4

concept

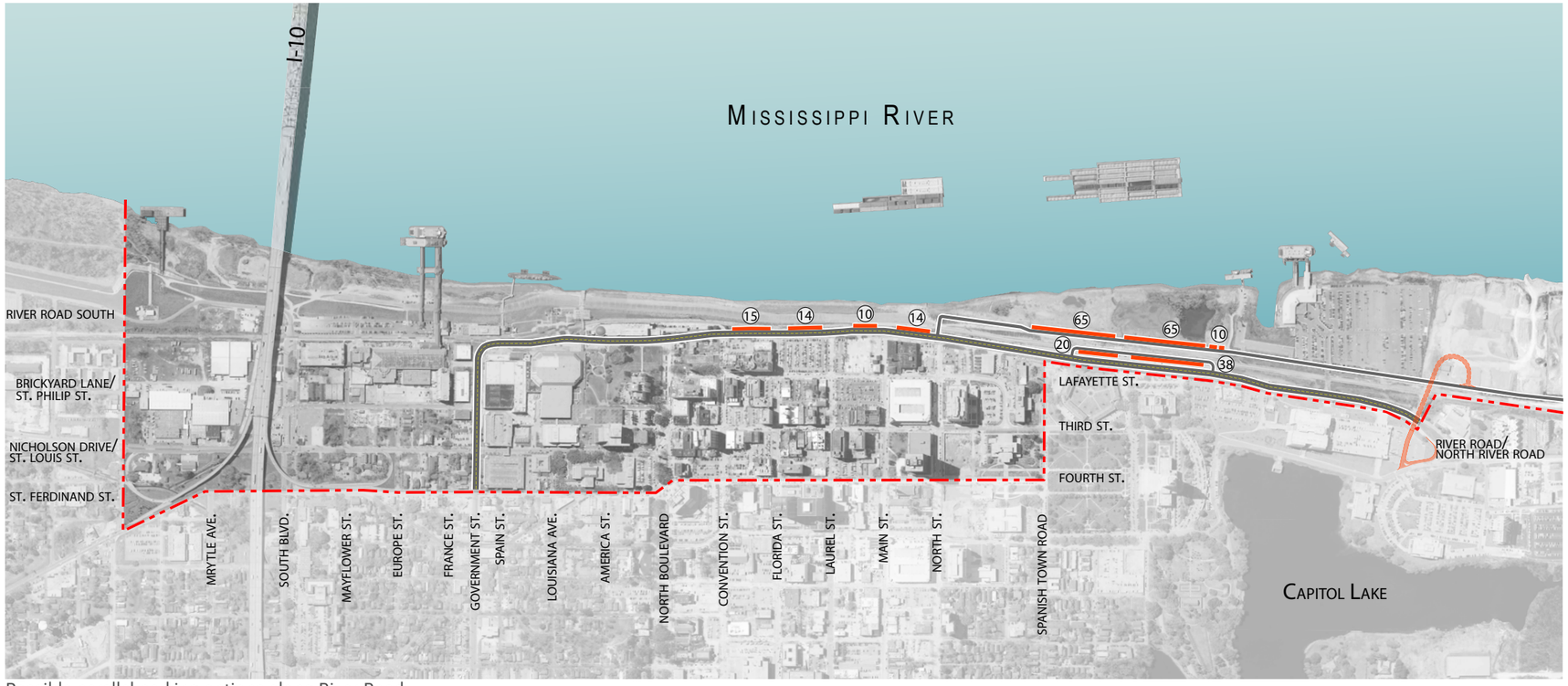
The master plan concept evolves and refines selected aspects of landscape and development components discussed and studied in the preceding “Approach” portion of the study. Each aspect of the final concept evolved through conversation and discussion between the design team and the management committee, supplemented by input from the steering committee members and near-daily conversations between the Downtown Development District and Hargreaves Associates.

Two early assumptions collectively held changed dramatically over the course of the study. The first assumption was that DeSoto Park was likely to be the primary public open space for the riverfront. As noted earlier in this document, legal questions have clouded this topic. The second preliminary assumption was that existing public landscapes, such as Repentance Park and the Old State Capitol, were likely to stay untouched.

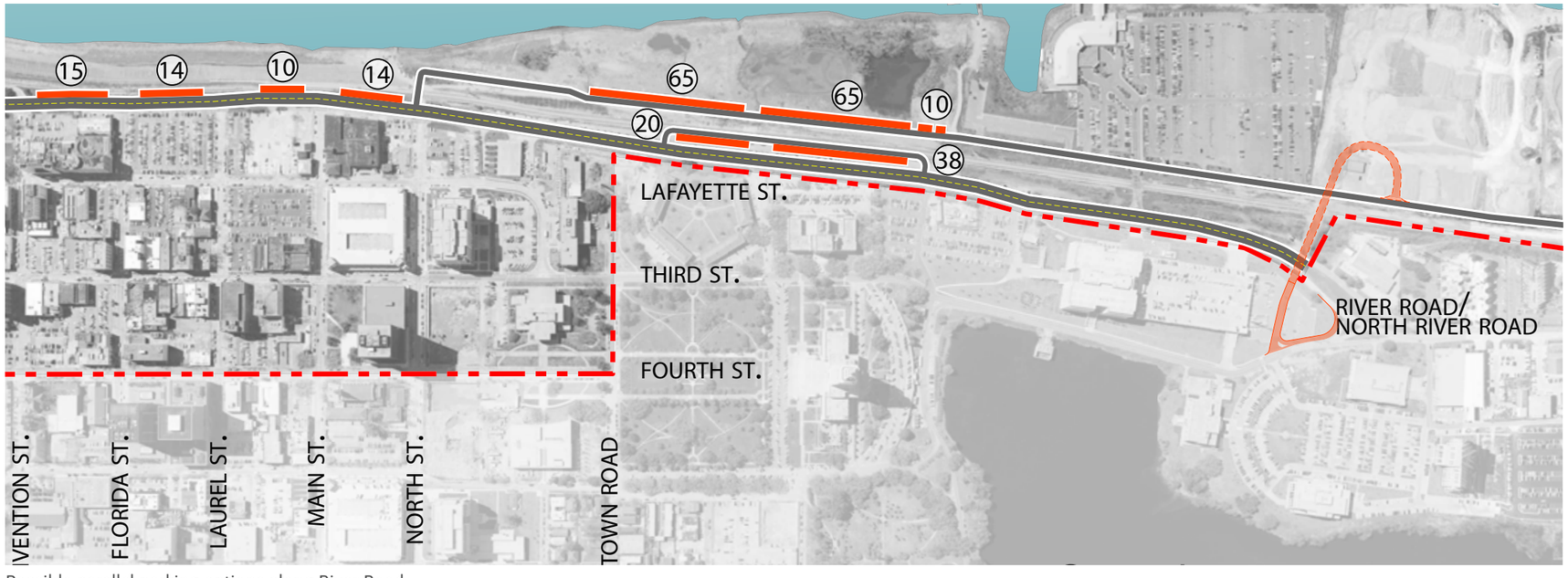
The analysis and conceptual thinking behind this study has redefined the functional mission of several open spaces, as well as the interstitial spaces connecting to the levee. The product is an integrated streetscape and circulation strategy for reinforcing pedestrian connections between downtown Baton Rouge and the Mississippi River.

Possible River Road industrial traffic restriction through downtown

River Road will continue as a primary arterial collector from the north to Government Street. Heavy commercial traffic, particularly industrial traffic, should be discouraged from using River Road as a high speed cut through to downtown to points south. This could be accomplished by posting signs prohibiting vehicles with more than three axles from traversing River Road between Government Street and State Capitol Drive, or at a minimum, between North Boulevard and North Street. Industrial traffic originating from the north can in most cases re-route east along Chippewa Street to access I-110, for destination north or south. Regulating commercial traffic will require coordination with the State of Louisiana as River Road is a state route (SR 61) north of Florida Street. One option may be the transfer of right of way between the city and state to afford the city greater control over traffic issues within the downtown riverfront core. Regulating traffic transfers enforcement to the city and parish police department to monitor traffic. Commercial trucks will need to service the River Center and the Hilton Hotel, to name just two of perhaps several destinations within this exclusion zone. This study acknowledges that the objective is not a comprehensive ban on all trucks along River Road, but a discouragement of heavy commercial through traffic as River Road is currently the path of least resistance.



Possible parallel parking options along River Road



Possible parallel parking options along River Road

The previously proposed River Road lane consolidation will allow for the addition of street trees on both sides of River Road. Placement of trees along the west side of the street will need to take into account the varying dimensional relationship between River Road, the rail track and the topography along the length of the street. The limited available space along the west edge will likely require a choice between either street trees or on street parking. The concept shown here balances street trees and parking by configuring intermittent bands of parking spaces followed by stretches of street trees. In this iteration, approximately ten contiguous on street metered parking spaces are shown immediately to the north of each of the east-west streets terminating at River Road. These spaces may be an opportunity for the City to test multi-bay, pay-by-display, metering pay stations allowing the city to varying the rates on an hourly or daily basis. Opportunities for sidewalks along River Road are constrained by a narrow right of way, train tracks, and topographic challenges. A detailed design effort will need to coordinate traffic lane changes, parking, planting and sidewalks to balance the end result.

Possible parallel parking options along River Road

Possible parallel parking options along River Road

Street trees and on street parking along River Road work together to reduce the speed of through traffic drivers as they scan ahead for traffic flow interruptions. The objective is that this currently wide open thoroughfare becomes urbanized with streetscape fixtures and trees signaling to drivers that this route is no longer a high speed corridor. Pedestrian-activated crossing signals would encourage and help reassure pedestrians that crossing River Road to the levee is a safe venture. LED crosswalk countdown indicators may clarify for pedestrian and driver alike the time interval between light cycles. A subsequent design effort including a landscape architect and traffic engineer will be necessary to integrate traffic and environmental improvements in the same construction effort.

Additional traffic calming improvements to River Road should include an assessment of where curbs can bulge or bump out, effectively narrowing the vehicular travel way to caution against excessive speed, while expanding the pedestrian zone to reduce the dimensional cross walk distance. The pavement bounded by the three cross walks at River Road intersections from North Boulevard to Main Street would be repaved with vehicular concrete unit pavers to further emphasize the transition from through highway to city street. This paving would continue beyond the west curb, across the rail and up to the levee top. Each street crossing has different dimensional and topographic constraints which will vary the ultimate configuration with steps and ADA-compliant ramps. A single vocabulary of lighting can be concentrated to mark the crossing during daylight and at night.

Existing River Road

River Road with vehicular pavers

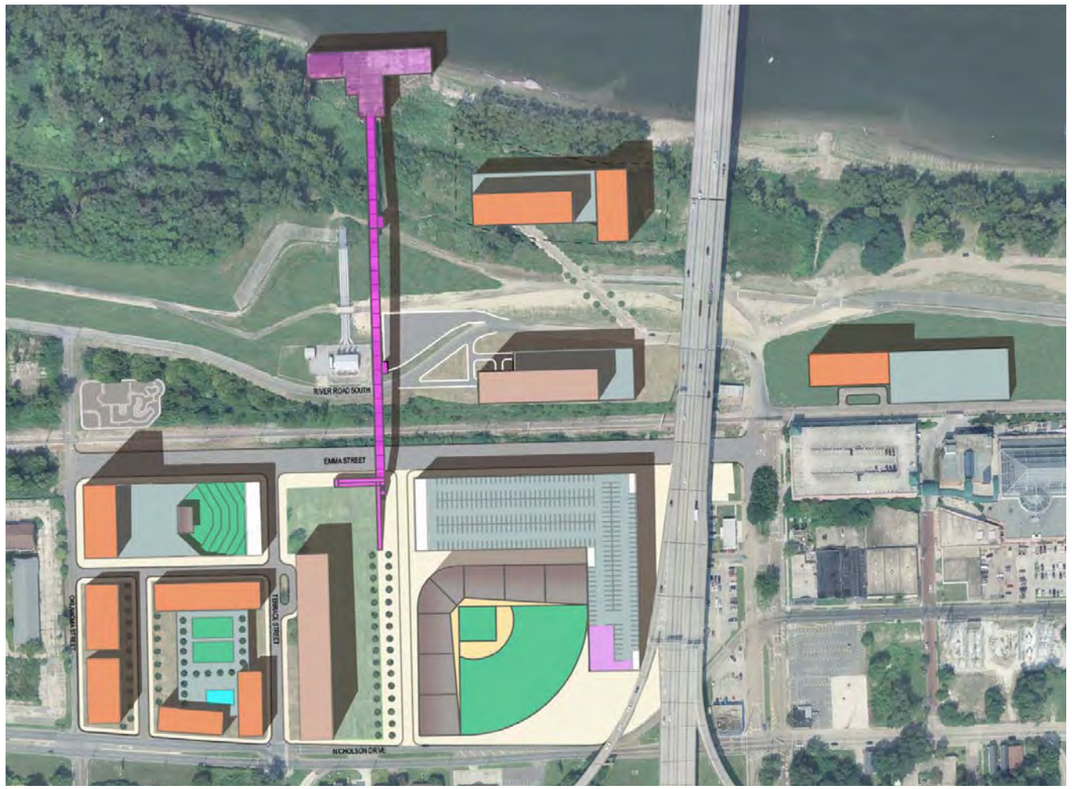
River Road as event space

The strategy of repaving the roadway with vehicular concrete pavers borrows from the existing Lafayette Street installation between North Boulevard and Convention Street. The unit pavers signal to drivers and pedestrians alike that this stretch of road is an intended to accommodate pedestrians. Further south on River Road, between North Boulevard and the River Center, this strategy of paving the street is expanded from between the cross walks to delineate a block long zone. At Lafayette Street, vehicular pavers were used to signal a physical connection between Lafayette Park and the Shaw Center for the Arts. Programmatically, the street can be closed to traffic for weekend events and festivals.

The stretch of River Road between the LASM and the Old State Capitol offers a similar, prominent position between these two cultural institutions. The striping would be replaced with a raised median planted with groundcover and trees. The median further cautions against high speed through traffic and offers additional shade for street festivals. Recessed utility banks for water, electric, sanitary, voice and data lines can be configured flush with the sidewalk surface to accommodate a variety of events.

River Road with median planting

River Road with shaded event space



Brickyard development concept plan

Brickyard development concept perspective

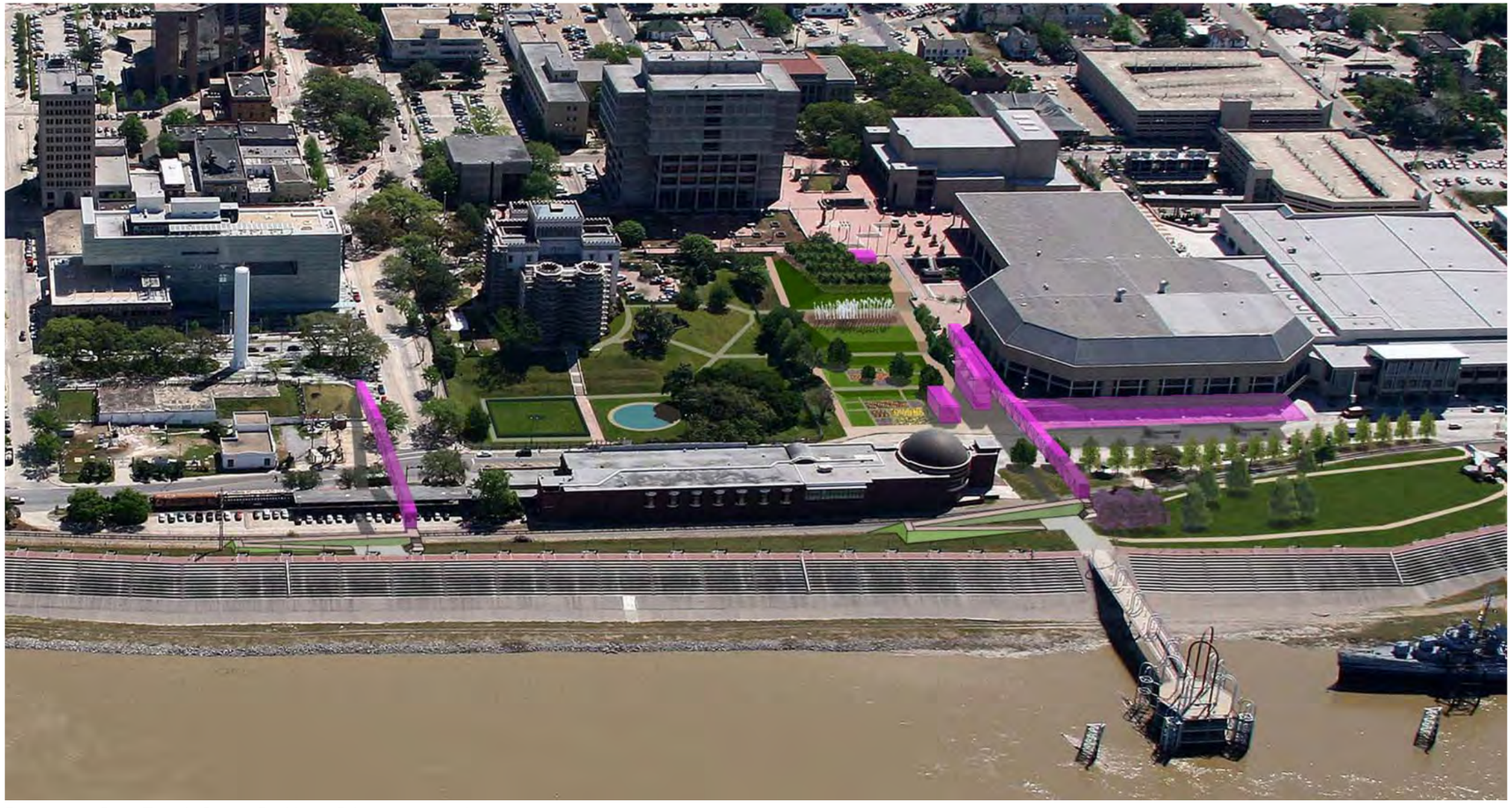
The study looks at private development in five downtown geographic areas. In many instances, privately owned parcels have publicly announced projects that have yet to break ground for construction while other parcels have no pending proposals. The study compiled a selection of known and anticipated projects onto a single drawing as context for assessing additional urban design massing and identifying appropriate land uses. In some cases, such as the Municipal Dock, a number of preceding studies and proposals have suggested uses and proposals, yet for a number of market driven reasons these have not come to fruition. Fundamentally, this study looks to expand revenue generating opportunities downtown, close to the river, in a manner reinforcing public open space. The study expresses preferences for development without dictating specifics that will ultimately be market driven.

