AESTHETICS MANUAL

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For SR-836/I-395 from West of I-95 to MacArthur Causeway Bridge and I-95 Pavement Reconstruction and I-95 Southbound to SR-836 Westbound and SR-836 from West of NW 17th Avenue to Midtown Interchange (SR-836/I-395/I-95)

VOLUME 2: AESTHETICS MANUAL NARRATIVE, APPROVED SIGNATURE BRIDGE PACKAGE, AND APPROVED AESTHETIC PROJECT TECHNICAL ENHANCEMENTS (APTEs)

Financial Project Number(s):

I-395 Reconstruction 251688-1-52-01 (F.A.P. 3951-501-I),
I-95 Pavement Reconstruction 429300-2-52-01 (F.A.P. 0951-685-I),
I-95 SB to SR 836 WB Connector 423126-2-52-01,
MDX 423126-1-52-01,
Miami Dade Water & Sewer 251688-1-56-02,
MDX Work Program Number: 83611

Contract Number: E-6J53

Submitted to:
Florida Department of Transportation, District 6

Submitted by:

MCB
MIAMI COMMUNITY BUILDERS

AESTHETICS MANUAL NARRATIVE

Figures 1.2: View of the Signature Bridge and Zone 3 Public Plazas

The Signature Bridge marks the heart of the cultural district. The public plazas and gardens will support a range of public activities.

1. Introduction

Great cities have great bridges. Envision the I-395 project on opening day: the ribbon is cut, traffic moves safely and efficiently through Miami, new public plazas and public gardens are filled with people and activities, and a dynamic new icon soars on the Miami skyline. This is the vision Miami Community Builders, JV (MCB) has worked toward to ensure the project is a stunning success for FDOT and the people of Miami. When complete, Miami will have a great bridge to reinforce community pride and serve as a global beacon.

This is a large, complex project with many facets. The request for proposal (RFP) stressed two overarching concerns:

- First, the design must provide Miami with maximum value for a complete project
- Second, the project must embody high aesthetics value

In addition, numerous stakeholders emphasized the need to develop the 30 acres of open area within the project right-of-way (ROW) as useful and safe urban spaces. MCB embraced these concerns and developed an overall design solution that provides a vibrant public realm with gardens and plazas, iconic structures and maximum value.

MCB employed an innovative multidisciplinary design approach. Engineering, design, and construction disciplines worked together to develop and evaluate design solutions to provide beauty, durability, maintainability, and value. This approach brought together diverse perspectives and resulted in significant design innovations benefiting the project and Miami. The solution, illustrated and described in this Aesthetic Manual (AM) provides FDOT and the City of Miami with an aesthetically pleasing landmark Signature Bridge and an inviting, safe, and vibrant public realm stretching from I-95 through Overtown to the Bay.

The quality and quantity of all measures and features in Volume 2 is described in each of the approved APTEs and in the included Preliminary Plans and Aesthetics Master Plans, which are attached to this Volume 2, as well as to Volume 1 of this proposal. All approved APTEs are included in this proposal and MCB accepts and includes all conditions for approval of all APTEs.

Figure 1.3: Heading East at Night

The dancing forms of the pylons and cable arrays create an iconic crossing.

1.1.1. Criteria & Requirements

MCB has incorporated and exceeded numerous visual, technical, and environmental requirements to achieve the project goals of maximum value and a high level of aesthetics. These requirements include the following:

- The RFP and FDOT's AM Design Criteria
- City planning and zoning requirements
- Requirements of the environmental impact statement (EIS)
- Visual quality intentions
- Create a world-class Signature Bridge that is iconic and a Miami landmark
- Integrate all bridges and elements to complement the Signature Bridge
- Signature Bridge possess an elegance in which lines and proportions are the primary design elements
- Design elements should exhibit fluid lines in the presentation of bridges
- Proposed bridges are integrated into the existing context, but should recognize future development and building massing
- Motorists, bicyclists, and pedestrians using the area feel safe and secure
- Approach structures (AS) complement the Signature Bridge and exhibit well-resolved transitions
- Touchdown points of approaches blend into the adjacent landscape and wall heights are minimized
- Appearance of the proposed bridges - day and night
- Retaining wall system consistent with the aesthetic theme

The proposed design has addressed the requirements and intentions to create structures and spaces that will be beautiful, inviting, and usable. Our team's unique integrated approach will position FDOT and Miami on the leading edge of current thinking about large-scale infrastructure projects, demonstrating they can be integrated together.

The structure of this MCB Aesthetic Manual (AM) mimics the Aesthetic Manual (attachment A-18), to make it easy to find changes and added features. In an effort to accommodate the reviewers, we have only referred back to the RFP Evaluation Criteria in a single location, as follows:

- The Signature Bridge criteria are listed in section 6.4
- The Mainline and Connector Ramps in section 2.4 through 2.6
- Streetscape in section 2.9
- Lighting in section 2.7
- Both the additional value and long term durability and maintainability, provided by our APTEs, are described in section 1.4

Our features are sprinkled throughout the document and we are confident you will find this proposal compelling.

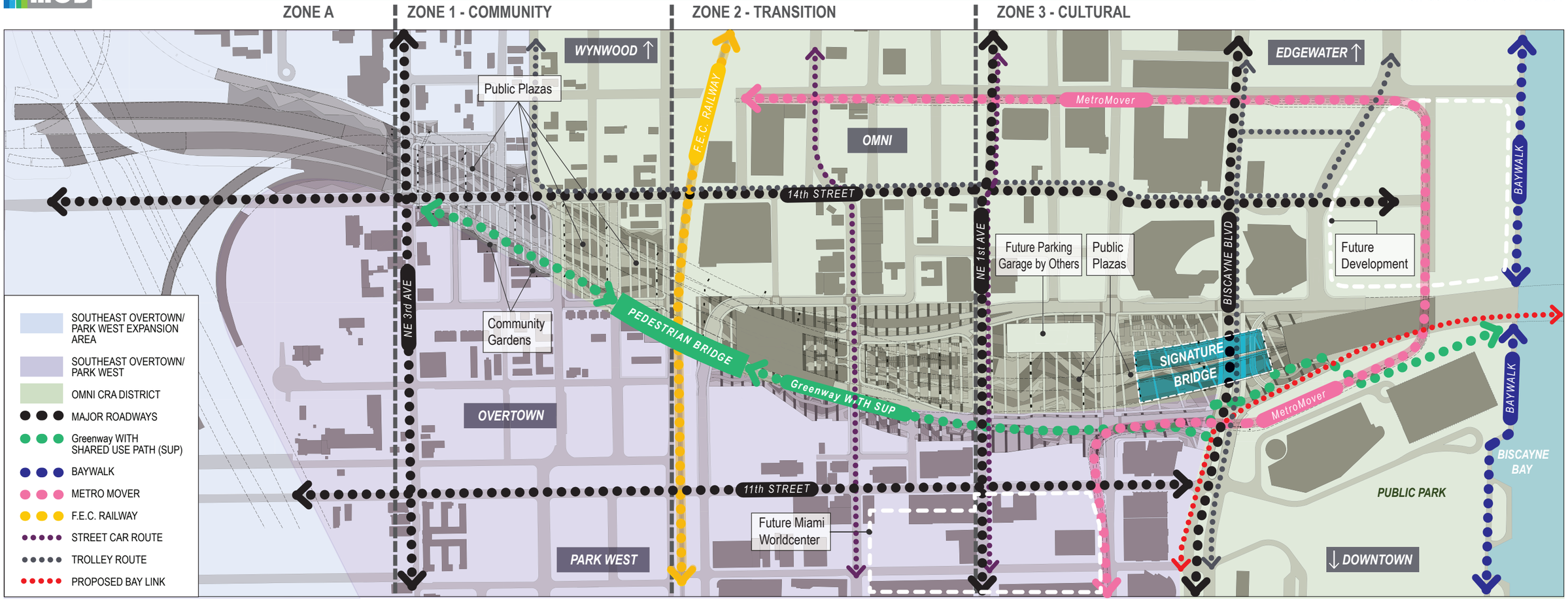

Figure 1.4: Project Context Plan

The 30 acres within the project ROW has been designed to knit the communities together. A combination of public plazas and urban gardens support a range of passive and active uses. A linear greenway with a shared use path, on the southern edge of the project provides important east and west connectivity.

1.1.2. Urban + Landscape Design

The project has been designed to integrate neighborhoods and highways creating a vibrant and active public realm. Streetscape and landscape design is consistent across all zones, all modes of transit are fully accommodated, and public plazas will support community activities and special programming.

When constructed in the late 1960s, the original I-395 project was disruptive to the Overtown community. We see a unique opportunity to blend transportation and urban design to produce a positive outcome with the reconstruction. An important design objective was to ensure the project is integrated with the City fabric.

The 30 acres of open space in the ROW have been developed as a combination of urban gardens and public plazas will provide the community with useful areas for active and passive recreation and programming.

Connectivity for pedestrians, cyclists, and motorists has been greatly improved and the entire area is visually unified with a consistent and exciting visual language inspired by the identity of Miami.

Site Opportunities and Constraints:

+ A high level site analysis reveals unique characteristics of the site

Opportunities:

+ 30 Acres of open space within the Project right-of-way (ROW)
+ Excellent access to public transit: MetroMover, Miami Trolley, and Future Baylink
+ A Nexus of neighborhoods: Overtown, Omni, Park West, Edgewater, Wynwood, and Downtown
+ Connection to Cultural Facilities/Amenities: AACPA, Frost, PAMM, Museum Park, Baywalk, and Biscayne Bay
+ Ongoing Development Projects and Growing Population
+ Access to Parking

Constraints:

+ Limited east/west major street connectivity: 14th St. and 11th St.
+ Limited north/south major street connectivity: NE 3rd Ave., NE 1st Ave., and Biscayne Blvd.
+ FECR creates a barrier to east/west movement

Our proposed design has taken advantage of the opportunities and addressed the constraints with innovative solutions. The overall landscape design is based on a common sense approach that creates attractive, useful spaces that are easy to maintain. Landscaped areas are positioned in the sun and the hardscaped areas are placed in the shade. This approach has numerous benefits:

+ Bridges provide shade and shelter for the plazas areas, especially useful for public programming.
+ Landscape in the sun will be viable and more easily maintained
+ Landscape is generally on the outside edges of the ROW or between the bridges; in these locations it reduces the scale and impact of the bridges on the adjacent communities.

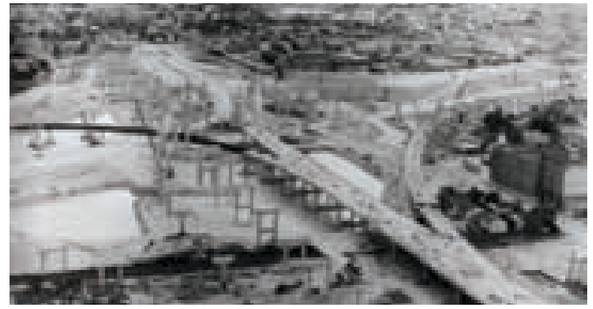

Figure 1.5: View of original I-395 Construction

The original project was disruptive to the City fabric.

Figure 1.6: Sunrise Illuminates Miami's New Icon

The curvilinear forms of the pylons and cable arrays provide a dynamic, ever changing profile with varying daylight and a viewer's location.

MCB Innovation - The entire southern project ROW has been developed as a landscaped greenway with a bridge over the FECR for pedestrians and cyclists. The greenway provides added east/west connectivity in response to the constraints noted above and accommodates a range of community uses including a shared use path (SUP) for pedestrians and bicyclists, community gardens, pet areas, and leisure gardens. Community uses will activate the areas bringing neighbors together to garden, walk their dogs, and stroll throughout. Active spaces feel safe, promoting increased activity followed by a positive feedback loop.

MCB Innovation - The RFP AM stressed the importance of Complete Streets, i.e., streets that are designed for use by pedestrians, cyclists, and cars. Our approach has addressed these ideas with a range of design enhancements:

- Pocket parking
- Shorter crosswalks
- Defined bike routes
- Larger landscape buffers between cars and people
- Pedestrian/bike bridge

To provide improved access to the gardens and plazas, some city streets have been realigned. The realignment will make movement more direct and way-finding simpler.

A bold design approach will provide aesthetic continuity across all Zones. Two patterns are apparent in the hardscape: the first travels east–west; the second travels north–south. The north–south pattern is based on the City street grid and emphasizes the connections north and south, similar to countless sidewalks. The east–west pattern, with colored pavers rendered in the hues of water and sand, are intended to recall waves breaking on a beach.

The blue, cool tones have the added benefit of providing a physiologically cooling effect for uses and the patterns reinforce the project-wide thematic ideas.

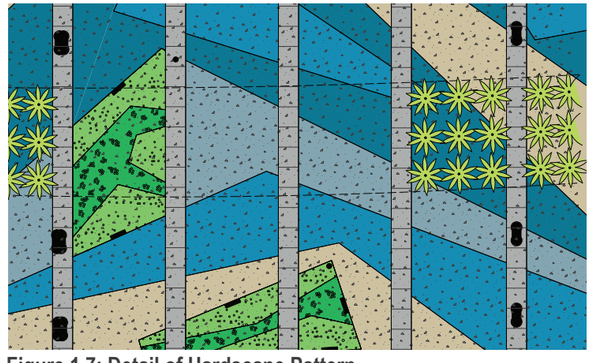

Figure 1.7: Detail of Hardscape Pattern

Our design features a north-south pattern based on the city street grid and an east-west pattern intended to recall breaking waves on a beach.

Figure 1.8: View Looking Toward the Miami Port

The pylons and cable arrays provide a dynamic 3D arrangement that constantly changes as the driver moves through the City.

MCB Innovation - Pushing even further to integrate the structures with the City, the entire bridge pier system was realigned to frame the City blocks and make the spaces more open, regular, and useful. In addition, in the long term the regular blocks better support future transportation development needs rather than the concept design, which produced many irregular parcels.

MCB carefully considered the RFP Evaluation Criteria and developed solutions that meet or exceed the objectives as follows:

a) Provide visual consistency between all four zones:

MCB Solution - Elegant approach structures, bold paving patterns, broadly linked landscape features, site furnishings, enhanced lighting, and the 3,000 feet long greenway with the SUP tying the zones together physically and visually, thus creating a beautiful and active corridor.

b) Provide landscaping in accordance with the RFP:

MCB Solution - A rich and varied landscape palette of grasses, shrubs, and trees create a range of pleasant public gardens and landscaped spaces supporting passive and active usage. Community gardens support urban agriculture, making portions of the ROW productive for users.

c) Promote Complete Streets Initiatives and traffic calming features:

MCB Solution - The greenway with the SUP, pedestrian/cycling bridge, and added bike lanes create a multi-model environment ensuring pedestrians and cyclist use of a safe area. We have added 1.7 miles of bike lanes and numerous traffic calming measures employed for connectivity and safety.

d) Enhance community activities:

MCB Solution - Large, colorful, paved programmable plazas in Zones 1 & 3 (with water and power), and greatly improved lighting will support a range of community programming (markets, fairs, sports, entertainment, etc.) both day and night to enliven the area. This makes the area more active, thereby inherently making it more safe and attracting more activity.

e) Adhere to and enhance aesthetic requirements of the Contract Documents:

MCB Solution - The MCB integrated design approach creates a vibrant, beautiful, and dynamic public realm providing passive and active spaces far exceeding the baseline design.

