New Haven, Missouri

Wayfinding and Downtown Site Plans

New Haven, MO

February 2012

DOWNTOWN
REVITALIZATION &
ECONOMIC
ASSISTANCE FOR
MISSOURI

PGAV PLANNERS

D·R·E·A·M INITIATIVE

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DOWNTOWN REVITALIZATION AND ECONOMIC ASSISTANCE FOR MISSOURI (DREAM) PROGRAM SPONSORS:

MISSOURI Department of Economic Development

MDFB Missouri Development Finance Board

Strength, Dignity, Quality of Life
Missouri Housing Development Commission

PLANNING CONSULTANT

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Downtown Revitalization and Economic Assistance for Missouri
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I. PRINCIPLES OF WAYFINDING

What is Wayfinding?

The term *wayfinding* refers to a mental process of understanding and navigating a given environment—literally "finding your way" between points A, B, and C. To make this mental process as easy as possible, communities can plan a coordinated system of signs, pathways, landmarks and other visual cues to help people understand where they are going.

In addition to directing traffic and conveying practical information, the best wayfinding systems accomplish larger, more subjective goals, such as

- Creating a unique visual identity,
- Establishing a sense of place, or
- Communicating or reinforcing messages about a place.

To put it simply, wayfinding directs travelers to a destination and creates a positive first impression about the destination. Wayfinding systems have been used for many years on college campuses, office parks and tourist districts. Cities and towns of all sizes are now using wayfinding systems to direct traffic to key destinations throughout the community and help shape their community brand.

Wayfinding is a mental process, and it involves more than just a program of coordinated signage. The most effective wayfinding solutions have well-defined routes or pathways and clear visual cues (such as landmarks or prominent buildings). Of course, printed maps or GPS navigation are part of wayfinding, too.

This report focuses on the value of a coordinated signage program and recommends specific locations for sign types in New Haven. The aim of this wayfinding system is to direct traffic to Downtown New Haven and other prominent destinations and create a positive impression of the community. One of Downtown New Haven's biggest challenges is alerting those driving along Highway 100 that Downtown New Haven is there to be seen and enjoyed. A comprehensive wayfinding program can address this challenge.

Monument Gateway Signage, St. Louis University

Vehicular Directional Sign, Gwinnett Place
Duluth, Georgia

II. WAYFINDING COMPONENTS

A comprehensive approach to wayfinding considers signage in light of architecture, lines of sight, and lighting. Below are general principles of effective wayfinding that relate to each of these four components:

Signage:

- Uniform signage at important decision points is a critical element of wayfinding. Locations for signage should be chosen in terms of decision points ("Should I turn or go straight"?) and traffic volume.
- Replace purely functional signs lacking character (e.g. standard MoDOT signs) with attractive uniform signs.
- The size of signs (the sign panel and lettering) should be governed by average vehicle speed and distance from the roadway.
- Excessive signage diminishes the effectiveness of individual signs. Fewer, easy to read, appropriately placed signs are preferred.
- Avoid signs that are too small and are of varying sizes, colors, and types. Uniform design helps users find the next sign and verifies that they are "on the right track."

Architecture:

- Buildings, landscape features and other elements of a street can serve as visual cues to help people understand their location and the route to their destination. For instance, seeing buildings spaced closer together is a cue that one may be entering a traditional downtown area.
- Strong architectural features serve as landmarks and orientation points. These points are often destinations as much as they can be starting points. The wayfinding system should exploit these types of features.

Downtown Directional Wayfinding Signage
Atlanta, Georgia

Wayfinding in Downtown
Northfield Minnesota

Sight Lines:

- Clean, clear lines down the streets at key intersections should be maintained. Avoid allowing buildings or private signage to encroach or block these lines.
- Motorists feel most comfortable maintaining visual contact with his or her destination and will want to make as few direction changes as possible.
- Repetitive landscaping, decorative light poles or street furnishings can draw the eye down streets, but care must be taken that these items do not obstruct views or navigational landmarks.

Lighting:

- A repetitive line of lighting can be a very effective navigation tool. Lighting can be used to encourage routes and pathways.
- Poor lighting causes missed information and leaves an unsafe impression.
- Warmly lit sidewalks and streets draw the visitor onward. Warmly lit storefronts and entrances draw the eye and help the visitor get to the business district.

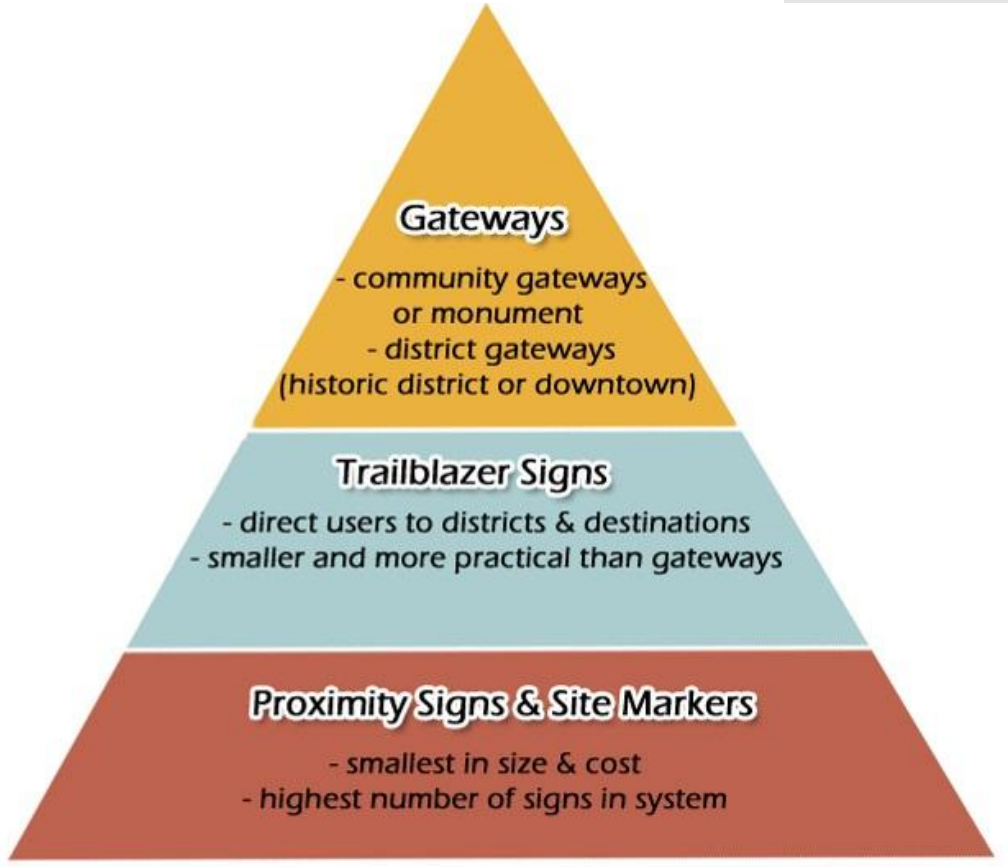
Arts & Cultural Connectivity, Toronto, Canada

Decorative Lighting Establishes Streetscape Pattern
Boonville, Missouri

A Hierarchy of Signs

In a wayfinding signage system, several types of signs are designed and placed at various locations around the community. Each sign type has a slightly different function and size but uses a common design theme. A typical wayfinding sign program can be described as a *hierarchy* because the sign types can be arranged as "levels" ranked by the number of signs needed.

The levels of sign types are pyramid-shaped, with the fewest number of signs occupying the top level, working downward to sign types installed with the most frequency. The top-level signs would be the largest and most costly, and the more common smaller signs lower on the pyramid are less costly. All the signs use consistent fonts, logos, and color patterns to create a uniform theme.



Hierarchy of Wayfinding Signs

Each of the most common wayfinding sign types are explained and illustrated below.

Gateways:

Gateways can have an important practical purpose (announcing entry or drawing attention to a key route), and they help establish the all-important first impression. Gateways can be purely signage, but are often incorporated into a monument. In some cases, the monument (such as a fountain, column or archway) is the larger element, with a simple sign component included.

