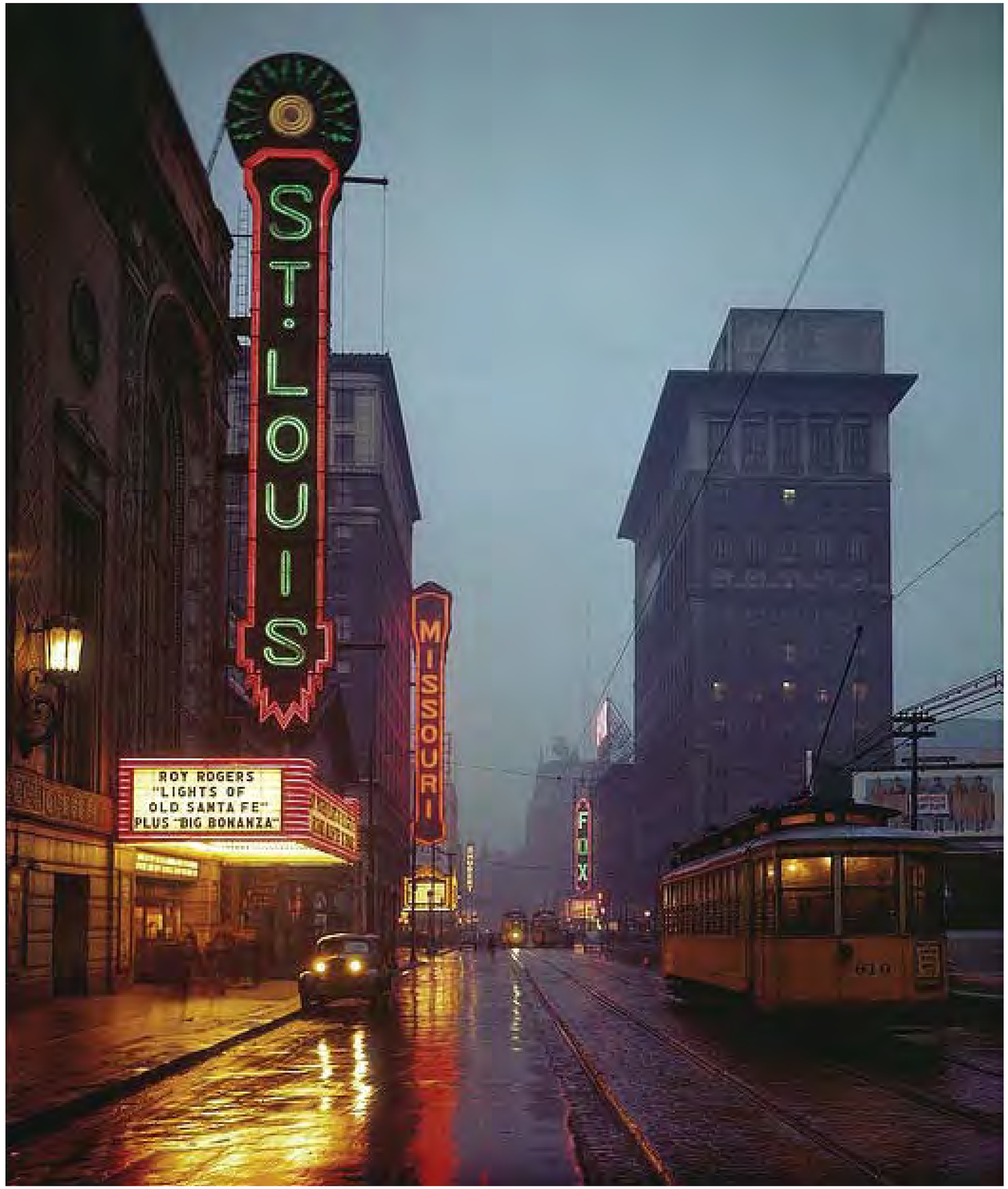
GRAND CENTER GREAT STREETS
MASTER PLAN

CHRISTNER + HOERRSCHAUDT
landscape architects

JUNE 28, 2013



Grand Boulevard, circa 1944

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- Metropolitan Sewer District
- Metro

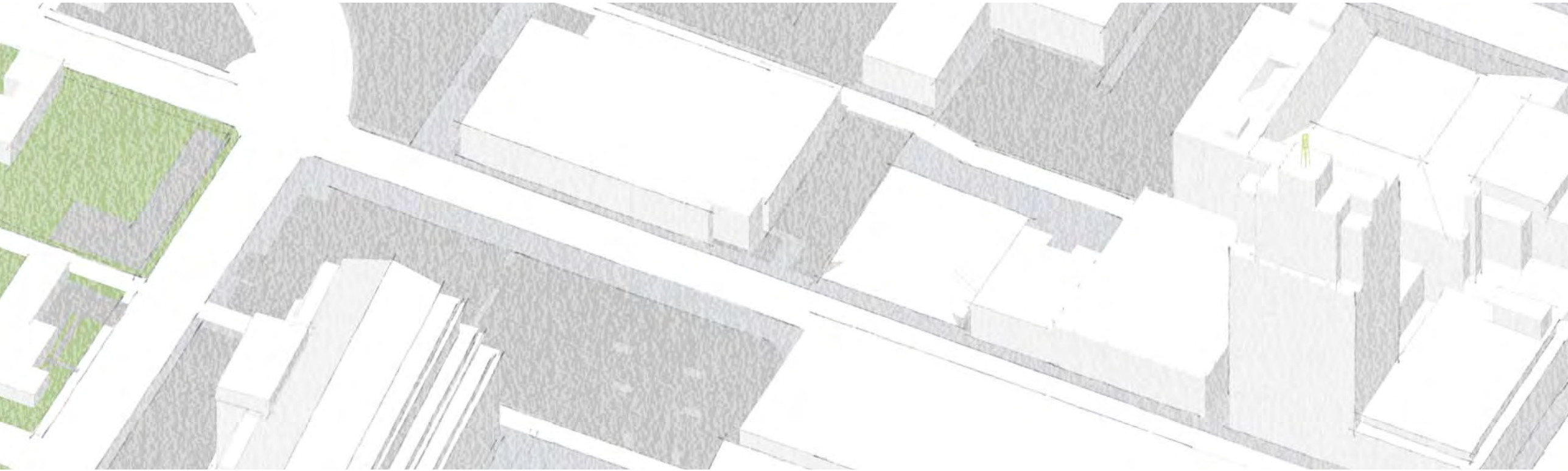
How to Use this Document

This document captures the planning/design process and outcomes of the Christner+Hoerr Schaudt Team and for the Grand Center Great Street project. The planning and design process was undertaken from January through June, 2013 through with East-West Gateway Council of Governments, the metropolitan St. Louis planning agency for the bi-state area of Missouri and Illinois. The study area included over 2.5 miles of streets and a 60 acre study area. The objective of the project was to create a plan for transformation - to transform the Grand Center business district into a vibrant community of "Great Streets" that will balance pedestrian and vehicular needs, create a dynamic new look for Grand Center and encourage continued economic development.

The Great Street planning process focused on quantitative, qualitative and spacial analysis; intensive stakeholder engagement and integrated design and technical disciplines. The recommendations are grounded in the practical realities of the existing infrastructure and reflect the aspirations of the community. This document is a comprehensive summary of the process, outcomes and recommendations of the multi-disciplinary planning and design team.

Features of the document:
Chapter 6 - MASTER PLAN, Design Concept is formatted to be used independently of the whole document as DESIGN GUIDELINES. The Master Plan and Street Sections portion of the document illustrate specific locations, materials and scope of the improvements. This section can also be used as a separate document to guide implementation planning.

This document is intended for client use in presenting the Master Plan vision to municipal officials for approvals and in attracting the interest of investors. It will provide the road map for subsequent phases of design and implementation.



1 INTRODUCTION

INTRODUCTION

Project Challenge

Over the last five years the redevelopment of the Grand Center District has gained significant traction with the addition of new restaurants, residential options, schools, office tenants and a continued expansion of cultural activities and events. It also has a bustling evening scene during events at its many visual and performing arts venues. Unfortunately, few patrons arrive early or linger after to frequent Grand Center's other establishments. "At the Intersection of Art and Life," Grand Center's supporters will not be satisfied until businesses and sidewalks are occupied throughout the day and night. Despite its many destinations and other institutions, Grand Center is lacking in basic community needs, services and pedestrian activity during the daytime hours. Additionally, over 15 acres of surface parking lots exist at the expense of development infill opportunities. The principles of East-West Gateway's Great Street Initiative provide the proper framework to reveal, enhance, and discover the potential of the Grand Center district. The combination of measureable progress, visible results and clearly articulated urban transformation will attract the developers and tenants needed to realize Grand Center's vision of a full-service, vibrant district.

"Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die."

Daniel Burnham

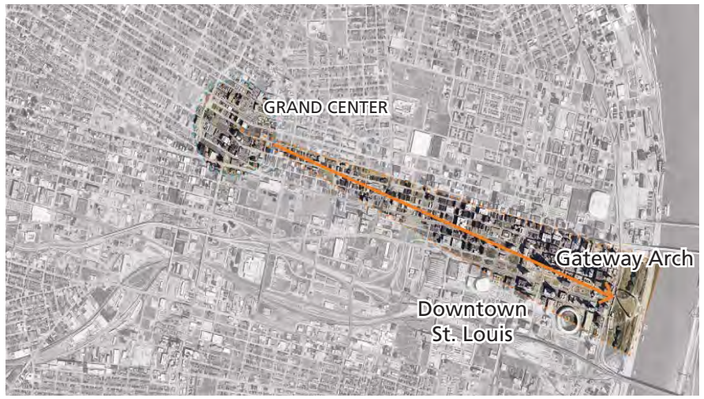
Study Context

Recognized nationally as a cultural hub, Grand Center has successfully established itself as a cultural arts destination with its blend of theater, music, media, fine arts and educational institutions. The Grand Center project includes over 2.5 miles of streets and an approximately 60 acre study area. Grand Center is located in what is called the "Midtown" area of the City of St. Louis as it is midway between the western city border and downtown along the Interstate 64 highway corridor. The "spine" of the district, Grand Boulevard, is a major north-south arterial in St. Louis connecting four interstate highways and the busiest Metro bus line in the region.

The product from the Grand Center Great Streets project will be a plan for the community and business district. Grand Center is much more than a typical business district. Within just a four block area there are 5 performing arts venues and 12 museums and galleries with over 1,500 cultural events and 1.5 million visitors each year. It is also home to 10 schools, a regional Veterans Administration Hospital and shares a border with the Saint Louis University campus. However, the challenges that continue to face the community are both practical and visual. These include: disconnected destinations; "wastelands" of large fields of surface parking; aging hardscape; vehicular dominated streets; sparse retail/restaurant offerings and empty sidewalks. These challenges make Grand Center an ideal candidate for the Great Streets Initiative.

The Study Area

The study area includes a majority of the Grand Center District with Grand Boulevard at the heart. The approximate boundaries of the study are Olive Boulevard on the south, Cook Street on the north, Spring Street on the west and Theresa on the east.



Location map

Partnership

Each Great Streets project involves a partnership between East-West Gateway Council of Governments (EWG) and a local sponsor. The Grand Center project benefited from the involvement of an existing strong and visible sponsor organization, Grand Center, Inc. (GCI), a non-profit organization founded in 1981. Their mission is to support the arts, preserve the legacy of the historic Grand Center district and transform their community into a vibrant and attractive place to live, work, shop, play and learn. In 1987, GCI hired an executive director and began the development of a plan to revitalize Grand Center into an arts, entertainment and education district.

Over the last couple of decades, GCI has been instrumental in developing arts venues, such as the Fabulous Fox and Sheldon Concert Hall; promoting other real estate development; programming arts festivals; preserving historic structures and making physical improvements such as streetscapes and parking improvements.

The Framework Plan Context

In the Spring of 2011, GCI worked with a national planning consultant, Don Stastny of Portland, Oregon, to develop a "Framework Plan" for Grand Center. The goal of this plan was to examine the Grand Center District holistically and build a common vision for its evolution. The Framework Plan engaged Grand Center stakeholders in a way they had not been engaged in previous initiatives. A 30-member Planning Committee was appointed by Mayor Francis Slay and represented not only the visual and performance venues, but property owners, property managers, residents, educational institutions and the VA. Personal interviews with 41 stakeholders were completed. The plan focused on physical improvements for the community but also uncovered structural challenges within the GCI board. Other outcomes revealed perceptions that there is a lack of common vision, poor physical conditions, no sense of community and a lack of diversity within the community. This plan was funded by 17 neighborhood partners. The product of this effort was a Framework Plan, instead of a Master Plan, that organized existing uses, suggested connectivity and encouraged infill development that fulfilled the making of a community.

When completed at the end of 2011, the Framework Plan set forth to resolve the following planning issues:

- Honor the history of the place and the people
- Make a paradigm shift of Grand Center as a community, not a district
- Place the Grand Center community in the context of the St. Louis region
- Execute a success audit to document what has already been achieved
- Celebrate racial and cultural diversity
- Embrace a "quick wins" strategy to build momentum on quickly achievable initiatives
- Use the arts as a bridge for cultural diversity
- Identify achievable public realm improvements that can be the "glue" that will encourage a shift in attitude
- Embrace teaching and learning as fundamental to Grand Center's identity
- Set the stage for attracting development
- Build a feeling of a community "front porch" at each institution to encourage neighbor and visitor interaction
- Solve the parking dilemma with consolidated and coordinated mixed-use parking facilities
- Create incubators for new activities and uses

The Grand Center Framework Plan created a framework or structure for many aspects of the Great Streets project. It outlined strategies to widen sidewalks, re-define transportation and create a new development/design pattern. It established an active stakeholder community that continued their participation in the Great Streets project. The Framework Plan also advanced Great Streets principles and created a common language about urban issues among participants. In light of its success and the momentum it created, it was critical for the Great Streets project to build on the Framework Plan by broadening the discussion to include technical considerations, intensive analysis and proposal testing.

Great Streets Initiative

The Great Streets Initiative is a program of East-West Gateway Council of Governments (EWG) which provides a forum for local governments of the bi-state St. Louis area to work together to solve problems that cross jurisdictional boundaries. The geographic region that East-West Gateway has served since 1965 is the 4,500 square miles encompassed by the City of St. Louis; Franklin, Jefferson, St. Charles, and St. Louis counties in Missouri; Madison, Monroe, and St. Clair counties in Illinois.

In early 2006, East-West Gateway launched the St. Louis Great Streets Initiative to expand the way communities think of their streets. Rather than viewing a roadway project as solely a way to move more cars and trucks faster, the goal of the St. Louis Great Streets Initiative is to trigger economic and social benefits by centering communities around interesting, lively and attractive streets that serve all modes of transportation.

In August 2012, Grand Center was one of three projects selected to participate in a second round of the Great Streets Initiative. The Christner + Hoerr Schaudt Team was selected for the Grand Center project. This team combined local knowledge and national planning/urban design expertise and included public art, lighting design, wayfinding/branding, civil, transportation, market research and community engagement consultation.

What are Great Streets?

Great Streets are representative of their places.
A Great Street reflects the neighborhood through which it passes and has a scale and design appropriate to the character of the abutting properties and land uses. Additionally, planning relies significantly on integrating technical expertise with local knowledge.

Great Streets allow people to walk comfortably and safely.
The pedestrian environment on, along and near the street is well-designed and well-furnished. The relationship between the street and its adjacent buildings is organic, conducive to walking, and inviting to people.

Great Streets contribute to the economic vitality of the city.
Great Streets facilitate the interaction of people and the promotion of commerce. They serve as destinations, not just transportation channels. They are good commercial addresses and provide location value to businesses that power the local economy.

Great Streets are functionally complete.
Great Streets support balanced mobility with appropriate provision for safe and convenient travel by all of the ground transportation modes: transit, walking, bicycling, personal motor vehicles and freight movement.

Great Streets provide mobility.
Great Streets strike an appropriate balance among the three elements of modern mobility: through travel, local circulation and access. The right balance varies with the function of the street and the character of its neighborhoods and abutting properties.

Great Streets facilitate place-making.
Great Streets incorporate within them places that are memorable and interesting. These may include plazas, pocket parks, attractive intersections and corners, or simply wide sidewalks fostering an active street life. The greatest pedestrian amenity is other pedestrians. Successful places encourage social interaction.

Great Streets are green.
Great Streets provide an attractive and refreshing environment by working with natural systems. They incorporate environmentally sensitive design standards and green development techniques,including generous provision of street trees and other plantings and application of modern storm water management practices.

source St. Louis Great Streets Initiative, East-West Gateway Council of Governments

Project Motivation & Approach

The project began with community engagement to help further define how the Framework Plan fit into the Great Streets process. The multidisciplinary team of planners, designers and engineers set out to define, test and refine concepts for Grand Center while vetting their ideas to the Grand Center Community throughout the process. The top priority was to create a safe, attractive and inviting public realm that accommodates convenient vehicular movement and contributes to the economic vitality of the community. If the pedestrian visitor experience can be transformed by vital, attractive infill development and complementary day and night time uses, more visitors are likely to visit, linger and invest in the community. As a result, business opportunities are created, centers of employment are increased and the area becomes a desirable place to live.

By embracing the Great Streets principles, Grand Center set out to achieve the following vision:

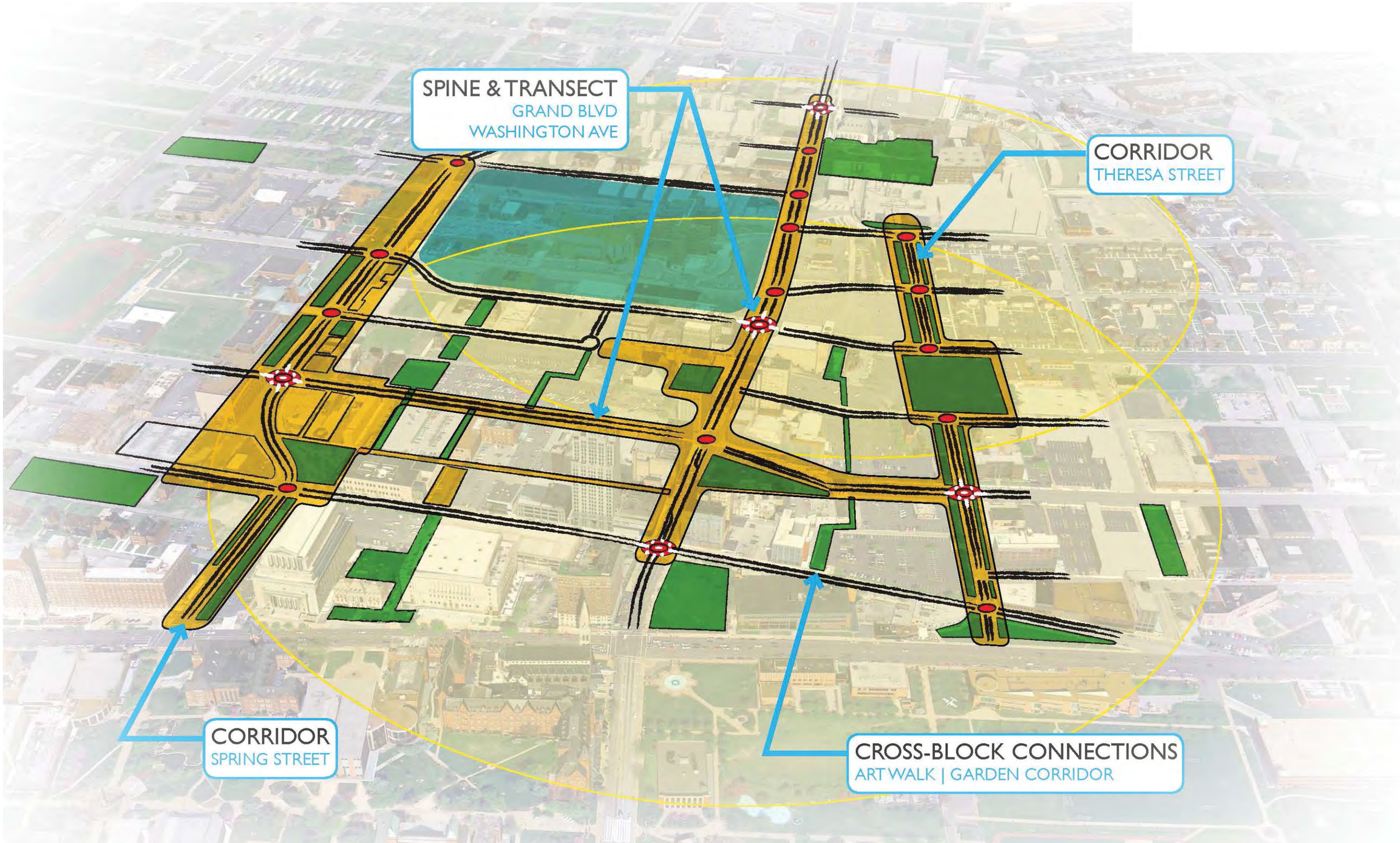
Grand Center's Great Street Project Vision Statement

Coordinate land use and connecting streets/pathways to allow the Grand Center community to maximize the potential economic value represented by 1.5 million arts patrons who visit the community each year. These visitors now come and leave with few arriving early and virtually none lingering after events. By creating a pedestrian embracing environment, the project will transform Grand Center into a vibrant entertainment, residential and retail community.

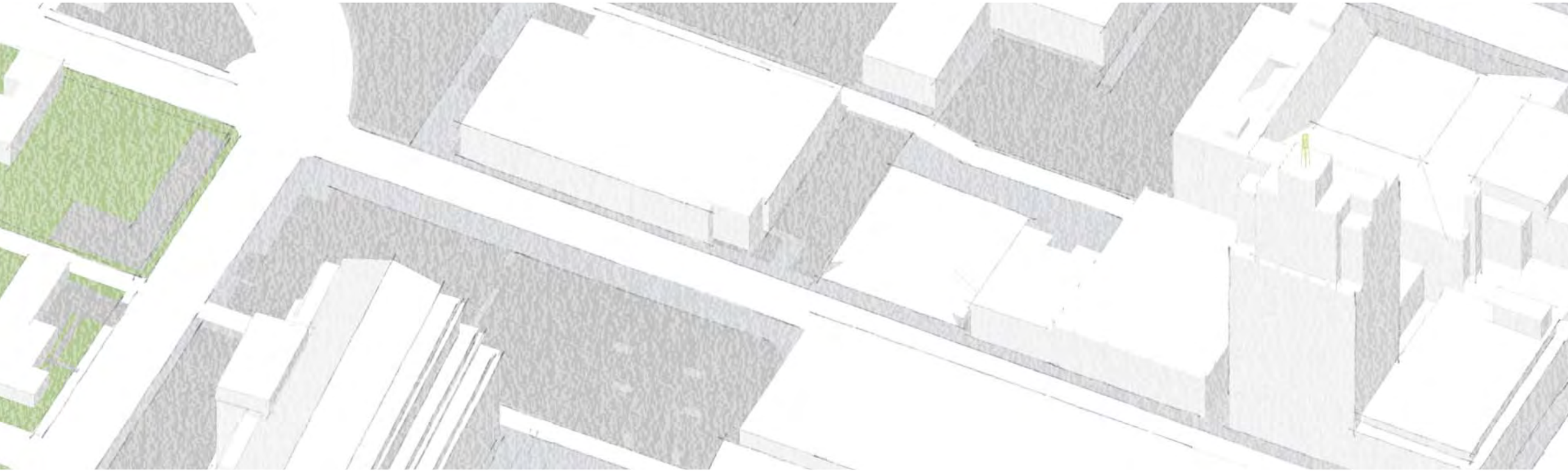
Project Approach

The Grand Center Great Streets plan should:

- Build on the momentum of The Framework Plan
- Be driven by stakeholders and the community
- Advance Great Streets/Complete Streets principles that have long-term value for the community
- Integrate design with capital and operational cost savings, environmental performance, and patron attraction
- Encourage vision-driven collaboration between the Council, stakeholders, and the design team members
- Be uniquely Grand Center with an attention and amplification of Grand Center's cultural context and timeless sense of place
- Reinforce connections to urban nature in a beautiful planted environment with crafted elements that are beautiful, functional, durable, and serve to attract and engage patrons for local businesses



Grand Center Framework Plan source: Don Stastny



2 BACKGROUND

BACKGROUND

Grand Center Historic Context

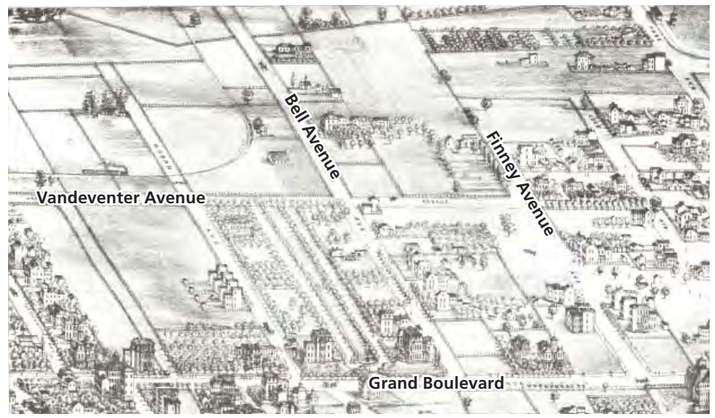
St. Louis history is rich and complicated. The evolution of the Midtown area cannot be summarized in a couple paragraphs, but, it is important to understand the key points in history that shaped the past and the lessons they tell us about the future.

Agricultural Patterns

Today, it is hard to imagine rolling farmland extending east and west from Grand Boulevard in the late 1700s, but the history of the land can still be seen in the street patterns and unusually long blocks on the western side of Grand. In the days of the early settlement of St. Louis, narrow strips of individually owned farm land, known as "Common Field" were assigned to settlers. These were laid out side by side to allow early settlers to work the land in strips as a safeguard against Indian attack. The "Grand Prairie Common Field" was laid out along the west side of a ridge line that corresponds to present day North Grand Boulevard. Since the field lots were perpendicular to this ridge, the streets of present day Grand Center were laid out to follow the old lot lines of the common fields.

Civil War in Midtown

By 1861, the American Civil War came to St. Louis at Camp Jackson or Lindell's Grove, as it was also known, which stood near the site of Saint Louis University's present day Busch Student Center. There was only one civil war battle in St. Louis, the Camp Jackson Affair, May 10, 1861, and it occurred just south of Grand Center.



Common field land pattern in what would become Grand Center
source: Pictorial St. Louis 1875

Current street grid in Grand Center
source: Google Earth, 2013

The Heyday

Fast forward a few decades to the 1870s when downtown residential and commercial development had expanded west to meet up with Midtown. By the 1900s, Midtown was considered a "second downtown" due to its density and tall buildings. It had become the City of St. Louis' entertainment district, home of many theaters and vaudeville houses. Within a 10 year period, five theater houses featuring both vaudeville shows and early motion pictures were built: the Odeon (1904), the Princess (1912), the Victoria (1917), the Grand Central (1913) and the Empress (1913). Grand Avenue became known as the "great white way" due to all of the signature neon signs that advertised for each theater.

These theaters had ornate, decorated facades and large neon marques addressing the street as if it where its audience. The sides and backs of the buildings were plain, windowless facades and had a "back stage" impact on the block. This development pattern can still be seen today at the Fabulous Fox. The imposing northern façade of the building facing Washington Avenue is very obvious today and has a negative impact on the sidewalk environment.

In addition, elegant mansions were built in the area including those along Grandel Square. At that time, Midtown had become a magnet for churches. So many were located here that it was called "Piety Hill". Social clubs and fraternal organizations also located here. The massive structures of the Saint Louis Club (now the Saint Louis University Museum of Art), The Knights of Columbus Medinah Temple (now the Centene Center of the Arts) and the Scottish Rite still occupy a key block on Lindell Boulevard.

Street cars on Grand Boulevard, circa 1925
source: www.city-data.com/forum/st-louis/

Neon marques in Midtown
source: www.city-data.com/forum/st-louis/

The business climate in Midtown thrived during the Great Depression and even through World War II. Midtown became a hub for public transportation and a stop on major streetcar and bus routes.
In the 1920s, major movie studios built large movie "palaces" in Midtown to show the "first run" of their movies. Three of these palaces were built between 1922 and 1929 and remain today. They are the Missouri Theatre (1921); St. Louis Theatre (1926) and the Fox Theatre (1929).

Midtown's Decline

Like so many other urban areas, Midtown began its decline in the 1950s as an automobile-dominated society moved to the newness of the suburbs. Noisy streetcars and rails were replaced by quieter rubber tire buses and the streets became emptier. As the population declined, the patrons did not return. By 1960, the population of St. Louis had declined by 73%. Midtown entertainment venues, along with office and residential buildings, eventually were vacated. By the 1970s, many of Midtown's buildings and stately homes had been demolished. It was fortunate that the major theater venues in current-day Grand Center such as the Fox were not lost to the wrecking ball. In 1968, the St. Louis Symphony Society purchased the St. Louis Theater and completed a full renovation. Powell Hall, as it is now called, is the home of the St. Louis Symphony. Founded in 1880, it is the second oldest orchestra in the nation preceded only by the New York Philharmonic.

The Fabulous Fox 1937 source: Missouri History Museum

The Birth of Grand Center

Led by Father Paul Reinert, President of Saint Louis University, along with key civic leaders, a revitalization plan was undertaken in 1980 to rehabilitate the neighborhood and activate the surviving buildings within an eight block area. The City Center Redevelopment Corporation (CCRC) was founded in 1981 and included Father Reinert and leaders from Saint Louis University, Third Baptist Church, the Urban League, the Scottish Rite, local businesses and two banks. The CCRC was successful in listing remaining buildings of the area on the National Register of Historic Places. In 1982, they introduced a new brand for the area calling it "Grand Center". Due to the efforts of the CCRC, the Fabulous Fox Theater and the former Ethical Society, now called the Sheldon Concert Hall were both restored and reopened. In 1987, the non-profit, Grand Center, Inc. (GCI) was formed. Its executive director set on a mission to develop a plan to establish Grand Center as a regional and national-caliber arts, entertainment and education district. The City of St. Louis invested two million dollars in public realm improvements such as streetscape, vintage lighting and parking improvements in the late 1980s, much of which remains today.

Redevelopment and Restoration

Throughout the `1990s, GCI was instrumental in the redevelopment and restoration of many of Grand Center's remaining, but derelict buildings. More importantly, they were instrumental in the establishment of a critical mass of arts and education institutions within the Grand Center area. GCI was the driving force behind the conversion of the former First Congregational Church on Grandel Square into the 470 seat Grandel Theater; the establishment of Jazz St. Louis (Jazz at the Bistro); the redevelopment of the Continental Life Building and the relocation of Nine Network of Public Media to the community. Private development had also returned during the 90s.

The 2000s represented a significant growth period within the context of the arts and education district mission. In 2002, GCI and the City of St. Louis created a Tax Increment Financing (TIF) District to stimulate growth and reinvestment. To date, $80 million in TIF financing has been reinvested in the community. In addition to the new Nine Network building, three brand new arts and education facilities were opened in Grand Center practically within a decade. These include the Pulitzer Foundation for the Arts (2001), the Contemporary Art Museum (2003), Cardinal Ritter College Preparatory High School (2003) and the University of Missouri St. Louis/St. Louis Public Radio Building (2012). Renovation and adaptive reuse of Grand Center's buildings were also a focus of GCI's efforts. These include: the Centene Center for Arts & Education in the former Medinah Temple (2006), the Moto Museum (2007), the Triumph Grill (2008), Moto Europa (2011) and Hotel Ignatio (2011) all in the former Hart Printing Building. They also include: Big Brothers Big Sisters and the Kranzberg Arts Center in the former Woolworth Building (2008), the Grand Center Arts Academy, the first visual/performing arts and academic charter school in Missouri in the Beaux Arts building across from Powell Hall (2012) and the Metropolitan Building (2012). During this period, new restaurants like, KOTA Wood Fire Grill, City Diner at the Fox, Urban Chestnut Brewery, Field House and Dooley's Beef n Brew House, have all come on the scene in the last couple of years.

The Metropolitan Building, renovated in 2012

St. Louis Public Radio, completed in 2012

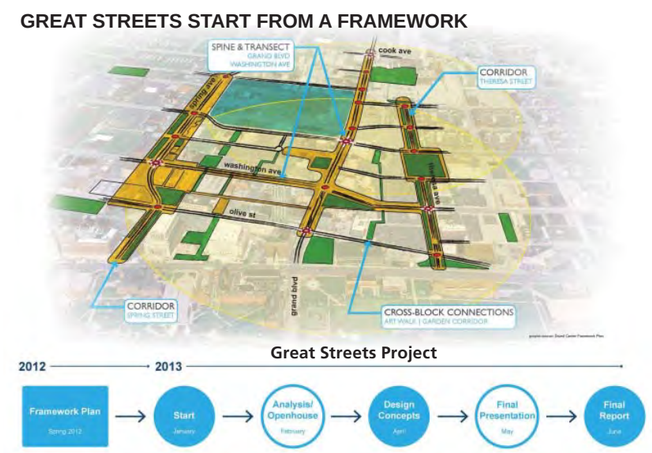
The Future

Also new to the scene will be community radio station 88.1 KDHX and the Larry J. Weir Center for Independent Media (2013) which will feature a 125-seat music venue and café on Washington Avenue. The St. Louis Theater is currently being renovated for mixed use. It is the last historic building in Grand Center to be renovated.

As Grand Center awaits the arrival of more contributions to this cultural district, new chapters continue to be written in Grand Center's rich history. It is time for a renewed investment in Grand Center's public realm and a focus on the needs of the pedestrians that are sure to be coming to Grand Center.

A Framework for Great Streets

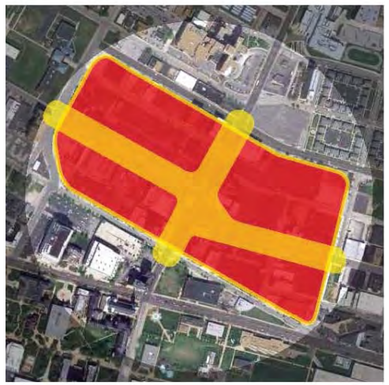
The 2011 Framework Plan process laid the ground work for a participatory dialog about community, aspirations and a bright future in Grand Center. It brought stakeholders together in their passion for this place. It also created a common language among the participants about great streets, complete streets and urban design principles. The Framework Plan laid the foundation for the Great Streets project to naturally build from this collective knowledge and momentum. As a result, the Great Streets project did not require a baseline level of stakeholder education or evidence for the merits of great streets principles. The Framework Plan process allowed the Great Streets design team to focus on the "what" and the "how" and not on the "if".



Great Streets project schedule
source: Don Stastny

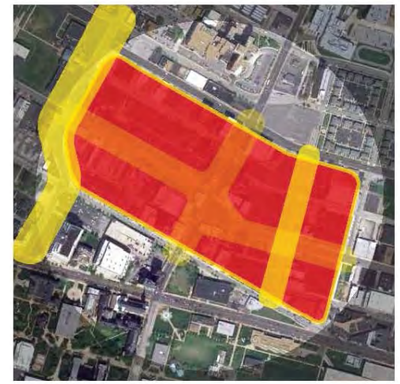
The Framework Plan included the following key proposals:

1. The Spine and the Transect – The Framework Plan calls Grand Boulevard the "spine". It is not only a major north-south arterial and bus route in St. Louis; it is the "Grand-way" where the entertainment venues of the past and present are located. From the tall buildings, traffic congestion and views from steeple to steeple, it is clear that Grand Boulevard is the "spine" of the community. Additionally, it is the street from which the east-west cross streets intersect. These streets are called the "transects" and include Olive Street, Washington Avenue and Delmar Boulevard. Washington is considered the main "transect" of the community.



Spine and transect - Grand Boulevard and Washington Avenue
source: Don Stastny

2. Corridors – Along the east and west edges of the community, the "corridors" or Spring and Theresa Streets, complete the diagram of the community structure. These streets are natural edges for community planning and pedestrian/vehicular portals from Lindell Boulevard. Spring on the west is the transition from the edge of the arts and education zone to a more residential development pattern. Theresa on the east is planned to be reconnected to Lindell Boulevard and is at the center of redevelopment potential. Surface parking lots to the west and the up-and-coming Locust Business District on the east, make Theresa a key development corridor.

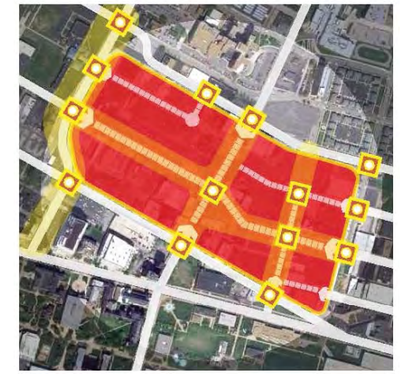


Corridors - Spring Street and Theresa Street
source: Don Stastny

3. Gateways – The Framework plan suggests that four key intersections of the spine, transect and corridors, at Grand/Olive, Grand/Delmar, Washington/Spring and Washington/Theresa, should have a special meaning and emphasis in the community. The Great Streets project includes a fifth gateway at Grand/Cook. It is suggested that these be "art gates" and emphasize the existing architecture as gateway elements at these intersections.

Gateways
source: Don Stasny

4. Intersections as Rooms – A treatment of other more minor gateways or nodes at other key intersections is described as "an outdoor room." This suggests that corner buildings and other edges should be thought of as defining space just as the floor, and walls of a room define space.



Intersections as rooms
source: Don Stastny

5. Cross-block System – The long east-west blocks of Grand Center established long ago by the agriculture patterns of the early settlers are not conducive to the pedestrian needs of today. A strategy to allow cross-block pedestrian circulation from one east-west street to another at multiple points along the street, allows for a network of pedestrian circulation. Other benefits become clear such as options for different development patterns, increased access, pedestrian-scaled amenities and an infusion of green corridors throughout the community. Currently, a process is underway to design the "Art Walk," a cross-block connection from Lindell on the south to Washington at the Sheldon and then Spring/Washington north to Delmar.

Cross-block system
source: Don Stastny

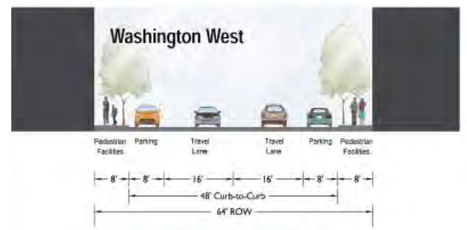
6. Arrival and Approach Strategy – Grand Avenue is used to get to, from, around and through the community. Currently, the vehicular pattern for approach and arrival is focused from the inside-out. This pattern concentrates traffic on Grand and competes with pedestrian circulation. Over the years, the idea of redirecting through-traffic around the community has come and gone. In the Framework Plan, the proposal is formalized. The vehicular approach and arrival is from the existing network of streets surrounding the community with Vandeventer and Compton Avenues absorbing the vehicular load from Grand. This way, the vehicular approach is from the outside-in and allows traffic to be dispersed. It allows stakeholders to think about options to reduce the width of the streets and widen sidewalks. It also allows for less vehicular congestion on Grand and a safer, more appealing pedestrian environment.

Current Condition

Future condition

source: Don Stastny

7. Proposed Street Sections – The Framework Plan laid the ground work for the validation of proposed street sections in the Great Streets project. With the goals of reducing street width where appropriate and expanding the sidewalks, the following changes were proposed:



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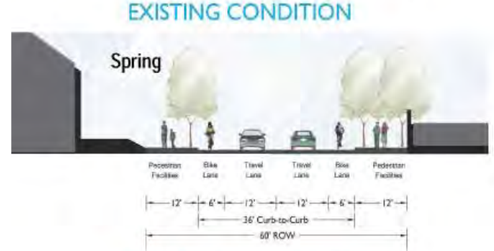

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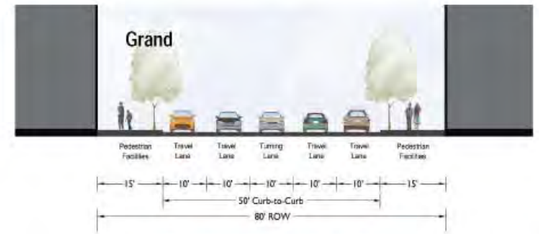

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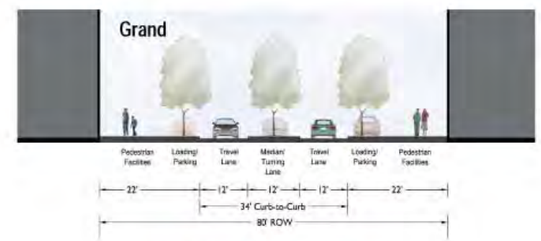
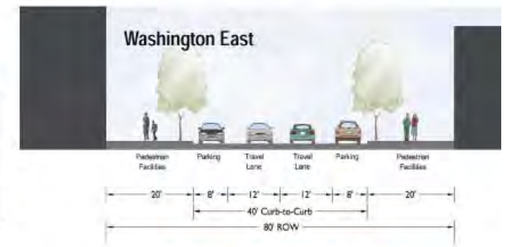


PROPOSED CONDITION

EXISTING CONDITION



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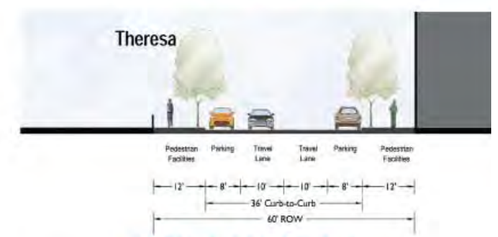

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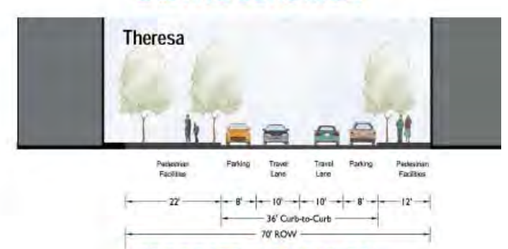
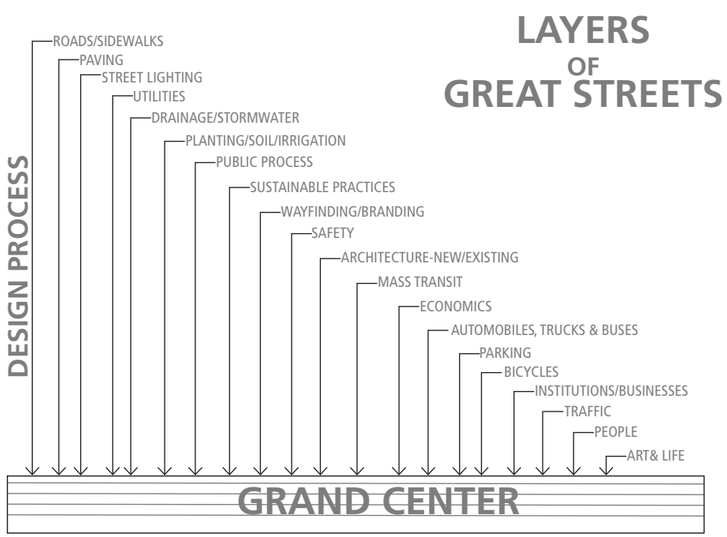


PROPOSED CONDITION

Layers of Design

Throughout the planning and design process for the Great Streets project, a Master Plan for Grand Center evolved from the Framework Plan's idealized concepts and principles into a working design plan. It focused on being responsive to the micro-issues of existing conditions and improving the practical function. Integrated development strategies, modal integration and the framework of art integration came together with a strong physical design proposal that created a new look for Grand Center. The ultimate goal was to recommend improvements that are functional, durable and delight the user.



The rigor of streetscape and urban design within the context of the Great Streets principles is a complicated and intertwined set of layers - `layers of design, consultant disciplines and urban infrastructure. The following are a description of the design and discipline layers that were involved in this project:

1) Urban Design and Landscape Architecture Layers – A strong design proposal was shaped by quantitative and qualitative analysis, spatial observations of existing conditions and a listening ear for the aesthetic direction of stakeholders. It was the integration of layers of design and engineering with community aspirations that lead to an approach that feels like Grand Center.

2) Lighting Layer – Starting with the quantitative and qualitative analysis of the existing lighting conditions and overlaying stakeholder aspirations for something uniquely Grand Center led to recommendations for new ways to think about lighting in the community. With safety at the forefront and the practical need to redefine overall lighting strategies, considerations for special opportunities such as event lighting, building highlighting, environmental lighting enhancements and light as art opportunities became the highlight of the study.

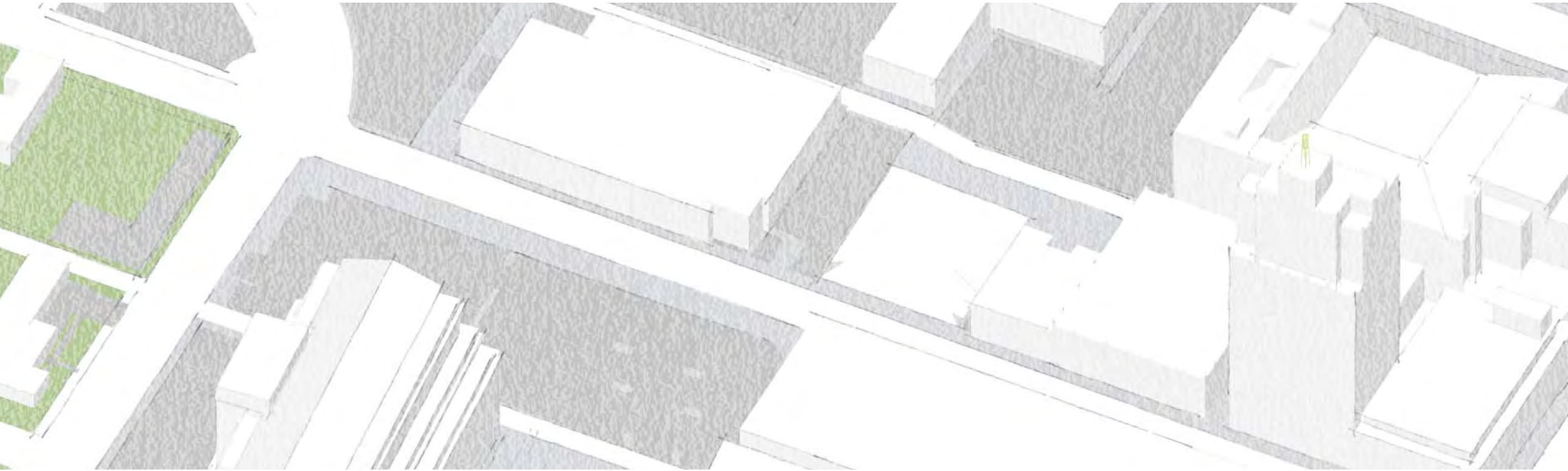
3) Public Art Layer – Stakeholders from Grand Center and St. Louis visual arts institutions worked together to articulate the "essence" or "gestalt" of Grand Center and how it should be translated visually in the overall community design approach for public art. These recommendations included 1) goals/guidelines for permanent and temporary art integration, 2) opportunities and locations for art installations and 3) as integrated hardscape and landscape design solutions.

4) Transportation Layer – The study of how people get to, from through and around Grand Center looked at many layers of multi-modal access, venue traffic and public transportation. The inventory and analysis of traffic counts for daytime, evening and event/venue traffic peaks throughout Grand Center and the limitations of the transportation network beyond Grand Center, started a dialog about validation of the transportation strategies of the Framework Plan. Analysis of the proposed street narrowing, intersection enhancements, transit locations, pedestrian needs, bike rider needs and emergency vehicle access were additional layers of scrutiny of the Framework Plan's proposals. In addition, the integration of the redevelopment potential with the future parking demand model led to recommendations for long-term development densities and parking strategies to accommodate increased density in Grand Center.

5) Land Use and Development Strategy Layer – This study documented the outcomes of concurrent market and land use reports being prepared for Grand Center in order to understand the broader context for the potential for new residential and commercial uses. The existing and projected residential and commercial demand as well as the overall market climate in St. Louis was studied to understand the development potential for Grand Center. Concepts for anticipated infill development were illustrated on the Master Plan to understand the implications for vehicular and pedestrian circulation, land use distribution and parking demand in the future.

6) Branding Layer – Within the context of the existing Grand Center brand, 'The Intersection of Art and Life", the recommendation for a more comprehensive signage/wayfinding strategy that enhances the visitor's experience was the focus. The analysis documented the existing wayfinding cues and messages on local streets and from major highways that direct to Grand Center. It also documented the the gaps in the wayfinding system. Recommendations focused on creating a new wayfinding strategy with alternative routes, venue wayfinding, pedestrian wayfinding and cross-educational opportunities in order to reinforce the new transportation strategy.

7) Civil/Stormwater Layers – Inventories of existing infrastructure conditions and the assessment of its practical impact on design solutions was the focus. The recommendations emphasized Green Infrastructure and Best Management Practices (BMP) for storm water mitigation and their integration in the hardscape, landscape design strategies and aesthetics.



3 COMMUNITY ENGAGEMENT

COMMUNITY ENGAGEMENT

Overview

Between January and May 2013, the Grand Center Great Streets project team implemented a public engagement program designed to elicit meaningful stakeholder and community involvement in the Great Streets planning process. Team members used a variety of outreach, communications and engagement tactics to facilitate constructive exchanges of information and ideas between the public and the project's decision makers. Community residents and stakeholders were given multiple opportunities to provide their input into the planning process and to share their project interests, concerns and aspirations. A summary of the engagement program's objectives, activities and outcomes is presented here.

Engagement Infrastructure

Subcommittees

A community engagement infrastructure was formed during the Framework Plan project. It eventually evolved to include Grand Center stakeholders within subcommittees that represented the street corridors of the study area. This stakeholder engagement infrastructure was comprised of 7 planning committees whose members included representatives from major stakeholder institutions, district property owners, residents and officials from municipal and state agencies. Over 50 people were involved on these subcommittees. The Corridor and Art Walk Subcommittees included the following:

- Art Walk Corridor Sub-Committee
- Grand Boulevard Corridor Sub-Committee
- Grandel Square Corridor Sub-Committee
- Olive Street Corridor Sub-Committee
- Spring Corridor Sub-Committee
- Theresa Corridor Sub-Committee
- Washington Corridor Sub-Committee

Additionally, there were three specialized committees involved in the project: The Technical Advisory Group (TAG), Plan Implementation Committee (PIC) and Land Use Committee.

Technical Advisory Group (TAG)

The Technical Advisory Group is another feature of the community engagement infrastructure that was developed during the Framework Plan. Officials from the City of St. Louis and its local utilities were asked to join the TAG at the beginning of the Framework Plan in effort to open a dialog between designers and those who would ultimately be responsible for the maintenance of the streetscape when constructed. This dialog started during the Framework Plan and the model continued throughout the Great Streets project. The TAG was engaged from the beginning of the project to help the designers understand the pitfalls of previous streetscape projects and the relative risk of particular proposals that may be considered throughout the planning process.

Plan Implementation Committee (PIC)

The chairs and co-chairs of each of the subcommittees sit on the Plan Implementation Committee (PIC) which is charged with the implementation of the recommendations for Grand Center over time. There are 15 people on the PIC that meet once a month along with Grand Center Inc. executives to discuss current and future initiatives and to advance the goals of Grand Center as an arts and entertainment district.

Land Use Committee

The Land Use committee a 16-person committee that includes stakeholders from other subcommittees and is focused on developing housing and commercial developments, not-for-profit institutional projects and parking lot/vacant land redevelopment. Chapter 5: Land Use and Development Strategy of this report was prepared in parallel with other on-going market research studies for Grand Center through coordination with the Land Use Committee.

Title VI of the Civil Rights Act of 1964

In accordance with the East-West Gateway Council of Government's public engagement policies, the Great Streets team complied with all federal and state laws, regulations, orders and directives regarding non-discrimination in federally assisted programs. Public outreach, marketing and involvement efforts, including the development of promotional materials and the hosting of public events were conducted in accordance with Title VI of the Civil Rights Act of 1964. The project team worked closely with East-West Gateway throughout the planning process to ensure that environmental justice requirements concerning minority and low-income persons were adequately and appropriately addressed. The project team took specific actions to ensure that Title VI compliance statements were on all public meeting notices and the availability of special accommodations for the public would be provided if needed. The team reviewed demographic data from the 2010 U.S. Census to identify minority populations that may have needed special outreach. From their findings, they decided to reach out to African Americans; low-income residents living in area rental housing; and non-native English speakers, many of whom lived in one Grand Center apartment complex.

With the help of Alderwoman Marlene Davis, the project team and GCI representatives met with and disseminated public meeting flyers to nine area churches, eight of which have mainly African American congregations. They also distributed flyers at community events and residential meetings and worked with rental property managers to generate interest in the project's public open houses among their tenants. Special efforts were made to engage the residents of the Renaissance Place at Grand Apartments, a mixed income Hope VI housing development. The team discussed the flyer translation needs of the non-native English speakers living at the Coronado Place Apartments and Lofts with its property manager who indicated that the tenants' English proficiency would not warrant specially translated materials.

Other Title VI outreach efforts involved working with area institutions and media organizations that serve largely African American populations and low-income communities. The project team sent e-blasts, robo-calls, and/or flyers about its open houses to staff, constituents of the Urban League, Delta Sigma Theta St. Louis Metropolitan Alumnae Chapter, Kappa Alpha Pi Fraternity, Clyde C. Miller Academy, Loyola Academy, Cardinal Ritter College Preparatory High School and Harris Stowe State University. The team also purchased on line and print advertising with the St. Louis American and with First Civilizations – two media outlets that target the African American media market. At the project's open houses, the team distributed Title VI brochures explaining citizens' rights and protections to all event attendees. Appendix A presents the public meeting reports that document all of the team's Title VI activities.

Goals & Objectives

The central aim of the public engagement program was to obtain meaningful participation in the planning process by community stakeholders and constituents. Accomplishing this required that stakeholders and the public have an appreciation of planning parameters as well as an understanding of major project decisions and their implications. More specifically, meaningful participation was most likely to occur when the involvement program: 1)increased project awareness among stakeholders and the public; 2) stimulated people's interest in plan activities and findings; 3) deepened comprehension of the plan and its eventual outcomes; and 4) solicited constructive public input. These objectives are described in greater detail.

Raising Awareness

Expanding the community's awareness of Grand Center's improvement efforts required the project team to provide clear, accurate and easily attainable information on the plan's purpose, activities, and desired outcomes. To achieve this, the project team: 1) worked closely with Grand Center Inc. (GCI) and East-West Gateway to deliver reliable, timely project information to the public and area stakeholders; 2) held regular planning and coordination meetings, ensuring the accuracy of information communiqués; and 3) utilized local information outlets to maximize the project's community exposure.

Generating Interest

While public information and awareness activities broadened the community's knowledge of the project, they did not, by themselves, guarantee the public's interest in the planning process. Getting people to care about the project meant first helping them to understand how it would impact their quality of life. The introduction of green infrastructure opportunities that were specific to Grand Center captured interest. By focusing on the outcomes that mattered most to people like economic growth, better parking and traffic flow, sidewalk and street improvements, and increased pedestrian activity, the team shaped a project identity that helped to firmly establish the project's relevance.

Promoting Understanding

Once community constituents were interested in the project, the team intensified its explanation of project issues as well as deepened its understanding of stakeholders' values, needs and priorities. Through stakeholder/subcommittee meetings and community charrettes, the team facilitated learning and sharing around key plan component. These included assessments of the public realm; pedestrian circulation/ADA/ visitor experience; traffic and parking conditions as they relate to the land use potential of the district; utility conditions, feasibility and cost; and emphasis on bike, bus and MetroLink linkages.

Soliciting Input

The project team's work to educate the community about the Great Streets planning initiative prepared the public to give meaningful input into the planning process. Informed stakeholders, including civic and business interests, elected officials, educational and faith based leaders, arts and culture aficionados, and neighborhood residents, provided project feedback that was helpful and insightful. Through these interactive meetings, an on-line survey, public comment forms, email messaging and other touch points, the team received valuable information from the community that helped to shape its thinking and ultimately its recommended designs.

Engagement Approach / Process

To advance public engagement goals and objectives, the project team developed a four-part engagement approach that consisted of stakeholder involvement, public involvement, technical review/capacity building, and community outreach. Though distinct in terms of their target audience or means of connection, these engagement focus areas were not only interrelated, they were also simultaneously executed to promote a high level of community awareness and participation. For each, a series of activities was undertaken to facilitate the success of the public engagement program. These activities, and the engagement focus areas they supported, are presented in the accompanying graphic.

Engagement Approach

Viewed in its totality, the public engagement program was designed to provide community stakeholders and residents with multiple points of entry into the planning process. In this way, the project team was able to assure accessibility, which helped to maintain open lines of communication with the public and maximize project participation.

Engagement Activities & Findings

Stakeholder & Public Involvement Plan

Before conducting any outreach, engagement and communications activities, the project team developed a Stakeholder and Public Involvement Plan that explained the logic and methods of the community engagement program. This document presents the range of activities the project team planned to undertake to engage stakeholders and the public in the design process and decision-making. It also outlined the goals and objectives of the involvement process; identified key stakeholder groups; clarified the specific communication strategies, meeting schedules and expected outcomes of the engagement process. In January 2013, EWG and GCI approved the plan and the project team began to execute its core components in alignment with the broader design process. The full plan is provided in Appendix B.