For example, the reference design had only 51 trees shown. By contrast our design has over 1,800 mature trees, as well as lush landscaped areas to create an attractive public gardens.

To summarize, our innovative design approach has resulted in a dynamic aesthetic solution providing maximum value for FDOT and the citizens of Miami.

1.2 Stakeholders

This project will touch many communities and stakeholders. In our effort to ensure this project is integrated with the city fabric, MCB conducted a robust stakeholder program. We wanted to understand the community's concerns to enables us to address these concerns with innovative design solutions and build support for the project.

Members of the ASC shared their vision for the Signature Bridge and the areas within the project ROW. Members of the Technical Review Committee (TRC) shared their thoughts about the project.

For the ASC, the Signature Bridge had to be iconic, possess a "wow" factor, and vividly express "Miami." The ASC also shared its concern for the areas beneath and adjacent to the bridge. Members believed the design of these areas will be vitally important to both the initial acceptance and the long-term success of the project. ASC members suggested the design should accomplish the following:

- Provide increased connectivity
- Be safe, inviting spaces that are well lit, promoting day and night activities
- Revitalize Overtown and promote development in the area
- Support programming such as festivals, exhibitions, and markets
- Provide a high quality of hardscape and landscape treatment for all zones

TRC members were concerned with technical issues, including maintenance of traffic (MOT), stakeholder coordination, work zone safety, and long-term maintainability. The sphere of concerns between the ASC (later the ARC) and the TRC were different, but MCB understands the importance of addressing all issues and saw an important opportunity to expand our thinking and approach to a project of this magnitude. Looking beyond the limits of the project, addresses the larger urban design issues, and resolving the technical issues.

MCB Innovation - Reframing the problem allowed us to develop new and meaningful design solutions that work on different levels to meet the needs of different stakeholders. We have reframed the interface between the infrastructure and the community to address stakeholder concerns. We believe this approach will engender support for the project.

1.3 Context-Sensitive Design Solutions

The RFP AM stresses the importance of a Context-Sensitive Design (CSD) approach for this project. CSD is a process using community involvement and input in the development of design solutions. As a design-build (DB) project, the traditional CSD process could not be followed. However, MCB undertook extensive stakeholder involvement, as outlined above, prior to release of the RFP and during the procurement. Stakeholders consistently expressed their desire for the project to express the character of Miami. In response, we developed themes founded in the Miami context; naturalistic, nautical and cultural. The themes provided a foundation for the design and the proposed solutions rooted in Miami's unique personality. In this way, CSD has been successfully addressed and incorporated in the design. Additionally, MCB has identified funding for Zone 1 Public Art and Programming. The money will be used to fine tune the design with community input and thereby build upon our CSD approach.

1.4 APTEs

MCB's 32 APTEs provide a singular aesthetics vision and add value by creating beauty and maintainability.

MCB Innovation - In addition to 32 APTEs described in table 1.10, the MCB design has incorporated all aesthetic enhancements identified in the RFP AM that are consistent with our approach to aesthetics and maintainability. **Our overarching goal: make the structures and the corridor a world-class project that is beautiful, useful and easily maintained.** Broadly, aesthetic betterments include enhanced landscaping and hardscaping, a linear landscaped greenway, realigned streets and re-ordered structure, programmable areas with water and power for easy set up and clean up, street furnishings, enhanced lighting, way-finding, improved parking, and public art.

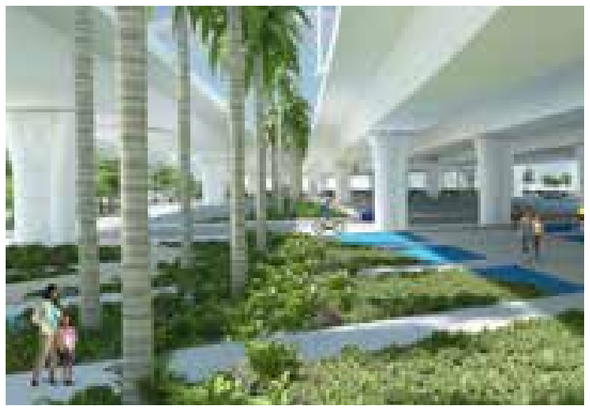

Figure 1.9: View in Zone 1

The elegant relationship between structure and landscape is evident in this view.

Description		Description & Benefit	Operations & Maintenance
5	I-395 WB Ramp Modifications	Landscaped buffers between ramps and community.	Palms and drought tolerant plantings reduce irrigation and maintenance. Landscape buffers deter graffiti on walls.
24	I-395 Approach Bridge Pier Locations	A key feature of our design, the piers have been positioned to frame the city blocks creating an improved sense of order between structures and the city streets. More regular span lengths allow the girders to be constant depth for a more uniform profile and a flat ceiling plane.	Eight fewer piers, 30% fewer bearings and more regular spans will reduce maintenance. Open blocks make planning and set up of programmed events simpler and break down easier.
26	Alternative Wall Design	Design is more consistent with themes. Strong irregular "waves" character will visually reduce apparent wall height. Wall patterns complement the wall lighting.	Irregular pattern will make painting over graffiti simpler and the areas will blend better.
29	Column and Box Girder Soffit Width	Variable soffit width creates smooth transitions between merging structures and a brighter ceiling plane, both day and night. Allows maximum flexibility for locating piers to "frame" city blocks to support recreation and programming.	The solid monolithic structure will have exceptional durability.
37	Portal Lighting Under-Deck Layout Enhancement at North-South Cross Streets	Lights reoriented to emphasize north south movement and focus lighting on sideways and bike lanes so areas appear brighter and safer.	30% fewer lights are required equating to less operating cost and maintenance.
38	General Lighting Under-Deck Luminaire Change	Enhanced light fixture has added wash to light the ceiling plane creating less shadows and a brighter more inviting spaces.	20% fewer fixtures were needed so there is less operating and maintenance.
39	Abutment and Embankment Wall Lighting Enhancement	Color changing lighting is used instead of white light. The lighting can be programmed to change color and pattern creating added visual interest in key areas.	No net change over reference design.
40	I-395 Realigning the City Street Grid - NW 1st Ave and NW 13th St from FECR to NW Miami Ct	More direct route for pedestrians/cyclists.	Overall length is shorter so less street maintenance needed.
41	I-395 Realigning the City Street Grid - NE 13th Str from NE 1st Str to Ramp G (I-395 WB off-ramp)	Provides added lane on NE 13th St. and minor realignment of WB NE 13th St. to reduce congestion, especially during AACPA events. Accommodates bike lane from MacArthur Causeway with connection to greenway.	No net change over reference design.
45	Cast-in-Place Construction on Falsework Construction Method for I-395 Approach Structures	Provides a superstructure with a smooth fully monolithic surface finish without segment joints that transitions smoothly throughout the corridor.	Exceptional durability is expected to result in reduced maintenance.
46	Use of Straddle Bents on I-395	Straddle bents are used and "C" piers eliminated resulting in cleaner look.	Straddle bents are simpler to construct and maintain.
53	Geometric Revisions to Ramp D-1 and D-2	Realignment resulted in more buffer space between cars and pedestrians/cyclists.	No net change over reference design.
54	Alternative Concept for Metromover Pier Support Structure	Simplified elegant solution does not compete with Signature Bridge.	Conventional structure is exponentially simpler to inspect and maintain.
55	Alternative Pier Design	Enhanced pier better expresses project aesthetic themes to create overall unified design.	Revised pier shape requires less maintenance.
60	I-395 Realigning the City Street Grid - NE 11th Terrace from N. Miami Ave to Biscayne Blvd	Allows greenway to continue through Zone, breaks up the parking areas, allows for more buffer between pedestrians/cyclists and cars.	No net change over reference design.
61	Enhanced Roadway Light Pole	More elegant light-pole relates better to project aesthetic themes.	No net change over reference design
62	Pedestrian Way-Finding Signage (Zones 1, 2, & 3)	Provided directional signage for pedestrians and cyclists.	No net change over reference design
63	Low Maintenance Public Art	Aesthetic, color changing lighting is used to create interesting project enhancement.	Sculptures and murals are subject to vandalism, the lights are not accessible to vandals, which will reduce maintenance
64	Zone 1 - Landscape/Hardscape	Bold design, increased planting to create public gardens and visually buffer structures, greenway for connectivity, colored pavers reinforce themes.	Common sense approach, landscape in sunlight, paving in shade, ensures viability of planting to ease maintenance
65	Zone 1 - Activity Plan/Street Furnishing	Large plazas with water- and power-servicer and street furnishings to support community programming.	All furnishings are highly durable, water and power service points are is lockable
66	Zone 1 - Parking	Pocket parking creates access to public plazas and gardens and provides traffic calming.	No change
67	Zone 1 - Programmable Color Changing Embankment Lighting	Color changing programmable lighting will provide visual interest.	Virtually no maintenance compared to murals or other graphics
68	Zone 2 - Landscape/Hardscape	Bold design, increased planting to create public gardens and visually buffer structures, greenway for connectivity, colored pavers reinforce themes.	Common sense approach, landscape in sunlight, paving in shade, ensures viability of planting to ease maintenance.
69	Zone 2 - Activity Plan/Street Furnishing	Street furnishings used along greenway create places for people.	All furnishings are highly durable, water and power service points are is lockable.
70	Zone 2 - Parking	Parking count is increased, but the areas are broken up into smaller lots with lush planting and colorful paving.	Pavers won't require patching and sealing, resulting in long lasting performance.
71	Zone 2 - Programmable Color Changing Embankment Lighting	Color changing programmable lighting will provide visual interest.	Virtually no maintenance compared to murals or other graphics.
72	Zone 2 - Parking Access	Continues NW Miami Ct. to improve pedestrian and bike access.	Easier access for maintenance vehicles.
73	Zone 3 - Landscape/Hardscape	Bold design, increased planting to create public gardens and visually buffer structures, greenway for connectivity, colored pavers reinforce themes.	Common sense approach, landscape in sunlight, paving in shade, ensures viability of planting to ease maintenance.
74	Zone 3 - Activity Plan/Street Furnishing	Large programmable areas with water- and power-service and street furnishings to support community and cultural programming.	All furnishings are highly durable, water and power is lockable.
76	Zone 3 - Programmable Color Changing Embankment Lighting	Color changing programmable lighting will provide visual interest.	Virtually no maintenance compared to murals or other graphics.
82	Constant Width Overhang - Approach Structures	Constant width overhangs create an overall consistent look for structures.	Enhanced durability
83	Zone 2 - Additional Parking - Miami Buses	School bus staging for PAMM and Frost will activate a potentially marginal area making it safer.	No net change over reference design.

Table 1.10: List of Approved APTEs

MCB has 32 approved and conditionally approved APTEs. Please see appendix for more details.

Figures 1.1: Aerial View of I-395 Corridor and the City

Aerial image illustrates two key features; the iconic Signature Bridge will stand proudly on the Miami skyline; the sophisticated landscaping solution will buffer the structures as they traverse the City.

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As a fully integrated JV with our design partner, MCB has an extensive background and knowledge base of Signature Bridge structures in urban environments. This basis has given our team the platform to be creative and innovate, which was proven by our 32 approved APTEs. The following provides examples and features the additional value of MCB's APTEs:

a) Provide additional aesthetic features beyond the minimum aesthetic baseline requirements:

MCB Solution - The design is a sophisticated and integrated aesthetic with numerous added features:

- A dynamic, elegant hardscape plan with large, highly flexible programmable areas framed by piers with water and power provided to support events
- Lush landscaping with a linear greenway connecting communities and providing passive and active uses
- Enhanced lighting strategies to create bright, well-lit public spaces

b) Improve upon existing requirement of the Concept Plans not otherwise captured in sub-criteria of the Aesthetic Proposal Criteria:

MCB Solution - Our integrated design approach led to numerous improvements including:

- Reorganizing the approach structures piers to frame the City blocks and create more usable public plazas
- Consistent overhang width/wider soffits to create a brighter ceiling plane
- Constant depth girders to create a consistent profile
- Enhanced walls and piers expressing the project themes to create an unified aesthetic

c) Further FDOT's goal of building a signature corridor providing aesthetic features exceeding requirements of the threshold requirements:

MCB Solution - 32 APTEs are included and all relevant aesthetic enhancements listed in the RFP AM. Taken together, the quantity of aesthetic betterment demonstrates our commitment to exceed the requirements and create a truly world-class corridor for Miami.

d) Include additional or enhanced pedestrian and/or bicycle safety:

MCB Solution-Three key features form the backbone of our enhanced pedestrian/cyclist plan:

- Greenway with the SUP linking all zones and allows pedestrians and cyclists to traverse the area largely away from traffic
- 1.7 miles of defined bike lanes connect the zones providing hugely improved connectivity
- Traffic calming measures in all zones: raised crosswalks where the SUP crosses the City streets and pocket parking to calm traffic

e) Provide long term durability and maintainability:

MCB Solution - Each APTE was developed with long term durability and maintainability in mind. Refer to Table 1.7 for a brief description of the durability and maintainability of each APTE.

Figure 1.11: Crossing the Signature Bridge

The dynamic pylons and cable arrays arch overhead creating a unique sense of enclosure.

2. Corridor-Wide Elements

MCB provides a unified, world class corridor by carrying all aesthetic elements throughout the entire project.

Our vision of the I-395 project uses a family of design elements consistently, to provide a clear, unique and recognizable identity to the entire corridor. MCB used a highly integrated design approach to coordinate the roadway design, the bridge layouts, pier and wall details, lighting, and urban/landscape design elements to provide aesthetic consistency and a high level of quality throughout the area.

Figure 2.1: St. Louis Arch and Park

A linear greenway in St. Louis is focused on the world famous iconic Arch.

Figures 2.2: Top-View of Greenway and Signature Bridge

The lush landscaped greenway with a meandering SUP following the southern edge of the project connecting all zones and creates a buffer between structures and adjacent buildings.

