

Fall 2014

Reconnecting Downtown to the Riverfront. Springfield, MA. Senior Urban Design Studio,

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Reconnecting Springfield's Downtown to the Riverfront

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The studio project area encompasses the Metro Center, the “Heart of the City” and the South End which was renowned for its rich cultural history. This photograph taken in 1913 from the City Tower illustrates the efforts taken to reinforce a strong connection to one of the city’s greatest assets, the Connecticut River. Source: <http://freepages.history.rootsweb.ancestry.com/~dickbolt/Springfield.html>

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Acknowledgments

The Department of Landscape Architecture and Regional Planning, UMass Amherst, continues the successful collaboration with the Office of Planning and Economic Development of the City of Springfield in the fall of 2014. The studio is coordinated and sponsored through an agreement between the City of Springfield and the UMass Amherst Design Center.

This Senior Undergraduate Urban Design Studio produced six tangible visions for re-connecting downtown Springfield with the Connecticut Riverfront. These design proposals were presented to The City of Springfield's planning officials to spark more interest and promote a new vision for the riverfront and its connection to Springfield's downtown. Finding imaginative ways to engage the waterfront as a place for people and as a landscape will be crucial for the future of Springfield.

We are grateful to Mayor Dominic Sarno for his ongoing support of the UMass Amherst Design Center in Springfield.

We sincerely thank Scott Hanson from the Springfield Department of Planning and Economic Development for his untiring enthusiasm and great cooperation through all stages of this project. We thank, Phil Burdick - Springfield resident, Brian Connors - Springfield Deputy Director of Economic Development, Phil Dromey - Springfield Deputy Director of Planning, Margaret Humbertson - Head of Library and Archives, Bill Malloy - Concerned Citizen, Bob McCarroll - Historical Commissioner, Jeffrey McCollough - Senior Transportation Planner, Jay Minkarah - DevelopSpringfield, Wayne Phaneuf - The Republican, Evan Plotkin - NAI Plotkin Real Estate, Catherine Ratté - Principal Planner PVPC, Chris Russell - Director of Springfield Business Improvement District, Michael Tully Senior Parks Planner, Carolina Aragon - Visiting Lecturer UMASS. We would also like to thank all the stakeholders or people that attended our meetings, came to our presentations and gave feedback and support of any kind. We specially thank Michael DiPasquale, Director UMass Amherst Design Center for his insightful critiques and recommendations regarding the project area and the proposed designs.

We are truly thankful for the faculty of the Department of Landscape Architecture and Regional Planning for participating and contributing their valuable comments during our studio reviews. We further thank Teaching Assistant Tharyn Nein-Large who provided great support for our presentations and advise on 3-D modelling during the whole semester.

Finally, we thank all the students in this Urban Design Studio for their great work to develop and present creative and integrative ideas for the City of Springfield.

We are specially thankful to Adam Fearing and John Milos who compiled and edited this comprehensive report.

Frank Slegers
Professor and Studio Instructor, Director UMass Amherst Design Center - Community Service Learning



Students of the Senior Urban Design Studio 2014.

The design scenarios will be beneficial to Springfield's downtown development plans with the reconstruction of I-91/291 and the MGM Casino. The six design alternatives are based on three different scenarios concerning the future elevation of the highway. One scenario is to keep the highway I-91 on an elevated level approximately 25 feet above ground; the second one brings I-91 down to an on-ground level; the third scenario will lower I-91 underground and as a completely or partially covered corridor. Lowering the highway will result in major opportunities for new development and better connectivity to the River with long-term benefits while facing the challenges of higher investment. Keeping the highway on the current level is a scenario that could be successful; primarily through improving the aesthetic experience of crossing the highway corridor and creation of additional connections from the City;



Workshop with expert panel in Springfield: Russel Green and Jing Pan present interventions and first design concepts for critique and guidance.

Introduction and General Recommendations

lowering the highway to an on-ground level may actually worsen accessibility. Other recommendations that are common to all six design alternatives are:

- Elimination of on- and off- ramps within the core of downtown to prioritize pedestrian movement to the Connecticut River and reduce noise.
- Eliminate parking structures underneath the highway corridor to make the riverfront more visible.
- Create more generous spaces in Riverfront Park and add areas that improve the ecology of the River.
- Design East and West Columbus Avenue as pedestrian- and bicycle-friendly corridors through a road diet and speed reduction.
- Foster mixed-use development along East Columbus Avenue.
- Connect the Connecticut River Walk and Bikeway to the South Bridge and Forest Park.

Study Area & Context - Studio Goals

Studio Project Area

The larger study area is in the southern end of the Metro Center Neighborhood and the South End Neighborhood. The boundaries are the Connecticut River to the west, the area around Court Square to the north, East Columbus Avenue to the east and the area around the I-91 underpass at Broad Street to the south. Two major projects in the area are planned in the next years that will change the urban landscape in downtown Springfield significantly. The first one is the immediate \$200 million replacement of the I-91/I-291 viaducts and the downtown section of the highway close to the Basketball Hall of Fame with possible alternatives. Currently these alternatives are investigated by civil engineers Milone & MacBroom if a section of the Interstate 91 should be depressed to ground level or below ground.

The second project is the MGM Casino, currently under construction that lies within our study area. MGM Resorts International will build a casino and retail and entertainment complex in a downtown section of the tornado-damaged section of the city just north of the South End. It would include amongst other activities a 250 room hotel, market rate one and two bedroom residential units, retail, restaurants, a cinema, and an outdoor stage. The MGM proposal includes the renovation of Riverfront Park with a skating rink, a boating dock and a performance stage.

The goal of this studio project is to design visions along downtown Springfield's I-91 highway reconstruction area to improve accessibility to the riverfront. Connecting people to the riverfront capitalizes on the great Connecticut River and will revitalize the city to attract and engage residents and visitors alike.



Bird's eye view of design area with the proposed MGM casino in Springfield, MA

© 2014 Microsoft Corporation, Pictometry Bird's Eye ©MDA Geospatial Services Inc.

Scenarios for the Design Studio

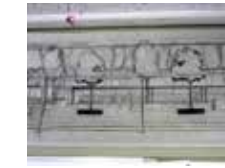
Alternative 1: Rebuild Highway on the current level; I-91 Highway runs on an elevated level approximately 25 feet above ground.



Alternative 2: At Grade Highway I-91 Highway will be at-grade/ on the ground level.



Alternative 3: Underground Highway I-91 Highway will be depressed underground and is completely or partially covered.



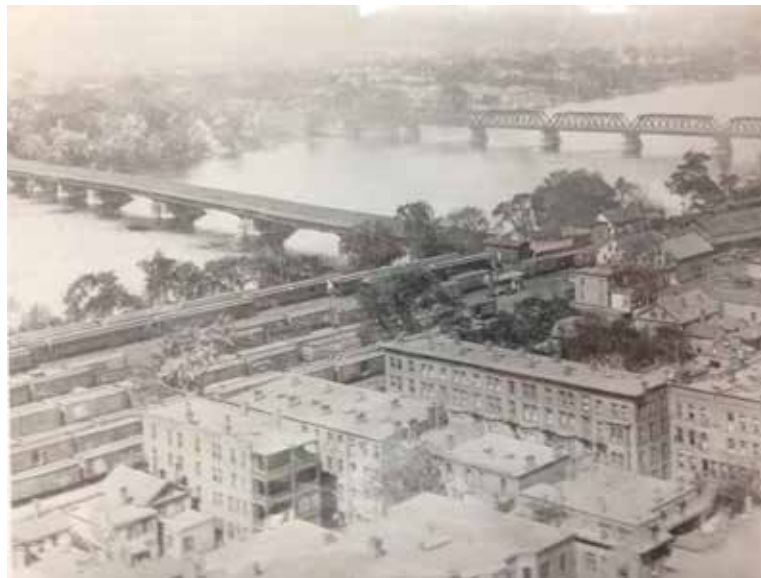
Study Area & Context - Studio Objectives, Studio Process

Studio Objectives

1. Improve pedestrian and bicycle accessibility from downtown to the Connecticut River selecting one of the three alternatives.
 - Facilitate circulation from the system of smaller streets that run perpendicular to Main Street and I-91 with the potential to create a logical connection to the Connecticut River. Integrate these to facilitate pedestrian movement to the Riverfront and the Connecticut River Walk and Bike Path.
 - Create a great entrance at the I-91 underpass at State Street to accommodate pedestrian and bicycle circulation. Create an entrance situation at the Broad Street underpass that is equally attractive and functional.
 - Redesign the existing railroad underpass in the north of Riverfront Park.
2. Improve the street scape on both sides of I-91 along East and West Columbus Avenue for pedestrians and bicyclists.
3. Develop a legible open space system of tree-shaded sidewalks, pocket and bigger parks for our area that is beautiful and responds to social and human needs.
4. Reduce impervious surfaces and increase street tree plantings.
 - Include ecological strategies to manage surface water runoff that reduce contamination of the storm-water system and create beauty in the landscape.
5. Propose a mix of socially and economically sustainable land uses. Re-organize the a parking system in the downtown area and search for sustainable alternatives. Investigate additional on-street parking to support local commerce.

Cultural Milieu - City History

Originally home to the Algonquin Native Americans and in the mid 17th century by Europeans, Springfield was used as a central trading post of commerce development for Boston, Albany, New York City, and Montreal. It quickly grew into an agricultural landmark due to its extremely fertile soil. During the 19th and 20th century Springfield was home to many innovations including, the Springfield Rifle, the first assembly line, vulcanized rubber, the Indian Motorcycle Company, one of America's first successful radio stations(WBZ), and of course James Naismith's Basketball.



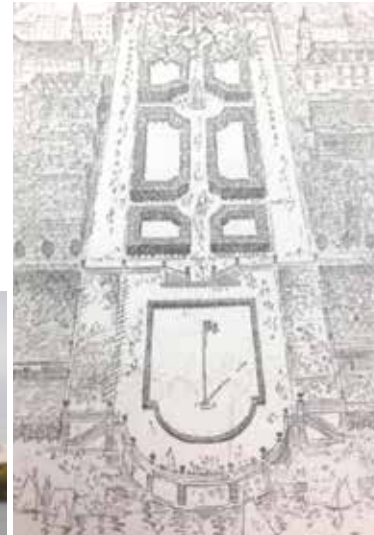
View of the six track railroad system, 1890. Wyman and Merrie Wood Archives



West Springfield Generating Station in the axis of the 1910 proposed Beaux Arts Court Street Extension
Shaping an Urban Image, 1990



Riverfront, 1910. Wyman and Merrie Wood Archives



Connecticut River, 19th century Shaping an Urban Image



Riverfront Park, 1978 Wyman and Merrie Wood Archives



Riverfront Park, 2014

Cultural Milieu - Riverfront History

In the early 20th century, the City Beautiful Movement encouraged efficiency and quality of life inducing a need for a new heavy-duty bridge to connect Springfield to West Springfield. The construction of the bridge would create an opportunity to move the railroad tracks of the New York, New Haven, and Hartford Railroad to the west side of the river, allowing for a scenic parkway connecting Downtown and Forest Park revitalizing commerce along the riverfront. For several reasons the plan to move the tracks to West Springfield never came to fruition. Nathan Bill and Mayor Everett E. Stone collaborated to make recommendations to the city of Springfield that would improve the downtown district, the riverfront area, and promote civic pride with a focus of water supply improvement and educational progression.

Due to the Flood of 1936 and the 1938 Hurricane, the Connecticut River Basin Flood control project was created to provide protection against floods greater than record by creating 13,000 ft of concrete flood wall.

The construction of I-91 in the 1960's created an influx of new business but continued to complicate efforts of beautification of the area. In the 1970's the riverfront returned to the public environmental consciousness, federally mandating sewage treatment of the river. In 1978, a six acre Riverfront Park was opened at the foot of State Street, becoming home to the site of Fourth of July Fireworks displays and outdoor events.

Cultural Milieu - Demographics

Population (2009 Census)

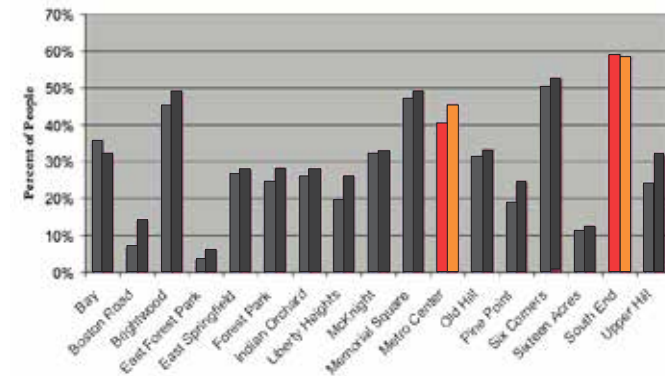
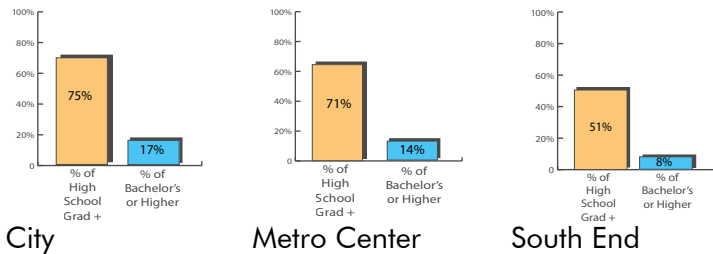
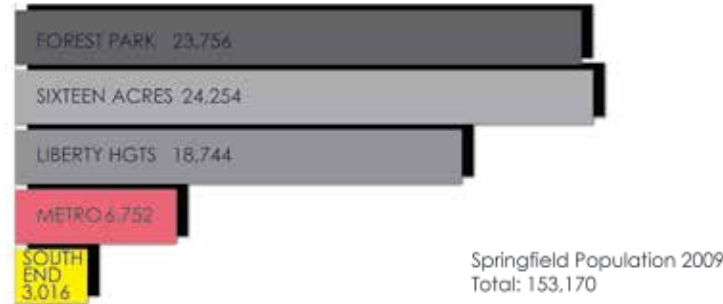
Springfield has a total population of 153,170. A total of only 9,768 people live in our project area which can be considered low in relationship to other neighborhoods. Split by neighborhoods 6,752 live in the Metro Center and 3,016 live in the South End.