The first area is named “the Brickyard,” referencing the existing Brickyard Lane that passes through the parcel. The area is currently dominated by the state-owned Prison Enterprise warehouses and a series of vacant and under-utilized adjacent parcels. The Brickyard is well-positioned, immediately south of the I-10 Bridge at the northernmost point of Nicholson Drive. In order to spur development south toward LSU, a sizable and diverse development of commercial and entertainment uses should be configured for this area.

With an emphasis of diversity of attractions, the Brickyard is anchored by a minor league professional ballpark and a privately run amphitheater. The partially covered amphitheater is positioned on top of a parking structure to conserve land, but also to raise the venue up to afford longer views toward the river. East of a widened Emma Street, these venues are balanced with a large hotel and residential towers, both with a mix of private and publicly accessible open spaces at ground level. Parking for this complex would be primarily consolidated into a new parking structure positioned to the northwest, where Emma Street meets the I-10 Bridge. The combination of stadium and parking garage is among the few structures compatible in terms of scale and use with the interstate at this location.

West of Emma Street, between the rail and River Road, there are assorted additional parcels that may be developed to include a skate park to the south, and a hotel or residential tower to the north. Within the batture, the Municipal Dock remains a potential commercial opportunity. A pedestrian bridge spans eastward, crossing rail and River Road to the Brickyard development, allowing a potential Dock development to park a larger number of cars than would be possible near the levee. It is proposed that this pedestrian connection have several vertical access points so that the various unconnected areas can be connected. This will encourage more use by more people. The batture between the Dock and the I-10 Bridge is privately held, and could potentially be developed as one or more residential towers, provided they are constructed on a parking structure with vehicular causeway to maintain vehicular access during flood events. Parking in this location could make the Dock reuse much more viable in terms of shared adjacent parking. North of the I-10 Bridge, owners of narrow surface parking lot parcels are encouraged to develop these parcels as structured parking garages with or without residential or hotel towers parallel to the levee.

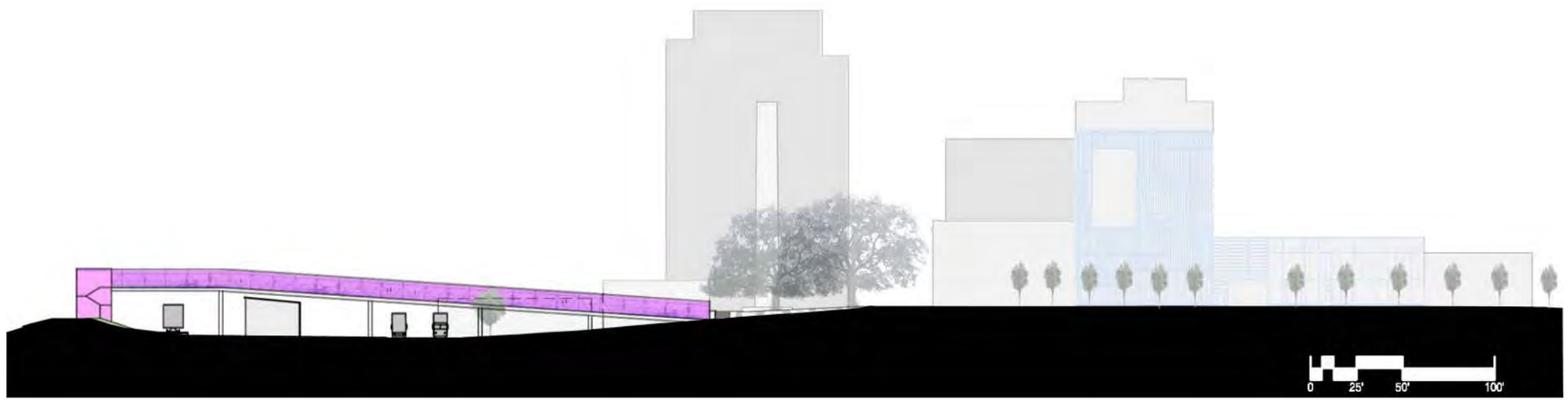
Repentance Park is to be reconfigured as a public open space possibly containing two commercial structures. The objective is to insert two pavilions with cafes, concessions or small restaurant as the intended use. The emphasis is on small, with no allowances for parking. This is a pedestrian only approach that will contribute to the traffic calming of River Road, and to encourage more pedestrian activity in the Government Plaza area and Repentance Park, with a direct connectivity across the Old State Capitol Grounds toward the Shaw Center for the Arts. The positioning of these pavilions puts them closer than virtually any other revenue generating opportunity to the Old State Capitol Grounds, in the heart of the Governmental Plaza/River Center complex.



Repentance Park, Transit Center, Pavilions, Bridges perspective

Repentance Park, Transit Center, Pavilions, Bridges cross section

Water Works and River Road crossing

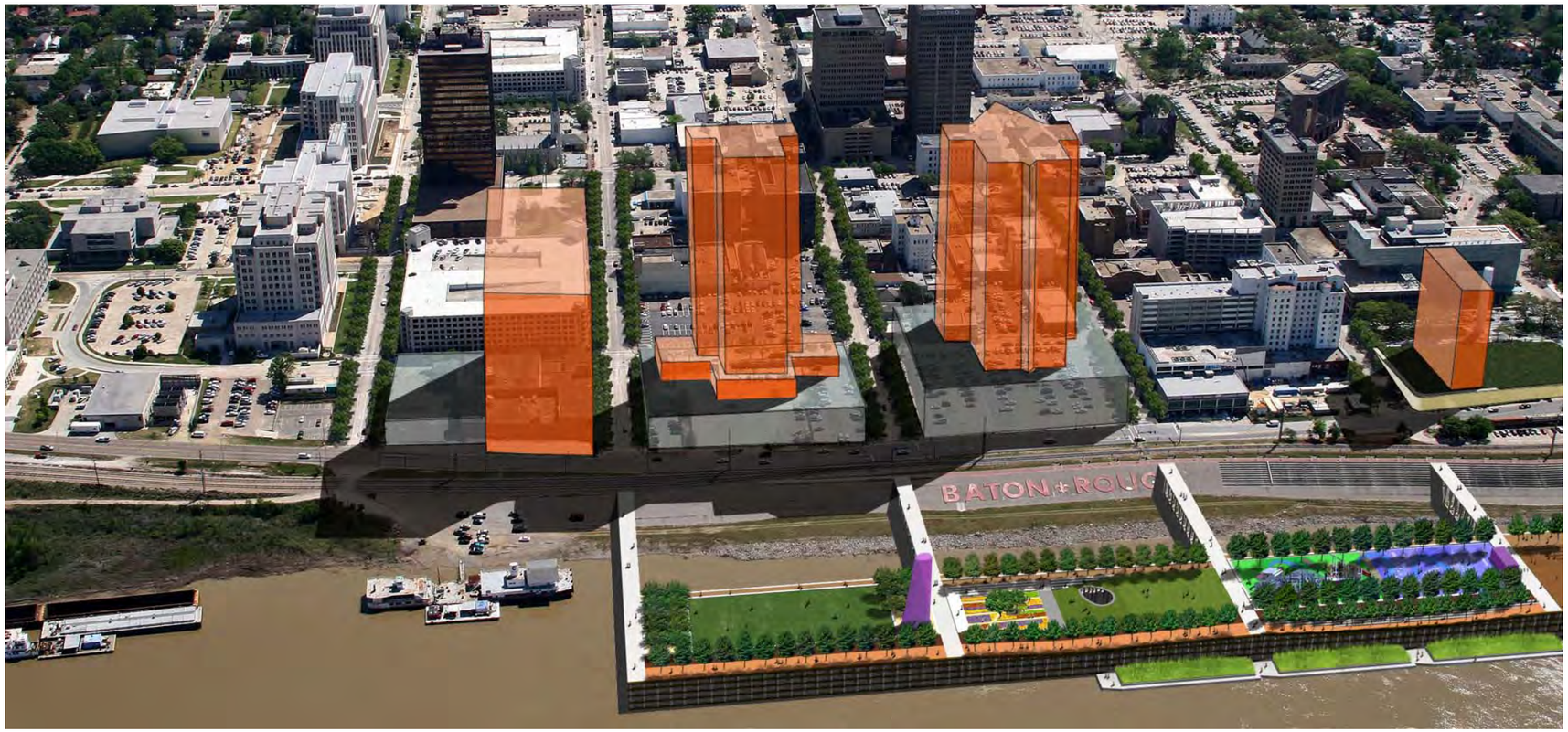


Water Works and River Road crossing section

The Water Works area could be developed to include two towers, preferably residential and a public open space extension of Lafayette Park infront of the Shaw Center for the Arts. A slender tower to the south would need to rise from a small footprint at North Boulevard to height greater than six stories. A larger tower aligned with the south face of the renovated Auto Hotel of the Shaw Center, and configured east-west, would offer views of the river from both sides of the building, while deferentially stepping back from the Hilton Baton Rouge Capitol Center Hotel to the north. Both towers would take advantage of the natural topography by positioning a 1-2 floor parking structure across the site as a platform for extending Lafayette Park closer to the river. A proposed pedestrian bridge from this location over River Road and the train tracks would stitch the very active functions of Lafayette Park and the Shaw Center directly to the levee.

Three proposed dominant River Road towers, by separate developers, remain under consideration, but have yet to move ahead toward construction. A common component to all should be a significant Lafayette Street retail and commercial presence to activate the street level.

River Road towers plan



River Road towers perpsective

Aggregate Construction parcel in relation to Casino Rouge and the state complex

The Aggregate Construction parcel to the northernmost portion of the study area remains in operation as a gravel transfer yard, though transformation to development would be a notable improvement. The change from industrial to residential or commercial will be contingent on a viable vehicular circulation strategy that meets with state and railroad approval. Current proposals suggest that a vehicular flyover ramp could connect River Road to the west side of the tracks, thereby eliminating conflicts with slow moving trains. The flyover is essential in the development of the parcel to include a large peak flow traffic generator such as a ballpark or amphitheater. One or both venues would fit at the Aggregate parcel, but would be distant and almost totally isolated from any pedestrian connection to downtown.

Repentance Park and the Old State Capitol Grounds are physically segregated from each other by the ornate iron fence, effectively precluding pedestrian circulation from one space to the other. While this insulates and controls the larger space, perception of the smaller space has grown to be viewed by many as unwholesome. Physically linking the two spaces will increase access to both spaces.

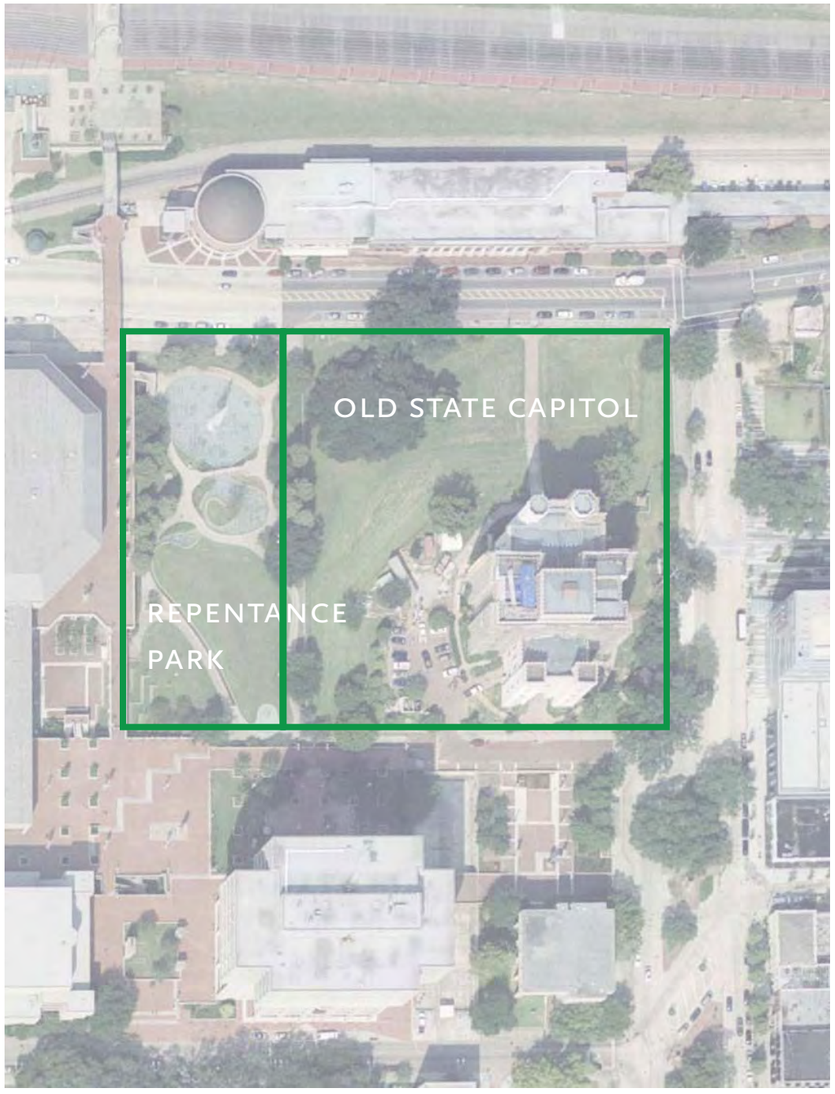


Diagram of Repentance Park and the Old State Capitol Grounds as two separate open spaces