2.1 Roadway Alignment and Geometry (APTEs 5, 40, 41, 53, 60, 72, 83)

"This is something everyone knows: A well-used city street is apt to be a safe street. A deserted city street is apt to be unsafe." - Jane Jacobs

MCB redesigned the City street network to better support pedestrians, cyclists, automobiles (i.e, Complete Streets), and provide more buffer space between bridges and adjacent uses. MCB's roadway design took place on two levels:

+ The bridge alignment
+ The city streets

A minor alignment of the elevated roadway was required for the Signature Bridge and was approved (ATC 10).

MCB Innovation - An important element of the urban design was to realign or reconnect city streets where practical. The strategic goal of these revisions was to make the area more inviting for pedestrians, cyclists, and drivers. **Altering the alignment of the street grid provided important benefits: way-finding is simpler, direct connections are more convenient, and buffers are created between pedestrians, cyclists, and vehicles**.

In addition, a more connected grid will encourage incremental development in the area, which will help to infill the urban fabric to create more inviting street frontage. The MCB roadway realignment and connections included the following:

+ I-395 WB Ramp F Modifications to create a landscape buffer (APTE 5)
+ Geometric Revisions to Ramp D-1 and D-2 to create better separation of transportation modes (APTE 53)
+ Realign NW 1st Avenue and NE 13th Street to make more direct route (APTE 40)
+ Added lane on NE 13th Street to improve traffic at the AACPA (APTE 41)
+ Widened NE 11th Terrace from North Miami Ave. to Biscayne Blvd. extends greenway through Zones 2 and 3 providing landscaped buffers between pedestrians/cyclists and vehicles (ATC 60)
+ Extended NE Miami Ct. to 11th Terrace providing improved connectivity for all modes of transportation (APTE 72)

All stakeholders stated the objective should be to create an attractive and vibrant space supporting activity in and around the bridges. The realignment of the roads support this key goal. Ultimately, a more connected street network as proposed will reinvigorate and unify the areas of Overtown, Omni, and MacArthur districts.

2.3: View of 11th Terrace Realignment

This view demonstrates a key benefits created by realigning streets; more buffer between modes of transit.

2.2 Aesthetic Theme for the Project/ Corridor (APTEs 26, 55, 64, 68, 73)

Developed aesthetic themes based on the key aspects of Miami.

After meetings with the ASC and TRC members, it was clear this project had to express what Miami represents. Aesthetic themes were developed based on creating a project unique to the City and the region. The following three themes will resonate with the community and visitors:

+ **Nature:** based on the Miami's beautiful natural environment
+ **Nautical:** based on water and maritime imagery
+ **Culture:** based on the location in cultural district and Miami as an international cultural destination

These themes are not overt and rather suggest ideas that are open to a range of interpretations. The unique "Sails" form of the Signature Bridge may also recall the form of broad-leafed tropical plant. Through consistent application in the corridor (hardscape, planting, piers, walls, structures), the themes provide an overall visual unity for the project, which is another important criterion of the RFP AM.

Figure 2.4: Thematic Imagery

Naturalistic, nautical, and cultural themes resonate throughout the project.

2.3 Approach Span Superstructure (APTEs 24, 29, 45)

The approach span design is elegant, consistent, and configured to interface gracefully with the City streets and blocks.

The RFP states that I-395 approach structures shall adopt the commitments established in the Project Record of Decision stating, *"the need for improvements is based on a combination of substandard traffic conditions, urban planning objectives and the interaction with other planned facility improvements impacting the proposed project area."*

The issues contained in this statement became important drivers in the design of the approach structures. These structures comprise a significant portion of this project and will have a great impact, both visually and physically, on the community.

MCB Innovation - An integrated solution was developed based on cast-in-place (CIP) concrete construction. The design has four key aspects: all spans are **constant depth,** overhangs are **constant width**, the soffits are variable width, and **piers are aligned with the City street grid.** Benefits of this approach include more regularized span lengths, level soffits, so the bridge profile is continuous, a brighter and less shadowed ceiling plane, smooth terminations of structural elements in plan and elevation, eight fewer piers, and more open areas on the City blocks. Importantly, larger unobstructed open spaces are created within each block for greater flexibility of special programming. It also reinforces the integration between the project and the City.

Figure 2.5: Typical Box Girder and Pier Type D

The clean consistent look of constant depth girders and overhangs.

Figure 2.6: Overall Project Aerial Rendering Looking East

This view illustrates the relationship between the Signature Bridge and the Government Cut; cruise ship passengers will be delighted as they see Miami's new icon on the horizon.

2.4 Piers + Straddle Bents (APTEs 29, 46, 55)

The Concept Design piers complemented the reference design Signature. This pier has a clean geometric form with defined, angular edges and an indented parabolic arch featured on the wide face. The design was applied to piers of differing size to create a family of piers.

The RFP states the design of all bridges are to be integrated and all elements shall be designed to complement the Signature. The reference pier design does not work well with MCB's fluid, dynamic Signature Bridge design. Instead, a softer, more fluid design was developed that better matches the MCB Signature to create a unified overall aesthetic solution. In addition, the pier design will feature enhancement on the wide face. The pier design provides the following aesthetic benefits:

- Pier design relates to Signature Bridge and approaches to provide a consistent overall aesthetic
- Add relief on the pier face to provide visual interest and discourage graffiti
- Includes patterns expressing and reinforcing the project themes

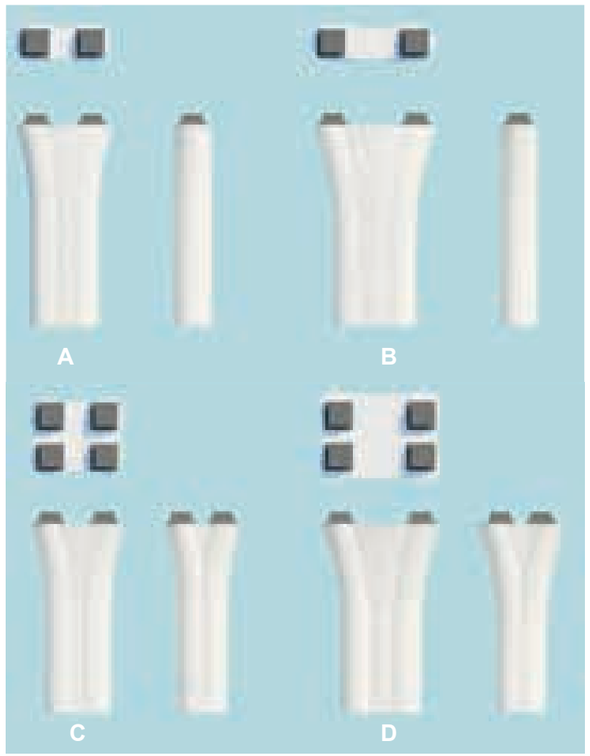

Figure 2.7: Four Pier Types A-D Plans and Elevations

Enhanced pier design works with the overall design and reinforces project themes.

Figure 2.8: Typical Box Girders and Pier Type A

Enhanced piers embody the project theme and added relief provides visual interest.

Figure 2.9: Straddle Bent

Enhanced straddle bents are well integrated to create visually clean transitions.

Figure 2.10: View of Transition Span

The tapered forms of the deck edge gracefully transition between the Signature Bridge and approach spans to create a smooth, fluid profile.

Figure 2.11: Example of a CIP on Falsework Structure

The structure is monolithic and will accept the white class V coating to create a smooth, sleek look.

Figure 2.12: Example of a Precast Segmental Structure

By contrast, a precast segmental structure has joints and will "telegraph" through the coating creating streaks and stains.

2.5 Retaining Walls (APTE 26)

The Reference Design illustrated two alternative patterns for MSE wall design to maximize visual intrigue and to deter graffiti. Neither visually complemented our Signature Bridge option. As noted in the RFP, other wall pattern designs can be submitted as enhancements, provided they have three inch deep relief. Our enhanced design was developed based on the underlying project themes to create a beautiful and consistent look for the corridor.

The MSE walls in the project corridor will be seen in close proximity by people walking, cycling, and driving at slower speeds. The deep relief pattern is based on waves and water. The fluid design was developed with the goal of softening the impact of the walls on the surrounding context. The strong horizontal flow makes the walls appear less tall and the pattern will provide a dynamic "screen" for the programmable color-changing embankment lighting. **The use of lighting rather than murals or other static solutions on the project walls has the added benefit of minimizing maintenance due to graffiti or other damage.**

Figure 2.13: Proposed Enhanced Wall Design Rendering

Enhanced wall design reinforces the project-wide themes and the horizontal orientation of the pattern will reduce the apparent height of the walls.

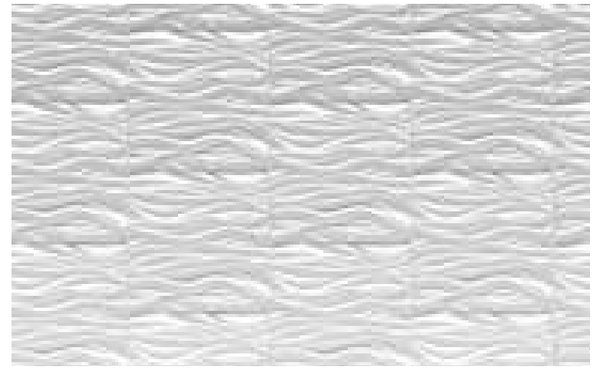

Figure 2.14: Enhanced Wall Design Elevation Detail

Proposed pattern recalls the fluidity and behavior of ocean waves.

Figure 2.15: View of Piers in Zone 2

This view of the enhanced piers demonstrates the level of finish. The smooth rounded forms will appear more slender than rectilinear forms while the relief adds visual interest, discourages graffiti, and expresses the project themes.

Figure 2.16: Night View along 14th Street

The areas ceiling plane of the bridges will be washed with light to avoid the dark cave effect. Enhanced portal lighting will also glow creating inviting passages along the City streets.

2.6 Concrete and Steel Surface Finish

This is a high-visibility project with surface quality being an important element. Following guidelines of the Reference Design, the color and finish selections were governed by three chief considerations:

+ The tone compliments the physical context and color of Miami
+ The colors emphasize the form of the project
+ Consistent finishes create a unified look

Concrete Finish

Steel forms will be used for piers and walls to achieve the required integrity of finish. Girders will be CIP concrete further ensuring smooth, monolithic surfaces. As figure 2.12 compared to figure 2.13 illustrates, CIP is a much more aesthetically pleasing finish. All exposed concrete surfaces, except the road surface of the bridge, will have a Class 5 applied finish coating. Federal Color FS37925, Insignia White, will be used on all concrete surfaces, except the driving surface, in Zones 1, 2 and 3.

FEDERAL COLOR FS37875
INSIGNIA WHITE

Enhanced Concrete Finish and Steel Finish

The RFP suggested an enhanced finish (a Class 3 rubbed finish) be used to alleviate possible color variations between batches and pours for Zones 1, 2 and 3, however this is not necessary as all surfaces will be coated. In Zone A, steel structures will be coated with a high-performance coating system. The color will match the existing steel in this area. A color swatch will be provided to demonstrate the color match.

2.7 Lighting

Nightlife is a large part of Miami's culture. To support nighttime use, all major bridge lighting has been enhanced to create better illuminated public spaces and more visual aesthetic interest.

MCB Innovation - Lighting of the areas beneath and adjacent to the bridges will be critical to create safe, inviting spaces for public use. Three lighting strategies are defined in the RFP AM:

+ General down lighting mounted on the bridge
+ Portal lighting over the north/south streets
+ Embankment lighting

All three are used in our proposal and each has been enhanced via APTEs to provide a higher quality lighting solution. In addition, our proposal features selected areas of landscape lighting to highlight key public gardens.

Typical Baseline General Lighting (APTE 38)

MCB Innovation - For the baseline lighting on all approach structures, a different fixture will be used providing a better quality of lighting for the general areas beneath the bridge. The Reference Design light fixture threw all light directly down on the ground. This fixture has been replaced with a fixture with a down-light component and horizontal wash of light. The wash will illuminate the bridge soffits creating a bright ceiling plane to eliminate the "cave effect" of a dark ceiling created by a pure down-light. This fixture will truly create a brighter environment, so the area below the bridge are safer and more inviting. This lighting has further positive impacts:

+ 20% fewer fixtures are required providing the same amount of illumination, which results in operation and maintenance (O&M) savings
+ The wash will create visual continuity on all bridges further unifying all three zones

Portal Lighting (APTE 37)

MCB Innovation - A Selux Survivor fixture was specified in the Reference Design and oriented these fixtures in an east–west orientation perpendicular to the roadways below. Our enhanced design solution for the portal lighting reorients these fixtures to run north–south. The fixtures are arranged on both sides of each street, so functional light level requirements are met with more focused lighting on the streets and sidewalks.

Figure 2.17: Precedent Image for Portal Lighting

Dynamic lighting pattern will grace the I-395 portals creating interest and movement.

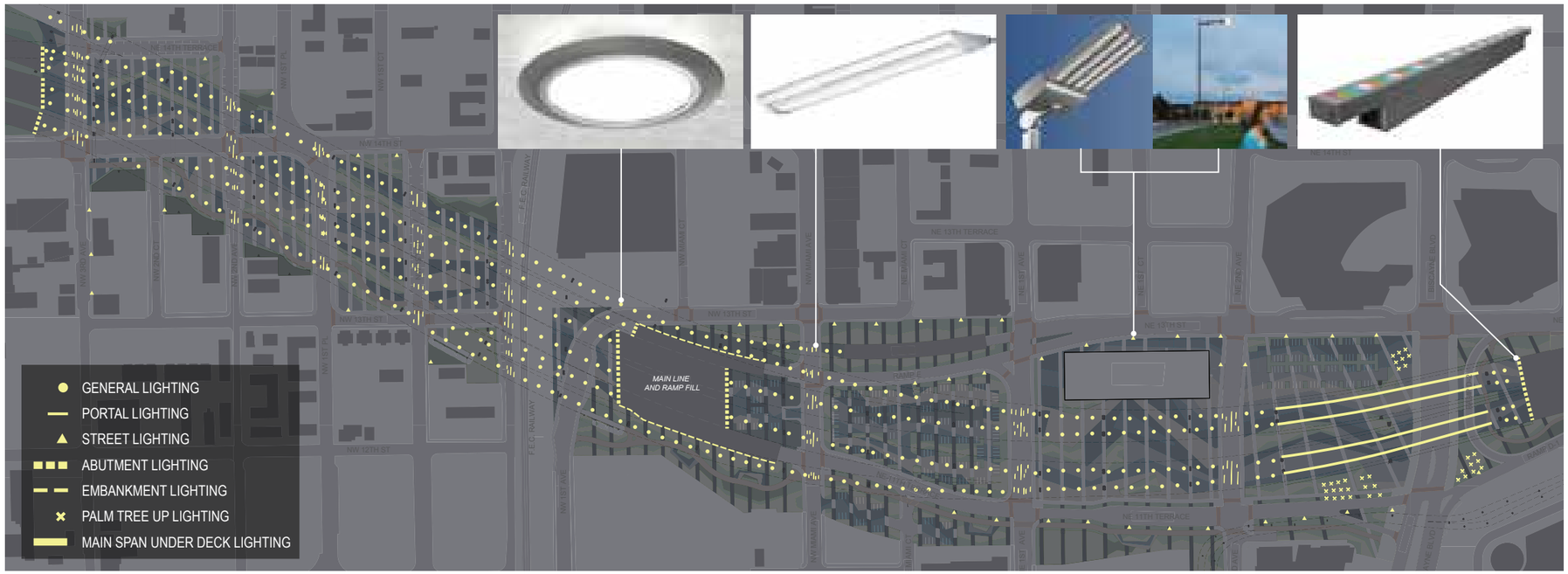

Figure 2.18: Overall Project Lighting Plan; Bridges, Roadways, Plazas, Gardens, and Greenway

All lighting elements have been enhanced via APTEs to ensure the areas are safe, inviting and useful at night.