To the visitor, the community gateway will establish the design theme that is repeated in some fashion on signage throughout the system. Some wayfinding systems will also incorporate "district gateways" that establish entry points to a district (the historic downtown, for instance, or a distinct neighborhood).

Gateway Monument designed for displaying banners, Belleville, Illinois

Trailblazers:

Trailblazer signs have a utilitarian function, pointing the way to key destinations or districts, but they also incorporate the community brand and the wayfinding system's design theme. Trailblazer signs can point the way to districts (using simple labels such as "Historic Downtown", "Theater District", etc.) or to specific destinations (e.g. "City Park", "River Walk" or "High School").

Trailblazers should be located at or near key intersections that serve as a "decision point" for travelers — a point where the motorist must decide to turn or continue straight to follow the route toward the destination. These decision points will often be near intersections of heavily travelled streets and highways. The other obvious factor in placement of the signs is the location of the destinations and clearest routes from main highways.

Trailblazer signs vary in size, but since they tend to be at key intersections on streets of relatively higher traffic volume and faster vehicle speeds, the size of the sign and the text printed on it may need to be relatively large. A typical trailblazer sign would be in a range of 5 to 6 feet wide by 3 to 4 feet high, installed on two poles with the bottom of the sign elevated 5 to 6 feet above grade.

Once locations for trailblazers are chosen, the typical sign dimensions and text size should be determined by the speed of traffic and roadway width. Because of

Trailblazer Signage in Warrensburg, Missouri

the varying size requirements, trailblazers of two different sizes might be needed—one for highways, one for local streets.

Proximity Signs:

As the most frequently used signs, proximity signs comprise the base of the wayfinding pyramid. Proximity signs are installed as the traveler gets closer to the destination or at the final turn to reach a destination. Proximity signs let users know they are "on the right track." These signs can point the way to a single destination with a simple "straight-ahead" arrow showing that the traveler is approaching the destination. A proximity sign might also be a smaller version of trailblazers, pointing the way to multiple destinations.

Intended for slower traffic on local streets, proximity signs are smaller and installed on single poles or on existing light poles, if properly situated. Proximity signs can be effective with dimensions as small as 36 inches square and usually still need to be installed at a height of 5 to 6 feet above grade.

The bottom panel of this Trailblazer is for special event information (Webster Groves, Missouri).

Special Purpose Signs:

Depending on the needs for the area, a series of special purpose signs, designed to reflect the uniform style of the overall signage program can be an important part of the wayfinding system. For pedestrian oriented areas like an historic downtown, informational kiosks can be helpful to point out attractions and options for shopping, dining or public restrooms. The use of historical information markers, which can include historic photographs or community history, are attractive to both visitors and residents alike. Signs pointing the way to public parking are often necessary for a downtown district or other area of dense development. All such signs should be designed with the consistent color scheme and font type of the wayfinding system, which will make the signs stand out.

Portable or other temporary signage is often overlooked in wayfinding programs, but these can be among the most useful for special events such as community festivals, sports tournaments, conventions or other events that draw visitors to the community. Examples include portable "sandwich-board" signs that can be placed at key roadside locations or point the way to overflow parking.

Proximity Sign in Downtown Fulton, Missouri

Banners and Decorative Lighting:

Street lighting, whether on standard or decorative poles, plays a role in wayfinding, and a series of attractive, decorative light poles can signal entry into historic areas or a downtown district. Banners that incorporate the consistent design of the wayfinding system can beautify an area and reinforce the community brand.

Ideally, banners will be designed with color schemes and font types consistent with the wayfinding program. Banners of different sizes can be used so they are of a scale appropriate for the pole height and street width. The community can use seasonal banners to celebrate community festivals; these temporary banners can be unique yet still reflect the consistent wayfinding design theme.

Corridors and Destinations

Before designing attractive signage, an effective wayfinding program begins with identifying the primary destinations and understanding traffic patterns of visitors. Currently, New Haven has identified "entry points" at which to place gateway signs, and trailblazer signs to help visitors along the way to destinations in Downtown New Haven or elsewhere. The map, labeled Wayfinding Sign System, on page 17 is the product of discussions between City staff, DREAM Committee members and PGAV.

Special Purpose Sign in Downtown, Joplin, Missouri

Parking Signage Boonville, Missouri

Downtown New Haven streetscape. (Summer 2011)

Public versus Private Signage

Community wayfinding programs focus on designing signs intended for installation on public right-of-way, which is typically a varying amount of land on either side of the roadway. As part of the street and highway system, installation of signs on public right-of-way require permission from the appropriate jurisdictional authority (MoDOT, county highway department, or City Public Works Department). The appropriate jurisdiction should be identified for each desired sign. As the entity coordinating the wayfinding program, the locations under City jurisdiction usually present the least difficulties in permitting. County or MoDOT approval may require submittal of formal applications. Establishing early communications with the appropriate review agency is important, as is keeping in mind the following considerations:

- A "clear zone" along the edge of pavement in which no signage may be installed will be required, in certain locations, to make way for errant vehicles. The width of the clear zone may depend on the traffic volume, average vehicle speed and layout of the particular roadside location.
- To further account for errant vehicles, the permitting agency may require that signs be installed with "break-away" brackets that would allow the sign pole to give way if a vehicle strikes the pole.
- Sign installation will need to meet specific wind load requirements.
- As part of the public right-of-way, the content of the sign will be restricted to giving direction to general districts or public destinations (as opposed to directing to private businesses or attractions).
- Maintain flexibility in working with MoDOT, and keep in mind that the primary goal of a transportation agency is to promote safe, efficient travel of motorists. Wayfinding does promote safe, efficient travel, but the aesthetic and branding goals of a wayfinding program will be subordinate to safety and consistency when it comes to permitting.

A community may also use the private property adjacent to the street or highway for installation of gateways and other components of the wayfinding system. Private property is usually less preferable since it is farther away from the right-of-way, but depending on the width and design of the roadway and availability of adjacent right-of-way, it may, in certain circumstances, be the only choice.

If permitting is problematic on right-of-way or if a particularly large sign is desired, then private property might be the best location. Just keep in mind that the farther away from the roadway, the less visible the sign. Elevating the sign or monument with a landscape berm, installing lighting to improve nighttime visibility and increasing the size of the sign can overcome this problem.

On private property, the wayfinding monument or signage has to compete with other privately owned signage. As with any other signs on private property, wayfinding signs are subject to city or county sign regulations, which are typically part of the zoning ordinance. Sign regulations will dictate maximum height, overall size, illumination and the number of signs per parcel. However, as signage with a unique public purpose, local ordinances often exempt signs installed or sanctioned by the local government.

Installing signage on private property requires that the City (or sponsoring organization) reach a formal agreement with the property owner to install the sign. This would typically be an easement or lease agreement that grants ongoing permission to install and maintain the sign.

Ongoing Signage Maintenance

When establishing a wayfinding program, the City and any co-sponsoring organization must consider that the signs will have a limited lifespan. Depending on the type of materials and construction, sign poles may need re-painting and sign faces may fade over time. The signs may be damaged by errant vehicles and then require complete replacement. Expected lifespan should be part of the consideration in choosing signage design. The City should consider including maintenance funds in future budgets.

III. REVIEW OF EXISTING SIGNAGE IN NEW HAVEN

As part of the process of preparing this report, PGAV reviewed existing welcome signage and directional signage to evaluate the ability of motorists to find their way from Highway 100 to Downtown New Haven.

There are two signs focused solely on New Haven:

1. Landmark "Welcome to New Haven" sign at the base of the water tower: While the landmark sign at the base of the water tower is an attractive sign, it's orientation is problematic. Located on the south side of Highway 100, it seems to be oriented toward west-bound traffic although it is on the east-bound side of Highway 100.
2. Downtown New Haven directional sign at Highway 100 and Miller Street: this sign lacks any unique image for Downtown New Haven and is difficult to read from Highway 100.

