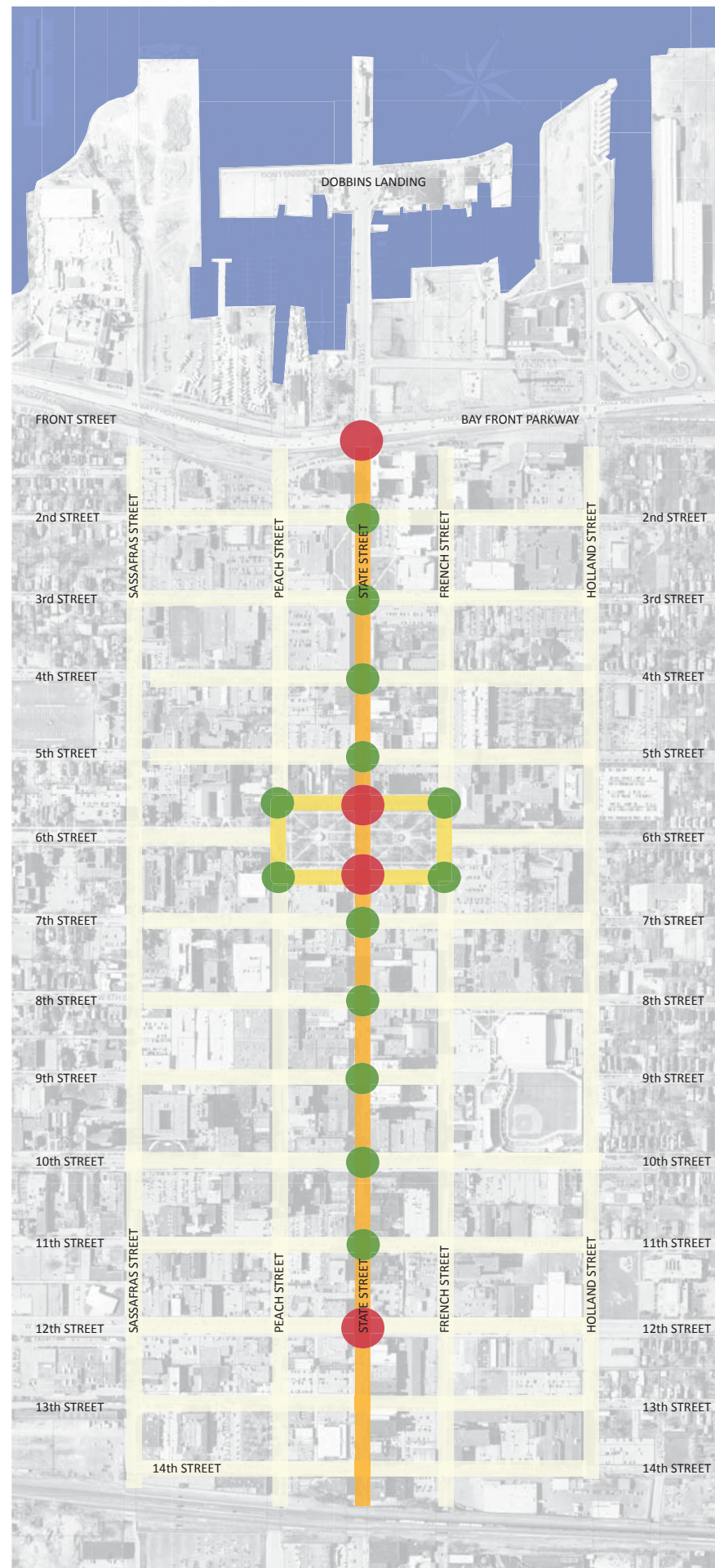
State Street - Green Street Concept



Concept Green Streets

Cultural Corners

Concept



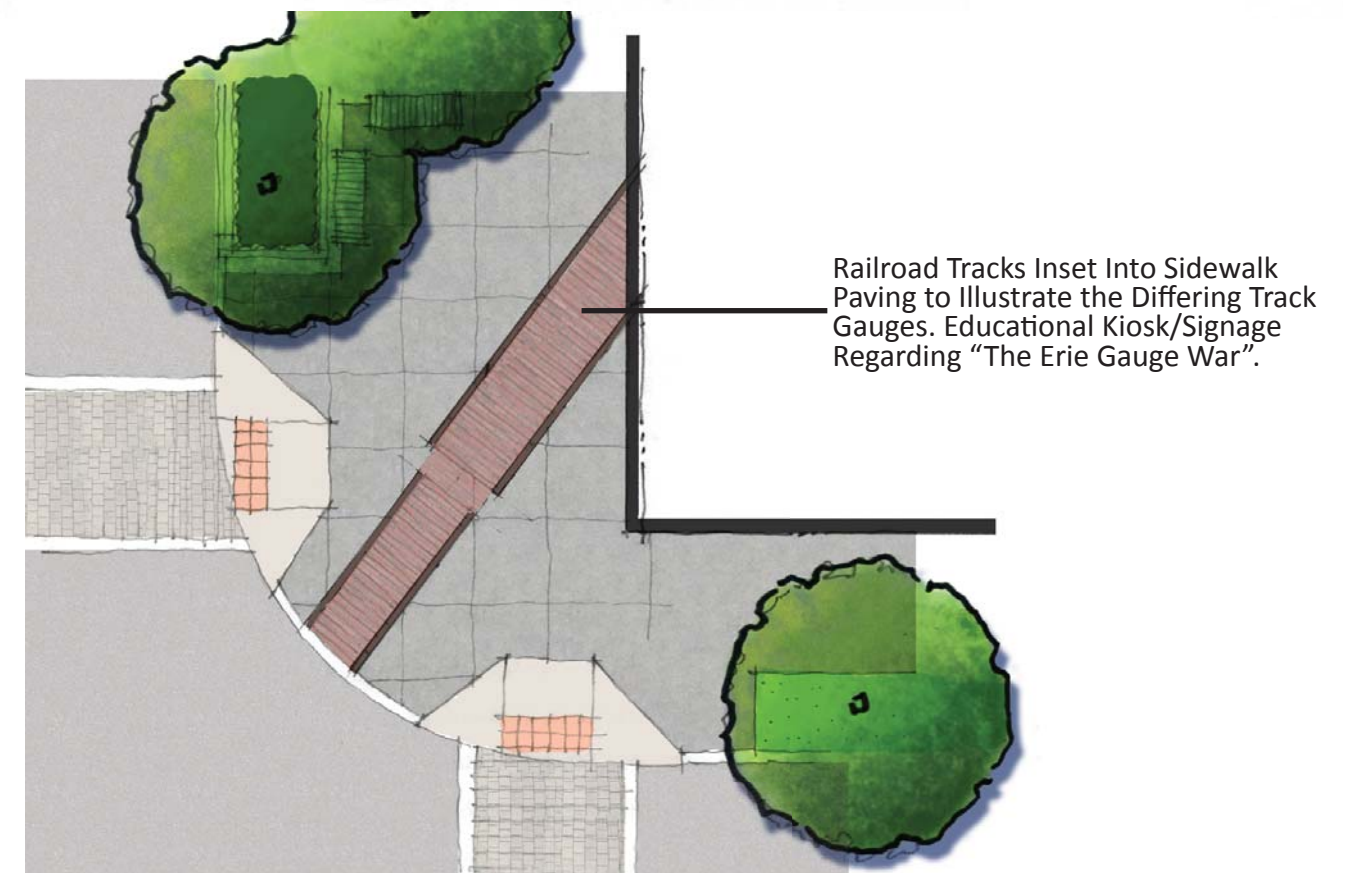
The Cultural Corners provide opportunities to express Erie's unique maritime and industrial heritage and provide a connection to the past. These areas could be used to display a vast array of ideas such as: architectural artifacts, sculpture, art, interpretive signage, etc. Major installations would occur at the intersections of State and 12th Street, North and South Park Row, and the Bayfront Parkway. Minor installations would occur at the intersections of State and 2nd to 5th Streets and 7th to 11th Streets, and at the intersections of North and South Park Row with Peach and French Streets.