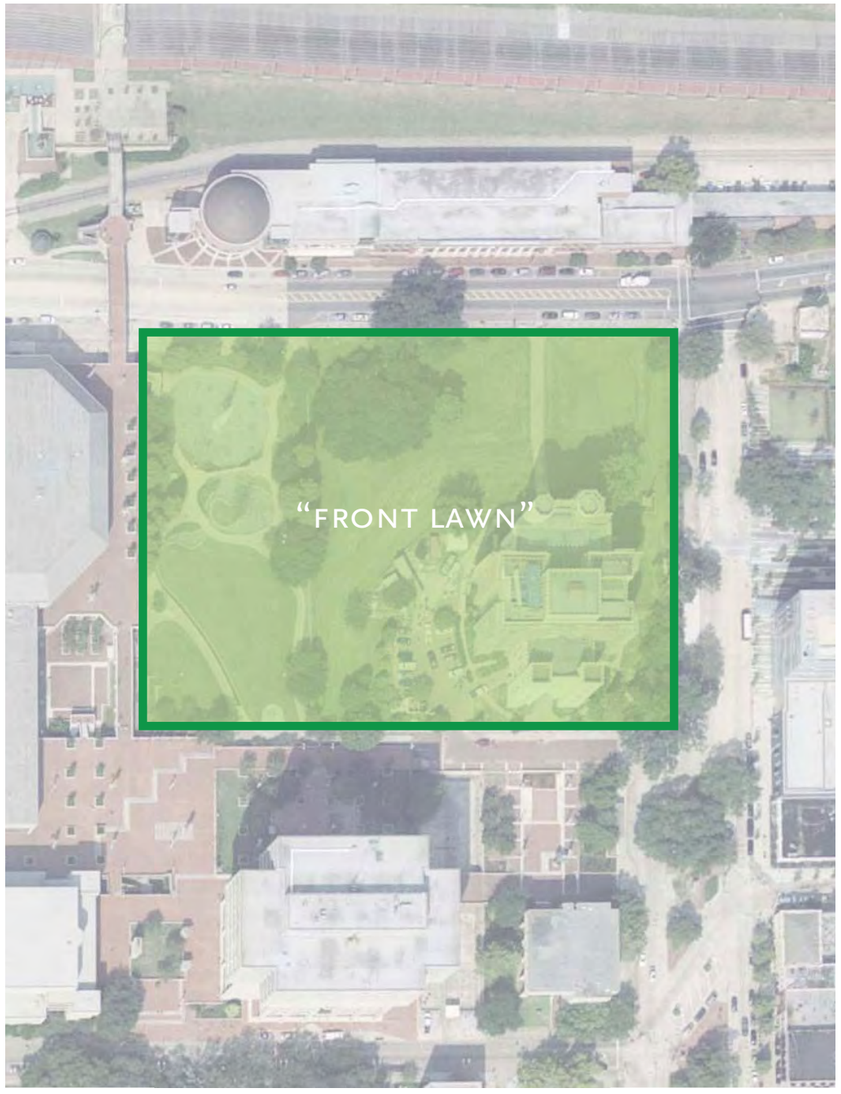
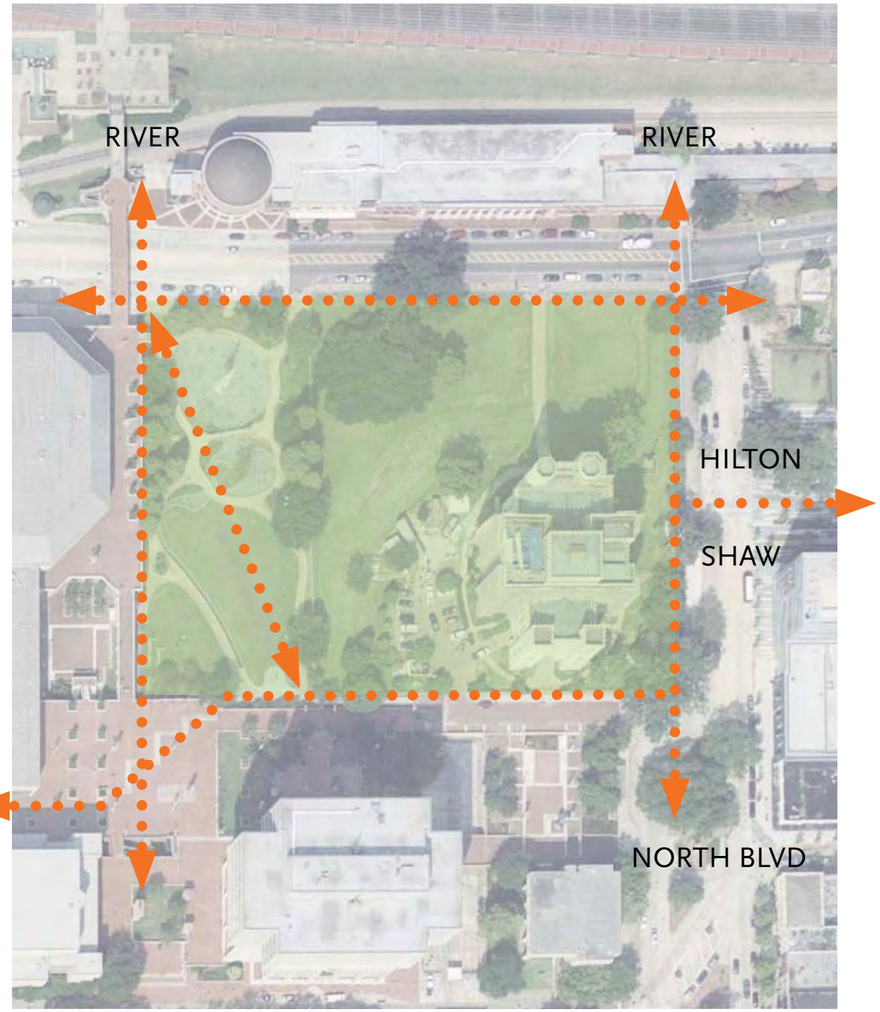
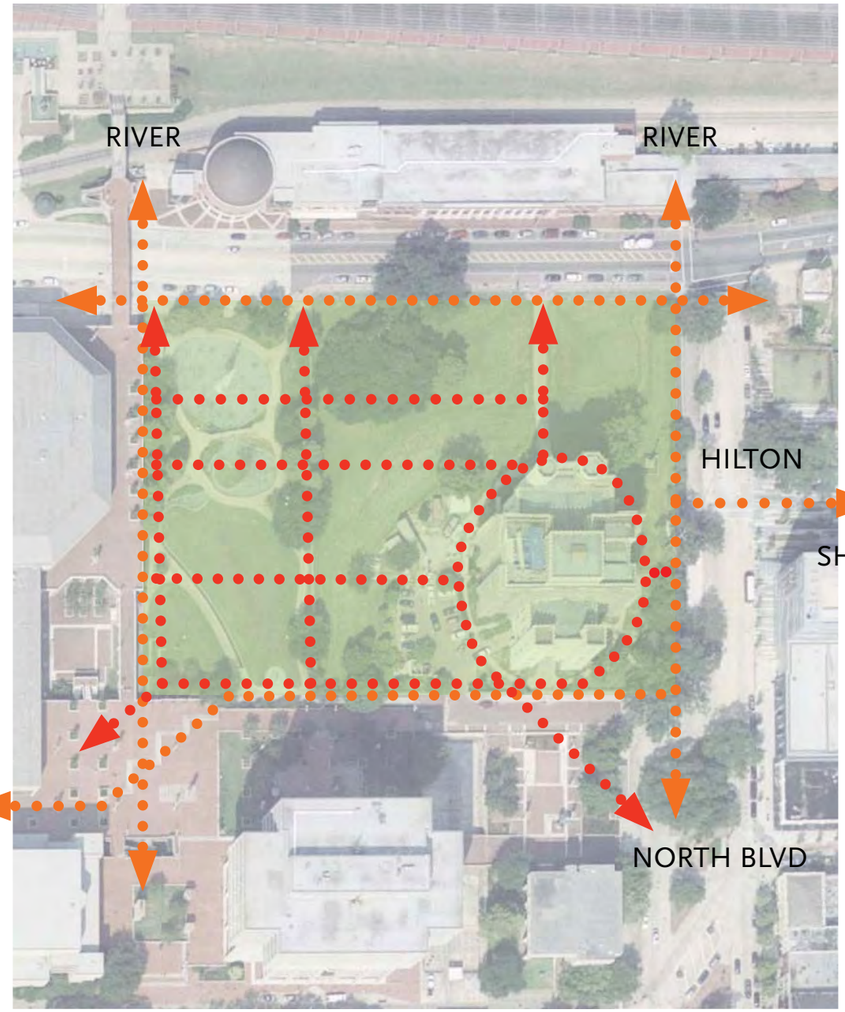


Diagram as the sum is greater than two segregated spaces



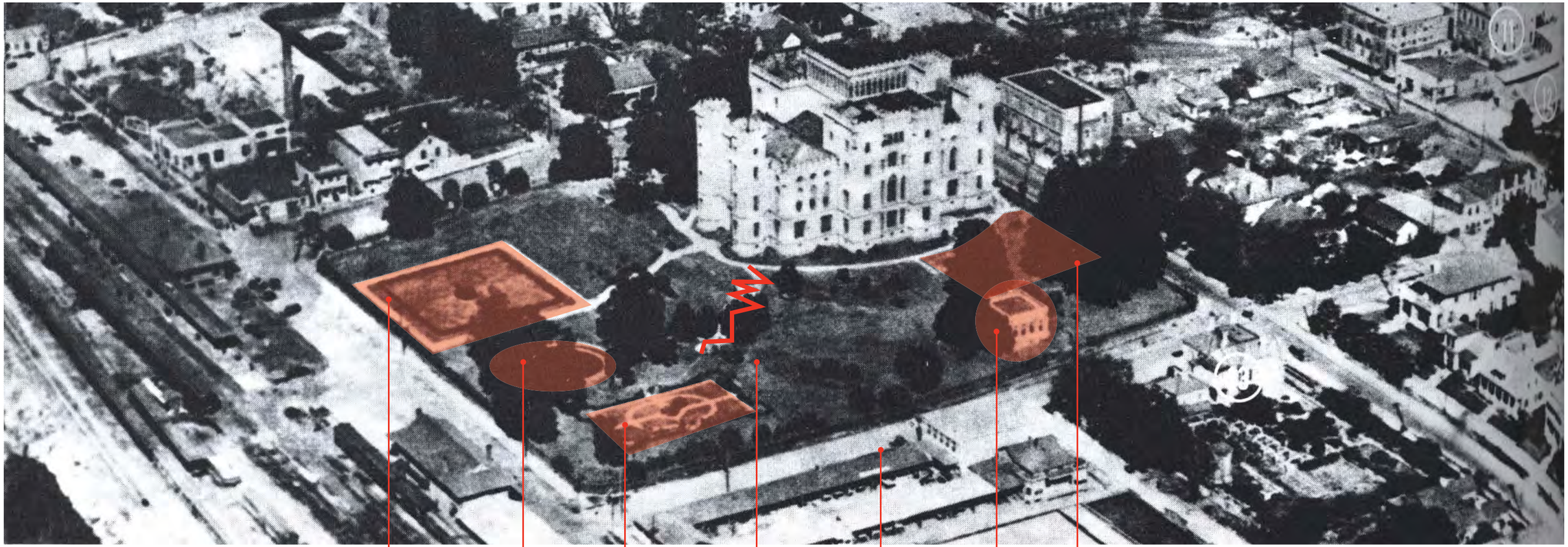
Existing pedestrian circulation confined to the perimeter

Historic photographs of the Old State Capitol Grounds reveal that the parcel has evolved through the decades since 1859. Whereas the property was predictably free of any vegetation during the 1860's, trees and gardens came and went through the years. As with the building itself, additions and subtractions were made reflecting stylistic adornment and maintenance decisions that visually affected the grounds. Shade trees and shrubs came and went, as well as formal gardens, parterres, reflecting pools, outlying structures and assorted pathways. Photographs also illustrate that America Street previously terminated at the railroad station on River Road rather than St. Ferdinand Street, clarifying why the southern perimeter cast iron fence is where it is positioned today.

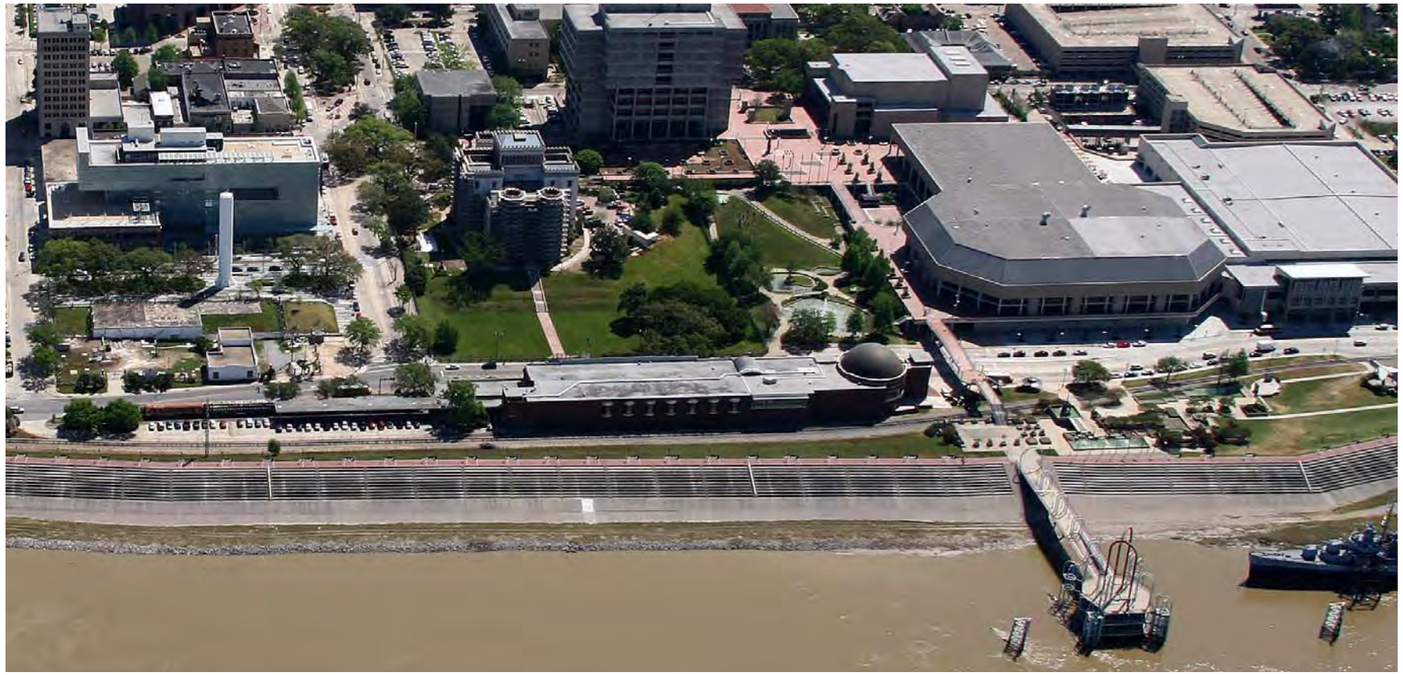


Proposed pedestrian circulation connecting the two spaces

Old State Capitol, 19th Century


Parterre garden: square
Reflecting Pool
Parterre garden: rectangle
Odd zig-zag path to monument
america street
Outlying "temple" with axial path
Parking lot as a later addition


PHOTOGRAPHIC

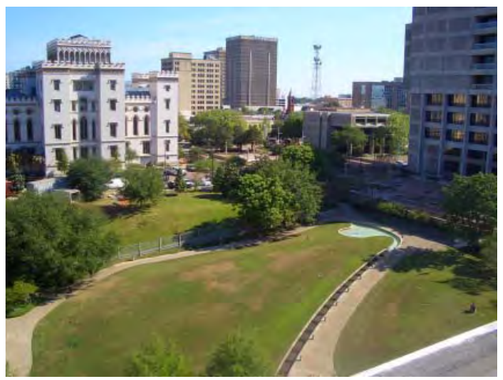


Existing Repentance Park

Proposed Repentance Park

The concept draws heavily from the historic photographs to envision a restoration of the Old State Capitol Grounds that is integrated with Repentance Park yet retains the perimeter cast iron fence. Topographically, the terraced landforms that step down from the west side of the capitol are echoed by slightly smaller, and deferential, parallel terraces in Repentance Park. Pedestrian circulation alternatives are increased by linking the two spaces with three north-south pathways that penetrate the cast iron fence with three reproduction operable gates. A reintroduced America Street, in a pedestrian-only configuration, reinforces the fence. Fence and walk keep the visual and operational distinction between the two open spaces intact, while functionally integrating the two spaces for visitors to explore. A more thorough study of Old State Capitol Grounds documents and photos will be needed to determine what if any configuration of parterres and pools are returned to the lower lawn of the grounds, with the objective of attracting more visitors while maintaining flexibility for a diversity of events and uses.

A Café pavilion anchors the southeast corner of the reconfigured Repentance Park positioned at the same elevation as the existing Governmental Plaza. A portion of the existing parapet wall is removed, encouraging pedestrians to move west into a grove of shade trees that push out onto the highest terrace of Repentance Park. This terrace slopes down to the first north-south walkway, with the slope clad in granite. A thin sheet of water runs granite shingles set to disturb the water flow with audible ripples and visual whitewater before collection and recirculation at the walkway. To the west of the walk, the shingled surface flattens out as a granite plaza punctuated by water jets choreographed to change their display. The granite paving gives way to the second terrace covered in lawn. The reconstituted America Street to the north is mirrored with a parallel walk that steps down from the performing arts center toward River Road. The majority of existing trees along the Old State Capitol fence are kept undisturbed.



Existing Repentance Park

Proposed Repentance Park

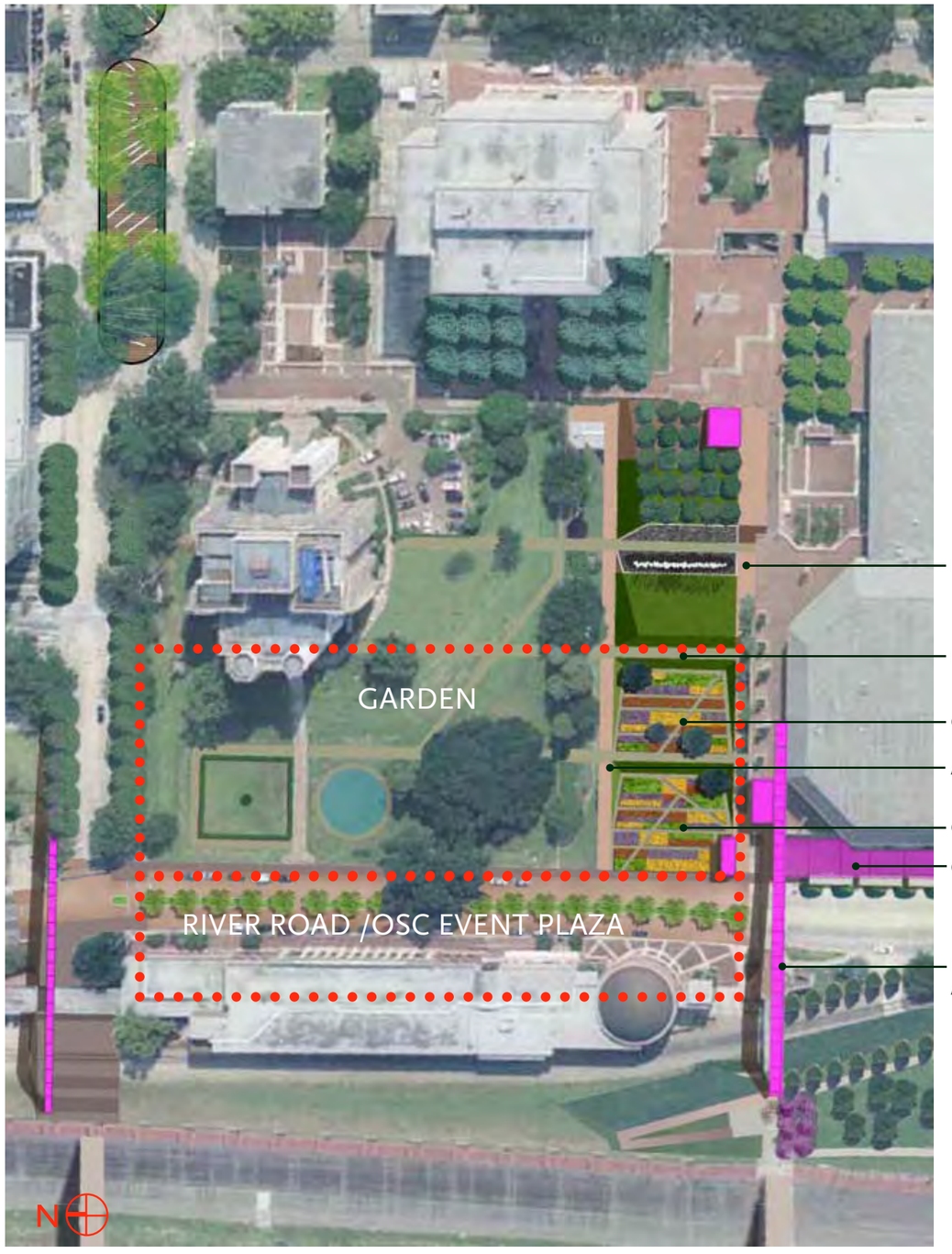
America St walk
ADA accessible route

Path + gate to OSC
Grounds

Fountain
(without a pool)

Fountain
sloped shingles

Shade-providing Grove w/
Café/restaurant pavilion



INTERACTIVE FOUNTAIN

PATH CONNECTION TO OSC GROUNDS

GARDEN (UPPER)

AMERICA STREET AS AN ACCESSIBLE ROUTE

GARDEN (LOWER)

COMMERCIAL PAVILION

RECONFIGURED/
ACCESSIBLE BRIDGE TO RIVERFRONT

Proposed Repentance Park

Below the second terrace and second walkway connection to the Old State Capitol are two lower terraces of formal gardens bisected by the third walkway to the north. With the café pavilion to the southeast, a second commercial opportunity is positioned to the southwest, available for food or other small scale retail venture. A nearby vertical elevator core connects the lower River Road level to the upper River Center deck, with accessible connections across a reconfigured bridge over River Road to the levee. South of this bridge, and fused with the River Center is the transit center, containing a public restroom.