Education

Citywide only 75% received a High School degree, graduates; and only 17% obtained a Bachelor's degree. Within our two neighborhoods the educational achievements of the South End are considerably lower. Only 51% of the students received a High School degree and 8% obtained a Bachelor's Degree. The Metro Center is comparable to the citywide educational attainments that are slightly lower with 71% and 14% respectively.

Income and Language

The differences in education are also visible in the poverty level and both neighborhoods are with the group of the five poorest in the City. Almost 80% of the families and individuals in the South End live in poverty; 45% are poor in the Metro Center. The median family income in the South End is \$13,962; 50% speak Spanish as their first language. The Metro Center is more culturally diverse and has a median family income \$20,184. Improving education and employment opportunities are primary goals that could benefit both neighborhoods and their current residents to create a more balanced demographic.



Percentage of families (in red) and persons (in orange below) poverty for the seventeen neighborhoods in Springfield, MA.



Existing Housing Market (Metro/South End)

- 2,292 estimated dwelling units in Downtown
 - Owner Occupied: 4%
 - Rental Units: 96%
- 90% of downtown units are subsidized housing

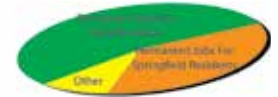


Cultural Milieu - Economic Development in Downtown

Casino Impact Economic Statistics

MGM estimates:

- 3000 new permanent jobs
- 2000 temporary construction jobs
- 35% of permanent jobs will be Springfield residents
- 90% of permanent jobs will be Springfield and other area residents



UMass Center Attracts Higher Education

The new UMass Center in Springfield will attract a young population to invigorate the local economy and patronize local businesses.

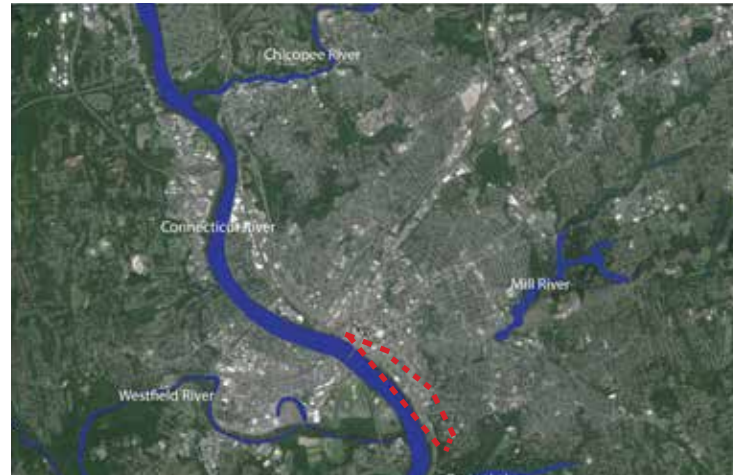
New Housing Opportunities

- A shift in market preferences from home ownership to rental dwelling units
- An anticipated preference for Multi-family rentals
- Total Target Market Households with Potential to Rent/ Purchase in Downtown Springfield: new 2,280 units per year
- Largest Target Group: younger singles & couples (the "Millennials")



Natural Systems - Springfield's Hydrology, CSO, Topography

The area is part of the larger Connecticut River watershed. Today CSOs (Combined Sewer Outlets) contribute to the poor water quality of the Connecticut River. Increasing infiltration and other alternative methods for storm-water management could mitigate water pollution by reducing storm-water volume in the CSO system. The project area slopes from the east to the edge of the Connecticut River. To the east we find an upper terrace with up to 150' elevation. The embankment of the terrace was molded by the glacial lake Hitchcock. The lower, mainly flat terrace has an elevation of about 60'. The original floodplain is altered by Interstates 91 & 291 with their steep embankment that separate the neighborhood. The flat topography of the lower terrace is suitable to accommodate infiltration. Infiltration strategies and a reduction of the large street profiles could reduce the high percentage (64%) of impervious surfaces in the area and minimize urban heat island effects.



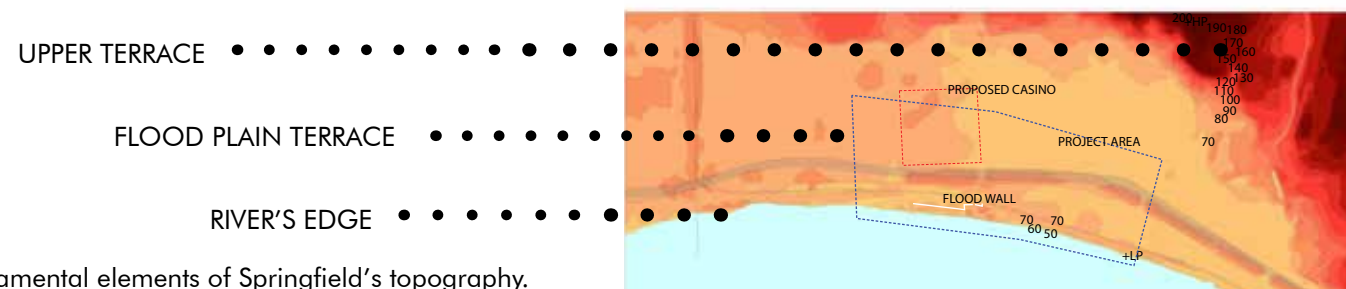
© 2014 google earth

Combined Sewer Outflow

A CSO is a sewer system that is used for both storm and waste-water. In large storm events, the system discharges the excess (polluted) water directly into rivers, streams, lakes, or oceans. Two CSO's are located on the edge of Riverfront Park.



Topography



The three fundamental elements of Springfield's topography.

Natural Systems - Permeable/Impermeable Surfaces

There is a direct relationship with the amount of impervious surfaces within the project area and the amount of stormwater released into the greater watershed. With a limited amount of pervious surfaces, much of the stormwater is rushed into catch basins, therefore contributing to a larger volume of water entering the CSO system. With an increase in green space, and a reduction of impervious surfaces, such as parking lots and roads, a healthier, more sustainable stormwater system will be established. Increasing the amount of vegetation (i.e. street trees, swales, lawns, plantings) will provide a more pleasant city to live in, reduce the heat-island effect mentioned before, and establish and restore habitats that have been lost or degraded.

Impervious surfaces in our area:

- Asphalt/Concrete
- Roads
- Highways
- Sidewalks
- Parking Lots
- Buildings and Structures

Pervious areas within our area:

- Community parks
- Residential yards
- Street plantings
- Undefined vegetated areas along roads

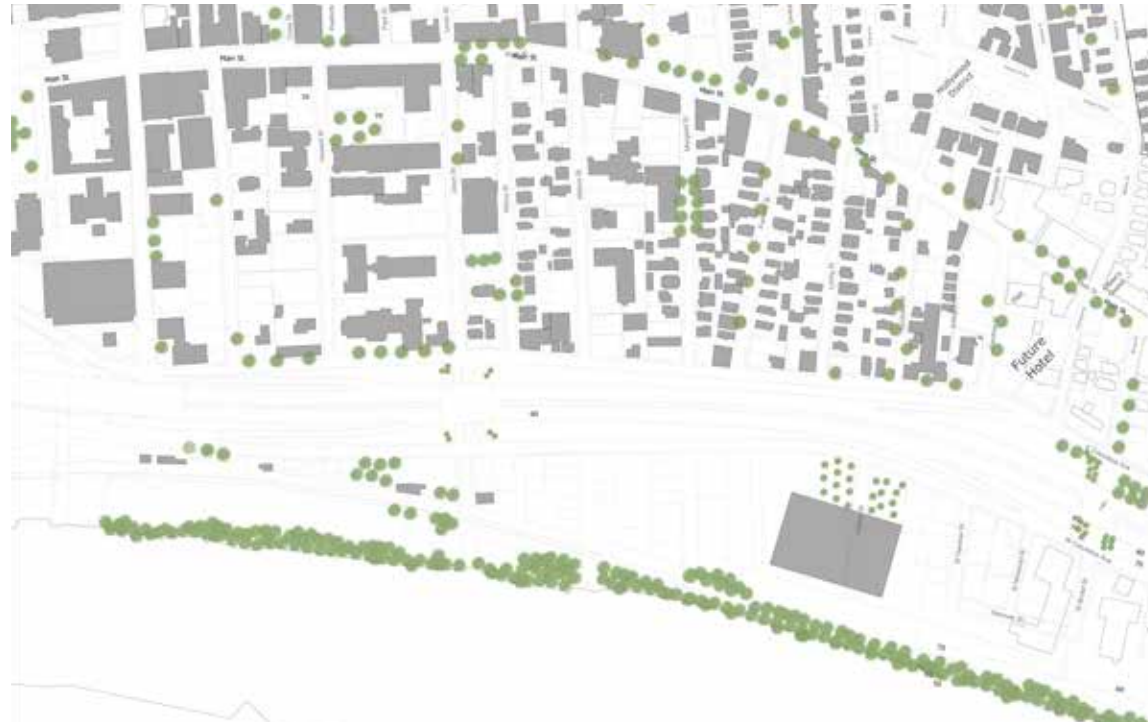


Around the Basketball Hall of Fame there are large areas of impervious surfaces. © 2014 Microsoft Corporation, Pictometry Bird's Eye ©MDA Geospatial Services Inc.



Impervious (in red) and pervious (in green) surfaces in our project area.

Natural Systems - Existing Vegetation



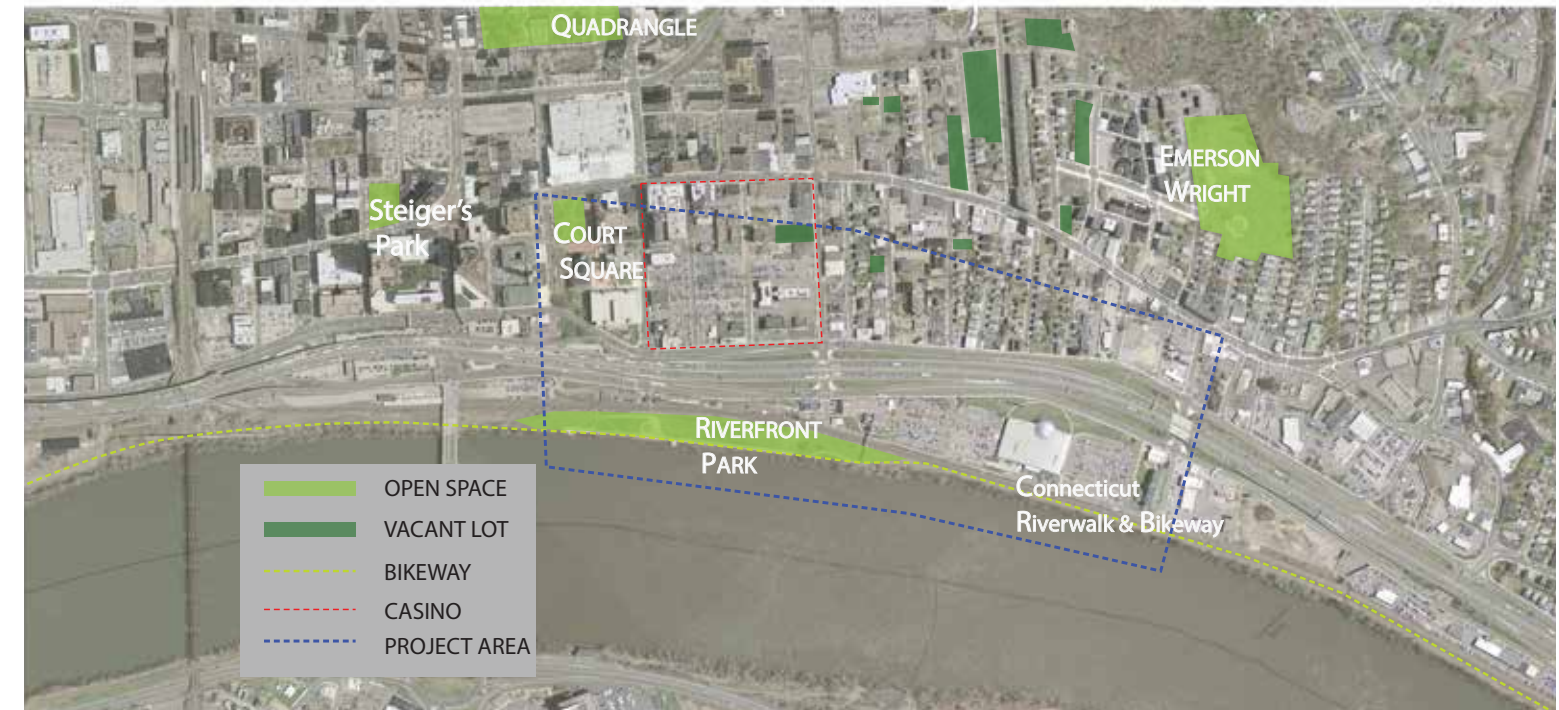
Google Earth Images

The greatest concentration of vegetation in the project area is along the riverfront. There are several specimen trees scattered throughout the riverfront park. In general the area has a lack of street trees. The three primary streets within the area (E-W Columbus Avenues and Main St.) are nearly barren, contributing to a heat island effect. Along Main Street a decent canopy cover can be found around the Court Square/ Financial District area.