- Major Cultural Corners
- Minor Cultural Corners

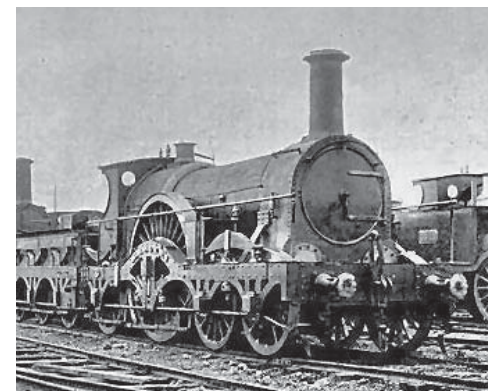
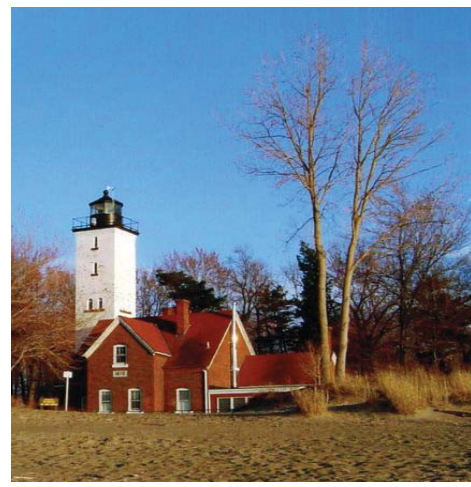
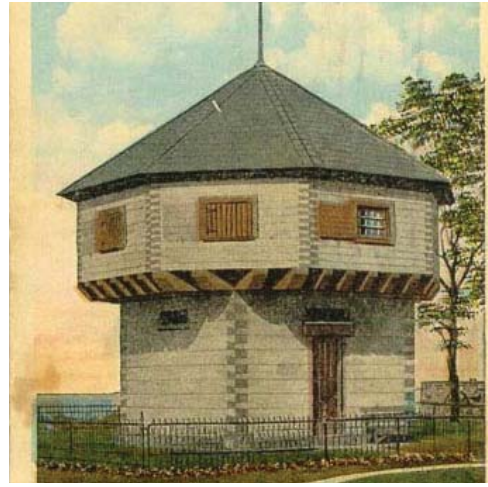