Fixtures will be mounted in a dynamic, staggered pattern to create a feeling of movement. This provides the following positive aspects:

- 30% fewer fixtures are used, thus reducing first cost and long-term operations and maintenance costs
- The lighting layout visually connects the north south movements and communities

Embankment Lighting (APTE 39)

MCB Innovation - The Reference Design fixture emitted static, all-white light. The proposed MCB design uses dynamic, color changing programmable fixtures to wash selected abutment walls in Zones 1, 2, and 3. The major abutment walls provide excellent opportunities for dynamic lighting, creating visual interest. The abutment lighting will share the Signature Bridge control system. The fixtures consistently illuminate the walls in the project corridor for an overall unity. **The multicolor, dynamic lighting on the abutment walls creates a more inviting feel for pedestrians and cyclists. Also, the multicolor dynamic lighting offers endless possibilities for colors, color changes, and timing. Programs can be developed to celebrate selected holidays or community events.**

Landscape Lighting + Streetscape Lighting

Landscape accent lighting will highlight the following areas:

- Zone 1 - Lighting of the SUP and Pedestrian Bridge
- Zone 2 - Lighting of the SUP and Pedestrian Bridge
- Zone 3 - Lighting of the SUP and key landscape elements i.e. the bosque of palms

Street lighting will be replaced to meet City requirements.

Keeping the community and Miami in mind, MCB has created overall lighting concepts that truly brings an inviting feel to the area and is diverse in its programmable nature. Our design has exceeded the RFP evaluation by the following items:

a) Provide portal lighting at all cross street locations:

MCB Solution - Enhanced portal lighting design will better light cross streets and sidewalks creating a dynamic element expressing north/south movement and reduces operations and maintenance.

b) Enhance design features in each zone:

MCB Solution - Overall, enhanced general lighting will better illuminate structures creating a glowing ceiling plane eliminating the “cave” effect of a dark ceiling. In addition, the lighting will highlight landscape and public areas in each zone. Enhanced wall lighting provides color and pattern changes to create dynamic visual interest and greatly soften the visual impact of the walls in Zone 1, 2 and 3. Landscape lighting will add a third level of interest for the robust landscape design.

c) Adhere to and enhance the aesthetic requirements of the Contract Documents:

MCB Solution - Nightlife is a key part of Miami’s culture. Our integrated lighting approach is both functional and aesthetic. Well lit areas will be safe and encourage nighttime use by residents and visitors. Dynamic colorful lighting features at walls will add an additional level of interest. Finally, specialized lighting will illuminate key landscape features by up-lighting over 100 palm trees, the SUP, and embankment.

2.8 Signage

Several large traffic signs will be included along the project corridor to direct traffic and at intersections outside of the corridor to inform drivers of the new traffic patterns. The sign structures will be a mixture of overhead span sign structures, overhead cantilever sign structures, and post-mounted signs. Overhead sign and cantilevered sign structures will be steel monotubes consistent with FDOT standards.

Figure 2.19: Standard Monotube Sign Structure

The rounded forms of the structures work well with the forms of the bridge.

Figure 2.20: View of Enhanced Embankment Lighting along Biscayne Blvd.

Color changing lighting, tied to the SB lighting controls, will allow all embankment lighting to change color and pattern creating interest and intrigue.

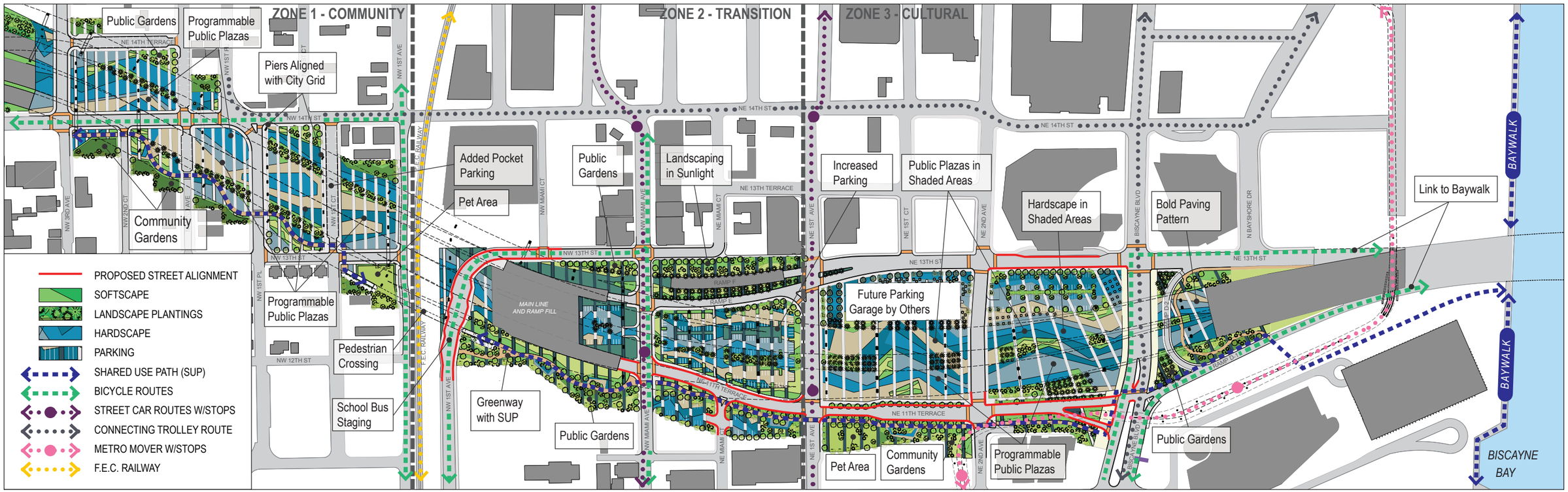

Figure 2.21: Corridor Site Plan for Zones 1, 2, and 3

Bold, colorful paving patterns, even in parking areas, and a pallet of lush landscape materials unify the entire corridor. A series of public gardens and public plazas will support a range of active and passive activities. A greenway on the south of the project creates an important east/west connection.

2.9 Urban Design

MCB Innovation - Our design team includes world-renowned, Miami based urban designers Duany Plater-Zyberk, looked beyond the limits of the project and considered the large scale urban design issues to create a more graceful interface between infrastructure (bridges) and community (City) as a way create connectivity and ensure the public realm is vibrant and active.

Expanding our thinking in this way enabled MCB to develop innovative and meaningful design solutions working on different levels to meet the needs of stakeholders, as well as the larger aspirations for the public realm.

Broadly, our overarching objective was to re-imagine the interface between infrastructure and community, making the highway and related open spaces an integrated part of the City, thereby connecting communities rather than disrupting them.

Building on this objective, three sets of design principles were developed and applied to the planning of each zone:

I. Structures and Highway Principles

- Expand carrying capacity
- Highlight the Signature Bridge within the context of the City and the cultural district
- Adjust piers to align with city street grid and city blocks

II. City Street Principles

- Realign city streets to better support all modes of transit: pedestrians, cyclists, mass transit, and vehicles
- Use Complete Streets strategies; streets support all modes of transit safely and efficiently
- Support a high-density, walkable, transit design oriented city
- Integrate neighborhood identities with programmable open spaces: Zone 1 (Overtown) = community uses, Zone 2 = transition, and Zone 3 = cultural uses

III. Ambient Principles

- Transform the highway into an urban place-making structure
- Develop a unified design recognizing the differing needs and characters of each zone
- Connect to the South Florida bicycle trail system and Bayfront promenades
- Allow for future Baylink transit alignment
- Place hardscaped plaza area in shaded areas and landscape in sunlight to support viability

These principals drove the innovative design for the 30 acres of the public realm in and around the bridges. The resulting urban design is unified and logical.

"The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity." - Jane Jacobs, The Death and Life of Great American Cities

Figure 2.22: Precedent Image of a SUP and Bridge

Precedent image of a SUP aligned with overhead structure.

2.9.1 Enhanced Urban and Landscape Design

Building on the principles above, many elements of the urban and landscape design were enhanced to create a highly attractive and useful public realm. Enhancements include:

- Bold graphic paving plan uses multi-colored pavers to create vibrant, waves of cooling color
- Lush landscape design creates urban gardens for texture, scale and to reduce the heat island
- Greenway with the SUP to vastly improve east-west connectivity and access
- Principals of Complete Streets employed: defined bike lanes, greenway, SUP, transit connections, and traffic calming
- Pier alignment frames blocks to ensure maximum flexibility
- Pier alignment ensures flexibility for planning of future development
- Added parking in Zones 1, 2, and 3 to provide convenient access to plazas and gardens
- Street furnishings

To this last point, a robust street furnishings program is provided for all three zones. This is a betterment as the concept design did not provide any street furnishing. The proposed design includes:

- Concrete benches
- Concrete tables with benches
- Bicycle racks
- Waste receptacles

2.10 Corridor-Wide Elements Summary

Table 2.23 summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in the design for corridor wide elements.

Our integrated approach to the corridor started with aligning the bridge piers with the local streets, to open up the space beneath the bridges. The bridge deck has a constant depth and overhang width and has smooth lines throughout, with no stub-outs. Our cast-in-place construction method avoids the segment joints that tend to remain visible. We then used uniform and elegant corridor wide features for the landscaping, streetscaping piers, walls and lighting, to optimize how this newly developed space is used.

RFP AM Reference	Included in Proposal	Enhanced by APTE (#)
2.3 Superstructure		
2.3.1 Baseline Superstructure		
a. Approaches shall have smooth transitions, no vertical steps or horizontal off-sets except at straddle bents.	Y	24 45 46
b. Bridge girders shall be closed box systems unless otherwise specified.	Y	24 29
c. All spans shall be constant depth to maintain a corridor-wide horizontal continuity.	Y	24
d. In Zones 1 & 2, horizontal off sets of the fascia are not allowed, except at straddle piers.	Y	24 82
e. In Zone 3, smooth transitions shall be maintained between the superstructure of the SB.	Y	24 29 45
2.3.2 Enhanced Superstructure		
a. An architectural "wing" that extends beyond the edge of deck.		82
2.4 Piers		
2.4.1 Baseline Pier Elements-constraints listed below pertain to the piers in Zones 1, 2 & 3		
a. Piers for all bridges shall match this AM except for the SB components & straddle piers.		55
b. Two main pier types are used to create a family of uniform shapes for all zones.	Y	
c. The pier design is has a parabolic arch on each transverse face.		55
d. Piers shall be monolithic with tapering heads inclined at the same angles as the web of the box.	Y	
e. All piers shall have the same transverse form. Widths may vary longitudinally.	Y	
f. Piers must be designed to have deep relief for shadows & visual interest.	Y	
g. The pier head width in Zone 1 & 2 shall match the box girder soffit.		29
h. Drainage pipes shall be routed within bridge elements & hidden from view.	Y	
i. Piers in addition to those shown are not permitted.	Y	24
j. SB transition pier cap shall not extend below the bottom of the superstructure elevation. The Signature Bridge transition pier columns below bottom of the superstructure elevation shall be of the same form.	Y	
2.4.2 Enhanced Pier Elements		
a. A design on the transverse face with deeper relief to create more shadow & intrigue.	Y	
b. Individual down-lighting for every pier.	N	38 39 64
2.5 Retaining Walls		
2.5.1 Baseline Wall Elements		
a. Wall patterns shall be as shown in the AM-Fig. 2-8 & 2-9.		26
b. Wall pattern designs shall have a relief depth of 3" to maximize visual intrigue & deter graffiti.	Y	26
c. The use of permanent sheet piles or pile-&-panel walls is prohibited.	Y	
d. Cheek walls shall be used at all bridge abutments.	Y	
2.5.2 Enhanced Wall Elements		
a. Alt. wall designs may be submitted for review as enhancements.	Y	29 39
b. MCB will work w/ the community in each zone to identify imagery or expresses community values.	Y	67 71 76
2.6 Surface Finishes		
2.6.1 Baseline Concrete Finish		
a. Steel forms shall be used for piers & walls to achieve the required finish.	Y	29 55
b. All exposed concrete surfaces, except driving surface of bridge decks, shall have a Class 5 finish.	Y	
c. Provide a mock-up of concrete surface appearances.	Y	
2.6.2 Enhanced Concrete Finish		
a. To alleviate color variations between batches & pours, a Class 3 rubbed finish may be used.	N	45
2.6.3 Baseline Steel Finish		
a. All structural steel in Zone A shall be coated with a High-Performance Coating System (HPCS).	Y	
b. All structural steel east of NW 3rd Avenue, including the SB, shall be coated with a HPCS.	Y	
2.7 Lighting		
2.7.1 Baseline General Lighting		
a. All lighting components shall be vandal resistant.	Y	39 61
b. All lighting components shall be corrosion resistant and care taken due to the marine environment.	Y	
c. All lighting components shall minimize maintenance wherever possible.	Y	67 71 76
d. Illumination shall be from down-lighting only, except for the SB.		64 68 73
e. SB up-lighting shall be designed to minimize light spillage through fixture placement & shielding.	Y	
2.7.2 Baseline Roadway Lighting for Zones 1, 2 & 3		
a. Poles shall be evenly spaced to create a consistent rhythm throughout the corridor.	Y	61
b. Light source must blend with the local landscape & enhance corridor aesthetic elements.	Y	37 38 39
c. The light source for the luminaires along the entire corridor shall be LED.	Y	
2.7.3 Enhanced Roadway Lighting for Zones 1, 2 & 3		
a. Use fixtures, accompanied by enhanced poles, throughout.	Y	61
2.7.4 Baseline Streetscape Lighting for Zones 1, 2 & 3		
a. Portal lighting shall be used to provide aesthetic and functional lighting for added safety & security.	Y	37
b. Secondary area down lighting shall be mounted on superstructure to illuminate the ground-plane.	Y	38
c. Abutment wall faces shall be continuously down-lit.	Y	39
d. Pole-mounted lights are allowed only where required light levels can't be achieved by structure maintenance lights.	Y	38 39 61
2.8 Signage		
2.8.1 Baseline Signage		
a. Overhead sign structures shall be FDOT standard mono tubes.	Y	
b. Destination signage shall be provided to promote areas adjacent to I-395.	Y	62
2.9 Urban Design		
2.9.2 Baseline Urban Design		
a. Design & construct streetscape elements in accordance with the Concept Plans.		5 40 41 53 60 64 thru 76
b. Fences are prohibited in Zones 1, 2, & 3, except as enhancements.		64 68 73
2.9.3 Enhanced Urban Design; Landscape May Be Enhanced by the Addition of the Following:		
a. Bioswales	N/A	
b. Low-maintenance sculptures and/or public art.	Y	63
c. Increased quantity or quality of landscape plantings.	Y	64 68 73
d. Pedestrian way-finding signage.	Y	62

Table 2.23 Summary Baseline Requirements and Enhancements

The table above summarizes the Baseline and Enhanced elements, as defined in the RFP AM, that are incorporated in the design for corridor wide elements.