Stakeholder Involvement Activities

One of the first and most critical steps of the public engagement program was to connect with project stakeholders. A stakeholder was defined as any person or organization interested in or directly affected by the project's activities. This included, but was not limited to, residents or property owners, neighborhood groups, business owners and operators, elected/community officials, governmental resource agencies, special interest groups, neighboring colleges students and religious and civic institutions. Stakeholders for the Grand Center Great Streets Project were identified by GCI. Most were involved in the planning process through key informant interviews, focus groups and /or large stakeholder committee meetings.

Kick-off Meeting

On January 9, 2013, GCI hosted a project kick-off for members of its 7 planning committees, community stakeholders and residents. Sixty-eight people attended this event where they received a brief refresher on the outcomes of the Framework Plan; were introduced to the project team and informed of its qualifications; learned about Great Streets' guiding principles and objectives; and reviewed the overall project schedule with its corresponding activities. The meeting followed a presentation format to facilitate comprehension of large amounts of information. Afterwards, attendees were encouraged to directly engage project team members whose areas of expertise aligned most with their interests.

Key Informant / Stakeholder Interviews

Five stakeholders, that had current planning efforts and capital improvements underway in the community, were contacted for key informant interviews in late January and early February. Sixty to 90 minutes in length, these interviews enabled the project team to learn about plans and developments that were currently underway and, where appropriate, to incorporate this information into the Great Streets planning process. Below is a brief synopsis of each interview. Full summaries of each interview can be found in Appendix C.

1. John Cochran Veterans Administration Medical Center – Keith Repko and Gary Drikow, January 24, 2103. VA representatives informed the project team of the Medical Center's expansion plans in Grand Center. With a large patient population and 1,100 to 1,500 full-time employees, the Medical Center is preparing to construct a new inpatient tower; expand its outpatient clinic space; add spinal cord beds; and build a parking garage that will house approximately 1,000 cars. Multiple master plan scenarios for campus expansion are being considered with a June deadline for a decision regarding the selected scenario. With regard to the Great Streets project, the VA is most interested in pedestrian-oriented improvements and most concerned about maintaining/ improving direct routes for visitors and ambulances.

2. Alderwoman Marlene Davis (Ward 19), February 5, 2013. Alderwoman Davis described Grand Center as a vibrant and exciting place for people to live, work and play. She talked about its transformation from a relatively lifeless neighborhood into a regional destination offering a variety of arts, culture, entertainment, retail and dining options. She also identified the community's educational institutions, ranging from elementary schools to higher education, as among the area's greatest assets. For her, the areas of greatest concern involved the community's limited residential housing offerings, traffic flow, sidewalk and street conditions; neighborhood beautification; and signage. She maintained that successfully addressing these concerns would require not only technical expertise, but also ongoing engagement of community stakeholders.

3. Grand Center Arts Academy – Lynne Glickert, February 5, 2013. Principal Glickert shared with the project team the history of the Grand Center Arts Academy and its affiliation with the arts district. Founded in 2010, the school is in the process of expanding its student population from its current base of 430 students to a maximum enrollment of 750 students. Among its challenges are a landlocked site, managing the traffic flow that accompanies student arrivals and dismissals, and the small sidewalks that surround its facility.

4. Clyde Miller Career Academy – Brandon Murray, February 13, 2013. Assistant Principal Murray provided background information on Clyde C. Miller Academy as one of St. Louis' schools of choice or educational magnets. Though it was started as a construction career academy, it evolved into a career/technical and college-prep training school with 13 learning pathways. For Mr. Murray, one of the issues of greatest concern was the prevailing perception of North Grand as unsafe. He asserted that many of the arts patrons do not go north of the Fox or Symphony because they think the rest of the neighborhood is in the "ghetto." For him, making visitors, residents and area employees more aware of the community's strengths is critical to improving long-term appeal, along with providing more retail and dining options.

5. St. Louis University – Peg Weathers, February 8, 2013. Assistant Vice President Weathers was involved in the District's earlier Framework Plan and was familiar with the public realm issues that the Great Streets team was working to address and resolve. She talked about the improving perceptions of Grand Center among St. Louis University students and staff who years earlier would not cross Lindell Boulevard into Grand Center. Though more students and their parents/families now explore Grand Center, it is still not a major draw because of safety concerns and the lack of youth-focused amenities. She also noted that traffic congestion and street design (the canyon-like size and feel of Lindell) are major pedestrian-experience issues that need to be addressed.

6. Great Rivers Greenway District (GRG) - Todd Antoine and Midtown Loop Trail Stakeholders, June 20, 2013. Great Rivers Greenway District is a stakeholder in the Great Streets project due to an opportunity to integrate an off-road bike and pedestrian trail facility within Grand Center within the Spring Street right-of-way. This trail could connect to the former Hodiamont streetcar right-of-way just north west of Grand Center and to the existing St. Vincent Greenway improvements at Porter Park north of Delmar. The Midtown Trail could also connect Cortex on the south and eventually Forest Park to the west. The trail alignment study for the Midtown Loop Trail has run concurrent with the Great Streets project. A combined meeting for Grand Center Great Streets and the Midtown Loop Trail projects was held in order to engage Great Rivers Greenway, key Grand Center stakeholders and the planning consultants in a comprehensive dialog about the potential alignment and opportunities. The group discussed the multiple initiatives that are underway on the west side of Grand Center that would be a draw for pedestrian and bicycle activity along Spring Street. These are: the Artwalk, cafe at Nine Network, Spring Church and comfort station, PXSTL art installation as well as the art/entertainment venues in the area. Feedback from GRG during the Great Streets project, led to the integration of the Midtown Loop Trail and Artwalk along Spring in the Master Plan.

Focus Groups

In addition to conducting stakeholder interviews, the project team held two focus groups – one with Grand Center residents and the other with area employees. These 90 minute meetings helped the project team understand the live-work priorities, interests and concerns of those who experience the community daily. In both groups, participants were asked to share their perceptions of Grand Center and reflect on its assets, challenges, transportation conditions and amenities. Highlights of the focus groups' findings are briefly described. Complete summaries can be found in Appendix D.

1. Employee Focus Group, February 21, 2013. Sixteen employees of local organizations and retail establishments met with members of the project team to share their desires for community beautification, traffic, parking, streets, sidewalks and more. Most participants were members of the Grand Center PR/Communications Network, which holds a monthly meeting for employees of major cultural and educational institutions as well as local restaurants. As part of the focus group process, team members explained the Great Streets project to attendees; solicited participant information via a written survey; and conducted a facilitated discussion of 10 project related questions.

   Data from the participant surveys revealed that on average, attendees had worked in the District for nearly four years, though some were new to the area and others had worked in the community for 20 years. Attendees maintained employment with 10 local organizations, including:

   - Grand Center Inc.
   - University Plaza Apartments
   - The Sheldon Concert Hall
   - Contemporary Art Museum St. Louis
   - Craft Alliance
   - KDHX – 88.1 FM
   - St. Louis University
   - Plush
   - St. Louis Symphony
   - Metropolitan Artists Lofts

   The survey also revealed that most participants drive to work daily – 15 out of 16, while 3 out of 16 frequently ride their bicycles. Although they rely heavily upon their cars to get to work, participants communicated that parking was not a major challenge as they either park on lots behind or adjacent to their offices or in nearby parking garages. A few also noted that they sometimes utilize street parking for convenience.

Employee Focus Group

   The facilitated discussion with participants revealed that Grand Center is generally seen as being full of potential, a diverse community that is in the midst of positive transformation. Attendees noted, however, that the District still feels underutilized in terms of general or pedestrian activity and seems unsafe in some areas. Yet, the community's unique architecture, critical mass of artistic and cultural venues, entertainment and dining options, and easy access to public transit make it an appealing destination for people to live, work and visit even today. Attendees asserted that Grand Center would be even more attractive if it had improved lighting and bike accessibility, more amenities between and among the cultural institutions, less surface parking, better traffic flow and signage, and a wider variety of neighborhood conveniences (e.g. delis, dry cleaners etc.) and dining options.

2. Resident Focus Group, February 26, 2013. Twelve people who live in or near Grand Center met with the project team to share their perceptions of the neighborhood's assets, challenges and needs. Property managers at the Renaissance Place at Grand Apartments, Metropolitan Artists Lofts, University Plaza Apartments, Continental Life Building and Coronado Place Apartments and Lofts were asked to solicit the involvement of their tenants. Individual property owners who lived between Spring and Grand were also invited to participate.

   Following the same format as the employee focus group, attendees at the resident meeting were first given a brief survey and later participated in facilitated discussions. Survey results indicated that participants had lived in the district nearly five years on average, though the actual length of time spent in the area ranged from six months to 31 years. Most attendees either resided at the Metropolitan Artist Lofts, where the focus group was held, or in personal residences along Washington and Olive. Everyone used motorized transportation (cars or a scooter) as their major means of travel. However, one-third walked frequently and one-sixth often rode their bicycles. As with the employee group, parking was not a major concern since attendees used garages and residential parking lots to accommodate their vehicles.

   From the facilitated discussions, the project team learned that area residents view Grand Center as an exciting, creative and diverse place to live. It has the potential for more growth and needs more consistent levels of programming and activity. While some parts may feel unsafe, it remains a prime location because of its geographic accessibility, unique arts and entertainment venues, engaging community programming (First Fridays, First Night, summer music concerts etc.), and increasing neighborhood investments. These strengths are, however, moderated by the absence of neighborhood conveniences like a grocery store, the lack of pedestrian accommodations, security concerns, limited residential offerings, insufficient community branding, chronic parking hassles, and a sometimes "dull" street life. Even with these concerns, participants maintained that Grand Center's overall residential experience was a positive one that could ultimately be enhanced by the development of more neighborhood amenities and comforts, increased residential density, larger amounts of green space, and more community events.

Public Involvement Activities

Great Street's public involvement activities were designed to reach any person or stakeholder interested in, impacted by or invested in Grand Center's revitalization and development efforts. To that end, members of the public were invited to attend a public open house in late February and a final presentation in early May. Additionally, the project team and Emerson developed and conducted an electronic survey in March and April that targeted area residents, patrons, and community stakeholders. Through the team's combined efforts, 1,116 people participated in the Great Streets planning process via public involvement activities.

Charrette and Public Open House

The project team held a two-day community charrette /workshop at the end of February that culminated in a public open house. The event was held on February 28, 2013 in a future retail space of the historic, renovated Metropolitan Building at the corner of Grand and Olive. The timing for the event coincided with the completion of the analysis phase of the project. With 103 people in attendance, the open house encouraged participants to discuss their desires for neighborhood beautification, traffic, parking, streets, sidewalks and more. Individually and in small groups, participants met with team members who listened to and documented their aspirations, issues and recommendations for community improvement.

Stakeholder Charrette/Workshop

The second round of subcommittee meetings was conducted at the Charrette/Open House. At these meetings, committee members became acquainted with the project team; reviewed design sketches for their corridors of interest; provided the team with information on their committees' work to date; and identified critical corridor issues that the team needed to consider during the planning process. Seventy-seven community stakeholders and GCI representatives participated in these meetings. The study area was divided into three sections, West Community, Central Community and East Community, in order for corridor subcommittee participants to think about the inter-related issues and intersections of one corridor to another. The feedback from each of the groups was documented at the end of the meeting by summary statements that follow:

Sketches and stakeholder input

West Community

1. Develop the Spring Park as part of a gateway between Olive Street and Washington Avenue
2. Provide great connections along Spring – greenway, Lindell gateway, view to campus, link to VA Medical Center
3. Coordinate the mid-block pedestrian way with Land Use committee recommendations
4. Allow the Art Walk to define the character of the west section of Washington
5. Create a pedestrian environment on Spring – benches, destinations
6. Widen sidewalks/narrow streets on Spring and Washington
7. Frame buildings and destinations with trees

Central Community

1. Widen sidewalks into the parking lane on Grand – places for pedestrains, outdoor dining, performance, retail
2. Provide turn outs on Grand where needed
3. Reduce Grand to 2 travel lanes and one turn lane
4. Clusters of trees on north Grand sections
5. Close Grandel and re-image the Tilted Plain green space
6. Develop the art screens concept
7. Open the view of the Fox from the east
8. Consider moving Washington along the Jazz at the Bistro frontage
9. Integrate Land Use committee recommendations – mixed use wraps on parking garages
10. Reveal and enhance the character of community gateways
11. Lots of light, fewer light poles

East Community

1. Develop a multi-use/multi-season park space that also works for the circus
2. Design for easy and slow traffic and good pedestrian facilities
3. Opening Theresa to Lindell with cross-walks to Saint Louis University
4. Integrate parking with a plaza setting at Olive and Theresa
5. Widen sidewalks/narrow streets on Theresa and Washington
6. Integrate Land Use committee recommendations – mixed use wraps on parking garages
7. Lots of light, fewer light poles
8. Frame buildings and destinations with trees

A full summary of each meeting is presented in Appendix E.

Open House Exhibits

As part of the meeting's activities, participants viewed exhibit boards that provided information on the Great Streets principles, project goals, planning schedule, qualitative analysis and quantitative analysis. These boards were clustered in themed stations that covered nine topics, including:

- Great Streets Principles
- Framework Plan Information
- Transportation
- Branding and Wayfinding
- Spatial Analysis
- Site Analysis
- Lighting
- Public Art
- Street Conditions

Attendees marking comments on a large plan of the study area

Open House at the Metropolitan Building

Attendees and analysis exhibits at the Open House

Open House "What do you think?" Boards

Two comment boards and a large aerial photo of the project area were positioned at the Open House and asked the question "What do you think? Participants filled the boards with yellow Post It Notes with personal comments.

Below are the question prompts used at the Open House and the list of responses. The first question is an open response question to seek ideas that participants have for the community. The results revealed a robust list of pedestrian amenities, services and retail offerings.

QUESTION: What would you like to see in Grand Center?

- Wayfinding as BOLD art
- More places to kill time and linger
- Find a way to include the Palladium Building into the district
- Less clutter – lights too close together
- More interesting and affordable housing options
- Make Grandel a cul-de-sac
- FroYo?
- Bike lanes
- Bike lanes
- More bike lanes!
- More restaurants and retail
- Street cars connecting Delmar Loop, Grand Center, and downtown!
- Green stormwater management systems in existing parking lots (retention & educational uses)
- Bring back the Wagoner Building façade
- Walls of abandoned houses as video screens
- Bookstores, clothing shops, boutiques, unusual retail, home furnishing stores
- I would like to see more creative eateries and lounges; chill party places
- Less concrete!
- More retail!
- Better drop off/pick up
- Grocery
- Grocery
- Grocery store (not Whole Foods!)
- Affordable housing / renting
- More buildings
- More houses
- No more demo of historic buildings!!
- Art along the streets
- Higher class restaurants
- Cheap/casual/classy coffee and quick breakfast place
- No more parking lots please!
- More parking garages
- Less parking garages
- Parking RAMPS, not lots!
- IF more parking, make it permeable!
- 5-10-15 minute walk times are irrelevant if you are in heels or elderly (or both)
- Co-working spaces
- StarFire Productions
- Pop-up shops and restaurants
- More retail! More retail! More retail! Daytime activities!
- Park – make it easier to traverse
- Benches! Ledges! Places to sit!
- More dining and retail options to facilitate a trolley service (King Street – Alexandria, VA)
- Outdoor theater/movie/performing space (First Fridays, etc.)
- Public performing arts space
- Pedestrian amenities (more public seating areas)
- Lots and side streets need better lighting – feel dark compared to Grand itself
- Neighborhood boutique community-owned feel for other streets (Froyo, grocery, etc.)
- Retail and art placement – regional draws along Grand
- More boutique/neighborhood feel for side streets
- Give a reason to turn off Grand or come to Grand from other streets
- Retail placement – Vandeventer/Delmar could also have regional retail; think Magnificent Mile in Chicago, State Street is an off-shoot

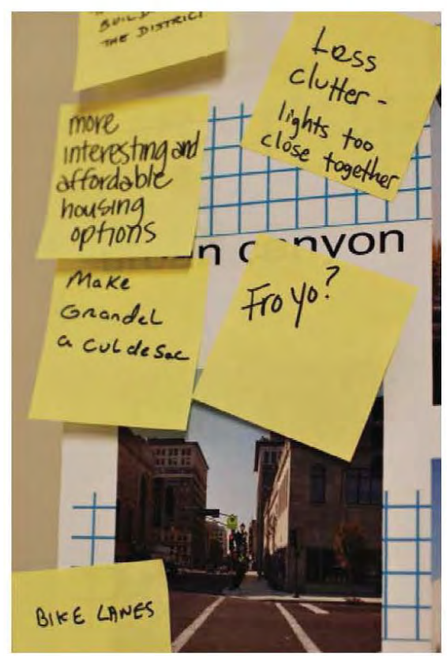
Attendees comments posted on board

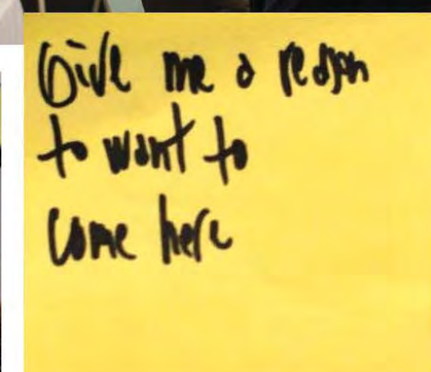
what do YOU think?

The second question asked for opinions of the transportation strategy advanced by the Framework plan. The outcomes revealed that these participants are savvy about the alternative routes to Grand Center and can see this as a viable option.

QUESTION: As an alternative to Grand, would you take either Compton or Vandeventer to get to Grand Center? Why? Or Why not?

- Yes, with better lighting and wayfinding
- Never use Grand; always use Vandeventer
- Compton is more direct for me
- Vandeventer currently has more businesses, etc. which could benefit from the direct route
- Yes! Either! Space traffic out to make transportation faster/safer/easier.
- Compton – less traffic, less construction, less dangerous
- On bicycle I would prefer Compton, but in a car I would use Vandeventer
- Yes, I think both Compton and Vandeventer are great options. I use them already!
- I think Vandeventer is good.
- County-based patrons need interstate signs to help them find their way home
- Vandeventer – I'm coming from the west.
- I ONLY use Vandeventer to get here!
- Yes – we almost never use Grand because everyone else does.
- Compton has less traffic and no students crossing
- Vandeventer - goes to 44





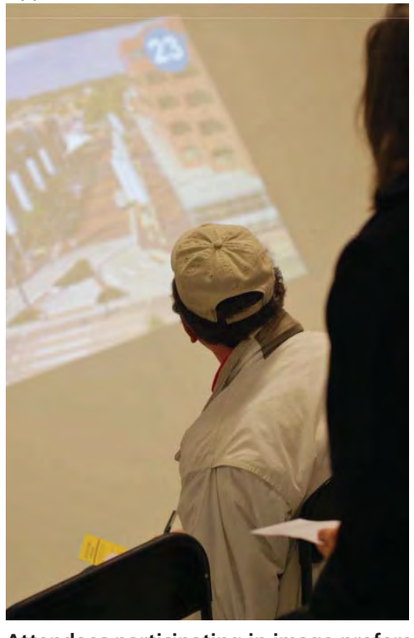
Open House Image Preference Survey and Results

There was an opportunity to participate in an Image Preference Survey at the Open House. Participants were asked to review 42 images in a continuous loop and simply record their response to the instructions *"Circle the numbers below of any images that represent a look that is appropriate for Grand Center."* A wide variety of images were presented including streetscapes from around the world, public art installations, gathering spaces, lighting and materials.

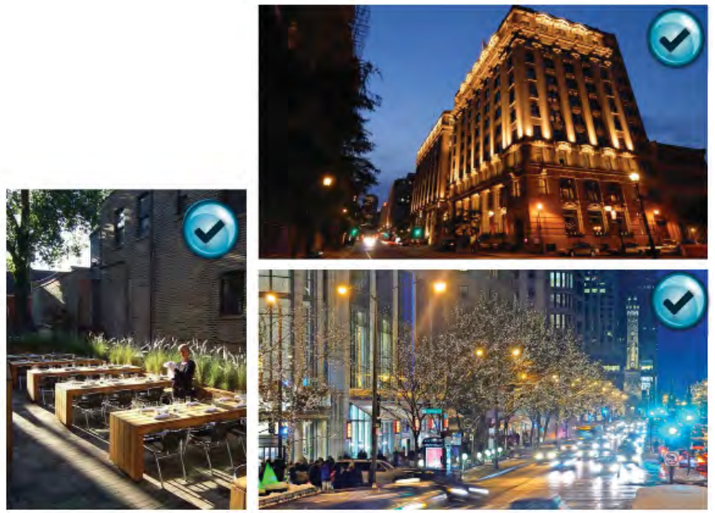
The results of the survey can be summarized by reviewing the top 3 preferred images and the top 3 least preferred images:

Highest ranking images: a vibrant nighttime street scene reveals a street where cars and pedestrians and trees and retail destinations are all in balance. Tree lighting and building lighting enhance the experience and highlight the assets of the street. A unique outdoor dining space reveals a desire for an intimate gathering spaces and sense of community.

Lowest ranking images: these street-dominated images and a lack of people give the impression that the needs of the vehicle comes first. Spaces and intersections are not human scale. Architecture is not highlighted or celebrated.
The images and results from the Image Preference Survey are provided in Appendix L.



Attendees participating in image preference survey



Highest ranking images

Lowest ranking images

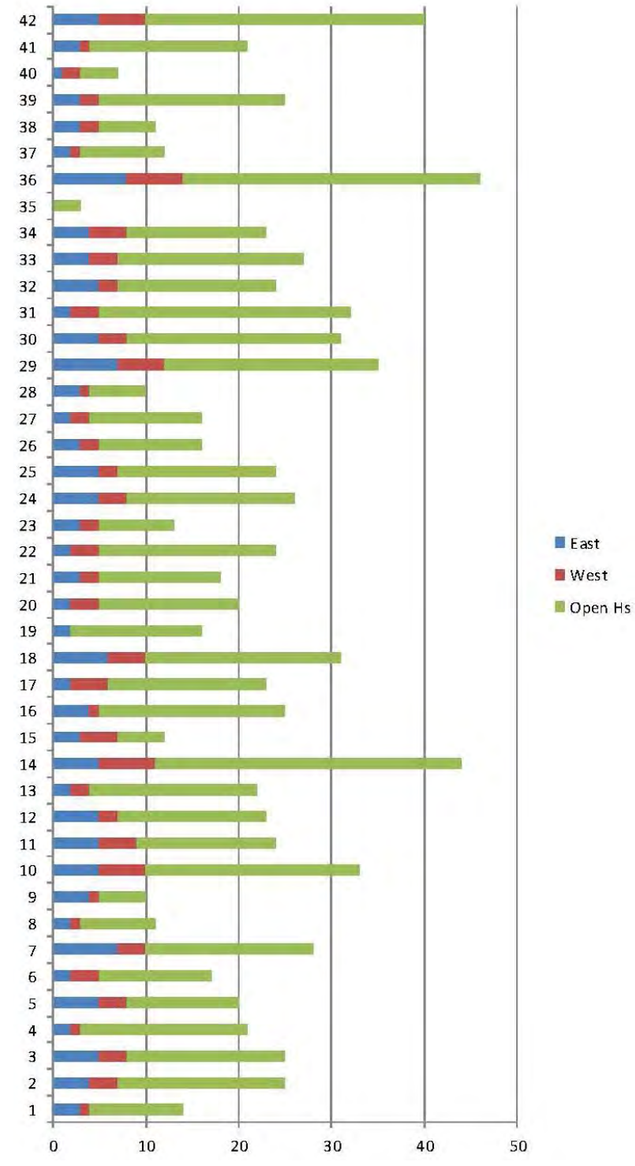


Image preference survey results

Open House Comment Form

After participants completed the participation activities of the Open House, they were invited to complete an event comment form. This document asked them to provide basic information about themselves; share how they learned about the event; evaluate their open house experience; describe what would make the Great Streets project a success; and provide additional comments or questions. Twenty-eight participants submitted completed comment forms. The findings from their submissions were compiled in a summary report that is presented in Appendix F. A brief synopsis of these findings is offered below.

More than 40% of those who completed open house comment forms were patrons of the arts in Grand Center, shopped and/or dined in the community, and were either students or parents of students who attended area schools. Nearly 20% lived or worked in the community.

GRAND CENTER GREAT STREETS
OPEN HOUSE COMMENT FORM

Thank you for completing this comment form. Your input will be used by the Grand Center Great Streets team in its community planning efforts and will inform the development of a more vibrant, attractive Grand Center.

PUBLIC INVOLVEMENT:

1. Which of the following best describes you? Please check all that apply.

____ I live in or near Grand Center
____ I work in or near Grand Center
____ I shop and/or dine in Grand Center
____ I am a student or a parent of a student of a nearby school, college or university
____ I am a patron of the arts in Grand Center
____ I am a patient or visitor at the Veterans' hospital
____ I am a property owner in Grand Center
____ I worship in Grand Center
____ Other

2. How did you find out about this Open House? Please check all that apply.

____ Printed Flyer
____ Website
____ Newsletter
____ Email
____ Social Media / Facebook
____ Other
____ Media / Advertisement
____ Word of Mouth

3. Please evaluate this event according to the following, circle your answer…

A. The study team was:

Informative				Uninformative
1	2	3	4	5
Helpful				Not Helpful
1	2	3	4	5
Prepared				Unprepared
1	2	3	4	5

B. In general the Open House was:

Well Planned				Disorderly
1	2	3	4	5
Worth My Time				Waste of Time
1	2	3	4	5

4. What would make this project a success to you?

5. Additional comments or questions:

THANK YOU!

Most respondents learned of the open house through word of mouth (41%), email (33%), social media (15%), and printed flyers or GCI's website (11% respectively). A little more than a quarter of respondents (26%) identified "other" as their primary information source, but none provided a written explanation that illuminated this response.

On the whole, respondents found the project team to be highly informative, helpful and prepared. They maintained that the open house was well planned and worth their time. While some would have preferred a presentation format to the high-touch open house setting, all appreciated the multiple opportunities to give their input and make their preferences known. This focus on meaningful engagement helped to make the open house a success.

Respondents later reflected on what would make the project a success and in this context emphasized the need for project funding and implementation. They want to see the community move forward with neighborhood beautification efforts, the adoption of better street designs, the development of a more robust pedestrian experience, improved traffic flow, increased parking, and the transformation of Grand Center from an arts and culture district into a livable area.

Design Review

The third round of committee meetings took place on April 4 and 5, 2013 to reveal the first look at the integrated design proposal for the public realm. The first meeting held was a general stakeholder presentation that was attended by 50 representatives of area institutions and community organizations. The subsequent meetings were focused on aspects of the design for each of the corridor sub-committees and afforded the team the opportunity to share its findings and emerging conclusions, including corridor specific design recommendations. Attendees were then asked to provide their feedback on the recommendations, including any desired design modifications, additions and deletions. An additional 95 people attended these sessions. Each subcommittee had specific direction for the refinement of the design that can be found in Appendix E. The core concepts of the design proposal generated excitement and had strong support for the following:

Reviewing the design with the stakeholders

1. The opportunity to widen sidewalks and right-size travel lanes including the recommendation to formalize Grand Boulevard to a 3-lane road section.
2. The "Street as Urban Stage" concept for Grand Boulevard which included a durable, elegant streetscape, theatrically-styled lighting and a curbless area at Grand and Washington.
3. The alternative parrallel route strategy to use the additional capacity of Vandeventer and Compton to reduce the through-traffic load on Grand as well as the arrival and exiting strategy for the venues.
4. The emphasis on a mode shift strategy to encourage visitors to arrive at Grand Center from Vandeventer and Compton, find parking off of cross-streets and become pedestrians as soon as possible.
5. Reinforcement of the transportation strategies with a more comprehensive wayfinding strategy that includes integrated highway signs, local wayfinding and detailed levels of pedestrian wayfinding.
6. Guidelines for public temporary and permanent art integration in Grand Center.

Digital Survey and Analysis

The project team was assisted by the market research department of Emerson, a diversified global manufacturing and technology company in St. Louis to prepare a digital survey for the project. Emerson structured and administered the survey in February and analyzed the results in April. Survey questions directed toward patrons, residents, students and the area workforce were composed to solicit input regarding the conditions of the Grand Center area in comparison to peer business districts in the St. Louis area, aspects of public transportation use and to establish the baseline data for Great Streets criteria. The research objectives include the following:

- Determine the most important Great Streets criteria for Grand Center to fulfill
- Assess the performance of Grand Center in meeting Great Streets goals / benchmarks
- Collect information on user subgroups and their needs;
- Identify factors critical to community design and targeted marketing efforts
- Explore special topics like transportation, barriers to using MetroLink, parking behaviors, traffic concerns and pedestrian interests. Including special topics:
    - Transportation
    - Barriers to using MetroLink
    - Parking behaviors
    - Traffic concerns
    - Pedestrian concerns

A total of 871 people from St. Louis City, St. Louis County, St. Charles County, nearby Illinois counties and other states completed the on-line survey. Emerson analyzed data from respondents' submissions and produced a 59-page report summarizing the detailed findings A brief summary is included below:

Summary of Findings

Over 65% of the respondents were major venue subscribers. Nearly all of the respondents visit Grand Center frequently and 83% of them live in St. Louis City or County. The respondents could be categorized into two major segments:

1. Distant Visitors (45% of respondents) – more concerned about parking, vehicular circulation, getting in and out of Grand Center efficiently and less concerned about the characteristics of an active, energetic community.
2. Nearby Visitors (55% of respondents) – more concerned about creating an active, energetic community and less concerned with parking, vehicular circulation issues and getting in and out of Grand Center.

Emerson found that Grand Center had a higher-than-average score on Great Streets' "Active Interesting Character" concept because of its arts and culture focus as well as its exceptional architecture. However, it had a lower-than-average overall Great Streets' score because of basic concerns involving safety, comfort, food and cleanliness. To increase the community's appeal, respondents suggested having the following: police walk the streets; more landscape plantings; and a heavier emphasis on street tree health, vehicle emissions and stormwater management. In addition, they indicated that MetroLink should be easier to access; parking easier to find; traffic congestion abated; and better lighting established throughout the community.

Final Presentation

On May 9, 2013, the project team held a final presentation for community stakeholders and the public describing in detail its recommendations for a more vibrant, attractive Grand Center. Team members incorporated community input from earlier public involvement activities into their designs and then formally shared their recommendations for better lighting, parking, streets and sidewalks, landscaping and beautification, traffic flow, and bicycle and transit access. Seventy-four people attended the evening's opening reception, 90-minute presentation, and 30-minute question and answer session.

Every member of the project team participated in the final presentation, which covered a host of topics, including:

- An overview of Great Streets' principles
- A synopsis of Grand Center vision statements
- A summary of the public engagement program
- Digital survey results
- An exploration of redevelopment opportunities
- Streetscape and lighting recommendations
- A vision of public art in the District, along with guiding principles and strategies
- Suggested stormwater treatments and best management practices
- A listing of branding, signage and wayfinding opportunities
- Insights on changing travel habits to, from and through Grand Center

With so much content to discuss, the team presented a 142-page slide deck that captured for attendees the essence of its final deliverable to EWG and GCI. Participants were, however, invited to give another round of input via public questions and comments and an event comment form. As with the comment form for the February open house, this document asked attendees to provide basic information about themselves; share how they learned about the event; evaluate their final presentation experience; give their impressions of the team's design recommendations; and provide any additional unscripted comments. Twenty-five participants submitted completed comment forms. The findings from their submissions were compiled in a summary report that can be found in Appendix G. A brief synopsis of these findings is offered below.

Sixty percent (60%) of those who completed comment forms identified themselves as patrons of the arts in Grand Center. Thirty-six percent (36%) worked in or near the community and/or shopped or dined at local establishments. Nearly 30% stated that they lived in the area. Most respondents learned of the open house through email (48%), GCI's newsletter (20%), social media (16%), word of mouth (8%), and media / advertisements or the project's webpage (4% respectively). An additional 20% identified "other" as their primary information source, but did not provide an accompanying written explanation.

Respondents found the project team to be very informative and prepared. They asserted that the final presentation was well planned and comprehensive, though it offered too much information to easily digest. Overall, they felt that the team's proposed designs were very positive and would be beneficial for Grand Center. Of particular interest to them were the lighting concepts, which generated great excitement, and the widening of sidewalks. Several respondents did, however, suggest that the team provide more substantive designs for areas outside of the study area; adjacent to Vandeventer and along the northeast corner of Grand and Lindell. They also requested more emphasis on the community's residential development and amenities. The comment form summary is available in Appendix G.

Technical Review & Hand-off Activities

To help ensure a smooth transition from Great Streets planning to project implementation, the Grand Center team engaged municipal officials, utility representatives and state agency staff in its planning efforts both early in the process and at critical decision-making points. Meetings with the Technical Advisory Group (TAG) were conducted along with other stakeholder involvement activities. In addition, a capacity building workshop for those charged with plan implementation was scheduled at the project's end.

Technical Advisory Group (TAG) Meetings

Three TAG meetings were held over the course of the planning process. These meetings were conducted after the kick-off meeting and first and second rounds of stakeholder committee meetings described earlier in this document. The meetings' primary purpose was to understand the long-term transportation and utility needs of the community within the context of the Framework Plan and the evolving Great Streets master plan. They also afforded the project team an opportunity to incorporate the TAG's planning expertise and design requirements into its proposed designs. A summary of the findings from the first TAG meeting can be found in Appendix E. Insights from the second TAG meeting are included in Chapter 6: Master Plan.

Hand-off Meeting

At the end of the project on June 27, 2013 the project team met with representatives from political leadership, municipal staff, Grand Center, Inc, East-West Gateway, and representatives for residents, businesses, and institutions. The intent of the meeting was foster a commitment to the project and to protect the integrity of the planning process over time and implementation cycles. Often, the rationale for decisions and project history are lost to time or during the involvement of new people in the process. As changes are made, the intricacies of the layered, multi-disciplinary process that drove decisions with significant community input need to be considered by those in charge of implementation. Changes to the plan will be necessary and incremental implementation will be necessary to build this plan. The meeting was aimed at educating project "implementers" about the plan fundamentals, the range of issues at play, and the process that was used. A commitment to support the plans was given from the mayor's office and other constituents at the end of the meeting.

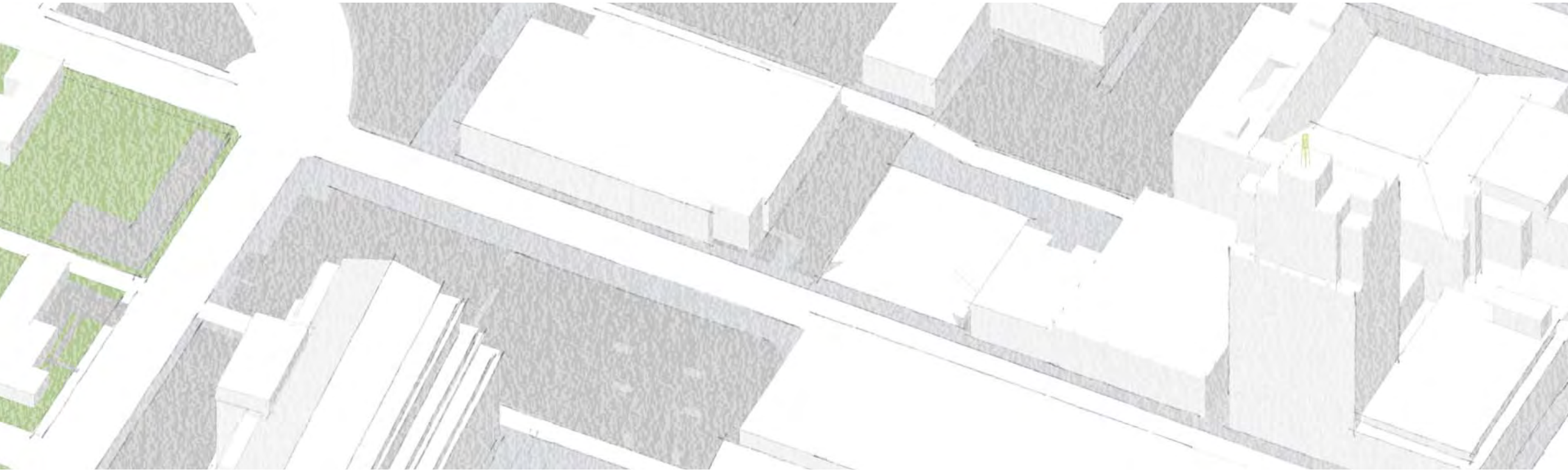
Community Outreach Activities

The project team's community outreach activities were largely undertaken to drive stakeholder and public participation in the February public open house and May final presentation. Working together, team members and GCI's community liaison, conducted a variety of communications and outreach tactics preceding both public meetings. A comprehensive list of these activities can be found in the Record of Public Meeting documents submitted to East West Gateway and presented as Appendix A. A brief summary of outreach efforts is provided in the table below.

Outreach Tactics	Reach / Distribution
Electronic Invitations & E-Blasts	▪ For the February and May public meetings, electronic flyers and email invitations were sent to nine GCI committees / boards, GCI's community database and the "listservs" of seven area institutions ▪ ***Total of 2,000+ electronic notices sent to area residents and stakeholders (twice)***
Newsletter Inserts	▪ For the February and May public meetings, newsletter inserts / articles on the events were presented in GCI's newsletter and the Fox subscribers' newsletter ▪ ***Total of 1,500+ community stakeholders and patrons reached***
Automated Phone Calls	▪ For the February public meeting, automated phone messages about the event were sent to all Clyde C. Miller Academy students and families
Advertising	▪ For the February and May public meetings, on line and print advertising was purchased for the events in the *St. Louis American* and *First Civilizations* ▪ ***Total circulation for both publications 86,000***
Flyer Dissemination	▪ Flyers for the February and May public meetings were disseminated to more than 35 area churches, businesses, restaurants, schools and institutions in or near the District ▪ ***Total of 8,500 flyers distributed***
Web-based Outreach	▪ Meeting announcements for the February and May public meetings were placed on GCI's Great Streets web page

Public Communications Log

Occasionally, the team's outreach efforts resulted in unsolicited public inquiries or comments. All of these exchanges with the project team were addressed and subsequently recorded in a public communications log. Over the course of the project, only four public comments / questions were submitted to the team for consideration. These focused on a range of topics from MetroBus movement along Grand Boulevard to the length of the on-line survey, to interest in the public meetings. Appendix H contains a listing of each query, comment and team response.



4 ANALYSIS

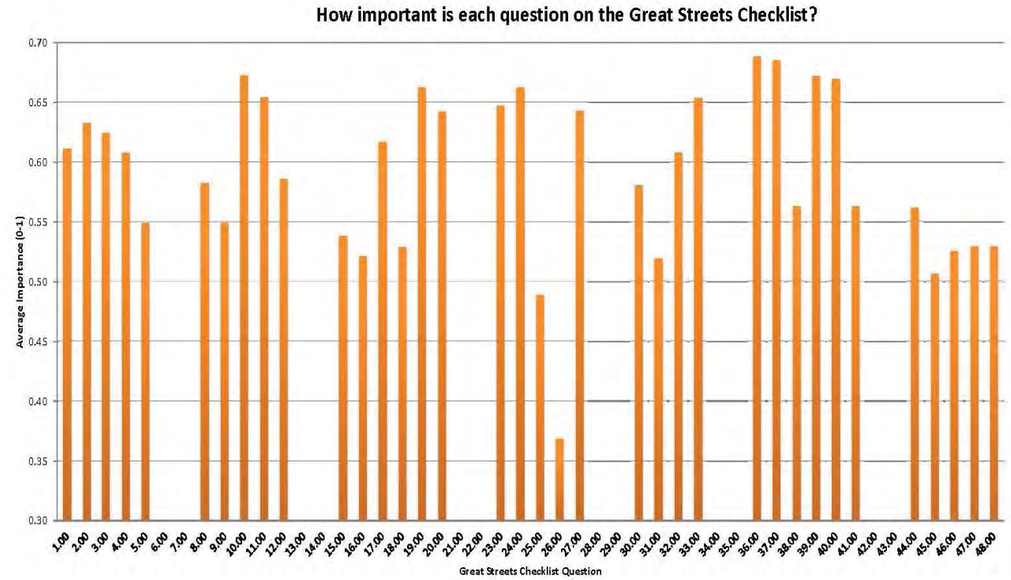
ANALYSIS

Goals for the Analysis

At the completion of the Framework Plan and in anticipation of the Great Streets project, it was determined that there was a need to enrich the dialog around particular great streets principles. A focus on particular components of a green community had not been part of the original dialog. Investigation into the heat island effects from parking lots, garages and roofs as well as the conditions of storm water drainage and the urban forest inventory were needed. The Framework Plan addressed event/venue transportation but did not include a traffic engineering consultant to evaluate proposed street designs against average daily traffic loads, daytime and nighttime peaks as well as events congestion. The Framework Plan addressed many elements of place-making, development patterns, street narrowing/sidewalk widening and special treatment zones. The goal for the Great Streets project was to leverage the multi-disciplinary team to fill in the analysis gaps with quantitative and qualitative investigation focused on great streets principles. The project also addressed the look and feel of the street environment, the pedestrian experience and functional completeness of the streets. With the Framework Plan as a point of reference, its proposals were tested and its merits weighted against the Great Streets principles.

The Great Streets Checklist

The "Great Streets Checklist" was prepared as a tool to articulate the specific planning objectives that governed the project planning and design direction. The Great Streets Checklist documented the baseline or existing conditions of the community with respect to the principles at the beginning of the project and was used throughout the planning process to evaluate concepts and designs. The checklist was introduced to the subcommittees during the 2-day charrette. Participants were asked to rate the importance of aspects of the Great Streets principles and then fill out the checklist based on how Grand Center embodies the Great Street principles today.



The results of the checklist can be found in Appendix K.

Documenting the Great Streets characteristics

The most important and least important characteristics according to stakeholders are listed below with the Great Street principle in parenthesis:

The most important Great Streets characteristics:

- The street has memorable places (Great Streets facilitate place making)
- The street has public spaces such as parks and plazas (Great Streets facilitate place making)
- The pedestrian environment is safe (Great Streets allow people to walk comfortably and safely)
- The street has sidewalks that are wide enough to provide for an active street life(Great Streets facilitate place making)
- The street has destinations along it (Great Streets facilitate place making)

The least important Great Streets characteristics:

- The street provides safe and convenient freight movement (Great Streets are functionally complete)
- The street provides for safe and convenient bicycle travel (Great Streets are functionally complete)
- The street looks like it incorporates green development techniques such as rain gardens (Great Streets are green)
- The street provides for those who want to travel through the district and beyond (Great Streets provide mobility)
- The street helps promote commerce (Great Streets contribute to economic vitality)

CHRISTNER

The Great Streets Check List outlines the principles of the Great Streets Initiative and refers to the street itself as well as the sidewalks, street trees, lighting and other improvements in the public right of way.

What do you think about the streets in Grand Center?

Great Streets Check List **Subcommittee:** **Date:**			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS ARE REPRESENTATIVE OF THEIR PLACE			
1. The scale of the street is appropriate for people and uses			
2. The character of the street is appropriate for the context of the district			
3. The street helps the district feel like a community			
4. The street feels like it is unique to Grand Center			
5. The street responds to special needs of the district			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS ALLOW PEOPLE TO WALK COMFORTABLY AND SAFELY			
1. The pedestrian environment is well designed			
2. The pedestrian environment is well furnished with pedestrian amenities			
3. The pedestrian environment is safe			
4. The width and condition of the sidewalk is conducive to walking			
5. The pedestrian environment is inviting to people			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS CONTRIBUTE TO ECONOMIC VITALITY			
1. The street helps people interact			
2. The street helps promote commerce			
3. The street is a destination for Grand Center and greater St. Louis			
4. The street is an effective transportation channel for vehicles			
5. The street is a desirable address for businesses and venues			
6. The streets provide connections from residential neighborhoods to businesses and venues in the district			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS ARE FUNCTIONALLY COMPLETE			
1. The street provides for safe and convenient transit travel			
2. The street provides for safe and convenient waking travel			
3. The street provides for safe and convenient bicycling travel			
4. The street provides for safe and convenient freight movement			
5. The street provides for safe and convenient accessible travel			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS PROVIDE MOBILITY			
1. The street balances the three elements of mobility: through-travel, local circulation and access			
2. The street provides for those who want to travel through the district and beyond local destinations			
3. The street provides for good local circulation through the district to local destinations			
4. The street provides for good access within the district			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREETS FACILITATE PLACEMAKING			
1. The street has memorable places			
2. The street has public spaces such as plazas and parks			
3. The street has attractive intersections and corners			
4. The street has sidewalks that are wide enough to provide for an active street life			
5. The street has destinations along it			
6. The streets has a recognizable design character that makes it unique to Grand Center			
	Important (Y or N)	**First Impression (1 low – 5 high)**	**Comments**
GREAT STREES ARE GREEN			
1. The street provides an attractive, green environment that incorporates natural systems such as native plants and urban forests			
2. The street looks like it incorporates green development techniques such as rain gardens, porous paving, water conservation or reuse, etc.			
3. The street has a generous amount of street trees and plantings			
4. The street has energy efficient lighting			
5. The street pavements are shaded by trees and buildings and reduce the build-up of heat in the summer.			

Analysis Discovery Methods

The analysis phase focused on both qualitative and quantitative analysis and spatial observation. The existing conditions of the street were documented by the design and engineering consultants during multiple site visits. Due to the aging condition of the existing street infrastructure, very little civil survey data exists for Grand Center. Any previous construction projects and utility drawings were collected from the City of St. Louis and various utility agencies to help form the project base map. Many individuals on the Design Team represented a significant experience resource having worked on previous Grand Center projects. But others on the design team surveyed the community with fresh eyes and a designer's critique to capture impressions of the community and qualitative and spatial character.

Existing sidewalk on Grand Boulevard

Site Analysis: Spatial and Qualitative

The Framework Plan touched on the physical barriers and perceptions that limit Grand Center's ability to function as a true community. A focus of the analysis for the Great Streets project was spatial and qualitative in effort to understand these limitations. A series of illustrations apply emphasis to these challenges on the following pages.

Existing sidewalk on Grand Boulevard

Grand Boulevard and Olive Avenue intersection

Narrow sidewalk conditions on Washington Avenue

legend:

- buildings with arts use
- buildings with institutional use
- schools
- churches
- visual arts cluster
- performing arts cluster
- institutional anchors
- locust business district
- renaissance place at grand apartments

Community Anchors

Today, Grand Center is nicely positioned at the center of key institutional anchors, much like a shopping mall's anchor department stores are destinations for users and centers of employment. Institutional anchors such as Saint Louis University, the Veterans Administration Medical Center, Cardinal Ritter and Clyde Miller High Schools, Renaissance Place Apartments and the Locust Street Business Districts all draw people to Grand Center. Other community anchors such as the performing and visual arts destinations are currently the most effective in drawing people to the area but are not known to be one arts district. This diagram illustrates how Grand Center anchors are perceived by users to operate as "islands" as not as a connected community. Grand Center can break down barriers to connectivity and leverage its institutional and arts anchors more effectively to encourage its users to linger in the community and support strong retail, commercial and residential offerings.

legend:

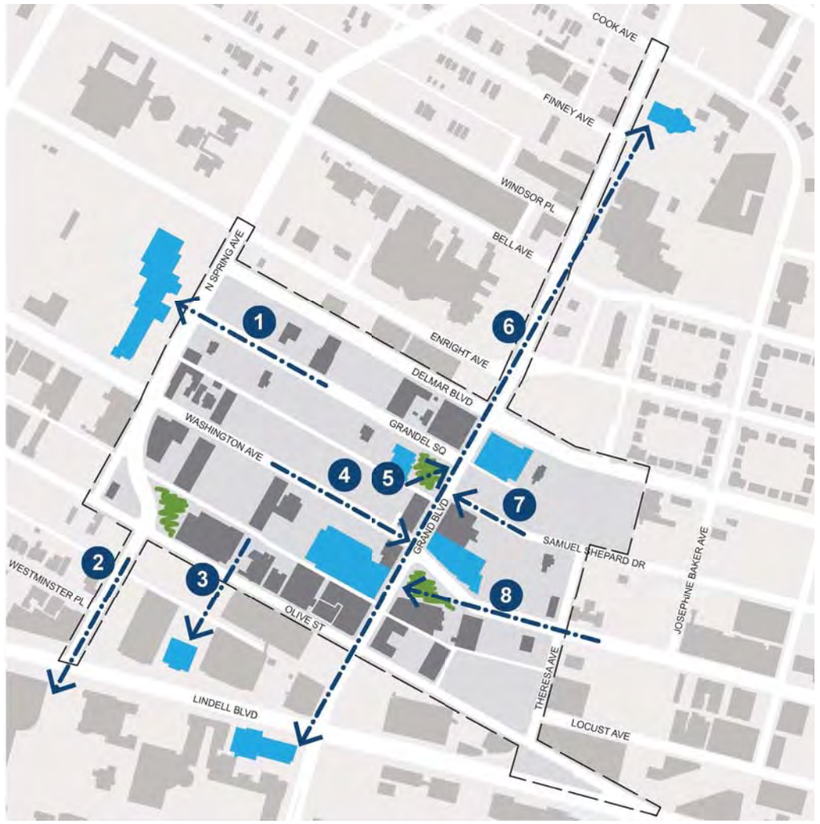
- grand center core
- public destinations
- * current art locations
- 1 perceived barrier
- ← potential connection

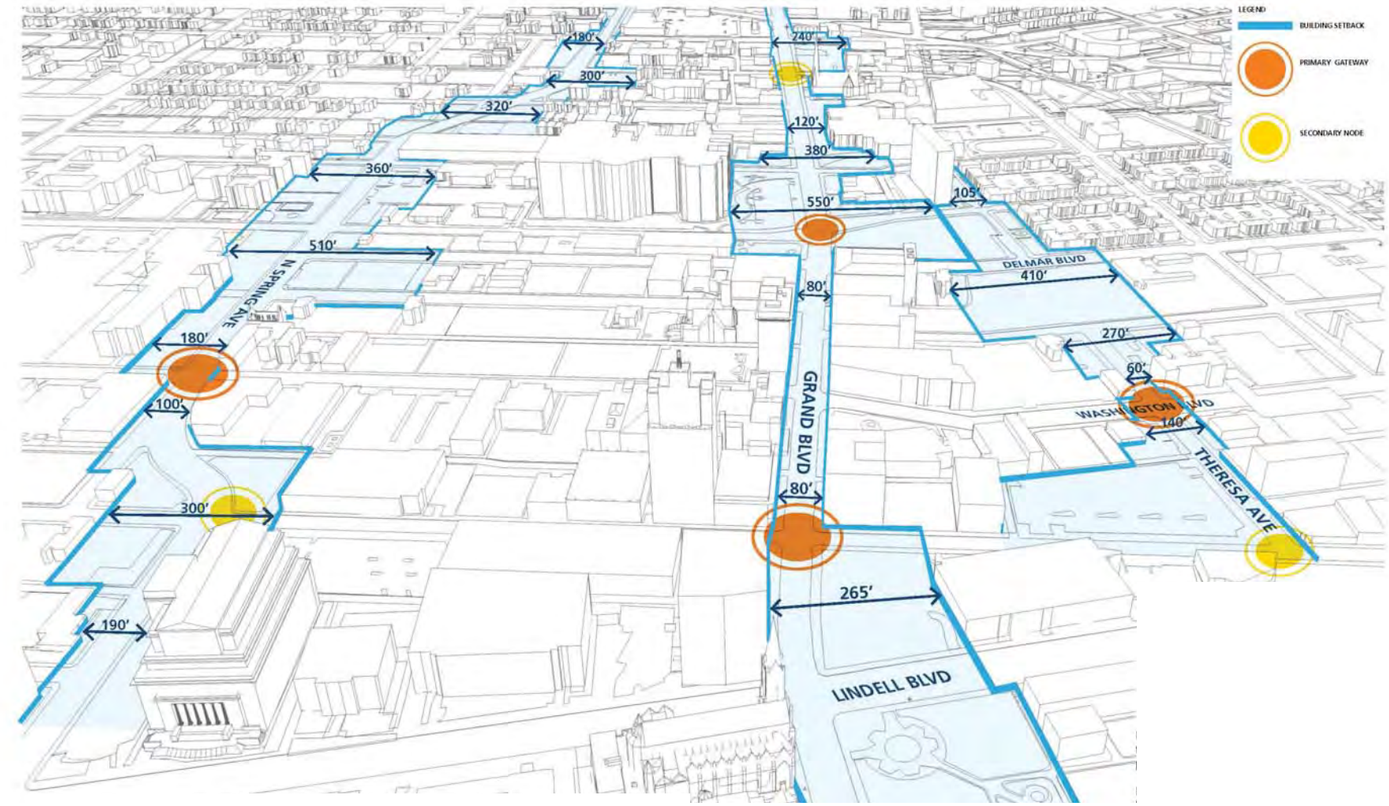
site key:

1. street edge dissolves, change in use
2. blank wall, lack of activity
3. long stretches of empty space - pedestrian comfort requires closely spaced destinations
4. long stretches of empty space
5. opaque facades, confusing traffic flow
6. locust business district abrubtly ends at surface parking
7. poor access to grand metrolink station, no clearly defined gateway to grand center
8. missing connection to slu campus; no feeling of continuity with grand center

Perceived Barriers to Connectivity

Stakeholder input and design team observation came together to document key physical and perceived barriers that reinforce the "island" effect.





Prominent Views

Grand Boulevard is aligned along the ridge line that the early settlers of St. Louis found in the 1700s. As the side streets fall away in east and west directions, views beyond the community are framed by buildings and even terminated by buildings. It is evident today that designers considered the view when designing their structures to take advantage of topography and kinks in road alignment. The impressive and massive Third Baptist Church literally terminates one's view when traveling east-bound on Washington Street, west of Grand Boulevard. The view traveling west-bound on Washington used to terminate at the Fox marque. A realignment of Washington Street, maturity of trees in Strauss Park and outdoor dining clutter have all but blocked this important view shed. There is an amazing axial view from "steeple to steeple" is from St. Francis Xavier College Church at Saint Louis University's campus on the south to St. Alphonsus Liguori "ROCK" Catholic Church at Cook Street on the north is created by a slight kink in Grand Boulevard, north of Delmar Boulevard. On the other hand, large expanses of surface parking allow broad and open views that highlight the "urban void" and contribute to a sense of inactivity in Grand Center.

Spatial Analysis

Vertical elements such as trees and buildings form the walls of a street and define an urban street as opposed to a suburban street. The activities contained within the buildings are the destinations and draw for the inhabitants of the street. A graphic representation of each of the north-south corridors in Grand Center, Spring, Grand and Theresa, reveals the loss of the street wall along the majority of each of the corridors. It is particularly notable to point out the missing corner buildings at key intersections such as Olive/Grand, Olive/Theresa, Olive/Spring, Grandel/Spring and Delmar/Grand. That being said, the street wall, tall historic buildings and marques of Grand Boulevard between Olive and Delmar have been preserved over time and maintain a distractive character that can be considered an "Urban Canyon"

Street Character Map

Street Character

Within the study area, the Design Team found ways to characterize the existing physical conditions of the streets in order to communicate its challenges and opportunities. The street corridors were grouped into four character categories:

Urban Canyon – characterized by the preservation of the street wall, tall historic buildings and marques of Grand Boulevard between Olive and Delmar and Washington, east of Grand.

Parkway – characterized by large rights-of-way, green "front yards" and wide building setbacks along Spring Avenue and Grand Boulevard north of Delmar.

Urban Void – characterized by streets adjoining surface parking lots, a general lack of street wall and isolated buildings found on Delmar, Grandel and Washington Streets.

Commercial Street – characterized by existing employment centers, parking resources and buildings forming the street wall found on Olive Street.

Building Façade Analysis

Landmark Facades

A significant portion of Grand Center building are listed on the National Register of Historic Places and contained within a National Historic Neighborhood. Of the significant buildings in Grand Center, many feature historically significant facades (e.g. Continental Building), marques (e.g. the Fabulous Fox) or landmark facades designed by prominent architects (e.g. Pulitzer and CAM). Grand Center can build on this wealth of architecturally significant and visually interesting structures. Future infill buildings should frame and highlight these facades and/or be designed to be architecturally significant in their own right.

Active and Inactive Street Level Presence

A landmark façade does not draw pedestrian activity at the street and sidewalk level on its own. The activities and the people behind the façade draw others to a business district. Despite its visual interest and historical significance, the Fox façade, has an inactive presence on Grand Center except during performances. This represents a significant gap in activity or the presence of people along Grand, contributing to a poor pedestrian experience. The Fox can introduce an active side-walk level us such as a cafe to create a human touch point along its façade. Outdoor dining will also bring activities out onto the sidewalk. Grand Center currently has outdoor dining on the south side of Strauss Park. Grand Center side streets represent the most logical locations for outdoor dining in conjunction with new mixed use developments and sidewalk level restaurant sites.