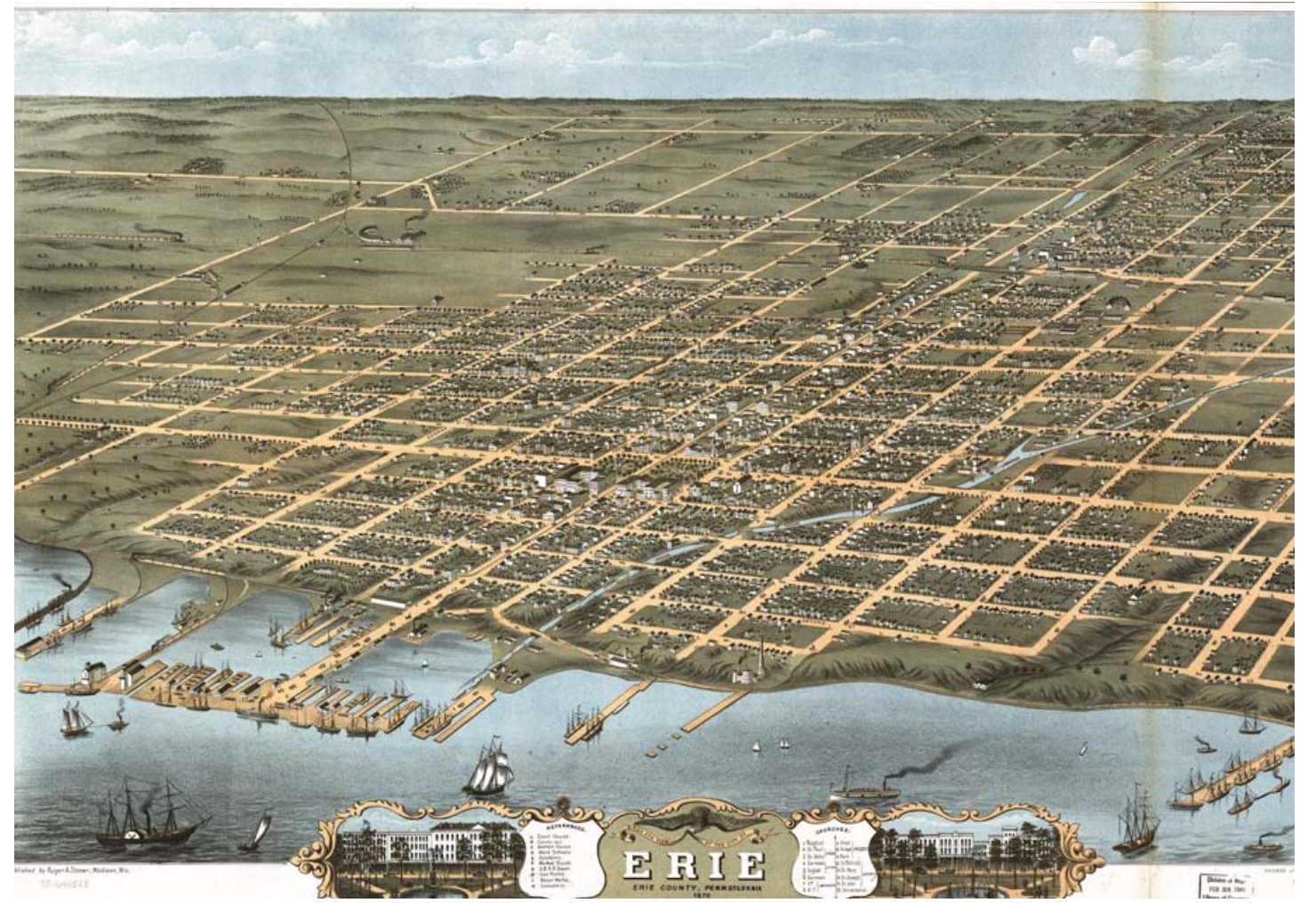
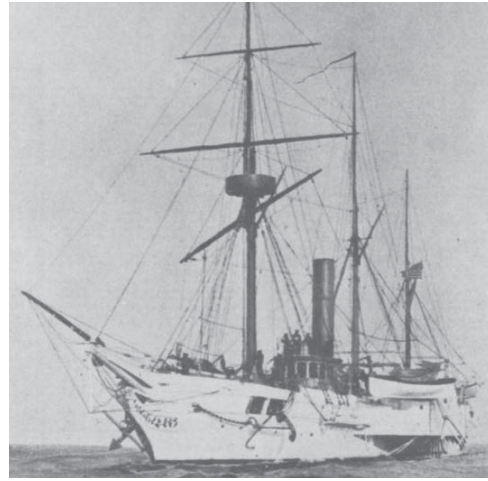
Explore opportunities to create "Cultural Corners" to express and celebrate the rich diverse history of Erie.