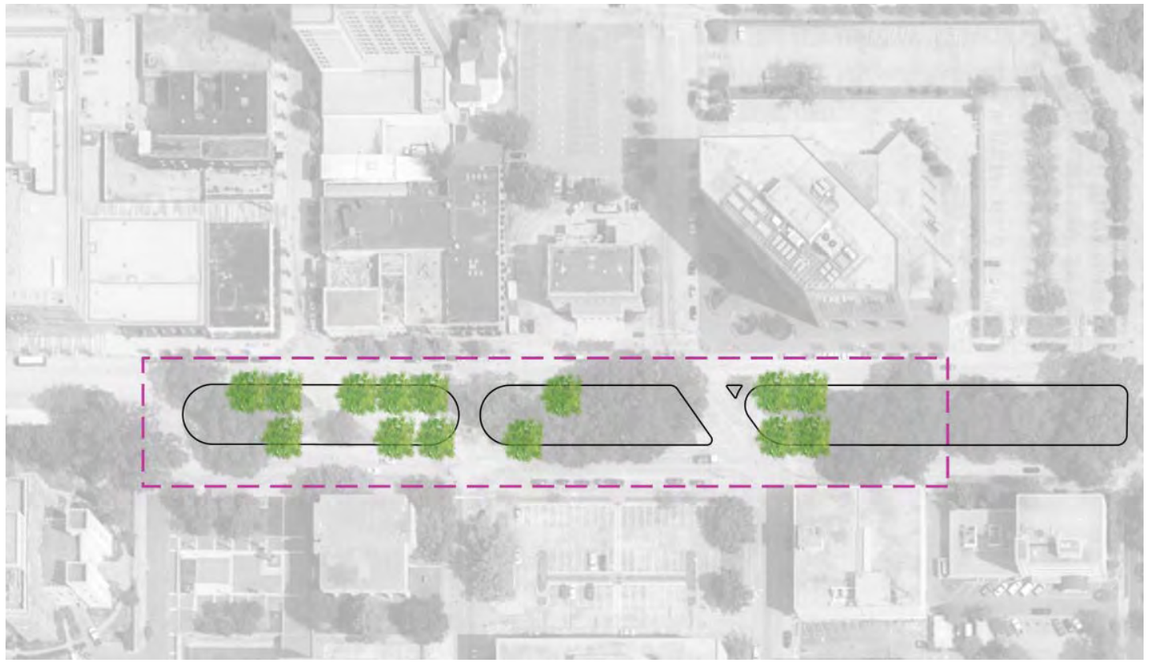
The removal of the fountain and walls will bring clarity to the landscape by re-grading the slope from the levee crown down toward the USS Kidd Memorial. The east slope is planted in groundcover and configured as a steep slope to deter pedestrians from running down the slope to the train track that continues to snake through the area. Accessible pavement slopes up from the USS Kidd memorial close to the levee, as well as along the eastern edge of the landform. USACE maintenance vehicles will be able to drive up the slope as needed to reach the levee top.

Drifts of trees originate at a grove of flowering trees adjacent to where the existing Red Stick sculpture sits. The trees drift down the landform in sporadic clusters yielding to primarily grass open space. Small public gatherings and concerts can occur in the new configuration, taking advantage of the shade trees. Additional trees line the River Road sidewalk further isolating the rail tracks from view without interfering with the passage of trains.

Proposed Riverfront Plaza Park

Proposed Riverfront Plaza Park

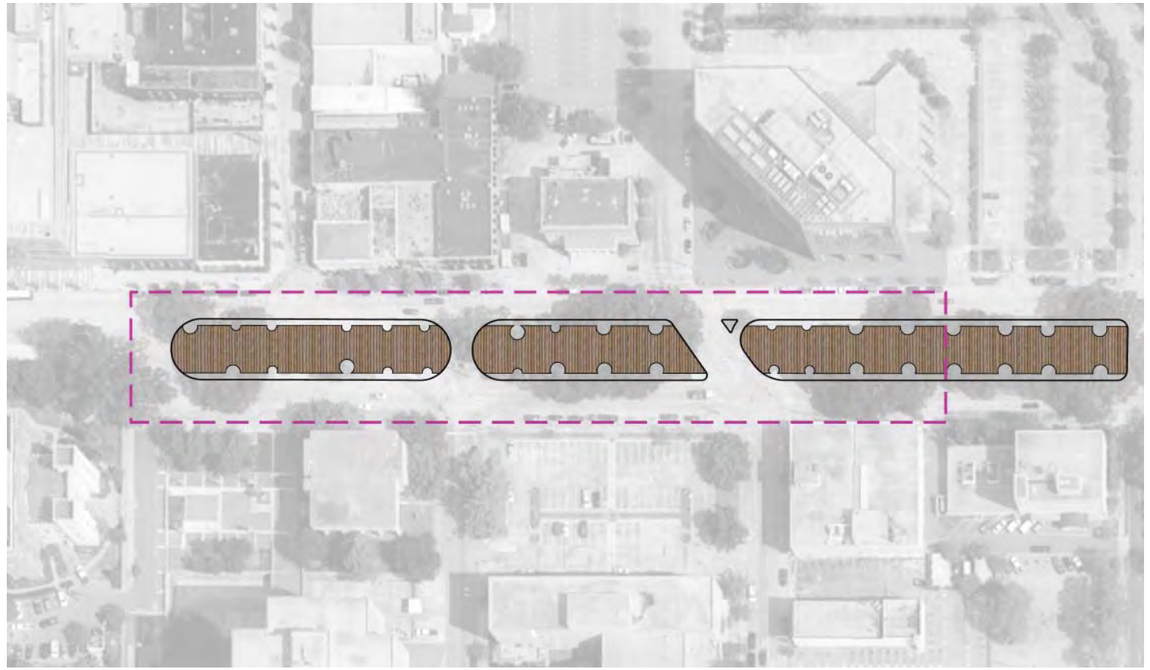
Existing tree cover



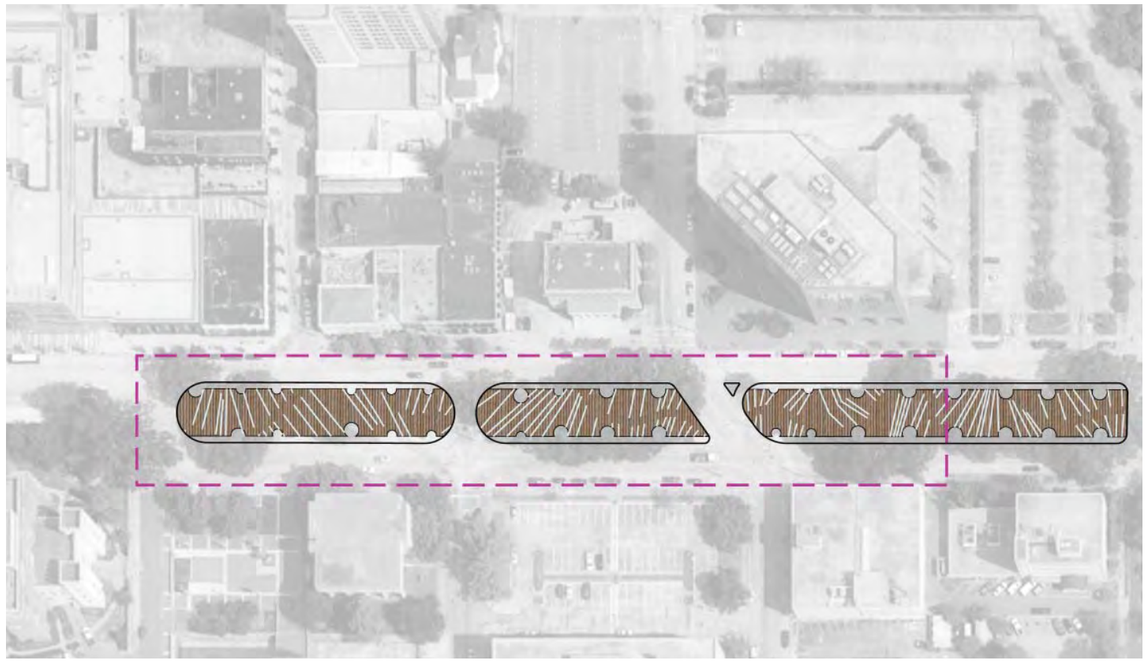
Tree infill

The preliminary concept took advantage of the reconfigured curbs to continue the allee of live oaks further west to reestablish the shade canopy to Third Street. Despite the 60-70 foot wide boulevard ground plane, existing pedestrian paving is generally limited to 6-8 foot wide paths and mulched beds to maximize the growth zone for the trees and to minimize the conflict between paving and roots. The proposed approach configures a raised wood deck, approximately 18 inches high, to "float" above the roots while simultaneously expanding the walk-able zone significantly. The floating deck would slope down to the curb, to the east and west, ensuring universal access. The deck would be held back from the curb to the north and south to deter jaywalking, and damage from errant vehicles, and configured to wrap around the trees in semi-circles.

The parallel bands of decking would be interrupted by seemingly irregular bands of glass block flush with the deck. The glass block would be sandblasted for traction and translucency, with LED lighting embedded to provide ground level illumination. These bands of lighting would be arrayed as an abstraction of the arpent sections of land ownership unique to Louisiana, resulting in long narrow parcels providing each land owner with river frontage, derived from French land division practices. The irregular pattern allows for the conservation of existing monuments into the composition and the removal of others.



Wood decking



Light bands

Composite

Groundcover infill

Linear, monolithic granite benches and curved wooden benches would provide a variety of seating options for visitors seeking to avoid the sun and lingering between destinations. The existing mulch beds would be supplemented with low growing groundcover, occupying the space between the curb and deck, providing eye level texture and color without obstructing views across the boulevard from building to building. Additional pedestrian-scaled light poles would illuminate the deck to foster a safe destination during the evening hours.

Diagram of river and arpent lines

Diagram of arpent lines

Precedent study, London

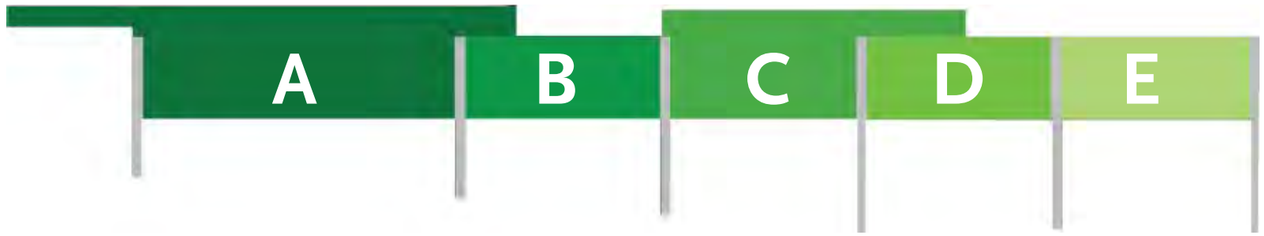
Existing conditions

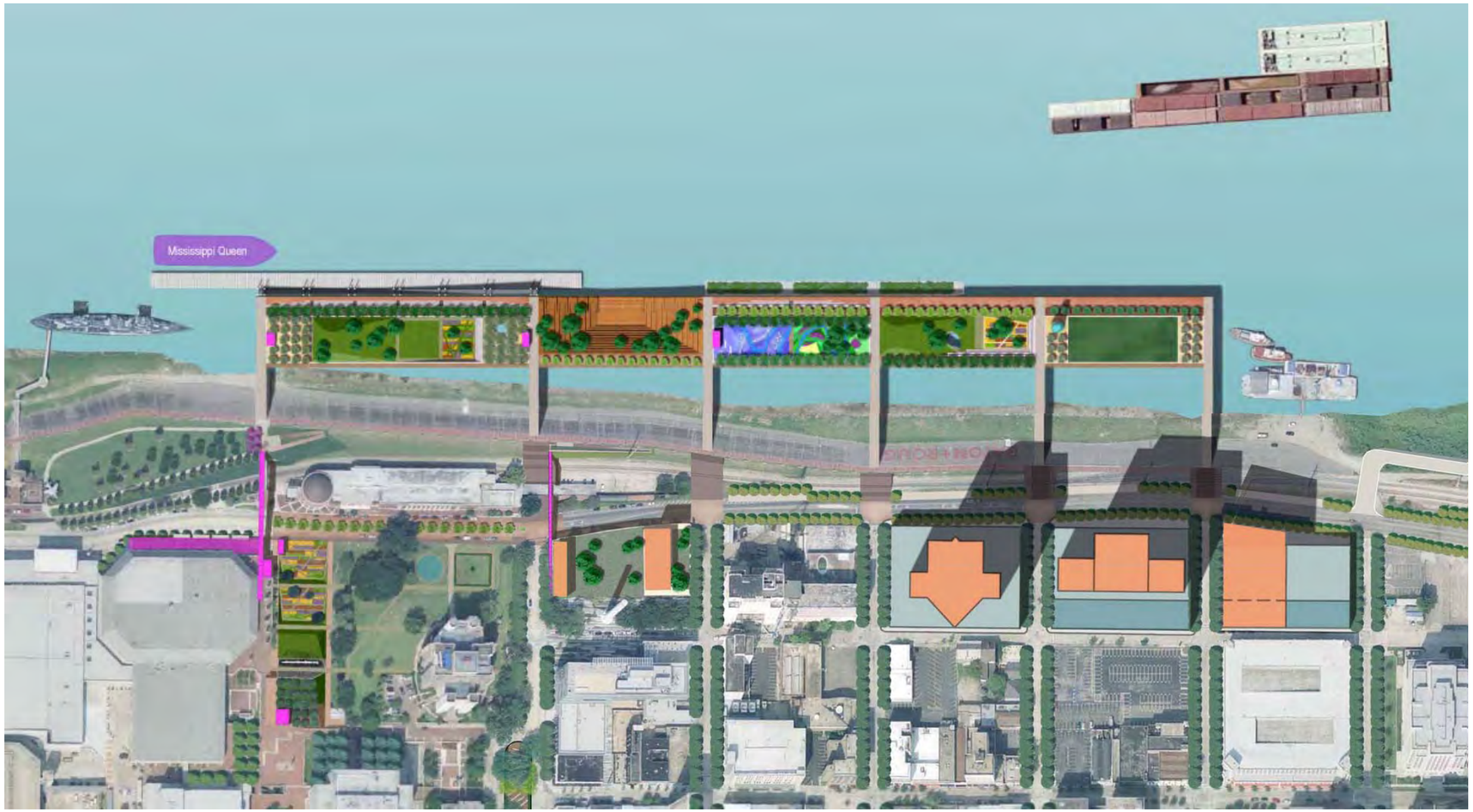
Proposed North Boulevard Town Square

River Road crossing diagram

The River Road pedestrian-focused improvement, from paving to bridges, along with proposed private sector development strengthens how the city meets the levee. All existing streetscapes, paving and public open spaces along this corridor are to varying degrees reconfigured or upgraded to facilitate greater pedestrian access to the levee top, but also the river.

The Mississippi River is awe inspiring. The dimensions of width, length, depth, velocity and volume make the Mississippi the most significant river in the United States, visually, militarily and commercially. In a state with little topographic relief, opportunities for distant views are rare. At the river, however, these views open up to afford long vistas across, up and down the river. The commercial activity on the river is brisk and constantly changing. All waterfronts attract visitors to view this space and activity. How each city does so varies infinitely. Waterfronts that push out into rivers, lakes or bays on piers contain program amenities ranging from entirely passive to commercially developed.





River Terraces illustrative plan

The challenge of not having sizable parcels of riverfront land free from seasonal flooding and restrictions imposed by the USACE levee system has shaped a design concept of the River Terraces. The city street grid is continued across River Road as a series of walks and pedestrian-only bridges, spanning the rail, and the landside levee slope. This grid extension transforms into a narrower series of pedestrian bridges, each an opportunity for art interventions and cultural interpretation, continuing westward over the river to a point where the river bathometry will allow for river vessels to moor along a new marine edge. This strategy effectively creates new land without constraining the flow of the river or subjecting the new land to flooding. This accomplishes the Mayor's vision for configuring a public riverfront unique to Baton Rouge, and demonstrably different from any other riverfront. The River Terraces concept provide for a dynamic river experience and an opportunity to view the evolving Baton Rouge skyline without leaving the parish.