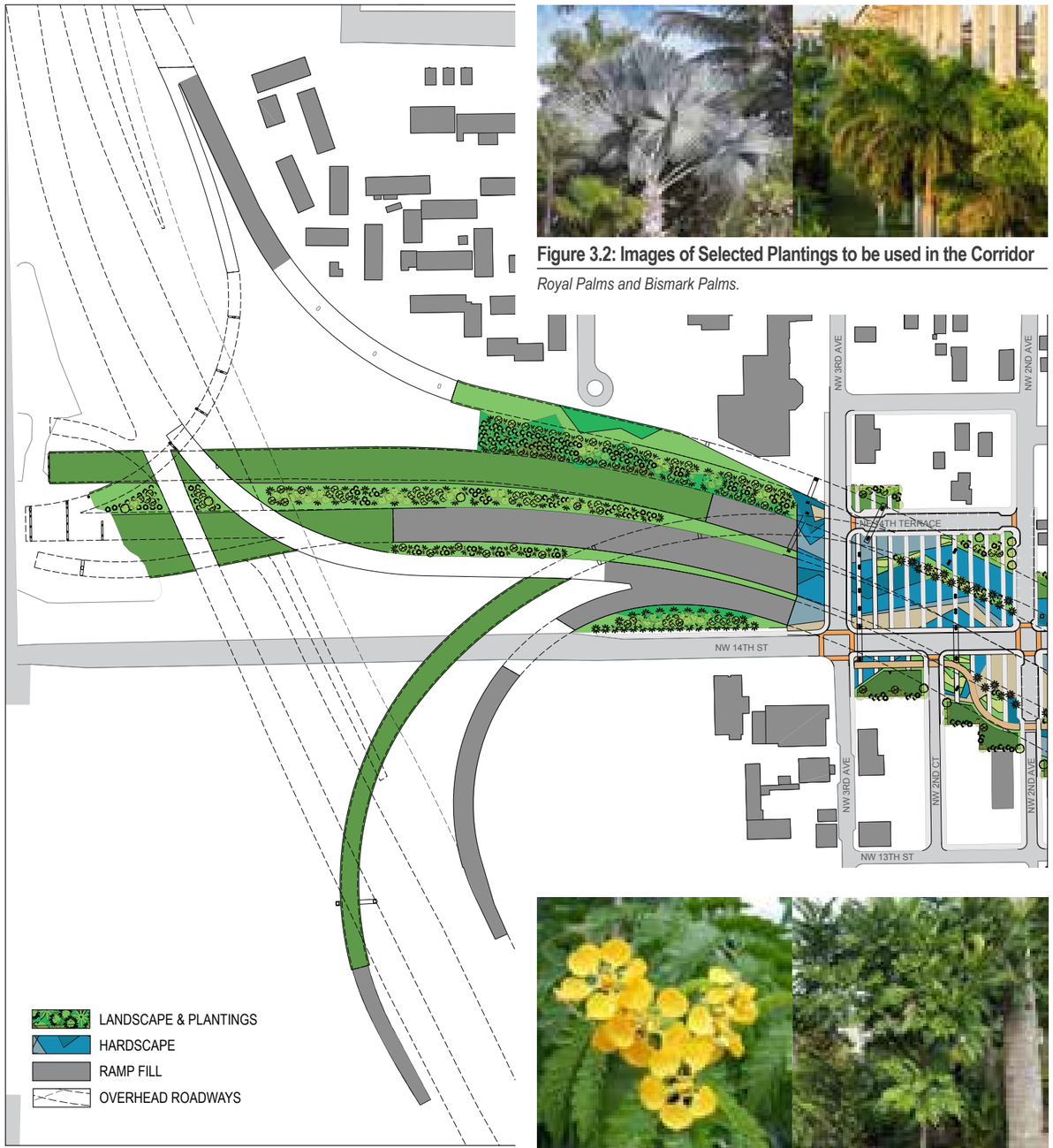

Figure 3.1: Zone A Site Plan

Zone A landscape is a continuation of Zones 1, 2, and 3 creating visual continuity.

Figure 3.2: Images of Selected Plantings to be used in the Corridor

Royal Palms and Bismark Palms.

Figure 3.3: Images of Selected Plantings to be used in the Corridor

Japanese Palm and Bulnesia.

3. Zone A: I-95/SR-836/I-395 Midtown Interchange

Zone A is comprised of landscape and dry water treatment ponds. The existing landscape is mature with numerous trees. The structures are simple spans with minimal aesthetic treatments. The columns are circular, the superstructure is Florida I-beams (FIBs), and painted steel girders.

Baseline Structures & Landscape Design

Proposed structures will be intermixed with existing structures in Zone A. To blend together, the proposed structural elements have been designed to match the existing interchange elements in form and color. MCB used landscaping elements to tie this zone together with the interchange and the I-395 project. The landscape in Zone A will be treated with a high degree of care to avoid damage to the existing trees. In some cases, the alignments (both temporary and permanent) will impact trees, in which case the affected trees will be relocated. MCB will plant 461 new trees in Zone A, including 315 mature palms of which 141 are Royal Palms.

A summary of the benefits of our design approach in this zone is described in table 3.4.

RFP AM Reference	Included in Proposal
3. Zone A: I-95/SR-836/I-395 Midtown Interchange	
3.2.1 Baseline Superstructure	
New structures shall match the existing girders in shape, mass, span lengths, material, and color.	Y
3.2.2 Baseline Piers	
New piers shall match the existing columns in shape, mass, material, and color.	Y
3.2.3 Baseline Landscape	
a. The landscape in Zone A shall be treated with high degree of care to avoid the existing trees.	Y
b. Where temporary & permanent alignments impact trees, affected trees are to be relocated.	Y
c. If tree relocation is not possible, mitigate the trees as stated in RFP.	Y

Table 3.4: Summary Baseline Requirements

The table above summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in the design for Zone A.

Figure 3.5: Aerial Photograph of Zone A

Aerial photo showing existing conditions in Zone A.

Figure 4.1: View of Zone 1 Gardens and Plazas

The entire zone has an open and airy feel, with elegant gardens and vibrant paving.

4. Zone 1: Overtown Area

4.1 Landscape + Hardscape

Design of Zone 1 has community focus with public plazas and gardens.

The Zone 1 landscape and urban design solution is a highly developed aesthetic conceived to create useful and beautiful, inviting public spaces. The design embodies a common sense approach combining colorful paved plazas and lush urban gardens. The plazas are shaded beneath the bridges and the gardens are in areas receiving sunlight to that ensure plants are viable and easy to maintain.

Placing the plants in the sunlit areas on the outside or between the bridges provides an added benefit by acting as a visual buffer between the structures and adjacent uses. In these locations, plants act as buffers to adjacent neighbors or break up the mass of the bridges for motorists and the surrounding tall pylons when seen from above. Street furnishing will be provided. All plants are based on FDOT standards. The landscape along the south edge of the project ROW is developed as a lush greenway with the SUP for pedestrians and cyclists. This greenway design accommodates a variety of community uses and provides a critical east-west connection linking Overtown to the east.

Figure 4.2: Landscaping Examples

(Clockwise) Example of Low Scale Planting , Blanket Flower, Cuban Royal Palm Trees.

Community gardens, pet areas, and leisure gardens line the greenway bringing neighbors and community together. Community gardens will include perimeter fencing, raised beds with improved soil, and irrigation. The east end of Zone 1 greenway connects to a pedestrian bridge to provide access over the railroad connecting all zones. The existing trees in this zone will be preserved to the maximum extent possible.

We will also discuss the preferred activities included in Zone 1 (i.e. volleyball, soccer, basketball, pet areas, etc) per APTE 65 with the Overtown CRA, the City of Miami, and the County. In all cases this coordination will occur before the 60% plans are completed. An allowance of $200,000 has been allocated for installation of the selected activities. Zone 1 has been designed to allow for the local community the ability to hold events (e.g., farmers market, outdoor movie night, concert series) to be either located within a single block or combined with multiple blocks. Infrastructure to be provided include lockable outdoor electrical outlets and water spigots.

Figure 4.3: Example of Community Green Market

Community markets can be set up and taken down on a temporary basis.

Figure 4.5: Example of Community Garden

Community gardens bring neighbors together and can provide produce.

Figure 4.7: Birdseye View of Zone 1 with Roadway Deck Removed

1. *Public Plaza*
2. *Public Plaza for Programming (water + power)*
3. *Public Garden*
4. *Community Garden*
5. *Greenway with Shared Use Path*
6. *Pocket Parking*
7. *Parking Garden*
8. *Pet Area*
9. *Enhanced MSE Wall + Aesthetic Lighting*
10. *Landscape Buffer*
11. *Future Parking Deck by Others*
12. *MetroMover*
13. *School Bus Staging*

Figure 4.4: Example of Yoga Under the Bridge

The shaded, programmable public plazas will support a range of activities.

Figure 4.6: Proposed Benches

Benches to be used in the plazas and gardens.

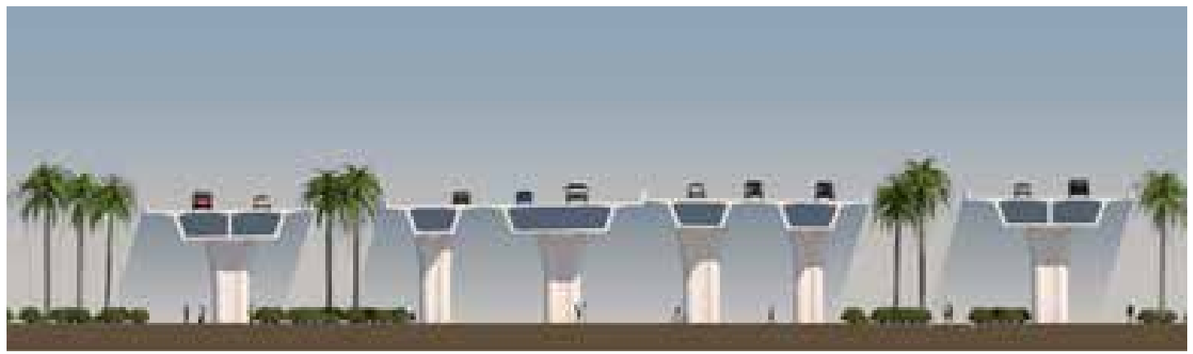

Figure 4.8: Section at Roadway

This section illustrates the relationship of the landscape and structures. The landscape has been placed in the sun to ensure viability. This placement creates a natural buffer between the structures and the adjacent community.

Figure 4.9: Public Garden and Plaza - Zone 1

Zone 1 daytime - plaza streetscape, landscape.

4.1.1 Baseline and Enhanced Landscape and Hardscape (APTEs 64, 68, 73)

The MCB design has provided all baseline landscape elements identified in the RFP AM: sidewalk widths match existing conditions, crosswalk locations are in accordance with the concept plans and include ADA upgrades, the three-block area between NW 3rd Avenue and NW 2nd Avenue will be paved with colored concrete pavers, and pathways bisect the blocks east of NW 2nd Avenue exceeding the minimum of 730 linear feet of 10-ft and 1,300 linear feet of 5-ft and wider.

MCB's design also provides all enhancements provided in the RFP AM including: traffic calming measures along NW 14th Street, pocket parking throughout, crosswalk bump-outs, infrastructure for public community gardens, increased quantity of trees, low-maintenance public art (lighting), and infrastructure for programming.

Figure 4.10: Overtown Music and Arts Festival

Public plazas in Zone 1 will support these types of activities.

Figure 4.11:14th Street Gateway Entry to Corridor

Public plazas and community garden frame 14th Street.

Figure 4.12: Rendering View along 14th Street in Zone 1

The application of Complete Streets principals are evident in this view. The plazas beneath the bridges feel open an inviting due the pier position and bright white color.