Site Analysis: Environmental

The Great Streets project for Grand Center also focused on environmental and quantitative analysis to gain an understanding about the baseline conditions of the community with respect to physical conditions, transportation and lighting.

Existing green spaces and urban heat islands

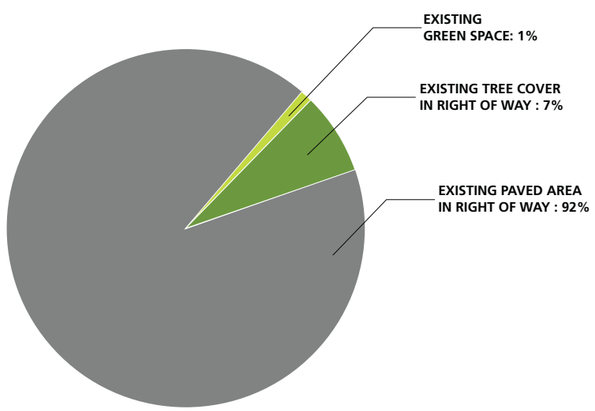


Chart of the green spaces, tree cover and paved areas in the rights of way

Green Space, Trees and the Urban Heat Island Effect

Heat gain in urban areas due to a high percentage of pavement and roof surfaces exposed to the sun can be as much as 20 degrees hotter than rural areas. This urban condition causes all sorts of economic, safety and personal comfort issues: Increased energy usage for cooling, increased pollution, dangerous conditions for residents of non-air conditioned buildings, personal discomfort for urban inhabitants and challenges maintaining urban green spaces and trees. New and renovated roof surfaces can use light or reflective roof (high albedo) material to reduce this problem. The use of concrete pavement can positively impact this problem. But the most effective strategy for reducing the effect of the urban heat island on the sidewalks and places that pedestrians use is trees. When maturing, trees create a natural umbrella that blocks the sun from reaching and heating the pavement. People will seek out even the smallest patch of shade when sitting outside. Unfortunately, in the Grand Center study area only 8% of the public right of way is covered by green space and tree canopy while the other 92% is covered by pavement. Additionally, there are 15 acres of surface parking lots and 21 acres of roof tops adding to the heat island effect in the study area.

Existing average soil volume in Grand Center

Strong Foundations for Trees

It is recognized by the Great Streets principles and the City of St. Louis Sustainability Plan that trees are desired in the public realm. Trees in the streetscape contribute greatly to the health and livability of our cities. Urban streetscapes notoriously provide inadequate conditions for vigorous tree growth. The secret lies beneath. A tree's foundation is its root system. It needs soils that are not compacted so that they allow free drainage and air and nutrient exchange. Trees also need adequate soil volume. On average, a street tree is provided approximately 144 cubic feet of soil in a typical streetscape.

Research by James Urban and Cornell's Urban Horticulture Institute indicate that ideally 1,200 cubic feet is a reasonable minimum volume of soil to support a functional large-canopy street tree. While this number is not always realistic to provide, it is important to recognize the benefits of larger volumes of good soil and find means to provide trees with a healthy soil infrastructure. Just as buildings need strong foundations, trees are the structure in the landscape, and they too need strong foundations.

Diagram of proper soil volume for a healthy shade tree

Existing Tree Conditions

legend:

- large mature shade tree
- good condition
- fair condition
- poor condition
- × tree grate in sidewalk with missing tree
- — portions of streets with no trees planted in the right-of-way

Urban Forest

Today, the urban forest inventory of Grand Center represents a wide range of conditions, health and success with many trees in decline or stunted by growing conditions. Many street trees have been removed presumably when damaged or dead. Empty tree planting areas are prevalent throughout the district and have become tripping hazards. The locations of the trees within the study area, their conditions and relative size have been illustrated. A significant portion of streetscape frontage is devoid of any trees.

Street trees in small tree pit can lift tree grates`

Empty tree pits are common in Grand Center

Attractive mature trees in Strauss Park

Attractive, mature Oak Trees in Strauss Park continue to be an asset at the corner of Grand and Washington. They provide shade for summer events in the park and form the street wall along the open park edge. However, these trees should be pruned to open the views to the Fabulous Fox marque.

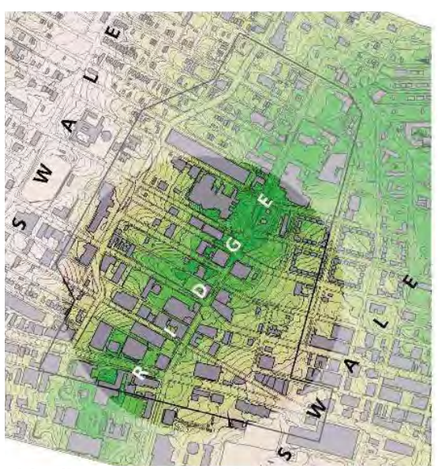
Infrastructure Analysis

Storm water Challenges

A Combined Sewer System

The existing system serving Grand Center and much of the City of St. Louis consists of combined storm and sanitary sewers. This condition is not ideal as it directs sanitary waste to our streams and rivers when the system overflows. It also contributes to sewer backups in homes. The City of St. Louis is working toward a future where there are separate storm and sanitary sewers. This is considered "Green Infrastructure." This will take many decades but each new project and sewer upgrade brings the goal closer.

The combined sewer system serves to drain both the public right-of-way and the private properties. Private properties have direct connections of both the sanitary piping and the roof drainage to the combined system. Grand Boulevard is the high point of two Mill Creek sub watersheds within the Bissell Service area of the local authority, Metropolitan Sewer District (MSD). The Grand Boulevard ridge has a high point south of Bell Avenue and storm water drains north and south from there. The drainage pattern fall away from Grand along the cross streets and alleys within the district.



Ridgeline at Grand Boulevard

Overflow and Flooding

Stormwater enters the system at inlets located in the streets, alleys and direct connections of the roofs within the district. For the most part, the system is adequate to serve the district but a couple of problem areas were identified during the project. These include the street drainage east of Grand on Washington Avenue and east of Grand on Olive. The street flooding is caused by gutter spread (width of the flow in the street) and is directly related to the distance between inlets. Additional inlets along both streets will address the problem. However, MSD has goals for the inclusion of green infrastructure to reduce the load on storm sewers in the Bissell Service Area and Great Street incorporate sustainable stormwater strategies. These are called Best Management Practices (BMPs) by civil engineers. Stormwater design options were explored in this project to enhance the function of the stormwater conveyance system; provide a sustainable storm water management system; reduce the impervious area; increase infiltration and minimize runoff.

Stormwater Goals

Selecting the Appropriate Green Infrastructure Locations

There are several factors that may influence the location chosen for the green infrastructure techniques, including contiguous available properties, the soil's ability to absorb water, proximity to areas of the combined sewer system that backup and capacity to convert impervious pavements that shed water to previous materials that absorb water.

Choosing the Right Green Infrastructure BMP to Maximize Value

After identifying the potential sites, the next challenge is to identify the green infrastructure techniques that will have the greatest return on investment in terms of cleaning water and reducing its volume. Maximizing value of the options also comes from site-specific design that takes into account important local factors such as soil, runoff content, climate and sunlight, as opposed to applying a standard detail that may or may not be appropriate. There are many examples of BMPs that were "designed" but fail to function properly due to a lack of understanding of the mechanics or the misapplication of a standard design. Native vegetation should be carefully selected to create diversity, withstand street toxins and require minimal watering and maintenance. Long term maintenance cost of the BMP has to be considered.

Finally, the spatial relationship between multiple BMPs must be considered so that they complement one another in order to maximize their combined value.

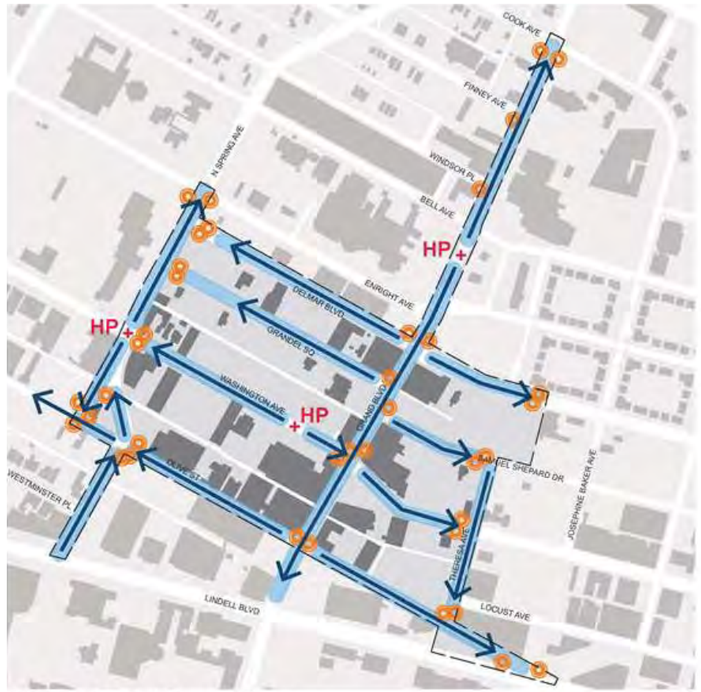
Finding Property Owners Willing to Participate and Maintain

Multiple public and private properties will be necessary to build a network of contiguous BMPs. Existing property owners may be hesitant to take on the burden of maintaining private green infrastructure. Potential buyers may be concerned about investing in a property that has a "BMP Reserve Area". These current and future property owners may need to be convinced that green infrastructure has been successful in other cities, and that there will be personal benefits (such as increased property value) if they are to agree to participate. Developers will need to understand that low impact development methods and green infrastructure can help attract commercial tenants. Signage can help educate the public and residents about native plantings. Choosing the correct plants, especially a diverse palette of native species, will help keep the need for watering and maintenance to a minimum and contribute to the greening of Grand Center and St. Louis.

Addressing Poor Draining Soils

Many of the standard BMPs rely on well-draining soils, a rare commodity in St. Louis. Soil replacement is an option, as is choosing BMP's that rely on storage and release. Either way, an accurate soil analysis will be required in order make proper decisions regarding the BMPs.

Challenges	POTENTIAL SOLUTION
Selecting appropriate Green Infrastructure sites	• Understand the area/system
Choosing the right stormwater best management practice (BMP) to maximize value	• Utilize legitimate experts • Site specific design • Spatial relationship to system
Finding property owners willing to participate and maintain these features	• Public relations campaign • Demonstration projects • Public education • Community gardens • Minimize maintenance
Impact on utilities/long-term maintenance can be difficult and costly	• Avoid or relocate utilities
Demonstrating positive impact on Combined Sewer Overflow (CSO) System	• Knowledge of combined system • Develop reduction assessment tools
Addressing poor draining soils	• Thorough infiltration analysis • Soil coverage in GIS • Soil remediation



Stormwater Catchment Areas

legend:

- study area boundary
- catchment areas
- stormwater flow line
- HP high point
- possible location to capture, store, clean, and/or slow down stormwater runoff

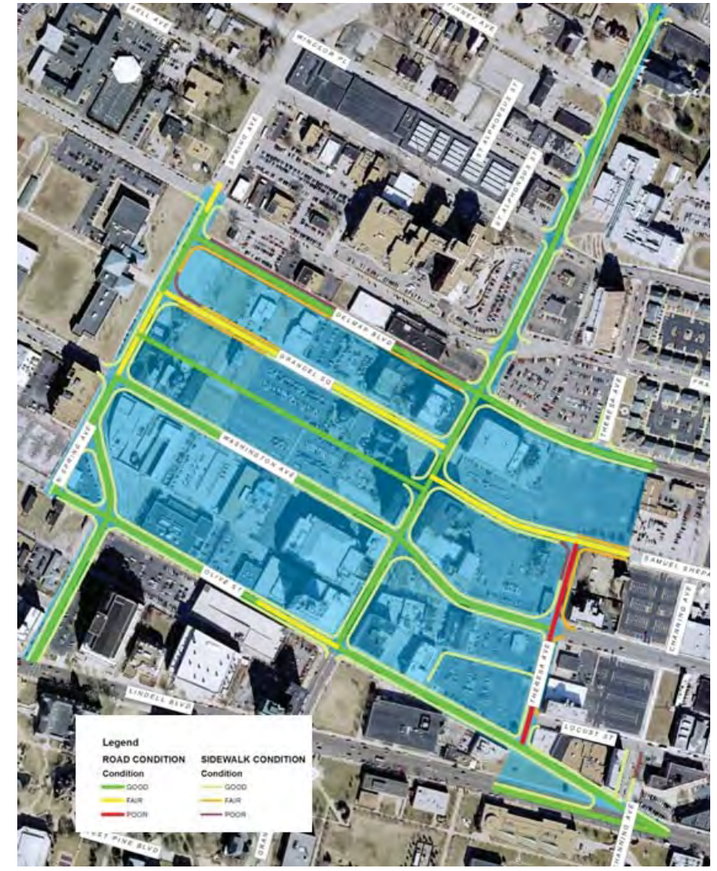
For every five percent of tree cover added to a community, stormwater runoff is reduced by approximately two percent.
- www.americanforests.org

Grand Center Stormwater Catchment Areas.
The high points, flow lines and catchment areas of the stormwater system are illustrated in the graphic. There are opportunities to capture concentrations of stormwater at the perimeter of the study area in order to store, clean and slow down the rate of stormwater runoff. Captured and stored water can be reused for irrigation, fountains and other features.

Street Conditions
The conditions of the existing streets as well as the utility locations were a consideration in the planning and design approach. The majority of the streets in the study area are in good to fair condition. The design recommendations recognized that adjustment to curb lines to widen sidewalks could keep the street intact. It was also determined that a prevalence of granite curb in the area was a clue to a palette of appropriate and contextual materials for Grand Center.

The existing streets within the Grand Center are generally asphalt, asphalt over rigid concrete base or concrete. The following table summarizes the street type and condition.

NAME	Condition	Street Material
DELMAR BLVD	Good	Asphalt over Rigid Base
GRAND BLVD	Good	Asphalt over Rigid Base
GRANDEL SQ	Fair	Asphalt
OLIVE ST	Fair to Good	Asphalt
SAMUEL SHEPARD DR	Fair	Asphalt
SPRING AVE	Good	Concrete
SPRING AVE	Fair to Good	Asphalt over Rigid Base
THERESA AVE	Poor	Asphalt
WASHINGTON AVE	Good	Asphalt



Street Conditions
The street and sidewalk condition within the district are graphically illustrated. Granite curb is the dominate curb type in the study area.

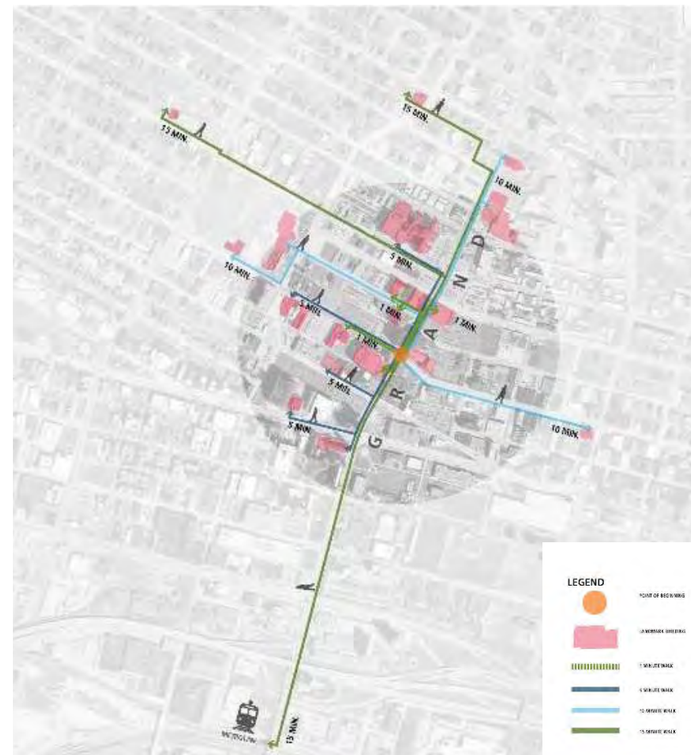
Transportation Analysis

Transportation Challenges

Grand Center is centered on the northern leg of a significant north/south arterial in the City of St. Louis. Grand Boulevard effectively connects four interstates (I-70, I-64, I-44, and I-55), several significant employers, institutions, and established neighborhoods by means of a heavily traveled roadway and the busiest bus line in the region. Due to this connectivity, motorists rely on Grand Boulevard as the primary access route to Grand Center, even though there are additional major north-south arterials to the east and west and east-west arterials that traverse the area.

The community has distinctly different traffic characteristics than a typical business district for daytime and evening/event traffic operations. While daytime peak hour (commuter) traffic conditions are typically the basis for analysis and design of public streets, in Grand Center the evening (venue) peaks are concentrated on Grand and exceed its capacity.

The configuration of streets and sidewalks in Grand Center currently inhibit effective vehicular traffic, safe pedestrian movement and detracts from a "sense of place". As an arts and entertainment district, Grand Center understands that the needs of the pedestrian must come first – realizing that every trip to Grand Center begins and ends on foot.



Walking Distance in Grand Center

Transportation Goals - Getting to, From, and Through Grand Center

In order to test the transportation strategy of the Framework Plan, the traffic volumes of existing streets were compared with the current capacity and potential of these streets. Particular attention was paid to Vandeventer and Compton; the targeted north-south alternative routes to Grand. The Great Streets project needed to test two assumptions:

1) The capacity of Grand can handle evening peak traffic with one travel lane in each direction
   AND
2) Alternative parallel routes have the capacity to reduce traffic volumes on Grand for through-trips

Existing Traffic Volumes

According to the traffic volume data that was collected and synthesized, Grand Boulevard had the highest concentration of traffic in the community's network of streets. Vandeventer and Compton Avenues, which parallel Grand Boulevard, had lower concentrations of traffic. This can partially be attributed to the fact that they intersect fewer interstates. Although both intersect I-64, their connections were much less prominent and possibly unclear to the unfamiliar driver. Vandeventer intersects I-44 with an interchange, while Compton merely crosses over it. Neither Vandeventer nor Compton intersect I-70 or I-55.

Existing Traffic Volumes in Grand Center

Existing Capacity

The data showed that Grand Boulevard, Lindell Boulevard and Vandeventer Avenue were the most-heavily traveled roads in the community, with volumes over 20,000 vehicles per day (vpd) on Grand and over 15,000 vpd on both Lindell and Vandeventer. However, these streets also had the most number of lanes and signalized intersections designed to accommodate larger volumes of traffic, making the concentration of traffic less apparent on Vandeventer and Lindell. It is important to note that Grand operated as a 3-lane street (one travel lane in each direction and a center turn lane with street parking on both sides) during the daytime and as a 5-lane street (two travel lanes in each direction and a center turn lane) during evening venue times when on-street parking is prohibited.

Conversely, many of the east-west oriented arterials in the district averaged less than 5,000 vehicles per day, but are also typically two-lane streets controlled by stop signs. Although the daytime and evening peaks can be significant, the commuter periods were spread out over an hour or more and where well within the capacity of the street network with the exception of Grand Boulevard between Delmar and Lindell.

However, during evening venue arrival and departure times, the data showed that there where substantial volumes of traffic arriving and departing during relatively short windows of time. In addition, congestion was exacerbated by large number of vehicles destined to or departing from a limited number of locations (e.g. parking facilities). The rush of vehicles was compounded by the need to accommodate high volumes of pedestrians moving through the street network as well. Although stakeholders and patrons expressed a primary concern over congested streets during venue times, it was interesting to conclude that the evening peak/commuter period generally had higher traffic volumes. There were exceptions on Washington Avenue, Olive Street, and a small portion of Grand Boulevard, between Olive and Lindell.

Understanding that Grand already functions as a 3-lane street and the optimization of the existing street network was possible, provided the Design Team an opportunity to consider the removal of the on-street parking to widen sidewalks.

Existing Capacity of the Street Network

Alternative Routes

There were other factors that had a substantial impact on the actual and perceived traffic operations within the Grand Center network besides traffic volumes and network capacity. These considerations ranged from connectivity and access, to traffic signals, to pavement quality. During the Open House, participants indicated that they were already using or would use Vandeventer and Compton as alternative routes to and from Grand Center. Others commented that the conditions of the streets discouraged them from using these alternative routes to Grand Center. A brief summary of the analysis of the existing alternative routes are outlined below and characterized by the follow:

1) Barrier – existing physical features of the roadway are a barrier to its use as an alternative route
2) Condition – existing roadway conditions discourage its use as an alternative route
3) Opportunity - existing roadway corridor offers opportunities to establish it as an alternative route

Interstate Access

- Existing direct access to Grand., Vandeventer and Compton with direct access from major St. Louis highways (opportunity)
- Highway signs and existing local signage directs to Grand Center from Grand Boulevard only (barrier)

Vandeventer

- Intersections are poorly lit (condition)
- Pavement conditions are poor from the highway and rough throughout the project area (condition)
- On-street parking is allowed but could become an additional travel lane (opportunity)
- Traffic signals give preference to Vandeventer traffic not Grand Center cross streets such as Olive and Washington (barrier)
- Vandeventer does not have dedicated turn lanes near the study area (barrier)

Compton

- Four traffic lanes and on-street parking on both sides between MLK Drive and Delmar (opportunity)
- Good lighting (opportunity)
- Worn roadway striping (condition)
- On-street parking is allowed on the east side between Locust and Olive but could become an additional travel lane (opportunity)
- Four lanes with on-street parking and a center turn lane south of Olive (opportunity)
- Intersection of Compton and Market is very busy and has long signal times (barrier)

Grand

- Left turn lanes prohibited at Grand and MLK Drive (barrier)
- Dedicated turn lanes for northbound and southbound left turns only at Grand and Page (barrier)
- Four traffic lanes north of Bell (opportunity)
- No dedicated turn lane for eastbound Delmar at Grand (barrier)
- Left turns prohibited from Washington to Grand (barrier)

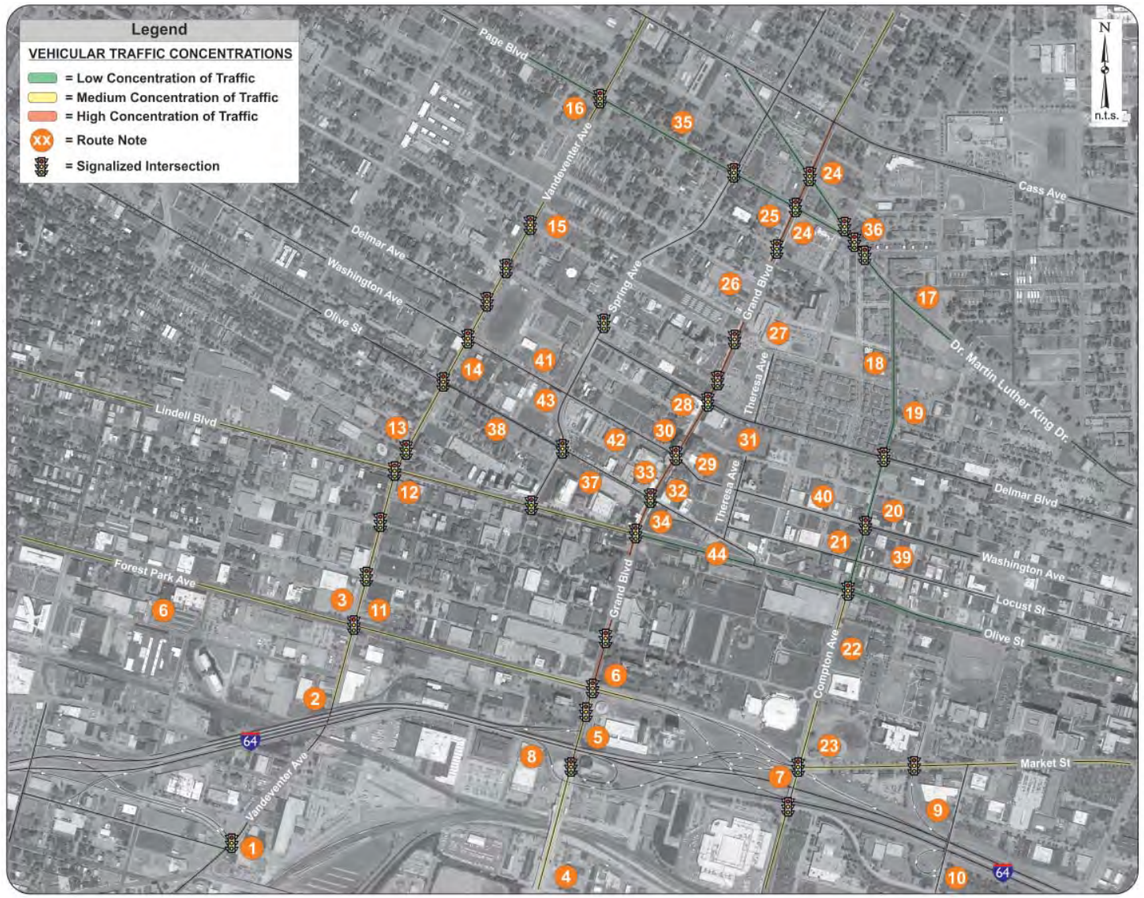
Cross Streets

- Olive is poorly lit and unattractive west of Spring (condition)
- Locust has two travel lanes and parking on both sides (opportunity)
- Washington travel lanes are oversized east and west of Grand (opportunity)
- Washington has dedicated left-turn lanes at Spring (opportunity)

Other Street Interfaces

- Page has no dedicated left turn lanes (barrier)
- Y intersection at Page, MLK Drive and Leonard/Sheridan is confusing with long signal times (barrier)

The Master Plan and implementation recommendations will reinforce the importance of public realm improvements to remove impediments to traffic and pedestrian flows and the establishment of alternative routes to, from, and through Grand Center. Recommendations will show that the alternative routes can be reinforced through physical design improvement, wayfinding and signage and public information.



Barriers, conditions and opportunities to alternative parallel routes

Alternative Modes of Transportation

Grand Center's location within the heart of Midtown is well positioned with an existing network of transit and bicycle opportunities. Additional initiatives were considered during the preparation of the report including the potential for streetcars on Lindell, additional Bike St. Louis routes and a study for an off-street bike and pedestrian facility along Spring Avenue.

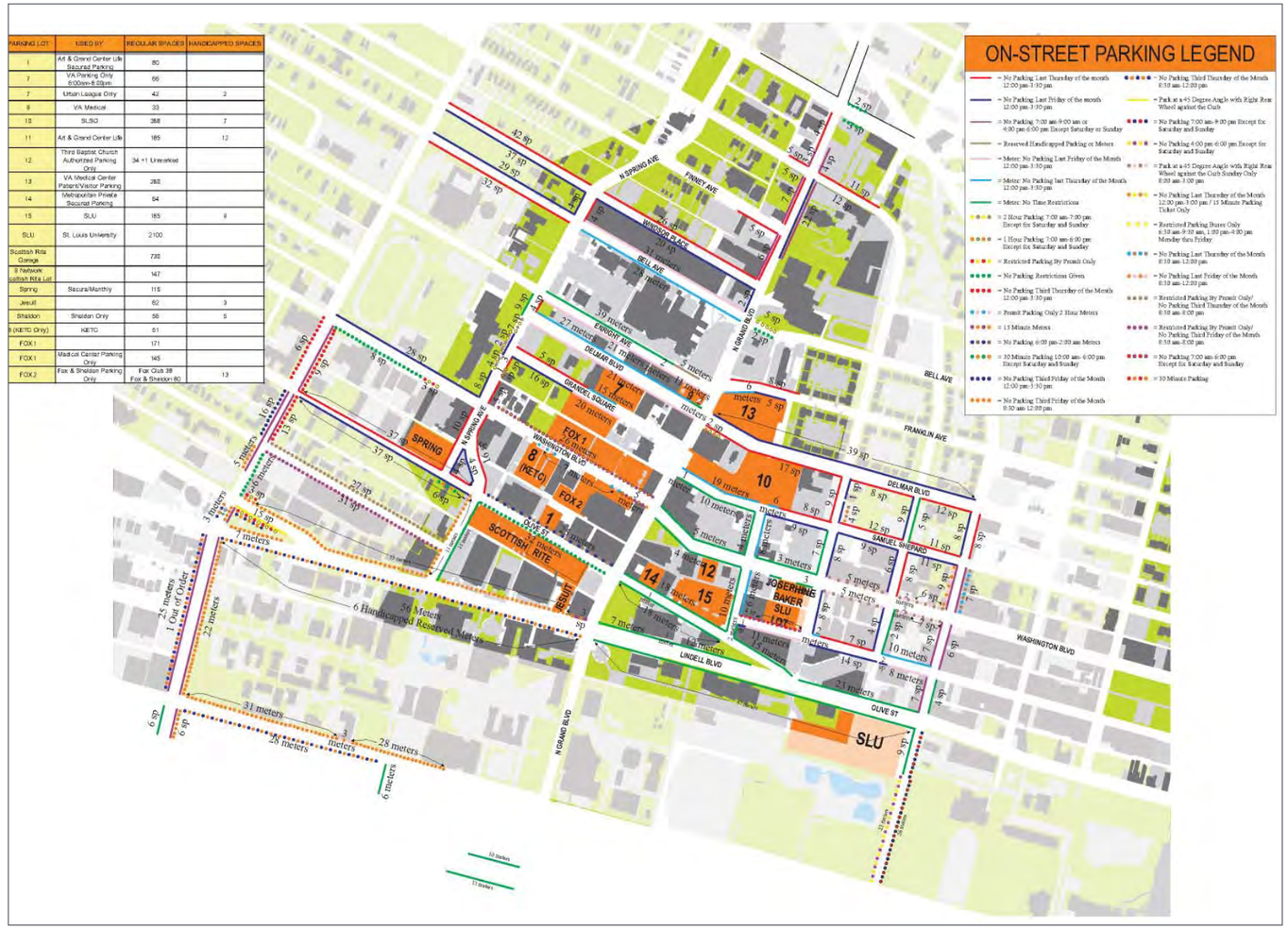
Key to any great street is its ability to be traversed by foot. Efficiency is realized in any sidewalk network, but the proximity of so many attractions in one place is something unique to Grand Center. Most landmark buildings and destinations are within a five minute walk. The focus in Grand Center is to reduce street widths and widen sidewalks. Dedicated bike lanes that effectively widen the street are in conflict with this focus. Instead sharrows and other bike connections were considered in the planning and design process. Public transportation is not far from Grand Center. Buses transect the community on Grand and Delmar. The MetroLink can be reached within a fifteen minute walk. Grand Center's patrons extend well beyond its residents and most drive in from other parts of the City and the suburbs. Physical and operational improvements need to help patrons understand that it is safe and convenient to park their cars sooner and walk in the community to their destinations.

Alternative Modes of Transportation in Grand Center

Existing Parking Conditions

An inventory of the existing supply indicated that there are approximately 2,900 parking lot spaces and 700 on-street spaces provided within the core of Grand Center, although many of the lot spaces are dedicated for private uses. There are over 3,100 additional parking spaces adjacent to the core of the district.

Despite perceptions of nighttime parking deficiencies, the study showed that there is generally sufficient parking within Grand Center to accommodate existing venue demands. This included most occurrences of simultaneous events; though shortages of preferred parking may exist in selected locations. In addition, parking access and departure was observed to be arduous due to the majority of patrons arriving via the same path and the fact that many parking facilities have a single (or limited) entrance and exit point. Enhancing alternative routes to and from Grand Center and minimizing entrance and exit processing times are considered strategies to reduce user frustration in regards to parking. The Master Plan and Implementation recommendations will reinforce the importance of public realm improvements to remove impediments to traffic and pedestrian flows and the establishment of alternative routes to, from, and through Grand Center. Recommendations will show that the alternative routes can then be reinforced through physical design improvement, wayfinding and signage and public information.



PARKING LOT	USED BY	REGULAR SPACES	HANDICAPPED SPACES
1	Art & Grand Center Life Secured Parking	80	
7	VA Parking Only 6:00am-6:00pm	66	
7	Urban League Only	42	2
9	VA Medical	33	
10	SLSO	368	7
11	Art & Grand Center Life	185	12
12	Third Baptist Church Authorized Parking Only	34 +1 Unmarked	
13	VA Medical Center Patient/Visitor Parking	268	
14	Metropolitan Private Secured Parking	64	
15	SLU	185	9
SLU	St. Louis University	2100	
Scottish Rite Garage		730	
Scottish Rite Lot		147	
Spring	Secure/Monthly	115	
Jesuit		62	3
Sheldon	Sheldon Only	58	5
8 (NETC Only)	NETC	61	
FOX 1		171	
FOX 1	Medical Center Parking Only	145	
FOX 2	Fox & Sheldon Parking Only	Fox Club 38 Fox & Sheldon 80	13

Existing Parking Inventory in Grand Center

Branding & Wayfinding Analysis

Every city has a great arts district,
Grand Center is ours.

Current State: The Brand

Grand Center: At the Intersection of Art and Life
The current Grand Center brand was born to define St. Louis' unique arts and entertainment district, capturing its place as a destination for both visitors and residents.

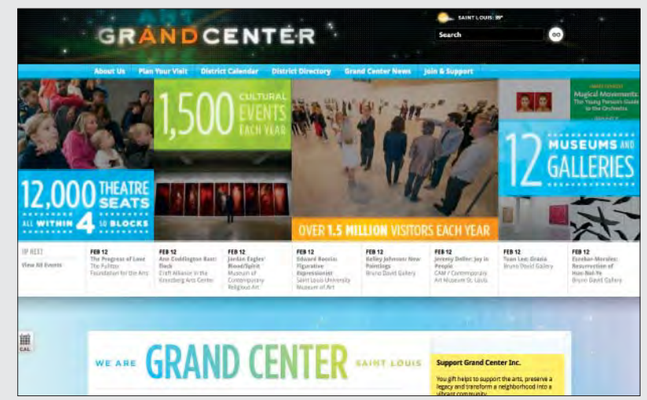
The district's tagline, 'At the Intersection of Art and Life' was created to capture the new-found energy around the growing arts and cultural institutions populating the area — all of which intersect the district's historic architecture, future retail, creative and residential spaces.

Organization
Grand Center is an overarching identity that encompasses the many cultural organizations and destinations found within the area. Such organizations include performance venues, museums, galleries, restaurants, residential and educational spaces.

The Brand, At-a-Glance
Examples of current branded materials (print, web and environmental) include the primary identity **1**, website **2**, street signage **3**, stationery system **4** and pole banner artwork **5**.

1

2



3

4

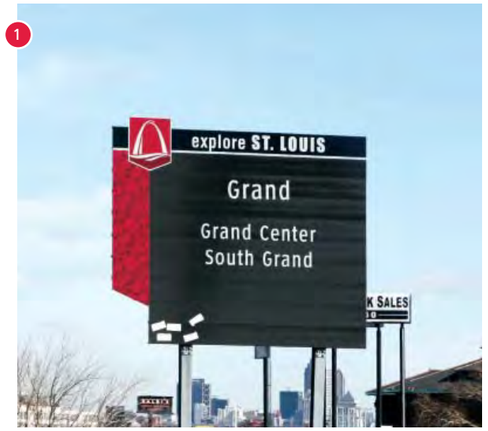
5

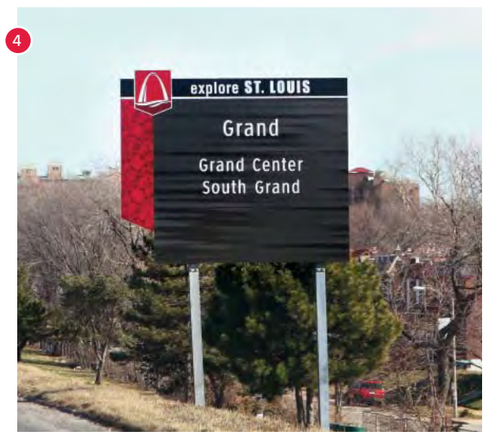
Current State: Signage & Wayfinding

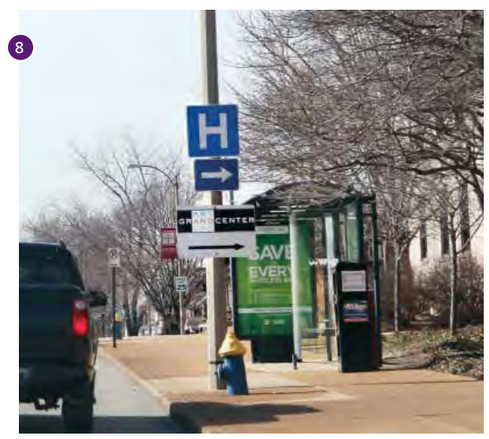
Approaching the District

The Grand Center district is accessible from multiple highways (interstates 40, 44 and 70) and nearby neighborhoods. The ability to successfully navigate to the district is equally as important as finding your way around once you arrive.

The following images capture existing out-of-district signage, located along interstates, exit ramps and adjacent neighborhoods.







Current State: Signage & Wayfinding

Navigating within Grand Center: Branded Signage
Installed in 2010 – 2011, the existing signage system was developed to reinforce the existing Grand Center brand, helping to differentiate this unique district in look and feel, and to aid in defining its parameters.

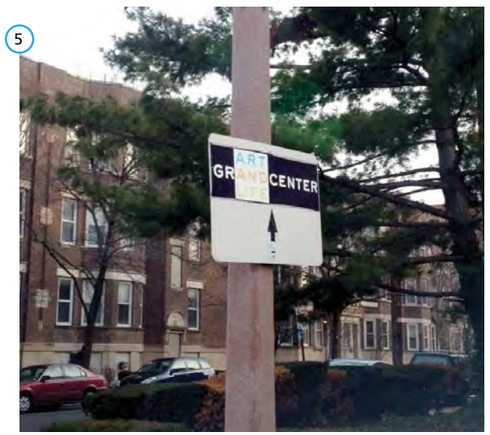
The current (branded) signage system contains 4 primary sign types: mast-arm **1**, **2** and pole-mounted street signs **3**, parking **4** and general directional signage **5**. Additional elements in the area include branded planters **6** and a variety of pole banner designs **7**,**8**,**9**.

1


2


3


4


5


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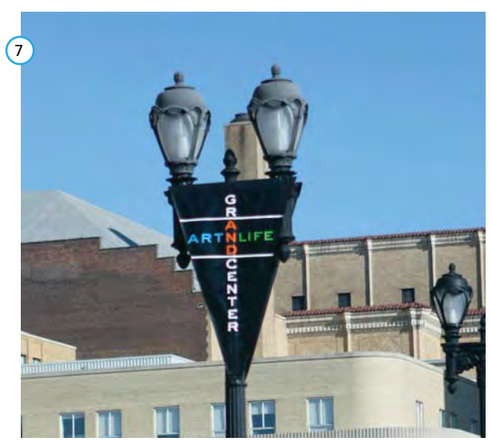

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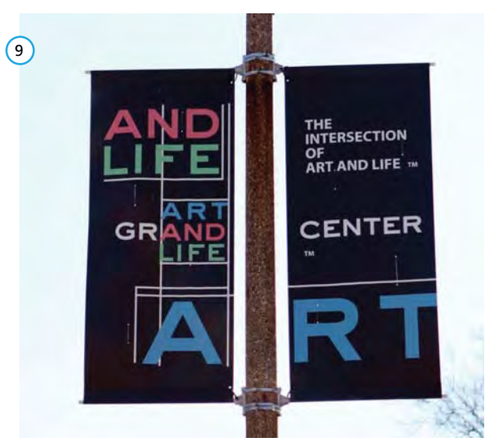


Current State: Signage & Wayfinding

Navigating within Grand Center: Non-branded Signage
Current signage inventory also includes non-branded elements that aid visitors in navigating the district and finding their way to neighboring districts.

Examples of non-branded signage include a CVC district map located in Strauss Park 1, CVC directional signage located throughout the district 2, retro parking signage 3 and SLU branded signage 4.

Exiting Grand Center
There are currently no signs indicating preferred routes for exiting the district.

1


2


3


4


Current State: Signage & Wayfinding Overview

Inventory of Existing Signage

Inventory of existing signage reveals gaps in the current system, making elements appear sporadic and unplanned. Most notable is the lack of branded street signage in the northeast area of the district, as well as inconsistent use of branded components, such as pole banners.

To be successful, signage and wayfinding components must be implemented consistently so that visitors can learn to rely on them as both place-making and navigational tools.

- Mast-arm sign (GC branded)
- Mast-arm sign (SLU branded)
- Pole-mounted street sign (GC branded)
- Parking Signage (GC branded)
- Pole Banners (GC branded)
- CVC, 'Explore St. Louis' Signage
- Standard City Signage (green)
- Planters / Barricades (GC branded)
- Directional Signage (GC branded)
- Non-Branded Parking Signage
- Public Parking Lots
- SLU Parking Lot

How does branding, signage & wayfinding contribute to a positive visitor experience?

1

The Brand

A successful visitor experience begins with a recognizable & memorable brand, differentiated from surrounding neighborhoods.

2

Approach

Visitors are able to easily navigate to the district from multiple directions/routes.

3

Arriving & Wayfinding

Visitors experience a 'sense of arrival' and are able to quickly locate their final destination (venue, parking, etc.)

4

Experience

Visitors encounter information at key points to inform wayfinding decisions, and are able discover 'what's ahead' both spatially & temporally.

Navigation is clear, leaving visitors open to experience their surroundings.

Visitors understand the 'sense of place' through visual (branded) cues in the physical environment.

Visitors learn more about the area and are encouraged to return.

5

Exit

Visitors are able to effortlessly navigate out of the area.

Current State:
Impressions & Recommendations

1

The Brand

IMPRESSIONS

+ The current brand is recognizable to people to living and working in the area, however infrequent visitors are not aware of Grand Center as a destination.
+ Venues do not consistently express affiliation with the Grand Center district in promotional materials.

RECOMMENDATIONS

+ Suggest updated message structure to strengthen brand awareness.

  When referring to the area:

  (1) Grand Center
  (2) At the Intersection of Art and Life

  When referring to a venue/place/business

  (1) Venue, Place or Business Name
  (2) at Grand Center,
  (3) The Intersection of Art and Life

+ Always include Grand Center brand on communication materials to strengthen name recognition and district affiliation

2

Approach

IMPRESSIONS

+ The majority of directional signage outside of the district is CVC, 'Explore St. Louis' branded.
+ ALL existing signs direct visitors to enter the district via Grand Blvd.

RECOMMENDATIONS

+ More prominent (Grand Center-branded) directional signage would improve district recognition
+ Directional signage from major interstates (40, 44 and 70) and nearby neighborhoods (Central West End, Downtown, North St. Louis) should direct visitors to enter the district via alternate routes, such as Compton or Vandeventer.

3

Arriving & Wayfinding

IMPRESSIONS

+ Prevalence of SLU signage at primary entrance (Grand/Lindell) is confusing.
+ There is no physical entrance or identifying Grand Center sign anywhere in the district.
+ Signage/wayfinding implementation is inconsistent, especially in the NE area of the district. (Green street signs vs. blue, no banners or other identifying elements)
+ Very minimal brand presence off main corridor; creates disconnect for side-streets
+ Despite unique shape, Mast-Arm signs at main intersections do not stand out due to size (only a 5% size increase was granted due to concerns about wind shear).
+ Some feel signs are hard to see at night, and should be illuminated internally.
+ Some feel street names on pole-mounted signs are difficult to read from a distance.
+ Many signs/banners are missing/damaged.

RECOMMENDATIONS

+ Implement branded elements consistently throughout district, including stronger presence along side streets.
+ Address functional qualities such as color and size for improved legibility

4

Experience

IMPRESSIONS

+ Branded items are effective as place-making/defining elements. Beyond Grand, these elements are sparse, appear random and don't reinforce a unified destination.
+ Pedestrian unfriendly. CVC sign located at Strauss Park is the only pedestrian-oriented signage found in the area.
+ No cyclist-oriented signage.
+ No district-branded map available on signage, print or hand-held devices.
+ No brand presence at night.

RECOMMENDATIONS

+ Increase volume and continuity of branded elements.
+ Target and encourage pedestrian traffic through appropriately scaled, informative signage.
+ Engage and educate visitors though cross-promotion.
+ Opportunity to create wayfinding tool for hand-held devices.
+ Opportunities for light installations that would draw attention and help transform the area at night.

5

Exit

IMPRESSIONS

+ There is currently no directional signage guiding visitors how to exit the area.
+ Traffic after events is problematic
+ Most visitors exit via Grand

RECOMMENDATIONS

+ Implement exit-specific signage at major parking lots directing visitors to exit via alternate routes (Compton, Vandeventer)
+ Increase presence of directional / interstate signage.

Lighting Analysis

Lighting Challenges and Conditions

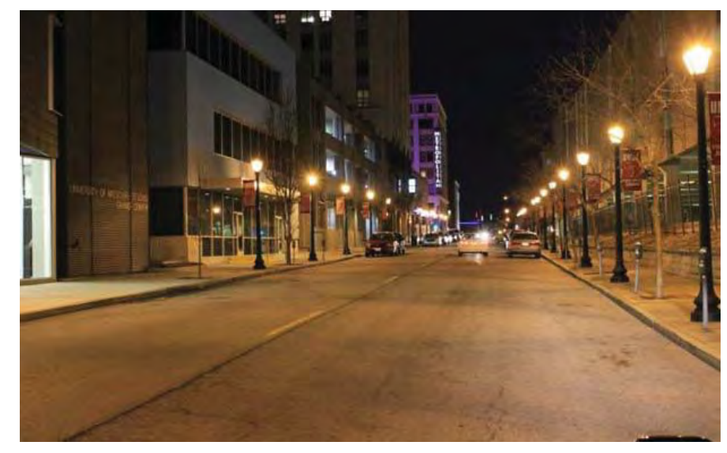
Qualitative Review and Analysis of Lighting Conditions

Lighting conditions throughout Grand Center vary in a number of significant ways. The study area for this project includes both major arteries and secondary feeder streets; and two fundamentally different approaches for the illumination of vehicular/pedestrian movement.

The streets are illuminated from both sides by the historic replica, high pressure sodium pedestrian-scaled poles on portions of Olive Street, Washington Avenue, Grandel Square, Delmar Boulevard and Grand Boulevard. These provide the most balanced lighting for both auto and pedestrian. Illumination levels are significantly higher than minimum standards and the warm glow of the source is appealing to many users. The one drawback to this fixture is that it produces some direct glare, and this can obscure, to a degree, visibility of pedestrians crossing at mid-block or identification of signage or other visual cues. Although the high pressure sodium source does provide a warm glow, it does not accurately portray color.

The other approach to street lighting is the City standard davit arm mounted high pressure sodium refractor unit – a.k.a. "Cobra-head" light. This fixture assembly does a reasonably good job of providing adequate vehicular street illumination levels, but is only marginally adequate in many other areas. Its high mounting allow broader spacing of poles, but provides virtually no pedestrian appeal. The backlight on the sidewalk flattens features and forms, tending to make the area appear less safe and secure. The high pressure sodium source color at these higher mountings feels drab, unappealing and institutional. There is little to no identity or streetscape context provided with this approach.

Just as important as dedicated street and sidewalk illumination, is the lighting and visibility surrounding buildings and properties. The importance of this attribute cannot be overstated. On some streets where there are active store-fronts, lighted signage, architectural highlighting and other illuminated features, the overall streetscape is perceived much differently from streets illuminated in nearly the same manner but without the flanking visual appearance. Although the resulting difference in the overall sense of the place may be obvious, in some cases these differences can also erode perceived sense of safety and security. The role adjacent building and open space can have in enhancing or reinforcing the street experience has been explored in the master plan recommendations.



Quantitative Review and Analysis of Existing Lighting Conditions - Illumination Levels

Although the measurement of light quantity on streets and sidewalks is only a part of understanding the perceived lighting conditions, it does provide a useful framework for assessing the general adequacy of the illumination. The majority of streetscape throughout the Grand Center study area meets minimum standards for illumination levels. The chart illustrated here, identifies by street, the current illumination conditions provided by the street lighting systems. Illumination of some streets can be improved through the addition of light sources, either more of what has already been established or new systems. Areas where vehicular related accidents have historically occurred, the enhancement of lighting may help in reducing such incidences.

Key

- Sufficient street lighting and a critical mass of adjacent building and street side illumination sources.
- Technically sufficient but due to lack of building and adjacent space light contribution, requires additional lighting.
- Border-line or below illumination levels due to light provided from only one side of the street.
- Location of previous lighting enhancement needing to be revitalized.

Lighting Goals

Best practices for Lighting

A successful streetscape lighting design encompasses both qualitative and quantitative needs of the community's program. Safety and security demands lighting levels and uniformity that meets or exceed standards of the Illuminating Engineering Society. It must also balance these requirements with the City of St. Louis' light level guidelines.

Lighting Guidelines:

1.0 to 2.0 foot-candles	Street surface illuminance
0.6 to 5.0 foot-candles	Pedestrian walkway surface illuminance (variations based on specific function, safety and security needs of given area)
6 to 1	Lighting illuminance uniformity of illuminance for maintaining good visibility

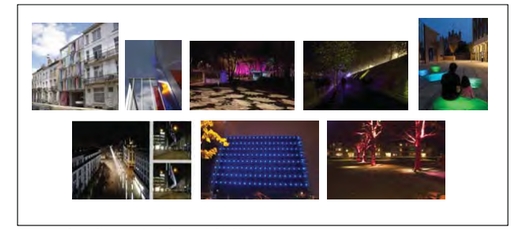
Street and pedestrian area lighting should also:

- Minimize glare.
- Provide relatively high color rendering properties.
- Appropriate scale – day and night.
- Exhibit good operational and maintenance profiles including: long source life, robust luminaire design (durability), ease of access, current and forward thinking technologies, high energy efficiency/ usage profile, etc.

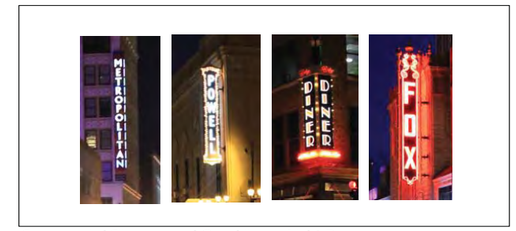
Lighting Design for the Nighttime Experience

The nighttime streetscape experience encompasses much more than simple street and walkway illumination. Perimeter elements and adjacent spaces/surfaces contribute significantly to the overall visual experience. This includes aspects of aesthetic enhancement, way-finding, orientation, sense of place, safety and security. It is also fundamental to creating and enhancing the complete experience. Moving forward with upgrades that will impact the nighttime experience of Grand Center streets, must include a sensitive and careful consideration of the adjacent street-side environments. Engaging these spaces, in both the public and private realm, will be fundamental in realizing the full potential of the community after dark.

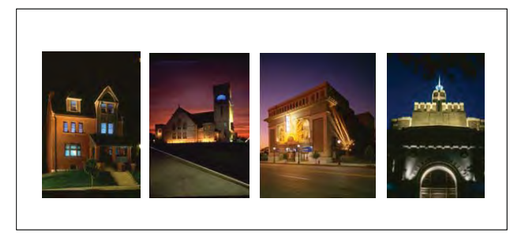
Highlighting Architecture



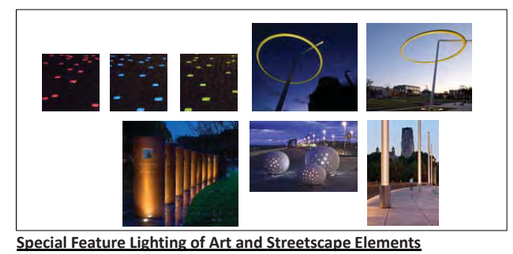
Special Lighting Display and Effects



Commercial Signage and Graphics as Light Beacons



Revitalizing Previously Installed Lighting



Special Feature Lighting of Art and Streetscape Elements

Public Art Analysis

Existing Public Art in Grand Center

Grand Center is and has been the home of various works of art, both permanent and temporary for many years. The origins of these projects vary, as does the ownership. There are two significant public art projects that were a direct result of an urban plan for Grand Center developed in 1990. These are by Studio Works/Robert Mangurian: Tilted Plane by James Turrell and Shadow Lighting by Randy Burkett of Burkett Lighting. In the past ten years, Grand Center has been home to several temporary public art installations, some initiated by Grand Center, Inc., and others presented by art institutions in the area. Projects, such as Chorus, by Rainer Kehres and Sebastian Hungerer, and Untitled, by Jason Peters, were both commissioned by the Pulitzer Foundation for the Arts as part of The Light Project series in 2008. These demonstrate the power that temporary public art projects have to inspire imagination, energize and enliven spaces, and engage audiences.

In 2011-2012, Grand Center, Inc. developed Temporary Public Art Guidelines through a grant from the National Endowment for the Arts. That planning process resulted in Grand Center's most recent temporary public art commission, A Chromatic Confluence, by the artist collaborative Thoughbarn. It was installed at a temporary public art platform south of Powell Hall. It was both visually interesting and interactive.

PERMANENT PUBLIC ART


1 *Tilted Plane*, James Turrell, 1990


2 *Leon R. Strauss*, Jesse Vonk, 1999


3 *Shadow Lighting*, Randy Burkett, 1992


4 *ART in Grand Center*, Jasmin Aber, 2012

PREVIOUS TEMPORARY ART


5 *E-Scaping the Grid*, Michael Oliveri, 2007-2012


5 *A Chromatic Confluence*, Thoughtbarn, May-June 2012


6 *CHORUS*, Rainer Kehres & Sebastian Hungerer, Sept 4 – Oct 17, 2008


7 *Untitled*, Jason Peters, Sept 4 – Oct 17, 2008

EXISTING TEMPORARY ART


8 *Earth Rabbit*, Catharine Magel, 2009

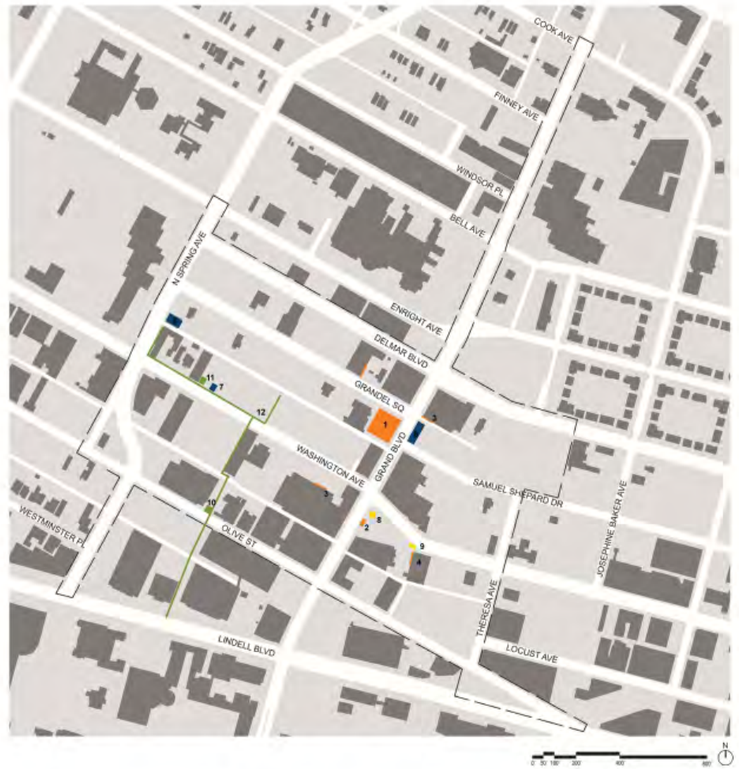

9 *After Hours*, Catharine Magel, 2010

PLANNED INITIATIVES

10 *Public Media Commons*, Nine Network

11 *PXS1L*, The Pulitzer Foundation for the Arts and Washington University

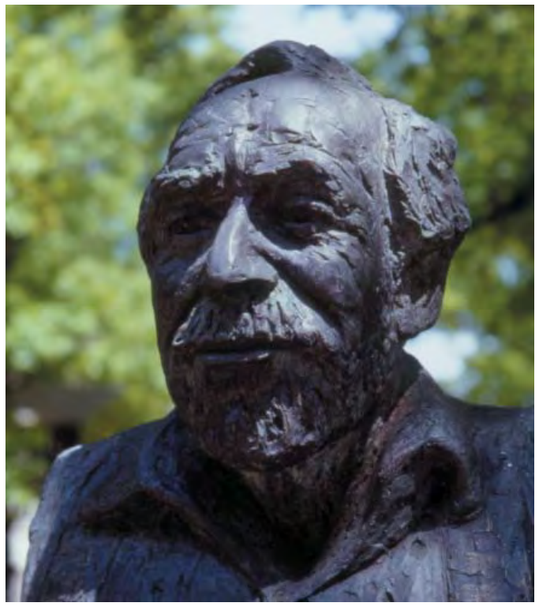
12 *The Art Walk*



Existing permanent and temporary public art in Grand Center

Permanent Artwork

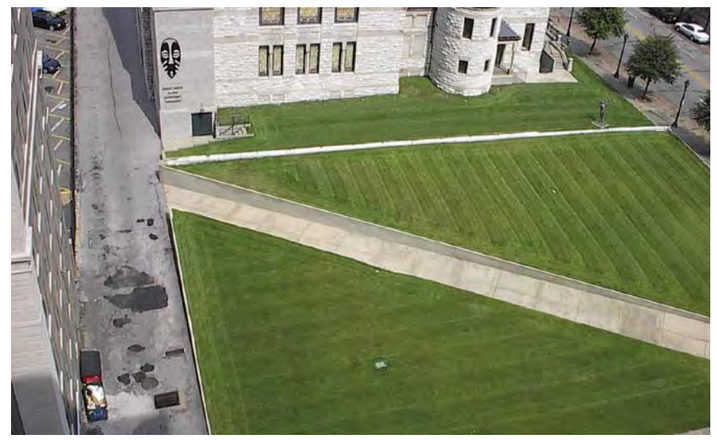
Leon R. Strauss
Artist: Jesse Vonk
Year: 1999
Location: Strauss Park
Media: Bronze, granite pedestal
Dimensions: 5′ x 3′ x 2′
Owner: Grand Center, Inc. (donated by Fox Associates)
Description: Facing the Fox Theatre, in Strauss Park, is a bronze portrait-bust of prominent civic leader Leon R. Strauss. An "Urban Pioneer and Preservationist," as the plaque indicates, he was a man with a vision of a restored St. Louis, a vision that, with his wife Mary, changed the urban landscape of the area.