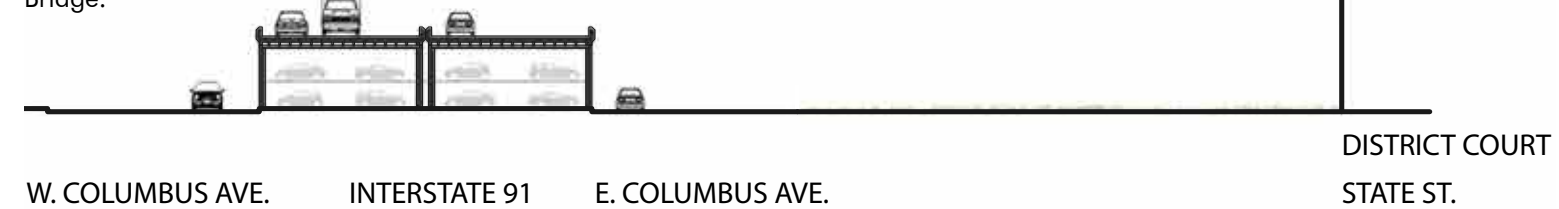
64' 500 YEAR FLOOD
 61' 100 YEAR FLOOD
 54' SPRING FLOOD
 46' FALL FLOOD
 38' WINTER AND SUMMER FLOOD
 28' RIVER FLOOD



Natural Systems - Public Open Space System



Springfield claims to be one of the cities with the largest amount of public open space per capita in the country, while in our area these spaces are disconnected and not very accessible. The approximately 3.7 miles Connecticut River Walk and Bikeway extends into the Riverfront Park and dead ends close to the South End Bridge.



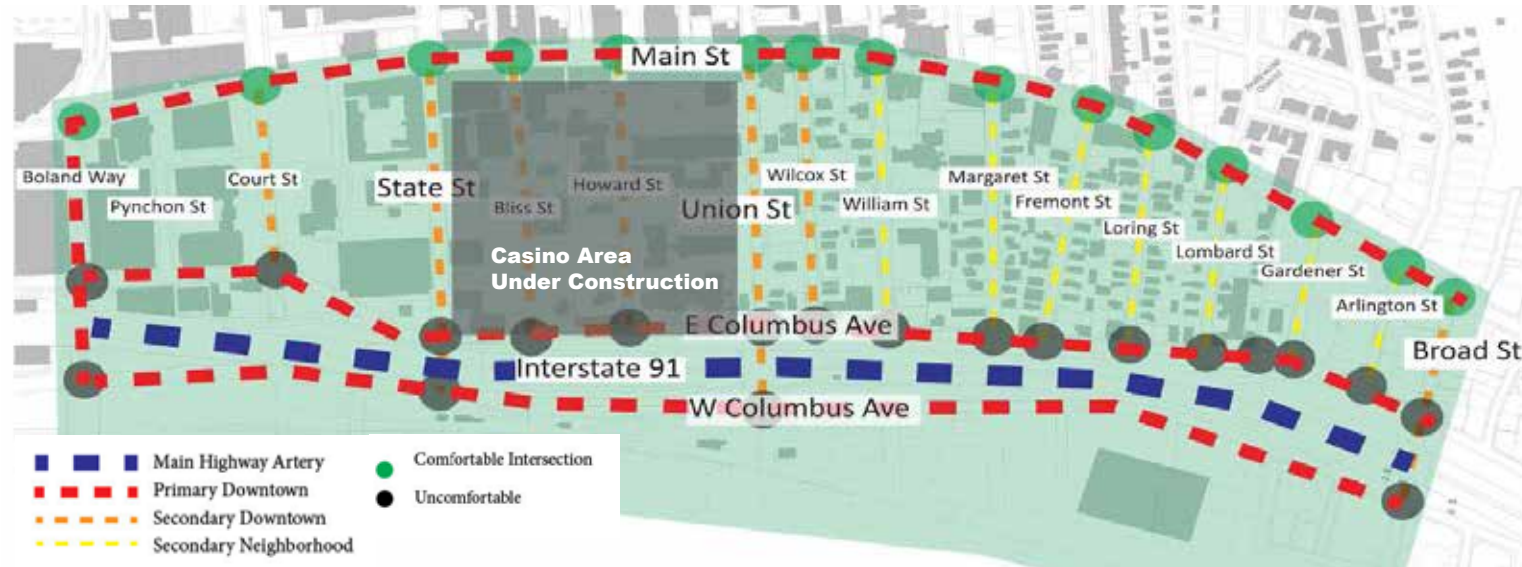
Street Network and Hierarchy - City Scale

Primary vehicular circulation within the project area occurs on Main Street, East Columbus Avenue, and West Columbus Avenue. There are secondary and tertiary streets connecting Main Street to East and West Columbus Avenues.

There are major areas of pedestrian-vehicular conflict where streets intersect. There is a lack of safe, well-marked crossings for both bicyclists and pedestrians.

The general grid pattern of the streets systems moves people towards the riverfront, but Interstate 91 runs the along our site creating a major barrier that disconnects downtown from the riverfront.

Establishing a safe, well-organized pedestrian and bicycle network that seamlessly connects the downtown and South End to the riverfront will be necessary in the design process. Utilizing the general grid-pattern mentioned above to connect the city with the riverfront will be a first step in examining the potential connections within the project site.



Street Network and Hierarchy - Existing Interstate Underpasses



Boland Way



State Street



Union Street



Broad Street

Google Earth Images

Street Network and Hierarchy - Public Transportation, Pedestrian Circulation, Walkability

The circulation throughout the project area is generally successful, but reaches a barrier that disconnects the downtown and South End from the riverfront. This barrier is I-91. There are few crossings and when there is one there are often several conflicts with passing vehicles.



The PVRTA provides bus stops along Main St. but there is a lack of stops closer to the riverfront.

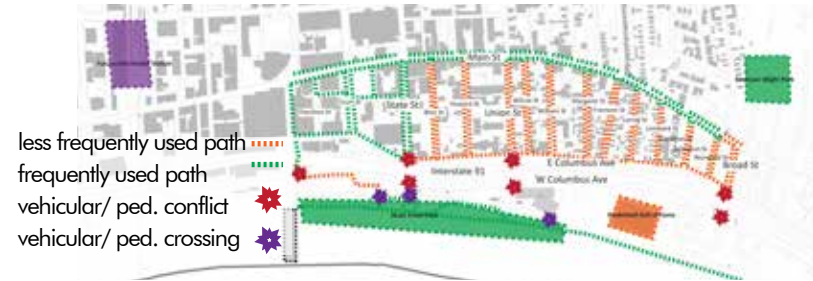
A future inter-modal station will provide access to a more public transit, hopefully bringing more visitors to the area



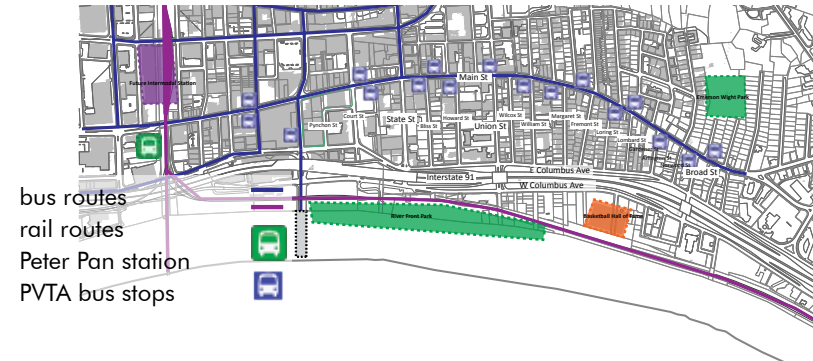
The walk-ability throughout the project area is quite easy. A pedestrian can walk anywhere within the project area within 10 minutes. The only issue is the lack of safe pedestrian crossings.



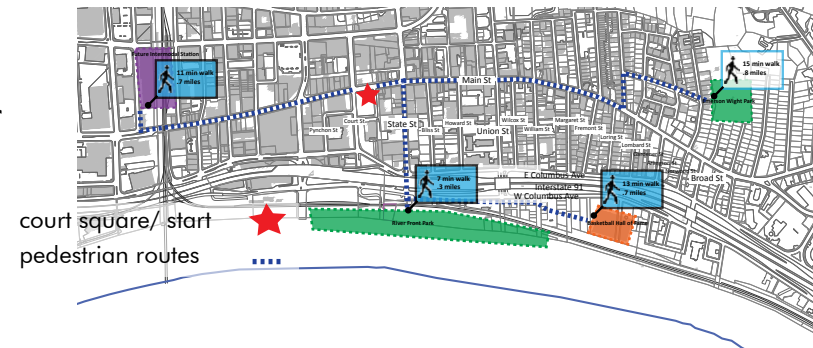
Circulation



Public Transit



Walkability



Street Network and Hierarchy - Streetscapes

East and West Columbus Avenues:
-Over-dimensioned street width (high speeds)
-Limited sidewalk with few crosswalks
-no street trees increase heat island effect
-no bike lanes



Main Street:
-Over-dimensioned street width
-wide sidewalk
-limited parking
-street trees (not consistent)



Freemont Street (South End):
-adequate street width (slower speeds)
-sidewalks
-parking
-street trees (semi consistent)



Urban Grain - Land Use

There are primarily commercial and mixed land uses within the project area. The mixed use (commercial and residential) is largely concentrated in the South End and along the streets perpendicular to Main Street and West Columbus Avenue. Commercial land use is primarily in the northern region of the project area along Main Street. This includes the MassMutual Center, Square One Mall, the UMass Center, and the future MGM Springfield Casino. There is also a commercial area to the south of the project area closer to the riverfront. This area includes the Basketball Hall of Fame, restaurants, and LA Fitness. Residential land use is primarily to the south and south-east of the project area. The South End district is the major residential area, made up of single family and multi-family housing options.

Public open space in the project area is mainly located along the riverfront with a few smaller parks throughout the Metro Center district.

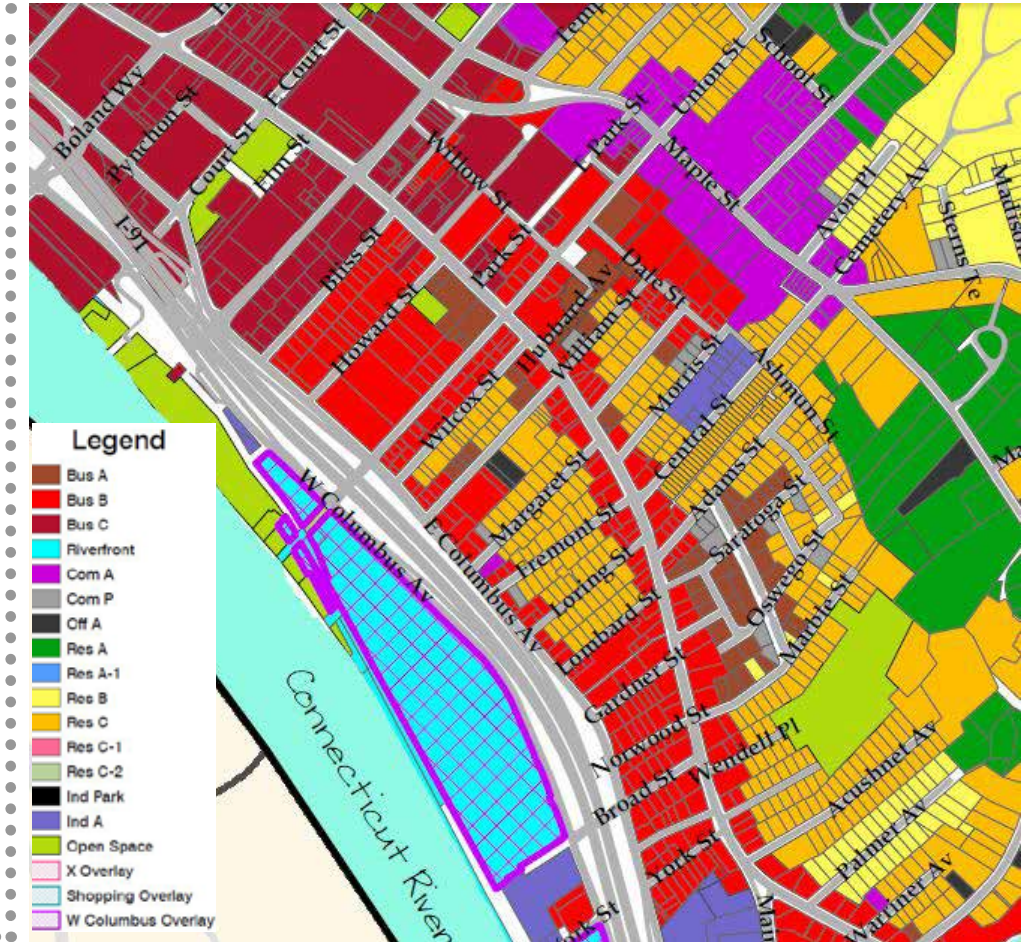
With an adaptive reuse approach, many of the existing building and lots can be reused for community, economic, and social growth.



Urban Grain - Zoning

The existing zoning patterns do not promote a solid connection to the riverfront. The vicinity of downtown and the South End neighborhood should encourage different uses: There should be a clear connection to the river with physical and economical links between the riverfront and downtown Springfield.

- Bus A- Main street and pedestrian oriented shopping districts with residential allowed.
- Bus B- General business services. More intense in nature than those in Bus-A.
- Properties that provide services to heavier industrial landuses.
- Business C- Downtown with pedestrian amenities and high rise buildings with no setbacks. Mixed uses.
- Res B- Medium density residential, primarily single family, and two family.
- Res C- Multi Family Residential
- Riverfront- Intended to accommodate and control the development of the riverfront land so as to promote and protect the nature and aesthetic qualities of the river for the general public.
- Open Space- To provide for the active and passive recreational needs of the City and the protection of its bountiful natural resources.