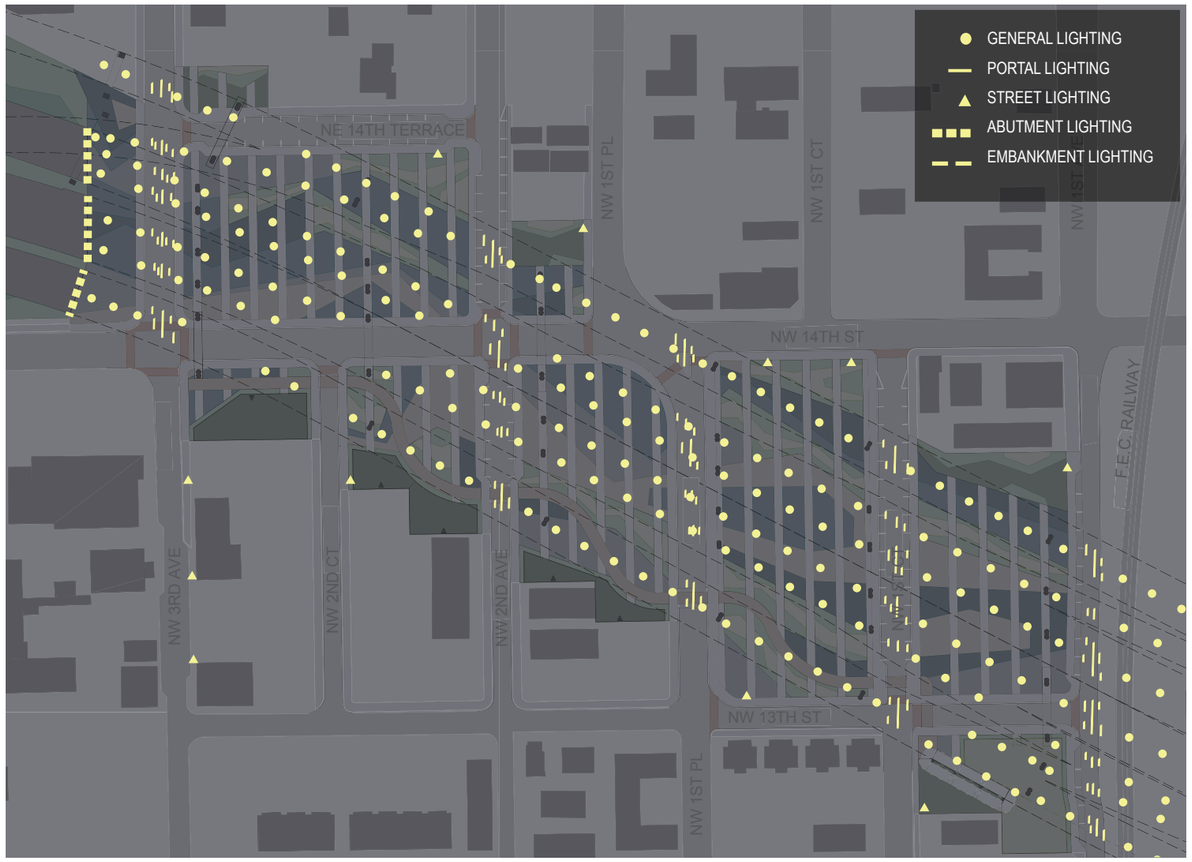

Figure 4.13: Zone 1 Lighting Plan

Lighting elements have been enhanced via APTEs to create dynamic lighting for structures and brighter areas for a better sense of safety.

Figure 4.14: Low Maintenance Public Art

Illuminated sculptural light installations will create added visual interest and a sense of space under the bridges.

4.2 Lighting

4.2.1 Baseline and Enhanced Streetscape Lighting

All lighting, typical, portal, and embankment in Zone 1 will be enhanced lighting as described in Corridor-Wide Elements, Section 2.7. In addition, this zone features special decorative lighting defined in APTE 63, Low-Maintenance Public Art. MCB will engage the local artist to finalize the pattern of these light features. This coordination will occur before the 60% plans are completed allowing FDOT to retain the final say. Please refer to figures 4.14 and 4.16.

Figure 4.15: Zone 1 Enhanced Embankment Lighting

Embankment lighting will be color changing and programmable.

Figure 4.16: Precedent Image of Low Maintenance Public Art

Illuminated sculptural light installations will create added visual interest and a sense of space under the bridges.

Figure 4.17: Nighttime Rendering View of Public Plazas and Gardens in Zone 1

Enhanced lighting creates a luminous ceiling plane that glows making the area safe, inviting and useful for the community into the evening hours.

Figure 4.18: Precedent Example of Shared Use Path

Shared use paths (SUP) for pedestrians and cyclists.

Figure 4.19: Precedent Example of Colored Paver

Example of colored concrete paving in use at MIA.

Figure 4.20: Zone 1 Community Gardens, the SUP, and Plaza

The plazas are bright and well lit to support activity into the evening hours.

Figure 4.21: Nighttime Rendering View on 14th St. in Zone 1

This view demonstrates the benefit of enhanced lighting in the creation of safe, useful public spaces.

Figure 4.22: Shared Use Path Bridge and Ramps

The bridge will provide critical east-west connection over the FECR.

Figure 4.23: Rendering of Pedestrian Bridge Looking West

Bridge is open feeling and well-lit.

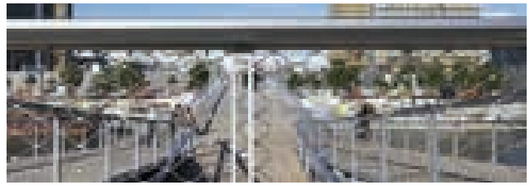

Figure 4.23: Ramp Handrail Detail

Wire fabric to be used on the pedestrian/cyclist bridge ramp guardrails.

4.3 Zone 1 Summary

Table 4.24 summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in the design of Zone 1 along with a listing of the APTEs that enhanced the elements or helped implement them.

In summary, this zone is enhanced by the aligned bridge piers and optimized bridge details. This gave us the space to provide a strong streetscape allowing community use and provides connectivity from north to south and from east to west, including the shared use path and bridge over the FECR.

RFP AM Reference	Included in Proposal	Enhanced by APTE (#)	Enhancement Length or Quantity
4. Zone 1: Overtown Area			
4. Zone 1: Overtown Area			
Superstructure shall meet requirements listed in Section 2.3.1, plus the following: a. Haunched, variable-depth, girders are allowed.	N/A	24 29 45 82	
4.3.2 Enhanced Superstructure			
Potential enhancements are listed in Section 2.3.2.	Y	24 82	
4.3.3 Baseline Piers			
Pier designs shall meet baseline requirements in Section 2.4.1 for corridor-wide elements.		55	
4.3.4 Enhanced Piers			
Potential enhancements are listed in Section 2.4.2.	Y	24 82	
4.3.5 Baseline Walls			
Wall designs shall meet the baseline requirements listed in Section 2.5.1 for corridor-wide elements.	Y	26 39 67	
4.3.6 Baseline Walls			
Potential enhancements are listed in Section 2.5.2, plus the following: a. Custom wall pattern designed in conjunction with Overtown, with deep relief of greater than 12”.		26 67	
4.4 Landscape			
4.4.1 Baseline Landscape; Urban Designs Elements Shall Meet the Requirements Listed in Section 2.9.2 for Corridor-Wide Elements in Addition To:			
a. Sidewalks widths shall at least match their existing conditions.	Y	26 39 67	
b. Crosswalk locations shall be per the concept plans, including ADA upgrades.	Y	64 65	
c. The three-block area between NW 3rd Ave & NW 2nd Ave shall be paved with stamped, colored concrete.	Y	64	18,970 SF
d. Ten pathways bisect the blocks east of NW 2nd Avenue, as shown in Figure 4-1.	Y	64 65	
4.4.2 Enhanced Landscape			
a. Provide traffic-calming measures along NW 14th Street.	Y	64 66	4 Crosswalks
b. Provide pocket parking throughout.	Y	64 66	26 Stalls
c. Provide infrastructure for community gardens.	Y	64 65	16,300 SF
d. Increase the quantity of trees.	Y	64	292 Trees
e. Provide wall murals or sculpture on bridge abutment of NW 14th St & NW 3rd Ave.	Y	63 67	200 LF
f. Provide wall murals or sculptures beneath the superstructure placed throughout Zone 1.	Y	63 67	6 Light Globes
4.5 Lighting			
4.5.1 Baseline Streetscape Lighting; Zone 1 Lights Shall Meet the Requirements Listed in Section 2.7.4 for Corridor-Wide Elements in Addition To:			
a. Locations of Portal, Secondary Area & Abutment lights are per plans.	Y	37 38 39	
b. Replace-in-kind any impacted existing period lighting.	Y		
4.5 2 Enhanced Streetscape Lighting			
a. Provide period double-headed pedestrian street lamps along NW 14th St.	Y		2 Light Poles

Table 4.24: Summary Baseline Requirements and Enhancements

The table above summarizes the Baseline and Enhanced elements, as defined in the RFP AM, that are incorporated in the design for Zone 1. The required tabulation of the quantity is listed in the far right column.

Figures 5.1: Zone 2 Aerial Rendering Looking East

The greenway and the SUP create an important and pleasant connection for pedestrian and cyclists. The landscape screens and softens the structures.

5. Zone 2: Overtown to Omni Area

5.1. Landscape + Hardscape

The design of Zone 2 breaks up the parking into five smaller lots which are beautifully landscaped and paved, providing more parking, better connectivity, and providing special school special bus staging to activate the area west of the embankment.

The Zone 2 landscape and urban design provides overall design consistency, useful and beautiful spaces, and improved connectivity for all modes of transit. The colorful paving patterns and landscape bands continue through this zone to create a consistent corridor-wide aesthetic and visual/physical connectivity and fully integrate this zone within the community and corridor.

As in Zone 1, the design embodies a common-sense approach. Parking areas are positioned beneath the bridges to shade cars, the gardens are in sunlight to ensure plant materials will be viable and easily maintained. Placing the landscape in the sunlit areas provides an added benefit: the plantings are on the outside of the bridges or between them. In these locations, plants act as buffers to adjacent neighbors or break up the mass of the bridge deck for drivers and occupants in the tall towers looking down on the corridor.

Figure 5.2: Landscaping Examples

(Clockwise) Alexander Palm, Flax Lily, and Queen Crape Myrtle.

The enhanced landscaping along the southern edge of the project continues the prominent linear greenway and the SUP for pedestrians and cyclists provides important connectivity between zones and adjacent neighborhoods. The greenway brings life to the streets, variety to the community, and neighbors together. Uses include community gardens, viewing gardens, and a pet area. Community gardens include perimeter fencing, raised beds with improved soil, and water for irrigation. The pet area will have low fencing, so animals can run and play. The west end of the greenway connects to the pedestrian/cyclists bridge to provide access over the FECR and physically link the neighborhoods.

Figure 5.3: Example of Community Garden

Community gardens can be productive and interactive.

MCB Innovation - Our proposed design for Zone 2 has made changes to the Concept Design street grid. The MCB design reconfigured Ramp F, realigned 11th Terrace, realigned 1st Avenue, and extended NE Miami Ct. for better access to parking and for pedestrians. These changes break up the large single block of parking into five smaller parking areas. Colorful paving and landscape are used to create a highly attractive parking experience. **The parking capacity for Zone 2 has been increased to 246 stalls, 81 more than the Concept Design.**

Figure 5.4: Example of Pet Area

A social area for pets and people.

In addition, the street realignments have created wider landscaped buffers between the proposed bridges and the surrounding city. **The number of trees is increased from 29 in the Concept Design to 415**, producing a wonderful verdant environment for all users. Royal Palms line the exit and entrance ramps to celebrate the transition from highway to city. Shade trees are incorporated wherever direct sunlight is available to restore the urban tree canopy and layers of plantings further break up the ground plane. The layers consist of groupings of Sabal Palms, hardwood shade trees, and ornamental trees under planted with shrubs and ground covers providing seasonal and visual interest. **School bus staging (for the museums) is provided on 1st Avenue bringing activity to an isolated area.**

Figure 5.5: School Bus Staging

Provides bus staging for the museums and activates area.

Figure 5.6: Example of Gravel Paving

Gravel paving will be used in Zone 2.

Figure 5.7: Birdseye View of Zone 2 with Roadway Deck Removed Illustration

1. *Public Plaza*
2. *Public Plaza for Programming (water + power)*
3. *Public Garden*
4. *Community Garden*
5. *Greenway with Shared Use Path*
6. *Pocket Parking*
7. *Parking Garden*
8. *Pet Area*
9. *Enhanced MSE Wall + Aesthetic Lighting*
10. *Landscape Buffer*
11. *Future Parking Deck by Others*
12. *MetroMover*
13. *School Bus Staging*

Figure 5.8: Typical Section Through Zone 2 Looking East

Wide soffits create a bright ceiling plan and the landscape will buffer the structures form the adjacent buildings.

Figure 5.9: Rendering of Zone 2 SUP and Landscape Buffers

Landscape buffers separate pedestrians and cyclists from vehicles.

5.1.1. Baseline + Enhanced Landscape

The design provides all baseline landscape elements identified in the RFP AM: sidewalks widths match existing conditions, crosswalk locations are in accordance with the surface street concept plans, including ADA upgrades, and surface parking is provided and connected via the improved street system.

Our design also provides all enchantments listed in the RFP AM: Increased parking capacity, low-maintenance vegetation integrated into embankment areas, the horizontal surface is broken up with plantings to create an aesthetically pleasing environment, and trees are located along exit and entrance ramps.

Figure 5.10: View of Parking Below Bridges Rendering

This view demonstrates our strategy of "parking in gardens", creating a rich and beautiful environment that does not feel like a parking lot.

Figure 5.11: Aerial Rendering of Zone 2 near Pedestrian Bridge

The Zone 2 greenway connects to a bridge that provides access over the FECR for pedestrians and cyclists.

Figure 5.12: Birdseye View of Zone 2 with Roadway Deck Removed Looking West

The bold, rich hardscape and landscape design is evident in this view. Connecting NE Miami Ct. creates excellent connectivity between the parking areas and the City to the south.

Figure 5.13: Rendering View along 13th Street in Zone 2

The application of complete streets principals are evident in this view. The realigned on ramp allow a much improved landscape buffer between the ramp and the adjacent neighbors and creates a sidewalk connection linking Zones 2 and 3.

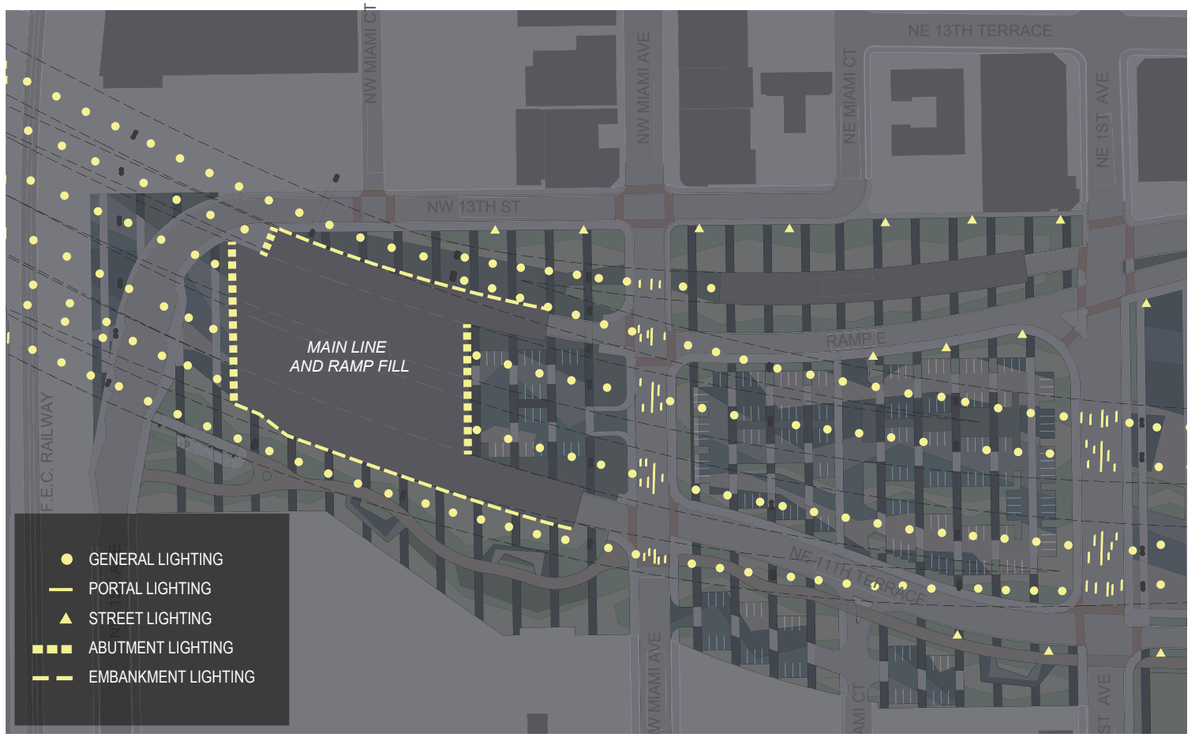

Figure 5.14: Zone 2 Lighting Plan

The baseline lighting has been enhanced via APTEs to create dynamic lighting for structures and brighter areas for a better sense of safety.