Shadow Lighting
Artist: Randy Burkett
Year: 1992
Location: Sun Theater, Fox Theatre, Grandel Theatre, Powell Symphony Hall
Media: Electric Lighting
Owner: Commissioned by Grand Center, Inc.
Description: Shadow Lighting brightens the facades of several buildings including that of the Grandel Square Theatre, the Sun Theater, the Fox Theatre and Powell Symphony Hall. The limestone face of the Grandel Square Theatre is dramatically illuminated along its east base in crisp white light and the Grandel's bell tower is lit in blue. Around the corner is the renovated fluorescent neon Sun Theater sign. Above the neon sign, three large arched windows are highlighted revealing the detailed design of the building's cornice and frieze. A single light source placed underneath fire escapes on sides of the Sun Theater, the Fox Theatre and Powell Symphony Hall rake the buildings' exteriors. This work is currently in need of restoration.

Tilted Plane
Artist: James Turrell
Year: 1990
Location: East side of the Grandel Theatre
Dimensions: 6' H, 35' W, 25' D
Media: Environmental earthwork - angled lawn area
Owner: Commissioned by Grand Center, Inc.
Description: Tilted Plane is and earthwork comprised of two triangles of grass that gently slope upward from the corner of Grand and Grandel Square. The viewer can walk across the top of the work or through the work via the sidewalk that cuts it in half diagonally.

Media: aluminum, LED lighting, computer control
Owner: Commissioned by Ken Kranzberg
Description: At nighttime the neon letters illuminate the building and emphasize on the ever-changing nature of art and architecture.



Temporary Artwork Currently on Display

ART at Grand Center
Artist: Jasmine Aber, CEL (Creative Exchange Lab) and Derek Lauer, Lauer Architecture Progressive Design
Year: 2012
Location: 3526 Washington Building

Earth Rabbit
Artist: Catharine Magel
Year: 2009
Media: Steel, Fiberglass, mosaic glass and ceramic
Dimensions:
Owner: Commissioned by Grand Center, Inc.
Description: Magel chose the rabbit because of its universal appeal and cultural significance. Luck for the New Year, Fertility for creative ideas among just a few. By examining the wealth of world mythology and folklore involving rabbits and hares we find many wonderful universal tales that can relate to our own lives.

After Hours
Artist: Catharine Magel
Year: 2010
Media: steel armature with fiberglass and mosaic coating
Dimensions: Height: 8 feet Length: 13 feet
Owner: Commissioned by Grand Center, Inc.
Description: For a long time, black and white jazz musicians were not allowed to perform together publicly. It was only at after-hours sessions that they jammed together, as Louis Armstrong and Bix Beiderbecke did in Chicago in the 1920s. The bird and rabbit playing a saxophone is meant to be telling an untold story about jazz and blues history. One detailed mosaic picture on the back side of the sculpture shows Louis Armstrong and Bix Biederbecke playing together regardless of the rules to not be seen playing together in public.

Temporary Artwork Previously on Display

Untitled
Artist: Jason Peters
Dates: September 4 – October 17, 2008
Location: field across from Pulitzer Foundation for the Arts
Media: scaffolding, buckets, light
Owner: Commissioned by the Pulitzer Foundation for the Arts
Description: A snake-like stacked bucket sculpture weaves throughout a cube shaped structure constructed of scaffolding. The rigidity and regularity of the scaffolding contrasts with the fluidity of the buckets.

CHORUS
Artist: Rainer Kehres and Sebastian Hungerer
Dates: September 4 – October 17, 2008
Location: Spring Church
Media: scaffolding, donated lamps
Owner: Commissioned by the Pulitzer Foundation for the Arts
Description: Kehers and Hungerer collected lamps from people in the St. Louis community and asked them to share a story about their connection to the lamp. These stories were archived on the web. The artists then used the lamps to construct an installation along the former roof-line of the fire-damaged church. The artists are interested in the history of lamps and through CHORUS they bring back pieces of history to the church.

Sunset (St. Louis, July 30, 2008)
Artist: Spencer Finch
Dates: September 4 – October 17, 2008
Location: Contemporary Art Museum St. Louis
Media: Solar powered panels, Soft serve ice cream machine, Ice cream cones, Ice cream.
Owner: Commissioned by the Pulitzer Foundation for the Arts
Description: This installation used solar power to generate ice cream the color of the sunset. The five ice cream colors were based on a watercolor study made of the sunset in St. Louis.

Crystal World (after J.G. Ballard)
Artist: Ann Lislegaard
Dates: September 4 – October 17, 2008
Location: Pulitzer Foundation for the Arts
Media: side by side video projections
Owner: Commissioned by the Pulitzer Foundation for the Arts
Description: Crystal World is a video installation based on a dystopian novel by J.G. Ballard.

E-scaping the Grid
Artist: Michael Oliveri
Dates: 2007-2012
Location: GrandPA
Media: 11 wind turbines, lights, stainless steel
Dimensions:
Owner: Commissioned by Grand Center, Inc.
Description: A series of wind turbines generate energy that powers the light behind a series of hexagon-shaped medallions affixed to the wall.

A Chromatic Confluence
Artist: Thoughtbarn (Lucy Begg and Robert Gay)
Dates: May 11 to July 1, 2012
Location: GrandPA
Media: scaffolding, plywood, macramé cord
Dimensions: 25′ x 60′ x 11′
Owner: Commissioned by Grand Center, Inc.
Description: An ephemeral maze-like landscape, created from over 25000′ feet of colored macramé cord. With multiple paths in and out, the piece entices visitors to hesitate, detour, linger and meander through the art. As they walk through, visitors experience a mesmerizing, constantly shifting pattern of colors and texture. Pockets and eddies formed by the string create moments of pause and opportunities for conversation.

Temporary Public Art Platforms

Platforms are places that are purposely built for the display of temporary public art or are visually and programmatically well suited for this purpose. Platforms generally have infrastructure to support art projects such as access to electricity and/or data; lighting;,foundations/pads in the ground with known weight bearing capacity; secure places to project light and/or video; structural anchors and other pertinent infrastructure. The following are the existing platforms in Grand Center:

Grand Public Art (Grand PA)

Grand PA (short for Grand Public Art) is the site located at Grand Boulevard and Samuel Shepard Drive, on the east side of the street just south of Powell Hall. The site was developed in collaboration with the Washington University School of Architecture especially for the display of temporary public art and is owned by Grand Center, Inc. The site consists of two concrete block walls fronted by a relatively narrow strip of lawn and plaza. The wall on the north is 59 feet long by 10 feet high and is approximately 17 feet from the sidewalk. The wall on the south is 41 feet long by 8 feet high and is approximately 23′ feet from the sidewalk. The plaza surface is crushed limestone, approximately 6″ deep. The plaza has lights embedded in its surface, and an additional set of lights wash the northern wall. Behind the northern wall is an electrical room. There is a concrete bench where the plaza meets the sidewalk.

The site has many attributes that make it a good site for temporary public art projects. It is at a highly visible location on Grand Boulevard, directly next to Powell Hall and across the street from The Grandel Theatre. It has electricity and lighting available and gravel and lawn surfaces that are forgiving for installing and de-installing work. The site works very well as a drive-by and can function as a gateway or landmark within the district. The site will also challenge artists to think about how to draw people in as pedestrians. Without art, it is not an inviting public space and does not naturally encourage people to spend time there. The future of this site may change with the expansion of Powell Hall and the development of a new public plaza in the parking lot to the east of the site.

Spring Church

On Spring, between Washington Boulevard and Grandel Square, stands the remains of the Spring Church, a church dating back to 1884 that burned down in 2001. Grand Center, Inc. purchased the property in 2002 and stabilized the remaining walls. Grand Center, Inc.'s vision is to ultimately preserve and enhance the church so that it can be used as a gathering place. In 2008 the Spring Church was the site for a temporary public art installation, Chorus, by Rainer Kehres and Sebastian Hungerer, commissioned by the Pulitzer Foundation for the Arts as part of The Light Project.

The site, in its current state, presents challenges for temporary commissions: there are no utilities at the site. Unlike GrandPA, it is not centrally located. However, it is close to three visual arts institutions and across from Cardinal Ritter College Preparatory High School. Despite the infrastructure challenges, this former worship space, community anchor and architectural relic, is a compelling site in which artists to work.

Planned and In-Progress Public Art Initiatives

Art Walk

Through a grant from the National Endowment for the Arts and matching funds from local institutions, Grand Center, Inc. is leading the design process for the Art Walk. It is an art-inspired linear green space and pedestrian pathway leading north from Lindell Boulevard (west of the Scottish Rite Cathedral) between the Nine Network and St. Louis Public Radio buildings, past the Sheldon Concert Hall to Washington Avenue, then north and south along Spring Avenue. Design concepts for the Art Walk is will be completed by a local architecture and design firm in 2013.

PXSTL

PXSTL is a collaborative project of the Pulitzer Foundation for the Arts and the Sam Fox School of Design & Visual Arts at Washington University. Through PXSTL, an emerging United States-based artist and/or designer will be selected to create a temporary construction on the vacant lot on Washington Avenue, across from the Pulitzer Foundation and east of the Bruno David Gallery. PXSTL will be open to the public for six months, starting in the summer of 2014.

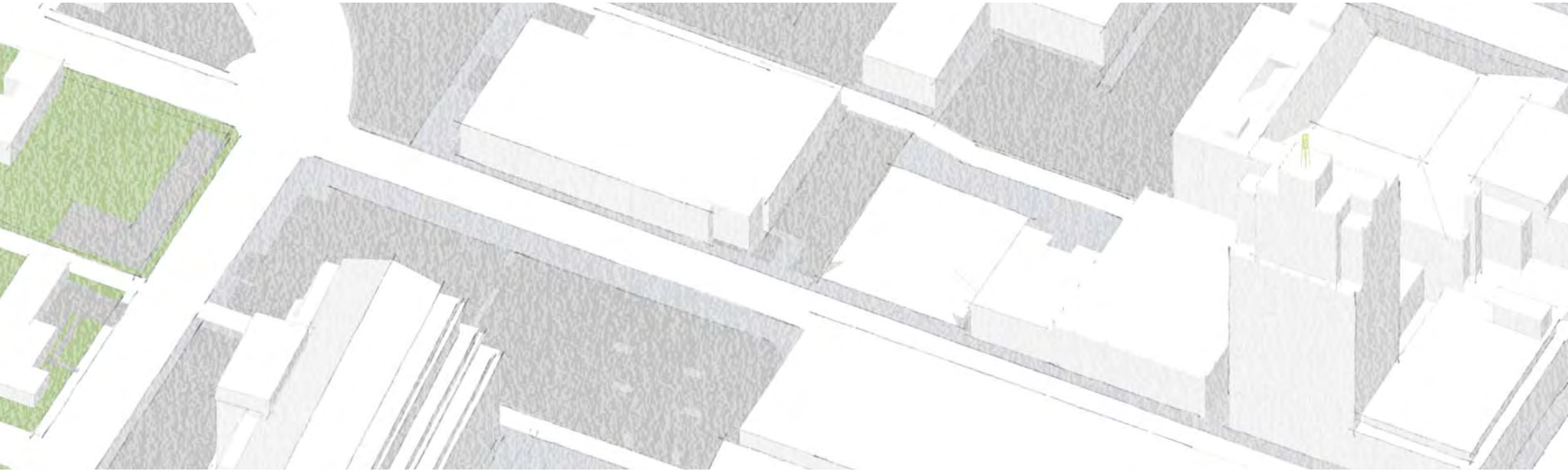
Public Media Commons

The Public Media Commons will be a new public space located between the Nine Network and St. Louis Public Radio in Grand Center. The Commons will include interactive technology, large-screen projections, performance stages for small groups and a terraced green space.

Public Art Goals - Reinforcing Great Streets Principles

The support and display of public art in Grand Center is distinctive in our region. It is a natural part of creating a great street. How public art supports Greats Streets is outlined below:

GREAT STREETS PRINCIPLES	HOW
Great Streets are representative of their place	• Distinctive artworks become part of Grand Center's cultural landscape
Great Streets allow people to walk comfortably and safely	• Art is a 'feast for the eye" and a pedestrian destination • Encourages exploration and conversation • Marks important thresholds and pathways • Helps people orient themselves
Great Streets contribute to economic vitality	• Creates an innovative and distinctive art experience that draws people to Grand Center • Contributes to the creative economy through opportunities for artists to create new work and explore new ideas. • Creates changing art experiences that encourage return visits
Great Street facilitate placemaking	• Makes places welcoming to inhabit • Adds a creative spark to design of places and spaces • Explores layers of meaning in the community • Anchors important gathering places • Encourages participation, social interaction and stimulates conversations • Expresses community stories that tie people to each other and to the community
Great Streets are green	• Collaborations bring creative solutions to managing stormwater and making those systems visible • Promotes community awareness and action concerning the environment • Reveals aspects of the natural and built environment that might go otherwise unnoticed



5 LAND USE & DEVELOPMENT STRATEGY

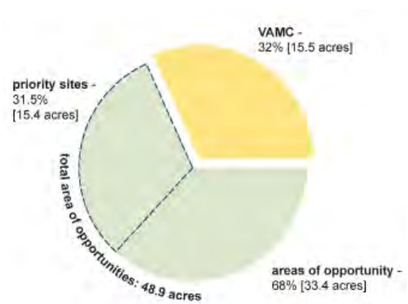
LAND USE & DEVELOPMENT STRATEGY

Great Streets foster and enhance the economic vitality of their surroundings. Chapter 5 assesses the current and prospective relationships between the built and economic environment of Grand Center and its Great Streets. Great Street improvements and land redevelopment will be integrated and mutually dependent. Beginning with an analysis of real estate market conditions, building and land use, and aggregate employment and payroll data, a series of observations and recommendations are provided that frame an overall development strategy for the district. The information supports the Great Streets initiative, but is not a district land use master plan.

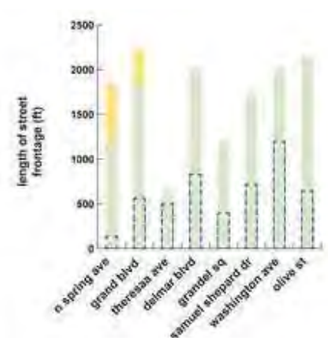
Opportunities for Transformation

Within the almost 60 acre study area, Grand Center has almost 50 acres of vacant land/surface parking lots that represent redevelopment opportunity. Over 30% of this land (15 acres) is considered a priority site for redevelopment due to current interest or ideal positioning of the site.

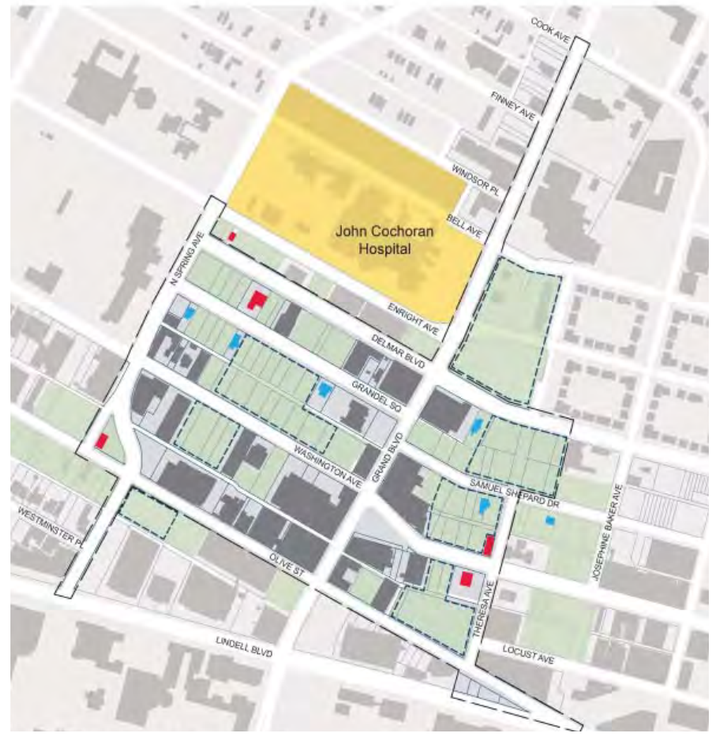
These redevelopment sites occupy the majority of street frontage on cross-streets to Grand Avenue suggesting that the type and density of this redevelopment will make a significant impact on the future function and character of the street. Washington Avenue is the cross-street that represents the greatest opportunity for transformation.



Redevelopment area comparison



Potential impact for streets



Redevelopment opportunities map

legend:

- study area boundary
- areas of opportunity for new buildings, parking garages, parks / open spaces, plazas, and public artwork installations (temporary and permanent)
- priority sites
- VAMC john cochoran campus redevelopment area
- existing non-keeper buildings
- existing keeper buildings

Background

From the 1980s, two decades passed before the psychological barrier between St. Louis University and Grand Center at Lindell Boulevard began to be breached. Some St. Louis University students, staff, faculty and visitors now move more freely across the Lindell divide for dining, entertainment, culture and even housing. But the full potential has not been realized. This increased openness and comfort has yielded an expanding pattern of infill investment in retail, dining, office and institutional facilities within Grand Center. However, other than the renovated apartment buildings along Lindell between Vandeventer and Spring, there are limited opportunities for university students and employees to live or shop north of Olive/Lindell today.

A summary of the strengths, weaknesses, opportunities and threats that explain why the full potential of Grand Center has yet to be realized is illustrated below:

SWOT Analysis

Strengths
- Two major employers
- Growing residential strength in central corridor
- Regional draw from cultural, educational & hospital inst.
- Locust Business District

Weaknesses
- Lack of day-time population
- Limited funding sources
- Regional perceptions of the city
- Current “wasteland” impressions
- Lack of retail traffic

Opportunities
- 15 acres of surface parking
- Strong stakeholder collaboration
- High stakeholder aspirations
- Vision of Framework Plan and Great Streets concept

Threats
- Competition for funding
- Aging of cultural audience
- Competing entertainment districts
- Residential financing

Land Use and Employment Profiles

The following section begins with a synopsis of findings from a comprehensive but generalized inventory conducted of building space-use within Grand Center. The results were aggregated for the Core Area defined by Delmar on the north, Lindell on the south, Spring on the West and Josephine Baker on the east, and by a District Perimeter Area extending to Cook Avenue on the North, the Frost Campus of Saint Louis University on the south, Vandeventer on the west and Compton Avenue on the east. This is followed by a synopsis of the survey of principal employers and uses within Grand Center. Information was sought regarding the number of employees and total payroll, amount and type of building space occupied, and parking provisions utilized. While responses were received from about 2/3 of the 60 firms and organizations surveyed, a smaller proportion yielded responses that were sufficiently complete to enable full reporting. Still, the overall results of the survey begin to provide a useful overall picture of the economic strength and character of the area's primary users and occupants. The following sections of this chapter address the current status and potential for addition of residential, office and restaurant, entertainment and retail commercial investment.

Land Use Profile

A comprehensive inventory of building use and occupancy yielded the following estimated floor area distribution:

	Offices	Retail, Restau-	Commercial/ rant & Comm. Entertainment	Residential Industrial/ Warehouse	Institutions & Hotel	Total (excl. SLU)
CORE	550,000 sq. ft.	330,000	110,000	650,000	830,000	2,470,000
PERIMETER	290,000	125,000	520,000	1,000,000	4,980,000	6,915,000
TOTAL	840,000	455,000	630,000	1,650,000	5,810,000	9,385,000

- Offices: 6 primary buildings (Humbolt, Centene, Big Bros/Big Sisters, KWMU, Nine Network & the Wool office buildings), plus 4 smaller facilities
- Restaurants: 13, plus 2 fast food; 11 new in last 5 years; new retail shopping, including motorcycles!
- Numerous commercial/industrial/warehouse facilities: range of conditions and viability; often prime space for office or retail incubation or conversion
- Residential and hotel: approximately 1,000 units, w/ 850 multifamily, 45 single family, 60 institutional, 40 hotel
- Diverse range of cultural and entertainment venues: Fox, Powell Symphony Hall, Sheldon, Metro Theater, Grandel Theater, The Pulitzer, Centene Center for the Arts, & the Krantzberg
- Array of educational and health care institutions: Cardinal Ritter HS, Loyola Academy, Grand Center Arts Academy, Clyde Miller Career Academy, plus SLU and Harris Stowe nearby; Veteran's Administration Hospital

Employment Profile

A comprehensive employer/occupant survey yielded data on employment, payroll and occupancy:

	Performing Arts	Museums & Galleries	Education & Training	Health Care	Total
Employees					
- Full time	242	35	2,815	1.283	4,305
- Part time	1,039	54	150	179	1,422
Payroll	$21,173,000	$2,279,000	$139,000,000	$81,000,000	$243,452,000
Attendance, Visitors	829,000	39,020	24,300	430,000	1,322,320
Floor Area Occupied	309,000	103,050	4,200,000	990,000	5,602,050

Survey results indicate an employee payroll of nearly $250,000,000. Not surprisingly the two large institutional employers flanking the district on the north, Cochran VA Hospital, and south, Saint Louis University, comprise fully 80 percent of this amount. These two employers likewise comprise over 80 percent of the floor area occupied by the responding employers and nearly 85 percent of aggregate employment.

Residential Development Profile

Central Corridor: Primary Market Context

The portion of the St. Louis region's "central corridor" that extends from Downtown to the campus of Washington University at Skinker Boulevard comprises the principal market context for Grand Center. This section of the Central Corridor consists of three principal sub-sectors – Downtown St. Louis on the east and the Central West End on the west. In between is Mid-town with Grand Center as its focus.

Downtown

Downtown St. Louis realized dramatic growth of its housing inventory, beginning in the late 1990s and accelerating well into the 2000s. However, in keeping with the bursting of the national housing bubble in 2008-09, housing production declined dramatically there as well as throughout the regional market.

Downtown Housing Inventory

By Type	
Market Rate Rental	4144 – 47%
Below Market Rate Rental	1820 – 21%
Sale/Owner Occupied	2781 – 32%
	8745
By When Opened	
Before 1990	2863 – 33%
1990 – 1999	658 - 7%
2000 – Present	5224 – 60%
	8745 units

Housing production downtown prior to 1990 consisted primarily of then newly constructed projects (ex. O'Fallon Place, Mansion House, Columbus Square). This was followed by a mix of new construction and rehabilitation in the 1990s (ex. Murphy Park Townhomes, Art Loft Building). Growth has been most all rehabilitation and adaptive reuse throughout the 2000s to the present (ex. Edison Bros Condos, Lucas Lofts, Louderman Building, Park Pacific). With the notable exception of a portion of Columbus Square, multifamily ownership housing did not enter the downtown inventory until 2000 when it expanded rapidly until the bubble burst in 2008. More recently, and in keeping with regional trends, there has been action in a strengthened rental housing sector. This includes the highly successful Park Pacific (230 units) and The Laurel (205 units), both of which opened in 2011 and are now above 80% occupancy. Today, more than 14,000 people live within greater downtown St. Louis, a gain of over 9000 or 225% since 2000.

Central West End

No comprehensive inventory of multifamily housing, similar to that which is maintained by the Partnership for Downtown St. Louis, is available for the balance of the central corridor. There are numerous projects and buildings that date back as much as 100 years dispersed throughout the area. Highlights of the inventory gains since 1950s are summarized as follows:

Market Rate Rental		
Parc Frontenac	1958	202 units
Montclair on Park	1958	201
Monticello Apartments	1980	70
Sherwood Court	1981	66
Convent Gardens	1986/2012 (1925)	84
Clara Court	1989 (1913/57)	129
McCormack House - Forest Park	2001	55 units
Metro Lofts	2003	170
SoHo Square Apartments	2006 (1951)	180
West End Apartments	2009 (1985)	40
York House	2011 (1922)	33
		1230 units
Below Market Rate Rental		
McCormack House – Forest Park	2001	34 units
West End Apartments	2009 (1985)	40
		74 units
For Sale / Owner-Occupied		
Gaslight Square homes	2002	47 units
4200 Laclede (former Luyties)	2002 (1915)	18
Metropolis DeBaliveier Place (conversion)	2004 (various)	400
Park East Tower	2007	89
4545 Lindell	2007	31
Park East Lofts	2008	52
Private Residences at the Chase Pk. Plaza	2009	87
		924 units
		2228 units

The preceding highlights the strong shift to ownership housing in the Central West End which ground to a halt with the housing industry crash and national recession in the later years of the decade.

Mid Town & Grand Center

		MR	BMR	Sale	Total
Lucas Heights Village	1981	192	-	-	192
Drake Plaza	1990	-	85	-	85
University Plaza	1996 (1920)	56	31	-	87
McCormack House – CWE (Olive)	1999	72	-	-	72
Continental	2002 (1929)	95	12	-	107
6 North (Sarah)	2004	45	35	-	80
Grand View Tower Apartments	2004/07	170	130	-	300
Renaissance Place	2004/08	101	271	-	372
University Heights	2005 (1920)	244	-	-	244
Lindell Apartments (fire)	2009/13	197	-	-	197
P W Shoe Lofts	2009	33	-	-	33
Leonard (4166 Lindell)	2010 (1920)	34	-	-	34
Metro Artists' Lofts	2012	72	-	-	72
		1311	564	-	1875

Current Pipeline of Anticipated Projects

Today, there is a sizable pipeline of rental multifamily residential projects planned or underway in the "central corridor." Most are to be located to the east in downtown and the Central West End. In the short term, additions to the housing inventory within Grand Center are likely to be relatively modest and consist of rental multifamily units targeting St. Louis University students and moderate-income staff, along with striving young creative and arts participants. The recent success of the 72 unit Metro Artists' Lofts demonstrates this potential. As confidence increases, investors and lenders will support larger increments of housing addressing the needs of higher-income households. Successful residential additions in downtown and the Central West End will likewise pave the way for more challenging projects in Grand Center.

Expanded residential patronage is definitely required in order to broaden and deepen support for a larger retail and dining inventory. Additional residential development will likewise be demanded in tandem with employment growth within the district, especially from an expanding inventory of office-based businesses and institutions. Residential development in the district will be interdependent with the Great Streets improvements, requiring the urban environmental upgrade and supporting the goals of populating the district.

		MR	BMR	Sale	Total
Downtown					
Roberts Tower	2014 (2010)	132	-	-	132
Arcade Building Artists' Lofts	2014 (1919)	69	185	-	254
Pinza 50, Senior Apartments	2013 (?)		149	-	149
Chemical/Alexa Building	? (?)	120	-	-	120
Millennium Center Apartments	2014 (1962)	102	-	-	102
Lacassian Lofts	? (1916)	27	-	-	27
		450	**334**	**-**	**784**
Central West End					
City Walk (Mills, w/Whole Foods)	2014	160	-	-	160
Aventura (Manchester, FPSE)	2015	204	-	-	204
West End Terrace, Addition	2015	80			80
Cortona at Forest Park	2014	278	-	-	278
Parc Frontenac II	2015	?	-	-	?
Heart Association Lot	2015	?	-	-	?
		722	**-**	**-**	**722**
Midtown / Grand Center					
Laclede Lofts (u.c.)	2014 (1946)	50	-	-	50
North Sarah Apartments, Phase 2	2014	-	103	-	103
Missouri Theater Building		70			
		149	103		252
Total "Pipeline"		**1321**	**437**		**1758**

Recent Regional and Submarket Apartment Research

Two recent market condition assessments highlight the comparative strength of the central corridor in the City of St. Louis. Colliers International addresses the broader Central West End as a distinct regional sub-market, with the balance of the city comprising another sub-market. Its 1st Quarter 2013 report indicates the Central West End had the region's highest average rent at $1,151 per month or $1.34/ square foot. Current occupancy stands at 94.3%. With no new supply on tap in the short run, and anticipated demand for 98 units, occupancy is predicted to climb to 95% by the end of 2013.

The 2013 Apartment Market Report St. Louis from MPF Research indicates "St. Louis City claims metro's only conventional projects. Of the nine projects completed in 2012, only two were conventional properties (versus "affordable" or below market rate), and both completed in the City of St. Louis. The 72-unit Metropolitan Artists Lofts (in Grand Center) completed in the fourth quarter, and The Laurel (in downtown), a 205 unit project, completed in 1st quarter". In the report's Submarket Overview, the Central West End/Forest Park submarket ranked high (1st, measures cited – occupancy, annual occupancy change, monthly rent, quarterly rent change, annual rent change, quarterly revenue change, and annual revenue change.

A third market report from Marcus and Millichap fails to distinguish the Central West End, downtown or mid-town from the balance of the city, instead dividing it into north and south city submarkets as two out of 10 regional submarkets.

Observations on the Condominium Market

It is widely recognized that the market for condominium apartments and townhomes has been moribund since the housing crash. Values declined dramatically, sales withered, and production ceased beginning in 2008, and remains largely unchanged today. Sales of units in selected built projects persisted and have now been largely sold out, usually following incremental price reductions (ex. 4545 Lindell, The Private Residences at the Chase Park Plaza). Turnover in condo units overall is slow today and prices remain depressed. In the Downtown submarket, an array of projects launched as condominiums were either canceled, transitioned wholly or in part to rental occupancy, reduced in size, or remain unfinished and unoccupied (ex. Motor Lofts, The Arcade, The Laurel, Ely Walker Lofts, The Alexa, The Ventana, Leather Trades Lofts, Park Pacific, Skyhouse, et al.) There is every reason to believe it will be several more years before this market eases back into effective operation in the Central Corridor, including Grand Center.

Zimmerman Volk Associates (ZVA) Market Projections for Grand Center

Zimmerman Volk Associates was retained by Grand Center in 2007 to evaluate then current residential market conditions. Based on this research, ZVA was charged with providing projections for residential absorption in Grand Center over the decade to follow. ZVA issued its report in February 2008 based largely on field inventory, demographic data and other research assembled in the previous year. In August 2009, ZVA provided a follow-up review and affirmation of its earlier findings and recommendations. A brief synopsis is as follows: Given the wisdom of hindsight, the obvious problem with this projection model is that it was based on conditions comprising the major housing "bubble" that prevailed at the national, regional and local neighborhood levels. The bubble was comprised of inflated levels of production, pricing and number of transactions of primarily ownership housing. After a dramatic period of decline that lasted almost 5-years beginning in late 2007, sales of used homes, production of new homes and prices have finally begun to rise from their new low bases. In the meantime, there has emerged a strong landlord's market for rental

Annual Market Potential

Housing Type	Household Demand #	Household Demand %	Annual Unit Capture Rate - %	Annual Unit Capture Absorption
Multi-Family For Rent	970	36.2	5-10%	48-97 units
Multi-Family For Sale	950	35.4	5-10	47-95
Attached Single-Family, For Sale	760	28.4	5-10	38-76
	2,680	100.0%		133-268/year

housing that is currently spurring new rental housing production. This is evident in a growing pipeline of new and rehabilitated rental housing products in the central corridor and its primary submarkets as documented earlier. However, the recovery of this segment of the housing market is yet to stimulate new life in the urban ownership, for-sale housing market. There have been no proposals to date for the creation of condominium apartments or attached single-family homes, whether new or rehabilitated. All new projects are being planned for rental occupancy (although some are being seen as having potential for later conversion to condominiums should favorable market conditions return).

Housing Development Scenario for Grand Center

In consideration of the preceding inventory and trend information, and viewing the ZVA projections in light of current circumstances, the following housing development scenario is offered. It seeks to present a realistic set of expectations and guidelines for housing development planning and investment.

Ten-Year Residential Absorption – Grand Center, 2015 – 2024

Units / Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Rental Multi-family	50	50	60	60	80	80	80	70	60	60	650
For Sale Multi-family	-	-	20	20	30	40	40	50	50	50	300
Total / Year	50	50	80	80	110	120	120	120	110	110	950

Realizing that any actual development program will occur in less neat aggregations than those conceptually outlined above, as part of mixed-use projects (along with office, institutional and parking facilities) and at a wide range of project densities, it is challenging to estimate a corresponding allocation of land absorption. However, if an urban residential density averaging 30 units per acre is assumed, a total of 30 to 35 acres of land for housing sites would be required (including associated parking) – equal in scale to two to three of the larger city blocks comprising the Grand Center District today.

Office Development Profile

Existing Office Base in Grand Center

There is a tendency not to think of Grand Center as an office location. This is due in part because the major office buildings from the pre-World War II era, when Grand Center contained a high proportion of the region's medical offices, have long since wound down from this function or been converted to other uses – The University Club Tower, which houses the University Plaza apartments today, and the Missouri Theater Building, soon to be rehabilitated for new rental apartments. Also, offices in Grand Center are often overlooked because of the high profile of the district's cultural and entertainment venues along with the presence of two giant institutional complexes on its north and south flanks – The Cochran VA Hospital and the Frost Campus of St. Louis University.

Six primary office facilities totaling some 275,000 square feet of dedicated and fully occupied office floor area are located in the core of the district: the Humbolt, Nine Network, KWMU/UMSL, Big Brothers Big Sisters/Krantzberg, Centene Center for the Arts, and Wool Center/SLU buildings. These average 46,000 square feet. In addition, there are nearly 20 smaller buildings that appear to be occupied primarily by office uses, including those occupied by the Rodemeyer Christal firm, Laborers Union, Urban League, Fortitude Foundation, ATT (portion of larger structure), and St. Louis Enterprise Center. These buildings together comprise an estimated 235,000 square feet of office space, or about 12,000 each. Adding these two groups of office facilities together comprises about a half million square feet of active office space with an estimated 1500 persons employed there. In addition, there is a substantial number of less obvious office uses and users dispersed throughout the district, and others that are pending completion of announced renovations or additions (ex. future offices of KDHX, 88.1 FM at 3520 Olive). Given the scale, diversity and uniqueness of the office-based businesses and institutions in Grand Center, there is good reason to believe this is a solid base upon which to build additional distinctive office facilities.

On the other hand, it is unlikely anyone will build a speculative or general office building in Grand Center,in the manner they might in Clayton, downtown or another traditional office center. Rather, future office users are likely to be specialized firms interested in rehabilitating or adaptively reusing existing space. There will also be cases of firms or organizations desirous of creating new office facilities that meet their specialized space and location needs and to emphasize their own unique identities. Prime examples of such facilities are those recently built by Nine Network and KWMU/UMSL. The space inventory suggests there are substantial additional opportunities for office upgrades or adaptive reuse of obsolete commercial/industrial buildings for offices, both upper story and ground level (estimated to be several hundred thousand square feet). There is likewise sufficient vacant and underused land to accommodate an array of new office facilities.

Planning for Additional Office Occupancy

Optimum development of Grand Center would include growth in office employment in tandem with residents. Both groups can provide committed patrons for retail shopping, entertainment and dining, as well as for cultural and arts institutions. Both groups also benefit from the presence of adjacent large institutional uses – Cochran VA Hospital and St. Louis University, as well as nearby Harris Stowe University. Local residents are attracted to work in local offices, and vice versa – office employees are prime candidates to rent or buy apartments in the district. Office-based businesses will tend to focus on serving the needs of the large institutional employers and their employees, while relishing their association with the major arts, cultural and institutional anchors that characterize the area. Certain office uses and users have the additional advantage of helping to make effective and efficient use of, and hence contribute revenue to support, costly garage parking facilities. Office employees need parking during the day and are gone when the parking needs of residents and entertainment and cultural venues are peaking in the evening.

It is recommended that planning for further development of Grand Center provide for creation of a total of 500,000 square feet of additional office space. An estimated 200,000 would result from the reuse of existing building space dispersed throughout the district, with the balance being in new facilities. Assuming an average floor area ratio of about 1.5 (1.5 sq. ft. of office space per sq. ft. of site area), the additional new office space would require approximately 4.5 acres of site area – equal to about ½ of the area of a typical large Grand Center city block.

Dining, Entertainment and Retail Development Profile

Grand Center has seen a significant expansion of its restaurant and bar establishments over the past five years. Building on a few well established institutions like Best Steak House, Vito's and Jazz at the Bistro for evening fare, as well as Sunrise Chinese, the choices now include KOTA's Grill, Dooley's, City Diner, Nadoz at the Coronado, Sweetie Pies, Triumph Grill, Café Praxtos, Fieldhouse, Urban Chestnut, Flying Cow Yogurt & Plush. In addition, there are limited availability venues in the Fox Theater, Griffin Restaurant, and Powell Symphony Hall, Met Bar. This rather dramatic up-tick in dining offerings affords a base for a growing dining, entertainment and retail sector in Grand Center.

When it comes to non-restaurant retail establishments, current choices in Grand Center are few. These include: American Automotive and Nuelle Automotive in the car repair and maintenance category, Salon Edge for hair care, Epiphany Boutique for gifts and furnishings, and Moto Europa for high-end motorcycles. Overlapping the world of museums and retailing are commercial galleries like Greenberg Van Doren, Bruno David, Portfolio, Shearburn and Horizon.

The preceding establishments are estimated to occupy approximately 135,000 square feet floor area, the great majority of which is at ground, street level. Restaurants occupy about 85,000 sq. ft. of this area (15 restaurants averaging 5,600 sq. ft. each) and other firms actively providing retail goods or services occupy about 50,000 sq. ft. (9 establishments averaging 5800 sq. ft. each). Vacant or obviously underutilized street front floor area deemed appropriate for restaurants or retail occupancy totals an estimated additional 60,000 sq. ft. There are of course extensive opportunities for new retail and restaurants to be developed on the ground floor of future parking garages, and office, residential and mixed-use buildings.

Over the last 5 years, the restaurant inventory has increased from 4 operations in about 21,000 sq. ft. to 15 operations in 85,000 sq. ft., a 63,000 square foot or 300 percent increase in occupied floor area. Bars and restaurants are typically the advance guard for commercial revitalization of historic and "Main Street" business districts. Grand Center is now well on its way in this regard. However, the addition of significant amounts of retail shopping and services, other than standard 'big box' merchandisers who would be inappropriate in this location, presents a much greater challenge – one that requires a proven, reliable base of relatively affluent, daytime patronage.

Development Strategy

Diversify Uses

A stated long-term goal of Grand Center has been to further diversify land uses. This is critical to populating sidewalks and underpinning the effective use of an expanded parking infrastructure. Also, it is clear that well-lit and used sidewalks are key to addressing the security concerns of patrons. Wider, well-appointed sidewalks with effective street furniture, lighting, and landscaping encourage and anchor retail uses and restaurants and their patrons. As pedestrian use of sidewalks increases, the area's desirability as a residential, employment and cultural and entertainment center will grow dramatically.

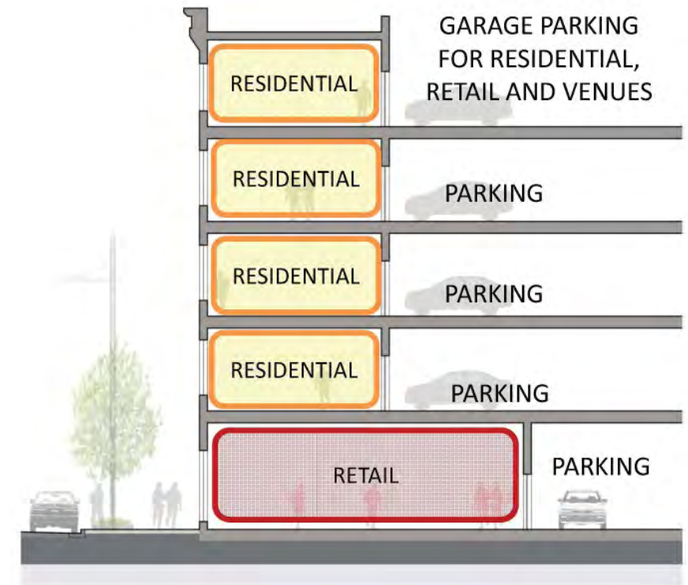
A further opportunity lies in the ability of the district to attract increased daytime pedestrian traffic from the two largest institutions in the area: St. Louis University on the south and the Veterans Administration Medical Center on the north. These institutions have 24/7 operations and attract employees, visitors and students from throughout the region. This constituency represents a major economic opportunity for the district. Attractive restaurant offerings coupled with improved north-south pedestrian connections will encourage these groups to take advantage of the area's many amenities throughout the day. Desirable residential options nearby will be sought by employees and office facilities will be in demand by allied firms and non-profit organizations. Altogether, these groups will widen and diversify patronage for shopping, dining and entertainment.

The proposed Great Streets plan will facilitate these linkages and yield a pedestrian environment that attracts both daytime and evening patrons.

Parking Infrastructure

The Design Team prepared a conceptual capacity study of the potential for redevelopment of currently vacant land, including implications for expanded parking strategies. Initial analysis indicates a potential for 4,200 cars in structured parking, displacing 1,500 surface spaces for a net gain of 2,111 spaces. While diversity of use will yield greater effectiveness of daytime use of the parking facilities, this net increase in capacity will accommodate both existing and future increases in parking demand. The Veterans' Administration Hospital parking system has not been included in these numbers. However, it is assumed the VA parking lots on the east side of Grand, between Delmar and Bell, will be redeveloped eventually for other uses.

The overall future supply and pattern of on-street parking will be influenced by several incremental but planned changes. On-street



Typical Mixed Use Building with Residential Wrap

parking to be removed from Grand will be more than offset by increased on-street parking on Grandel. Initial district-wide analysis indicates an increase from 529 to 554 on street parking spaces, although there will be some further reductions from several new curb cuts, drop-off zones, and larger accessible parking spaces.

In Grand Center, a prime opportunity lies with the fifteen acres of surface parking currently located to the east and the west sides of the district core. The long-term land use plan, supported by the Grand Center Framework Plan, calls for the redevelopment of these large surface lots with multi-story, mixed-use "wrap" development that surrounds, or "wraps", interior parking structures. The street fronts would have ground level retail shopping, entertainment and dining with offices and/or residential uses above.

A key to the success of all sectors and uses in Grand Center will be a well-managed inventory of commonly accessible parking facilities. Ideally, this inventory will be comprised primarily of garages strategically sited to serve multiple uses and facilities 24/7, rather than being sequestered to meet the needs of selected users or sources of patronage. An ad hoc system of dedicated parking for individual buildings or uses, as is routine in most suburban, automobile-centric locations, would require far more parking spaces to meet the collective

needs of the area. Such an approach would also inhibit pedestrian movement between uses leading to reduced pedestrian comfort and safety.

There are numerous examples of revitalized traditional business districts that demonstrate this principal in action. An especially good case is downtown Greenville, South Carolina. Effective public infrastructure has been key to success over a three-decade period of revitalization and expansion. First came major city investment in streetscape improvements along with a system of public parking lots. As new commercial investment arrived, the public lots became public garages and the streetscape system was extended further along Main Street and onto side streets. The need for private, off-street parking for individual buildings and uses was minimized, enabling continuous building frontage on the street and encouraging pedestrian traffic. While bars and restaurants along with infill office buildings dominated initial investment in the downtown, determined planning and recruitment efforts have yielded expansion of retail shopping opportunities. New and expanded public and private cultural institutions and open pace have added to the district's commercial attraction as well as to bolstering civic pride.

Land Use and Development Potential

While a series of major entertainment and cultural venues is at the heart of Grand Center today, few such additional institutions are anticipated. Rather, new and rehab infill development will likely consist of a variety of types housing, for rent and sale, unique office facilities for an array of business and institutional users, and expanded options for shopping and dining. The preceding portions of this section delineate these market opportunities. Like many such revitalized traditional business districts, successful restaurants and bars will lead to expansion of retail shopping and services.
The variety and extent of future development has the potential to radically transform the environment of Grand Center at street level and create a distinctive urban place. The Christner team foresees attracting nearly 1000 new residential units over a 10-year period, doubling the current housing inventory. Similarly, there is potential to increase the inventory of office uses from some 800,000 sq. ft. today to about 1.3 million sq. ft. over the next decade. An estimated 200,000 sq. ft. of new office space could result from renovation and adaptive reuse of existing commercial/industrial buildings with 300,000 sq. ft. being in new structures. There is likewise the physical capacity to accommodate a significant proportion of future office and residential development configured to create a consistent street frontage that screens new mid-block parking garages. New residential and office facilities would accommodate expanded retail shopping, entertainment and dining at ground level.

It is important to stress that the land use pattern in Grand Center will evolve over time, and the purpose of the capacity study was not to offer a development master plan. Rather, it is intended to provide an analytical and conceptual frame of reference from which to anticipate the development mix and densities that are possible and likely in the district. Specific land use or site plans have not been developed or vetted with area leadership or property owners.

Implementation

With the renovation of the Sun Theater and the Missouri Theater Building, the last vacant major or landmark buildings will have been redeployed. This is a critical juncture in the revitalization of Grand Center. As a result, a high proportion of future investment will be in new construction, including the creation of structured parking to allow a transition away from the large surface lots that dominate the area today. This will need to occur one project at a time so as not to displace too much parking at one time. The Great Streets plan offers an anticipated parking density distribution to guide future development, along with recommended site entry and egress points.

Implementation of the Great Streets plan will occur in response to market cycles as well as in relation to available public and private funding of specific development projects. The cost model suggests potential segmentation of the district into manageable packages, and provides unit costing for further analysis of alternative packaging strategies.

The Great Streets plan presents a vision of a public realm that will encourage, and depend on, a gradual overall increase in the density of Grand Center. Together with the anchor institutions and established cultural and performance venues, expanded residential, office employment and retail, dining and entertainment components will create a district that is economically sustainable as a desirable place to visit, live and work. The Great Streets of Grand Center will both frame and guide public and private investment required to build this special place in St. Louis.

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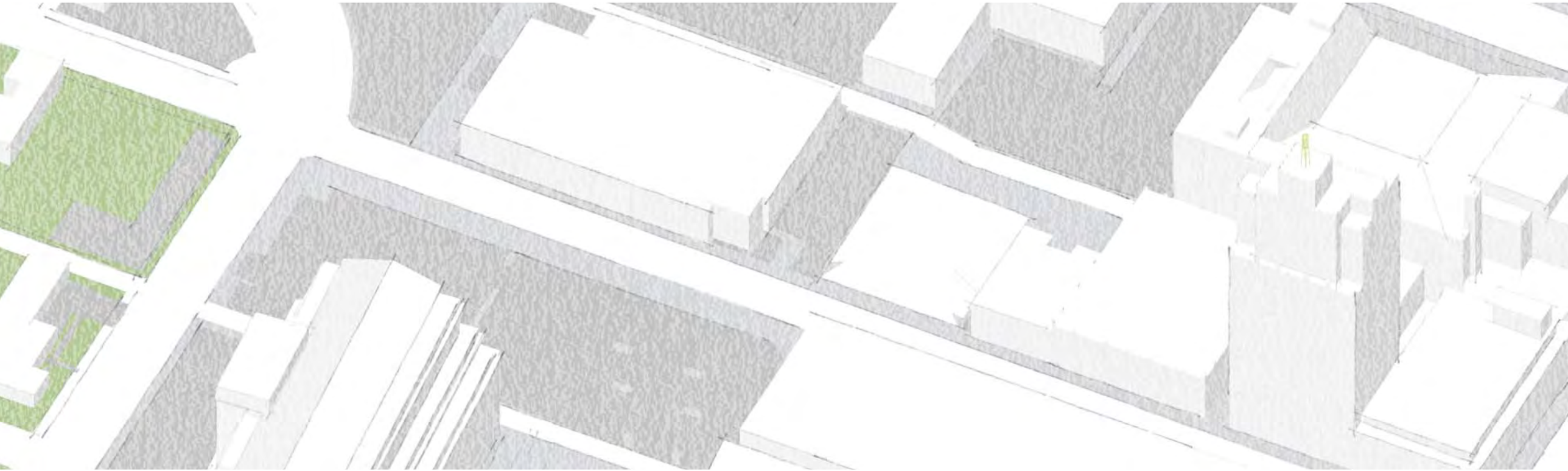


6 MASTER PLAN

MASTER PLAN

Grand Center Vision

As the participatory planning process evolved, the Design Team documented a vision for the community which is summarized by the six statements below. These statements were reviewed and refined by members of the subcommittees during the design phase of the project. The following visions statements and their respective strategies guided the development of the design, the transportation approach and land use planning throughout the planning process.

Vision Statements and Strategies

1. Grand Center is a diverse Community
   Strategies: Diversity of uses, users and cultures
   Connection of neighborhoods, business districts and institutions
   Infusion of dense residential development
   Added neighborhood businesses and services
   "Front porch" feeling for all institutions and business

2. Art and life unify a distinctive community
   Strategies: Reinforcement of the art anchors
   Public realm design that respects the needs of the venues
   Branding for activity zones of visual and performing arts
   Public spaces for permanent and temporary art
   Public realm design that is unique and special for Grand Center

3. Access to, within and through Grand Center is logical and intuitive
   Strategies: Parallel routes on Vandeventer and Compton
   Local venue and business traffic on Grand
   Coordinated parking entrances/exiting strategies
   "No fault" circulation
   Great wayfinding and branding in and beyond the community
   Strategies for manipulation of GPS mapping instructions

4. The pedestrian experience is transformed
   Strategies: Design for the pedestrian experience
   Wider sidewalks
   Better lighting and wayfinding
   Active street level businesses
   Pedestrian destinations and street venues
   Subdivide long blocks with mid-block crossings
   Infill of empty and dark surface lots with active uses
   Programmed green spaces and plazas
   Great access to public transit and bike facilities
   Vehicular, bicycle and pedestrian traffic balance

5. Parking solutions support the future of Grand Center
   Strategies: Denser parking capacity
   Reduction of demand for parking
   Mixed use infill development with parking garages
   Strategic locations to serve venue and business patrons
   More efficient use of large surface lots
   Coordinated parking operations
   Valet parking, cab stands and public transit options
   Shuttle from MetroLink Grand Center Station
   Shared car options (WeCar)

6. Underutilized properties lead to purposeful redevelopment
   Strategies: Mixed use infill with parking garages
   Inclusion of residential use
   Pedestrian routes around and through are integral to design
   Active street uses and "front porch" at the street
   Shapes spaces and streets
   "Mission teeth" are filled along the street frontage
   Distinctive, honest design for Grand Center

Transportation Recommendations

A Bold Vision

In order for the community to think about a bold vision for Grand Center, fundamental questions about transportation had to asked and answered. The outcome of the traffic investigation enabled stakeholders to think about reducing the width of Grand Boulevard and widening the sidewalks. Below is a discussion of the outcome of the transportation recommendations.

The Transportation Recommendations

The transportation challenge of the community is a complex set of interconnected variables supporting the desire to make Grand Boulevard the heart of the district, a place where the community can gather and move freely between destinations. The main conflict to this goal is the vehicular dominance of Grand Boulevard. To bring a pedestrian focus to the forefront, through- rips need to be shifted to alternative routes. Residents and visitors need to be encouraged to arrive and depart Grand Center from the east and west. Connections to uncomplicated pedestrian paths need to be clear and strong for all modes of travel.

The Great Streets plan tested two assumptions from the Framework Plan: 1) The capacity of Grand can handle evening peak traffic with one travel lane in each direction and 2) alternative parallel routes have the capacity to reduce traffic volumes on Grand for through-trips. The findings revealed that there is sufficient capacity to shift the way vehicles get to, from, and through Grand Center.

Before key recommendations of the plan can take place such as lane removal and sidewalk expansion on Grand, alternative routes need to be improved. An initial focus on the improvement and establishment of efficient vehicular routes allows for all the pedestrian improvements to follow.

The following are transportation goals and associated strategies for the Grand Center plan.

Transportation Goal	General Strategies
Provide efficient ingress and egress for Grand Center that is easily identifiable and user friendly.	*Promote the usage of alternate arrival and departure routes through the education of patrons, improved network management, event parking strategies, and other district "defining" streetscape improvements.*
Create a safe and friendly pedestrian and cyclist environment through the usage of traffic calming strategies.	*Provide safe pedestrian crossings at all intersections, with attention given to accommodating event pedestrian volumes at intersections in close proximity to the major venues.*
Modify traffic patterns on Grand Avenue to be more conducive to venue and retail users.	*Support the local orientation of this segment of Grand by providing strong connections and good wayfinding to alternative and parallel corridors.*

When realized, Grand Center will have functionally complete streets that balance modes of transportation. Specific improvement recommendations for the implementation of the Great Streets Plan for Grand Center are:

Vehicular

1. Enhance vehicular network connectivity
   a. Reconnect Theresa Avenue to Lindell Boulevard
   b. Improve lighting on Olive Street west of Spring to encourage use
   c. Implement special event signal timing plans for Olive and Washington during venue peaks
   d. Extend Grand Center branding, wayfinding and lighting on Olive, Washington, Locust, Samuel Shep herd and Delmar to Vandeventer and Compton

2. Improve physical conditions of parallel routes:
   a. Vandeventer
      - Repair pavement
      - Remove curb parking on the east or west side to improve driver comfort
      - Improve signal times
      - Enhance streetscape
   b. Compton
      - Improve pavement striping
      - Prohibit on-street parking between Delmar Boulevard and Olive Street
      - Redesign Compton between Olive Street and Laclede Avenue to obtain two lanes in each direction with dedicated parking
      - Remove curb parking from west side be tween Laclede Avenue and Market Street

3. Improve driver information
   a. Coordinate with Missouri Department of Transportation (MoDOT) to modify freeway signage
      - Grand Center wayfinding at interstate exits for alternative routes
      - Wayfinding (Interstate "shield" signage) with in district for exiting using alternative routes
   b. Coordinate, upgrade and extend wayfinding throughout and beyond the district
   c. Public and patron education campaign to promote alternative route usage
   d. Seek ways to manipulate GPS/navigation device/cell phone driving directions and position of final destinations in Grand Center

Pedestrian

1. Enhance Pedestrian Network
   a. Widen sidewalks and create safe intersections for pedestrians and drivers
   b. Build new curb ramps to meet ADA and provide visually graphic crosswalks for visibility in day or night
   c. Improve locations of pedestrian signal button locations at intersections for better accessible access and safety
   d. Improve pedestrian signal crossing times and special programming for venue peaks
   e. Quickly shift the vehicular mode of travel to a pedestrian mode as patrons enter the district.