For ease of describing the program, each Terrace is assigned an alphabetical designation (A through E) from south to north.

In general, each terrace is configured as a stationary, non-floating, "flat" concrete structure positioned on top of a grid of concrete piles driven into the river bed. The overall structure is connected back to the existing levee by a series of six pedestrian access bridges, approximately 22' wide, aligning with the city street grid. The entire terrace perimeter is surrounded by a 42" high guardrail providing a safe landscape for families. The main pedestrian "upper" promenade is tree lined walk oriented south to north. To the east of this promenade, a stadium seat walls step down six feet to a lower promenade, accessible by sloped ADA compliant ramps at either end. The stadium steps are bisected every 100 feet by steps down to the lower promenade. Pedestrian scaled light fixtures line all walks, and high mast lights illuminate broad areas from high above. Site furniture and fixtures are to be contemporary in design, rather than referencing a non-existent past. To the west of the upper promenade, a rectangular seatwall contains program components that differ from terrace to terrace. The design of the actual spaces will take place in a subsequent effort, where the content and programming of the spaces will be fleshed out in greater detail.

River Terraces illustrative perspective, north end

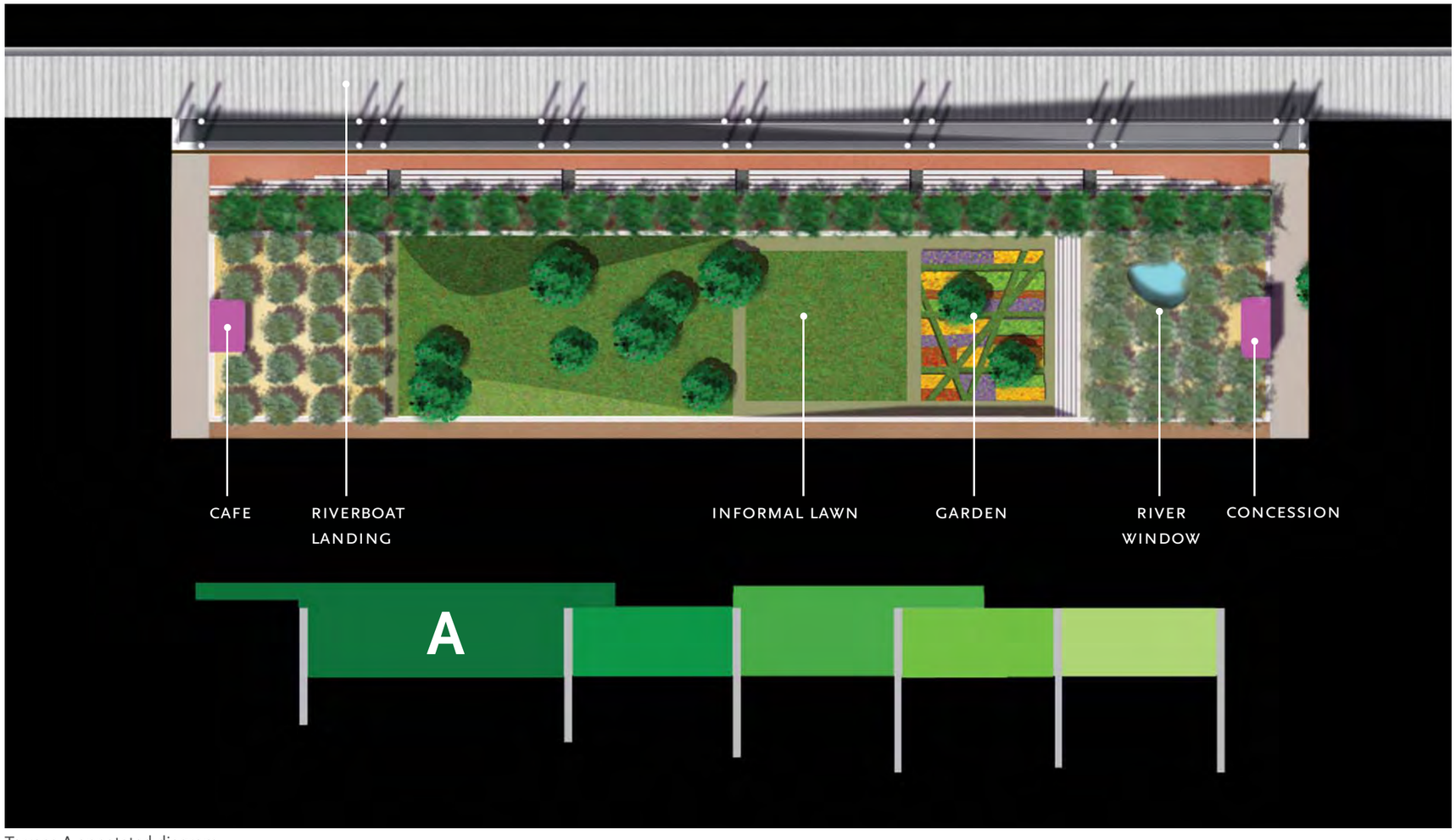
River Terraces illustrative perspective, north end

River Terraces illustrative perspective, south end

Lower promenade illustrating rail and proximity to river activity

The River Terraces are fundamentally configured as public open space on the river. The objective is to configure a pedestrian landscape with a diversity of program without restricting access. The terraces are intentionally vehicle free to maximize visitor safety. The terraces would be structurally capable of accommodating emergency vehicles and light maintenance vehicles, though not public vehicles and parking. The distance from the River Terraces to the levee top varies between 150 and 270 feet, and the complexity of negotiating vehicular alignment across the additional 50 to 200 feet of the rail corridor and varied topography reinforce the pedestrian focus of the space. Revenue producing opportunities are intentionally distributed across the terraces as a series of pavilions rather than consolidated as a commercial development. The footprints of the various pavilions can expand or contract as their design processes evolve and likely tenants are determined. The precedents proposed follow Hudson River Park in New York City, rather than Fisherman's Wharf in San Francisco. Design of site specific architecture for the terraces reinforces the identity of the project and differentiates the Baton Rouge riverfront from other waterfronts and franchises across the parish and country.

Upper promenade illustrating relationship between shaded stadium steps and lower rail

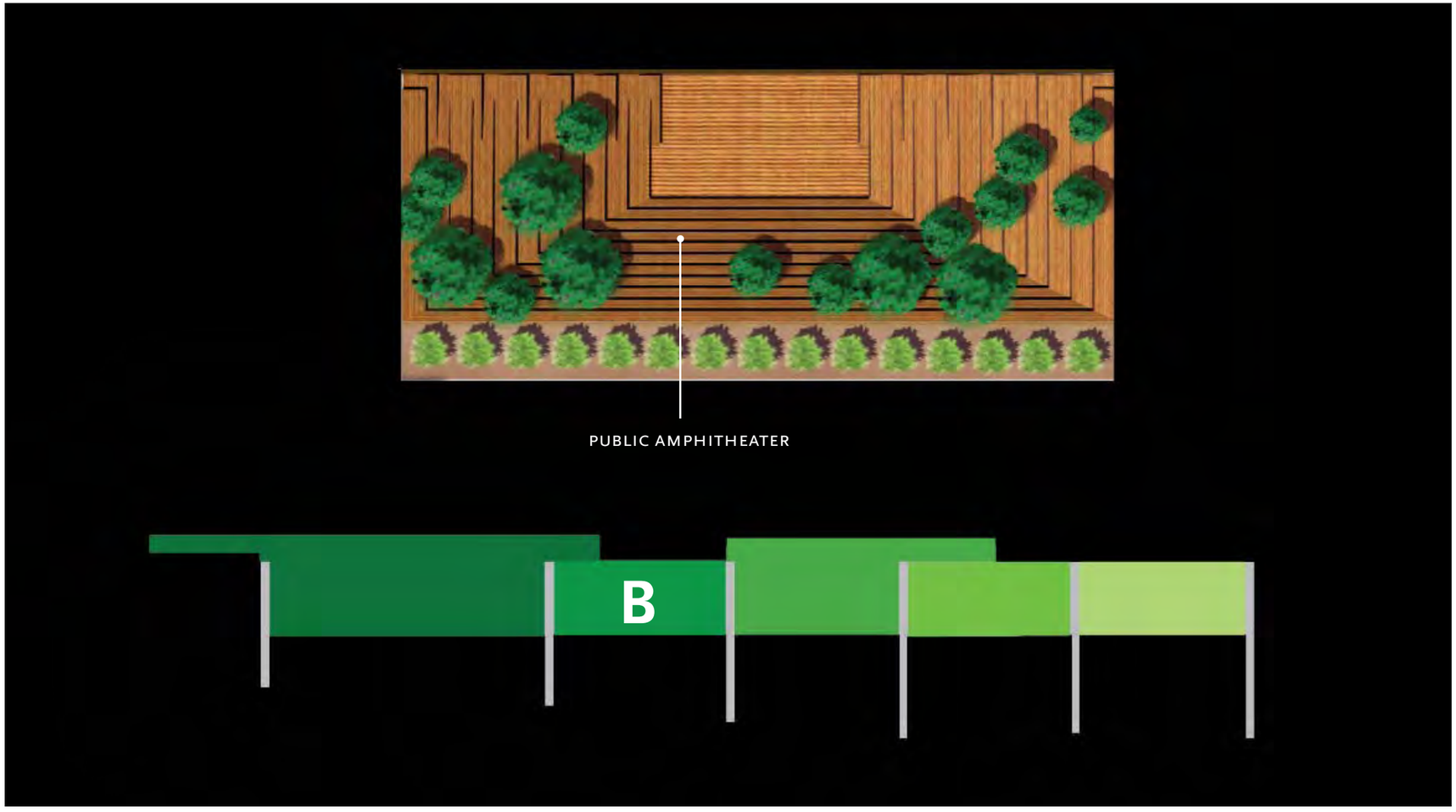


Terrace A annotated diagram

The southernmost terrace, "Terrace A," provides the City of Baton Rouge with a grand entrance to the heart of downtown. Terrace A replaces the existing Municipal Pier, and extends 295 feet west of the levee, connecting to a significantly expanded riverboat landing. The landing expansion responds to growing demand for improved and expanded landing opportunities, resulting in larger and more frequent riverboat visits. The floating gangway provides universal access to the floating riverboat landing that rises and falls with the river stage. This gangway rides up and down along a series of piles, never exceeding 5% slope. At the bottom of the gangway, a series of standard river barges have been adapted and configured as a 1000 feet long landing with water, electric and data connections, as well as a hydraulic lift to service riverboats.

Two groves of trees, configured at either end of the 3.75 acre terrace, cast dense shade over a decomposed granite paving material. A 50 feet diameter elliptical hole is punched through the deck, as a river window, with a guardrail, revealing views to the river below. Between the groves, a series of stadium seats step down to a lower garden area which then rises up to the south becoming a 10 feet high rounded landform. The landform offers an informal lawn for small gatherings, or an elevated grass promontory beneath sporadic shade trees to watch the river activity. A concession is positioned to the north, close to the North Boulevard access bridge, and a café pavilion positioned at the River Center access bridge.

Terrace A upper promenade, with stadium steps down toward the river on the left, and a grass lawn to the right



Terrace B annotated diagram

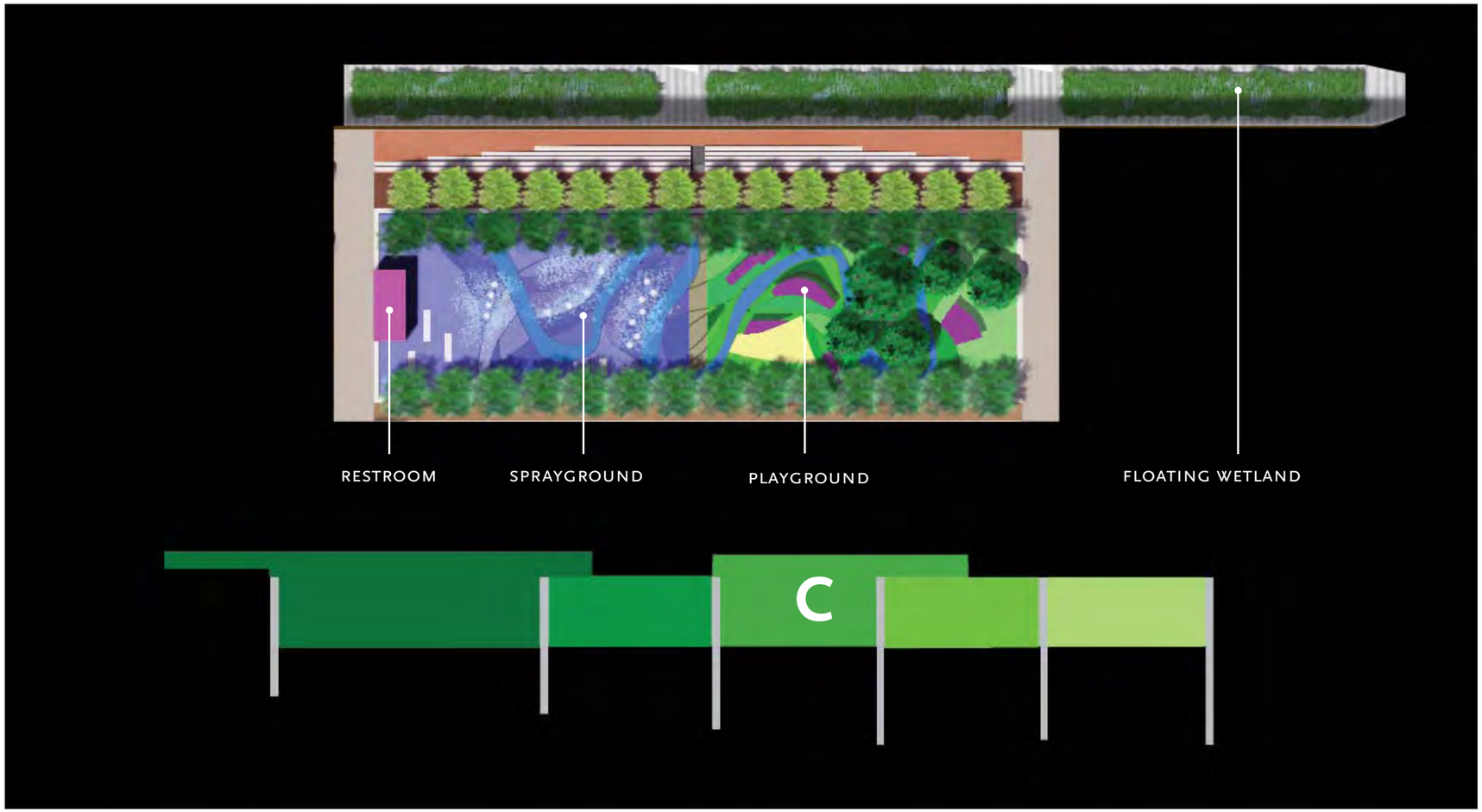
The east edge of "Terrace B," continues the upper promenade beneath a row of trees while the majority of the terrace is configured as a public Amphitheater. The space is conceived of as a river viewing platform for solitary visitors or 5,000 guests attending a performance. Configured as an outdoor performance venue, the space has tremendous dual use potential for the various school field trips visiting the numerous cultural assets along the Baton Rouge riverfront. The Amphitheater is an ideal venue for students and teachers to gather, lunch and discuss the importance of the lower Mississippi River.

Wood decking concentrically steps down 15 feet as a series of stadium steps to a wood deck stage. The Amphitheater steps down to the river, where the high water level will come close to edge for a seasonally notable river experience. The Amphitheater is a flexible space capable of accommodating a temporary stage and performance, while predominantly functioning as a comfortable venue for passive viewing of the river.

The decking is punctuated by a drift of shade trees positioned in flush planters, casting shadows over the venue throughout the day. Two accessible ramps wind down either side affording universal access to the entire facility. Water, electric, data and voice lines are stubbed out at the upper and lowest levels to maximize flexibility for any events.