These signs are noticeable to motorists and placed appropriately to advise of upcoming turns. In general, however, existing signage can be characterized as uncoordinated and insufficient.

Some of the challenges and considerations with respect to implementing an effective wayfinding regime include:

- Making travelers along Highway 100 aware that they are in New Haven and that Downtown New Haven is a brief drive to the north and has much to offer any visitor.
- The topography of Highway 100, entering New Haven from the east or west, land uses along the Highway, and the clutches of signs at various intersections present challenges for signage installation insofar as implementation will require negotiations with private landowners where public right-of-way is either too narrow to work with or nonexistent.

Wayfinding Sign at Bus Stop
Washington D.C.

Installation of Wayfinding Sign
Greene County, Ohio

IV. NEW HAVEN'S PROPOSED WAYFINDING SYSTEM

The goals of New Haven's wayfinding program are:

1. Alert Highway 100 travelers to Downtown New Haven.
2. Help these travelers find Downtown New Haven and its points of interest.
3. Establish a positive first-impression.
4. Alert travelers to other destinations in New Haven.

A uniform system of wayfinding for New Haven will communicate New Haven's identity as an attractive, vibrant community and direct visitors from the highway to Downtown and other destinations. The components of the wayfinding program are explained in the narrative below and illustrated on the two map exhibits labeled Wayfinding Sign System (page 17) and Downtown Detail (page 18).

Gateways to New Haven and Downtown

Two locations for primary gateway signs (or monuments) are proposed for the system (denoted with the yellow X symbols on the map on page 17). These locations are along Highway 100 near the water tower near the eastern end of the City, and at the intersection of Highway 100 and Shamrock Drive, near the western end of the City.

Trailblazer Signs

Trailblazer signs are recommended at seven locations, three of which would be on Highway 100.* These trailblazers would be set at the Miller Street, Maupin Avenue, and Sunset Lane as motorists could take either of these streets and reach Downtown New Haven. Three of the four remaining trailblazer signs will be placed at key intersections along Miller Street, Maupin Avenue, and Sunset Lane to guide motorists on their way to Downtown New Haven. The seventh trailblazer sign will be posted at the end of Miller Street, at the entrance to Downtown New Haven.

*The three trailblazer signs along Highway 100 are to be double-sided to allow for vision from both directions of travel. The other trailblazer signs are single-sided.

Proximity Signs

The proposed proximity sign locations are closer to particular destinations in New Haven. Depending on the location, they can list a single destination, assuring travelers that they are headed in the right direction, or they can point out the location to two or more destinations with arrows.

A total of 12 proximity signs are proposed in the Wayfinding Plan. The majority of these would be on the downtown square, to point out key attractions and businesses or business areas. The remainder will be along key routes, such as Miller Street, Maupin Avenue and Sunset Lane, or near the High School and recreation area.

New Haven's proximity signs will have the same coordinated design as trailblazers but would be installed on single posts. Some of these signs, which are designed to be as small as 3 feet by 2 feet, could be installed on existing light poles as a cost-saving measure.

Maps showing the placement of each aforedescribed signage type can be found on pages 17 and 18 of this report.

Wayfinding Implementation

After considering the information and recommendations provided in this Wayfinding Plan, the City should confer directly with the New Haven Area Chamber of Commerce, members of the DREAM Committee, and members of Downtown New Haven, Inc. (when formed) with respect to funding and implementing the wayfinding plan:

1. Study the Wayfinding Plan and make any desired modifications to destinations and sign placement locations. Begin consultation with MoDOT officials regarding permitting along Highway 100.

2. Develop a budget (including funding sources) and installation timeline for the program.

3. Using the recommendations in the Plan, evaluate and photograph each proposed location to determine any conflicting signage or installation problems.

5. Obtain permits from MoDOT for signage on state highways.

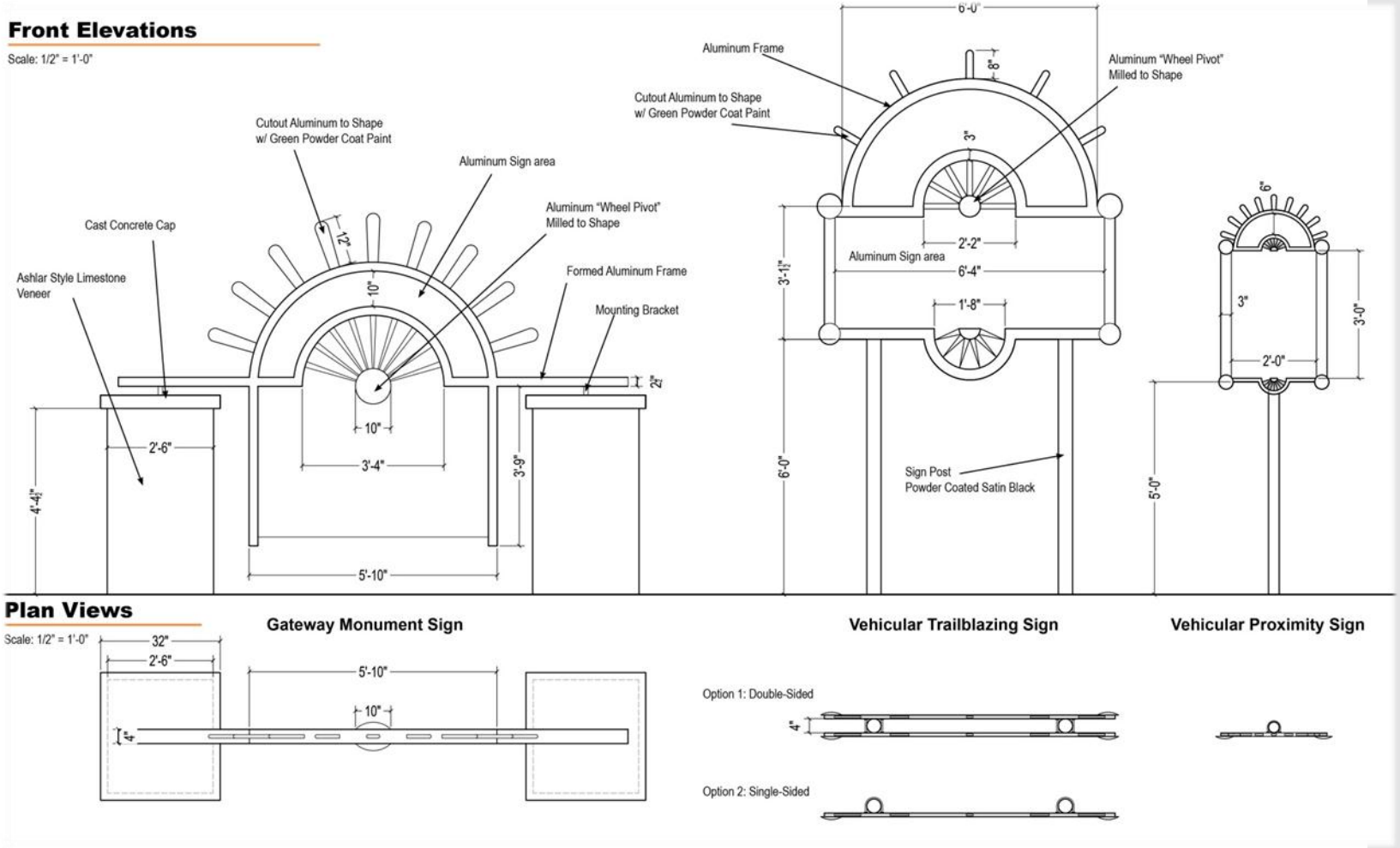
6. Evaluate proposals and enter into contracts to purchase and install signs.

Because of the anticipated cost of the wayfinding projects, a phased approach is expected, and implementation of portions of the Wayfinding Signage System may take a few years to complete. However, with community buy-in and funding support, much of the program is achievable within a short timeframe.

A series of public meetings were held at which three different signage design motifs were presented. After discussion, the signage designs shown below were chosen.