Bike and Transit

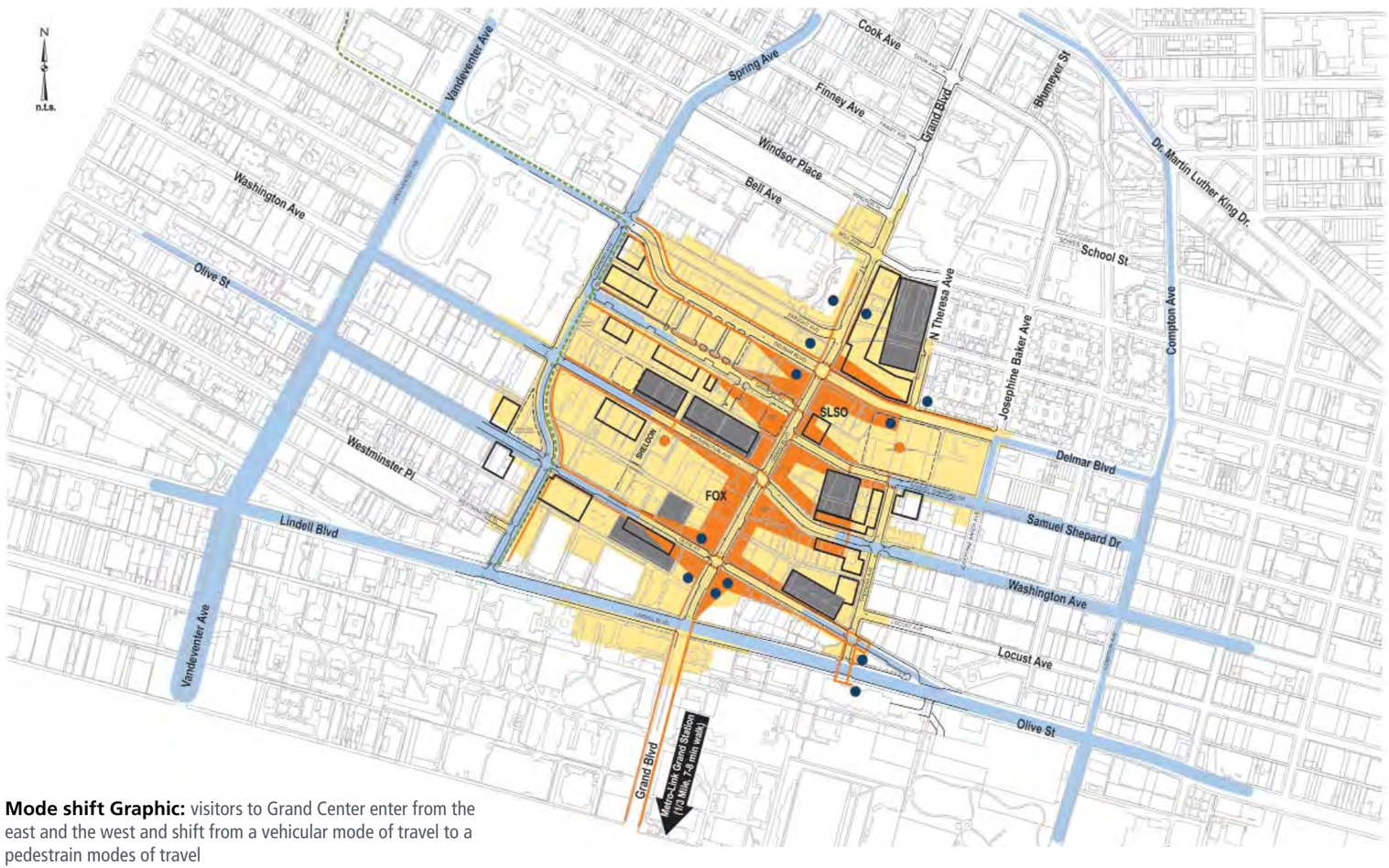
1. Strengthen access to and use of public transit and bike facilities
    a. Improve public realm conditions, wayfinding signage and lighting to transit and bike facilities
    b. Create strong visual linkages to transit opportunities and bike facilities
    c. Create an off-street pedestrian and bike facility (Midtown Loop Trail) on Spring with a partnership with Great Rivers Greenway
    d. Connect on-street bike routes (Bike St. Louis) and proposed Midtown Loop Trail to all major destinations, employment centers and residential areas in Grand Center
    e. Capitalize on the newness of future articulated buses to be operated on Grand to change perceptions about public transportation and gain ridership
    f. Reposition new bus stops along Grand to provide access on the south and north ends of the community and interface better with the Delmar route

Parking

1. Choreograph parking access and exiting
    a. Promote the use of alternative and parallel routes to access the community through signage, wayfinding, public information campaigns, etc.
    b. Create new mixed use parking facilities on the east and west edges of the community to allow visitors park quickly upon entering the district
    c. Create and employ venue exit traffic management plans
    d. Investigate and implement alternative payment methods for parking facilities (kiosks, credit card payments) to speed up and stager payment process
    e. Stagger visitor access and exiting with enticing activities before and after performances

2. Reduce parking demand
    a. Promote public transit and bicycle use through improved facilities, wayfinding, public information, etc.
    b. Investigate and implement WeCar, car-sharing facility
    c. Maximize parking resources with shared facilities for daytime uses and evening/event uses
    d. Promote mixed use infill development with a mix of services so that residents don't need cars

Improving how people get to, from, and through Grand Center opens the door for a bold design vision that dramatically improves the look and feel of the public realm. The next sections of the Master Plan illustrate these proposed physical improvements.



Mode shift Graphic: visitors to Grand Center enter from the east and the west and shift from a vehicular mode of travel to a pedestrain modes of travel

The Design Vision

Grand Center, a hub of entertainment venues in St. Louis, needs a compelling vision to complement its world-class institutions. The iconic "steeple to steeple" Grand Boulevard view corridor is the most striking architectural memory of the Grand Center community. Whereas surface parking lots have become the dominant spaces in the community—areas of "void" in a once vibrant part of the City of St. Louis.

The Issues

Grand Center's sidewalks are too narrow and its streets are too wide. The pedestrian experience is marginalized and lacks basic pedestrian comfort and safety considerations. The current street widths are more than adequate for traffic flow and this condition promotes higher vehicular speeds. The existing pedestrian corridors are conventional and do not physically express or capture the essence of the place.

The existing replica "acorn" lights served their purpose in the early days of Grand Center revitalization and now appear out of date for the contemporary entertainment district that Grand Center has become. Although the historic lights were never truly authentic to this neighborhood when they were installed, it was a common trend to remove "cobra head" street lights when looking to transform streets into pedestrian environments. The poles are spaced closely at 30 ft. on center and create a three-dimensional "picket-fence" visual barrier. Because the poles are short and the acorn light fixture is inefficient, they are placed close together to provide the appropriate lighting levels. The by-product of this is a very cluttered and congested sidewalk. The distinguished landmark buildings are awkwardly blocked when viewing from the sidewalk.

Place Making

The image preference survey completed by the participants during the Public Open House revealed preferences for engaging nocturnal experiences. Preferred images of other precedent streetscapes revealed a desire to create a more vibrant nightlife with intimate places to dine and linger before and after events.

How Great Streets Apply

Great Streets are representative of their "place." Making the pedestrian environment safer, more gracious with simple elegant materials will rightfully acknowledge and express the high quality architecture and cultural institutions that represent Grand Center as a "place." The design will: 1) transform the nocturnal pedestrian/vehicular experience; 2) reveal the great views of the buildings at eye level and enhance the pedestrian experience with state-of-the-art durable and elegant materials, sculptural stone benches, seasonal planting, street trees, way-finding and public art; and 3) the design will attract future development—making this diverse community a better place to live, enjoy and experience.

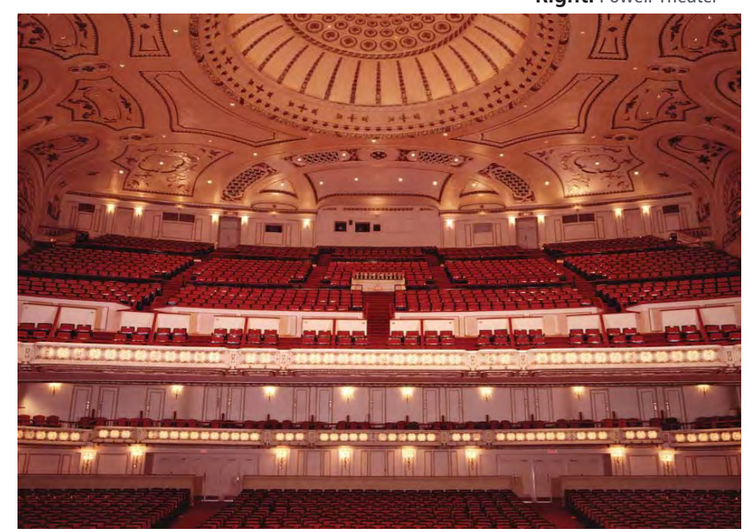
In order to comprehend, digest and then design all elements of the neighborhood and streetscape into a coherent whole, a multi-disciplinary team focused on Great Street "layers." These "layers" all had to be specifically woven together to make an integrated whole.

Right: Light poles create a 'picket fence" effect and block views

THE DESIGN CONCEPT

The design concept is inspired by the majestic historic theaters, performance stages, galleries, schools and Grand Center's "The Intersection of Art and Life" motto. Historic photos of the Fabulous Fox and the St. Louis Theater (Powell Hall) illustrate the visual power of the architectural room they created with the street. The ornate facades and neon marques add to the glamor and excitement. In its heyday, going to a show on this memorable street must have suspended its patrons from reality for a brief time. The design concept is intended to be unique in St. Louis and be a physical landmark for citizens, tourists and neighborhood residents.

Left: Fox Theater
Right: Powell Theater



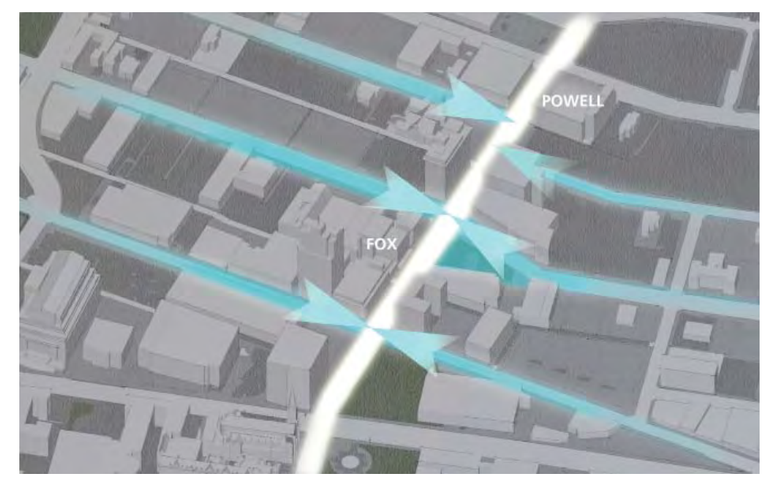
“STREET AS URBAN STAGE“

The visual and performing arts are no longer contained within buildings. The street becomes the stage; transforming the public right of way into an urban stage—creating a setting for a vibrant, active, diverse, flexible space where people and vehicles are “on-stage.”

Lighting will be the key to this design vision. The core element of any stage, theatrical lighting highlights the main attraction, does not detract from its setting and makes everything clear for its audience. New tall light armatures will line Grand providing safety as well as dramatic lighting for this grand stage. The tall buildings of Grand Boulevard define walls of this stage.

The night-time pedestrian experience is heightened when traveling down main cross streets like Washington and Olive within a linear “room” defined by a delicate constellation light ceiling - small fixtures suspended with very thin wire cables span over the streets. The lights are spaced like stars in the sky along the streets leading to Grand, progressively intensifying in density. At each intersection the ceilings of light dramatically lift to reveal open sky and magically unveil Grand Boulevard. There is a crescendo of light at Grand, the spine of the community. Lighting and the urban stage makes a very suitable story for this place.

First Night at Grand Center: The street is a stage



Revealing the spine: the crescendo to Grand Boulevard

Top: Grand Center Spine Plan

Grand Spine Plan
The core spine of Grand Boulevard is an important central space for the Grand Center Community. The absence of trees between Delmar and Olive preserves the historic "steeple to steeple" view

PLACE-MAKING

"Streets as Urban Stage" is a "place making" concept that is relevant for Grand Center because it is a physical design statement that demonstrates the unique qualities that only Grand Center has to offer in St. Louis. It is designed to build lasting memories and encourage repeat visits. Most importantly, it is meant to express the character of a diverse community and its residents. The Great Streets of the world are theaters where pedestrians are the "actors" on their community stage.

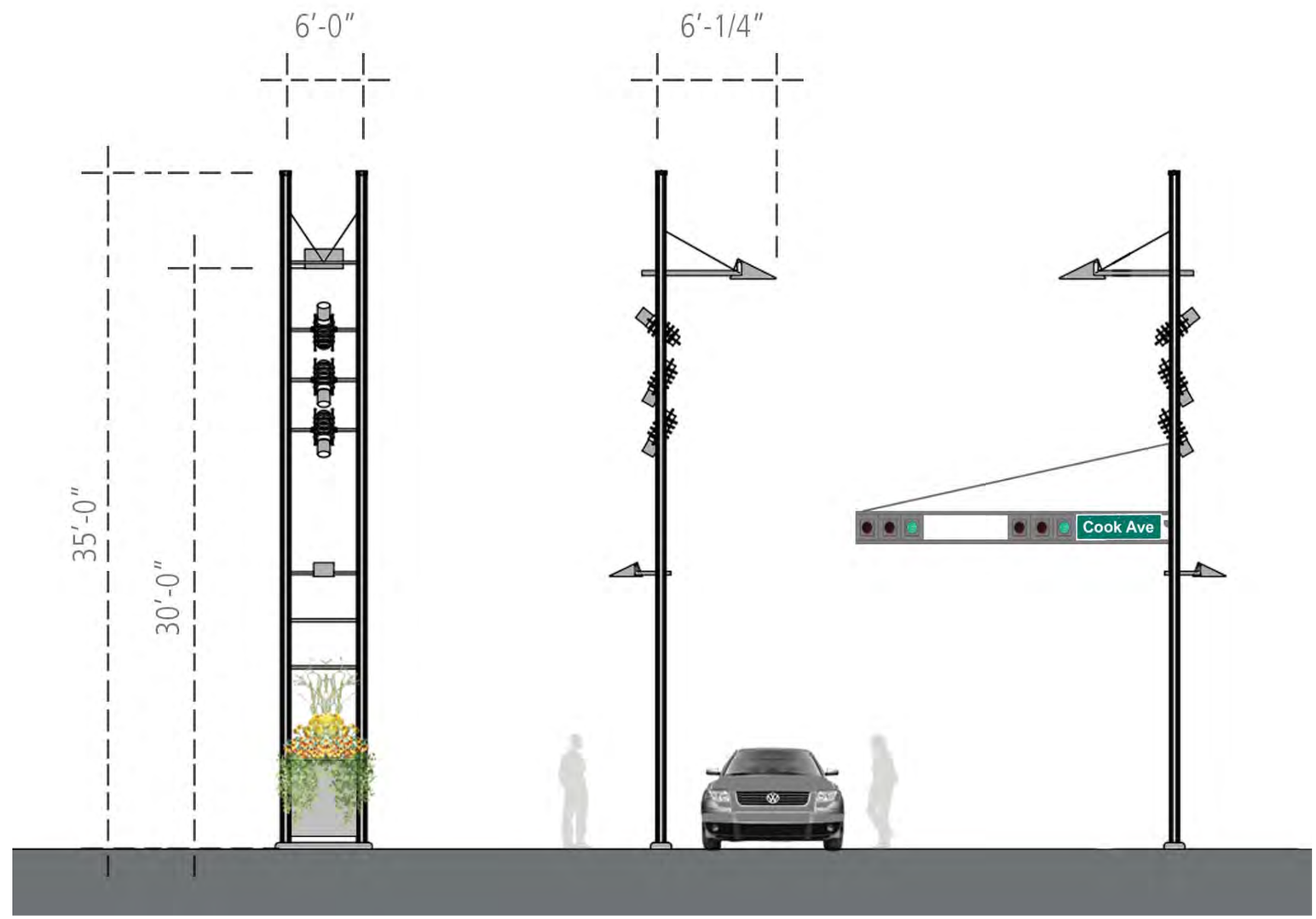
Right: Concept Sketches--Grand Boulevard Lighting Feature

Elements of the Design

The design elements are simple, durable and elegant with a special focus on lighting.

Lighting

The idea of the "architecture" of the light fixture was inspired by backstage lighting; where multiple flexible lights would be mounted on tall poles expressed honestly with a minimalist aesthetic defining a flexible track of lights. The fixture design was initially conceived of a "ladder" with various levels of light for sidewalk and street. A planter is integrated at the base to soften the hardness of the Grand streetscape that is designed not to have trees.



Right: Grand Armature

Left:
Washington Boulevard -- Lighting boards Concept Sketch
Right:
Washington Boulevard -- Lighting boards nighttime Concept Sketch

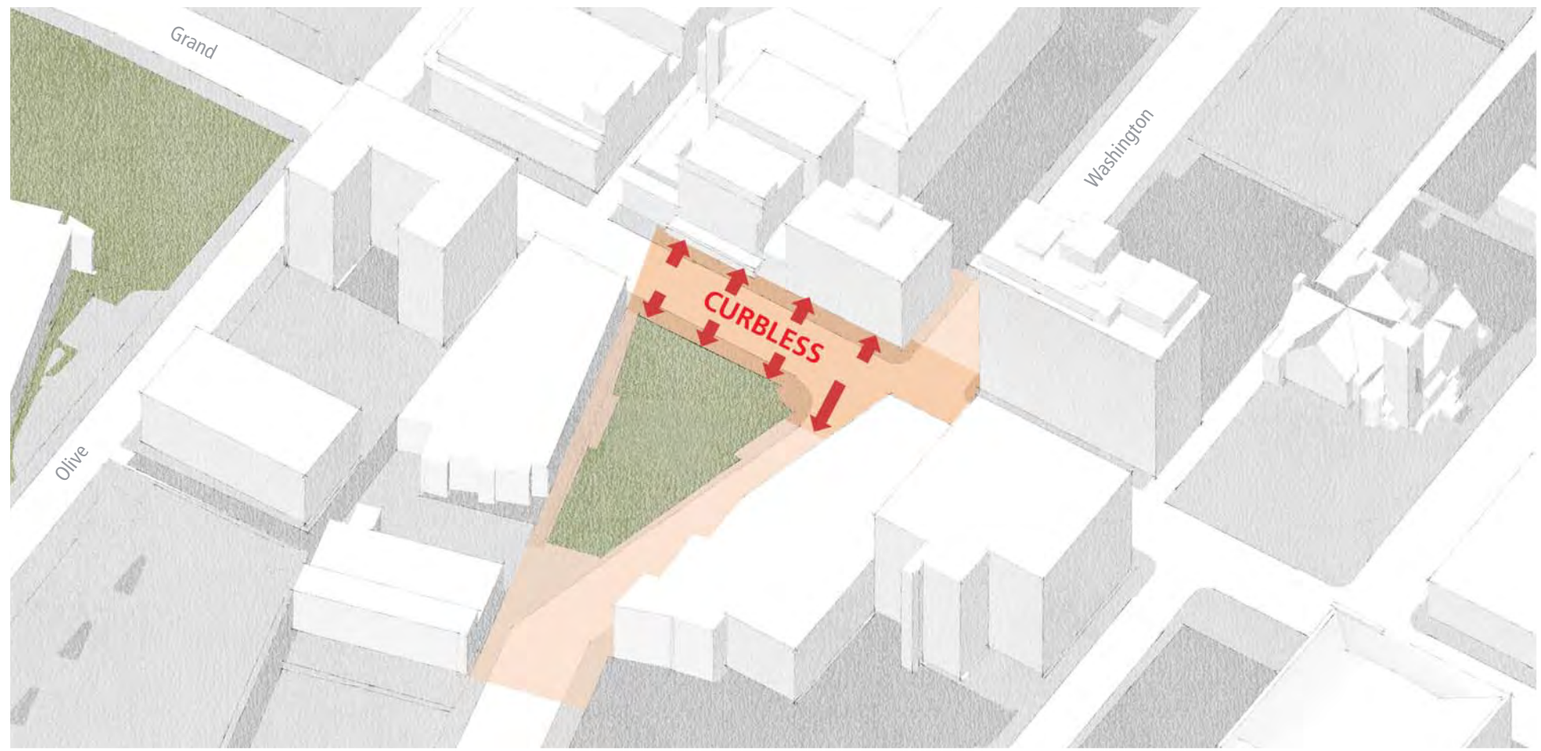
Stage

At the heart of Grand Center is Strauss Park

The triangular space on sloped ground is dramatic. The large mature trees are a neighborhood asset. To strengthen the park, adjoining spaces and buildings as a room, a curbless Grand Boulevard between the mid-block crossing and Washington Boulevard is proposed. It establishes a space designed for people to use for special events and continutes to provide daily use of the major thoroughfare. Bollards and long benches are placed along this edge on both sides for pedestrian safety and for visual and physical cues for drivers.

Left: Strauss Park Detailed Plan

The whole area between the buildings and over the street will have a "carpet" of durable paving to visually express the "floor" of the room. Simularly, suspended lights above a section of Washington will create a "ceiling" effect. These lights will be placed throughout and in the trees of the park creating an aesthetically beautiful setting—the park becomes an urban stage along with the streets.

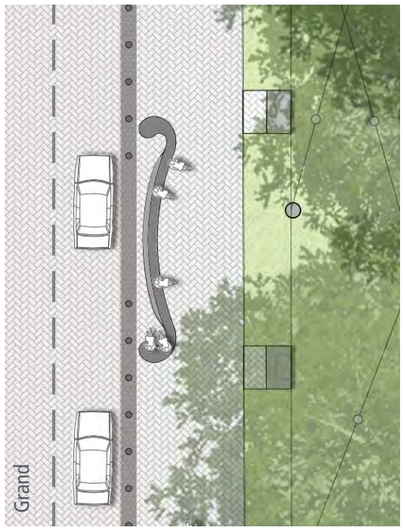


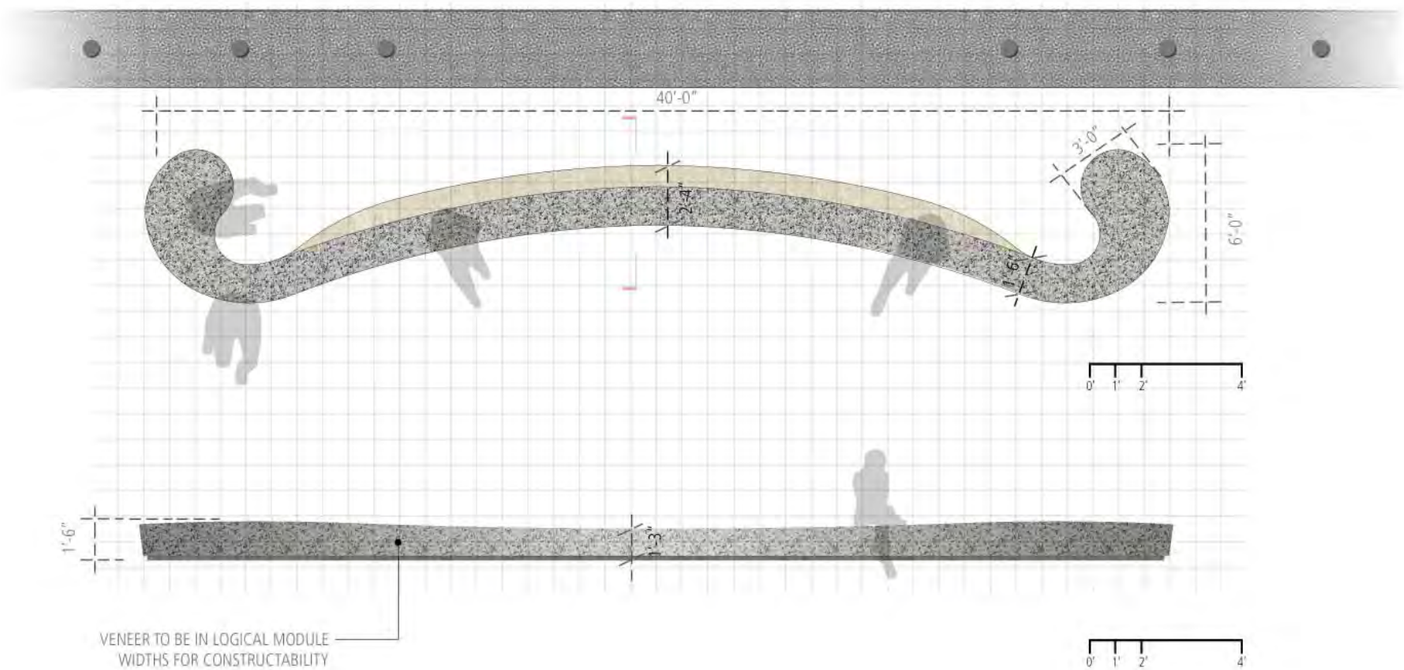
Right: Strauss Park Paving Diagram

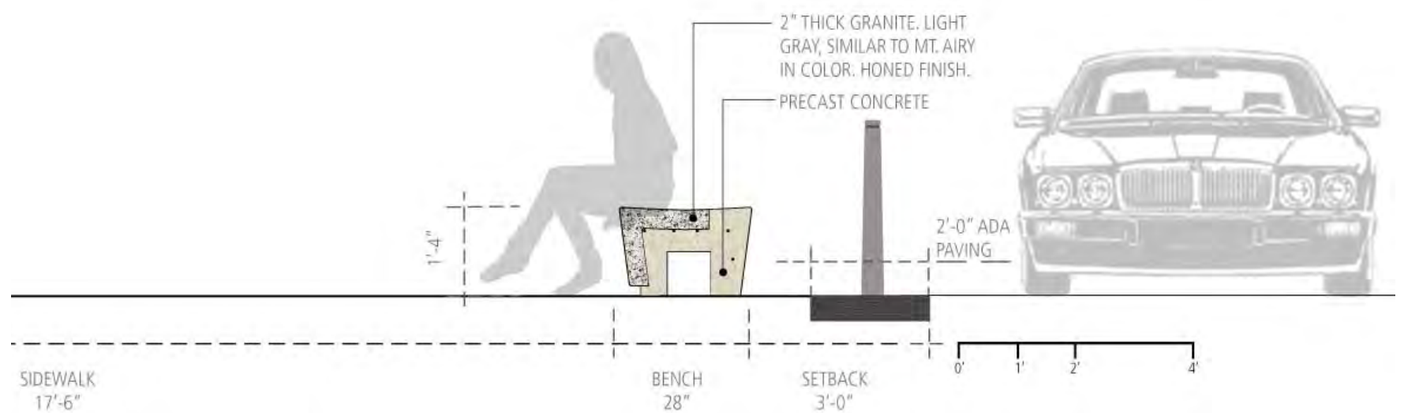
Seating

The configuration of the curbless Grand Boulevard required a barrier to protect pedestrians. A long bench was designed to be both barrier and a monumental-scale bench. Three of these are located along Grand: one in front of the Fox, one at Powell Hall and one centered along Strauss Park on Grand. A "cousin" bench was designed to be a complement to the long bench and includes a planter. The inspiration for the sculptural form of the bench was derived from the form of musical notes, instruments and the St. Louis flag—depicting the Mississippi and Missouri rivers. The benches and bench planters are carved of gray granite with curvilinear shapes and bull nose detailing. A tactile, soft and smooth feeling is expressed and a concave curvilinear form. It lures people to congregate before or after a show or as a place to have lunch. When not being used as a bench, the design is meant to be an elegant piece of sculpture along the sidewalk.

Bottom Left and Right: Musical Notation--Bench Inspirations

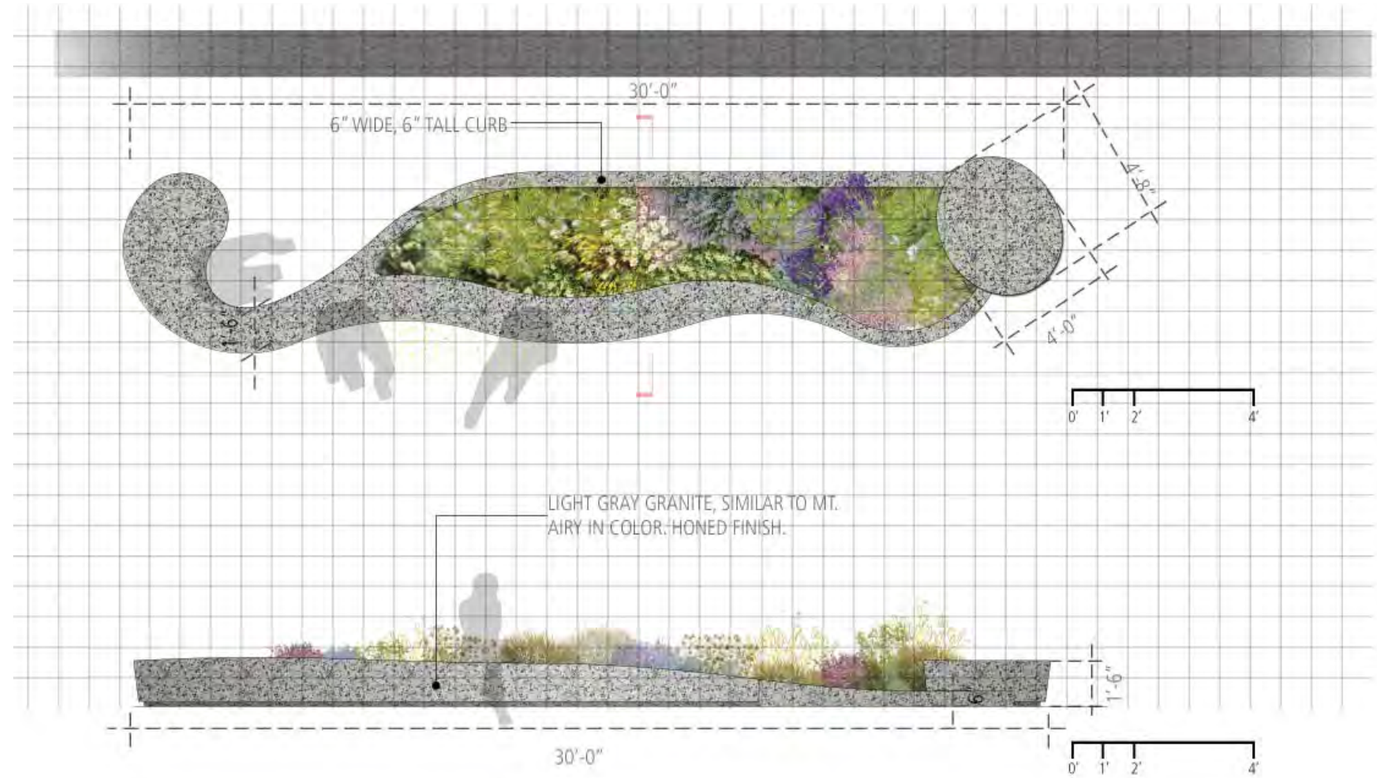


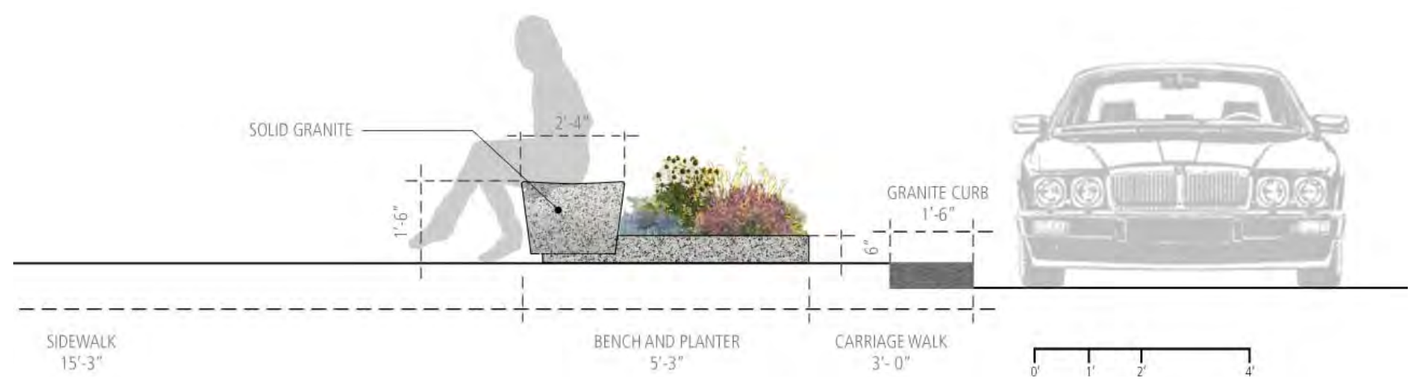




Long Bench

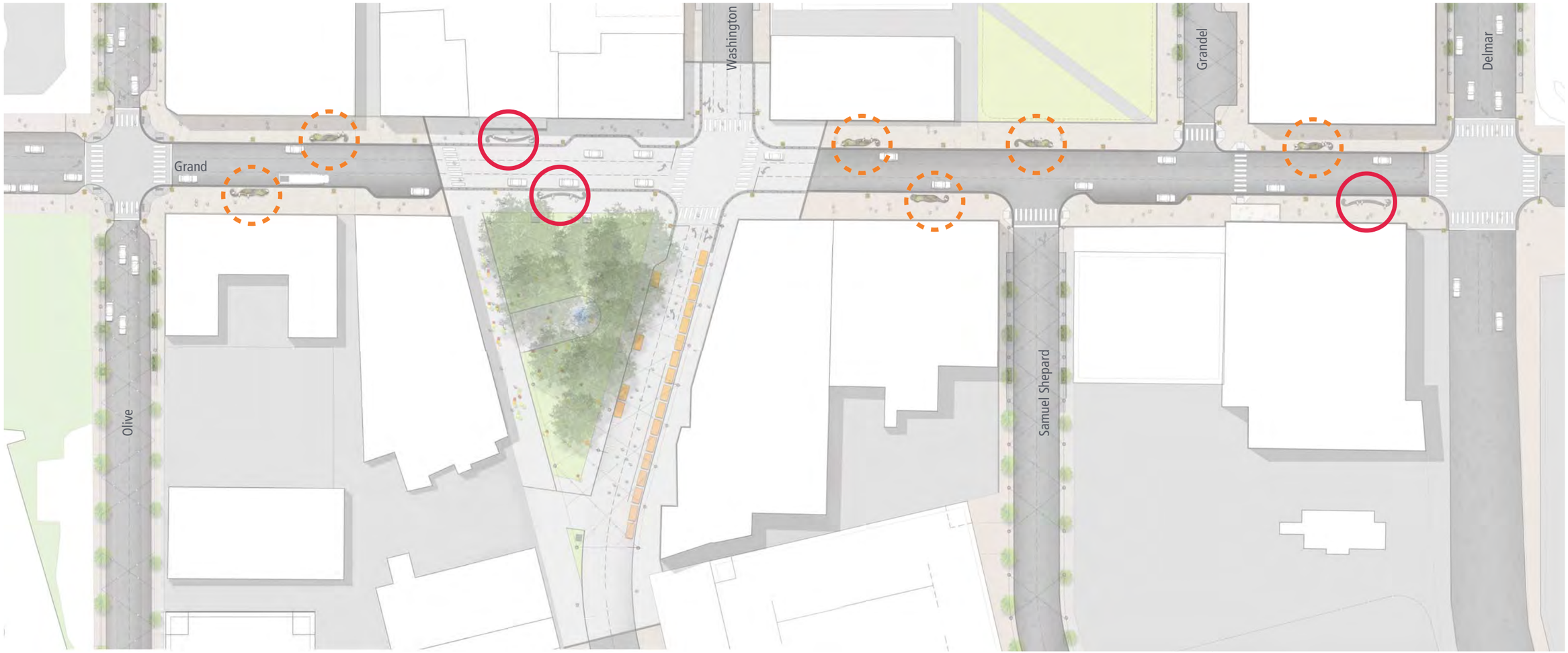
Top Left: Benches Placement
Top Right: Plan View
Bottom Right: Sections





Bench with Planter

Top Left: Benches Placement
Top Right: Plan View
Bottom Right: Sections



Bench Placement Diagram

0' 20' 40' 80'

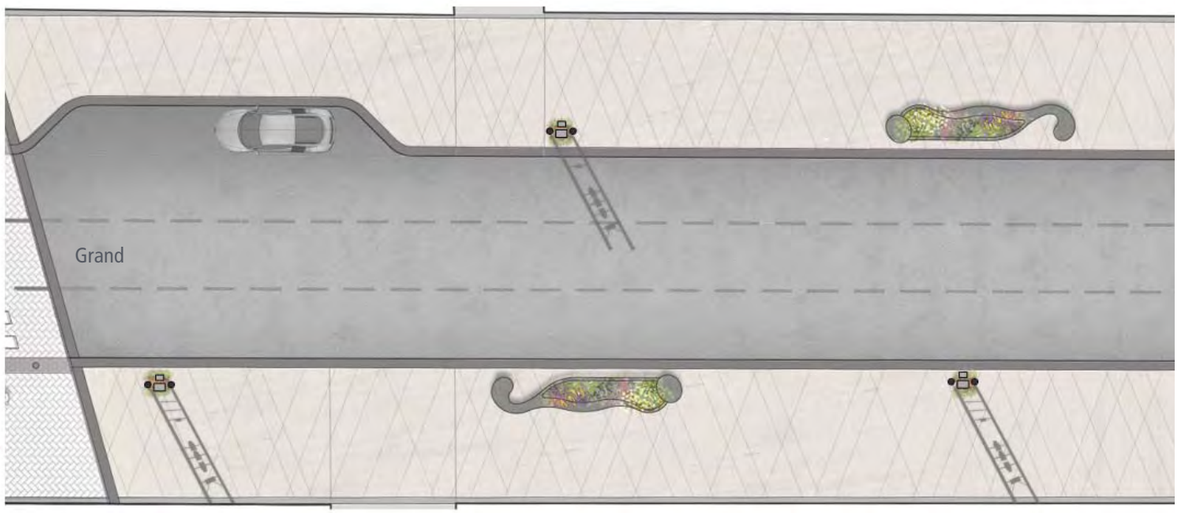
Long Bench

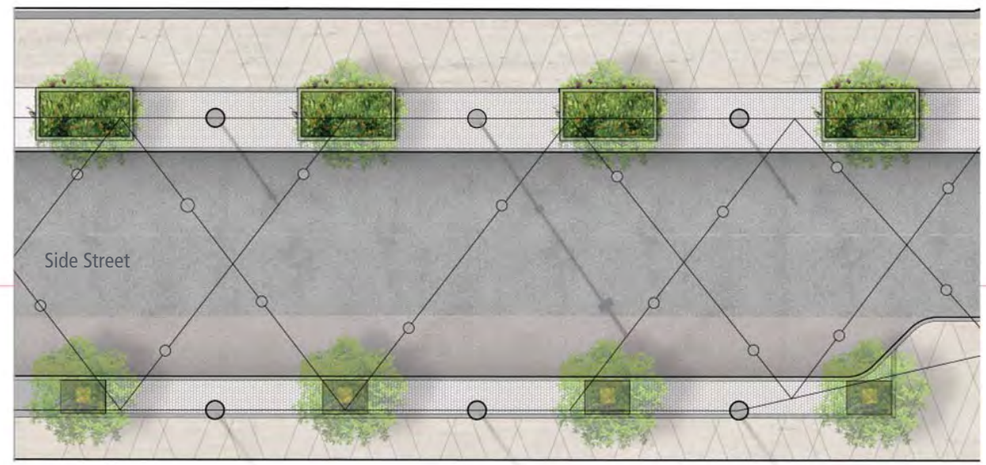
Bench with Planter

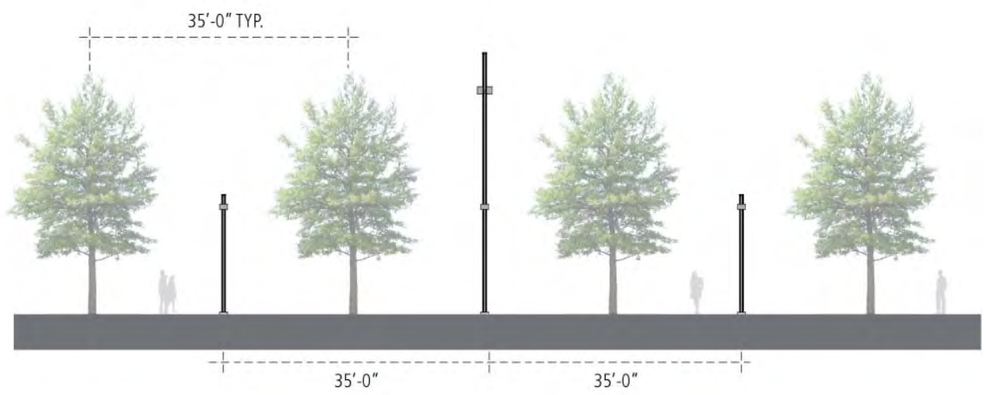
Coherence of all the Elements Together

All famous pedestrian streets in the world have a balanced visual coherence integrating all elements into a unified "whole" artistic composition. Combining trees, lighting armatures, suspended overhead lighting, benches, planters, pavement materials, way finding signage and open spaces for public art is our design response to creating an identity for the space. There are numerous memorable places that will physically express "community" when arriving or passing through on a daily basis.

Overhead Lighting Diagram: typical for Olive, Washington and Samuel Shepherd





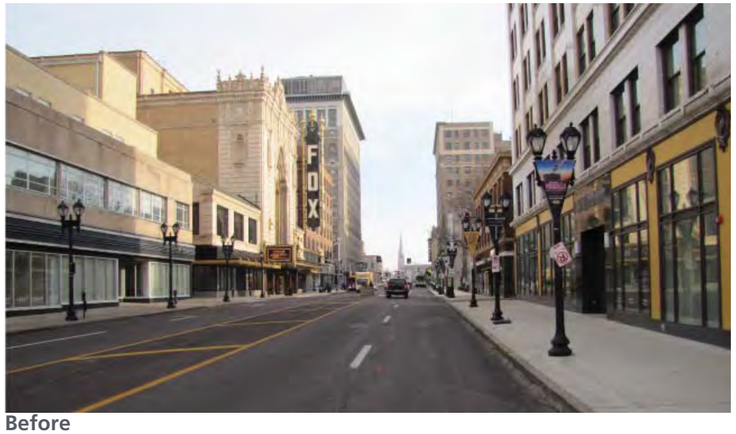


Top Left: Grand Boulevard Site Plan
Bottom Left: Side Street Typical Section

Top Right: Side Street Typical Plan
Bottom Right: Side Street Typical Section

0' 20' 40' 80'

TRANSFORMATION
STREETSCAPE "BEFORE" & "AFTER" DESIGN VISION



Before

The design includes both editing and removal of old elements as well as the addition of new elements. Lighting is often seen as the most important physical streetscape improvement for both enhancement of safety and identity for the community. For Grand Center, this is particularly true. By removing the heavy light poles, views of the street, sidewalks and historic buildings are revealed.

Grand Boulevard Transformation

The "before" image shows a very hard environment, existing lights, a middle turning lane and narrow sidewalks. The "after" vision provides a much more generous pedestrian walkway on both sides of the street and eliminating the former turning lane. Light armatures, planters and sculptural benches complete making the pedestrian experience much more vibrant and adding planting softens the environment with seasonal color.

After

Nighttime View

The nighttime view illustrates the transformation in light quality as it pertains to safety and the lighting design making the street much more animated. Opportunities to highlight building or apply light images are possible.

Before

After

Washington Boulevard Transformation

Currently the large paved space adjacent to the Fox Theater is used for large semi-trucks delivering and removing stage equipment and patron parking. The idea is to improve the view corridor with a large mural art wall elevated off the ground for eye-level safe visibility. This idea can be executed with video or a combination video/art. The goal is to create a dynamic screen and art platform to allow the space behind to function as it does today.

Before

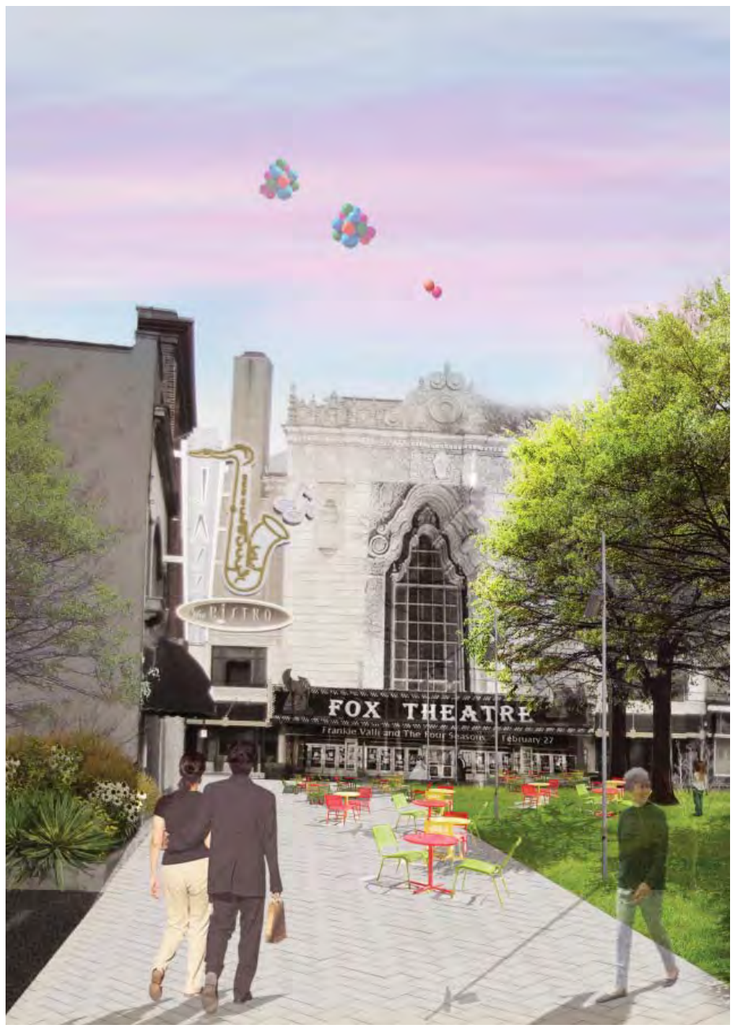
Strauss Park Transformation

Strauss Park is the "Central Park" of the community. Its unique position and shape makes it a great place to gather during the day or at special events. We have used extreme design restraint for this park.

The "before" view illustrates the density of the acorn fixture layout and newly planted trees on the south walk. The design proposal recommends removing the small trees and carefully pruning the mature trees higher in order to see the Fabulous Fox central archway as you travel from the east on Washington—this is another design "revealing" solution which can be easily achieved.

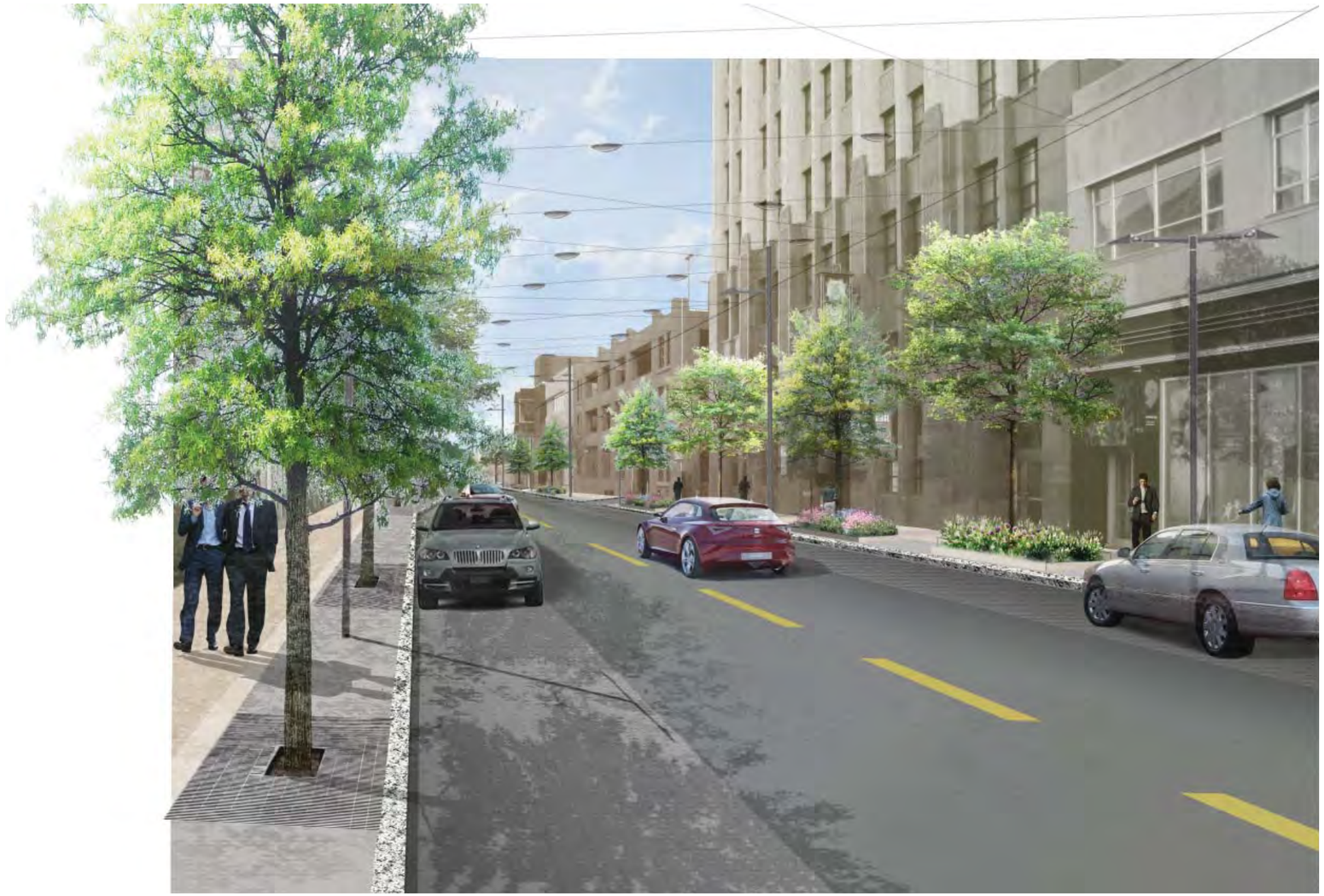
The "after" design vision illustrates the overhead wires with suspended lights. These are the same as the side streets. This will allow flexible lighting and eliminates pole lighting in the center so that the park can be more open for use. The rendering also shows farmers' market canopies in the parking areas on Washington Boulevard adjacent to the Third Baptist Church - creating an an opportunity for a market environment for special events.

After



Fox Theatre View
The south walkway is slightly widened for café restaurant seating creating a simple straight edge to the park. This aligned sidewalk becomes the mid-block crossing on Grand Boulevard. This raised crosswalk defines the "curbless" paved plaza.

Before



After

Olive Street Transformation

The existing Olive Street "before" shows the very narrow sidewalks and sparse tree planting. The proposed vision narrows the roadway, providing porous paving parking with street trees. The overhead lighting is suspended from the light fixtures.

The Nighttime View
At nighttime, the overhead lights suspended with wire come alive. Not solely being decorative, these lights contribute to the streets' lighting level.

Nighttime View

Before

After

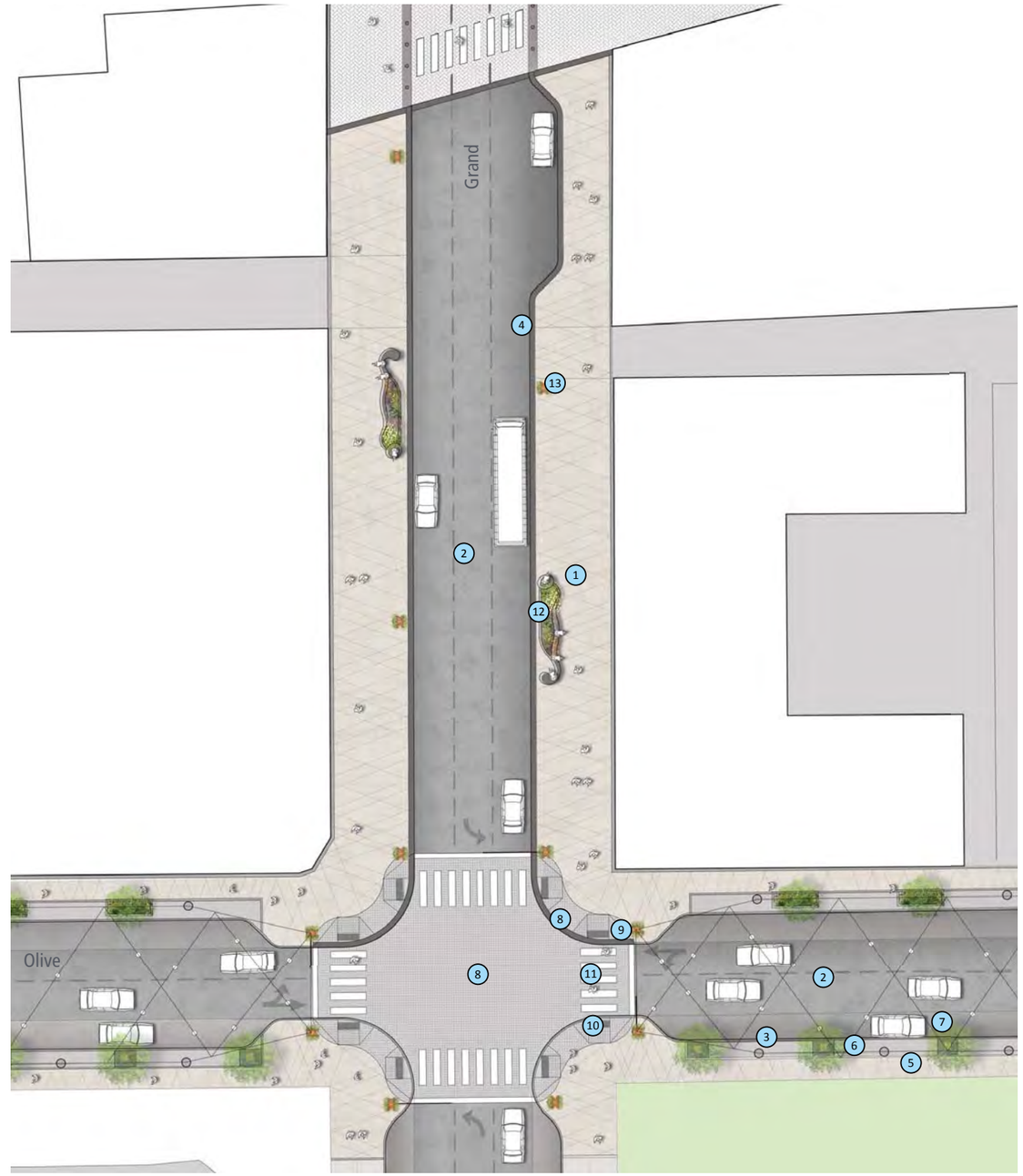
Cook Gateway Transformation

The existing conditions of Cook Avenue at Grand Boulevard are very sparse with few street trees. The threshold to the "steeple to steeple" St. Alphonsus Rock Church and Grand Boulevard corridor is transformed as a gateway with the Grand lighting armature, street trees, storm water rain garden parkways, gateway signage, and porous paving parking. The grand scale of the light armatures creates the new identity when arriving to Grand Center from the north.

MATERIALS

Grand Center's streetscape material palette is chosen for its simplicity, restraint, and practicality. Its neutral composition compliments the landmark deco style of the neighborhood's limestone and granite buildings. Conventional materials – concrete and asphalt make up a large part of the hardscape, maintaining truthfulness to regional sources and constructability.

The finish materials discussed herein will be found throughout Grand Center's public realm, evoking it as one cohesive place. These elements, in conjunction with the architecture, attribute to the aesthetic and the unique design feel of the community.



1. Cast-in-place concrete
2. Hot mix asphalt
3. Granite curb
4. 18" Wide Black Granite Curb
5. Flush concrete band
6. Permeable precast concrete pavers (pedestrian)
7. Permeable precast concrete pavers (parking
8. lane)
9. Granite Paving
10. Flush granite edge restraint
11. ADA Precast concrete tiles
12. Thermoplastic striping
13. Planter: Granite curb and granite bench

Grand Light

Typical Material Plan

0' 20' 40' 80'

Trees

Street trees in Grand Center will be species recommended for their urban tolerance by the City of St. Louis Forestry Division:

http://stlouis-mo.gov/government/departments/parks/forestry/documents/street-tree-information.cfm

Street trees will not be the same on every block. Any given species cannot offer a one size fits all solution. Different tree characters and forms address different land uses. Tree diversity promotes flexibility in terms of availability and installation sequencing while offering interest, and combating catastrophic epidemics. Street trees in Grand Center will be specified to be balled and burlapped, installed at 4″ caliper size, and limbed up to 7′-0″, minimal.

Street trees are usually canopy trees that cast effective shade, live long, and have strong branching. However, some locations where a punch of color or shorter species is needed will warrant ornamental flowering trees. *

Common Name: European Hornbeam
Scientific Name: Carpinus betulus

Common Name: Ginkgo
Scientific Name: Ginkgo biloba

Common Name: Kentucky Coffeetree
Scientific Name: Gymnocladus dioicus

Common Name: Crabapple *
Scientific Name: Malus sp

Common Name: Baldcypress
Scientific Name: Taxodium distichum

Common Name: Elm, Hybrid
Scientific Name: Ulmus sp

Right: A palette of street tree favorites chosen to exhibit a variety of characters from the city of St. Louis list

Common Name: Freeman Maple
Scientific Name: Acer x freemanii

Common Name: Sugar Maple
Scientific Name: Acer saccharum

Common Name: Tulip Tree
Scientific Name: Liriodendron tulipifera

Common Name: London Planetree
Scientific Name: Platanus x acerfolia

Common Name: Swamp White Oak
Scientific Name: Quercus bicolor

Common Name: Willow Oak
Scientific Name: Quercus phellos

Right: A palette of street tree favorites chosen to exhibit a variety of characters from the City of St. Louis list

Open Parkway Planter
Where the distance from the face of curb to the edge of right-of-way is 12 feet wide or greater, street trees will be planted in an open parkway planter.