Terrace Amphitheater at low water, with the venue ‘above’ the river

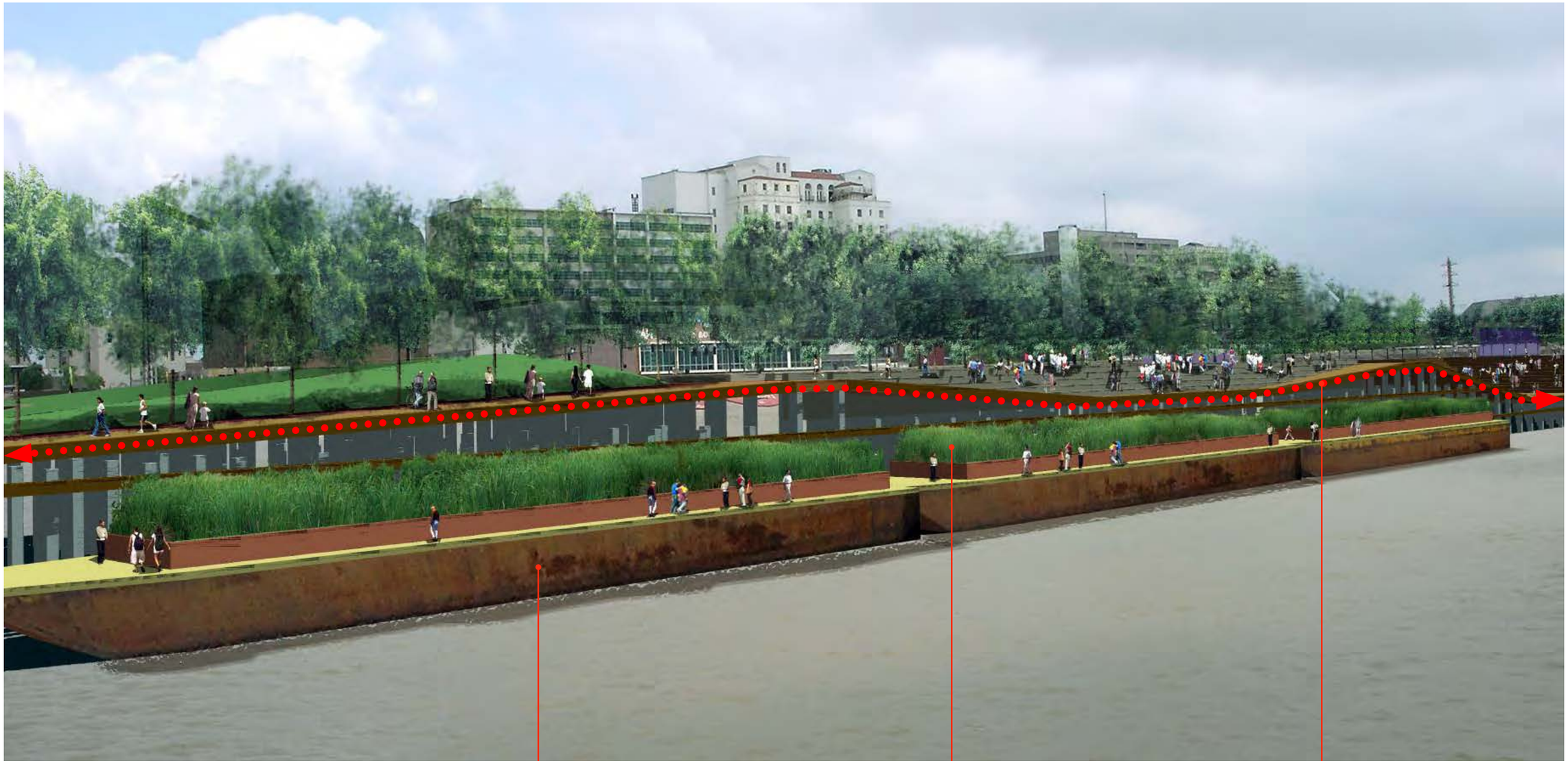
Terrace Amphitheater at high water, where the river rises up close to the venue edge, dramatically changing the experience of occupying the space



Terrace C annotated diagram

Children and family focused activities dominate “Terrace C,” with both a sprayground and playground. As with the other terraces, a low seatwall encloses the program areas, supplementing in this instance with a metal perimeter fence to further secure the activities. A row of shade trees line both the west and east sides providing shade to resting children and parents, while a drift of tress marches through the playground to the north. A series of climbing and play structures are set on a multi-colored rubber play surface punctuated by sand pits. An abstracted plan of the alluvial fans of the Mississippi River winds through the playground and into the sprayground. A series of random water jets and child-activated water jets activate the space. A restroom and showers is located immediately adjacent to the sprayground.

A series of three river barges would be adapted to host “floating wetlands,” as a demonstration project to make the wetlands more accessible to residents and visitors alike. The wetlands are an opportunity for state institutions, agencies or wetland-focused organizations to work together in a prominent state capital location to interpret the processes that have historically and currently affect the Louisiana wetlands. Each of the barges, repurposed from nearby industrial use, could be planted with a different species mix to showcase the diversity of Louisiana wetlands, circulating river water through the hulls in a controlled manner to sustain the plants while demonstrating their cleansing capacity.

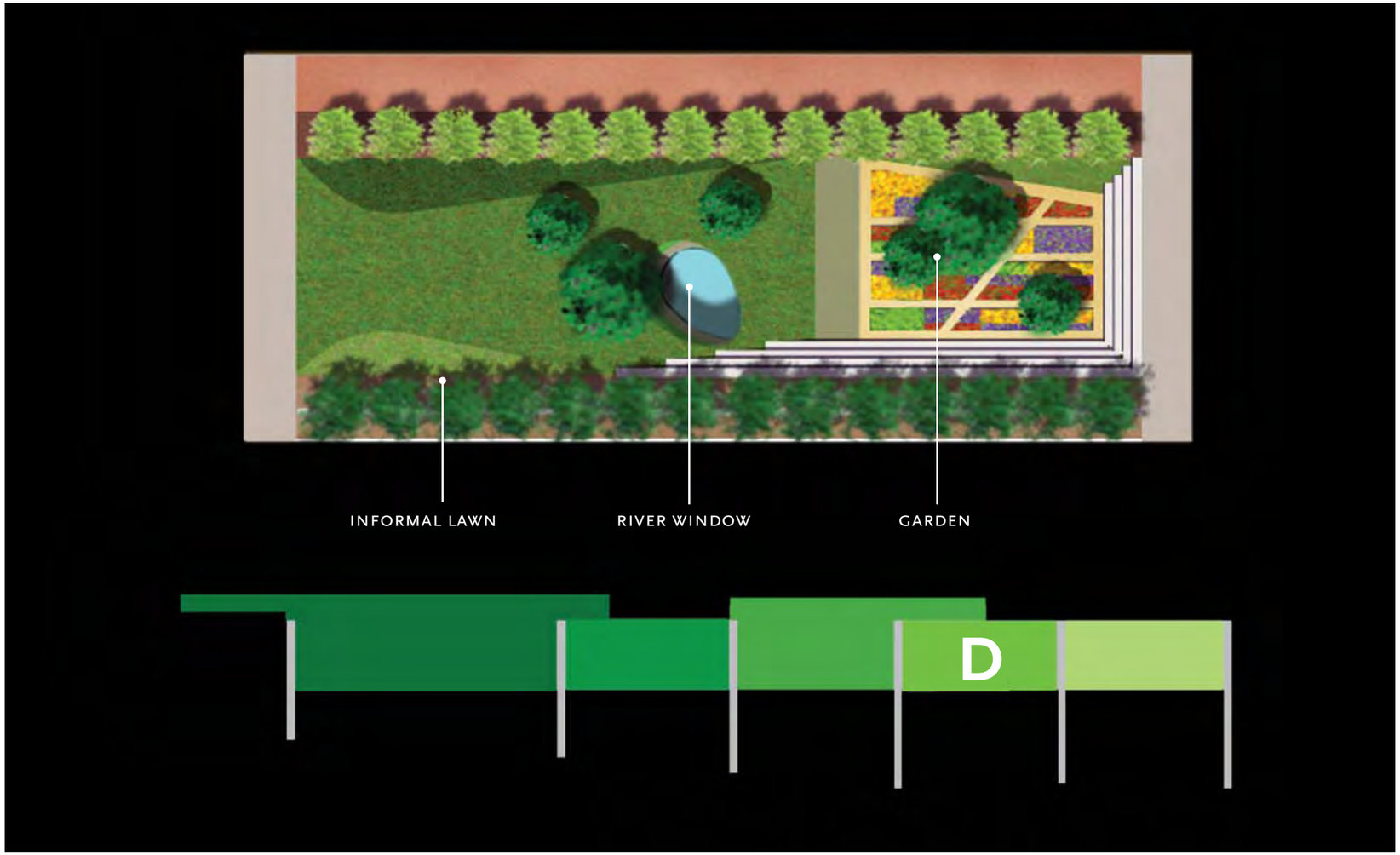


Terrace C viewed from the river

Wetland barges from the local Baton Rouge industrial corridor

Wetland grasses as an opportunity to bring their function into greater visibility

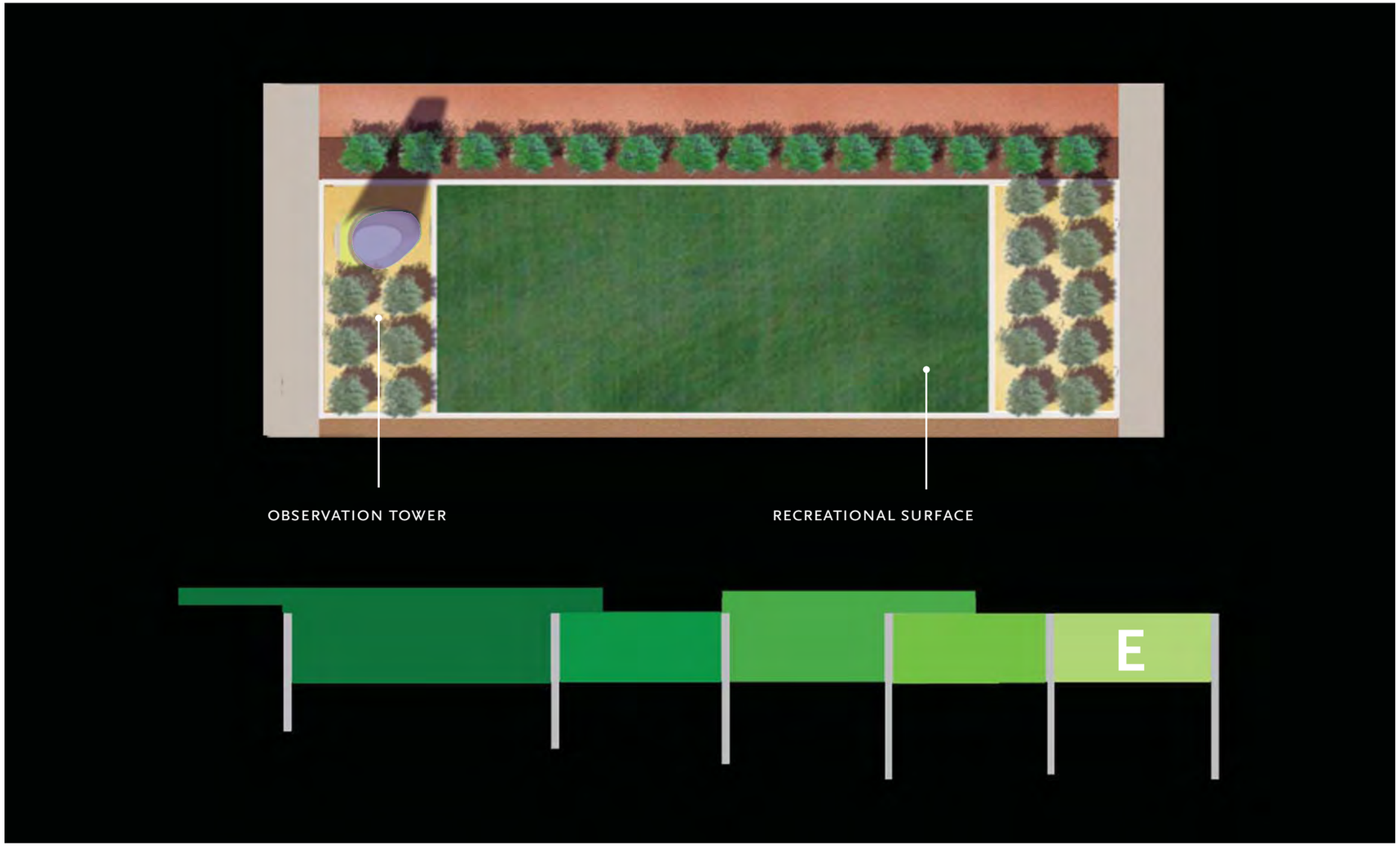
Perimeter edge of River Terraces configured to slope up and down, offering different relationships to the river surface



Terrace D annotated diagram

A passive grass landform anchors “Terrace D,” while a perimeter of stadium seats step down to a lower garden. As with all of the concept components, design development of the garden will further flesh out what constitutes the form and content of the garden, as it could be dominated by perennials or sculpture, or other components. The landform is penetrated by a second river window as shade trees hover above. The lower promenade in this configuration is at the same elevation as the upper promenade, resulting in a broad river edge on this terrace. Contrasting pavers break up the scale of the space.

River Terraces viewed from the Camelot Club



Terrace E annotated diagram

"Terrace E," is configured as "flat," with a synthetic recreation surface occupying the majority of the terrace, for informal play. A 100 foot tall Observation Tower is prominently positioned on this northernmost terrace. An elevator and stair invite visitors to ascend to the top for views up and down the river, as well as over the terraces and the Baton Rouge riverfront.

River Terraces viewed from the River Center

The proposed River Terraces are five city blocks in length, while several developers proposing adjacent residential towers between 15 and 30 stories.
The combination of towers and River Terraces will bring a larger scale to the River Road landscape in the next decades.

The space between the River Terraces and the levee is half river and half batture. The vertical piles of the structural grid of the terraces will be exposed to varying degrees as the river level rises and falls. In order to animate this space both visually and audibly, a River Fountain concept has been developed. Along terraces “B” and “D,” a stainless steel weir totaling approximately 350 feet in each location can be positioned near the top of the terrace at elevation 50. A total of six, 60hp submersible pumps would be attached to the concrete pile structure, conveying river water along 16 inch diameter pipes to the horizontal weirs. The river water, screened by not filtered, would cascade back down to the river in city block long sheets of water. The fall from nearly thirty vertical feet from weir to the river surface will create shimmering curtain and resounding crash.

The perimeter pedestrian guardrail will keep visitors from touching the water or from overspray, as the weir is set out of reach from the terrace tops, and more than 100 feet from the toe of the levee. On occasions where the river level has receded to where the river bottom aligns with the east face of the terraces, the operation of the fountain would be triggered off. Marine-quality LED or fiber optic lighting positioned either under the terrace, along the weir, or on the access bridges will illuminate the River Fountain during evening hours. The submersible pumps would be rail-mounted to allow them to be pulled up for maintenance. The coarse screening will stop sizable objects from entering the system.

River Fountain cascading off the River Terraces


Mississippi Queen

5

implementation

package	*2006 dollars*	*2010 dollars*
PACKAGE 1: NORTH BLVD. TOWN SQUARE	$3,738,000	$4,485,000
PACKAGE 2: RIVER ROAD & STREET GRID IMPROVEMENTS	$30,721,000	$36,865,000
PACKAGE 3: REPENTANCE PARK & GOVERNMENTAL PLAZA	$13,000,000	$15,600,000
PACKAGE 4: SOUTH TERRACE (A)	$49,513,000	$49,513,000
PACKAGE 5: RIVERFRONT PLAZA & TRANSIT CENTER	$10,967,000	$13,160,000
PACKAGE 6: CENTRAL TERRACE (B & C)	$41,250,000	$49,500,000
PACKAGE 7: NORTH TERRACE (D & E)	$51,757,000	$62,108,000
PACKAGE 8: OLD STATE CAPITOL GROUNDS	$5,966,000	$7,159,000
PACKAGE 9: BRICKYARD PEDESTRIAN BRIDGE	$5,510,000	$6,612,000
Total	**$204,170,000**	**$245,000,000**

Estimates

The Baton Rouge Riverfront Master Plan Concept is accompanied by a USACE-sponsored cost estimating effort yielding a preliminary, concept-level, total project cost of approximately $245 million dollars in 2010 dollars. This number is generated by assigning construction units to an illustrative plan rather than the product of an exhaustive estimating effort for a set of design development drawings. As such, a robust design contingency has been applied, as well as yearly escalation from current 2006 post-Katrina unit costs to 2010.

These numbers represent an estimation of public open space improvements only, and do not include commercial development by private entities. Potential riverfront components of private development excluded from the estimate are: a ballpark, hotels, residential towers, skate board park, Municipal Dock redevelopment and a privately run amphitheater. The overall number is comprised of several smaller design packages intended for sequentially construction or as a series of concurrent packages, as funding allows. The cost estimate in the appendix provides detail regarding each package, with a summary provided to the left.

To put these numbers in context, the Hudson River Park construction budget has been $330 million dollars since 1996, with an additional $100 million anticipated to finish the 150 acres project (“After 20 Years of Delays, a River Park Takes Shape,” New York Times, 15 May 2006). Millennium Park in Chicago had a construction cost of $475 million dollars for a 24.6 acre park.

To add perspective to the public investment, new and proposed residential towers along Manhattan’s Tribeca, West Village, and Battery Park neighborhoods are all touting the emergence of the new waterfront park as the key amenity to differentiate their developments qualitatively from elsewhere in Manhattan. Quantitatively, private Chicago developers adjacent to Millennium Park estimate that the new park has spurred $1.4 billion in spin off residential development and increasing values of existing structures (“How a Park Changed a Chicago Neighborhood,” New York Times, 4 June 2006). The private investment would not have occured without the catalyst of public open space to focus attention on the area: a sprawling former Illinois Central Railroad switchyard. The bottom line goal is to improve the identity of Baton Rouge, attract visitors and residents to a unique riverfront, and to reinvigorate the local economy with downtown residents.

Packages

The concept plan represents an anticipated multi-year road map for transforming the Baton Rouge riverfront. There are precedents for proceeding with the master plan as a single design and construction project. The City of Chattanooga commissioned a riverfront master plan and recently completed construction of the $120 million design in a span of four years. Nevertheless, the project was documented as a series of smaller interlocking packages to coordinate design documents and construction sequences. The Baton Rouge Riverfront Master Plan Concept has been defined as nine interlocking design packages for the public open spaces. This allows for incremental funding as well as ease of assigning costs to specific priorities. A companion diagram identifies select pending private developments as described within the report, without assigning costs or time frames to their individual completion.

Implementation

Completion of the master plan is the first step in a longer process toward completion. Completed waterfront parks indicate that a strong non-profit development organization with strong public-private participation such as a Chattanooga's River City, and Louisville's Waterfront Development Corporation were instrumental in shepherding their respective complex projects to completion, and providing day to day ongoing maintenance. In most cases, existing city parks departments are ill-funded to take on the maintenance responsibilities of a large waterfront park without negatively impacting their current responsibilities.