Concept for a maritime artifact located near the intersection of State Street and Bayfront Parkway

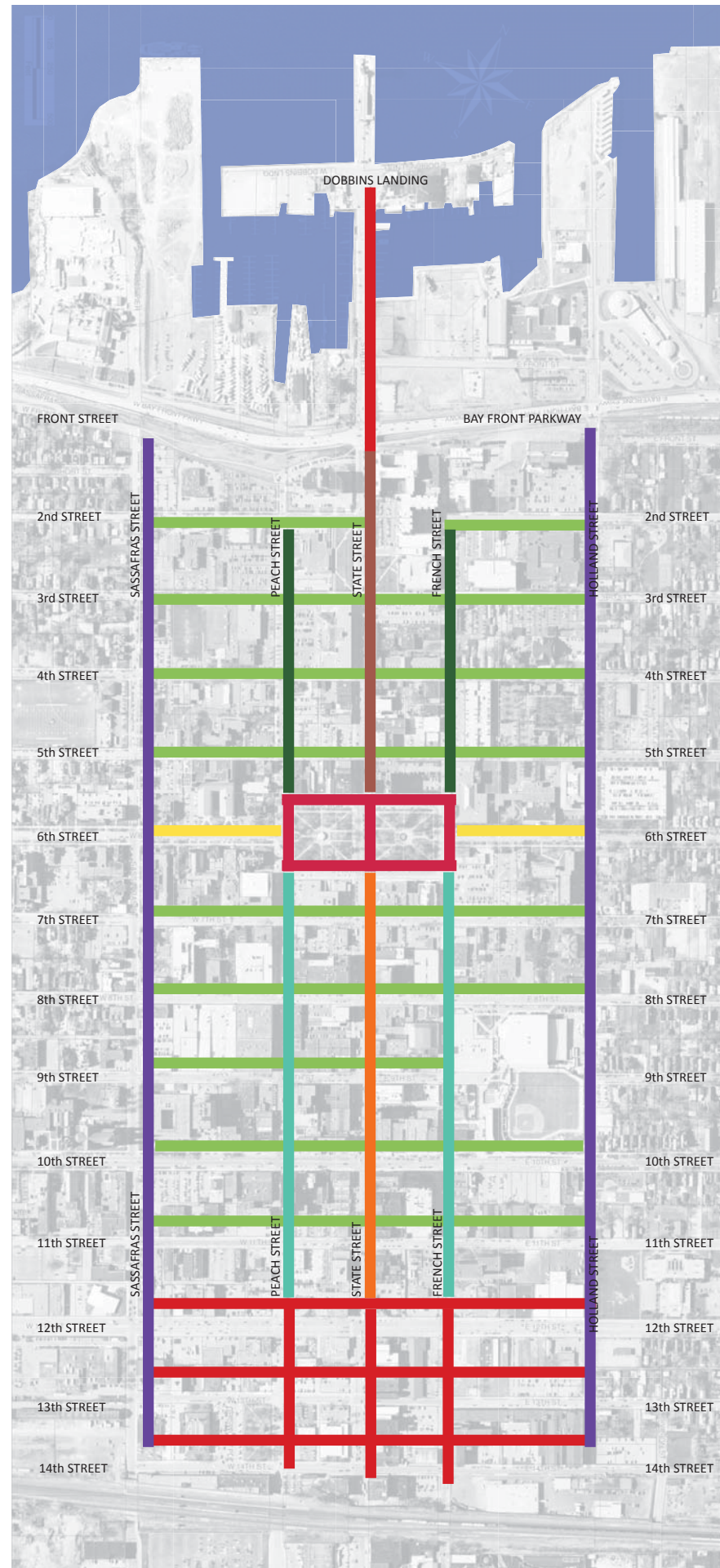


Concept to educate users about the "Erie Gauge War" through the use of artifacts and public art, near the intersection of State Street and 12th.





Phasing Plan and Cost Estimate



A Phasing Plan has been created to provide a design and implementation priority to the overall Master Plan, and to act as a guide for future development in the downtown core.