Streets - Landmarks - Destinations



Image source:
Google Street View

General Assessment and Opportunities - Strengths to Build On

Assets:

- Sovereign Bank Plaza successful gathering space
- Waterfront, views and gathering
- Court Square, green space
- Museum Quad, walkable
- Proposed Casino, brings people and income
- Da Vinci Park, successful pocket park
- Hall of Fame, tourists, revenue
- South End, cultural diversity, Italian restaurants, bakeries
- Emerson Wight Park, only park besides riverfront
- Memorial Bridge, historic landmark
- Bike path, connects whole riverfront
- Symphony Hall and City Hall, beautiful architecture, civic center
- Union Station, historic, transportation hub
- Mass Mutual Center, vibrant multi-function venue

Weaknesses and Opportunities:

- I-91, noise, disconnect, only 3 access points to river
- CSO, sewer outlet
- Vacant and boarded up buildings
- Casino, raises property values, may expulse poorer residents
- Bike path dead ends
- Train track edge, disconnect to waterfront
- South End, vacant, poorly maintained properties
- Big parking lots at Hall of Fame
- Bridge at LA Fitness, cumbersome
- East and West Columbus Ave, not a mixed-use commercial edge
- Court Square, no real connection to waterfront



source: sustainableknowledgecorridor.org

Design Proposal Overview

Design Proposals Overview



Springfield's NatureScape Project: An Integrative Connection to the Riverfront
Caroline Fay • Adam Fearing • Dan Keirstead
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Sustainable Loop System: Reconnecting Springfield to the Waterfront
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Bridging the Gap: Extending Downtown Springfield to the River
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Springfield's NatureScope Project: An Integrative Connection to the Riverfront

springfield's
NATURESCOPE project
An Integrative Connection to the Riverfront



Springfield's NatureScope Project aims to be a true revitalization plan for the city of Springfield. Through landscape and urban design, the project serves to provide a pleasant city that respects and celebrates nature while establishing a strong connection with the riverfront and the city dwellers that call Springfield home. These figure ground diagrams depict the changes we see making a positive impact in the urban fabric of Springfield.



Existing Figure-Ground

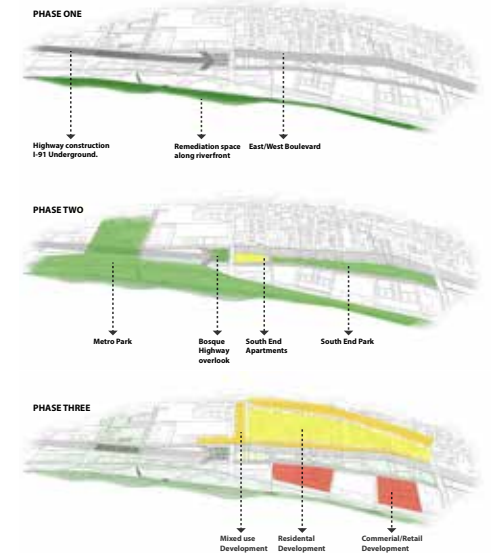


Proposed Figure-Ground



The dense mixed use edge created along East West Columbus Boulevard will bring new community vitality to the South End creating comfortable third places separate from work and home. New shopping developments adjacent to the Basketball Hall of Fame, constructed in the last phase of project development, will bring an entirely new level of commercial tourism to the downtown area. Apartments built at the northern end of South End park will put people in the space on a daily basis and provide those who live there a park as their front lawn.

NatureScope's Phasing



Springfield's NatureScape Project: An Integrative Connection to the Riverfront



Boardwalk at Sunset

Metro Park

Metro Park provides a heart for the proposed NatureScape design. Being a "heart" to the design, the park is a place of constant action. From a children's concert in the Spring, to a harvest festival in the Fall, or even sledding in the winter, The Grand Lawn is a place of fun and excitement. The Meadow Walks that traverse throughout the entire park system serve as remediation spaces. The restored riparian corridor is a major element in the project's ecological restoration plan. Bringing back the ecology of the riverside not only provides a scenic view, it allows for an educative experience for all.



Meadow Walks



Court Boulevard / The Highway Bosque

The new Court Boulevard will be a pedestrian only corridor, formerly a two way street. Drawing inspiration from the Rose Kennedy Greenway this new pedestrian friendly strip will be attractive to the office workers during their lunch breaks as it sits directly outside the Financial One Tower. Food trucks will amass along the corridor during lunch hours. Located directly adjacent to the MGM Casino parking structure on the northern side of Union Street The Highway Bosque space serves as a central experience for our entire project. With its dense grid of Honey Locust trees the canopy will be a full yet not overbearing due to the transient quality of this tree's leaves. I-91, as shown in the rendering is descending into an underground tunnel which begins directly underneath the Bosque.



Metro Park Aerial View

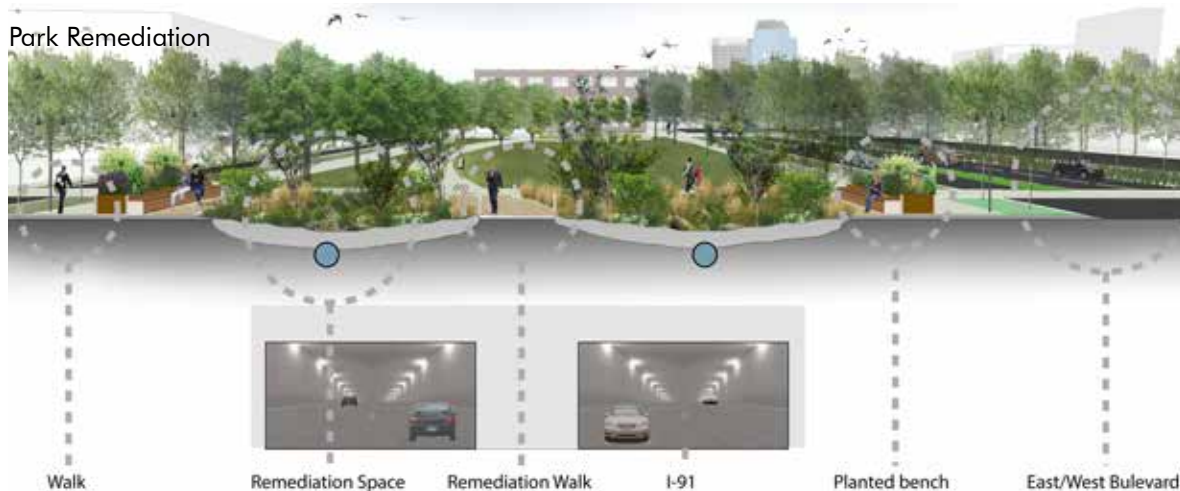
Wetland Overlook

Springfield's NatureScape Project: An Integrative Connection to the Riverfront



South End Park. The main goal of South End Park is to give the residents a sense of place in their neighborhood. The proposal accommodates open lawn spaces for casual soccer games, frisbee, and picnics for the families that live in the South End. On all sides of the South End Park there is new infill development. This creates business opportunities that gives an alternative to the Casino.

Park Remediation



Storm-water management techniques collect runoff from East West Boulevard and other impervious surfaces in rain gardens within the park. This supports the overarching theme of ecological restoration carried throughout our design. New market-rate housing above the businesses of the mixed use edge and in the apartment complexes at either end of the park will have beautiful views.

East-West Boulevard

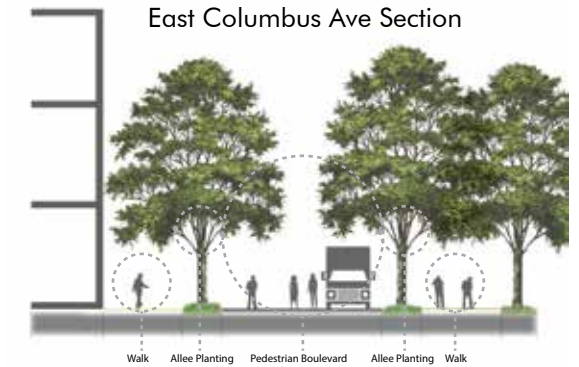
The new East West Columbus Boulevard unites formerly separated traffic into a concise system placing motorist visitors along the new alluring mixed use storefront edge of the South End. This boulevard is easily traversable by pedestrians thanks to raised crossings located where each downtown street intersects with East Columbus Boulevard. This will be the new heart of the South End.



Mixed-Use Buildings Street Side Parking Bike Lane East Boulevard



East-West Boulevard Section



A Riverfront City Identity: Reestablishing Springfield's Historic Link with the River

This scenario for Springfield's riverfront revitalization leaves the Rte 91 Highway above grade as it is today. When this highway was first built in the 1960's, it was instrumental in amputating the city from the waterfront. Our design strives to overcome this disconnect by focusing on the highway underpasses as major pedestrian gateways to the riverfront, thus reconnecting the city to the water.

This proposal brings the city back to the waterfront as it brings the water back to the city through a series of water features and river references to make real connections both artistically and commercially. This would include a "water wall" in the State Street underpass to mitigate noise from the highway as you pass through. The proposed Margaret Street Park in the South End has a similar water wall and a splash pad for children. A geomorphic water insignia or logo will be an artistic gesture repeated throughout the underpasses and walkways to the riverfront park. The Court Square plaza is extended west and features a series of reflecting pools and a central space for public gatherings and performances.

This design includes many riverfront attractions to bring people to the water, both locals and visitors. There are two new overlook structures to view the river, one acting as a venue for outdoor riverfront performances. There are new steps down to the water on the south end to physically reconnect with the river, a new train museum with antique locomotives to celebrate Springfield's railroad history, a dog park and playground for families, and many vendor opportunities in the new farmers market underpass, as well as along the beautiful Riverfront Park.



A Riverfront City Identity: Reestablishing Springfield's Historic Link with the River



Bike lanes and big trees are proposed on all major streets to create a walkable and bicycle-friendly city.

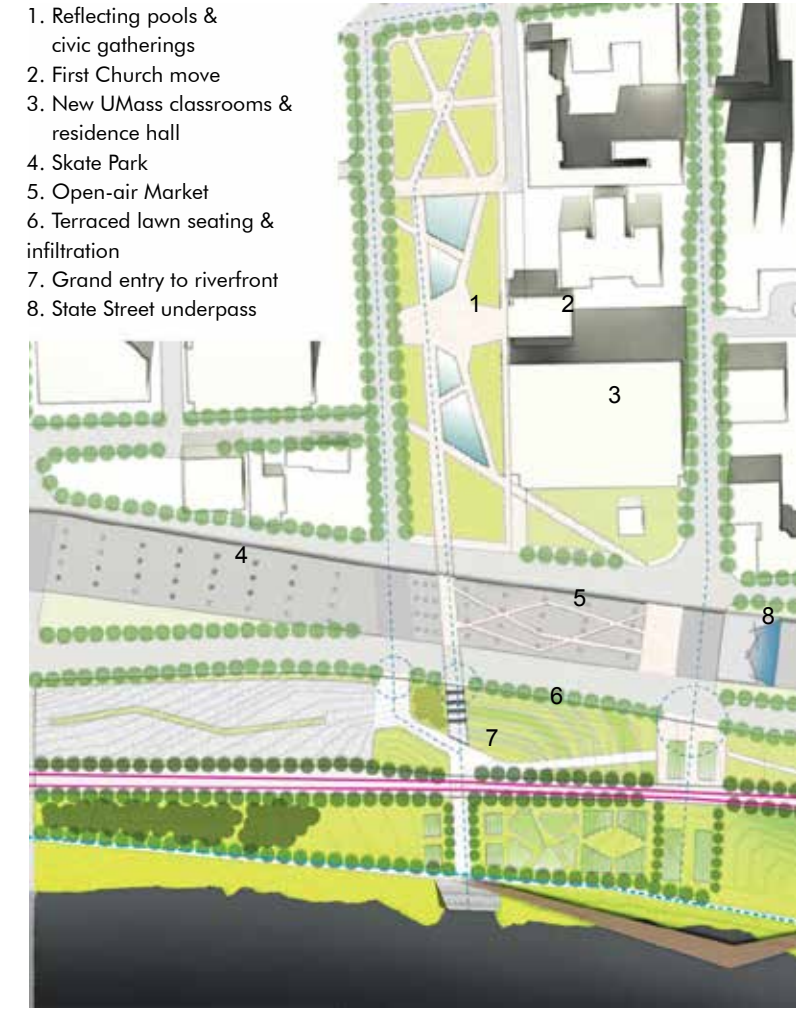
Court Square Connection and Gateway to Riverfront Park

- Open a visual connection and easy pedestrian access between downtown and the waterfront.
- Celebrate historic First Church giving it a prominent place on the new city promenade.
- Pedestrian friendly streets; narrow lanes, tree coverage, bike lanes, lighting, and seating in the colorful underpasses.
- Create amenities at the river to attract people from downtown.

Removal of the parking garage structure under the highway creates a visual site line into the city. An open market and skateboard park here make an attractive transition from municipal to recreational uses on either side of the highway. Permeable turf seating terraces help infiltrate runoff and reduce erosion on the steep slope, while a canopy of shade trees along the streets and bike ways create a pedestrian friendly experience. A wider crossing under the railroad creates a grand entry into the riverfront park, while the permeable railroad-tie paving celebrates Springfield's train history while functioning to infiltrate storm water.