The coordinating agency, whether public or non-profit, will need to work closely with the USACE to ensure smooth permitting of the project and exploration of possible federal funding sources. Other state agencies may be appropriate sources for funding earmarked for specific project components satisfying off site mitigation for other regional projects. As with most sizable and prominent public infrastructure projects particularly those that include family-friendly program, private fundraising, donations and gifts are an integral part of raising the necessary financing. Corporate naming opportunities are also a possibility, provided the terms are not exploitative or restrictive with regard to public access to the landscape.

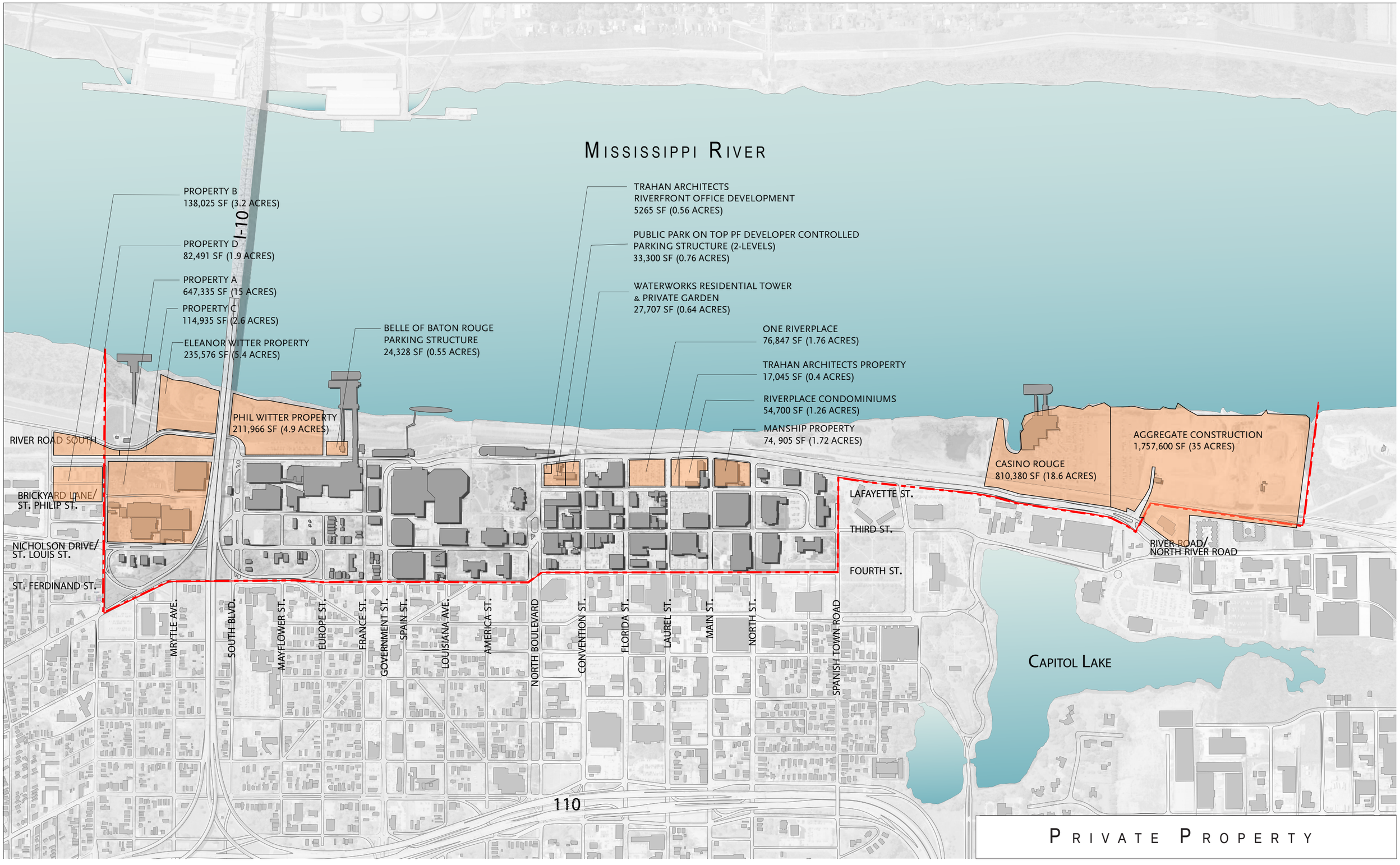
Implementation of the riverfront master plan concept requires additional project management and staffing to prioritize attention to specific development opportunities and channel resources efficiently. The aforementioned River City Company, and the Waterfront Development Corporation manage the design process and construction activities for their respective public open spaces, while simultaneously encouraging and facilitating revenue generating economic development on adjacent parcels. Both cities recognize and embrace the inextricable link between the public image of the city and the ability to translate that into revenue, in a mutually reinforcing manner. Baton Rouge's organization will be and should be a hybrid unique to the local circumstances of the parish.

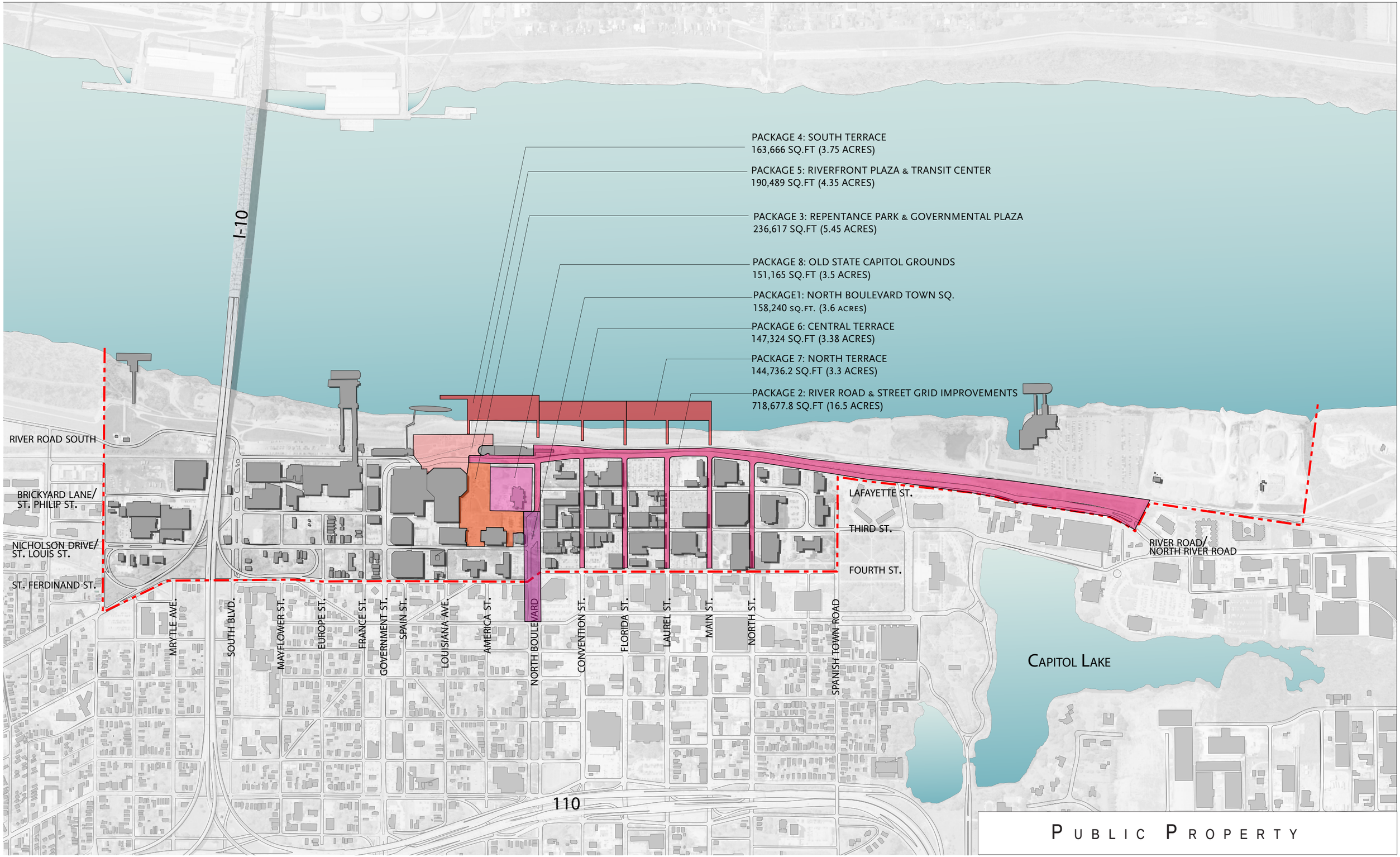
A public entity that could provide oversight and management as noted with Chattanooga's River City Company and Louisville's Waterfront Development Corporation is the Baton Rouge Downtown Development District. With the addition of financial and staffing resources, the DDD could expand its current operations to manage the daily oversight of the riverfront master plan implementation. The fundamental tasks that an expanded DDD will need to coordinate will at a minimum include:

- Ongoing interaction with prospective developers and investors
- Fast response and expedited approval processes for priority projects
- Ongoing management of staggered projects to ensure opportunities are not missed or delayed

Donations

Public parks, particularly waterfront parks, often attract well-intentioned residents interested in contributing design or funding of specific park components, such as memorials and art. The coordinating organization or city agency responsible for the park would be well advised to articulate a clear set of criteria for considering donated memorials and art. A committee of local architects and administration members should be established for reviewing suggestions and channeling contributions toward completion of the park itself, rather than carving out monuments to events unrelated to the provision of public recreation opportunities.


MISSISSIPPI RIVER
PROPERTY B
138,025 SF (3.2 ACRES)
I-10
PROPERTY D
82,491 SF (1.9 ACRES)
PROPERTY A
647,335 SF (15 ACRES)
PROPERTY C
114,935 SF (2.6 ACRES)
ELEANOR WITTER PROPERTY
235,576 SF (5.4 ACRES)
BELLE OF BATON ROUGE
PARKING STRUCTURE
24,328 SF (0.55 ACRES)
PHIL WITTER PROPERTY
211,966 SF (4.9 ACRES)
TRAHAN ARCHITECTS
RIVERFRONT OFFICE DEVELOPMENT
5265 SF (0.56 ACRES)
PUBLIC PARK ON TOP PF DEVELOPER CONTROLLED
PARKING STRUCTURE (2-LEVELS)
33,300 SF (0.76 ACRES)
WATERWORKS RESIDENTIAL TOWER
& PRIVATE GARDEN
27,707 SF (0.64 ACRES)
ONE RIVERPLACE
76,847 SF (1.76 ACRES)
TRAHAN ARCHITECTS PROPERTY
17,045 SF (0.4 ACRES)
RIVERPLACE CONDOMINIUMS
54,700 SF (1.26 ACRES)
MANSHIP PROPERTY
74, 905 SF (1.72 ACRES)
AGGREGATE CONSTRUCTION
1,757,600 SF (35 ACRES)
CASINO ROUGE
810,380 SF (18.6 ACRES)
RIVER ROAD SOUTH
BRICKYARD LANE/
ST. PHILIP ST.
NICHOLSON DRIVE/
ST. LOUIS ST.
ST. FERDINAND ST.
LAFAYETTE ST.
THIRD ST.
FOURTH ST.
RIVER ROAD/
NORTH RIVER ROAD
MRYTLE AVE.
SOUTH BLVD.
MAYFLOWER ST.
EUROPE ST.
FRANCE ST.
GOVERNMENT ST.
SPAIN ST.
LOUISIANA AVE.
AMERICA ST.
NORTH BOULEVARD
CONVENTION ST.
FLORIDA ST.
LAUREL ST.
MAIN ST.
NORTH ST.
SPANISH TOWN ROAD
CAPITOL LAKE
110
PRIVATE PROPERTY


PACKAGE 4: SOUTH TERRACE
163,666 SQ.FT (3.75 ACRES)
PACKAGE 5: RIVERFRONT PLAZA & TRANSIT CENTER
190,489 SQ.FT (4.35 ACRES)
PACKAGE 3: REPENTANCE PARK & GOVERNMENTAL PLAZA
236,617 SQ.FT (5.45 ACRES)
PACKAGE 8: OLD STATE CAPITOL GROUNDS
151,165 SQ.FT (3.5 ACRES)
PACKAGE1: NORTH BOULEVARD TOWN SQ.
158,240 SQ.FT. (3.6 ACRES)
PACKAGE 6: CENTRAL TERRACE
147,324 SQ.FT (3.38 ACRES)
PACKAGE 7: NORTH TERRACE
144,736.2 SQ.FT (3.3 ACRES)
PACKAGE 2: RIVER ROAD & STREET GRID IMPROVEMENTS
718,677.8 SQ.FT (16.5 ACRES)
I-10
RIVER ROAD SOUTH
BRICKYARD LANE/
ST. PHILIP ST.
NICHOLSON DRIVE/
ST. LOUIS ST.
ST. FERDINAND ST.
LAFAYETTE ST.
THIRD ST.
FOURTH ST.
RIVER ROAD/
NORTH RIVER ROAD
MRYTLE AVE.
SOUTH BLVD.
MAYFLOWER ST.
EUROPE ST.
FRANCE ST.
GOVERNMENT ST.
SPAIN ST.
LOUISIANA AVE.
AMERICA ST.
NORTH BOULEVARD
CONVENTION ST.
FLORIDA ST.
LAUREL ST.
MAIN ST.
NORTH ST.
SPANISH TOWN ROAD
CAPITOL LAKE
110
PUBLIC PROPERTY

6

appendix

Baton Rouge Riverfront Master Plan and Concept
Preliminary Cost Estimate

Assumptions:

1 Master Plan-level cost estimate, generated from illustrative drawings and concept level CAD files
2 Costs are based on allowances and broad assumptions, not actual designs
3 Quantities derived from 3D formZ model and CAD file, yielding coarse quantities, annotated with additional description
4 Dollar amounts shown in 2006 post-Katrina dollars, and projected construction 2010 dollars (5% escalation per each year)
5 25% Master Plan design contingency representative of the broad interpretation taken in assigning costs to a concept level description of components
6 Costs represent probable construction costs only
7 Design and costruction documentation fees not included in totals

PACKAGE 1: NORTH BLVD. TOWN SQUARE
Total Area: 158,240 sq.ft. (3.6 acres)

item	*quantity*	*unit*	*description*	*unit cost*	*estimate*	*2006 dollars*	*2010 dollars*
Demo of existing curbs and some pavement	1	ls	650' curb x $14.45/ sq. yd.. pavement x $11.10	15,000	$15,000		
Statue relocation to local cemetery	1	ls	4000		$4,000		
New concrete curbs for the median	650	ft		50	$32,500		
Restriping of traffic lanes	16,500	ft	4 lane lines for 3/4 mi. plus removal of existing paint lines	5	$80,000		
Premium wood benches	20	ea	FORMS+SURFACES Bridge Bench Series: Four curved Bridge Benches with Ipé slat seats arranged in circle (http://www.forms-surfaces.com/products/site_furniture/bridge.htm)	2,500	$50,000		
Premium light fixtures (vertical)	82	ea	FORMS+SURFACES Light Column Pedestrian Series 600 (http://www.forms-surfaces.com/products/lighting/lightcolumn.htm)	2,500	$205,000		
Ipe wood decking	35,246	sf	Ipe decking from curb to curb, resting on 12-18" grade beams pressure treated (or Ipe) resting on the ground, or mounted to timber posts	28	$986,888		
Custom LED light fixtures	3,000	ft		300	$900,000		
Irrigation system	16,730	sf		2	$33,460		
Custom granite benches	720	sf	3ft (W) x 12 ft (L) x 18in (H)	65	$46,800		
Landscape maintenance (1 year)	158,240	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$118,680		
Groundcover	16,730	sf		3.6	$60,228		
Trees	14	ea		3,200	$44,800		
SUBTOTAL					**$2,577,356**		
			Mobilization	10%	$257,736		
			Profit and Overhead	10%	$257,736		
			Master Plan Contingencies	25%	$644,339		
TOTAL						**$3,737,166**	**$4,484,599**

PACKAGE 2: RIVER ROAD & STREET GRID IMPROVEMENTS
Total Area: 718,678 SQ.FT (16.5 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Relocation of curbs	2,800	lf	(adding new curbs) to effectively narrow the roadway surface, and provide intersection traffic calming	24.5	$68,600		
Partial removal of pavement	33,600	sf		1.2	$40,320		
Repaving of parallel parking spaces	13,370	sf	$40/sy (6" thick) =>$ 5/ sf	5	$66,850		
Repaving of DeSoto parking	225,730	sf	$40/sy (6" thick) =>$ 5/ sf	5	$1,128,650		
North River Road fly over	1	ls	Vehicular bridge, with sidewalks, over rail and River Road	10,000,000	$10,000,000		
Shaw pedestrian bridge	1	ls	Pedestrian bridge from Lafayette Park to levee	2,000,000	$2,000,000		
Meters	5	ea	Meters for parallel parking spaces (assume multi-bay parking meter with variable rate capability, such as http://www.wwparking.com/equipment.htm)	9,500	$47,500		
Pedestrian actuated crossing signals	10	ea	Add median planter curbs and groundcover between Old State Capitol and LASM, plus median street trees	15,000	$150,000		
Pavement restriping	27,000	lf		5	$135,000		
Median planter curbs	1,200	lf		11.1	$13,320		
Median planter groundcover	4,045	sf		3.6	$14,562		
Median planter trees	20	ea		1,050	$21,000		
Vehicular concrete unit pavers:			(assume 4"x6"x12" Hanover Prest Pavers as basis for design) for select roadway installation (sf)				
Between LASM and Old State Capitol, including North Blvd @ River Road	34,100	sf		17	$579,700		
Convention St @ River Road	3,850	sf		17	$65,450		
Florida St @ River Road	3,455	sf		17	$58,735		
Laurel St @ River Road	3,740	sf		17	$63,580		
Main St @ River Road	3,625	sf		17	$61,625		
Pedestrian concrete unit pavers	40,720	sf	(assume 4"x6"x12" Hanover Prest Pavers as basis for design) for pavement west of River Road curb, extending to existing levee (top) pavement (sf), as well as west of Old State Capitol walkway (changing from concrete to concrete pavers)	10.5	$427,560		
Concrete stair from street up to top of levee walkway	1	ls	including grade beam structure and associated regrading to landside of levee surface according to USACE standards	1,200,000	$1,200,000		
Stainless steel rails along each stair	1,250	lf		200	$250,000		
Street trees along from River Road to Fourth Street:							
North Blvd	30	ea		3,200	$96,000		
Convention St	47	ea		3,200	$150,400		
Florida St	47	ea		3,200	$150,400		
Laurel St	48	ea		3,200	$153,600		
Main St	48	ea		3,200	$153,600		
North St	45	ea		3,200	$144,000		
Tree Grates	265	ea		2,500	$662,500		
Street trees along River Road	340	ea		3,200	$1,088,000		
Irrigation to each street tree	21,000	lf		15	$315,000		
Irrigation to sodded & groundcover areas	29,000	sf		2	$58,000		
Sodding	25,000	sf		1	$25,000		
Landscape maintenance (1 year)	236,700	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$177,525		
			(standard catalog item)	75	$585,000		