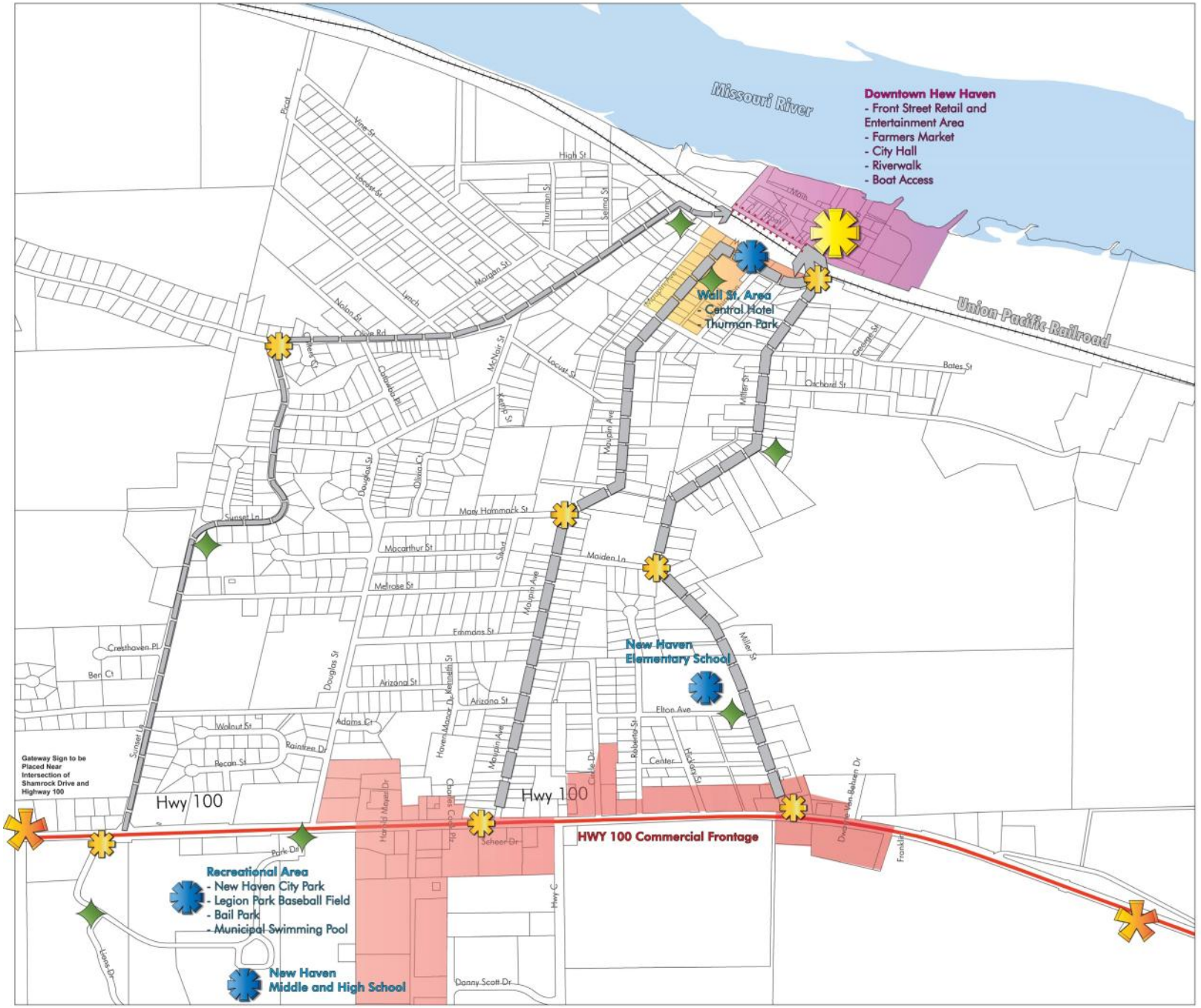
The signs are (from left to right); the gateway sign, trailblazer sign, and proximity sign.

Specifications for each sign are shown in the following page, and cost estimates for each sign are shown on page 16.


Front Elevations
Scale: 1/2" = 1'-0"
Cutout Aluminum to Shape w/ Green Powder Coat Paint
Aluminum Sign area
Aluminum "Wheel Pivot" Milled to Shape
Cast Concrete Cap
Ashlar Style Limestone Veneer
Formed Aluminum Frame
Mounting Bracket
12"
10"
2"
2'-6"
10"
3'-4"
3'-9"
4'-4"
5'-10"
Aluminum Frame
Cutout Aluminum to Shape w/ Green Powder Coat Paint
Aluminum "Wheel Pivot" Milled to Shape
6'-0"
8"
3"
2'-2"
Aluminum Sign area
6'-4"
1'-8"
3'-1"
6'-0"
Sign Post Powder Coated Satin Black
6"
3"
2'-0"
3'-0"
5'-0"
Plan Views
Scale: 1/2" = 1'-0"
Gateway Monument Sign
32"
2'-6"
5'-10"
10"
4"
Vehicular Trailblazing Sign
Option 1: Double-Sided
4"
Option 2: Single-Sided
Vehicular Proximity Sign

New Haven Wayfinding System Signage Cost Estimate

Sign Type	Description	Quantity	Unit Price	Subtotal
Monumental Gateway Sign 	Gateway Monument sign. Aluminum fabricated sign to match supplied layout. Support Columns to be constructed of stone set with mortar.	2	$15,000	$30,000
Double-Sided Vehicular Trailblazing Sign 	Trailblazing Sign Double-Sided is to be flat cut with domed accents. The sign will be constructed of aluminum composit materials with 3M HP graphic copy as per supplied layout.	3	$4,800	$14,400
Single-Sided Trailblazing Sign 	Trailblazing Sign Single-Sided is to be flat cut with domed accents. The sign will be constructed of aluminum composit materials with 3M HP graphic copy as per supplied layout.	4	$4,200	$16,800
Vehicular Proximity Sign 	Proximity is to be flat cut with domed accents. The sign will be constructed of aluminum composit materials with 3M HP graphic copy as per supplied layout.	12	$2,000	$24,000
		Grand Total		**$85,200**



New Haven Wayfinding

Wayfinding Sign System

Legend

- Major Activity Area
- Destination
- Gateway Sign
- Trailblazer Sign
- Proximity Sign
- Proposed Streetscape Enhancements
- Primary Access Route
- Secondary Access Route
- Wall Street Area Historic District
- Downtown New Haven
- HWY 100 Commercial Area
- State Highway
- Railroad

PGAV PLANNERS

0 300 600 1,200 Feet

1 inch = 300 feet

New Haven Wayfinding

Downtown Wayfinding Detail

Legend

- Destination
- Gateway Sign
- Trailblazer Sign
- Proximity Sign
- Proposed Streetscape Enhancements
- Primary Vehicular Circulation Route
- Railroad
- Downtown New Haven
- Wall St. Area Historic District

PGAVPLANNERS

0 60 120 240 Feet

1 inch = 60 feet

V. DOWNTOWN SITE PLANS

During the initial assessment meeting at the start of the DREAM Initiative planning process, local stakeholders made PGAV staff aware of their desire to improve the look and character of Downtown New Haven in certain material ways. Among the desired results of these improvements would be enhanced aesthetics and functionality with respect to five targeted portions of Downtown New Haven:

- Front Street Streetscape
  - The main commercial street in Downtown New Haven, fronting on the railroad.
- East Front Street Streetscape and Lion's Club Property
  - Front Street east of Miller Street and including recommendations for the Lion's Club property
- The Town Steps
  - The public steps leading up the bluffs from the railroad tracks.
- The Downtown Alley
  - The area comprising the center of the block that is the heart Downtown New Haven
- The Riverwalk
  - The pedestrian walkway that winds from the end of Front Street on the east along the levee and back around to Olive Street.

The following pages show a series of graphic illustrations for each Downtown Site Plan showing observations made during site visits and illustrated recommendations for improvements.

The Downtown Site Plans shown in this document were developed over a series of meetings with the City and with the DREAM Committee. Drafts were presented at meetings in August and November 2011, and revisions were made pursuant to feedback from those in attendance.