1. Reflecting pools & civic gatherings
2. First Church move
3. New UMass classrooms & residence hall
4. Skate Park
5. Open-air Market
6. Terraced lawn seating & infiltration
7. Grand entry to riverfront
8. State Street underpass

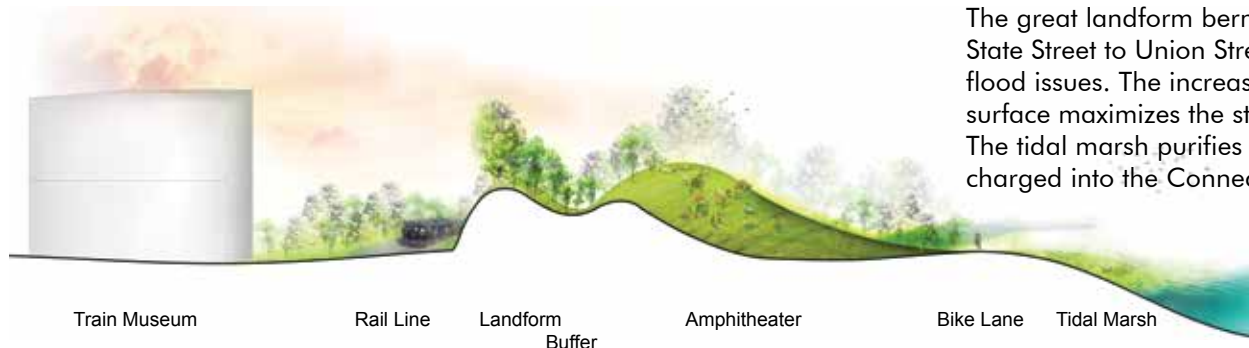


Design concept plan with major interventions.

A Riverfront City Identity: Reestablishing Springfield's Historic Link with the River



Shown in perspective and elevation above; the Hall of Fame overlook ramp provides a promontory view of the Connecticut River, and allows access from the Hall of Fame park to the river and bike path.



The great landform berm that stretches from State Street to Union Street addresses noise and flood issues. The increased amount of pervious surface maximizes the storm water infiltration. The tidal marsh purifies water before it is discharged into the Connecticut River.



State Street underpass today is a vast, dark space that is uncomfortable for pedestrians. Adding color and light, as well as a water-wall to mitigate noise from the highway makes it a more pleasant experience. The skatable pool creates a seasonal attraction and once again brings water back to the city.



Margaret Park provides a series of three open spaces with seating along a wide angular path system. The element of water is used in the form of a splash pad and "water wall" within the park to symbolically suggest the presence of the nearby Connecticut River. In addition to connecting the South End to the riverfront, the park provides a pleasant amenity for local residents and visitors alike.



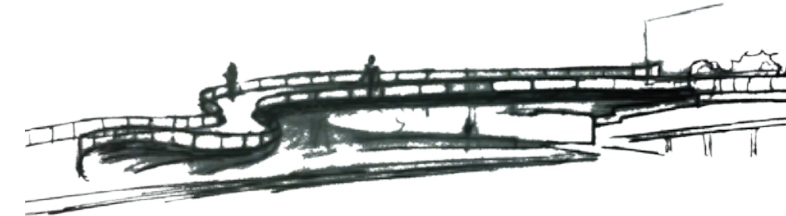
The Union Street underpass will house an artistic water insignia and neon lights to create a safer and more pleasant experience.



A Sculptural Endeavor



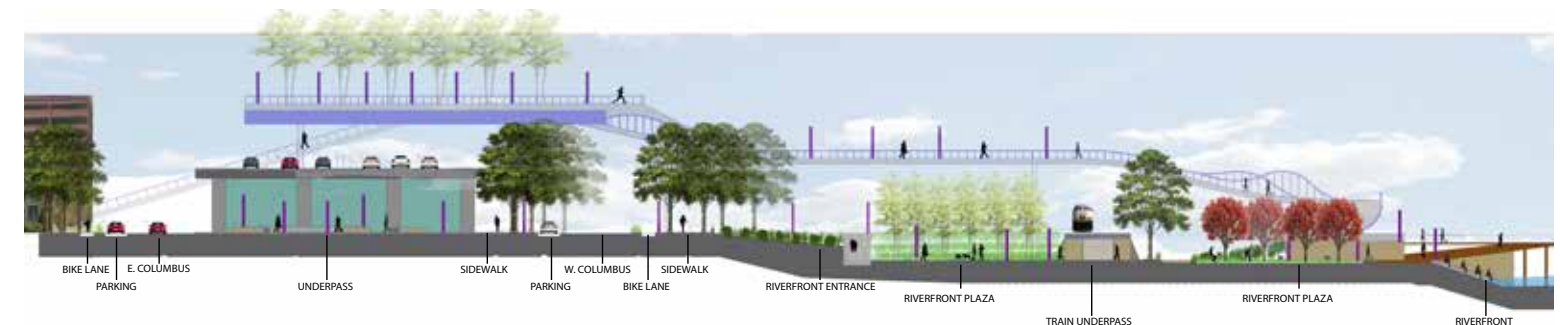
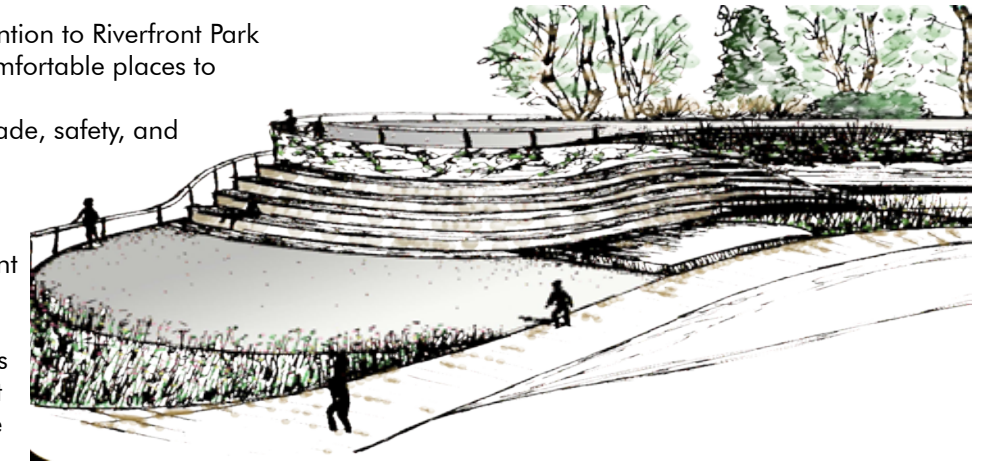
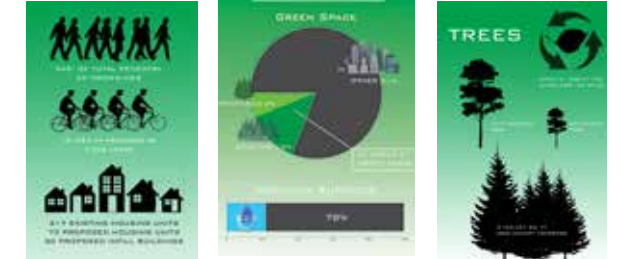
Master Plan in bird's Eye view with the pedestrian connections to the redesigned Riverfront Park. This scenario is based on lowering Interstate 91 on grade. The connections between downtown Springfield and the Connecticut Riverfront lack function and appeal. I-91 creates a visual disconnection to the Riverfront. By relocating I-91 to ground level it removes the obstructed views that were in place when the interstate was elevated. However this also creates a connection issue from the city to the river. In order to allow for better circulation, serpentine pedestrian bridges are proposed to get pedestrians over the interstate and railroad and into Riverfront Park.



The main objective of the Union St. Pedestrian Bridge is to:

- Give some accessibility across the Interstate
- Create an eye catching sculpture to bring attention to Riverfront Park
- Provide clear circulation while allowing for comfortable places to stop and rest
- Create strong edges of planting to provide shade, safety, and aesthetic value

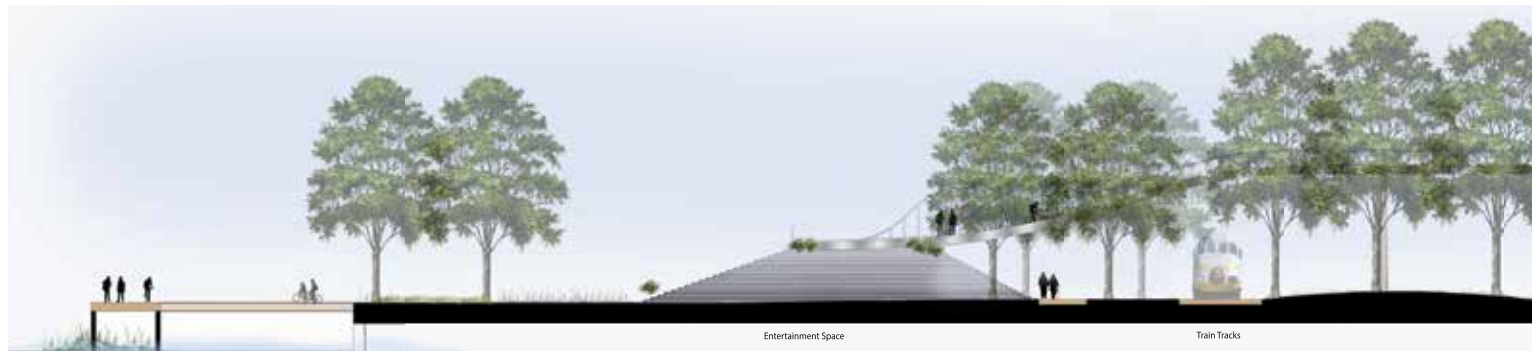
Due to the sloping grade of I-91, the Pedestrian Bridge also slopes down. The terracing of the Bridge is displayed below, showing three different levels. The top level sits at a height 40' above grade, allowing for sufficient space between the highway and the bridge. From there are options to either take a gradual walk down to the lowest grade which sits at 25' above grade, or take the grand stairs directly to the lowest level.



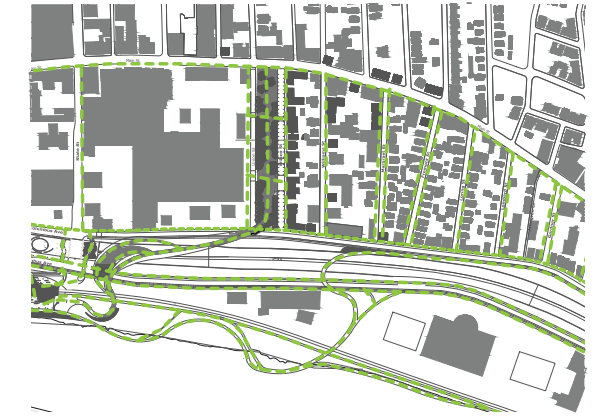
A Sculptural Endeavor



Proposed Wilcox Street facing west toward the Riverfront Park depicting the storefronts of the proposed mix use edge. Today the block between Union Street and Wilcox Street is currently filled with parking lots, and some small businesses. This proposal will transform this block into a Greenway Park that will allow direct access from Main Street towards the Riverfront Park. It will also ease the transition from the casino being built to that existing residential south end. On the south side of Wilcox Street a mixed use edge will be used for these small businesses as well as other businesses. The buildings will have commercial uses on the first floor and residential units on the upper floors. The design for Union Street Park utilizes serpentine seating walls that allow people to rest throughout the whole greenway. With planted edges it brings some natural elements into the urban fabric of Springfield.

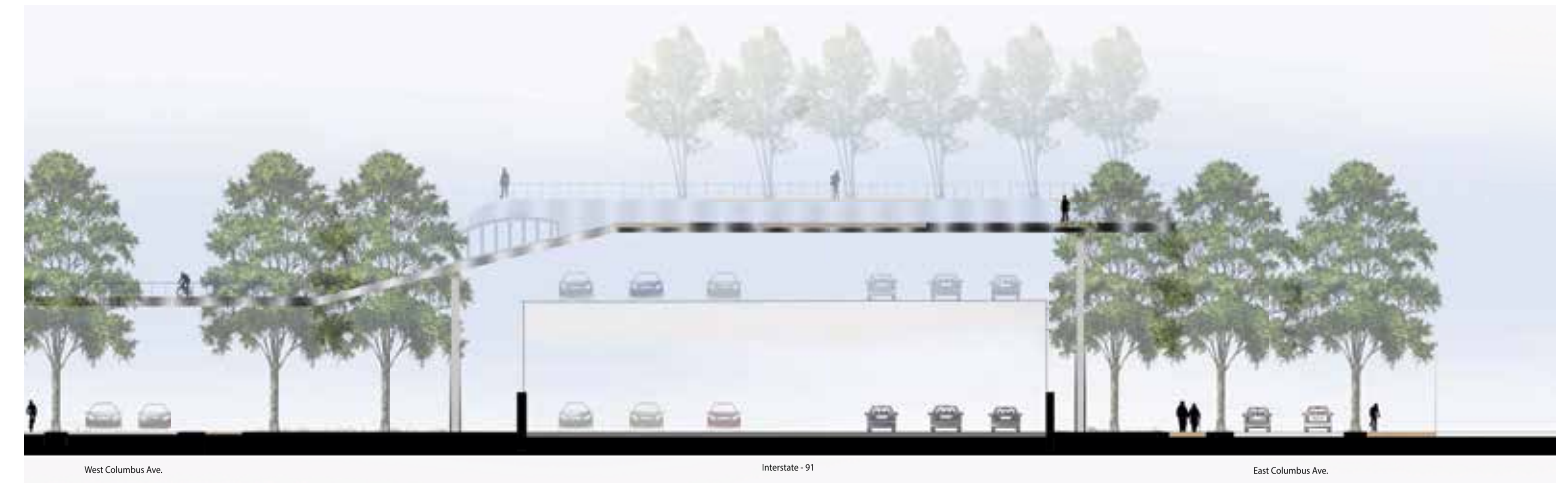


Vehicular Circulation



Pedestrian Circulation

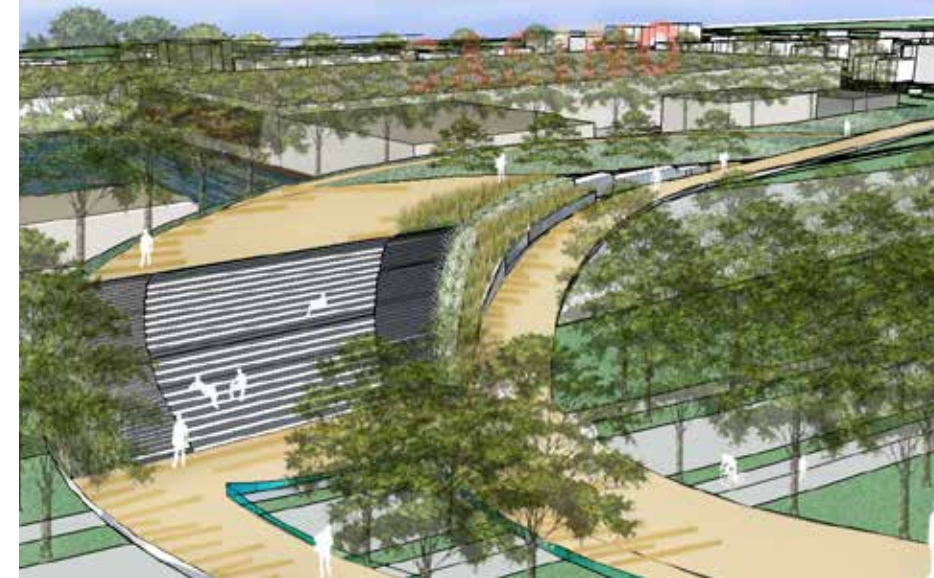
Promoting comprehensive pedestrian and vehicular circulation will be provided to gain a healthy connection to major design elements as well as existing portions of Springfield. The pedestrian bridges help pedestrian cross up and over I-91 and bringing them straight into the Riverfront Park, Vehicular keeps two access points at the underpasses at State Street and Broad Street.