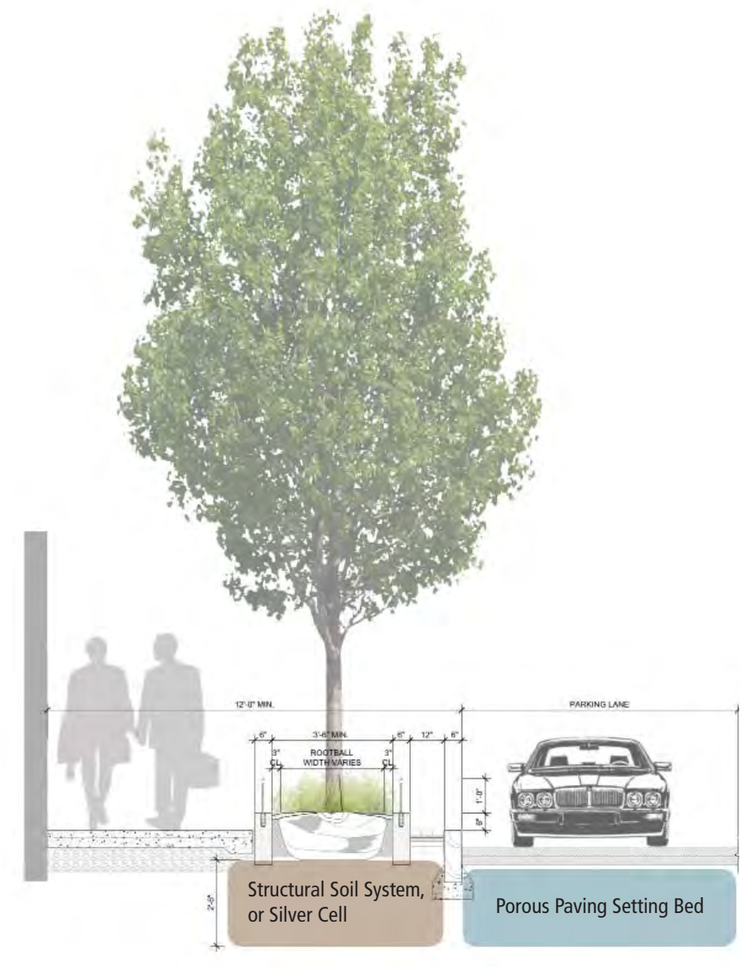
Tree Grate
Where the distance from the face of curb to the edge of right-of-way is greater than 10 feet wide, but less than 12 feet wide, street trees will be planted with a tree grate.

No Tree
Where the distance from the face of curb to the edge of right-of-way is less than 10 feet wide, street trees will not be planted.

Open parkway planters are preferred to tree grates as soil compaction and other maintenance issues arise overtime with tree grate assemblies.

Note
When the distance from the face of curb to edge of right-of-way is greater than 12 feet, the open parking planter will be wider. Maintain a consistent 6 foot walk zone, typical on side street.

Left: Sidewalk between 10′ and 12′ wide: tree grate needed



Right: Sidewalk ≥ 12′ wide: tree in open pit

Understory Plants

Understory plants will also be chosen for their urban tolerance. Though no plant is maintenance free, some do not require as much maintenance. Assuming soils are freely draining, an idea is to introduce a sedum palette under the street trees in the raised street tree planter. A sedum mix, if grown in the right conditions, can offer a green understory with little need for maintenance.

Other perennials, chosen for their hardiness, seasonal interest, form, texture and color should be considered for open parkway planter.

Left: Washington Boulevard Understory Planter
Right: Olive Street Understory Planter

Rain Gardens

Rain gardens are a best management practice employed to manage stormwater. They are an effective measure in St. Louis and will be included in the arsenal of BMP's utilized in Grand Center. Rain gardens are designed with a specified soil profile and vegetated to be able to absorb and infiltrate runoff water during storm events.

The desired outcome is to incorporate rain gardens on the east side of Grand Boulevard between Bell and Cook. This stretch has the width needed and currently displays an excess of runoff that needs to be managed.

Rain gardens should not be considered an appropriate solution for all of Grand Center. A level of maintenance is needed to keep rain gardens looking and functioning well. Their aesthetic is one of naturalistic planting and this look will be reserved for the area selected.

Rain Garden Plants

Rain garden plants are more difficult to specify than typical parkway beds because they need to be able to live in briefly saturated soils during heavy rain events, but will also need to endure dry conditions. Many rain gardens fail because the plants are not getting enough water. These plants need to be drought tolerant. Rain garden plants that are native to the region are preferred and salt tolerance is strongly advised. These images comprise a simple, but strong rain garden palette for Grand Center based on the criteria above.


Common Name: Red Buckeye
Scientific Name: Aesculus pavia


Common Name: Butterfly Weed
Scientific Name: Asclepias tuberosa


Common Name: Purple Coneflower
Scientific Name: Echinacea purpurea


Common Name: Rattlesnake Master
Scientific Name: Eryngium yuccifolium


Common Name: Butterfly Weed
Scientific Name: Liatris spicata (L.) Willd


Common Name: Ninebark
Scientific Name: Physocarpus opulifolius


Common Name: Black-eyed Susan
Scientific Name: Rudbeckia hirta

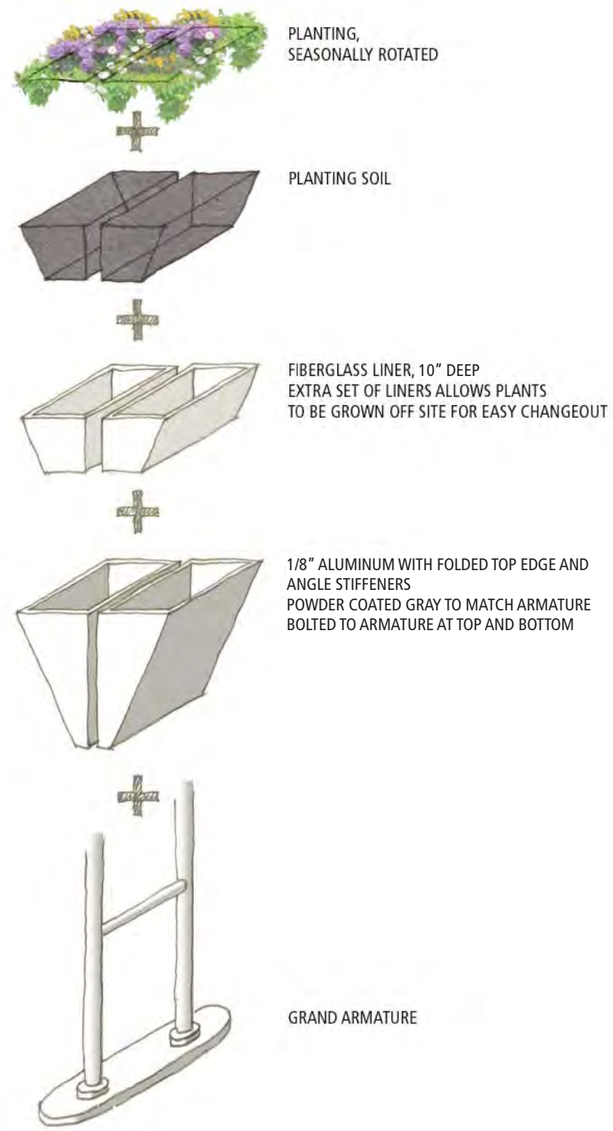

Common Name: Little Bluestem
Scientific Name: Schizachyrium scoparium

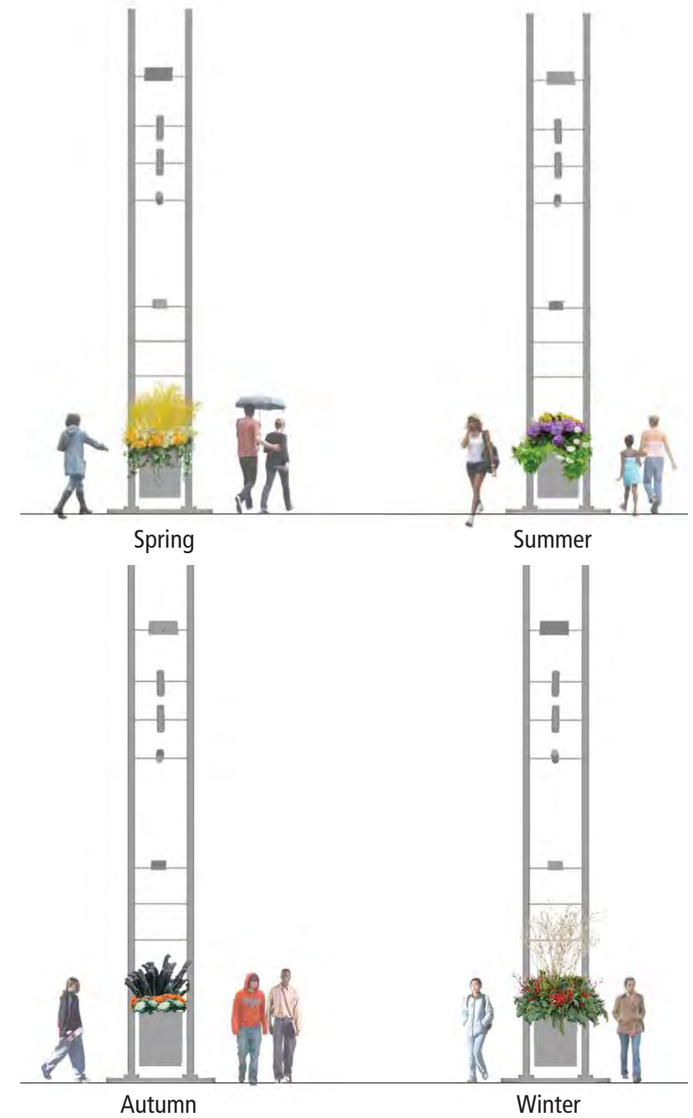

Common Name: Prairie Dropseed
Scientific Name: Sporobolus heterolepis

Seasonal Armature Planters

Armature planters are found only on Grand Boulevard. They contribute to making Grand "grand". Without trees on Grand Boulevard, the street would look bare if it did not have a green component. In addition, the digital survey results revealed a desire for plantings in the community. Vegetation on Grand is concentrated in managable forms that include 1) planters integrated with the sculptural benches between Olive and Delmar; 2) tree lawns between Delmar and Cook; 3) planters at the base of street trees and 4) planters integrated with the Grand Armatures. These are vertical and horizontal strategies that are designed to not block views.

The Armature planter is permanently affixed to the light armatures on Grand Boulevard from Olive to Cook. This planter will be a metal enclosure with a fiberglass liner. This planter will be changed out seasonally, meaning it will be planted with an annual display. There will be four change-outs per year: spring, summer, fall, winter. There is an efficiency if Grand Center owns two liners per planter. One can be in place in the armature planter, while the other is at the nursery growing the next season's rotation. In the course of one evening, all the planters can be changed out to unveil the new season's pop, grown in and ready to impress.





Left: Armature Planters Components Diagram
Right: Armature Planter Seasonal Planting

Plant maintenance

A note about maintenance for trees, understory planting and seasonal planters. Automatic irrigation will be installed in all planting beds. Vegetated streetscapes are living organisms. Grand Center is an urban environment, and the planting will require a committed maintenance program to succeed. A strong public / private partnership is recommended. The most successful maintained streetscapes have neighborhood and city financial partnerships.

Planting soil mix

Just as trees need a foundation of good soil, so do all plants. A good planting soil mix will be provided 2 feet in depth at shrub and grand plane planting beds. Soil mix will be provided 1 foot in depth of turfgrass areas. Properly specified soil mixes can be sourced through local soil blenders.

Right: Grand Boulevard Street Planting

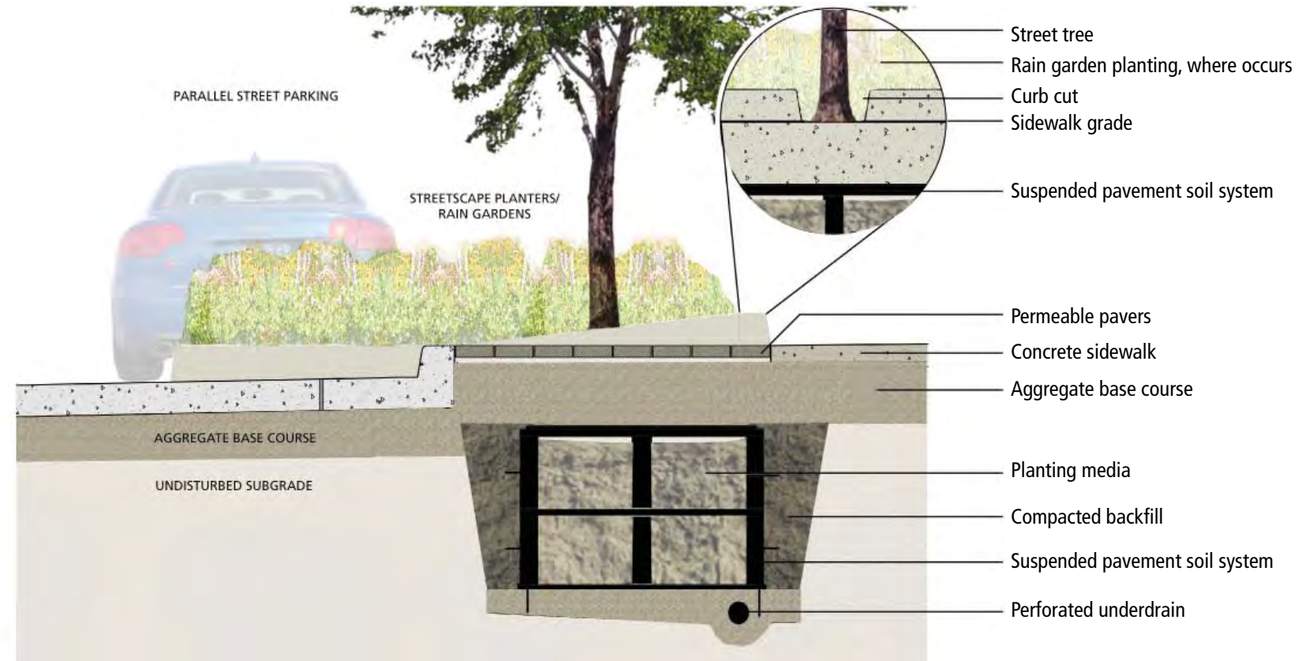
Suspended Pavement Soil Systems/Structural Soil

Soil is the foundation for plant material. Urban conditions typically do not allow trees the adequate soil volume or quality needed to thrive. Tree root systems extend far horizontally, and in an urban environment, the root zone can extend under the sidewalk, curb, and road. These areas typically have compacted soils. Soil compaction stunts tree growth and leads to early fatality. Proper planting soils are free draining to allow water, air, and nutrient movement. There are two main soil systems that can be used in the streetscape to resist compaction – suspended pavement soil systems and structural soils.

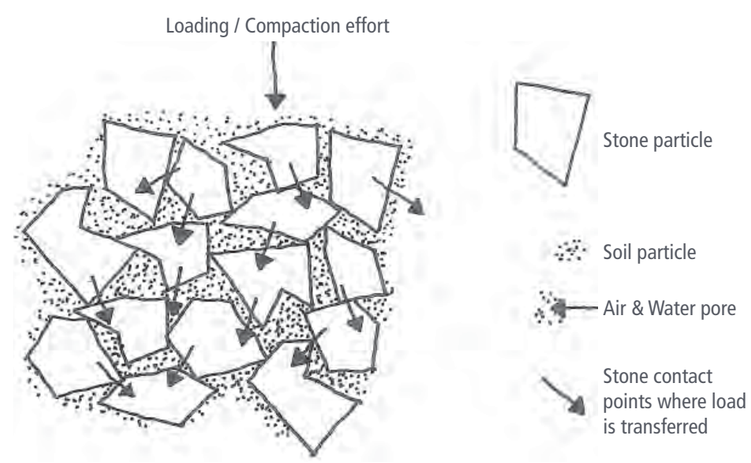
Suspended pavement soil systems are best specified as modular - composed of a frame and deck. Sidewalks and roads can be constructed on top of the deck and planting soil is sandwiched between the decking, giving root systems space to grow. Another soil system is more generically referred to as structural soils. Structural soils have larger aggregate that can support sidewalks and roads above while manitaining the void space root systems need to grow. Different structural soil mixes can be blended at local soil supply outifts.

Inconsistencies in structural soil mixes can sometimes render poor soil conditions. A soil consultant is recommended on any large streetscape project to ensure proper mix ratios and compaction rates. Though more expensive than structural soils, suspended pavement soil systems are the preferred alternative because the pavement systems above are not dependent upon the soil mix for load bearing. When installed on a small scale, suspended pavement soil systems are a good way of adding value to the infrastructure. Incremental projects should consider budgeting for this.

Structural soil should be specified to a depth of 3 feet in a continuous trench along the back of curb between the trees. Ideally, 1,200 cubic feet is a reasonable minimum volume of good soil to support one functional large canopy tree.



Top: Suspended pavement soil system and rain garden, where occurs



Bottom Left: Structural soil diagram
Bottom Right: Structural soil

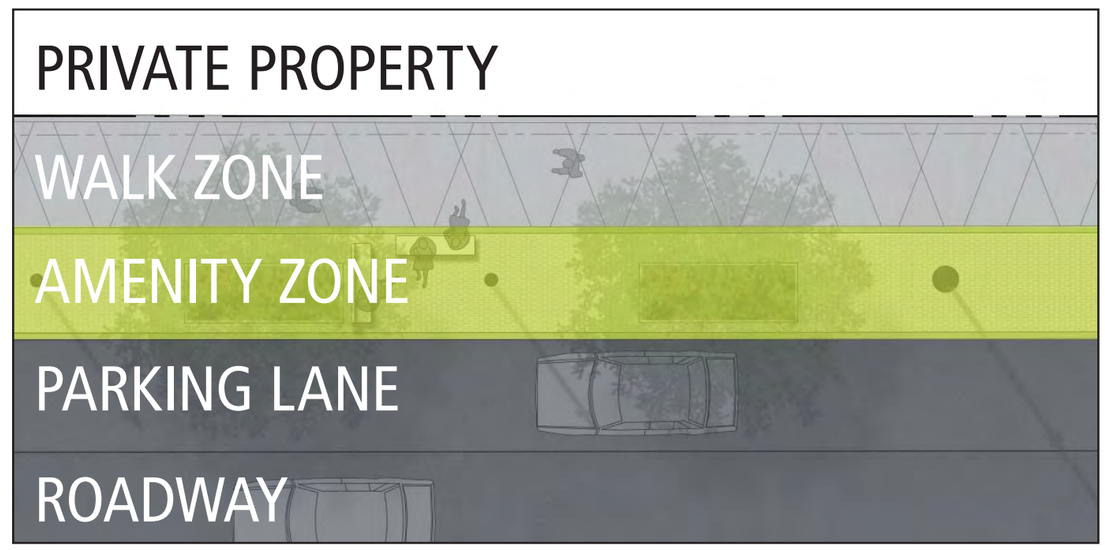
Porous paving – pedestrian and vehicular

Porous paving is a strategy used to address the combined sewer system and poor draining soils in Grand Center. Porous paving allows water to infiltrate on the spot. This is beneficial because it minimizes runoff that contributes to erosion and sewer capacity breaches. Porous paving comes in many forms: Porous concrete, porous asphalt, and porous unit pavers.

Porous unit pavers are selected for Grand Center's vision, to contribute to the look and function of the streetscape. The color range will be warm gray to tonally match the concrete sidewalk adjacent. The herringbone pattern will make reference to the community's brick and cobblestone streetscape past while implementing a technology of today.

The porous paving will be installed in the Amenity Zone on the streetscape. This is the zone at the back of curb between the street trees. This is also the zone where the suspended pavement soil system / structural soil is found in a continuous trench. Having porous paving over a continuous trench of good soil allows water, air, and nutrients to infiltrate and access by the trees' root systems. This strategy allocates water to where it should be.

Porous unit pavers will also be installed in the parking lane of many of the streets in Grand Center. Porous paving parking lanes assist in water collection where long spans of impervious street exist between drain structure. Compared to other porous materials, porous unit pavers are easier to maintain by road crews and are less abrasive under turning vehicular movement. It is the preferred material from the perspective of the Metropolitan Sewer District (MSD) because pavers are modular and able to be removed, set aside and re-installed when utility work is necessary.



Top Left: Porous Paving on the Road
Top Right: Porous Paving at pedestrian
Bottom: Right-of-Way Zone Plan Diagram

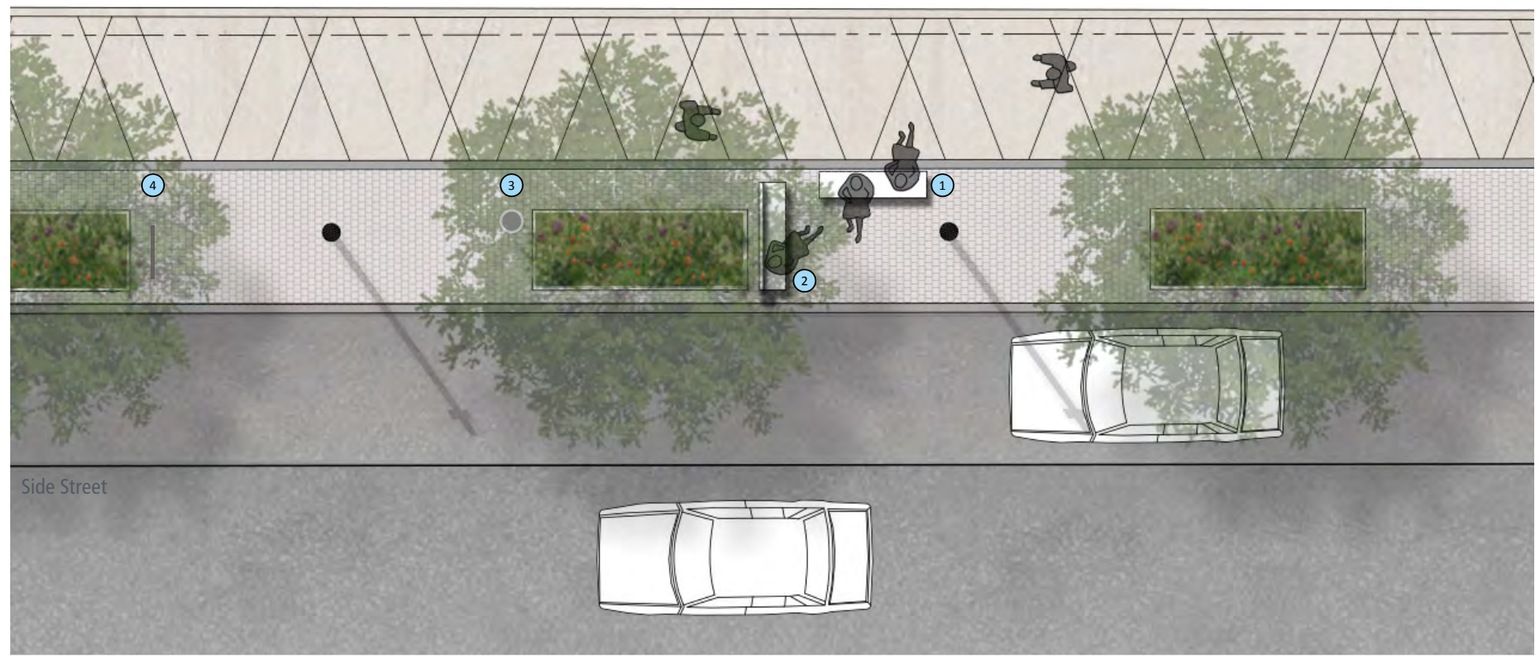
Site furniture

Catalog furniture will be incorporated into the streetscape only where appropriate are specified at the time of implementation.

For seating, intimate and conversation friendly 'L' shaped nooks can be achieved through strategic bench placement within the amenity zone. Backless benches are optimal when oriented parallel to the curb, promoting dual facing seating.

Additionally, a family of catalog benches, trash and recycle receptacles, bike racks, and bollard will be established with the owner during design development.

Right: Typical Site Furniture Plan



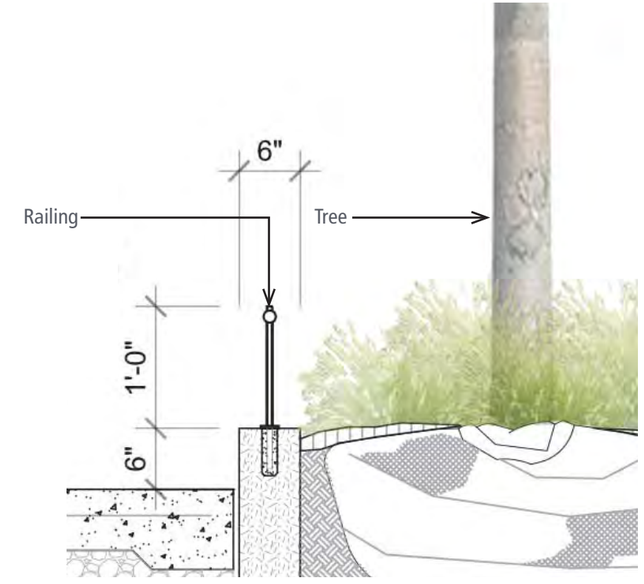
1 Bench, backless
2 Bench, with back
3 Trash receptacle
4 Bike rack

Planter Curbs and Railings

Planter curbs and railings are utilized to protect plant material and soil conditions in open tree pits. A 6 inch curb with a 12 inch railing discourages pedestrians and pets from stepping on the vegetation. A planter curb also protects the soil from becoming contaminated by salty winter runoff.

The planter curbs will match the cleft face granite header curbs at the street edge. The planter rail will be a catalog stainless steel product to maintain a consistent level of quality in metal craftsmanship as the project gets phased. Seating can be integrated with the planter rail as an option.

Top Left: Planter Railing
Top Right: Railing and Curb Details

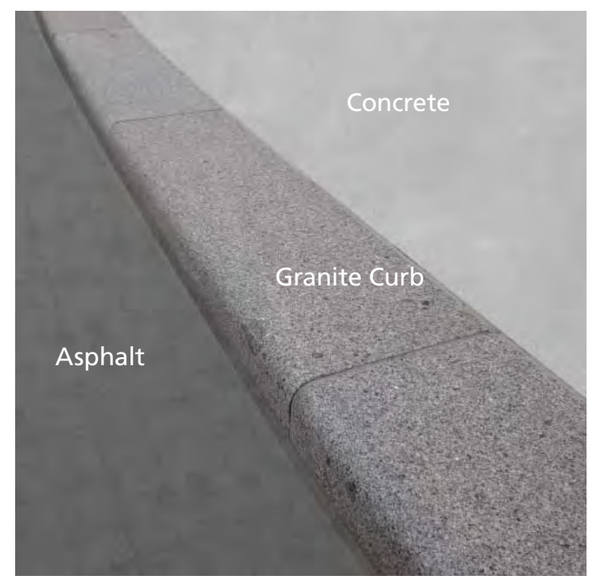


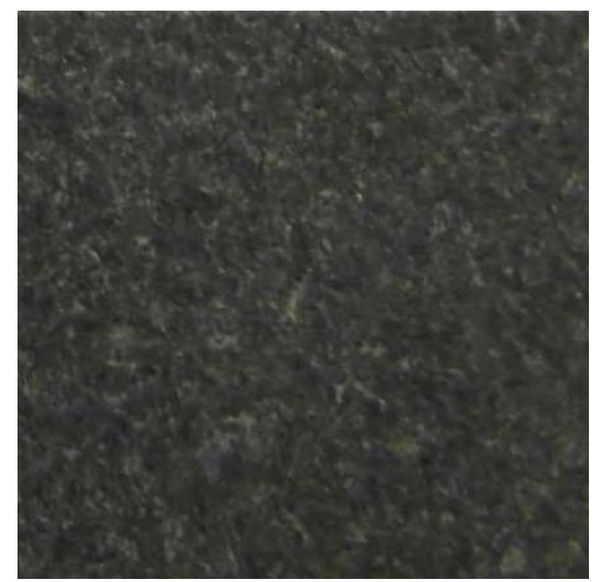
Street Curbs – standard and specialty

Curbs are an element in the street that run continuously and while often unnoticed, they present an opportunity to make an impact on the material vocabulary of Grand Center. The spine of Grand Center on Grand Boulevard between Olive and Delmar is celebrated with a robust 18 inch wide granite curb with a bull nose edge. This granite will be a black color. A curb of this scale signifies the prominence of Grand Boulevard.

All other curbs in Grand Center will be the City standard cleft face granite header curb. These are intended to be reused or replaced only where necessary during construction.

Bottom Left: 18 inch Wide Granite Curb with Bullnose
Bottom Right: Black Granite Curb Color



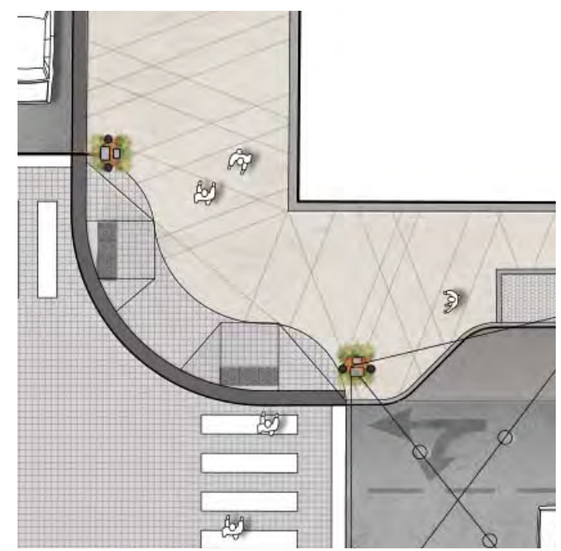


Concrete Sidewalks

The sidewalk (walk zones) in Grand Center will be cast-in-place concrete, warm gray / buff in color. With the absence of street trees on Grand Boulevard, the amenity zone porous paving will not be exposed as it typically is on the side streets. On Grand Boulevard, the cast-in-place concrete will extend from typically building face to back of curb. A sparkle grain finish system will be applied to the top coat of the typical concrete sidewalk, adding a subtle touch of white sparkle to reflect in the sun and at night. The use of this material is consistent with existing sidewalks and adds a bit of drama to this entertainment district.

Sparkle concrete will be on all sidewalks except on Grandel Square, Delmar Boulevard, Samuel Shepard Drive, and Spring Avenue. These streets will have standard warm gray / buff concrete, without the sparkle application.

All concrete sidewalks will be scored in way that is unique to Grand Center. Two oblique angles will crisscross throughout the concrete field, giving the walk zone interest and movement. These joints will be saw cut. A typical band will be poured at the building face. A common datum line will be struck parallel to the typical building face per block, and offset approximately 1 foot, and will mark the limit of the band. With an expansion joint separator, the criss crossing saw cut joints adjacent can be achieved without a problem of overrun.



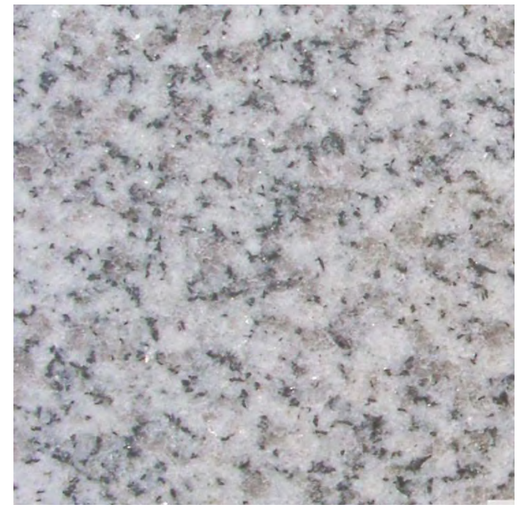
Top: Sparkle Concrete
Bottom: Example of Concrete Scoring

Granite paving – Pedestrian and Vehicular

Granite paving will be found in the special spaces throughout Grand Center. This includes the curb ramps and crosswalks in the four gateway intersections, the midblock crossing at the Sheldon, and Strauss Park's extended surfacing. For pedestrian zones, a flamed finish 2 inch paver will be bituminous set on a 4 inch reinforced concrete slab. For vehicular zones, a flamed finish 3 1/2 inch paver will be bituminous set on an 8 inch reinforced concrete slab. The paving pattern on the vehicular surfacing will be done in a herringbone or similar pattern to promote interlock. The granite will be Mt. Airy or similar.

Detectable Warning Tiles – standard and specialty

Detectable warning tiles will be at every curb ramp. This is typically a 2 foot square precast concrete paver, charcoal gray in color. In the four gateway intersections and at the curbless zone at Strauss Park, the detectable warning will be 2 foot square granite to match the black 18 inch wide granite curbing found at Grand Boulevard.



Top Left: Mt. Airy Granite or similar
Top Right: Granite Detectable Warning
Bottom: Example of Granite Paving at Vehicle/Pedestrian Crossing

Roadway Pavement

The typical road pavement in Grand Center will be hot mixed asphalt. There is exception in the areas that will receive porous unit pavers and in the special intersections that will receive concrete or granite as noted.

Crosswalk

All crosswalks will receive the continental crosswalk configuration (repeated 24" thermoplastic marking – 24" void). Crosswalk areas and the intersections at gateways intersections will have granite vehicular paving to match the granite paving slated elsewhere in Grand Center. Crosswalk areas and the intersections at secondary nodes will have vehicular rated concrete, warm gray / buff to match Grand Center's standard concrete. All other typical crosswalk areas and intersections will be standard hot mixed asphalt with painted striping.

Right: Special Materials Diagram

Lighting Recommendations

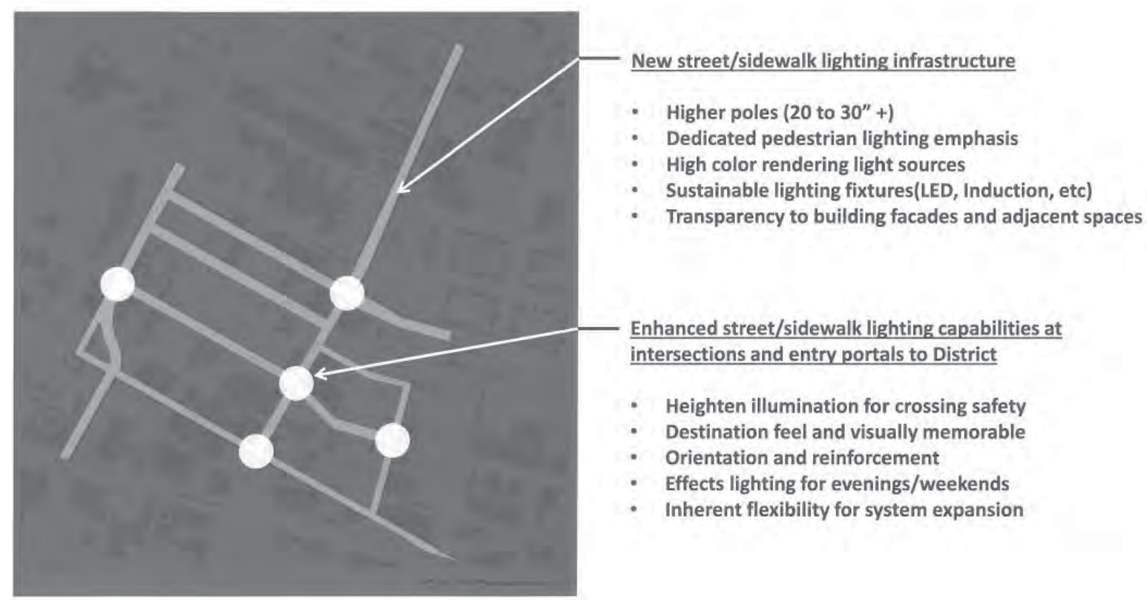
Outcomes

The design vision puts the primary emphasis on lighting. Not only will it play a key role in the revitalization of Grand Center's streetscapes, it should provide the following outcomes:

- Measurable and perceived improvements in safety and security
- Heightened visibility of Grand Center businesses and institutions through an overall reduction of lighting pole equipment, diminished light source glare and improved color rendering
- Enhanced sense of place and destination through creation of dynamic and appropriate lighting themes in equipment and illumination effectiveness
- Improved user orientation and comfort for nighttime visitors to Grand Center
- Improved day-to-day user satisfaction in thr nighttime environment`
- Highlighted properties with lighting to add to the streetscape's nighttime experience
- Improve on energy and power profiles through reduction of overall needs
- Improved operations and maintenance of lighting systems through improved technology and materials
- Long term flexibility and growth in the lighting infrastructure, including the interface of lighting support equipment with signage, graphics, wayfinding, signaling, surveillance, landscape and other ancillary needs

Design Strategies

The proposed Great Street lighting design solutions employ a number of lighting application techniques to improve the existing lighting conditions and embrace the common overall goals for the project. A visual hierarchy of lighting applications has been evolved to provide clarity and organization to the Grand Center district. The lighting designs are intended to illustrate the intent and desired outcome of the concept. In future implementation phases, the aesthetic appearance, function and locations will be refined with stakeholder, technical and engineering input.

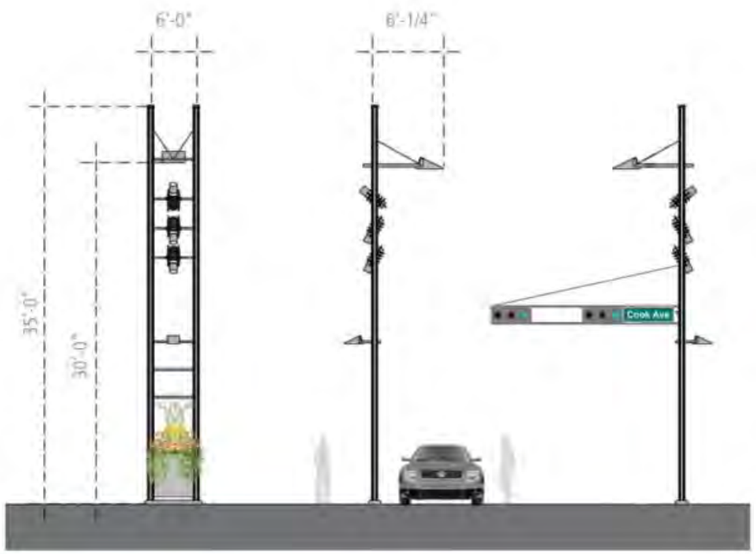


Lighting Hierarchy Drawing: lighting emphasis strategy

Grand Boulevard

The expanse of the Grand Boulevard streetscape, from Lindell on the south to Cook on the north, will be illuminated by a new lighting pylon system that alternates sides of the street. The pylon will serve as the vertical support for three principal light sources:
1) a high-wattage full cutoff LED source mounted at approximately 30 feet to provide uniform street and sidewalk illumination; 2) a low-wattage full cutoff LED source mounted at 12 to 14 feet to provide pedestrian scale and heightened illuminance at the pylon; and 3) up to three LED or metal halide adjustable floodlights/accent lights to highlight special areas, amenities, art or building features along the Grand Center frontage.

The curbless area at Grand, Strauss Park and Washington Avenue, will employ lower pedestrian scaled poles with either adjustable accent lights for trees, art and amenities, or cutoff optics LED area lights. It will also feature a low wattage LED tensile cable lighting system stretched across the street, which will also be applied at the intersections at Olive, Washington, Grandel and Delmar, east and west of Grand.



Grand Boulevard Armatures: street, pedestrain and flood lighting

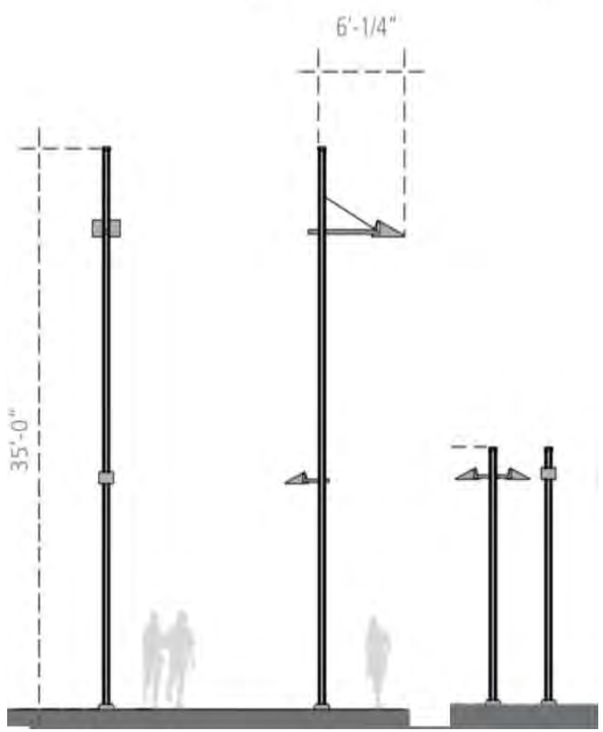
Grand Boulevard Armatures: **evening** view of Grand Boulevard

Main Cross Streets (Olive, Washington, Grandel, Delmar)

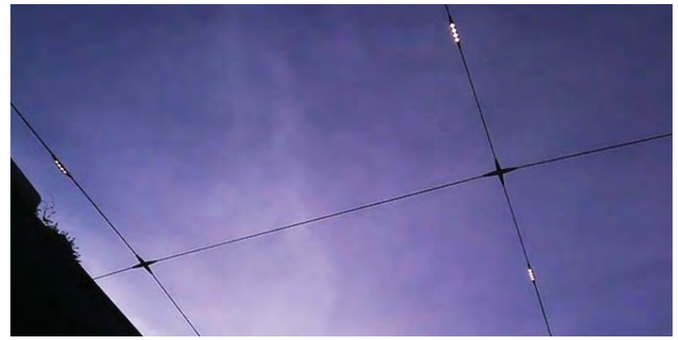
These streets intersect Grand Boulevard and are home to many of the principal art, entertainment and hospitality venues in Grand Center. The streetscape pole-based lighting system that will serve these arteries, will consist of a deployment of 30 foot poles, alternating street sides, at 150 to 180 foot spacing. They will each operate a high wattage full cutoff LED source mounted at approximately 28 feet to provide uniform street and sidewalk illumination; a low wattage full cutoff LED source mounted at 12 to 14 feet to provide pedestrian scale and heighted illuminance at the pole. Between these poles, at a 12 to 14 foot height, will be pedestrian-scaled pole with an identical low wattage full cutoff LED source for sidewalk illumination continuity and scale.

LED Tensile Cable Lighting

The block leading up to each street's intersection with Grand will also feature a low wattage LED tensile cable lighting system stretched across the street. The density of its LED's will increase as the street approaches the Grand intersection, reinforcing the sense of arrival.



Main Cross Street Lights: **Washington, Olive, Grandel and Delmar**



Overhead Tensil Cable Lighting: **creating a "ceiling" of light on main cross streets**

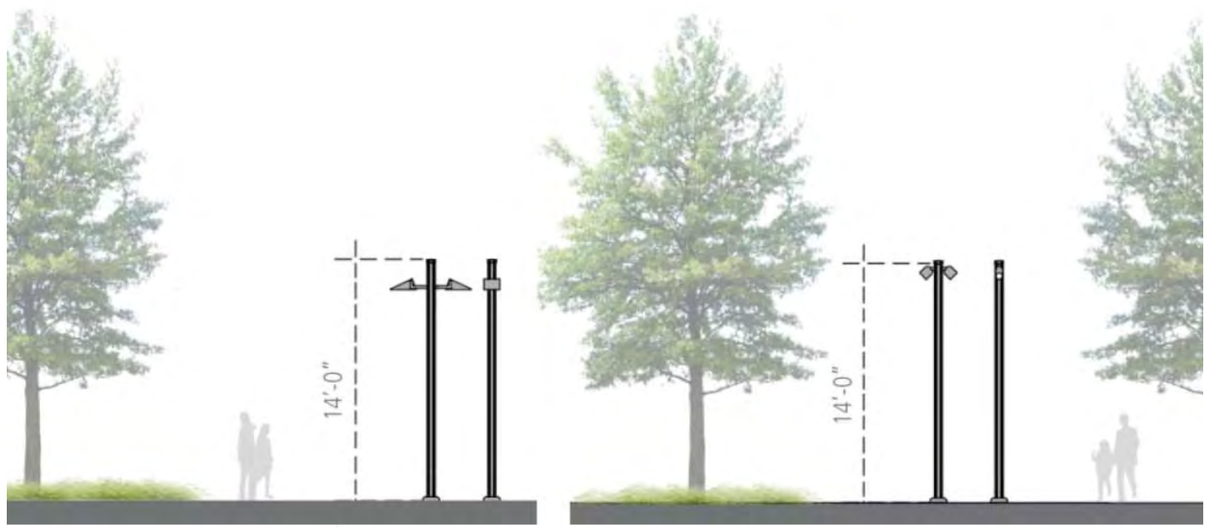
Main Cross Street Lighting: **evening** view of Olive with overhead tensile cable lighting

Minor Cross Streets (Spring, Sam Shepard, Theresa)

These streets run parallel to Grand connect the major cross streets. The streetscape pole-based lighting system that will serve these streets will utilize poles at a 16 foot height, with a low or mid wattage full cutoff LED source for both street and sidewalk illumination continuity. This pole height strikes a balance between the lower pedestrian-driven height and the dedicated street-only stature.

Overall

The lighting systems described for the streetscapes throughout Grand Center work together to provide a visually coherent, singular vision for the community's nighttime environment. Common materials and application techniques recognize the need for operational sustainability and long term expansion of the community.



Minor Connector Street Lights: Theresa and Samuel Shepard

Armature Pole Assembly: a pre-engineered pole system

Branding & Wayfinding Recommendations

Improving the Grand Center Experience
Based on analysis of the current state, opportunities for improved signage and wayfinding for the Grand Center district can organized into the four major experience categories.

Approach

- **Directional signage**
  Opportunity for Increased directional signage outside district

Arrival / Wayfinding

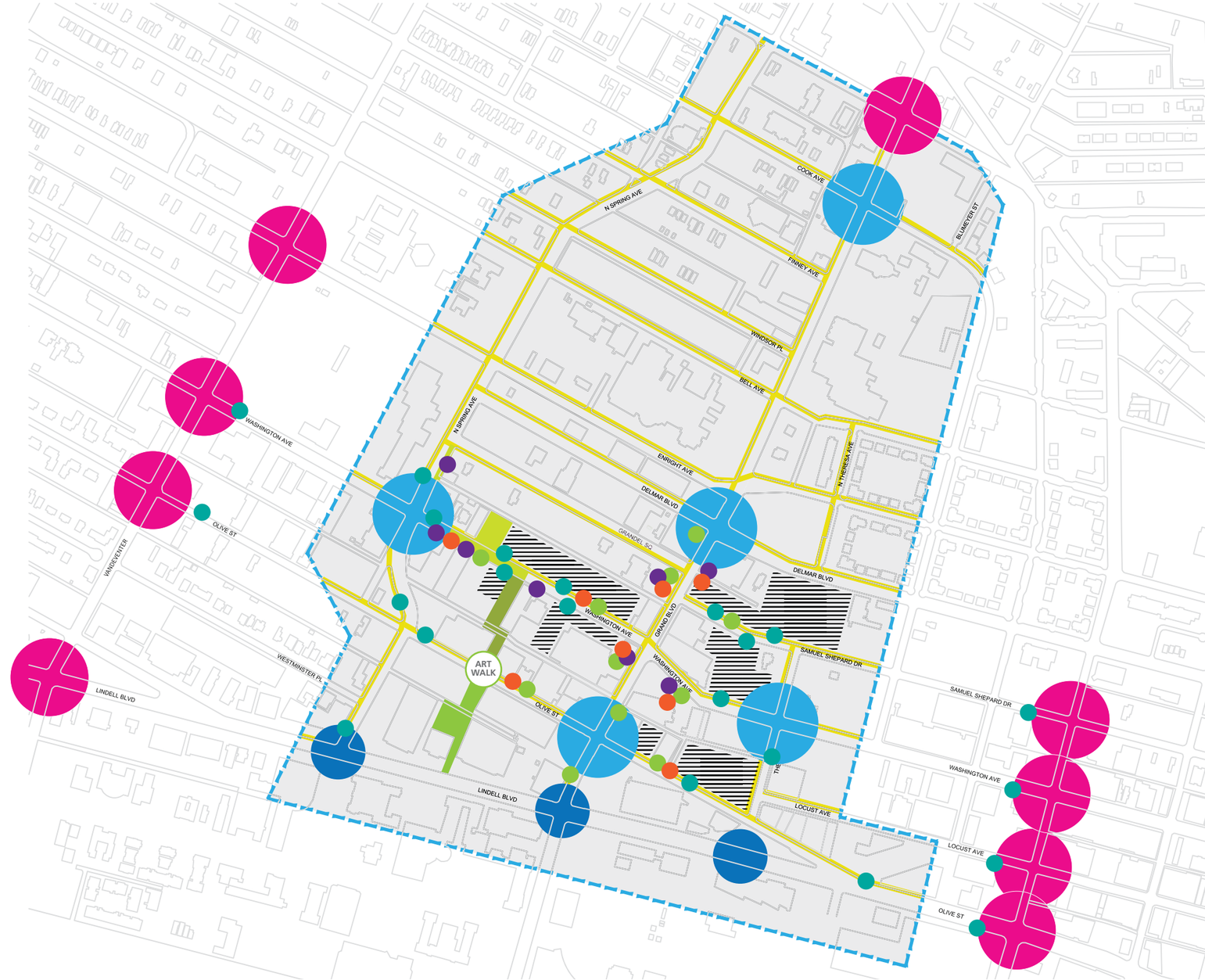
- **Gateway signage**
  Opportunity to announce and identify area
- **Street signage (& branded wayfinding elements)**
  Opportunity to improve legibility and continuity

Experience

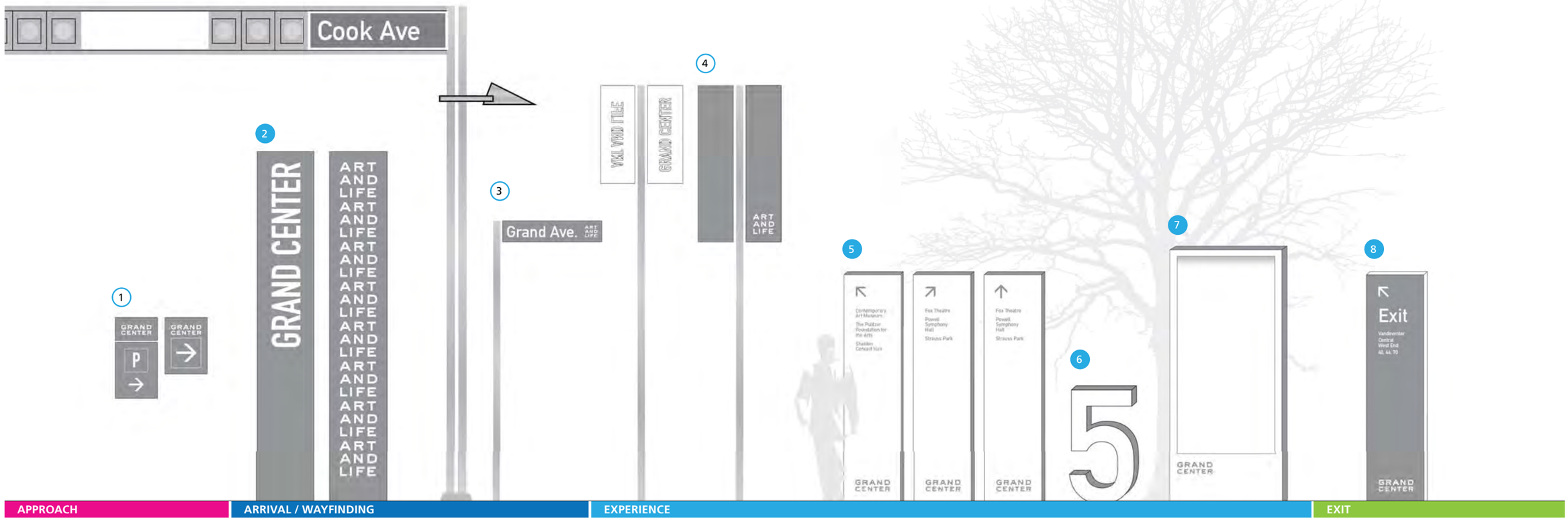
- **Pedestrian-scaled signage**
  Opportunity to improve pedestrian wayfinding
- **Branded wayfinding elements (& street signage)**
  Opportunity for consistent use of branded elements
- **Sculptural signage**
  Opportunity to identify locations in the physical environment
- **Cross-Education**
  Opportunity to educate and inform

Exit

- **Exit signage**
  Opportunity to encourage use of alternate exit routes



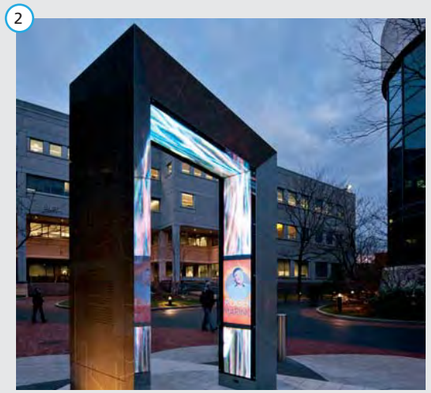
Opportunity: Expanded Signage System Concepts



Improving the Current System
Recommendations to improve current elements include increased out-of-district directional signage **1**, updated mast-arm and pole-mounted street signs **3** and consistent application of branded elements such as pole banners **4**.

Expanding upon the Current System
Recommendations to expand the current system include introducing 5 new sign types: Gateway signage **2**, pedestrian-scaled signage **5**, sculptural signage **6** cross-education kiosks **7** and exit signage **8**.

Opportunity: Announce



Gateway Signage

ARRIVAL

Function

+ Identify district 'gateways'
+ Create a 'sense of arrival'
+ Reinforce district name
+ Serve as landmark / point of reference

Content Opportunity

+ Grand Center identification

Benchmark Examples

1 City Museum, Melbourne, **2** Tribute Park, Northeastern University, **3** Know Canada and **4** University of Purdue.

Opportunity: Place-making

Pole Banners

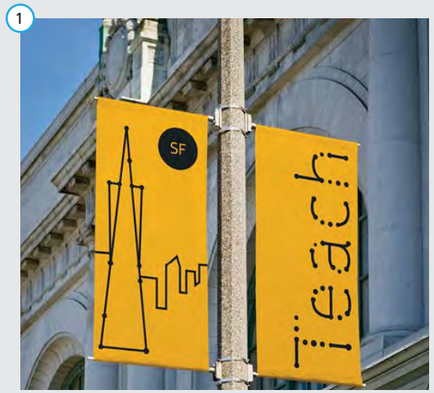
EXPERIENCE

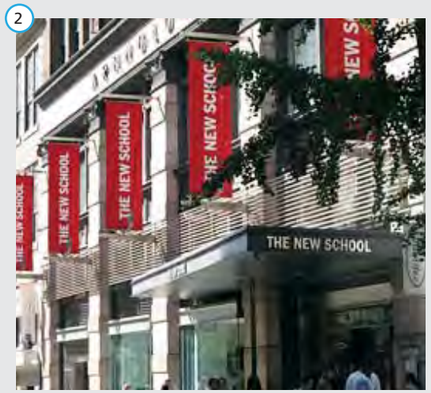
Function

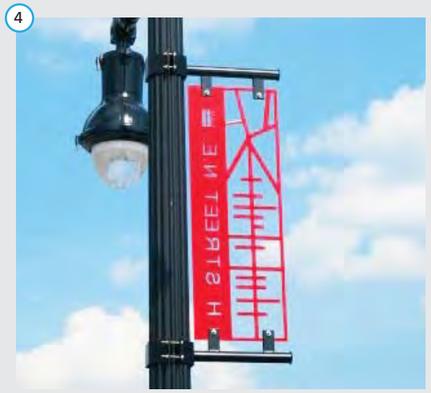
+ District identification
+ Event / venue promotion
+ Wayfinding & place-making

Content Opportunity

+ District identification and promotional content for venues and current / upcoming events



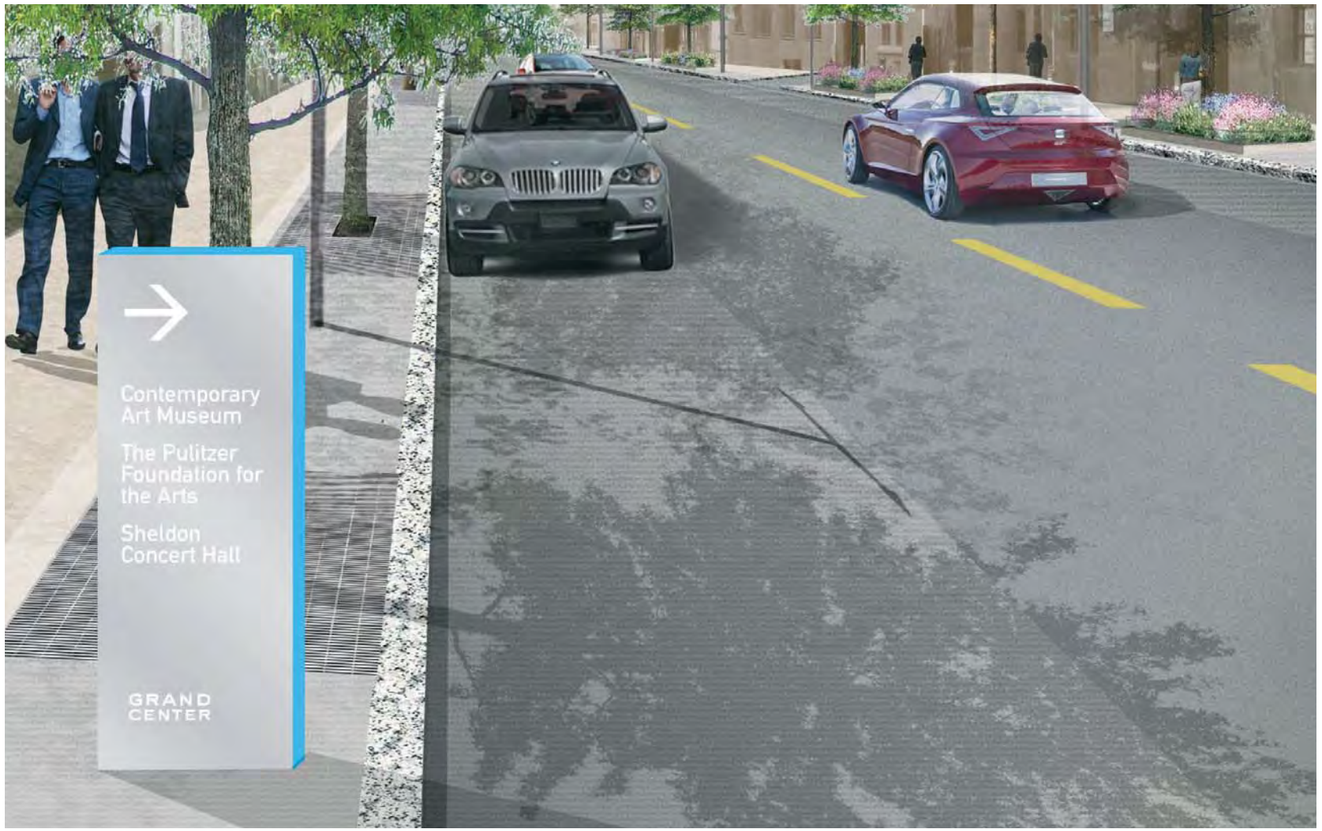


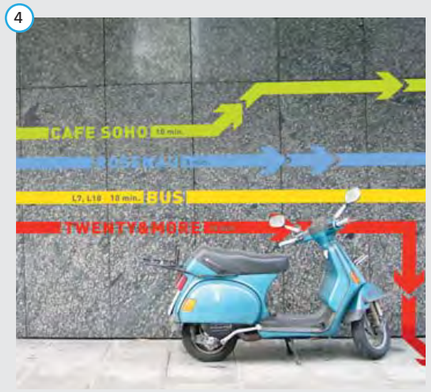


Benchmark Examples

1 Teach Campaign, concept, **2** The New School, New York, **3** Nottingham Trent University, UK, and **4** Metal banner, H Street, Washington DC.