Phasing Priority

- 1** State Street from Dobbin’s Landing to Bayfront Parkway, Perry Square and Union Station areas are currently planned for improvements
- 2** Connect State Street from Union Station area to Perry Square
- 3** Connect State Street from Perry Square to Bayfront - Funding for improvements are already in place
- 4** Connect 6th Street from Holland and SassafRAS streets to Perry Square
- 5** Peach and French Streets through future development areas, Gannon University, Erie Insurance, Hamot, and retail/dining area
- 6** Peach and French Streets to 12th Street and Union Station area, through Gannon University, and theater/sports area
- 7** Holland and SassafRAS Streets from Bayfront area to 12th Street and Union station area
- 8** Future phases Community/non-framework streets

Note: As an interim solution, items 2-8 could be re-striped within the existing curb configuration until funding becomes available.

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

Ceremonial Street Typology (State Street)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	32.000	\$0.86	\$27.52
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Removal of Existing Pavement	sf	8.000	\$2.59	\$20.72
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
1' Shy Zone paving	sf	2.000	\$6.66	\$13.32
11' Sidewalk (.84' length)	sf	18.480	\$6.66	\$123.08
Driveways (.16' length)	sf	3.520	\$11.00	\$38.72
6' Planting Strip (2/3 of the space)	sf	8.000	\$1.50	\$12.00
Brick Pavers (1/3 of the space)	sf	4.000	\$15.00	\$60.00
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 60 ft spacing (incl foundation, cable, junction box)	ea	0.033	\$6,000.00	\$198.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
1.5' Step Strip	sf	3.000	\$6.66	\$19.98
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	60.000	\$3.65	\$219.00
Revise Storm Drainage (normalized by LF of curb)	lf	1.000	\$19.00	\$19.00
Decorative Crosswalk (Pro-rated 2 per block)	sf	4.000	\$15.00	\$60.00
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	6.000	\$0.50	\$3.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				\$1,152.52
				\$230.50
				\$1,383.02
				\$6,016,137.70

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

Ceremonial Street Typology (6th Street)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	36.000	\$0.86	\$30.96
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Removal of Existing Pavement	sf	0.000	\$2.59	\$0.00
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
6' Sidewalk (.85' length)	sf	10.200	\$6.66	\$67.93
6' Driveways (.15' length)	sf	1.800	\$11.00	\$19.80
5'-6" Planting Strip (2/3 of the space)	sf	7.330	\$1.50	\$11.00
Brick Pavers (1/3 of the space)	sf	3.660	\$15.00	\$54.90
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 60 ft spacing (incl foundation, cable, junction box)	ea	0.033	\$6,000.00	\$198.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	48.000	\$3.65	\$175.20
Revise Storm Drainage (normalized by LF of curb)	lf	1.000	\$19.00	\$19.00
Decorative Crosswalk (Pro-rated 2 per block)	sf	4.000	\$15.00	\$60.00
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	6.000	\$0.50	\$3.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				<hr/>
				Subtotal
				\$977.97
				20% Contingency
				\$195.59
				<hr/>
				Total Estimated Cost per linear foot
				\$1,173.56
				Total Estimated Cost per typology
				(6th Street 1350 LF)
				\$1,584,306.54

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

Park Street Typology (North & South Park Row)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	36.000	\$0.86	\$30.96
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Removal of Existing Pavement	sf	13.000	\$2.59	\$33.67
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
15' Sidewalk	sf	15.000	\$6.66	\$99.90
8' Planting Strip (1/2 of the space)	sf	4.000	\$1.50	\$6.00
8' Brick Pavers (1/2 of the space)	sf	4.000	\$15.00	\$60.00
15' Planting Strip	sf	15.000	\$1.50	\$22.50
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 60 ft spacing (incl foundation, cable, junction box)	ea	0.033	\$6,000.00	\$198.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	51.000	\$3.65	\$186.15
Revise Storm Drainage (normalized by LF of curb)	lf	1.000	\$19.00	\$19.00
Decorative Crosswalk (Pro-rated 2 per block)	sf	4.000	\$15.00	\$60.00
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	8.000	\$0.50	\$4.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				\$1,058.36
				\$211.67
				\$1,270.03
				\$2,857,572.00