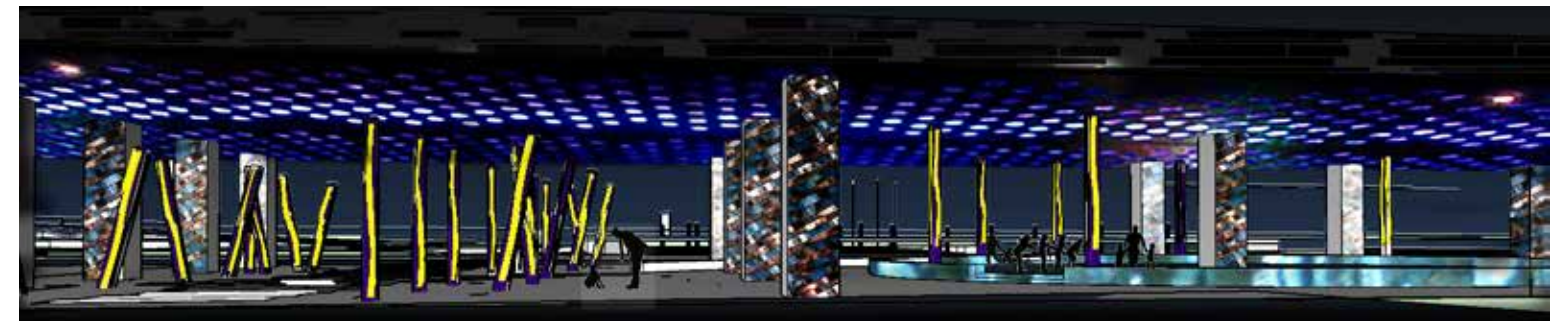
A Sculptural Endeavor



This space focuses on the views out to the Connecticut River. The public swings create an interest on the Riverfront and can be used by many people at once. The swings sit atop a naturally terraced space creating a natural transition into the river.



The Union Street Bridge encompasses all of our design elements with its sculptural and curvilinear form. It provides comfort and accessibility throughout the bridge, as well as improving the experience of walking below the bridge through growing trees that mediate between the two levels.



The underpass located at state street would be transformed into a activity center allowing people to roller blade during warm months and ice skate during the winter months, it will also be act as a gateway to the Riverfront playing with light, shadows, and sculptural elements that will add aesthetics and function.

Sustainable Loop System: Reconnecting Springfield to the Waterfront

Bounded by the Connecticut River, the loop is home to Springfield's commercial core. The loop hosts various recreation activities throughout the street grid, providing lively connections into the Riverfront Park. The loop creates a new central district in Springfield. The community is designated for mixed use activities, providing aesthetic and ecologically friendly connections into the Riverfront Park. Designated destinations within the loop system include: Residential Living Streets, Concave Boulevard, The Prom', Lee Williams Grand Lawn, Student Dormitory and Shops, Senda Abbott Library, UMass Springfield, UMass Athletics, Urban Island, Seasonal Kiosks, Sea Serpent, Urban Forest, The Court Square, and the proposed casino.



RESIDENTIAL LIVING STREETS - Designed with priority of pedestrians. While still accessible for motor vehicles, the streets provide space for cycling, play live, work, shop, in safe, attractive, and enjoyable environment.

CONCAVE BOULEVARD AND THE PROM' - Median between East and West Columbus Avenue is a lowered area for infiltration that adds beauty to the streetscape. The Prom' is a large, open recreational walk/jogging trail. The double alley of mixed trees merges into the urban forest.

LEE WILLIAMS GRAND LAWN - Steps down from the Hall of Fame and creates a recessed space for social gathering, framed by cafés and restaurants. It provides views of the Springfield skyline, and fireworks from the Riverfront Park.

STUDENT DORMITORY AND SHOPS - Three story building providing commercial use of 1st floors and student dormitories on 2nd and 3rd floors.

SENDA ABBOTT LIBRARY - Extension off UMass satellite campus provides research facilities for students through its technology resources, services, and support to enhance teaching, learning, and administrative efficiency.

UMASS SPRINGFIELD AND UMass ATHLETIC - This is an UMass extension to promote entrepreneurship within the youth of Springfield. Keeping up with the culture of healthy student living, the UMass Athletics provides many facilities such as yoga, indoor track and even rock climbing.

URBAN ISLAND - Kayak rental and beach area providing social gathering spaces for events such as concerts. This sandy spot enjoys a cool breeze from the shores of the Connecticut River. Start the day with a sunrise yoga session on the sand.

SEASONAL KIOSKS - Temporary vending kiosk that operate from by selling inexpensive consumables such as newspapers, magazines, and confections, and others by selling excellent burgers and hot dogs.

SEA SERPENT - Inspired by the Gaudi Bench it is a marvel of shape, color and contrasts. The bench is a giant collage of broken ceramics and encompasses open space with grand views of the Connecticut River.

URBAN FOREST - Urban heat island preventing, traffic calming. Other benefits include: increased reduction of flooding, reduction of water/air pollution, traffic calming, and aesthetics of the landscape.



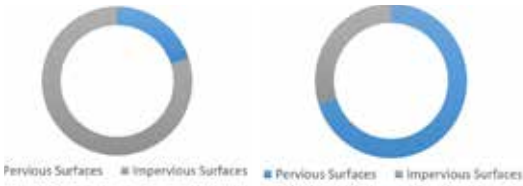
Forest board walk area along the Connecticut River.



Urban beach with kayak rental shop provide social gathering spaces for events such as concerts. This sandy spot enjoys a cool breeze from the shores of the Connecticut River.

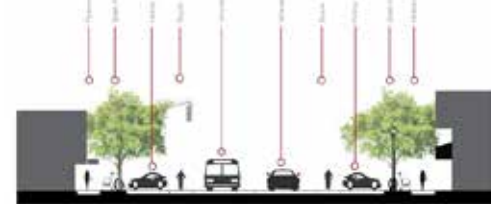
Sustainable Loop System: Reconnecting Springfield to the Waterfront

Existing Conditions Proposed Design



Proposed Streetscapes: Livable Streets

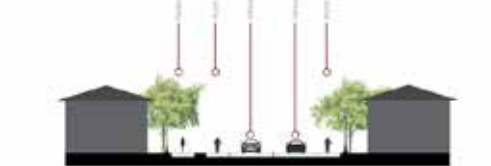
Main Street



East/West Columbus



Residential Areas



More livable streets and pedestrian friendly zones create a better experience for residents and visitors.

FACTS AND PEOPLE

+ 39 RETAIL SPACES



+ 136 NEW UNITS



+ 3 EDUCATIONAL FACILITIES



+ 588 ACRES OF PUBLIC OPEN SPACE



MIA is a Tourist/Hospitality Student at the new UMass Amherst Springfield campus. After her classes she usually grabs a bite to eat at one of the local cafés located on the Promenade and then takes a short walk back to her student apartment. Before settling in for the evening Mica takes on her shift as a Front Desk Manager Intern at the casino hotel where she harnesses the skills to one day run a hotel on her own.



JASON is a local business owner of the Chill Grill Cafe in the South End. As a long-term resident of the City Jason always dreamed of giving back to the community he has loved in the form of delicious food. His newly formed business has been a local hot spot for students and residents who live nearby. After a hard day of work Jason rides his bike to his house on Margaret Street to cook for his family and help his children with their homework.



JIM & MARTHA have lived in the South End of Springfield for as long as they can remember. Their Italian ancestors were some of the many who first settled in the area. Jim and Martha are an active couple who enjoy going to the various fairs around town and trying out new restaurants in the area. They also enjoy renting kayaks and paddling on the Connecticut River on summer afternoons. After a long day of paddling they usually end up on the Gaudi bench to relax. Martha usually has to keep nudging Jim so that he does not fall asleep after a long paddle.



LANA was originally from Hadley but was drawn to Springfield because all of her friends move there for the nightlife and bustling activity. On the weekends she usually heads out with a friend or two to run along the boardwalk on the riverfront. After a long jog through the forests they stretch and buy energy smoothies at the Kiosk Court before heading home. After relaxing with friends Lana heads back to her apartment on West Columbus Avenue and showers up for the day. The rest of the day is spent making plans to head out for the night with a group of friends.

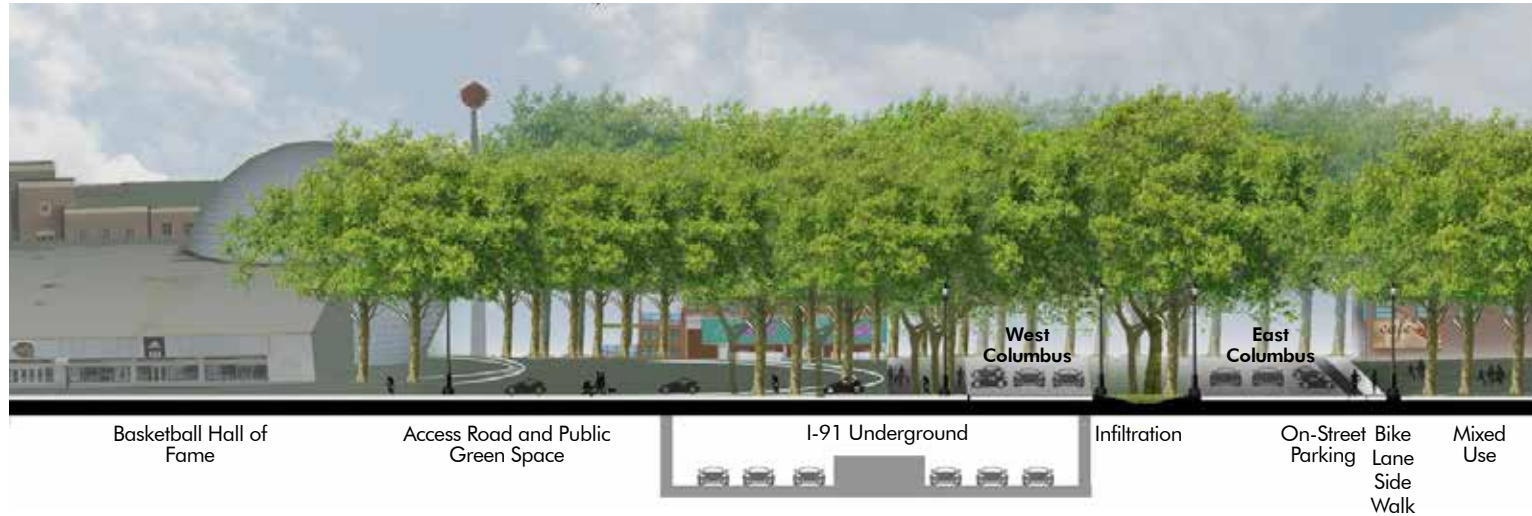


Inspiration from the Gaudi bench in Barcelona, Spain.