Opportunity: Wayfinding





Pedestrian-scaled wayfinding

EXPERIENCE

Function

+ Improve wayfinding for pedestrians
+ Announce 'what's ahead'
+ Reinforce district brand

Content Opportunity

+ Directional arrows
+ Venue and / or business names
+ Grand Center brand

Benchmark Examples

1 London Docklands, **2** Buenos Aires wayfinding, **3** Manufaktura wayfinding, and **4** Stuttgart, Germany wayfinding.

Opportunity: Surprise, Play

Sculptural Signage

EXPERIENCE

Function

- Identify district locations in the physical environment
- Introduce an element of 'play' or 'surprise'
- Serve as wayfinding, sculpture, seating or photo opportunity

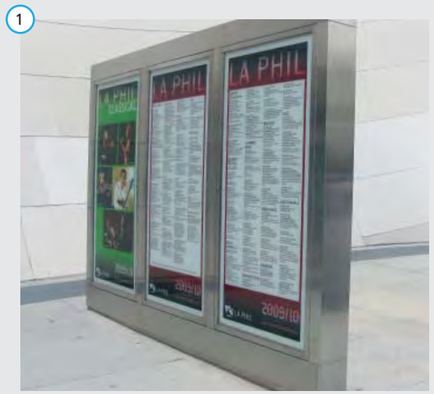
Content Opportunity

- Numeral, name or other identifying element

Benchmark Examples

1 Manufaktura wayfinding, **2** Battery Point Sculpture Trail, Washington DC, **3** Manufaktura wayfinding, and **4** Festival wayfinding, Ultrecht, Netherlands.

Opportunity: Educate



Cross-Education Kiosk

EXPERIENCE

Function

- Cross-promote district venues & events
- Reinforce brand through district identification
- Serve as an information hub
- Community curated

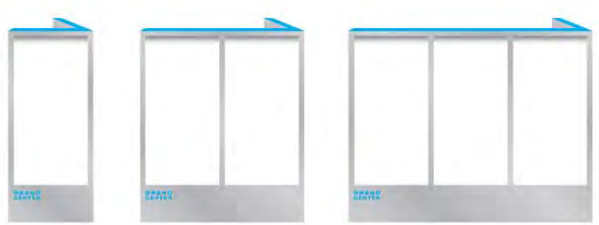
Content Opportunity

- Current event information & promotion
- District map
- Opportunity for art displays or community announcements
- Grand Center identification

Benchmark Examples

1, 2 Walt Disney Concert Hall, Los Angeles Phil Harmonic, **3** Freedom Trail kiosk in Boston Common, and **4** New York City Information Center, interactive map.

Opportunity:
Cross-Education Kiosk, Concept



1 Modular kiosk concept designed to house interchangeable district information. Content may be presented static or digitally.

2 An optional digital 'ticker' might display current or upcoming event information visible to both pedestrians and vehicular traffic.

3 Strategically placed kiosks will provide an opportunity for Grand Center identification as well as branded district maps.

4 Additional display space serves as an opportunity for additional branding, interchangeable artwork displays or even community bulletin / announcement space.

Branding & Wayfinding Conclusions

Great Streets are representative of their place...

Branded signage and wayfinding plays a crucial role in creating successful and memorable visitor experiences.

Effective systems not only provide guidance for navigating space, but also help to strengthen the connection between targeted locations (for example, Fox Theatre) and their broader surroundings (the Grand Center district). This 'sense of place' is created through consistent use of visual cues that tie back to the overall Grand Center brand.

... and facilitate mobility.

Implementing recommendations for new and improved signage elements will not only facilitate the functional goals of the district, but will help reshape the entire visitor experience — approach, arrival, wayfinding, experience and exit.

Sustainable Stormwater Recommendations

Not only are using sustainable stormwater practices beneficial for the environment by slowing, reducing and cleaning stormwater, they are also required by regulation. Stormwater runoff is regulated by the Metropolitan Sewer District (MSD) and the Environmental Protection Agency (EPA). Any improvement/redevelopment will require review and approval by MSD including the stormwater management plan. In the past, improvement of the water quality and reduction in volume of stormwater before entering combined sanitary and storm sewers in MSD's service areas was not required. More stringent regulations have recently been adopted by MSD. Grand Center is in the Bissell Service Area. Any disturbance greater 1 acre or an increase in runoff of 2 cubic feet per second (cfs) in the Bissell Service Area will be required to meet both the water quality and the volume reduction requirements. Each phase of this project is likely to trigger both requirements. As such, sustainable practices have been proposed in each phase to address the requirements. They are a component of how streets become Great Streets.

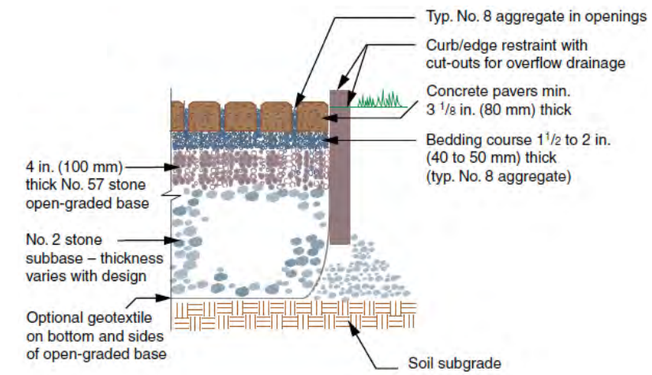
Several sustainable stormwater strategies are integrated with the public realm improvements for Grand Center. These include:

- Porous Pavement Systems
- Bump-out Rain Gardens
- Bio-filter Strips
- Porous Alleys
- Infill Roof Drainage
- Water Capture/Reuse

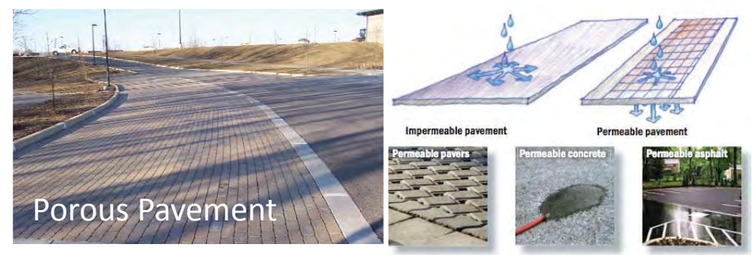
Porous Pavement Systems

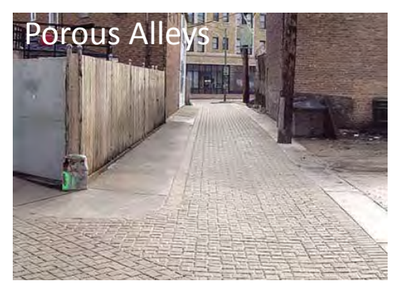
Porous pavement is a material that allows water to soak into the soil below. It will receive, store and infiltrate (absorb) rain from mild rainfall events. The amount of water that is effectively processed through a porous system is dependent on several components such as the actual pavement surface (concrete, asphalt, pavers, and gravel) and storage layer below the pavement, which can be controlled through design. Other components, such as the existing underlying soil can be a limiting factor. The inability of the underlying soils to effectively drain water through will allow water to be stored in the aggregate layer below the pavement. But this condition is likely not to allow the volume of water generated by prolonged rain events or multiple events to be absorbed.

To avoid prolonged saturation of the pavement and subgrade with stormwater, one or more small perforated pipes are located at the bottom of the aggregate layer to meet the storage capacity for the particular area. There are several ways to design porous paving. An example can be seen above.



Porous Pavers Section source: Interlocking Concrete Pavement Institute





Sustainable Stormwater Strategies

Location

Because storm water is collected on the cross streets south of Delmar, porous paving systems are proposed in the parking lanes on Olive, Washington and northern sections on Grand. In addition, a similar system will be utilized on the entire street section on Grandel Square. A summary of the potential stormwater volume reduction for Grand Center is detailed in the table below.

Porous Pavement	Total Size	Total Storage Volume	Anticipated Volume Reduction
	(SF)	(CF)	(CF)
Grand – Lindell to Delmar	3,195	700	17,500
Grand – Delmar to Bell	1,728	400	10,000
Grand – Bell to Cook	13,254	3,100	71,000
Washington – Grand to Spring	18,672	4,300	67,000
Olive – Grand to Spring	10,146	2,300	67,000
Olive – Grand to Theresa	11,004	2,500	70,000
Theresa – Olive to Sam Shepard	18,800	4,400	100,000
Sam Shepard	7,840	1,800	45,000
Grandel Square	20,945	4,800	120,000
Delmar – Grand to Spring	13,114	3,000	70,000
Spring – Lindell to Delmar	53,127	12,300	310,000

This is a total 881,170 CF of storm water each year that will not enter the sewer system. This amount of water would fill the old Busch Stadium 1.7 times.

Future Maintenance and Durability of Porous Pavements

Porous pavers are the recommended material for the designated porous pavement areas in the project area. Several studies claim that porous paver systems are very durable and long lasting with proper maintenance. The City of St. Louis has experience installing and maintaining porous pavers in their Green Alley pilot projects. They see advantages of a modular material that can be taken up and replaced when doing repairs. MSD has approved porous pavers as an alternative to porous asphalt and concrete. However, this is a material that is not considered standard and it requires specialty maintenance with a vacuum-sweeping street cleaning machine to remove materials that clog its ability to absorb water. Vacuuming and sweeping is recommended at least once or twice a year. Private maintenance funding from Grand Center may be required. However, there are many examples of installations that have had no vacuuming, and have maintained adequate stormwater surface infiltration. An added feature of all porous pavements is their ability to infiltrate melted snow, thereby reducing snow plowing and the risk of hazardous ice patches.

Bio-filter Strips

Bio-filter strips are landscaped areas that manage and treat stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a long linear depression. The method combines physical filtering and adsorption of stormwater with biological processes. They allow the stormwater to be stored and treated before it enters the piping system. This slows the flow of stormwater into the sewer system and improves the water quality before the stormwater enters the Mississippi River.

A large bio-filter strip is proposed along Spring Ave north of Olive adjacent to the potential Midtown Loop Trail. A filter strip at this location serves as a final capture point of several sources of runoff. The drainage from Spring that does not infiltrate into the porous parking will sheet flow into the filter. In addition, the bikeway will sheet flow into the filter. Finally, the excess drainage from the cross streets (Delmar, Grandel Square, Olive, Washington) can be directed to the this filter.

Filter Strip Examples

Benefits of bio-filters include:

- Long, linear areas provide significant water quality and volume impact benefits
- Stormwater west of Grand drains to bio-filters on Spring, allowing for "chained" or connected systems and greater impact
- Bio-filters capture adjacent roadway drainage, bike greenway and cross street drainage
- Midtown Loop Trail/greenway is enhanced by their appearance and sustainable function

Rain Gardens

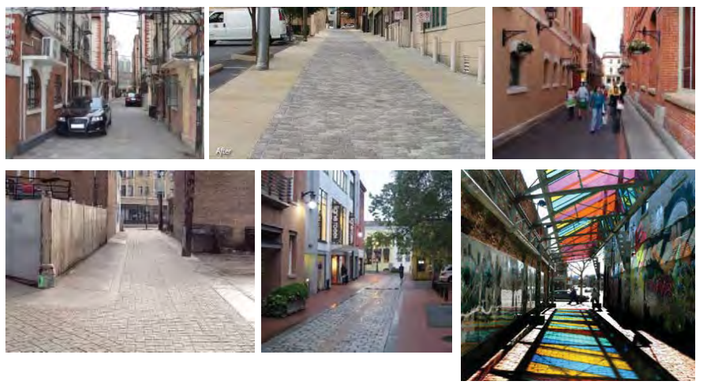
Rain gardens are similar to bio-filters in the way that they manage and treat stormwater runoff using a conditioned planting soil bed and native planting materials to filter runoff stored within a shallow depression. They are located along the curb and within the parking lanes where they "bump-out" to be in the direct flow of the storm water traveling on the street. They also combine physical filtering, adsorption with biological processes. On sites with moderately permeable soils, some portion of the stormwater quality volume in these systems can be absorbed into the soil. Like bio-filters, they allow the stormwater to be stored and treated before it enters the piping system. This slows the flow of stormwater into the sewer system and improves the water quality before the stormwater enters the Mississippi River. Rain Gardens are proposed on Grand Avenue North of Bell and along Grandel Square.

Bumpout Rain Garden Examples

Location	Total Size (SF)	Number of Rain Gardens	Total Storage Volume (CF)	Anticipated Volume Reduction (CF)
Bio-filter Strip				
Spring Ave (N of Olive)	23,350	-	28,875	290,000
Bump-out Rain Gardens				
Grand (Bell to Cook)	1,980	4	3,800	90,000
Grandel Square	5,560	8	10,500	123,000

Porous Alleys

Many of the alleys in the Grand Center district serve both a utilitarian function and are used as pedestrian thoroughfares from parking areas to Grand Boulevard. In addition, the alleys serve as major stormwater drainage channels. As these alleys are improved to enhance the function and the safety, the stormwater can be managed in a sustainable way. The use of porous paving can improve the aesthetic value of the alley while still allowing the utility function to be maintained and provide a storm water quality and volume reduction benefit. Converting an existing traditionally paved alley to a porous paving system can reduce the volume of stormwater runoff by as much as 40 percent.



Porous Alley Examples

Special Projects

Opportunities exist within the district to provide large-scale stormwater management solutions. These are also potential pedestrian destinations within the community that would have the added benefit of providing substantial areas in which to funnel the stormwater. Multiple strategies can be used within these areas to increase the impact of the stormwater solutions. These include joint use of rain gardens, pervious area, porous pavement, and stormwater capture/water reuse. The table above details the potential benefit from grouping BMPs together to maximize the overall stormwater benefit.

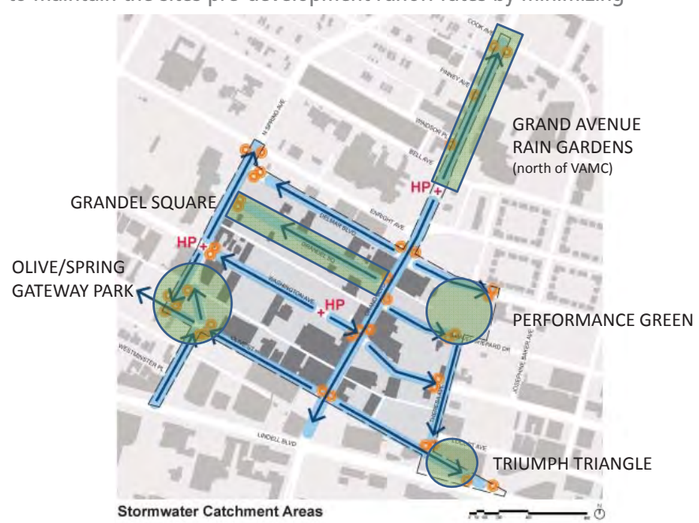
This potential total volume of storm water that could be managed in special spaces in Grand Center is around 185,900 gallons every year. That is over 202 miles of gallon milk jugs sitting side by side.

Stormwater BMP Feature	Drainage Area (Acres)	Design Storm Flow (cfs)	WQv Design Required (ft3)	Required WQ Feature Area (ft2)	Existing Runoff Volume (CF)	Proposed Runoff Volume (CF)	Cistern Volume (Gallons)
Performance Green	3.18	11.8	11904	7040	432000	238000	67000
Spring Park	2.86	10.6	10701	7970	436000	211000	60000
Parking Plaza	3.21	11.9	10466	7650	389000	208000	59000
Parking Garage & Filter Strip	2.54	9.4	9522	7900	344995	168000	53000

Cisterns could be integrated into the design for Grand Center's special spaces. Storm water is directed to cisterns that store the water for reuse. The square footage of porous pavements in the parking lanes in the entire Great Streets project is estimated to be about 170,000 square feet. Approximately 430,000 cubic feet (3,213,124 gallons) of storage for water is provided for under the porous pavements. Instead of being stored in porous pavements for slow-release into the storm sewer system, this same water could be directed to underground or above ground cisterns to be stored for reuse as water for landscape irrigation or use in water features.

Infill/Redevelopment Roof Drainage

As Grand Center continues to redevelop, there are potential opportunities to incorporate private stormwater management/treatment that meet the design objectives of the district. Implementation of low impact development strategies will allow Grand Center to redevelop in a sustainable manner. Low impact development encourages the developer to maintain the sites pre-development runoff rates by minimizing



Special Project Areas

imperious area, use of stormwater BMPs, vegetated roofs, etc. Storm water facilities such as cisterns and biological filters can be retrofitted at existing downspouts on existing buildings or incorporated in to new mixed use development and parking garages. Creative ideas can be incorporated that are in line with the public art focus of Grand Center and provide storm drainage benefits.

Funding for Green Infrastructure

Sustainable stormwater practices are often overlooked in private redevelopment. For projects in Grand Center, there may be financial assistance to offset the cost. The location of the study area within the Bissell Watershed makes low impact redevelopment projects available for financial assistance as part of the Metropolitan St. Louis Sewer District's Stormwater Grant Program. As part of their Long Term Control Plan in St. Louis, MSD will spend $100 million to construct green infrastructure and promote low impact development (LID) in watersheds that have combined sewers that discharge to the Mississippi River. The techniques that have been recommended in the master plan are good candidate for grant funding.

Infill/Redevelopment Roof Drainage: could be integrated with art opportunities

Public Art Recommendations

The New Strategy

Public art is an essential component of Great Streets and part of what makes Grand Center unique in the region. Grand Center, Inc. and the institutions in Grand Center and throughout the region should continue to foster and support a vibrant public art presence in the District. The following sets forth a vision, principles and specific strategies related to an ongoing public art initiative.

Public Art Vision Statement

Grand Center Inc. supports the presentation of visually engaging and artistically innovative permanent and temporary public art that contributes to the overall vitality of the district and its identity as the cultural hub for the region and a center for creativity.

Principles

- Public art should be part of what makes a complex and complete urban fabric in Grand Center.
- Commissioned artwork builds upon the identity of "arts district" to include a place where art is made and new ideas are cultivated.
- Artistry can be infused into the built environment, bringing a creative spark and element of craftsmanship to design.
- Emphasis should be placed on public art projects that invite participation and interaction.
- Public art in Grand Center should be of high artistic quality and integrity.

Strategies

Art Integrated into the Design of Streets and Public Spaces

The Great Streets Plan outlines a plan for elegant and functional streets and active public spaces. As these projects move into schematic and final design, artists could be commissioned to work collaboratively with the design team to infuse art into the overall design.

Plaza and Park Design

Imagine visiting a plaza in Grand Center and having the experience of walking into a work of art. Imagine a flexible space that can be used for temporary public art, concerts, plays, readings and other performances.

The Framework Plan identifies, and the Great Streets plan supports, new and re-developed public parks and plazas. An artist can be engaged in the design or re-design of plazas and public spaces in Grand Center to bring a sense of creativity and imagination to the spaces.
Next Steps: As these spaces go into design, conduct an invitational call to select an artist to be a part of the design team. The selected artist should have experience working in collaboration with architect, landscape architects and/or urban designers in the design and activation of public spaces. The artist's scope of work for this phase would parallel the scope of the design team in terms of level of planning and design.

Art Integrated into the Design of Private and Public Facilities

Stormwater Solutions

Imagine functional and visually engaging works of art that help slow-down and cleanse stormwater before it re-enters the environment or the sewer system.

Artists can work collaboratively with engineers to develop solutions ranging from stormwater gardens to harvesting water from buildings.

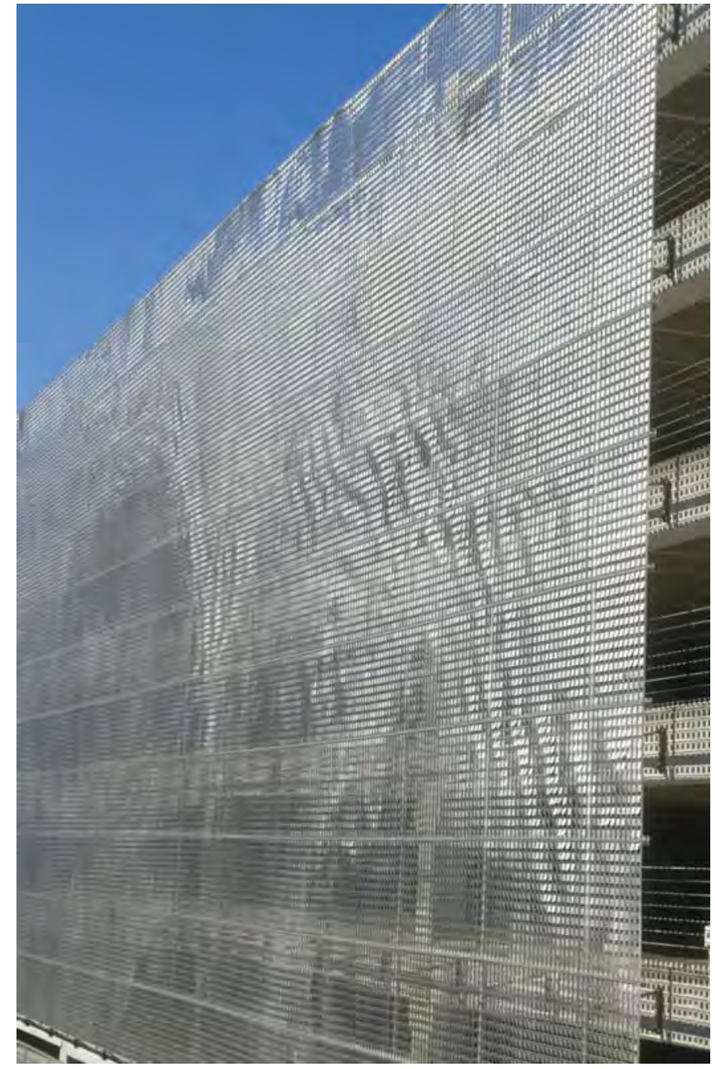
Next Steps: Encourage the owners/developers of facilities to commission an artist to be involved in the design of stormwater systems. Seek out a partnership with MSD or other institutions to have the artist's work be part of a demonstration or educational project.

Art in Private Development

Imagine new buildings in Grand Center combining architectural excellence with artistic excellence.

As new commercial and residential buildings, parking garages, and other facilities come on-line, in addition to high architectural standards, integrating public art should also be considered.

Next Steps: Encourage developers to commission artwork as part of their facilities. Look into how art requirements or criteria can be built into new zoning for the District.



Ongoing Art Initiatives

Temporary Public Art

Imagine each visit to Grand Center bringing different visual surprises, inspiring you to walk around, explore and interact with unique works of art that can only be found here.

Grand Center, Inc. should continue commissioning and supporting the presentation of temporary public art throughout the district on a regular basis.

Next Steps: 1) Grand Center, Inc. should secure funding to develop and ongoing temporary public art initiative. This initiative could include one to two large-scale temporary installations a year, and one to two smaller installations, creating a rotating gallery of work year-round. Art projects could be sited in different public locations in the District owned or controlled by Grand Center, Inc. 2) Grand Center, Inc. should communicate regularly with the Grand Center-based visual arts organizations, encouraging them to consider temporary public art as part of their curatorial programs and providing information to them about the support that Grand Center, Inc. can provide.

Neighborhood Projects

Imagine approaching Grand Center by car, bus, bike or on foot and seeing art projects that celebrate Grand Center as a neighborhood and are visual cues you are getting near the district.

Grand Center, Inc. should commission and support and encourage Grand Center artist institutions, community organizations and property owners to commission permanent and temporary community-based, neighborhood-scale artworks.

Next Steps: 1) Neighborhood Projects could be a commissioned by Grand Center, Inc. as part of the temporary art initiative described above, and could perhaps start with properties they own or that are owned by the The Land Reutilization Authority (LRA.) This entity receives the titles to all tax delinquent properties not sold at the Sheriff's sale. 2) Grand Center, Inc. should communicate regularly with the Grand Center-based visual arts organizations, community organizations, and property owners, encouraging them to consider neighborhood art projects.

Art Lab

Imagine Grand Center as the premiere place where artists from around the country come to prototype, test and build large-scale projects.

Grand Center has affordable space, and St. Louis has the cultural and industrial resources to support artists in creating new work. Artists could build and debut work here before taking on it to major national and international exhibitions and festivals.

Next Steps: Art Lab would require significant collaboration and some initial funding to get off the ground. Pitch the idea to art institutions, galleries, educational intuitions and funders. Inventory spaces in Grand Center that could be converted into for-lease studio space for large-scale projects.

Implementation

In 2011-2012, Grand Center, Inc. developed Temporary Public Art Guidelines through a grant from the National Endowment for the Arts. These guidelines, developed with input from visual arts stakeholders in the District and throughout the region, identified a process for selecting artists for temporary public art projects, and reviewing proposals for temporary art projects initiated by outside organizations. The implementation strategy for the projects and programs described above build upon the recommendations in these Guidelines.

Visual Arts Panel

The Grand Center Temporary Public Art Guidelines recommend the development of a Visual Arts Panel. The role of this panel should be expanded to include serving in an advisory capacity to Grand Center, Inc. to review all public art projects that Grand Center, Inc. initiates and supports.

Public Art Projects Commissioned by Grand Center
Grand Center, Inc. will directly commission public art projects by either:

- Commissioning artists directly with the support of an independent consultant or curator and review by the Grand Center Visual Arts Panel, or
- Partnering with a visual arts organization that will serve as a curator for the project, with review by the Grand Center Visual Arts Panel.

Public Art Projects Commissioned through City-led Processes
Grand Center, Inc. will work with the Board of Public Service to develop and implement the artist selection process. The Visual Arts Panel wills make recommendations regarding artist selection and will review and provide feedback on artist concepts. If the artist is working as part of a design team, a representative of the team will also be involved in the selection and review.

Public Art Projects Commissioned by Others
If the public art project is on property owned or controlled by Grand Center, Inc., or if the commissioning entity is receiving financial or in-kind support from Grand Center, Inc., then the Visual Arts Panel may request review and approval of artist selection and artist concept.

The Master Plan & Street Sections

The Master Plan for Grand Center is the culmination of the layers of design, the layers of technical expertise and the layers of the Great Streets Principles. After the Framework Plan, preparation of this Master Plan is the next but not final step in the planning and implementation strategy that will see these great streets built. The Master Plan along with the street sections will serve as the road map to implementation over the next number of years.

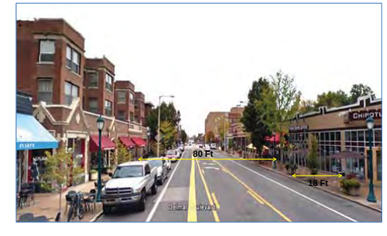
Street Sections

In conjunction with the plan vision established in the Framework Plan, proposed street sections where prepared for Grand, Washington, Olive, Spring and Theresa. These sections illustrated the recommended traffic lane configurations, travel lane widths and sidewalk widths. The activities of the Great Streets project were geared to scrutinize these assumptions and add additional levels of analysis, community engagement and technical input to come away with a refined recommendation.

Traffic capacity verification and underground utility investigation were two of the most critical factors in making the final recommendation for each of the major streets in the study area. A review of existing local streetscapes that represented similar character, land use and right-of-way width to the conditions for various streets in Grand Center helped stakeholders visualize potential outcomes. These local streets such as Delmar in the University City Loop, Manchester in Maplewood, South Grand near Tower Grove Park and an out-of town-example, Main Street in Ann Arbor, Michigan served as precedents for this planning effort.

The existing and proposed sections Grand Center on the following pages, illustrate a typical area of each street corridor.

GREAT STREETS PRECEDENTS



Delmar Boulevard, University City

Central Avenue, Clayton

Manchester Avenue, Maplewood

Euclid Avenue at Maryland Avenue, Central West End

South Grand Avenue Median, St. Louis

South Grand Avenue Streetscape, St. Louis

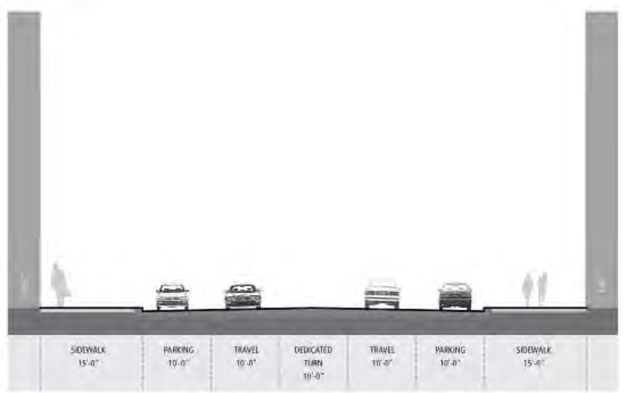
Forsyth Blvd., Washington University Bikeway

Main Street, Ann Arbor, MI

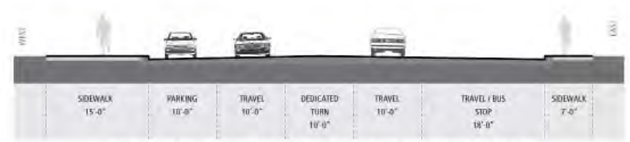
Grand Boulevard – south of Delmar
On-street parking has been removed and the sidewalks have been expanded to over 23′ wide on both sides. One traffic lane in each direction and a center turn lane are proposed. The lane width has been narrowed to 11″ wide to further enhance the traffic calming potential of this new street section. The proposed generously sized sidewalks are now in proper scale to the height of the buildings and for the lively pedestrian crowds coming and going from the performance venues. A decision was made to omit street trees on this section of Grand.

Grand Boulevard – Delmar to Bell
On-street parking has been preserved except where bump-outs define new articulated Metro bus pull-ins and where bio-filters are proposed. The travel and turn lanes are the same as the street section south of Delmar. In the pedestrian zone, generous sidewalks are maintained.

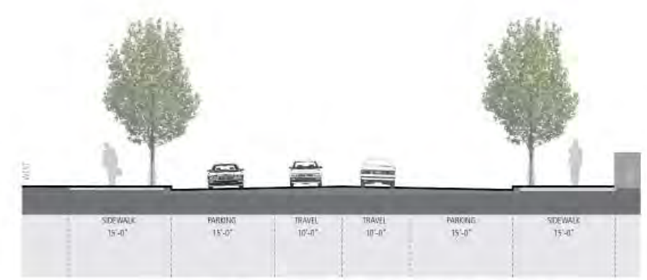
Grand Boulevard – Bell to Cook
On-street parking has been preserved except where bump-outs define new bio-filters – planted areas that collect, slow down and clean stromwater before it enters the sewer system. The travel and turn lanes are the same as the street section south of Delmar. In the pedestrian zone, a new grass parkway is proposed and a generous sidewalk is maintained.



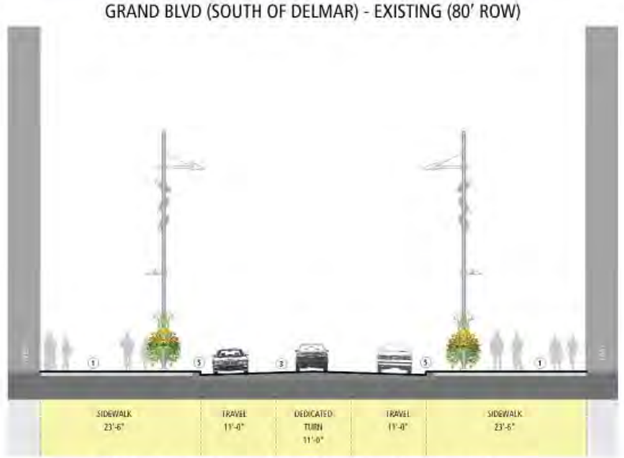
GRAND BLVD (SOUTH OF DELMAR) - EXISTING (80′ ROW)



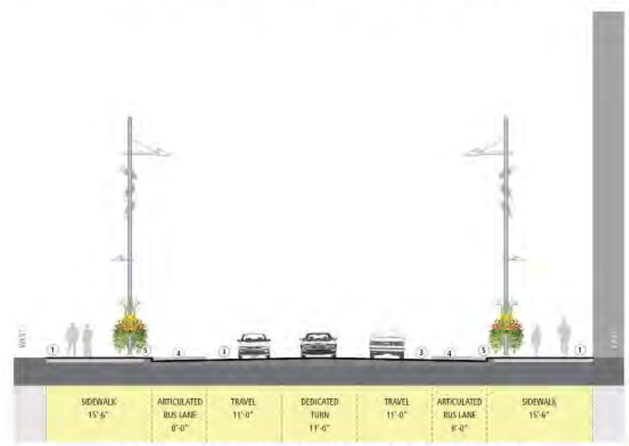
GRAND BLVD (DELMAR TO BELL) - EXISTING (80′ ROW)



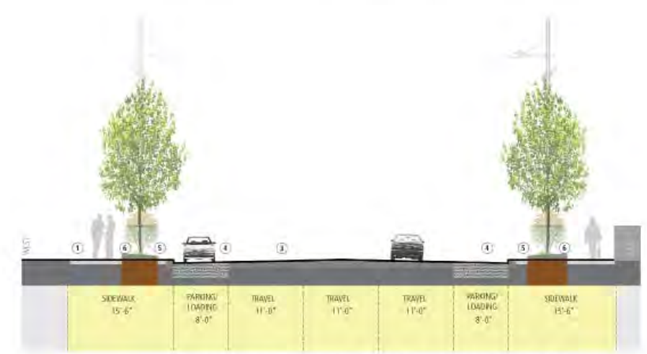
GRAND BLVD (NORTH OF BELL) - EXISTING (80′ ROW)



GRAND BLVD (SOUTH OF DELMAR) - PROPOSED (80′ ROW)

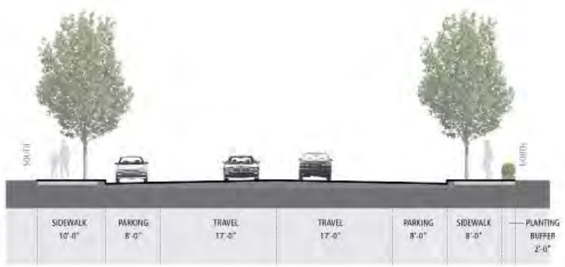


GRAND BLVD (DELMAR TO BELL) - PROPOSED (80′ ROW)



GRAND BLVD (NORTH OF BELL) - PROPOSED (80′ ROW)

Washington Avenue – west of Grand
On-street parking and curb-side loading as well as one travel lane in each direction have been preserved but the width of the lanes have been significantly reduced to "right-size" the street and allow sidewalks to be widened. A concentration of venues on the section of Washington between Spring and Grand, require curb-side drop-off, loading, bus marshaling and semi-truck parking. The on-street parking spaces do double duty for these uses as well. Sustainable features include porous pavement in the parking/loading lanes and street tree zone. The travel lanes are 12' to allow 2' of additional space in the parking lanes when wide vehicles such as buses and semi-trucks are parked in the on-street parking spaces. Dedicated on-street or off-street bike lanes were discussed but these are in direct competition with wider sidewalks. Shared vehicle and bike travel lanes (sharrows) are proposed for Washington.



WASHINGTON AVE (WEST OF GRAND) - EXISTING (70' ROW)

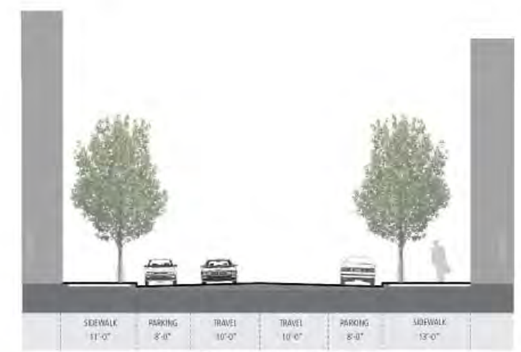
WASHINGTON AVE (WEST OF GRAND) - PROPOSED (70' ROW)

Washington Avenue – east of Grand
On-street parking and one travel lane in each direction have also been preserved for these sections of Washington and have also been "right-sized" to provide a traffic calming effect. The right-of-way varies dramatically in width. All the left over space can be dedicated to sidewalks and pedestrian amenities. Sustainable features include porous pavement in the parking/loading lanes and street tree zone. Dedicated on-street or off-street bike lanes were discussed but these are in direct competition with wider the sidewalks. Shared vehicle and bike travel lanes (sharrows) are proposed for Washington.

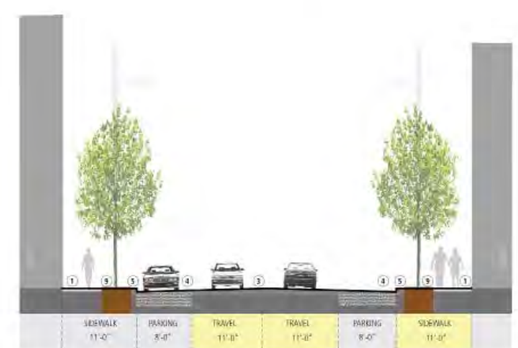
WASHINGTON AVE (EAST OF GRAND) - EXISTING (70'-80' ROW)

WASHINGTON AVE (EAST OF GRAND) - PROPOSED (70'-80' ROW)

Olive Street
Alternative proposals where considered for Olive that included removal of on-street parking on the north side to widen sidewalks. Discussion with stakeholders and the needs of adjacent land -uses verified that the existing section of Olive remains viable for the future and includes on-street parking on both sides and one travel lane in each direction. Sustainable features include porous pavement in the parking lanes and street tree zone. Dedicated bike lanes were discussed but the space is not available. Shared vehicle and bike travel lanes (sharrows) are proposed for Olive.



OLIVE ST - EXISTING (60' ROW)

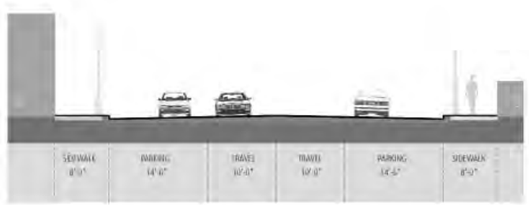


OLIVE ST - PROPOSED (60' ROW)

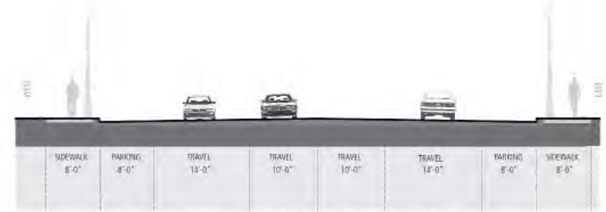
Spring Avenue – south of Olive
A 65′ right-of-way is available at this section of Spring. The travel lanes are wide and the sidewalks are very narrow. This is an important pedestrian connection to and from Saint Louis University. On-street parking is needed for adjacent businesses but even with on-street parking on both sides and a travel lane in both directions, there is room to consider an off-street, dedicated bike and pedestrian trail. The Midtown Loop Trail study is looking at the opportunities in more detail but the Grand Center Master Plan anticipates this type of facility on the east side of Spring.

Spring Avenue – north of Olive
The right-of-way north of Olive is very large at 85′ wide and will accommodate the extension of the bicycle/pedestrian extending from the south. On-street parking is maintained as this is a good parking street for the community and adjacent land uses such as the arts institutions and Cardinal Ritter High School. With the additional space, sustainable storm water opportunities such as bio-filters can be integrated into the street and bike/pedestrian trail on the east side of Spring

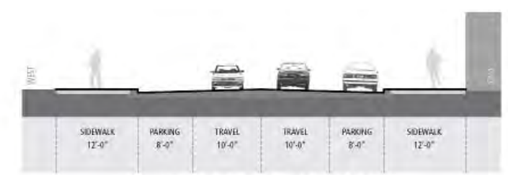
Theresa Avenue
The proposed street section for Theresa is principally the same as it is today. However, the Framework Plan called for an additional 10′ setback beyond the right-of-way into private property to provide for a generous pedestrian promenade on the west side of the street. This concept has been maintained in the Great Streets plan due the opportunities it provides when planning for infill development within adjacent parking lots.



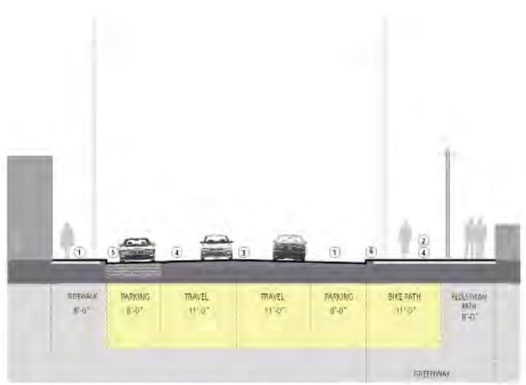
N SPRING AVE (SOUTH OF OLIVE) - EXISTING (65′ ROW)



N SPRING AVE (NORTH OF OLIVE) - EXISTING (80′ ROW)



THERESA AVE - EXISTING (60′ ROW)



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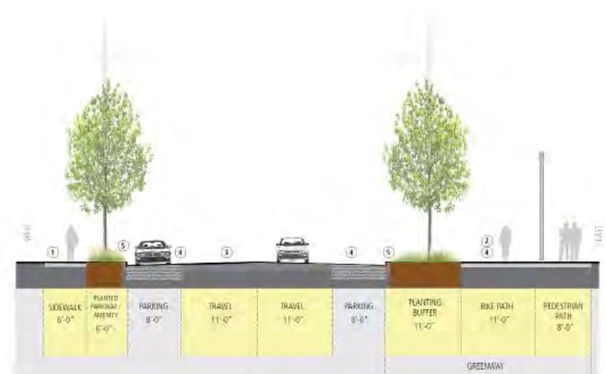

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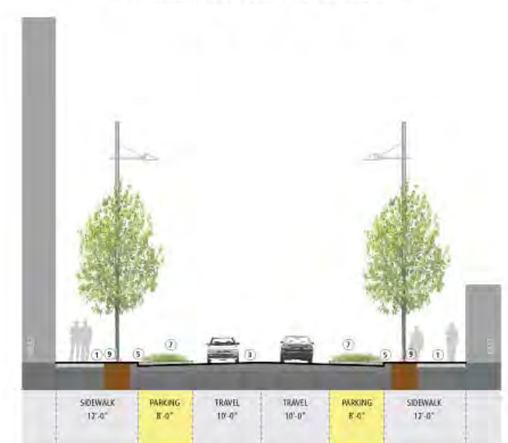


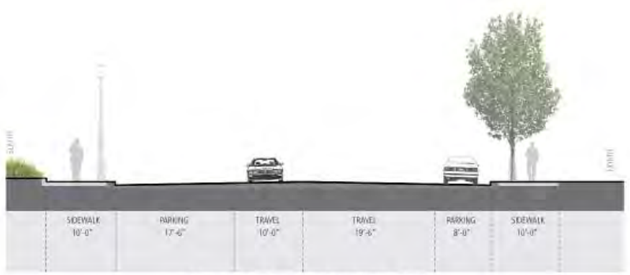
THERESA AVE - PROPOSED (60′ ROW)

Grandel Square

This street is a segment of a street that runs from Spring to Grand. Alternatives have been discussed over the years and have included closing the street, making it one way, etc. Only a few buildings are left on Grandel and the street has become a parking resource over the years for the VA Medical Center, Powell Hall and the Grandel Theater. Currently, the Grand Center Arts Academy is putting pressure on this street for student drop-off. The Great Streets plan proposes to formalize this parking resource with head-in, 90 degree parking, like a typical parking bay in a parking lot. Additional right-of-way in needed on the north side of the street to accommodate a 60' parking bay with parking on both sides and two-way traffic in the middle. This "parking street" provides parking for daytime and evening uses. Sustainable features include the opportunity to pave the entire street with a porous pavement and incorporate bioretention and other sustainable features.

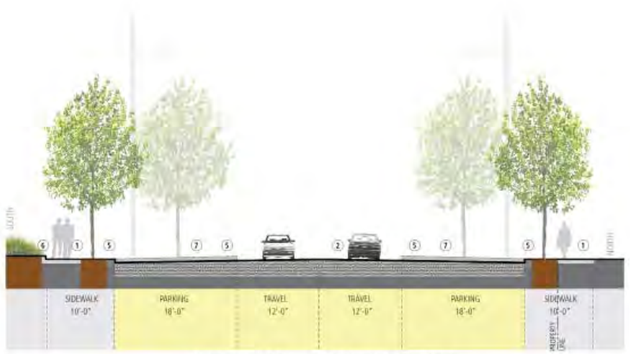
Delmar Boulevard

The Delmar right-of-way is also very large. Over time this street has been converted to an angled parking resource for Powell Hall and the VA Medical Center. In anticipation of the expansion of the medical center in the future, the new Delmar section includes on-street parking on both sides, a travel lane in both directions and a center turn lane.

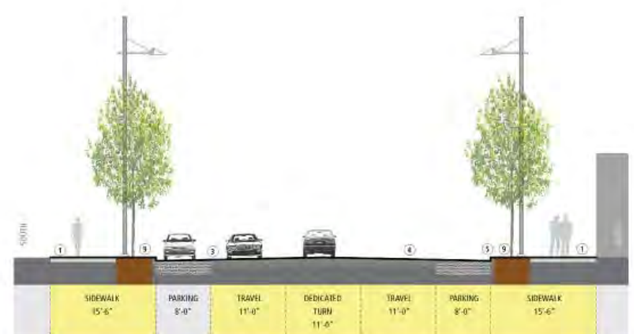


GRANDEL SQ - EXISTING (75' ROW)

DELMAR BLVD - EXISTING (80' ROW)



GRANDEL SQ - PROPOSED (80' ROW)



DELMAR BLVD - PROPOSED (80' ROW)

The Master Plan

The Master Plan is the road map for implementation. It lays out the planning and design recommendations described in this document and illustrates their relationships in plan view. Although the proposed improvements are contained within the study area boundary, this Master Plan and all the associated recommendations are design guidelines that can inform other areas of Grand Center. Proposed infill development has been shown for context and to illustrate the opportunity in the community. Other features such as the Art Walk and five significant green spaces in the community represent the next layer of opportunity and refinement.

How to Use the Master Plan

The full Master Plan is illustrated in its entirety for the study area. Then each of the streets in the study area have been sub-divided into public realm corridors and annotated keyed notes to identify materials and features.

1N

Grand Center Great Streets Master Plan

Cost Summary

To assist in the implementation planning over the coming years, the Great Streets project has been broken up into 12 zones. These zones represent logical project areas based on common design character and segments of the streetscape improvements on each street.

The cost summary is defined by total project cost and cost by zone. Refer to the Master Plan for illustrations of the areas of the public realm that are included in each zone.