An element from the perspective view of the Town Steps site plan.

FRONT STREET STREETSCAPE
Site Evaluation

Large Area of Undefined Pavement Should be Redefined To Increase Aesthetic Appeal and Functionality

Existing Railroad Tie Retaining Wall Should Be Replaced With More Durable Masonry Units

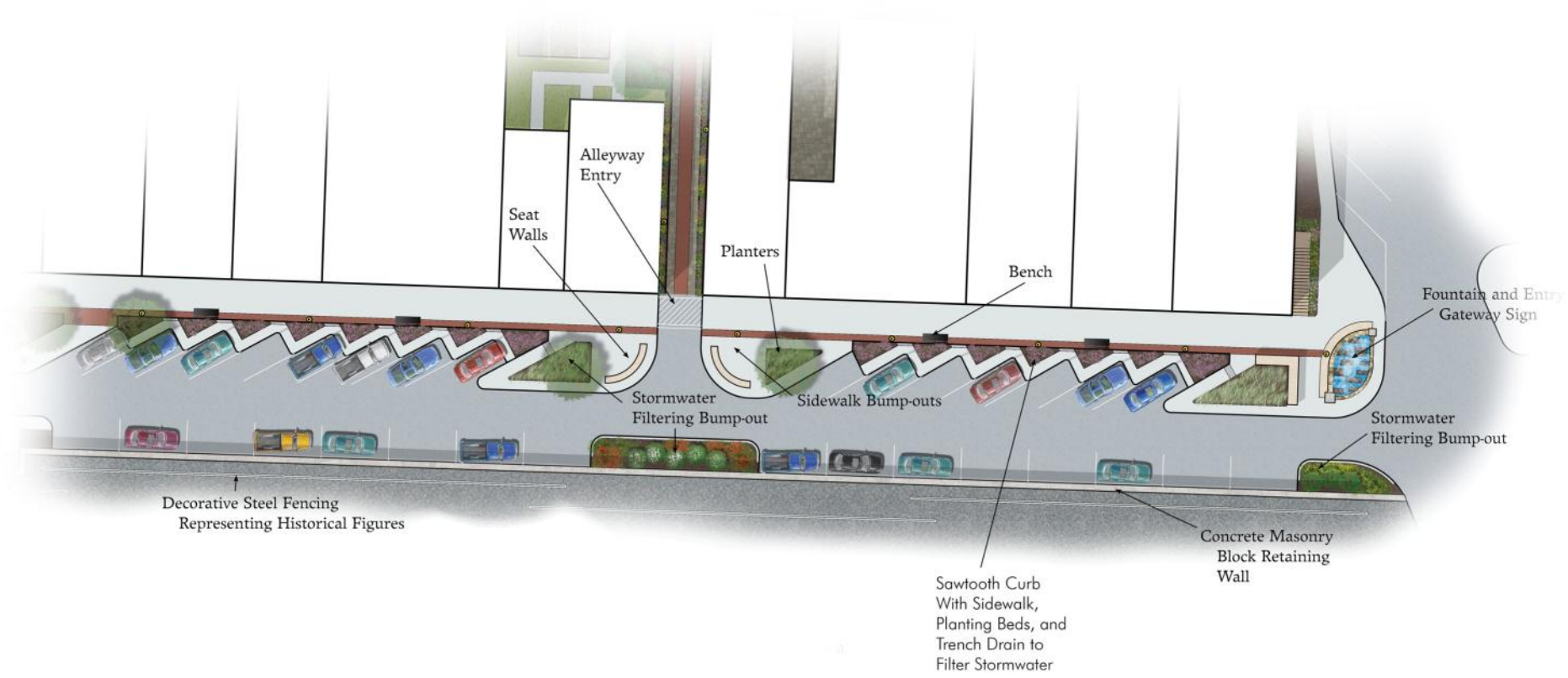
Potential For Storm Water Capture and Defined Parallel Parking

Front Street Building Facades Are In Good Condition. Enhancements to The Pedestrian Zone Will Boost Pedestrian Safety, Aesthetic Appeal and Comfort.

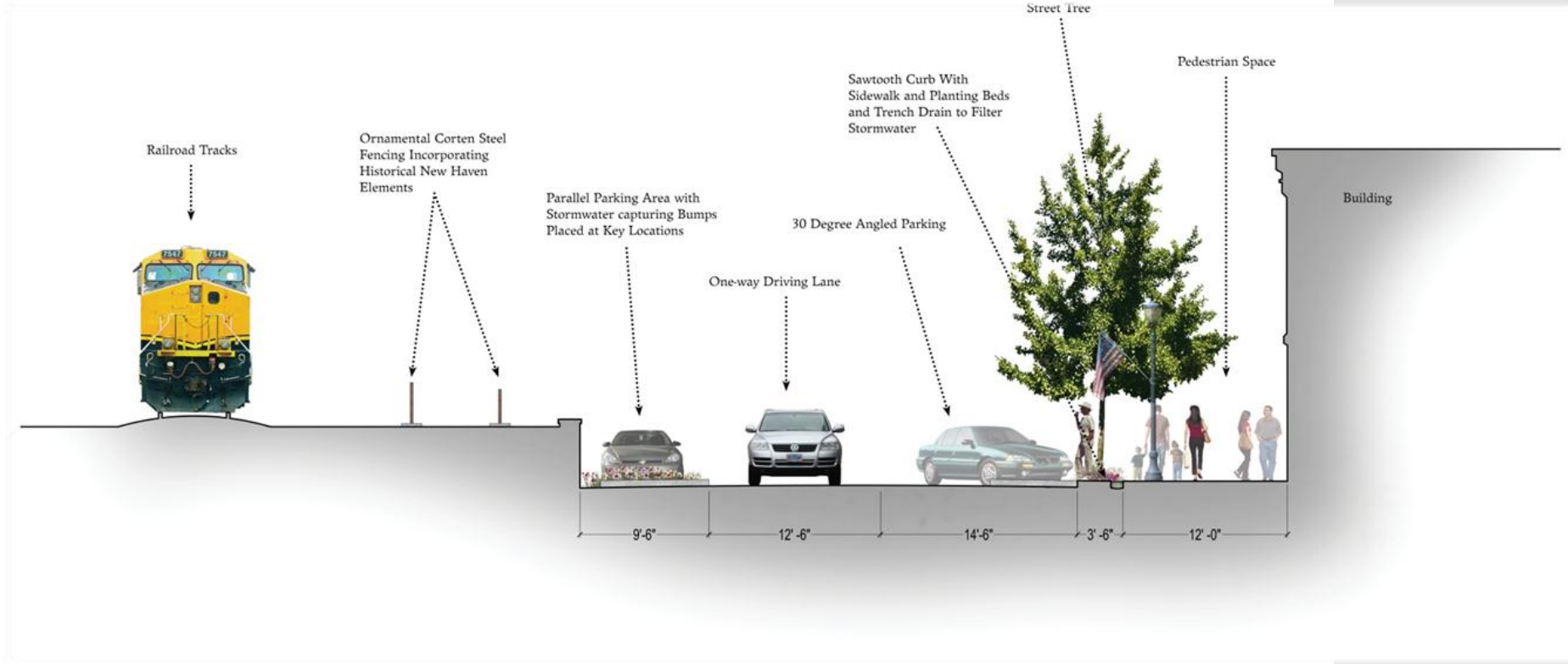
Existing Shrub Planting are Overgrown and Need to Be Refreshed

Front Street Streetscape: Site Plan

Front Street Streetscape: Site Plan Detail



Front Street Streetscape: Elevation



PGAV PLANNERS

Front Street Streetscape: Elevation

Sample Elevation of Ornamental Corten Steel Fencing Incorporating Historical New Haven Elements Height Will Vary From About 2' to 4'.

EAST FRONT STREET STREETSCAPE:
Site Evaluation

Roadways Undefined and Should Designate Driving Lanes and Pedestrian Zone.