Figure 5.15: Nighttime View of Parking Gardens

Parking gardens will be well-lit, pleasant and safe.

5.2. Lighting

5.2.1. Baseline and Enhanced Streetscape Lighting

All lighting, Typical, Portal, and Embankment in Zone 2 will be enhanced lighting as described in Corridor-Wide Elements, Section 2.7.

Integrated lighting for the SUP provides a well-lit and safe usable path for pedestrians. MCB has also increased overall lighting along the shared use path is a walkable and safe environment for the community.

Figure 5.16: Nighttime Aerial Rendering of Pedestrian Bridge

The bridge and ramps will be well-lit and safe.

Figure 5.17: Nighttime View of Parking Gardens

Bold, rich hardscape and landscape will create a welcoming environment.

Figure 5.18: Nighttime Rendering View along 13th Street in Zone 2

The landscape provides a lush, pleasant atmosphere for pedestrians and cyclists at all times

Figure 5.19: Plan Diagram of Parking Gardens

The parking is broken up into five smaller areas and the parking count increased.

RFP AM Reference	Included in Proposal	Enhanced by APTE (#)	Enhancement Length or Quantity
5. Zone 2: Overtown to Omni Area			
5.4.1 Baseline Landscape: Landscape Elements Shall Meet the Requirements Listed in Section 2.9.2 for Corridor-Wide Elements in Addition to the Following:			
a. Sidewalks widths shall at least match their existing conditions.	Y	68 69	
b. Crosswalk locations shall be per the concept plans, including ADA upgrades.	Y	68 69 72	
c. Provide surface parking for 200 spaces between N Miami Avenue & NE 1st Avenue.	Y	70 83	215 Stalls
5.4.2 Enhanced Landscape			
Suggested landscape enhancements can be found in Section 2.9.3 for corridor-wide elements, in addition to the following: a. Increased parking capacity.	Y	70 83	31 additional Stalls West of N Miami Ave
b. Low-maintenance vegetation integrated into embankment walls.		26 71	
c. Add trees along exit and entrance ramps.	Y	6 40 68	415 Trees
5.5.1 Baseline Streetscape Lighting			
Landscape elements shall meet the requirements listed in Section 2.7.4 for corridor-wide elements, in addition to the following: a. Portal, Secondary Area & Abutment lights are shown on Figure 5-5.		37 38 39	
b. The parking lot shall be brightly illuminated to ensure the highest level of visibility in the area.	Y	70	
c. Replacement of impacted existing period lighting on N Miami Avenue.	Y		
5.5.2 Enhanced Streetscape Lighting			
a. Longitudinal aesthetic down-lighting along the top of embankment walls.	Y	71	1,180 LF
b. Increase parking area lighting.	Y	69 70	4 Light Poles

Table 5.20: Summary Baseline Requirements and Enhancements

The table above summarizes the Baseline and Enhanced elements, as defined in the RFP AM, that are incorporated in the design for Zone 2. The required tabulation of the quantity is listed in the far right column.

Figure 5.21: Precedent Image of Enhanced Lighting Pole

The enhanced lighting pole provides an elegant scale for the parking gardens in Zones 2 and 3.

5.3 Zone 2 Summary

Table 5.20 summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in the design of Zone 2 along with a listing of the APTEs that enhanced the elements or helped implement them.

Zone 2 enjoys all the same enhancements as Zone 1, as well as a greater focus on added parking and improved lighting of parking features.

Figure 6.1: Aerial Rendering of Zone 3 and Signature Bridge Looking West

The sun rises on Miami's new icon.

6. Zone 3: Omni to MacArthur Area

Zone 3 has a cultural focus with grand public plazas and gardens that frame the Signature Bridge and are welcoming gateways into the corridor public realm.

6.1 Landscape + Hardscape Design APTEs 73, 74, 76

Spacious paved plazas and lush urban gardens provide variety and interest for users in Zone 3. The plazas are located beneath the bridges and the gardens are in sunlit areas to ensure plants will remain viable and healthy. The aesthetic solution expresses the project themes and provides design continuity for the entire corridor. Placing plants in sunlit areas provides an added benefit in that the plantings are on the outside bridge drip-line or between bridges. In these locations, the trees and plantings act as buffers to adjacent neighbors or help to reduce the apparent scale of the bridges. All plantings are based on FDOT standards.

The plazas framing the Signature Bridge will become important entry points into the corridor from the highly traveled Biscayne Blvd. and the other public transit stops.

The landscape along the south edge of the project continues the greenway and the SUP for pedestrians and cyclists. The greenway features community uses and completes the critical east–west connection all the way to the Bay Walk, the museums, and Museum Park. Community uses along the greenway brings members of the neighborhoods together to activate the area. When an area is active, it will draw more people and more activity, creating positive development. Features include community gardens, viewing gardens, and a pet area.

Figure 6.2: Precedent Image of Outdoor Performance

Lincoln Center, New York City, New York.

Figure 6.3: Birdseye View of Zone 3 with Roadway Deck Removed Illustration

1. *Public Plaza*
2. *Public Plaza for Programming (water + power)*
3. *Public Garden*
4. *Community Garden*
5. *Greenway with Shared Use Path*
6. *Pocket Parking*
7. *Parking Garden*
8. *Pet Area*
9. *Enhanced MSE Wall + Aesthetic Lighting*
10. *Landscape Buffer*
11. *Future Parking Deck by Others*
12. *MetroMover*
13. *School Bus Staging*

Figure 6.4: Typical Section at Signature Bridge

The thin, elegant deck profile creates more height beneath the bridge as well as a smooth ceiling plane. The unique tower form recall sails, broad leaf tropical plants or lilting dancers.

MCB Innovation - The structural layout for the approach spans was reconfigured to be better positioned with the piers within the blocks to ensure the area is open and offers maximum flexibility for programming. The plaza areas beneath the bridges provide large open, sheltered areas for community festivals, markets, and outdoor cultural programming. Water and power service will be provided to enable the events to be easily set up, broken down, and cleaned up.

The paving bands running north and south slowly change orientation in Zone 3 to recognize the geometric relationship of the AACPA, the Frost, and the PAMM. This paving change further identifies Zone 3 as a cultural focal point for the City and corridor. Surface parking in front of the AACPA features decorative pavers and plantings blending in well with the larger plaza.

Figure 6.5: Art Basel Event

The plazas can be used for special cultural programming.

Figure 6.6: Jacksonville Arts Market

The plazas can be programmed for these types of events.

Figure 6.7: Miami Book Fair

The plazas can be programmed for these types of events.

MCB Innovation - As a key enhancement, 11th Terrace is moved further north to create more generous landscaped buffers and to allow the greenway and SUP to continue to Biscayne Blvd. and then to the BayWalk. A **lane has been added at 13th in front of AACPA (APTE 41) to eliminate traffic bottlenecks** due to performances and the westbound bike lane from MacArthur Causeway is routed to the west side of Biscayne Blvd. to connect to the SUP on the south**.**

MCB Innovation - A planting of 513 trees for Zone 3 (the Concept Design had zero trees) provides a wonderful and pleasing public environment. As shown in Figure 6.4, Tall Royal Palms are under planted with Sabal Palms and shade plants are located between the overhead spans providing spatial quality and rhythm both for motorists on I-395 and pedestrians at street level. Bosques of Royal Palms organized along the north-south paving bands reinforce the design and strengthen the connection between the three major cultural institutions and Museum Park. **Layers of low-maintenance plantings break up the plazas and discourage graffiti near embankment walls.** Groupings of Sabal Palms, hardwood shade trees, and ornamental trees under planted with shrubs and ground covers will provide seasonal and visual interest along the greenway.

Figure 6.8: View Beneath Signature Bridge

This view shows the visually pleasing curving forms of the bridge structures.

Figure 6.9: Aerial Site Plan Rendering of Zone 3

The distribution of vegetation and plaza areas beneath I-395 integrate with the cultural district urban fabric.

Figure 6.10:View of Plaza from Knight Concert Hall Rendering in Zone 3

Public plazas and gardens define the areas around the Signature Bridge. The surface parking has been designed to be consistent with the open plaza area, so it may be closed to cars and used for larger public events.

Figure 6.11: View of Signature Bridge from Greenway

The dynamic form of the towers and cable array create a changing silhouette on the Miami skyline.

Figure 6.12: Aerial View of Zone 3

The landscape framing the Signature Bridge provides an attractive and dynamic gathering space for pedestrians visiting the area.

6.1.1 Baseline and Enhanced Landscape

The MCB design provides all baseline landscape elements identified in the RFP AM including: two large areas for public gatherings (the east block provides 16,000 SF, the west block 18,000 SF, both areas exceed the minimum required area), concrete and paved pathways are provided, the proposed parking structure footprint is integrated into the design, Parcel 171 will accommodate vehicle parking and support multipurpose gatherings, design of the lot has been integrated into the overall design and enhanced paving is used, and the Burle Marx paving is preserved along Biscayne.

In addition to the baseline, MCB also includes all key design enhancements identified in the RFP AM: patterned distribution of vegetation beneath I-395, trees along the southern and northern edge of the highways, pet areas with fencing, traffic calming along NE 2nd Avenue, colored pavers provide three-dimensional characteristic for pathway paving as well as textured pathway surfaces, and vegetation is integrated into the parking area. Water and power are provided in the plaza areas to support programming.

The plazas areas beneath the bridges provide large open areas for programming such as community festivals, markets, and outdoor cultural programming. Water and power service will be provided to enable events to be easily set up, broken down, and the areas cleaned up. The structural layout for the approach spans was reconfigured to allow the piers in this area to be better positioned within the blocks to ensure the areas are open and they offer maximum flexibility for programming.

The paving bands running north and south slowly change orientation in Zone 3 to recognize the skewed geometry of the AACPA, the Frost, and the PAMM. This change identifies Zone 3 as a cultural locus.

Surface parking in front of the AACPA features decorative pavers and plantings, so it may be seen as one with the larger plaza.

Figure 6.13: Landscaping Examples

(Clockwise) Montgomery Palm, Macho fern, and Geiger Tree.

Figure 6.14: View of Public Garden

Public gardens provide a beautiful natural contrast to the structures.

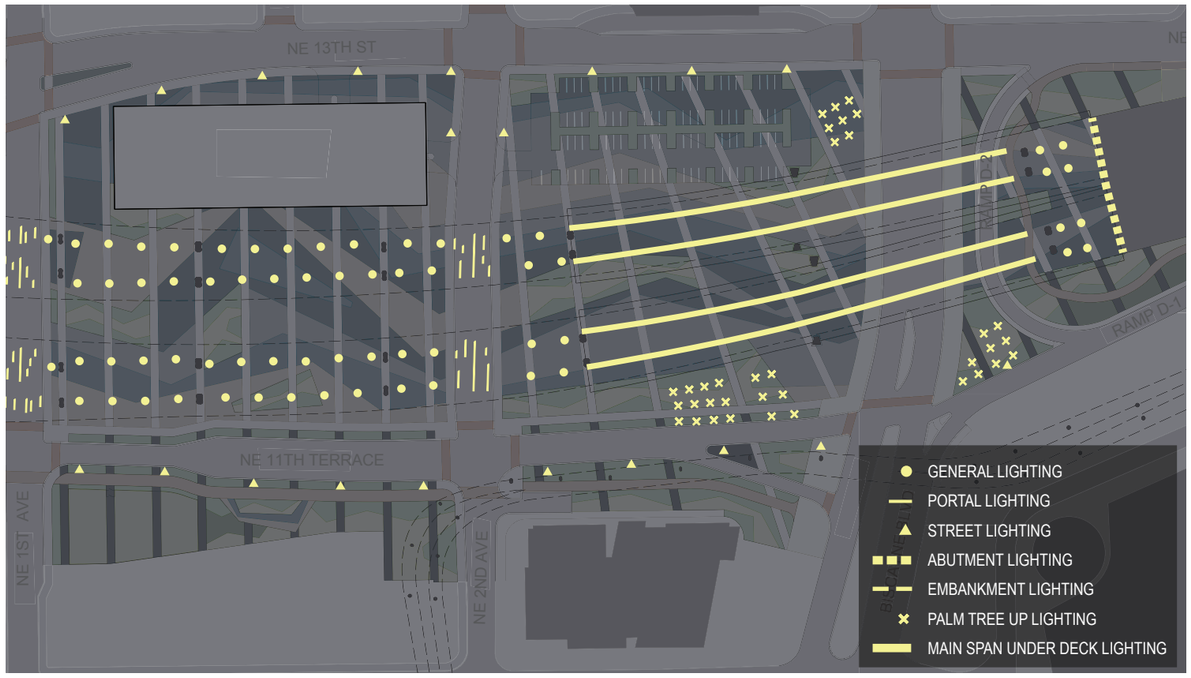

Figure 6.15: Zone 3 Lighting Plan

Lighting elements have been enhanced via APTEs to create dynamic lighting for structures and brighter areas for a better sense of safety.

Figure 6.16: Nighttime View of Plaza at Signature Bridge

The plazas are open for programmable space and community events.

6.2 Lighting

6.2.1 Baseline and Enhanced Lighting

All lighting, Typical, Portal, and Embankment in Zone 3 will be enhanced as described in Corridor-Wide Elements, Section 2.7. In addition, this zone features special Signature Bridge lighting over the plaza and Biscayne Blvd. and landscape lighting of the palm tree bosques.

Figure 6.17: Example of Palm Tree Up-lighting

Palm bosques in Zones 3 will be lit at light.

Figure 6.18: View of Plaza at Signature Bridge Looking East

Plazas are open and inviting.