ZONE 1	$16 M
ZONE 2	$2.8 M
ZONE 3	$4.4 M
ZONE 4	$6.1
ZONE 5	$4.4 M
ZONE 6	$3 M
ZONE 7	$1 M
ZONE 8	$4.4 M
ZONE 9	$3.2
ZONE 10	$5.5 M
ZONE 11	$6.1 M
ZONE 12	$11 M
TOTAL	$68 MILLION

Cost estimate zone map

GREAT STREETS MATERIAL KEY

Lighting
- L1 Intersection signals and lighted street signs
- L2 Grand armature with lights, floods and planters
- L3 Grand armature with lights and planters
- L4 Street light with pedestrian fixture
- L5 Street light - pedestrian scale
- L6 Tree light
- L7 Tension lighting

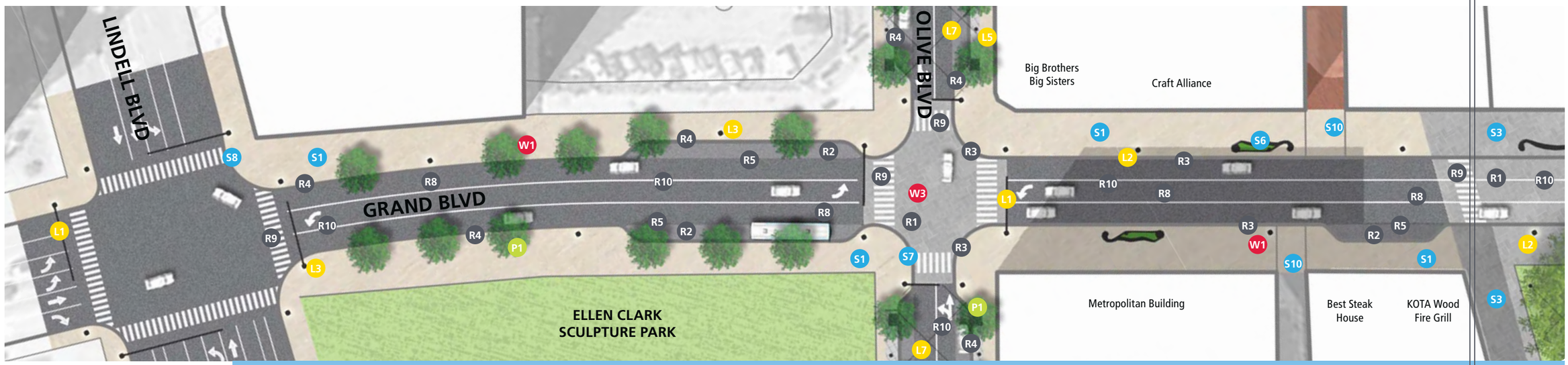
Sidewalks
- S1 Sparkle concrete, 5″
- S2 Standard concrete, 5″
- S3 Granite paving, pedestrian
- S4 Porous pavers, pedestrian
- S5 Other decorative paving
- S6 Granite planter curbs with planter rail or bench
- S7 Curb ramps, granite detectable warning
- S8 Curb ramps, standard detectable warning
- S9 Granite benches/barriers
- S10 Sparkle concrete, 8″
- S11 Standard concrete, 8″

Roadways
- R1 Granite paving, vehicular
- R2 Porous pavers, vehicular
- R3 Granite curb, 18″
- R4 Granite curb, 6″
- R5 Flush gutter pan/rigid restraint
- R6 Concrete crosswalks
- R7 Raised mid-block crosswalks
- R8 Asphalt overlay
- R9 Thermoplastic stripping
- R10 Painted stripping

Wayfinding
- W1 Pedestrian and exit Signage
- W2 Sculptural signage
- W3 Gateway signage
- W4 Cross-educational kiosk

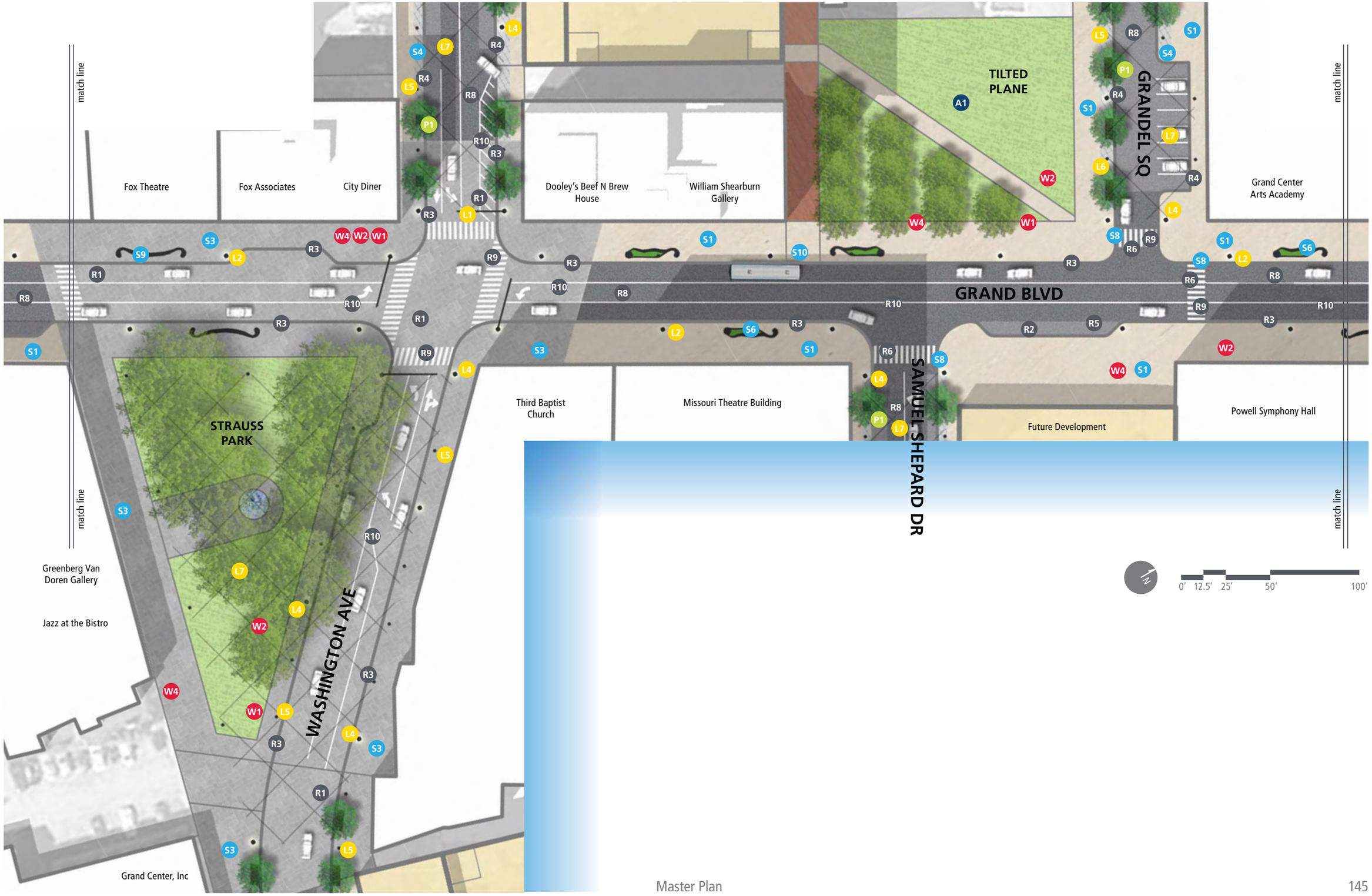
Planting
- P1 Street trees and structural soil
- P2 Rain garden and plantings
- P3 Bio-filter and plantings

Art
- A1 Public art / special project areas

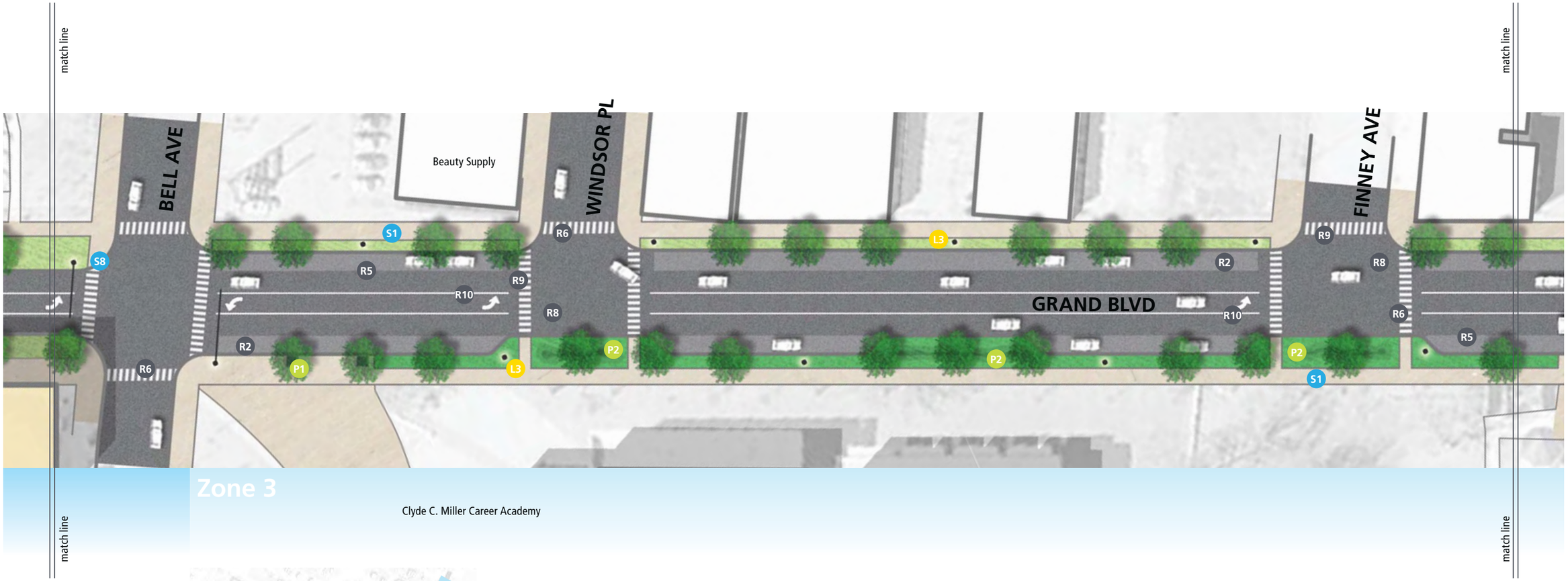


Zone 1

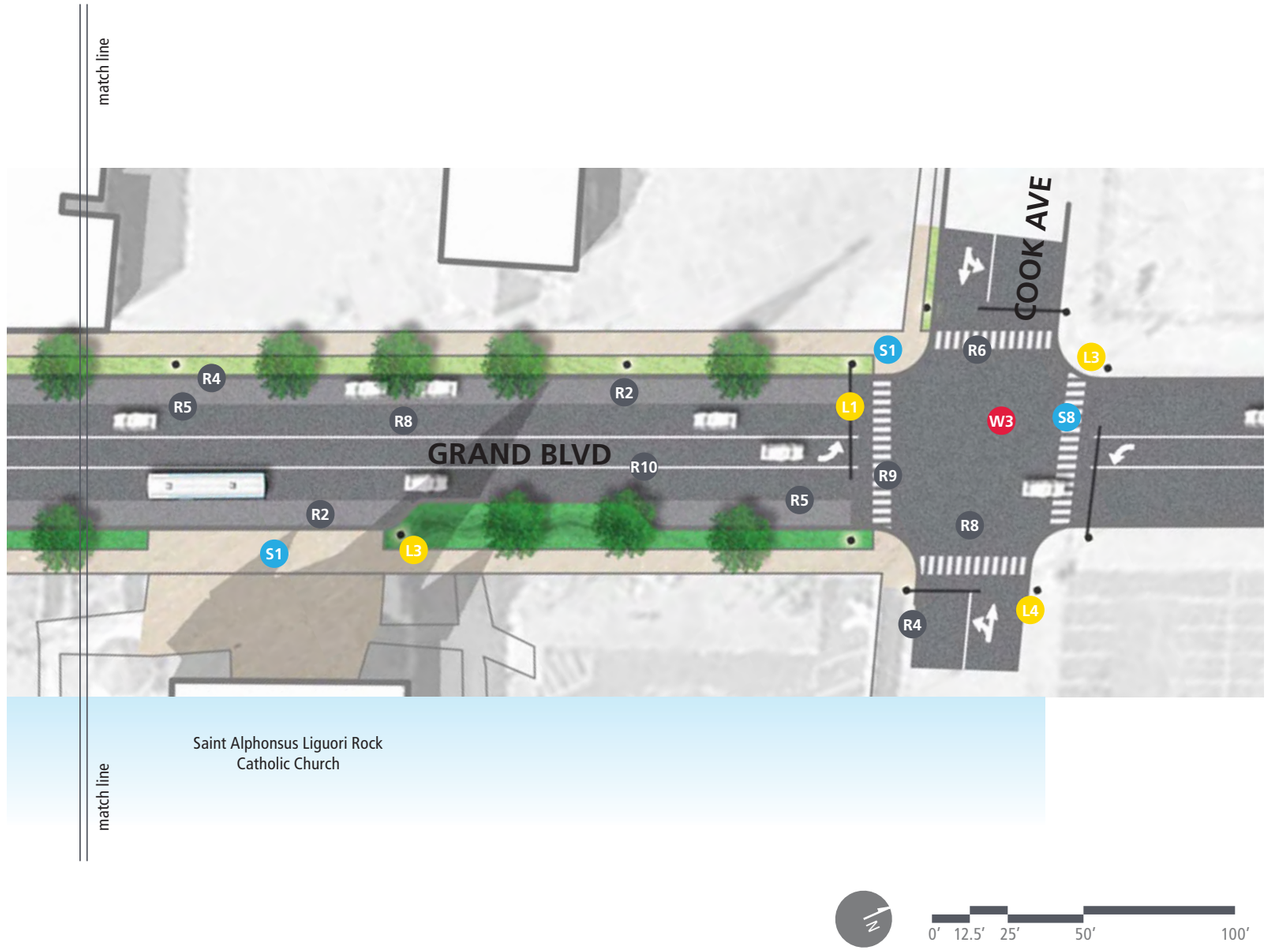
Location Map: Zone 1

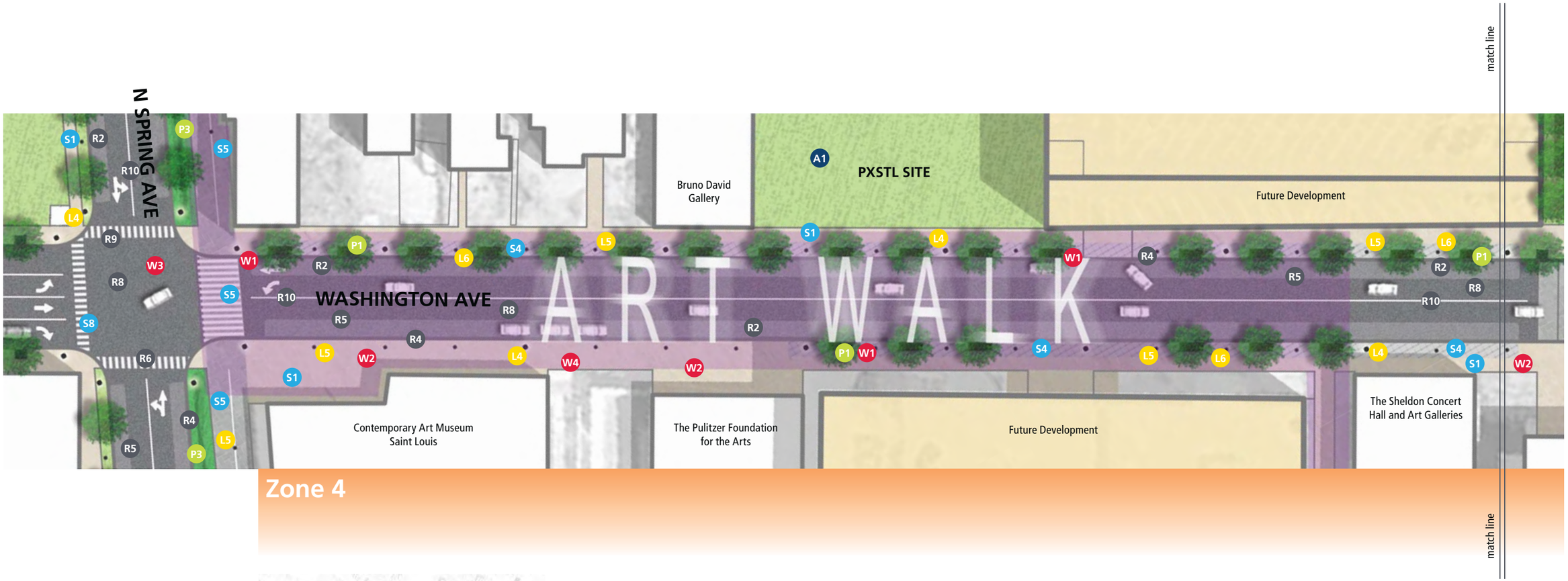

match line
Fox Theatre
Fox Associates
City Diner
Dooley's Beef N Brew House
William Shearburn Gallery
TILTED PLANE
GRANDEL SQ
Grand Center Arts Academy
GRAND BLVD
STRAUSS PARK
Third Baptist Church
Missouri Theatre Building
SAMUEL SHEPARD DR
Future Development
Powell Symphony Hall
Greenberg Van Doren Gallery
Jazz at the Bistro
WASHINGTON AVE
Grand Center, Inc
0' 12.5' 25' 50' 100'

Location Map: Zone 2



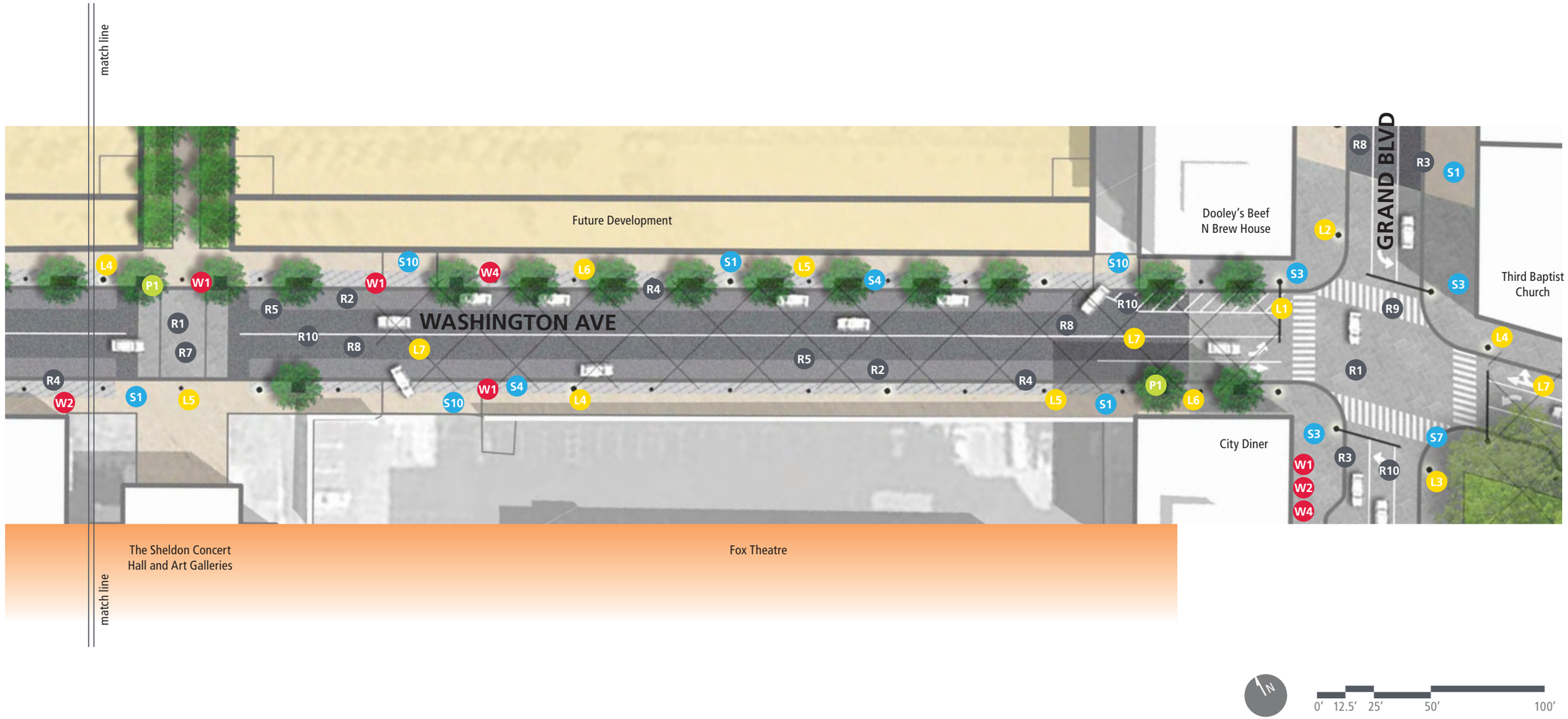
Location Map: Zone 3


match line
COOK AVE
GRAND BLVD
R4
R5
R8
R2
R10
R2
R5
R9
R8
R6
R4
S1
L1
L3
W3
S8
L4
Saint Alphonsus Liguori Rock
Catholic Church
match line
N
0'
12.5'
25'
50'
100'

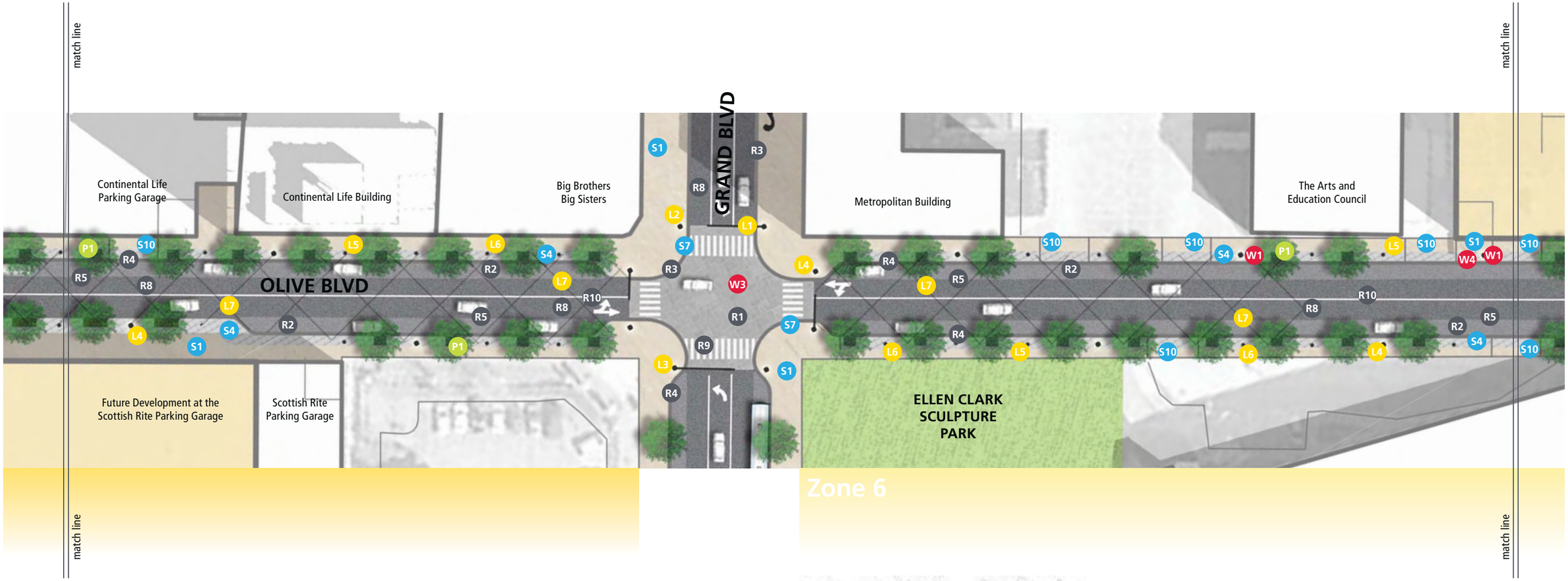


Zone 4

Location Map: Zone 4

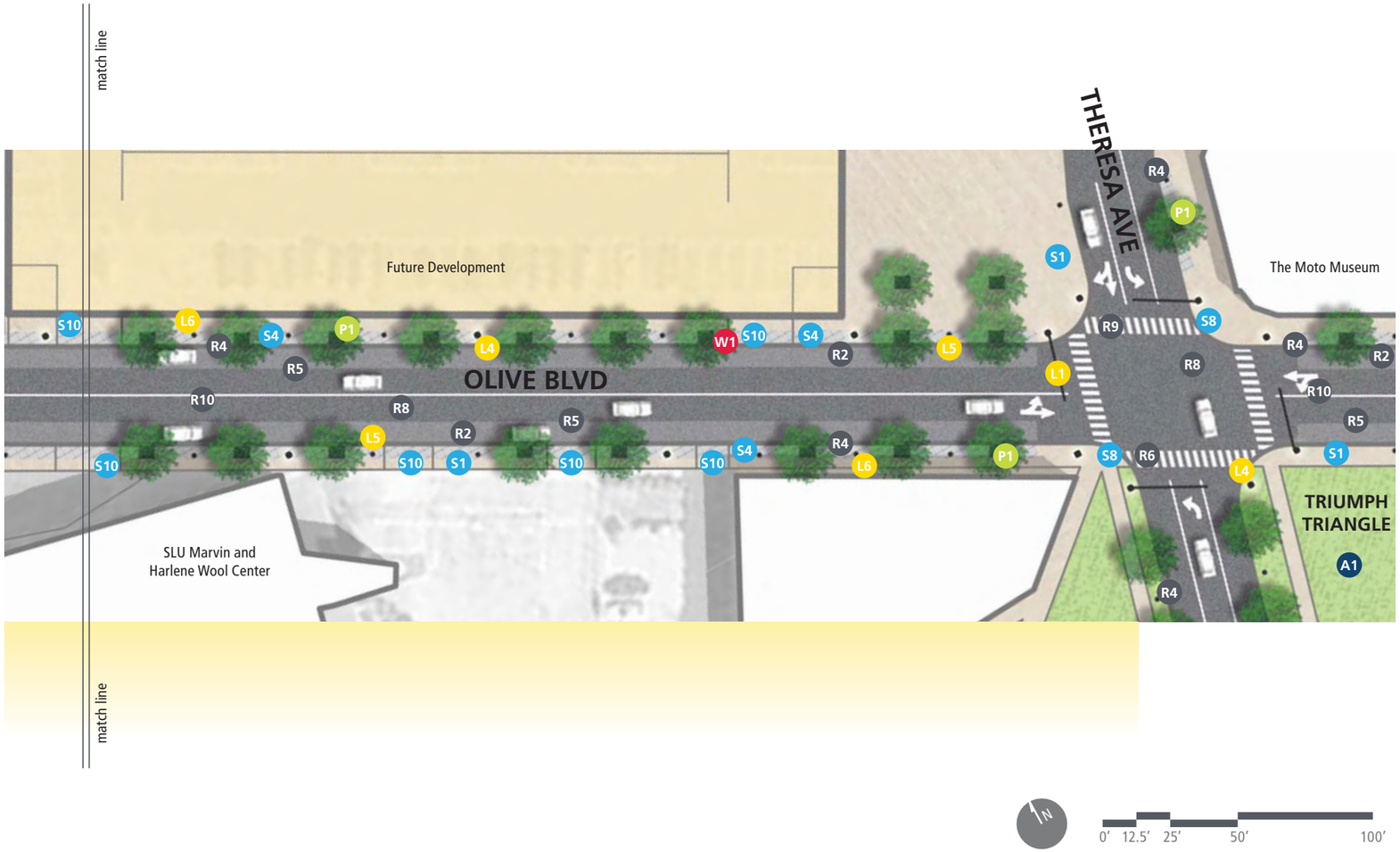

match line
Future Development
WASHINGTON AVE
GRAND BLVD
Dooley's Beef
N Brew House
Third Baptist
Church
City Diner
The Sheldon Concert
Hall and Art Galleries
Fox Theatre
match line
N
0' 12.5' 25' 50' 100'

Location Map: Zone 5



Location Map: Zone 6

N


match line
Future Development
THERESA AVE
The Moto Museum
OLIVE BLVD
SLU Marvin and
Harlene Wool Center
TRIUMPH
TRIANGLE
A1
W1
S10
S4
S1
S8
L1
L4
L5
L6
P1
R2
R4
R5
R6
R8
R9
R10
match line
N
0' 12.5' 25' 50' 100'

Location Map: Zone 7

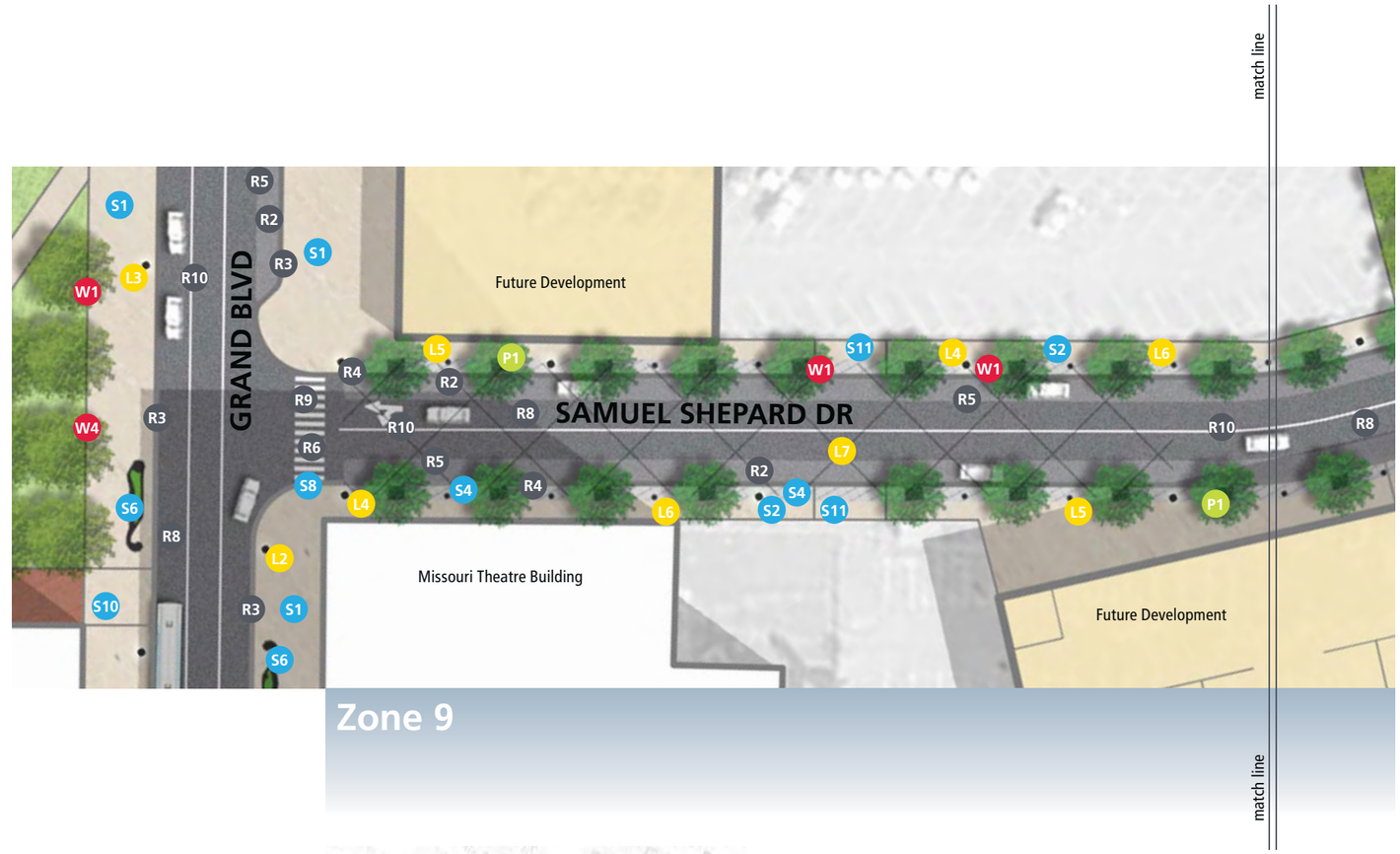
Location Map: Zone 8

Zone 7

Zone 8

Master Plan

0' 12.5' 25' 50' 100'



Zone 9

Location Map: Zone 9


match line
PERFORMANCE GREEN
A1
SAMUEL SHEPARD DR
THERESA AVE
Future Development
Future Development
R2
P1
L5
L6
W1
S2
L4
R8
R10
R5
S4
S11
R6
S8
R9
S1
N
0′ 12.5′ 25′ 50′ 100′
match line

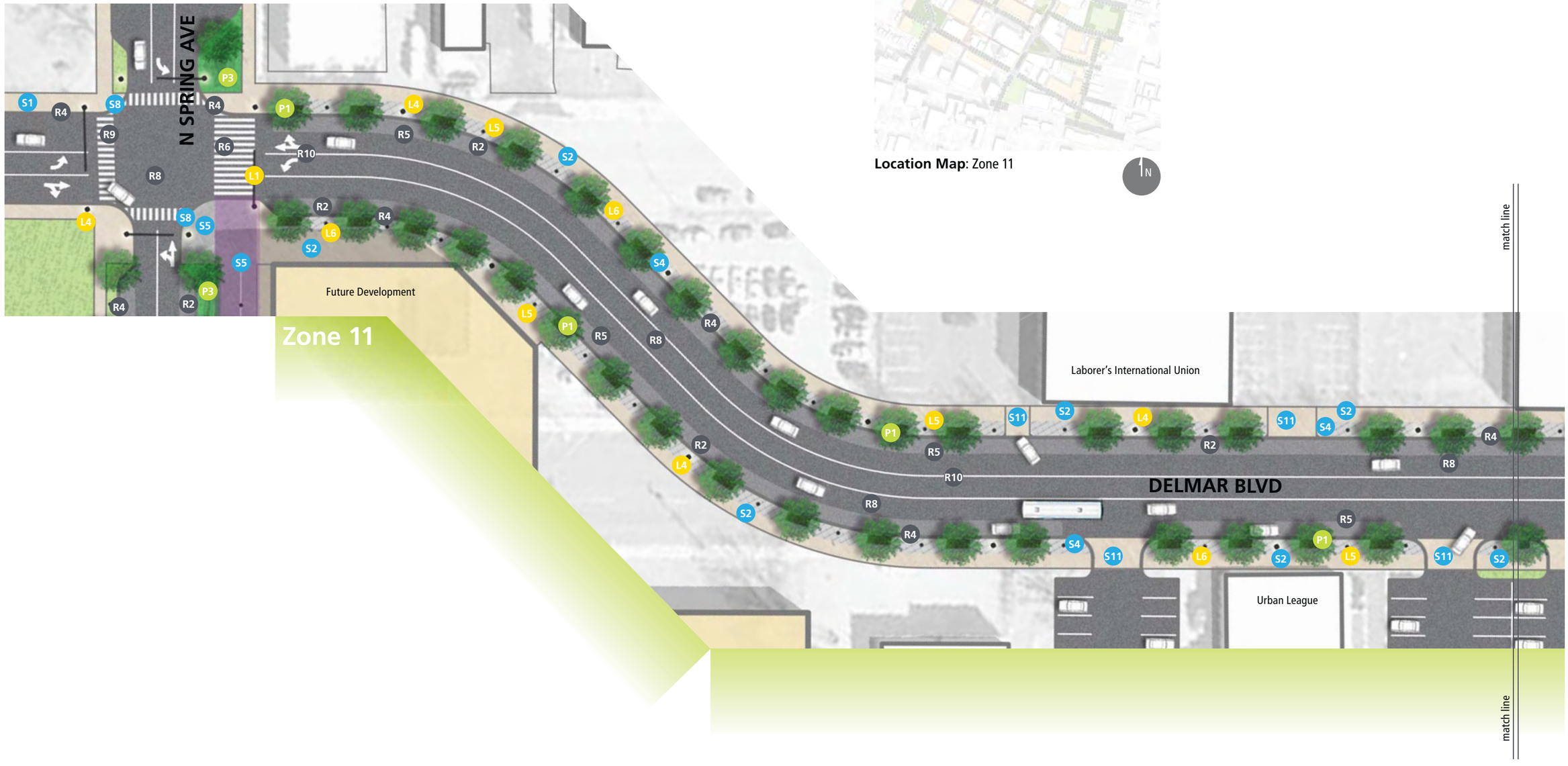
Zone 10

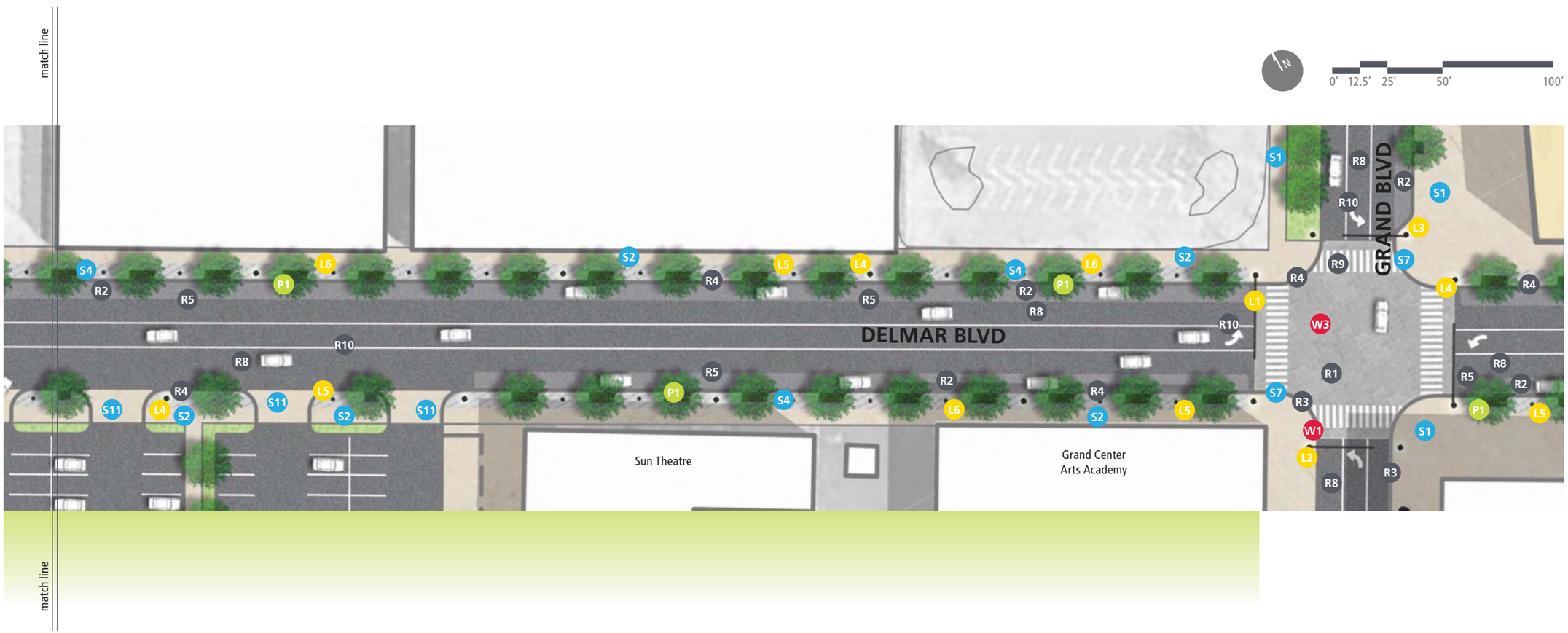
Location Map: Zone 10


match line
Sun Theatre
Grand Center
Arts Academy
GRANDEL SQ
GRAND BLVD
Powell
Symphony Hall
Future Development
Future
Development
Future
Development
Grandel Theatre
TILTED
PLANE
match line
N
0′ 12.5′ 25′ 50′ 100′

Location Map: Zone 11

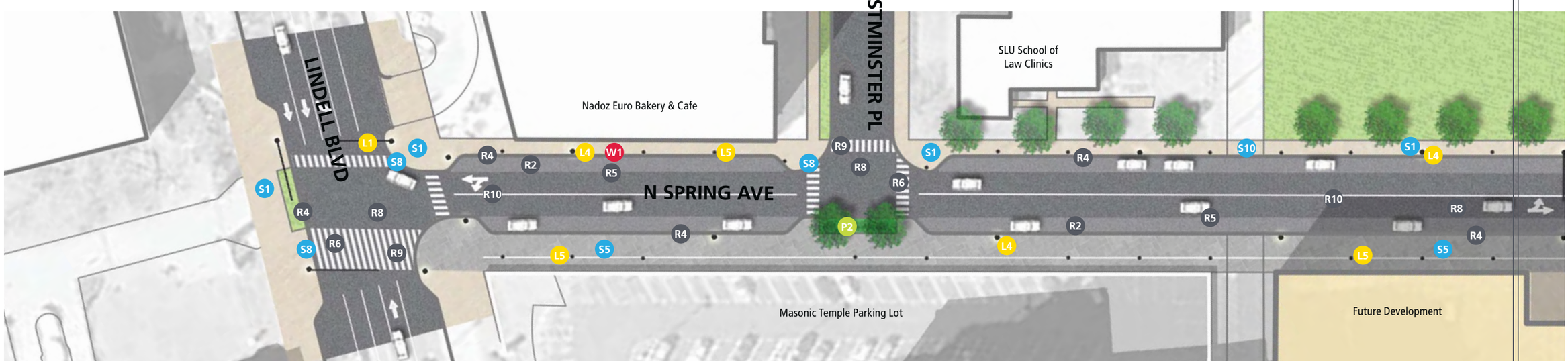
N



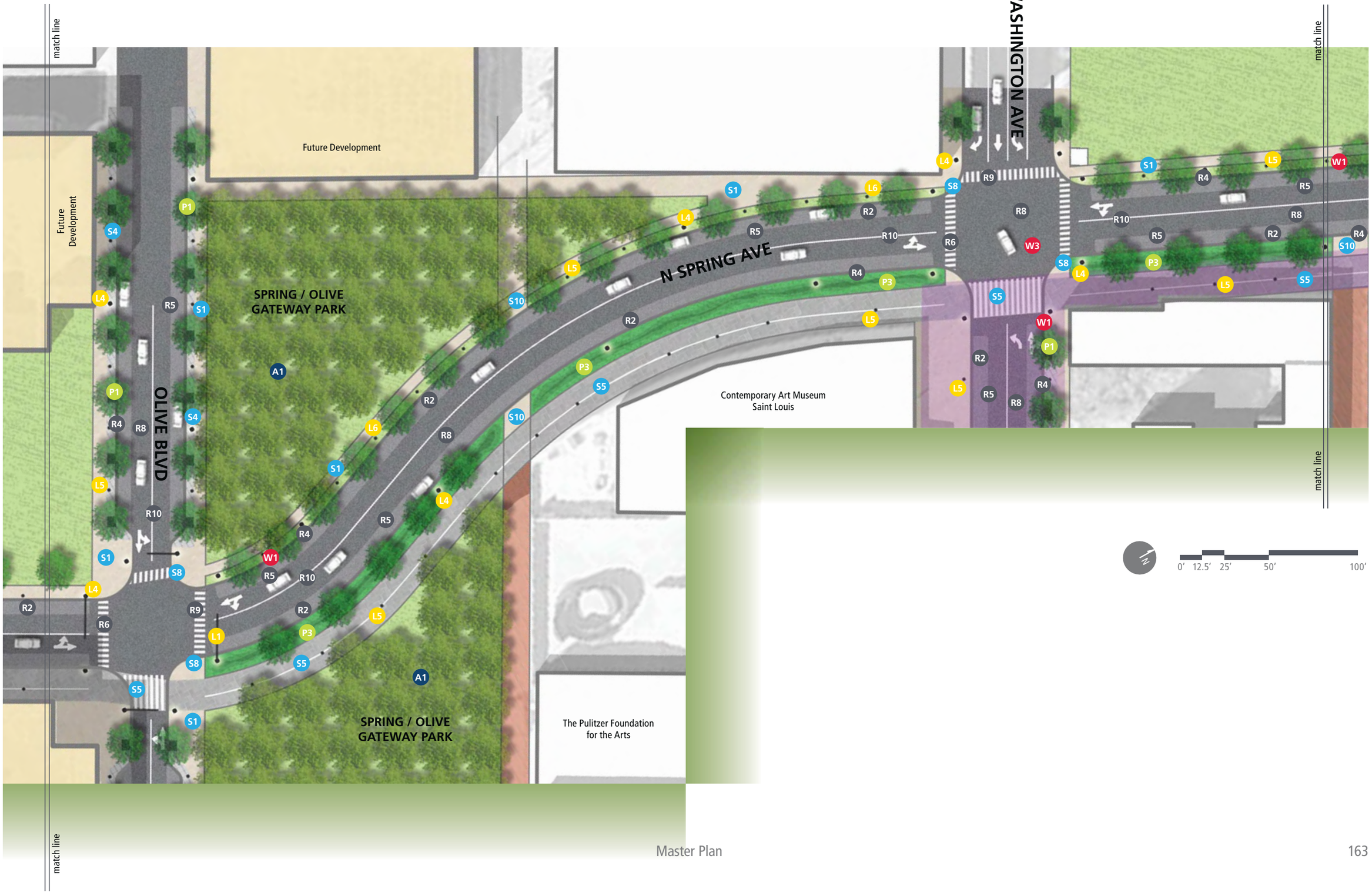

match line
N
0' 12.5' 25' 50' 100'
DELMAR BLVD
GRAND BLVD
Sun Theatre
Grand Center
Arts Academy
S1
S2
S4
S7
S11
L1
L2
L3
L4
L5
L6
P1
W1
W3
R1
R2
R3
R4
R5
R8
R9
R10
match line

Location Map: Zone 12

N



Zone 12


match line
Future Development
Future Development
SPRING / OLIVE GATEWAY PARK
OLIVE BLVD
N SPRING AVE
WASHINGTON AVE
Contemporary Art Museum Saint Louis
The Pulitzer Foundation for the Arts
SPRING / OLIVE GATEWAY PARK
match line
match line
match line
0' 12.5' 25' 50' 100'


match line
Cardinal Ritter College
Prep High School
DELMAR BLVD
N SPRING AVE
GRANDEL SQ
ART WALK
SPRING
CHURCH
Future Development
Future Development
W1
W2
A1
L1
L4
L5
L6
S1
S5
S8
S10
P1
P3
R2
R4
R5
R6
R8
R9
R10
match line
0'
12.5'
25'
50'
100'

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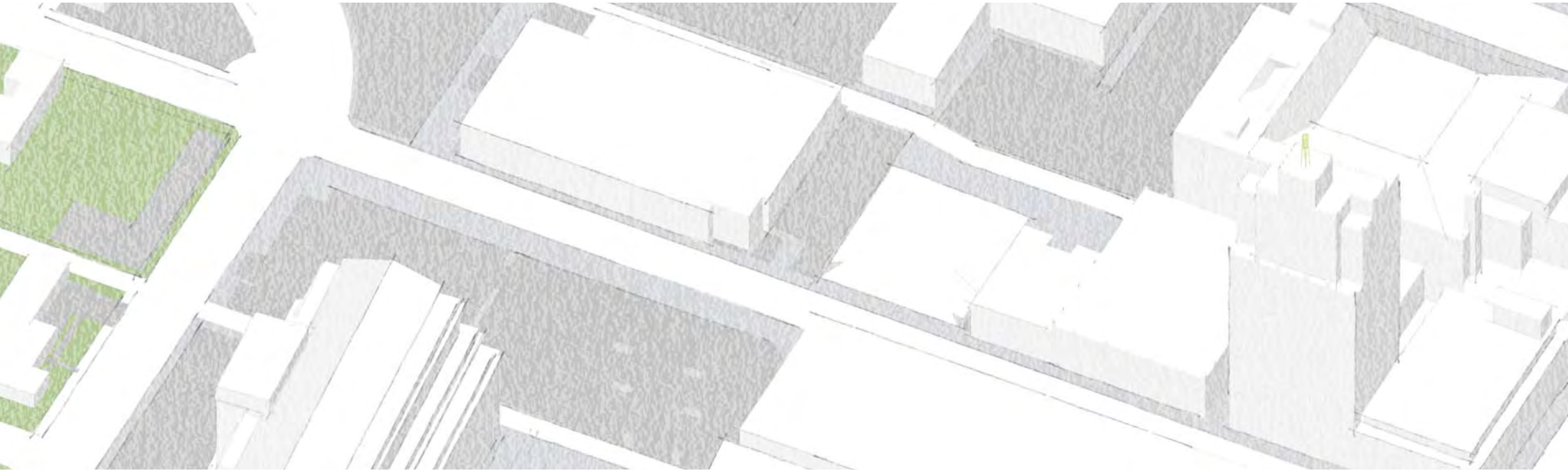


7 NEXT STEPS

NEXT STEPS

Now that the Grand Center Master Plan has been thoroughly developed, the logistical steps outlining how this plan can be realized need to be explored. This chapter will describe the context of what is going on now in Grand Center; discuss the factors that will drive the implementation process and identify the next steps that Grand Center will need to advance this project.

Moving Forward

The stakeholder community has an organization and a drive to continue the advancement of the Grand Center Great Streets Master Plan. Much has been achieved in the last five years and indications look promising that the progress will continue to accelerate. At the completion of this report, the following initiatives were under way:

- The VA Medical Center will unveil its Redevelopment Master Plan at the end of June, 2013 which will document expansion of the hospital, site expansion, parking structure development and concurrent street improvements.
- The Art Walk is being planned as a new "connector" attraction, linking the west side cluster of visual arts institutions. This project will build on the work of the Great Streets project.
- A study of the Midtown Loop Trail sponsored by Great Rivers Greenway District is looking at creating an off-street bike and pedestrian facility on the west side of Spring. It will integrate the Great Streets and Art Walk improvements in that corridor.
- Grand Center Arts Academy is adding a grade every year and will continue to expand its facilities with the renovation of the Sun Theater
- The Missouri Theater Building will be renovated into apartments and ground floor retail.
- Community radio station, 88.1 KDHX and the Larry J. Weir Center for Independent Media is under construction and will feature a 125-seat music venue and café on Washington Avenue.
- The Fox is working on concept for a parking garage along Washington Avenue for Fox patrons and other users.

To the fullest extent possible the Great Streets Master Plan has anticipated these developments and provided a streetscape design representing the collective aspiration of the community and stakeholders.

Implementation Drivers

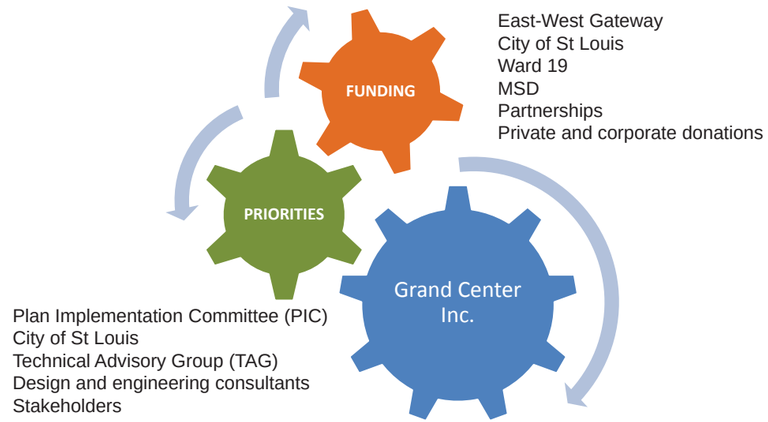
It is more likely that other factors will determine how each of the incremental project scopes will be defined. Currently, the phasing and prioritization of the street improvements remains unknown and will ultimately be driven by the factors of concurrent land use development, funding availability and perceived value.

1) Long Term Value
This driver suggests that funding will have greater benefit with some aspects of the project than others, and that it should drive the acceleration of certain priority improvements. While this might appear to favor the current primary pedestrian zones, including Grand and its more immediate edges, the greater liabilities are identified as the mid-block undeveloped areas and the Theresa corridor. These offer the greatest advantage to attracting development.

2) Short Term Value
Short term value focuses on improvements that will bring immediate impact over the next twelve months, if the resources can be found. This is also linked to the desire to have immediate visual and experiential impact on the district. High value, low cost improvements should be identified that will begin to alter traffic patterns, address concerns identified in the survey and begin to transform the visual appearance of the district. Initiatives should exclude elements that would require replacement in the realization of the long term plan. Quick win projects might include the following:

- Improved signage, way-finding and pavement conditions to encourage use of Vandeventer and Compton as alternative parallel routes
- Decorative hanging planting to streetscape
- Tensile light canopy to Strauss Park
- Restoration of architectural lighting to landmark structures
- Connection of Theresa at Lindell
- Multiple pay credit card meters
- Special events and mock up streetscape elements to test the design concepts and keep Grand Center on people minds

3) Infrastructure
Whereas the Master Plan is divided into 12 implementation zones, the planning of infrastructure improvements can be driven by utility networks such as street lighting infrastructure. The proposed LED street lighting will need be supported by new electrical distribution



and possibly new transformers. Planning for logical storm water management will drive the geographic scope of a project to maximize the benefit for porous paving, bio-filters and bioretention within the context of grant funding. To the extent underground utilities require relocation, this will affect project scope definition. With the significant curb re-alignments that are proposed, projects scopes will need to encompass an area that allows a safe and logical transition to existing conditions. To fully understanding a project scope, topographic/utility surveys need to be completed. The cost estimate has addressed these unknowns through conservative contingencies.

4) Land Use – Current and Future
Land use development will be driven by a desire to consolidate parking into parking structures and significantly diversify land use with the construction of housing, retail, commercial developments. Building the public realm improvements associated with these projects will be critical to the marketability of these developments. However, the incremental phasing of streetscape improvements that involve significant curb re-alignment creates phasing challenges and can drive the scope of the project. Other initiatives unrelated to changing land use will also have an influence on public realm priorities, including the Art Walk, the VA Medical Center improvements and the potential Great Rivers Greenway Midtown Loop Trail on Spring. Building the public realm improvements with other development remains a strong strategy to realize a new Grand Center.

5) Funding Availability
While a broad range of funding will be sought for the streetscape implementation, each source will have its own schedule and priorities. These will have a significant, and often irrational, effect on project implementation and the scope of the project

Action Agenda

Below is an outline of the activities that initiate implementation for the Great Streets projects.

Action: Establish Priorities

The Plan Implementation Committee is now charged with developing a logical phasing plan for the project. Although this exercise is not independent from other actions in the agenda, the committee can assemble a list or matrix of the drivers, aspirations and practical factors that will help reveal logical priorities for the plan. When combined with funding, the phasing plan can be formalized.

Action: Management and Structural Enhancements

Grand Center Inc. is currently working on the establishment of a Community Improvement District (CID). Its immediate function is to provide for safety and cleanliness in the community.

Over time, the roll of this entity could be expanded to include the full range of CID functions including: finance of public-use facilities; establishment of management policies and public services relative to the needs of the district. Within the context of the Great Streets project, a CID with this expanded role can finance new public facilities or improvements to existing facilities such as streetscapes, plazas, public art, parking garages and other public improvements. A CID can also provide public services such as parking facility operation, shuttle bus services, public realm maintenance and outdoor café leases.

As redevelopment and investment in Grand Center expands, funding of the improvements may be accomplished by a district-wide special assessment. Grand Center Inc. would continue to play the role of coordinator, advocate, and catalyst for redevelopment of Grand Center as an arts and entertainment district. Operations and maintenance of the proposed community-wide improvements will require a funding source and a management entity that will be responsible for Grand Center-specific activities that the City of St. Louis will not be able to perform.

Action: Technical and Engineering Investigation

In order to take the Master Plan to the next level of detail with respect to understanding the technical and engineering challenges that may drive scope, priorities and funding needs, comprehensive topographic and utility surveys need to be prepared. The Master Plan can be overlaid with the survey in order for infrastructure challenges and conflicts to be identified. It is recommended that pre-design services be engaged to investigate the identified conflicts prior to the start of construction drawing phase services. These include:

Pre-design Activities

- Topographic and utility survey
- Pot-holing to determine actual utility locations
- Existing lighting infrastructure routing and limitations
- Agreements from Streets Department and Lighting Division on lighting strategy and material specifications

Action: Funding Identification

Funding is available for public realm improvements through several yearly grants opportunities as well as on-going TIF revenue. Grant funding has vigorous competition within the St. Louis area. Financing the Great Streets project will involve multiple funding sources including private donations. Incorporating donor recognition opportunities in the design of the project is a great way recognize these contributions in a lasting way. Known sources of funding include:

- Tax Increment Financing (TIF)
- Ward funding
- St. Louis Sewer District Stormwater Grant Program (MSD)
- Community Development Block Grants (CDBG)
- Great Rivers Greenway District (GRG) funding
- Community Improvement District (CID)
- Surface Transportation Program (STP) and Transportation Improvement Program (TIP)
- National Endowment for the Arts (NEA)
- Corporate and private donations

Action: Transportation Improvements

Throughout the planning and design process for this project, it became clear that there were some relatively easy solutions to some of the mental and physical barriers to the use of Vandeventer and Compton as alternative routes to Grand. Being recognized for some "quick wins" in the community and among the Grand Center's patrons will help keep the momentum for improvement alive. A list of transportation improvement by short to long term have been outlined:

Short-term Improvements

* Coordinate with Missouri Department of Transportation (MoDOT) to add freeway wayfinding signage to Grand Center and use of alternative routes
    - Wayfinding on I-64 at Vandeventer and Market exits
    - Wayfinding on I-44 at Vandeventer exit
    - Interstate "shield" signage within district for exiting using alternative routes

*Coordinate with the City of St. Louis Division of Traffic to improve vehicular and pedestrian signal timing:
    - Implement special event signal timing plans for Olive, Washington, and Grand (at minimum) during venue peaks
    - Improve signal timing for Vandeventer and its cross-streets between Page Boulevard and the I-64 ramps
    - Coordinate with the City of St. Louis Division of Traffic to repair pavement on Vandeventer and improve striping for nighttime conditions
    - Coordinate with the City of St. Louis Division of Traffic to repair pavement on Compton and improve striping and lighting for nighttime conditions
    - Coordinate with Metro to reposition new bus stops along Grand to provide access on the south and north ends of the community and interface better with the Delmar route

*Investigate redesign of Compton Avenue between Olive and Market to obtain two consistent travel lanes in each direction
*Begin discussions with the City of St. Louis Treasurer's Office to remove parking meters and/or restrict parking at key locations in Grand Center
    - On Grand Boulevard between Olive and Delmar (with the goal of converting the two parking lanes to sidewalk)
    - On Compton Avenue between Delmar and Olive (with a goal of creating four consistent vehicular travel lanes)
    - On one side of Compton Avenue between Lindell and Market (with a goal of creating four consistent vehicular travel lanes)

*Implement Grand Center wayfinding signage within the district and on approach/departure routes
*Promote public transit and bicycle use within and to/from Grand Center, capitalize on newness of future articulated buses
*Create and employ venue exit traffic management plans
*Stagger visitor access and exiting with enticing activities before and after the performance
*Investigate and implement a WeCar, car-sharing facility

Mid-term Improvements:

*Implement a public and patron education campaign to promote alternative and parallel route usage through and to/from Grand Center
*Seek ways to manipulate GPS/navigation device/cell phone driving directions and position of final destination in Grand Center
*Reconnect Theresa Avenue to Lindell Boulevard
*Improve lighting on Olive Street west of Spring to encourage use
*Coordinate with City of St. Louis Treasurer's office to remove parking meters at key locations and test multiple-pay credit card meters
*Continue discussions with the City of St. Louis Treasurer's Office to remove parking meters and/or restrict parking on Compton to parking aisles for traffic lanes

*In select locations on Vandeventer allow room for vehicular turning lanes and/or improve driver comfort
*Reconstruct Compton Avenue between Olive and Market to achieve two consistent lanes in each direction
*Investigate and implement alternative payment methods for parking facilities (kiosks/credit card payments) to speed up and stager payment process

Long-term Improvements:
*Create new mixed use parking facilities on the east and west edges of the community to park visitors quickly and shift them into pedestrians
*Extend Grand Center branding, wayfinding and lighting on Olive, Washington, Locust, Samuel Shephard and Delmar to Vandeventer and Compton
*Enhance Vandeventer streetscapes
*Add turning bays at select locations on Vandeventer to improve vehicular flow

Action: Sustained Technical Advisory Group (TAG) Engagement

Engagement with the TAG should be sustained throughout implementation. A partnership with the TAG has been formed and should be strengthened as more technical details are available. Implementation will be successful if all parties go into construction with agreements regarding material choices, installation methods and maintenance responsibilities. The TAG includes representatives from the following agencies:

- St. Louis Water Division
- Laclede Gas
- Metropolitan Sewer District
- Office on the Disabled
- St. Louis Streets
- St. Louis Streets/Lighting Division
- Metro
- City of St. Louis Planning and Urban Design
- City of St. Louis Cultural Resources

The Design Team met with the TAG three times throughout the project duration to review project goals, discuss lessons learned from other streetscapes, review the design proposal and gain feedback from a technical perspective. An important TAG meeting occurred about midway through the project at which the design concepts where previewed with the TAG prior to being revealed to the subcommittee stakeholders at a Design Review Meeting at the beginning of April. Separate meetings with the St. Louis Streets department and the Lighting Division occurred to discuss design options, materials and lighting. Below is a brief summary of the key issues by agency:

1) St. Louis Water Division:
   - Concerns about finding the origin of leaks in under porous paving
   - Concerns about patching special pavements
   - Private cost for relocations and adjusting values

2) Laclede Gas:
   - Concerns about finding the origin of leaks in under porous paving
   - Private cost for relocations and adjusting values

3) Metropolitan Sewer District:
   - Green infrastructure is maintained with a private maintenance agreement
   - Funding is available for construction green infrastructure
   - Porous pavers are a preferred porous material for the parking aisles
   - Problems with porous concrete on the sidewalks

4) Office on the Disabled:
   - Bumpy surfaces and textures are a problem
   - Maintain a 6'-8' wide accessible route
   - Curbless areas need high contrast and detectable warnings
   - Proper lighting for low vision
   - Accessible parking and drop offs at all the venues
   - Exiting and wayfinding cues and strategies
   - Safety, Convenience and Communication

5) St. Louis Street Department
   - Consider concrete streets for better patching
   - Will not maintain special pavements or features

6) Street Department/Lighting Division
   - Mock-ups and fixture testing is required before any lighting product is approved for use
   - Maintenance plan with costs is required by the City for BPS review
   - Concerns about on-going simple maintenance/sign maintenance
   - Theft of lighting equipment, structural aluminum poles and other metals
   - Concerns about timeliness about traffic signal replacement
   - City of St. Louis 480 voltage is a limiting factor for LED light sources
   - Consider new transformers and 277 voltage as the new standard
   - Cannot pay for any lighting other than public safety lighting
   - Will not maintain special lighting

The Master Plan and TAG Recommendations
The Design Team took a deliberate approach to the material choices; strategies for installation/patching and long term durability when creating the design for Grand Center. In order to address the concerns from the TAG, the design incorporates durable materials that are typical to St. Louis such as concrete, granite and asphalt. However, custom elements, porous pavements and non-standard items are a concern for participants of the TAG due to the high cost of repair and maintenance. It is recommended that specialty elements such as granite pavement at the curbless areas of Grand and Washington at Strauss Park and the specialty lighting be investigated further in implementation phases.

Action: Maintenance Responsibilities

Funding for on-going and long-term maintenance will need to be identified. A partnership with the City of St. Louis on maintenance will not only be necessary but could become a model for the City. Pressure to reduce costs are typically in direct competition with improvement goals. However, streetscapes that contribute to cost off-sets should be recognized and rewarded. Cost offsets could include:

- LED lights that save energy and maintenance
- Green infrastructure that reduces flooding, property damage and demand on the sewage treatment plant
- Parking meter revenue from a vital and busy business district

With a partnership, these cost offsets could directly contribute to the maintenance of the special elements such as landscape maintenance, green infrastructure maintenance, trash removal and special pavement maintenance.

"Make no little plans. They have no magic to stir men's blood and probably will not themselves be realized"

Daniel Burnham