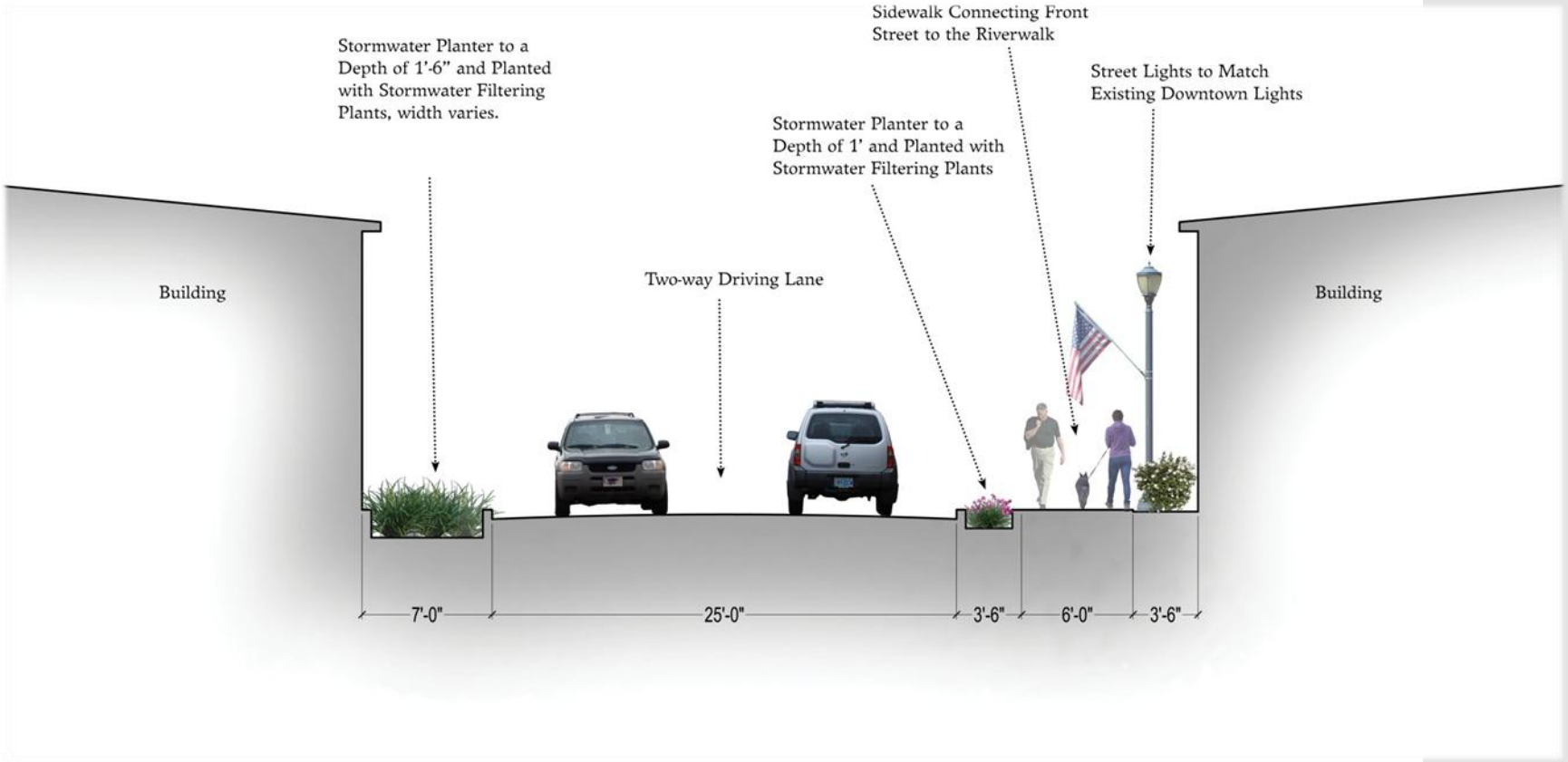
Sidewalk Should Be Continued to the River walk and Lions Club Property.

Underutilized Lions Club Property Has High Potential For a Community Event Space

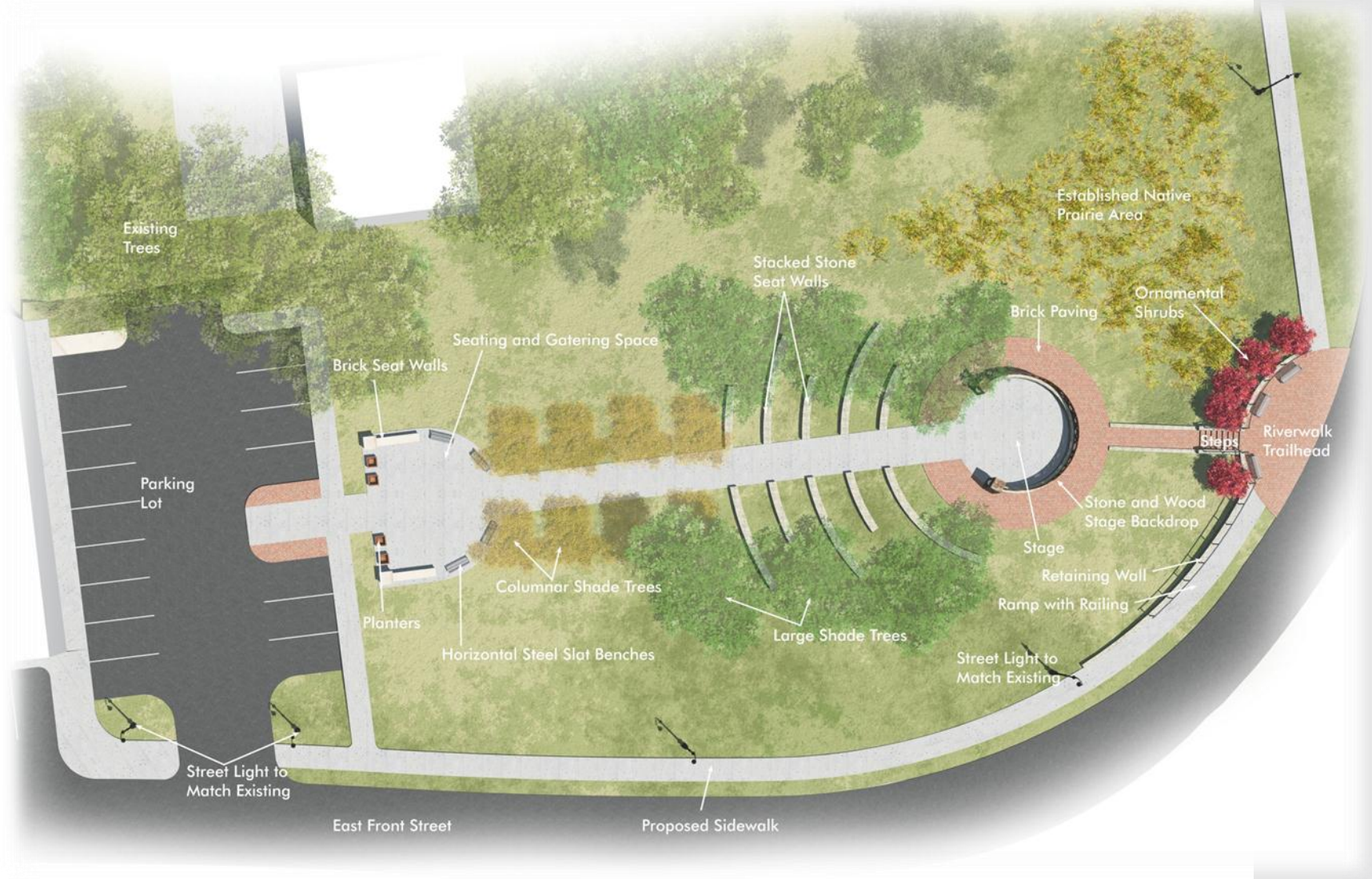
No Dedicated Pedestrian Access to RiverWalk. No Signage to Give Direction.