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

2 Way Mobility Street Typology (12th Street)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	23.000	\$0.86	\$19.78
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Removal of Existing Pavement	sf	6.000	\$2.59	\$15.54
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
9' Sidewalk (.67' length)	sf	12.060	\$6.66	\$80.32
9' Driveways (.33' length)	sf	5.940	\$11.00	\$65.34
5'-6" Planting Strip (2/3 of the space)	sf	7.330	\$1.50	\$11.00
5'-6" Brick Pavers (1/3 of the space)	sf	3.670	\$15.00	\$55.05
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 60 ft spacing (incl foundation, cable, junction box)	ea	0.033	\$6,000.00	\$198.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	71.000	\$3.65	\$259.15
Revise Storm Drainage (normalized by LF of curb)	lf	1.000	\$19.00	\$19.00
Decorative Crosswalk (Pro-rated 2 per block)	sf	4.000	\$15.00	\$60.00
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	6.000	\$0.50	\$3.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				\$1,124.35
				\$224.87
				\$1,349.23
				\$1,956,377.00

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

One-Way Mobility Street Typology (Peach & Sassafras)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	16.000	\$0.86	\$13.76
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
6' Sidewalk (.85' length)	sf	10.200	\$6.66	\$67.93
Driveways (.15' length)	sf	1.800	\$11.00	\$19.80
5'-6" Planting Strip (2/3 of the space)	sf	7.330	\$1.50	\$11.00
5'-6" Brick Pavers (1/3 of the space)	sf	3.670	\$15.00	\$55.05
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 50 ft spacing (incl foundation, cable, junction box)	ea	0.040	\$6,000.00	\$240.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	36.000	\$3.65	\$131.40
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	6.000	\$0.50	\$3.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				\$880.12
				\$176.02
				\$1,056.14
				\$9,505,263.60
Subtotal				\$880.12
20% Contingency				\$176.02
Total Estimated Cost per linear foot				\$1,056.14
Total Estimated Cost per typology (Peach and Sassafras Street 9000 LF)				\$9,505,263.60

**Erie Streetscape Master Plan
Planning Cost for Street Typologies**

Community Street Typology (2nd, 3rd, 4th etc.)

Item Description	Units	Qty. per Linear Ft of Street	Unit Cost	Item Cost per LF
Saw cutting	lf	2.000	\$5.00	\$10.00
Demolition of Existing Walks	sf	36.000	\$0.86	\$30.96
Demolition of Existing Curbs	lf	2.000	\$10.00	\$20.00
Selective Tree Removals (assumed Qty 6 per block)	lf	1.000	\$5.00	\$5.00
6' Sidewalk (.85' length)	sf	10.200	\$6.66	\$67.93
Driveways (.15' length)	sf	1.800	\$11.00	\$19.80
5'-6" Planting Strip (2/3 of the space)	sf	7.330	\$1.50	\$11.00
5'-6" Brick Pavers (1/3 of the space)	sf	3.670	\$15.00	\$55.05
Trees - 2 trees/30 feet (one per side)	ea	0.067	\$400.00	\$26.80
Lighting Standards 60 ft spacing (incl foundation, cable, junction box)	ea	0.033	\$6,000.00	\$198.00
Benches/trash recept (1/300 feet)	ea	0.007	\$3,000.00	\$21.00
Concrete Curb	lf	2.000	\$30.00	\$60.00
Mill and Pave Road Curb - Curb	sf	36.000	\$3.65	\$131.40
Utility Adjustments (Assume \$10,000/block)	lf	1.000	\$33.00	\$33.00
Pavement Marking	lf	6.000	\$0.50	\$3.00
Signing	lf	1.000	\$2.38	\$2.38
Curb Ramps (pro-rated 8 per block)	lf	1.000	\$160.00	\$160.00
				<hr/>
Subtotal				\$855.32
				20% Contingency
				\$171.06
				<hr/>
Total Estimated Cost per linear foot				\$1,026.38
Total Estimated Cost per typology (2nd-5th and 7th-11th Street 33350 LF)				\$34,229,786.34