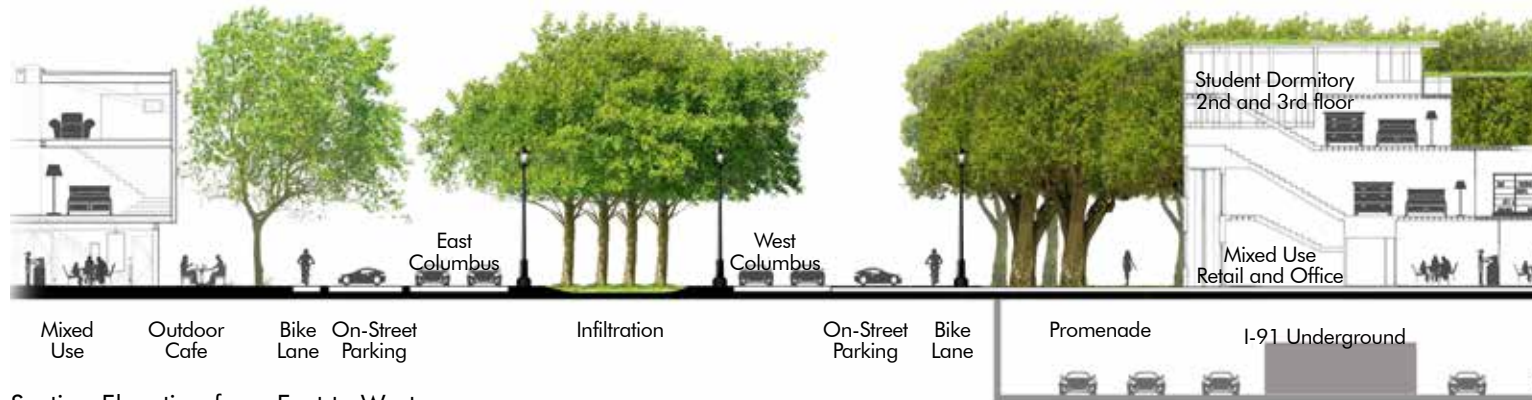


Sea Serpent Overlook. The bench is a giant collage of broken ceramics and encompasses open space with grand views of the Connecticut River.

Sustainable Loop System: Reconnecting Springfield to the Waterfront



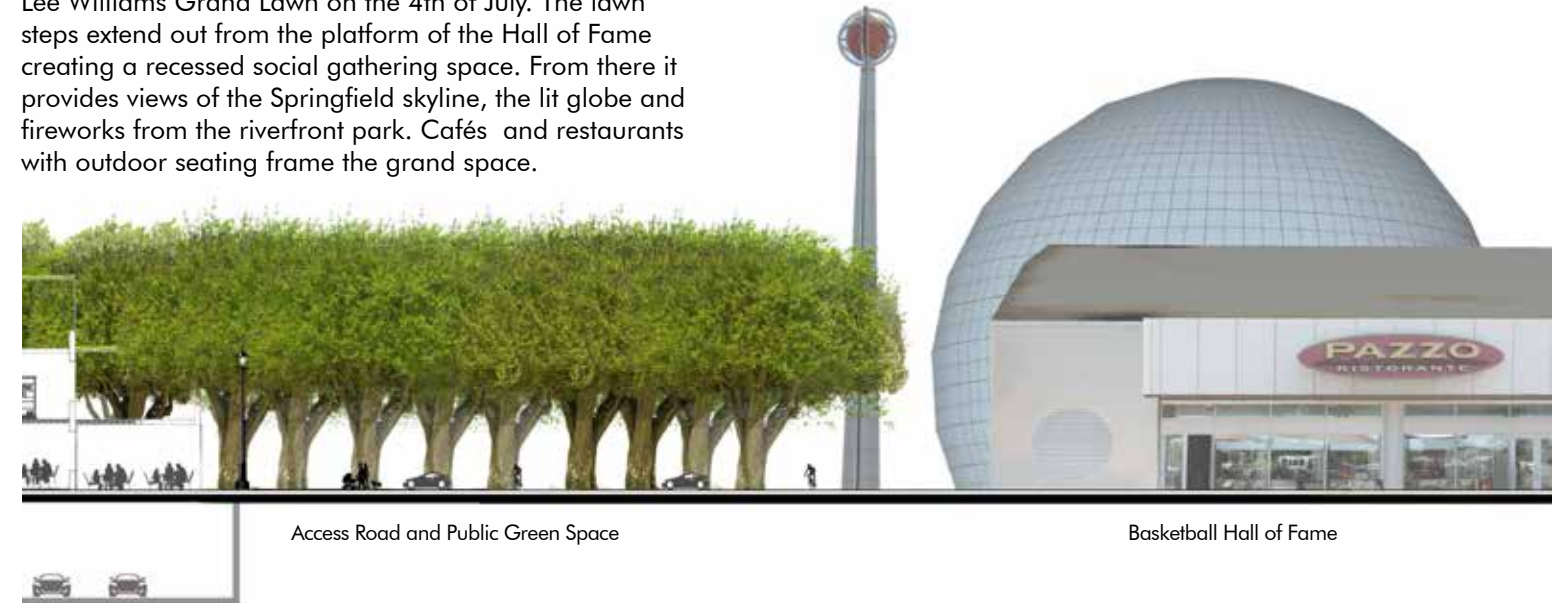
Lee Williams Grand Lawn - Section Elevation from West to East



Section Elevation from East to West.

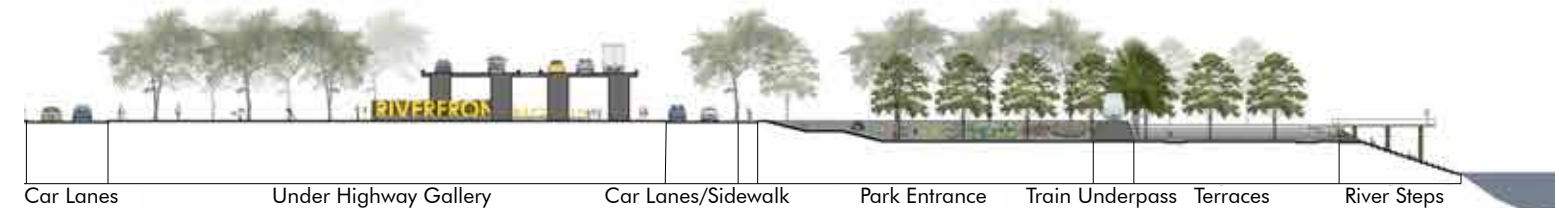
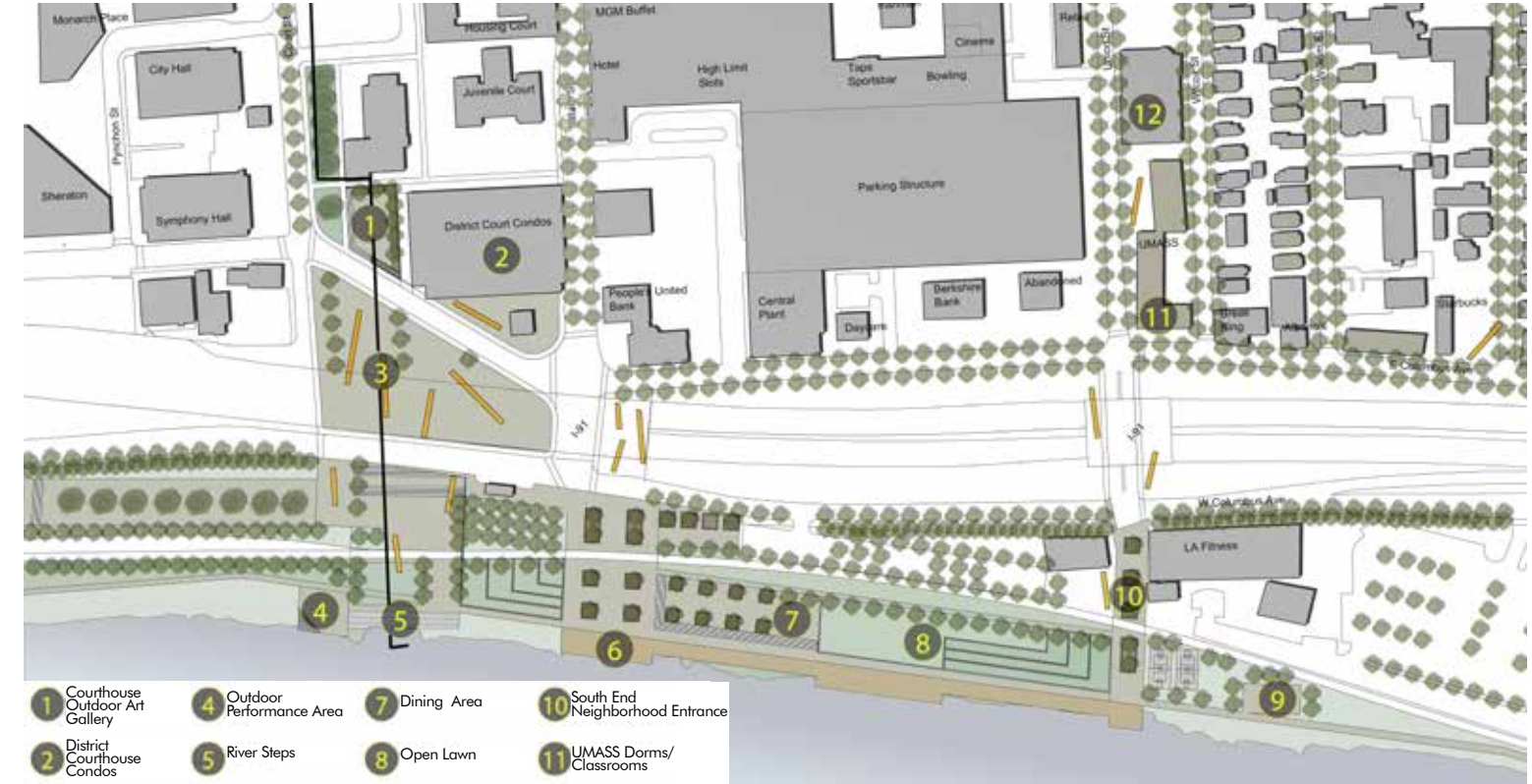
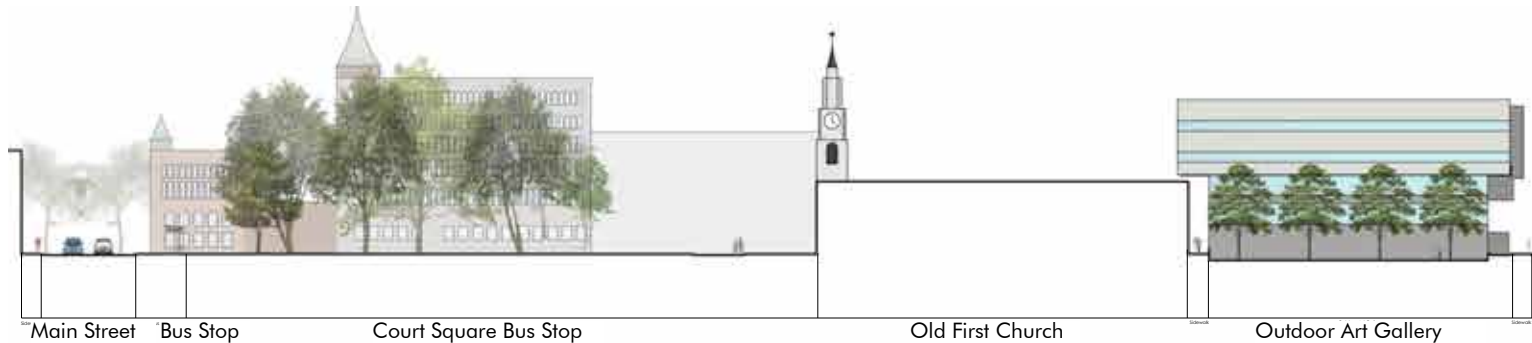


Lee Williams Grand Lawn on the 4th of July. The lawn steps extend out from the platform of the Hall of Fame creating a recessed social gathering space. From there it provides views of the Springfield skyline, the lit globe and fireworks from the riverfront park. Cafés and restaurants with outdoor seating frame the grand space.



F.U.S.E. Fully Utilizing Springfield's Environment

This scenario keeps Interstate 91 staying as it is today. One of the major challenges is creating a connection from downtown Springfield to the waterfront. Springfield has many strengths including a strong downtown, cultural diversity, a rich history, a beautiful riverfront, and multiple attractions across the city. All of these are disconnected though. The major goal of this proposal is to create a connected system of all of Springfield's assets. FUSE: Fully Utilizing Springfield's Environment. The objective of FUSE is to create a comprehensive design in the project area that makes more connections across the city for more usable, linked spaces and places.