East Front Street Streetscape: Site Plan

East Front Street Streetscape: Elevation



LION'S CLUB PROPERTY
Park Space Plan



Lion's Club Property: Perspective View

DOWNTOWN ALLEY:
Site Evaluation

Existing Utilitarian Alleyway Does Not Present A Welcoming Feel To Pedestrians.

Parking Space Should Be Defined To Help Control the Use of Alleyway Space.

A More Defined Pavement Can Help To Guide Vehicular and Pedestrian Users

Trash Bins Can Be Placed In Designated Screened Off Trash Areas.

Downtown Alley: Site Plan

Downtown Alley: Site Plan Detail

Downtown Alley: Perspective View

RIVERWALK:
Site Evaluation

No Sense of Entry to The River walk Trailhead.

Existing Trees Along The Bank of the Missouri River, Block Views From River walk and Downtown.

No Dedicated Pedestrian Access To and From The River walk.

Existing Walkway Lights On River walk Are in Good Condition and Should Be Kept.

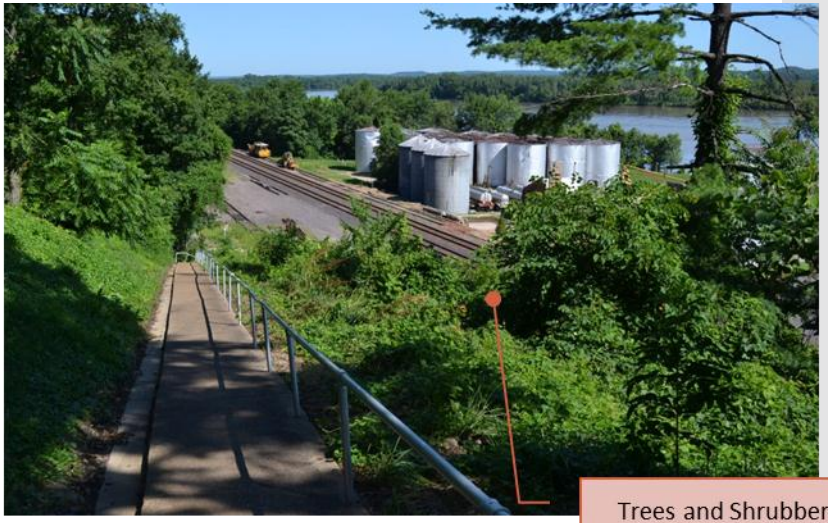
Riverwalk: Improvement Plan

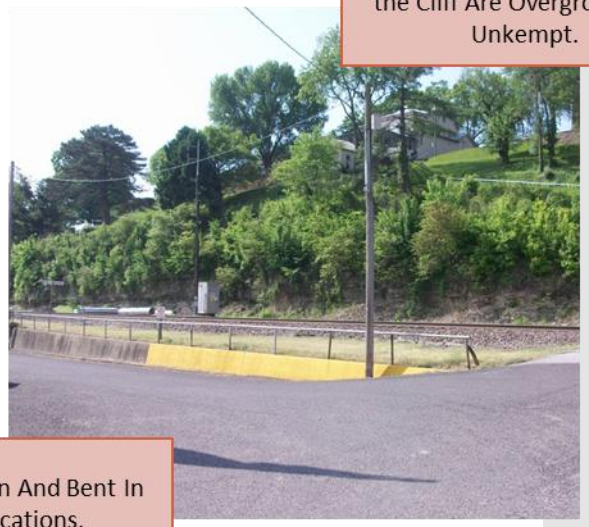
Riverwalk: Improvement Plan Detail

Riverfront Improvements Aerial View

Riverfront Improvements Perspective View

TOWN STEPS:
Site Evaluation





Town Steps Site Plan

Town Steps Perspective View

VI. DOWNTOWN SITE PLANS IMPLEMENTATION

PGAV staff developed cost estimates for each of the aforedescribed Downtown Site Plans. The course of implementation will be determined, in part, by priority, as determined by stakeholders, and the ability of the City, other organizations, and civic leaders to raise funding for the construction of each Downtown Site Plan.

Programs which may be particularly useful in funding the implementation of the Downtown Site Plans are:

1. **Community Development Block Grant ("CDBG"):** The City and/or Downtown New Haven, Inc. could apply to DED for CDBG monies to fund portions of Downtown Site Plan related improvements. The application for CDBG assistance is competitive.

2. **MDFB Tax Credit for Contribution Program:** If a private entity (i.e. corporation or private individual) in the community would like to donate funds for implementation, they could do so via the MDFB Tax Credit for Contribution Program which provides the donor with a credit against their state income liability equal to 50% of their contribution to the project. Activities eligible pursuant to this program include infrastructure projects; as a result all of the activities proposed as Downtown Site Plans are eligible with the exception of the Downtown Alley improvements which are planned for what is currently private property. If that property were deeded to the City, then improvements thereon would become eligible for this program.

3. **MDFB Public Entity Loan Program:** Through this program, MDFB provides loans to local governments to finance general public infrastructure improvements and economic development projects. Downtown Site Plans work would qualify.

4. **Neighborhood Improvement District:** Via the implementation of a Neighborhood Improvement District ("NID"), that portion of the City affected by the Downtown Site Plans (or willing to contribute to funding the implementation thereof) may participate in a NID (with permission from the County) which would levy an additional tax or special assessment on property within the NID to raise revenues to pay for portions of implementation. These moneys could be leveraged, with the assistance from MDFB, to gain full funding via tax credits or other low cost financing options.

5. **Neighborhood Assistance Program ("NAP") Tax Credits:** The City and/or Downtown New Haven, Inc. would apply to DED for an allocation of NAP tax credits to help fund these revitalization projects. A corporation (or a person with rental income) making a qualified donation to an approved NAP project would receive State tax credits in an amount equal to either 50% or 70% of their contribution depending on the type of NAP tax credits allowed after the application process for the project.

For assistance in funding implementation, PGAV recommends that the City engage directly with staff of two of the DREAM Initiative sponsor agencies, the Missouri Development Finance Board ("MDFB") and the Missouri Department of Economic Development ("DED") to discuss the options listed above and any other scenarios staff may know of to assist implementation funding.

The following pages include cost estimates for each Downtown Site Plan.

Front Street Streetscape

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Brick Paving - 4"x8"x2 1/4" - Gravel Base	S.F.	1,130	$ 15.00	$ 16,950
Concrete Footing - To Frost Line	L.F.	100	$ 35.00	$ 3,500
Concrete Curbing - Cast in Place - 6"	L.F.	125	$ 28.00	$ 3,500
Concrete Sidewalk Paving - 9" Depth - Gravel Base	S.F.	3,610	$ 10.00	$ 36,100
Pavement Demolition	S.F.	5,000	$ 2.00	$ 10,000
Seat Walls - CMU 8" - 4' - Complete	L.F.	70	$ 70.00	$ 4,900
Seat Walls - Ashlar Veneer - 4" thick	S.F.	300	$ 29.50	$ 8,850
Seat Walls - Precast Coping - 4"	L.F.	75	$ 35.00	$ 2,625
Benches - Plastic Coated Steel - 6'	Ea.	6	$ 895.00	$ 5,370
Shade Trees - 2" Caliper	Ea.	6	$ 200.00	$ 1,200
Mixed Ground Cover Plantings	S.F.	2,600	$ 4.50	$ 11,700
Landscaped Area Soil Amendment - 12" deep	C.Y.	97	$ 40.00	$ 3,880
Concrete Masonry Unit Retaining Wall	S.F.	2,100	$ 18.00	$ 37,800
Decorative Corten Steel - Interpretive Fencing	S.F.	1,200	$ 20.00	$ 24,000
Pavement Marking - Thermoplastic - 4" Wide	L.F.	600	$ 1.20	$ 720
	Subtotal			**$ 171,095**
	City Cost Multiplier[1]			**92.9%**
	Total			**$ 158,947**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