Figure 6.19: Nighttime Rendering View of Portal Lighting looking South on NE 2nd Ave

The enhanced Portal Lighting will create bright well-lit streets and sidewalks that feel safe and inviting.

Figure 6.20: Zone 3 Enhanced Embankment Lighting

Embankment lighting will be color changing and programmable

6.3 Zone 3 Summary

Table 6.21 summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in Zone 3 along with a listing of the APTEs that enhanced the elements or helped implement them. This includes the continuation of the corridor wide features, lighting and landscaping, but also brings in the iconic Signature Bridge, and our elegant and simplified modification of the MetroMover Bridge.

A separate summary of the Signature Bridge elements is provided in section 6.6.

RFP AM Reference	Included in Proposal	Enhanced by APTE (#)	Enhancement Length or Quantity
6. Zone 3: Omni to MacArthur Area			
6.3.1 Baseline Superstructure; The Baseline Design Elements Shall Conform with the Corridor-Wide Superstructure Specific Captions Previously Listed in Section 2.3.1 of AM			
6.3.2 Enhanced Superstructure			
Potential enhancements are listed in Corridor-Wide Section 2.3.2.	Y	24 45 82	880 LF
6.3.3 Baseline Piers			
Baseline design elements shall conform with the corridor-wide pier specifications in Section 2.4.1.	N/A	24 29 55	
6.3.4 Enhanced Piers			
Potential enhancements are listed in Corridor-Wide Section 2.4.2.	Y	24 55	
6.3.5 Baseline Walls			
The baseline design elements shall conform with the corridor-wide wall specifications.	N/A	39 55	
6.3.6 Enhanced Walls			
a. A custom wall pattern may be designed.	Y	26 76	2,000 LF
6.4.1 Baseline Landscape			
a. Area for public gathering shall be provided.	Y	73 74	
b. Concrete pathways shall be provided, as illustrated in Figure 6-3.	Y	73 74	
c. The proposed parking structure shall be integrated into the design.	Y	73	
d. Parcel 171 will be used as vehicle parking & shall also support multipurpose gathering uses.	Y	73 74	
e. Preserve & maintain Burle Marx streetscape design.	Y	73	
6.4.2 Enhanced Landscape			
a. Patterned & designed distribution of vegetation beneath I-395.	Y	73	517,648 SF
b. Trees along the southern edge of the highway.	Y	60 73	78 Trees
c. Pet area facilities, with appropriate fencing.	Y	73 74	
d. Pocket parking with plantings.		73	
e. Traffic calming along NE 2nd Avenue.	Y	60 73	4 Crosswalks
f. Three-dimensional characteristics for the pathways.	Y	73	
g. Textured pathway surfaces.	Y	73	1,700 LF
h. Integrate vegetation into parking area through the use of permeable pavers or similar features.	Y	73	61 Trees
6.5 Lighting			
6.5.1 Baseline Streetscape Lighting			
The baseline design elements shall conform with the corridor-wide lighting specifications listed in Section 2.7.4.	Y	37 38 39	
6.5.2 Enhanced Streetscape Lighting			
a. Aesthetic down-lighting along the top of embankment walls.	Y	74 76	170 LF
b. Pole-mounted pedestrian path lighting with cutoffs.	Y	61 62 74	7 Light Poles

Table 6.21: Summary Baseline Requirements and Enhancements

The table above summarizes the Baseline and Enhanced elements, as defined in the RFP AM, that are incorporated in the design for Zone 3. The required tabulation of the quantity is listed in the far right column.

6.4 Miami MetroMover Bridge

MCB's MetroMover structural solution provides a simpler option to build, easier to maintain, and does not compete with the Signature Bridge.

A solution was developed being simpler (quicker) to construct and easier to maintain (refer to figure 6.22). As further described in APTE 54, the solution for the MetroMover is lower in profile, so it does not compete with the Signature Bridge or block views from the Frost and PAMM facilities.

Figure 6.22: Miami MetroMover Bridge

The simplified MetroMover span does not compete with the main span.

6.5 Signature Bridge

MCB has created a dazzling icon for Miami that expresses the unique personality of the City.

The keystone of our proposal is the iconic, expressive, and dazzling Signature Bridge - the Sails. The form of the sails concept expresses the unique nautical, natural, and cultural history of Miami. The design of the pylons and cable array creates a monumental urban icon that proudly stands on the Miami skyline. Unique and dynamic, the curvilinear profiles of the pylons suggest sailboats racing across Biscayne Bay with their spinnakers billowing in the breeze. At the same time, the curving forms imply natural organic shapes, such as the broad leaves of tropical foliage. The form suggests an Afro-Caribbean dancer with a flowing skirt. These are understandable metaphors we believe will resonate with the diverse citizens of Miami, as well as visitors to the City and anchor this bridge in the heart of Miami.

Both pylons exceed the minimum height: the smaller pylon is more than 250 feet tall and the larger pylon is more than 300 feet tall. To create an even more dynamic profile, the pylons are inclined at five degrees toward Biscayne Bay. The inclined pylons create lively 3D asymmetrical cable arrays, to provide a profile that constantly changes when viewed from different parts of the city.

Figure 6.23: Miami Nighttime Skyline View

Signature Bridge stands proud on the Miami skyline.

Figure 6.24: Cruise Ship View

The Signature Bridge will be a welcome beacon for cruise ships.

The pylons step down in scale to the north, thereby acting as a scaling device to transition between the tall condo towers to the south and the AAPCA. The soft forms also relate well to the curvilinear forms of the Frost Museum. The two structures will be built independently, yet visually work together to create a unified composition like Astaire and Rogers dancing together. Each of the four planes of cables is unique as they extend high above and across the curving bridge deck. This will provide the experience of passing through differently shaped portals when traveling on I-395. From the street view, the stay cables will provide a series of veils crossing Biscayne, like a stage set scrim.

The white color for the Signature Bridge was selected for a few reasons:

- First, white is nautical, the color of ships and boats.
- Second, white echoes many of the gleaming modern context of downtown Miami.
- Third, white will best reflect the changing colors of the sun and the aesthetic lighting.

The tops of the sail pylons are capped with lanterns clad in translucent material to create a glowing beacon of light at the pinnacle of each pylon creating an exclamation point on the City skyline.

The roadway structures are smooth tapered forms like a boat hull. The deck edge is thin creating an elegant profile appearing to be lightweight and the appearance of more height beneath the bridge allowing sunlight to reach further beneath. The smooth, shadow-less soffit will maximize reflected sunlight and nighttime illumination to create the sense of a glowing ceiling above the public plazas.

As the main focal point of the I-395 corridor, MCB has created an elegant Signature Bridge with innovative designs, easy low cost maintenance, and additional value added features. In addressing the RFP Evaluation Criteria, we have offered many solutions:

a) Provide a dynamic 3D cable arrangement:

MCB Solution - The unique, asymmetric organic quality of the design creates a dynamic cable arrangement differing in height is offset in plan and is inclined differently due to the slope and curvature of the pylons.

b) Provide a design that configures bridge elements so that the appearance varies as a driver progresses through the structure:

MCB Solution - The cable arrangement follows curvature of the deck alignment and inclination of the pylons to become a dynamic cathedral like enclosure for drivers as it reaches to the sky spatially enclosing the deck below. The asymmetrical pylon heights create further interest for drivers as the two cable arrays of the bridges differ, one is taller and one lower.

c) Provide a design that offers significantly different appearances viewed from various locations:

MCB Solution - The curvilinear pylons create a unique, iconic profile that will contrast beautifully with the angular geometries of the AACPA and the towers to the south.

At the same time, the forms relate to the Pritzker Prize winning architect Zaha Hadid's tower now under construction. Further, the pylons step down to the north to recognize the changing scale of the context. The inclination of the pylons give the bridges an ever changing profile as one moves through the City.

d) Provide a design for two superstructures for the eastbound and westbound directions but which combines into one single unifying structure visually:

MCB Solution - The two pylons and cable arrays visually work together to create a lively composition suggesting boat sails, broad-leaf tropical plant, dancers, or an "M".

e) Include feature bridge lighting which provide unique views of the structures at night:

MCB Solution - Aesthetic lighting is a key component of the design and all areas of the bridges have been fully considered. Asymmetrical lighting of the pylons emphasizes the curving forms while on the shorter pylon legs, narrow-beam floodlights illuminate the outside and inside faces of each cable, putting a soft wash of light on the vertical components.

Figure 6.25: Nighttime View of Signature Bridge

Zone 3 - Signature Bridge pylons step down to the north.

The pylons are capped with large lanterns that are internally lit. Below deck, linear color-changing luminaires wash the sloping undersides of the deck. All lighting is color changing and programmable, which creates an infinite range of color and pattern options giving FDOT the ability to create fantastic light shows.

f) Adhere to and enhances the aesthetic requirements of the Contract Documents:

MCB Solution - Overall, the Signature Bridge has addressed and exceeded all the RFP aesthetic requirements plus more to create a unique iconic structure represents the heart and soul of Miami. This is not a basic cable stay, but an advanced, innovative engineering solution providing long lasting value.

6.5.1 Signature Bridge Aesthetic Lighting

A strong overall aesthetic lighting concept was developed to highlight the unique design of the Sails and light up the nighttime skyline. The asymmetry of the two sails will be emphasized at night through a different lighting effect on the longer and shorter legs of the pylons. This variation will create a dynamic and engaging view from many viewpoints in the City. Along the entire height of the longer pylon legs, a direct-view color-changing line of light will wash the adjacent surface with light from one viewing angle with creating a crisp line of light when viewed from Biscayne Blvd. On the shorter pylon legs, narrow-beam floodlights illuminate the outside and inside faces of each cable, while putting a soft wash of light on the vertical components of the Signature Bridge.

Below deck, linear color-changing luminaires along the underside of the deck will wash the sloping undersides of the deck. The direct-view lighting on the pylon legs and the linear lighting on the superstructure allows for tight control of color and movement to create a juxtaposition with the soft wash of colored light on the cables and shorter pylon legs. Together with the beacons at the tops of the pylons, the lighting can be programmed for a wide array of both static and kinetic lighting.

Figure 6.26: Nighttime View of Signature Bridge

Zone 3 - View of Signature Bridge from the Ziff Ballet Opera House.

Figure 6.27: Crossing the Signature Bridge

The dynamic pylons and cable arrays arch overhead creating a unique sense of enclosure.

Figure 6.28: Nighttime Rendering View of Signature Bridge and Zone 3 Plaza

Color changing, programmable lighting will imbue the Signature Bridge with many personas.

6.6 Signature Bridge Summary

Table 6.29 summarizes the baseline and enhanced elements, as defined in the RFP AM, which MCB incorporated for the Signature Bridge, as approved in the Final Aesthetic Submittal (FAS).

RFP AM Reference	Included in Proposal	Enhanced by APTE (#)
6.5.3 Signature Aesthetic Lighting		
6.5.3.1 Baseline SB Aesthetic Lighting		
a. The SB shall have LED programmable, color-changing aesthetic lighting.	Y	FAS
b. Aesthetic lighting shall highlight the main structural features of the form.	Y	FAS
c. The aesthetic lighting shall illuminate the stay cables of the structure.	Y	FAS
d. The underside of the deck superstructure shall be illuminated.	Y	FAS
6.7 Signature		
6.7.1 Baseline Signature		
a. SB shall be have a constant depth superstructure.	Y	FAS
b. SB shall be 2 fully independent bridges that are made to look like one form.	Y	FAS
c. The SB shall take advantage of the drivers experience of passing through the cable arrays.	Y	FAS
d. There shall be smooth transitions between the superstructures of the curves of the alignment.	Y	FAS
e. The traffic barriers shall match those used by the Approach Structures.	Y	FAS
f. The SB shall be of a prominent height & mass; min. apex of structure above street level is 245 ft.	Y	FAS
g. Cable type & connection details are critical to the visual impact of the design; use light color cables.	Y	FAS
h. Cable connections to be thoughtfully articulated: sleeve color & texture to match cable sheathing.	Y	FAS
i. SB deck width may be increased a max. of 10' for cable clearances & anchorages.	Y	FAS
6.7.2 Enhanced Signature		
a. Angled wings at deck overhangs are required if they are a featured on the approaches.		82

Table 6.29: Summary Baseline Requirements and Enhancements

The table above summarizes the Baseline and Enhanced elements, as defined in the RFP AM incorporated in Zone 3.

Figure 6.30: Detail of Signature Bridge Lantern

Glowing lanterns cap the pylons on the Signature Bridge. The lanterns will be internally lit with programmable color changing lighting.

Figure 6.31: Nighttime View of Signature Bridge

The pylons and cable arrays will be impressive when viewed by pedestrians.

Figure 7.1: Crossing the Signature Bridge at Night

Aesthetic lighting of the Signature Bridge is color changing and programmable.

7.0 Conclusion

As demonstrated is this Manual, MCB has created a highly innovative design offering maximum value and outstanding aesthetics for the entire project corridor. Our team's goal has been to exceed expectations for the project and we have taken the design further to develop a safe and useful public realm supporting a range of community activities day and night. The innovative fusion of engineering and urban design creates a project working on many levels to benefit Miami and the region. The iconic Signature Bridge and approach structure provide an efficient highway and street network resulting in a vibrant public realm.

Great cities have great bridges. From the start of this pursuit, MCB has understood the goal to create an iconic Signature Bridge that stands proudly on the Miami skyline, a beacon expressing the exuberance and energy that is Miami. The sails concept is built on thematic ideas rooted in the City and succeeds in this important role. The unique, curving forms, soaring to over 300 feet exceed all requirements of the RFP. The themes were also used to develop the innovative and elegant approach structures. The result is overall design unity, a family of structures gracefully traverse the City as they soar over Biscayne Boulevard.

In total, MCB developed 32 APTEs to advance aesthetics, create value, and reduce maintenance. An excellent example was the realignment of the pier system to complement the City streets, reduce the number of piers, and create more flexible plaza areas. Table 6.32 summarizes the baseline and enhanced elements, as defined in the RFP AM, that are incorporated in the design of Zone 3.

MCB met with a wide range of stakeholders before and during the pursuit to understand what issues would be important to the project. It was clear the creation of the public realm and design of the open areas around the structures are the keys to the long term success of the project.

MCB has designed the 30 acres of open space in the ROW as a combination of lush urban gardens and colorful public plazas providing the community with useful areas for active and passive recreation and special programming. Connectivity has been improved with realigned city streets and a SUP traveling along the greenway linking all zones. MCB employed an innovative multidisciplinary design approach with engineering, design, and construction disciplines to develop outstanding design solutions, providing durability, value, and beauty, bringing an iconic Signature Bridge and I-395 corridor to Miami.