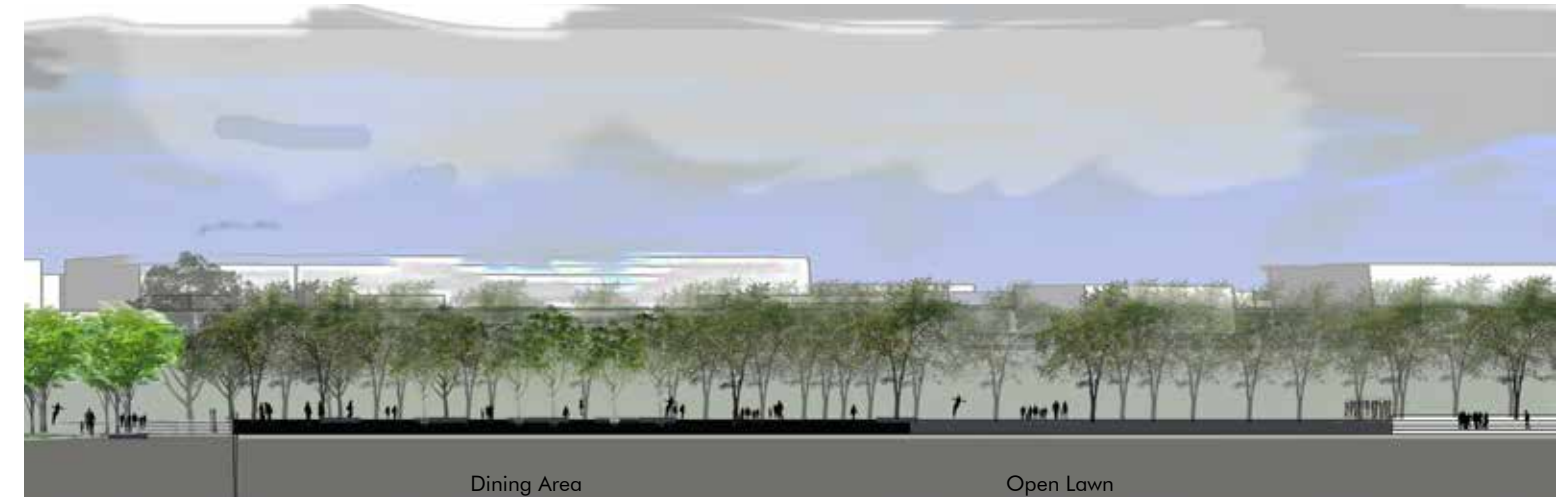
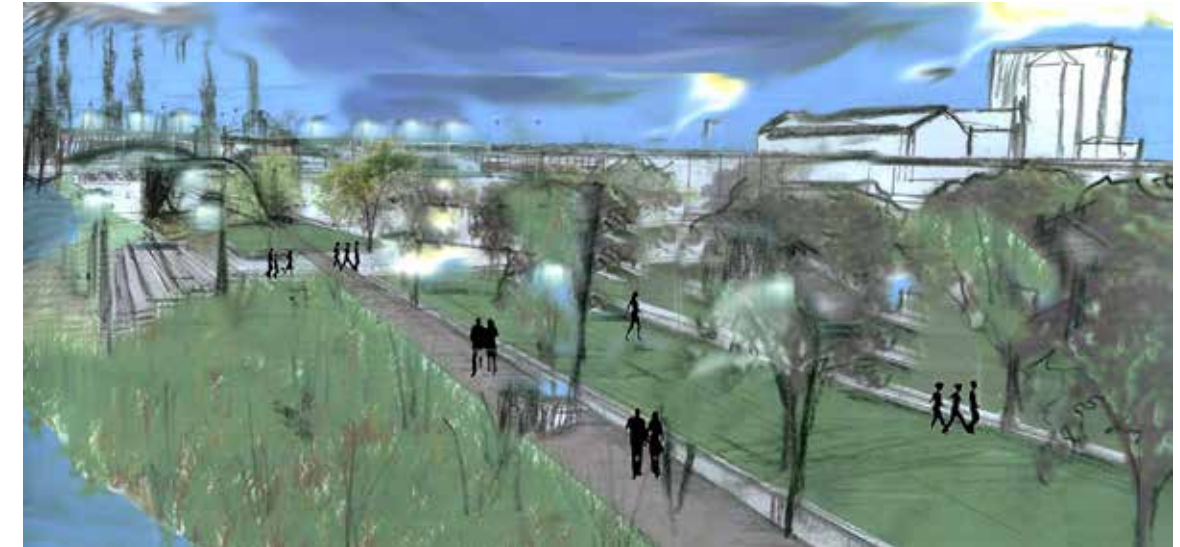


F.U.S.E. Fully Utilizing Springfield's Environment

The City of Springfield has many attractions. The connections between these attractions are not strong enough to glue the components together and appeal to the resident, the visitor, the tourist or the future resident. This fact opens up creative opportunities such as connecting the city to Riverfront Park and utilizing the historically significant landmarks to pertain to a diversity of users creating an interconnected system: new and old - from urban interior to the natural riverfront. F.U.S.E - Fully Utilizing Springfield's Environment.

Designed Spaces

- Court Square Gallery
- Courthouse lofts
- Pedestrian Underpass Entrance
- Open Pavilion
- River Steps
- River Walk Deck
- Dining Area
- Open Lawn
- Outdoor Workout
- South End Entrance
- UMass Dorms/Classrooms
- Bar and Art Gallery



F.U.S.E. Fully Utilizing Springfield's Environment

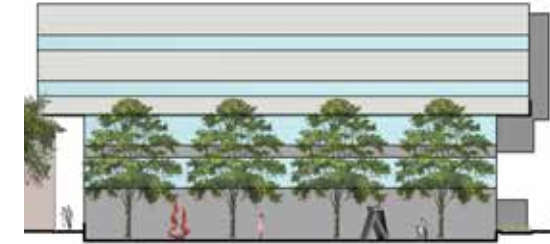
Court Square Pedestrian Underpass

The Court Square pedestrian underpass acts as the park's largest entrance. Word walls create a sense of direction for people while moving through the space coming from the outdoor gallery or Downtown Springfield. The space offers cross walk entrance on both East and West Columbus Streets, along with an attractive walk through a not so typical highway underpass.

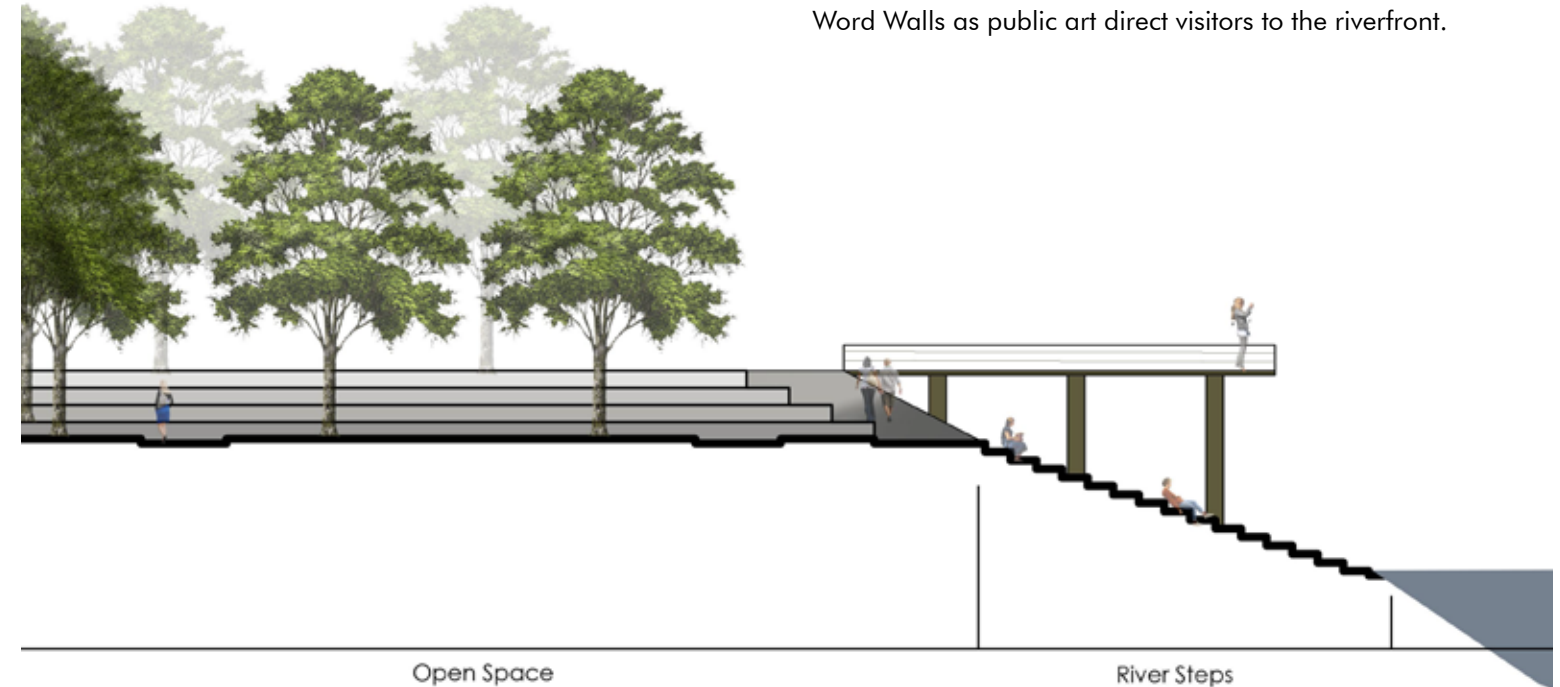


Main Entrance + Street Art Wall

Train Underpass

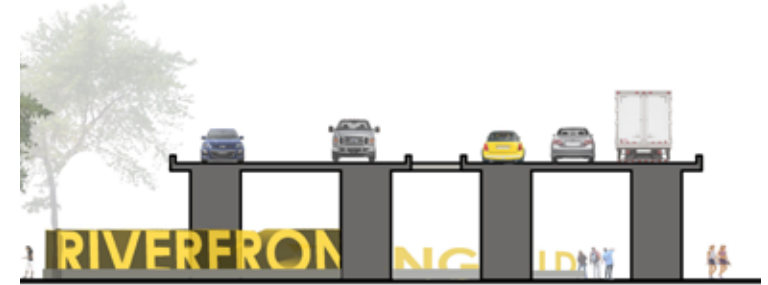


Courthouse Outdoor Art Gallery.



Open Space

River Steps



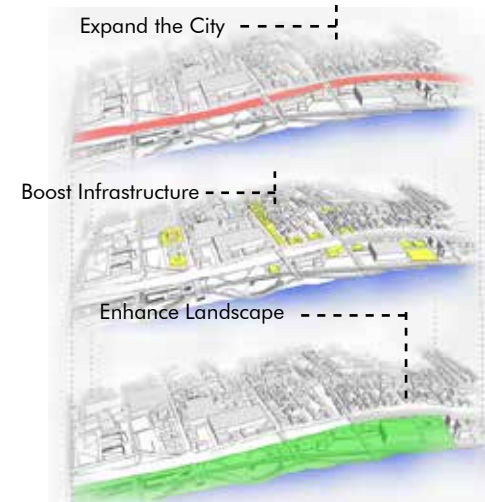
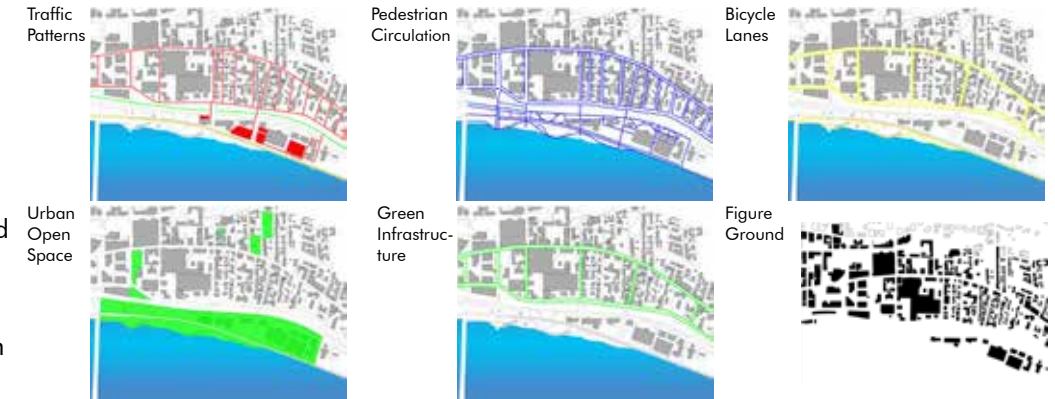
Word Walls as public art direct visitors to the riverfront.

Bridging the Gap: Extending Downtown Springfield to the River

Using a series of green way street extensions, the urban fabric of Springfield has been fused with the river's edge to create a unified and successful design solution. The highway is proposed to recess twenty feet below grade from Union Street through Broad Street. This allows for a better visual and physical connection from Springfield's downtown to the new Riverfront Park. As a product of these new connections, a series of piers are formed allowing space for people to experience the river views, as well as strong ecological areas. This provides visitors with a unique space to connect with the riverfront, and learn about ecological remediation. The main attractions in the park are a recreational area in the north with a skate park, basketball court, and a playground.



To the south, a stage and large outdoor concert lawn, a dog park for residents of the South End, a meditation garden, numerous open plazas for meeting and informal dining are proposed. For current residents and workers of the City, as well as the visitors of the future casino, a new Rail-side brewery will abut the Lux Burger, as well as three additional restaurants and retail shops in the south near the Hall of Fame. Residents of the city will use the new bike path that runs along the river's edge and enjoy the luxury of a large open lawn in the center of the park where they can relax or organize outdoor games and activities.



90,000+ sq. feet of ecological space given back to the river



1,750,000+ sq. feet of designed canopy cover



68,000 lbs per year of carbon dioxide absorbed
366,000 lbs per year of oxygen produced



425 more tons of carbon dioxide absorbed over the next 40 years



6.7 miles of green infrastructure developed



14+ acres of public space afforded



242% increase in street trees planted

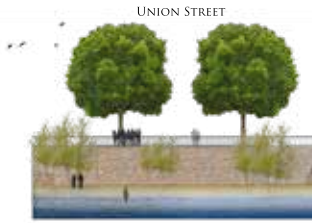
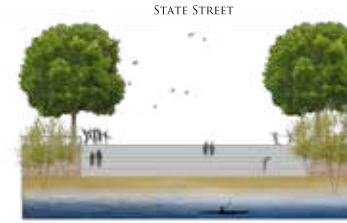


10,050 linear bike feet created

Bridging the Gap: Extending Downtown Springfield to the River

The State Street Ecological Floodplain functions to:

- Remediate Connecticut River Ecology
- Reduce the CSO's Effects
- Inspire Wetland Exploration
- Increase Floodable Area
- Stabilized Shoreline
- Purify River Water
- Educate Onlookers
- Habitat Wildlife



Bridging the Gap: Extending Downtown Springfield to the River



The introduction of MGM's new casino works to increase employment opportunities and further develop Springfield as a destination city but it also dwarfs the nearby South End residential neighborhood. In order to minimize this change in architecture scale, a diverse retail edge is proposed on Union Street. This creates an interdigitated zoning edge that is complimentary to the retail in the MGM Plaza.



Bridging the Gap: Extending Downtown Springfield to the River



The Amphitheater and Great Lawn, accompanies Symphony Hall as an outdoor alternative for performance artists. The orientation of the space celebrates the alluring city skyline and brings night life to the park, something that presently is seriously missing.



The restorative floodplain connects the city of the Connecticut River and serves as a new landscape of education.

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