Downtown Alley and Farmer's Market Area

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Brick Paving - 4"x8"x2 1/4" - Gravel Base	S.F.	4,200	$ 15.00	$ 63,000
Permeable Unit Paving - Permeable Gravel Drainage Base	S.F.	13,900	$ 12.00	$ 166,800
Concrete Sidewalk Paving - 9" Depth - Gravel Base	S.F.	3,610	$ 10.00	$ 36,100
Seat Walls - CMU 8" - 4' - Complete	L.F.	80	$ 70.00	$ 5,600
Seat Walls - Ashlar Veneer - 4" thick	S.F.	240	$ 29.50	$ 7,080
Benches - Plastic Coated Steel - 6'	Ea.	6	$ 895.00	$ 5,370
Ornamental Trees - 1" Caliper	Ea.	18	$ 150.00	$ 2,700
Ornamental Shrubs - 24"	Ea.	35	$ 50.00	$ 1,750
Mixed Ground Cover Plantings	S.F.	1,000	$ 4.50	$ 4,500
Landscaped Area Soil Amendment - 12" deep	C.Y.	20	$ 40.00	$ 800
Ornamental Wall Mounted Light	Ea.	4	$ 800.00	$ 3,200
Ornamental Street Light - Match Existing	Ea.	4	$ 2,800.00	$ 11,200
Wood Shadow Box Fencing - Cedar - 6'High	L.F.	80	$ 32.00	$ 2,560
Pavement Marking - Thermoplastic - 4" Wide	L.F.	500	$ 1.20	$ 600
	Subtotal			**$ 311,260**
	City Cost Multiplier [1]			**92.9%**
	Total			**$ 289,161**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

East Front Street Streetscape Improvements

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Concrete Curbing - Cast in Place - 6"	L.F.	928	$ 28.00	$ 25,984.00
Concrete Sidewalk Paving - 6" Depth - 6" Gravel Base	S.F.	3,430	$ 6.50	$ 22,295.00
Pavement Demolition	S.F.	6,285	$ 2.00	$ 12,570.00
Decorative Street Lights - To Match Existing Downtown	Ea.	5	$ 2,800.00	$ 14,000.00
Grass Seeded	Ea.	1	$ 1,000.00	$ 1,000.00
Mixed Ground Cover Plantings	S.F.	850	$ 4.50	$ 3,825.00
Landscaped Area Soil Amendment - 12" deep	C.Y.	30	$ 40.00	$ 1,200.00
Pavement Marking - Thermoplastic - 4" Wide	L.F.	600	$ 1.20	$ 720.00
	Subtotal			**$ 81,594.00**
	City Cost Multiplier [1]			**92.9%**
	Total			**$ 75,800.83**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

New Haven Town Steps

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Brick Paving - 4"x8"x2 1/4" - Gravel Base	S.F.	600	$ 15.00	$ 9,000.00
Seat Walls - CMU 8" - 3' - Complete	L.F.	110	$ 140.00	$ 15,400.00
Seat Walls - Ashlar Veneer - 4" thick	S.F.	350	$ 29.50	$ 10,325.00
Benches - Plastic Coated Steel - 6'	Ea.	2	$ 895.00	$ 1,790.00
Ornamental Trees - 1" Caliper	Ea.	6	$ 150.00	$ 900.00
Ornamental Shrubs - 5 gal	Ea.	100	$ 48.00	$ 4,800.00
Mixed Ground Cover Plantings	S.F.	1,000	$ 4.50	$ 4,500.00
Planted Native Grass Area - 4 to 7 species	Acre	0	$ 3,100.00	$ 930.00
Erosion Control Blanket	Acre	0	$ 3,600.00	$ 1,620.00
Planted Native Wildflower Area -	Acre	0	$ 3,600.00	$ 540.00
Landscaped Area Soil Amendment - 12" deep	C.Y.	50	$ 40.00	$ 2,000.00
Decorative Aluminum Railing	L.F.	410	$ 50.00	$ 20,500.00
Limestone Boulders - For Retaining Walls	Ton	25	$ 350.00	$ 8,750.00
	Subtotal			**$ 81,055.00**
	City Cost Multiplier [1]			**92.9%**
	Total			**$ 75,300.10**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

Lion's Club Property

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Brick Paving - 4"x8"x2 1/4" - Gravel Base	S.F.	1,900	$ 15.00	$ 28,500.00
Concrete Footing - To Frost Line	L.F.	330	$ 35.00	$ 11,550.00
Concrete Curbing - Cast in Place - 6"	L.F.	200	$ 28.00	$ 5,600.00
Concrete Stairs - 5' Wide - 5 Risers	Ea.	2	$ 1,450.00	$ 2,900.00
Concrete Sidewalk Paving - 9" Depth - Gravel Base	S.F.	6,500	$ 10.00	$ 65,000.00
Pavement Demolition	S.F.	2,500	$ 2.00	$ 5,000.00
Seat Walls - CMU 8" - 1 1/2' - Complete	L.F.	330	$ 70.00	$ 23,100.00
Seat Walls - Ashlar Veneer - 4" thick	S.F.	600	$ 29.50	$ 17,700.00
Benches - Plastic Coated Steel - 6'	Ea.	6	$ 895.00	$ 5,370.00
Ornamental Trees - 1" Caliper	Ea.	12	$ 150.00	$ 1,800.00
Shade Trees - 2" Caliper	Ea.	6	$ 200.00	$ 1,200.00
Grass Seeded	S.Y.	3,333	$ 0.48	$ 1,599.84
Landscaped Area Soil Amendment - 12" deep	C.Y.	10	$ 40.00	$ 400.00
Concrete Masonry Unit Retaining Wall	S.F.	1,000	$ 18.00	$ 18,000.00
Decorative Aluminum Railing	L.F.	130	$ 50.00	$ 6,500.00
Decorative Corten Steel - Interpretive Fencing	S.F.	270	$ 20.00	$ 5,400.00
Pavement Marking - Thermoplastic - 4" Wide	L.F.	230	$ 1.20	$ 276.00
	Subtotal			**$199,895.84**
	City Cost Multiplier [1]			**92.9%**
	Total			**$185,703.24**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

Riverwalk

Initial Construction Cost Estimate

Date: February 2012

Materials Required

Description	Units	Qty.	Cost	Subtotal
Brick Paving - 4"x8"x2 1/4" - Gravel Base	S.F.	600	$ 15.00	$ 9,000.00
Retaining Walls - CMU	S.F.	2,400	$ 18.00	$ 43,200.00
Concrete Sidewalk Paving - 6" Depth - 6" Gravel Base	S.F.	2,400	$ 6.50	$ 15,600.00
Benches - Plastic Coated Steel - 6'	Ea.	2	$ 895.00	$ 1,790.00
Ornamental Trees - 1" Caliper	Ea.	48	$ 150.00	$ 7,200.00
Ornamental Shrubs - 5 gal	Ea.	250	$ 48.00	$ 12,000.00
Mixed Ground Cover Plantings	S.F.	2,100	$ 4.50	$ 9,450.00
Planted Native Grass Area - 4 to 7 species	Acre	0	$ 3,100.00	$ 1,395.00
Ornamental Aluminum Fencing	L.F.	95	$ 50.00	$ 4,750.00
Landscaped Area Soil Amendment - 12" deep	C.Y.	200	$ 40.00	$ 8,000.00
Limestone Boulders - For Retaining Walls	Ton	15	$ 350.00	$ 5,250.00
	Subtotal			**$117,635.00**
	City Cost Multiplier [1]			**92.9%**
	Total			**$109,282.92**

[1] Cost estimates take into account material, labor and contractor fee costs and have been obtained from RS Means. The "City Cost Multiplier" represents an adjustment from the national average to account for how labor and material costs in the new Haven area may vary from the national average.

New Haven Downtown Site Plans

Initial Construction Cost Estimate

Date: February 2012

Project Totals for each Site Plan

Front Street Streetscape Improvements	$	160,000
Alleyway and Farmers Market Improvements	$	290,000
East Front Street Improvements	$	76,000
New Haven Town Steps	$	75,000
Lion's Club Property Park	$	186,000
New Haven Riverwalk	$	110,000
Grand Total	**$**	**897,000**