Package 2 continued on the next page

Package 2 continued

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Premium pedestrian light poles	120	ea	at each River Road intersection: FORMS+SURFACES Light Column Pedestrian Series 600 (http://www.forms-surfaces.com/products/lighting/lightcolumn.htm)	2,500	$300,000		
Premium vehicular light poles	180	ea	along River Road	4,000	$720,000		
Festival/event utility hookups embedded in sidewalk	7	ea	in flush mounted hatches for city controlled data, water, electrical connections every 100' linear feet from River Center to North Blvd.	2,210	$14,840		
SUBTOTAL					**$21,186,317**		
			Mobilization	10%	$2,118,632		
			Profit and Overhead	10%	$2,118,632		
			Master Plan Contingencies	25%	$5,296,579		
TOTAL						**$30,720,160**	**$36,864,192**

PACKAGE 3: REPENTANCE PARK & GOVERNMENTAL PLAZA
Total Area: 236,617 SQ.FT (5.45 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Demo of existing fountains and walkways	1	ls		24,000	$24,000		
Protection of existing trees	1	ls	$100/Tree x 20 Trees	20,000	$2,000		
Partial removal of parapet wall	450	sf	150 linear feet of existing wall to remove	2.5	$1,125		
Custom granite fountain	1	ls	Custom fabrication of sloping granite fountain with interlocking granite shingles, and full mechanical, electrical and filtration system	3,500,000	$3,500,000		
New pedestrian paving	31,000	sf		10.5	$325,500		
Earthwork	1,200	cy		14	$16,800		
Irrigation	41,700	sf		2	$83,400		
Site lighting	12	ea		2,500	$30,000		
Architecture: café pavilion	1	ls		750,000	$750,000		
Architecture: concession pavilion	1	ls		600,000	$600,000		
Architecture: vertical elevator core structure	1	ls		350,000	$350,000		
Architecture: pedestrian bridge, accessible replacement	1	ls		2,000,000	$2,000,000		
Landscape maintenance (1 year)	236,700	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$177,525		
Gardens	20,500	sf		50	$1,025,000		
Trees	25	ea		3,200	$80,000		
SUBTOTAL					**$8,965,350**		
			Mobilization	10%	$896,535		
			Profit and Overhead	10%	$896,535		
			Master Plan Contingencies	25%	$2,241,338		
TOTAL						**$12,999,758**	**$15,599,709**

PACKAGE 4: SOUTH TERRACE (A)
Total Area: 163,666 SQ.FT (3.75 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Bridges	6,000	sf	2 bridges that span the batture to the terrace - pedestrian only	300	$1,800,000		
Piles	200	ea	3x3' concrete piles to USACE spec 20'oc, from a top elevation of approx. 48 to resistance	15,000	$3,000,000		
Pile test program	1	ls		2,000,000	$2,000,000		
Decking (structural)	1	ls	Concrete (sub) decking, 18' thick, resting on piles, articulated in numerous zones to accommodate planting soil depths for tree and vegetated areas (36" soil depth).	5,400,000	$5,400,000		
Marine edge I	1	ls	Heavy timber marine edge and compressive impact components to minimize structural damage, covering a vertical area between the elevations of 6 and 50, running the length of the structure.	2,500,000	$2,500,000		
Marine edge II	1	ls	Cleats, dolphins, utilities (electric, data, water, but not fuel) to accommodate visiting riverboats and ideally military warships during emergencies/courtesy visits.	1,500,000	$1,500,000		
Riverboat Landing + Floating Gangway	1	ls	650' long floating/fluctuating height, metal pedestrian marine gangway, 10' clear width, with 42" high guardrails, set within a 5 sets of 4 piles each to restrict movement vertically only. Structurally need to accommodate at a minimum a Gator-type vehicle (or worse case a light pickup truck, which may not be structurally feasible).	6,400,000	$6,400,000		
Riverboat Landing (decking)	35,000	sf	Douglas fir wood decking mounted on top of adapted barges.	9	$315,000		
Architecture: café pavilion	1	ea	20w x 30l x 20h custom architectural structure with full kitchen and data lines	315,000	$315,000		
Architecture: concession pavilion	1	ea	18w x35l x20h custom architectural structure with full kitchen, utilities and data lines	420,000	$420,000		
Turf sod	30,000	sf		1	$30,000		
Topsoil	5,000	cy	36" depth	20	$100,000		
soil prep	30,000	sf	amendments	0.5	$15,000		
Garden	6,700	sf		100	$670,000		
Topsoil	750	cy	36" depth	20	$15,000		
Planting soil	100	cy	36" depth	30	$3,000		
soil prep/mulch	6,700	sf	amendments and mulch	0.5	$3,350		
Tree							
Trees (Terrace A)	69	ea	5-1/2" - 6" caliper shade tree	3,200	$220,800		
Tree grates	24	ea	6' dia round	2500	$60,000		
Tree well strip drains	69	ea	perforated drain pipe	125	$8,625		
Tree pit planting soil	1,500	cy	expanded tree growing zone, 3' depth, continuous from tree to tree, in most cases beneath paving, for 69 trees.	30	$45,000		
Irrigation	37,000	sf	popup sprayhead	2	$74,000		
Irrigation - Trees	2,500	lf	bubbler/popup	15	$37,500		
Landscape maintenance (1 year)	163,666	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$122,750		
Furniture							
Trash receptacles	7	ea		1,000	$7,000		
Recycling receptacles	7	ea		1,000	$7,000		
SS handrails	75	lf		300	$22,500		
SS perimeter guardrail	2,500	lf		400	$1,000,000		
Helpphone	2	ea		2,000	$4,000		
Bike rack	3	ea		1,000	$3,000		
Seatwalls	3,100	lf	18"h x36"w concrete seatwall	200	$620,000		
Lighting (all metal halide or LED)							
high mast lights	2	ea	single pole standard with multiple (6) aim-able fixtures	25,000	$50,000		
16' high pedestrian light fixtures	80	ea		2,500	$200,000		

Package 4 continued on the next page

Package 4 continued

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Surfaces							
Promenade, upper	12,000	sf	Concrete unit pavers	30	$360,000		
Promenade, lower	9,500	sf	Concrete unit pavers	35	$332,500		
Bridge, pedestrian surface	12,000	sf	Ipe wood decking, 1"x6" pre-grooved w/ SS clips http://www.advantagelumber.com/decking2.htm	28	$336,000		
Decomposed granite	10,000	sf	compacted, permeable walking surface, as by Stabilizer Solutions: http://www.stabilizersolutions.com/crush_stone1.html	1.65	$16,500		
East walk	11,000	sf	Concrete unit pavers	22	$242,000		
Secondary walks	4,000 sf		Concrete unit pavers	22	$88,000		
Utilities							
Water	500	lf	4" and 8" line	22.5	$11,250		
valves and cocks	3	ea		1,000	$3,000		
Fire	700	lf	6" line	22.5	$15,750		
hydrants	2	ea	Spaced 500'/ea	2,000	$4,000		
Sewer	500	lf	4", 6", and 8" line	50	$25,000		
manholes	1	ea		3,000	$3,000		
lift station	1	ea		50,000	$50,000		
SUBTOTAL					**$28,455,525**		
			Mobilization	10%	$2,845,552		
			Profit and Overhead	10%	$2,845,552		
			Master Plan Contingencies	25%	$7,113,881		
TOTAL						**$41,260,511**	**$49,512,613**

PACKAGE 5: RIVERFRONT PLAZA & TRANSIT CENTER
Total Area: 190,489 SQ.FT (4.35 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Demo of existing fountains, walls, and walkways	1	ls		48,000	$48,000		
Regrading to USACE specifications	2000	cy		14	$28,000		
Grade beam structural support	1	ls	to accommodate new pedestrian bridge terminating at levee walk	1,200,000	$1,200,000		
Architecture: transit station	1	ls		4,800,000	$4,800,000		
Relocate existing sculpture within new design	1	ls		4,000	$4,000		
New trees							
Along sidewalk	5	ea		3,200	$16,000		
Along rail tracks	17	ea		3,200	$54,400		
In groundcover slope	2	ea		3,200	$6,400		
On top of sloping landform	10	ea		3,200	$32,000		
Flowering grove	6	ea		2,400	$14,400		
Groundcover	9,590	sf		3.6	$34,524		
Sodded area	75,065	sf		1	$75,065		
Irrigation	84,655	sf	combined sf of groundcover and sodded areas, sf	2	$169,310		
Landscape maintenance (1 year)	190,500	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$142,875		
Pedestrian pavements	13,000	sf	20% pavers, 80% concrete	5.8	$75,400		
New fountain	1	ls	mechanical, filtration and electrical system	800,000	$800,000		
Premium pedestrian light fixtures	25	ea		25,000	$62,500		
SUBTOTAL					**$7,562,874**		

Package 5 continued on the next page

Package 5 continued

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
			Mobilization	10%	$756,287		
			Profit and Overhead	10%	$756,287		
			Master Plan Contingencies	25%	$1,890,719		
TOTAL						**$10,966,167**	**$13,159,401**

PACKAGE 6: CENTRAL TERRACE (B & C)
Total Area: 143,299 SQ.FT (3.3 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Bridges	6,000	sf	2 bridges that span the batture to the terrace - pedestrian only	300	$1,800,000		
Piles	220	ea	3x3' concrete piles to USACE spec 20'oc, from a top elevation of approx. 48 to resistance	15,000	$3,300,000		
Decking (structural)	1	ls	Concrete (sub) decking, 18' thick, resting on piles, articulated in numerous zones to accommodate planting soil depths for tree and vegetated areas (36" soil depth).	5,400,000	$5,400,000		
Marine edge I	1	ls	Heavy timber marine edge and compressive impact components to minimize structural damage, an image of which is included in the powerpoint presentation, slide 85, covering a vertical area between the elevations of 6 and 50, running the length of the structure.	2,750,000	$2,750,000		
Marine edge II	1	ls	Cleats, dolphins, utilities (electric, data, water, but not fuel) to accommodate visiting riverboats and ideally military warships during emergencies/courtesy visits.	1,750,000	$1,750,000		
Architecture: restroom pavilion	1	ea	18w x40l x20h custom architectural structure with toilets, lavatories, showers, changing tables	750,000	$750,000		
Tree							
Trees (Terraces B + C)	78	ea	5-1/2" - 6" caliper shade tree	3,200	$249,600		
Tree grates	29	ea	6' dia round	2,500	$72,500		
Tree well strip drains	78	ea	perforated drain pipe	125	$9,750		
Tree pit planting soil	1,900	cy	expanded tree growing zone, 3' depth, continuous from tree to tree, in most cases beneath paving, for 95 trees.	30	$57,000		
Irrigation	3,400	sf	popup sprayhead	2	$6,800		
Irrigation - Trees	2,000	lf	bubbler/popup	15	$30,000		
Landscape maintenance (1 year)	143,300	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$107,475		
Terrace Fountain (central)	1	ls	(3) 60hp submersible pumps, attached to the structural piers, generating 4600gal of water per minute per pump, through a 16" diameter manifold, discharging over a terrace-level 375' long stainless steel weir, including $1M for lighting.	3,550,000	$3,550,000		
Terrace Fountain electrical cost (central)	365	day	Energy consumption cost estimate for 16 hours per day, at 15-cent Kw-hour, for a 750 long fountain..	430	$156,950		
Furniture							
Trash receptacles	7	ea		1,000	$7,000		
Recycling receptacles	7	ea		1,000	$7,000		
SS handrails	75	lf		300	$22,500		

Package 6 continued on the next page

Package 6 continued

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
SS perimeter guardrail	2,000	lf		400	$800,000		
Helpphone	2	ea		2,000	$4,000		
Bike rack	4	ea		1,000	$4,000		
Seatwalls	3,100	lf	18"h x36"w concrete seatwall	200	$620,000		
Lighting (all metal halide or LED)							
high mast lights	2	ea	single pole standard with multiple (6) aim-able fixtures	25,000	$50,000		
LED flush mounted step lights	32	ea		500	$16,000		
16' high pedestrian light fixtures	85	ea		2,500	$212,500		
Surfaces							
Promenade, upper	6,800	sf	Concrete unit pavers	30	$204,000		
Promenade, lower	5,400	sf	Concrete unit pavers	35	$189,000		
Bridge, pedestrian surface	14,500	sf	Ipe wood decking, 1"x6" pre-grooved w/ SS clips, http://www.advantagelumber.com/decking2.htm	28	$406,000		
Decomposed granite	10,000	sf	compacted, permeable walking surface, as by Stabilizer Solutions: http://www.stabilizersolutions.com/crush_stone1.html	1.65	$16,500		
East walk	11,000	sf	Concrete unit pavers	22	$242,000		
Secondary walks	1,500	sf	Concrete unit pavers	22	$33,000		
Amphitheater	50,292	sf	Wood (douglas fir) clad amphitheater, stepping down from el 50 to el 35, with combination of wood ramps and pedestrian steps. Overall plan dimension of 381l x132w x15h	60	$3,017,520		
Sprayground surface	18,000	sf	2" depth custom rubber surface (http://nofault.com/products.php?action=show_products&id=1) Local BR firm, No Fault Sport Group should be able to provide a cost for this poured in place EDPM material.	8.5	$153,000		
Playground surface	18,000	sf	3" depth custom rubber surface (http://nofault.com/products.php?action=show_products&id=1) Local BR firm, No Fault Sport Group should be able to provide a cost for this poured in place EDPM material.	8	$144,000		
Sprayground play components	1	ls	Collection of water spraying devices activated by children and adults	1,500,000	$1,500,000		
Playground play components	1	ls	Collection of custom fabricated play structures	750,000	$750,000		
Utilities							
Water	500	lf	4" and 8" line	22.5	$11,250		
valves and cocks	3	ea		1,000	$3,000		
Fire	700	lf	6" line	22.5	$15,750		
hydrants	1	ea	Spaced 500'/ea	2,000	$2,000		
Sewer	500	lf	4", 6", and 8" line	50	$25,000		
manholes	1	ea		3,000	$3,000		
SUBTOTAL					**$28,448,095**		
			Mobilization	10%	$2,844,810		
			Profit and Overhead	10%	$2,844,810		
			Master Plan Contingencies	25%	$7,112,024		
TOTAL						**$41,249,738**	**$49,499,685**

PACKAGE 7: NORTH TERRACE
Total Area: 144,736.2 SQ.FT (3.3 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Bridges	10,800	sf	2 bridges that span the batture to the terrace - vehicular	300	$3,240,000		
Piles	220	ea	3x3' concrete piles to USACE spec 20'oc, from a top elevation of approx. 48 to resistance	15,000	$3,300,000		
Decking (structural)	1	ls	Concrete (sub) decking, 18' thick, resting on piles, articulated in numerous zones to accommodate planting soil depths for tree and vegetated areas (36" soil depth).	0	$5,400,000		
Marine edge I	1	ls	Heavy timber marine edge and compressive impact components to minimize structural damage, an image of which is included in the powerpoint presentation, slide 85, covering a vertical area between the elevations of 6 and 50, running the length of the structure.	0	$2,750,000		
Marine edge II	1	ls	Cleats, dolphins, utilities (electric, data, water, but not fuel) to accommodate visiting riverboats and ideally military warships during emergencies/courtesy visits.	0	$1,750,000		
Wetland barge	3	ea	Re-purposed 35x120' river barges, retrofitted with 42" high perimeter SS guardrail, and douglas fir wood decking. Mechanical adaptation to circulate and regulate the exchange of river water through the hold of the vessel to support the growth of wetland planting/habitat, all the while maintaining bouyancy. MEP connections to top of terrace, to convey all stormwater through the wetland barge before release to the river.	400,000	$1,200,000		
Wetland plants	12,000	sf	comprising total surface area of all three barge hold areas	2.5	$30,000		
Architecture: observation tower	1	ea	25w x36l x100h elliptical plan custom architectural structure, with two elevators, egress stair, clad in 80% stainless steel and 20% glass enclosed observation platform. High powered (bright) vertically aimed light beacon.	1 5,600,000	$5,600,000		
Terrace Fountain (north)	1	ls	(3) 60hp submersible pumps, attached to the structural piers, generating 4600gal of water per minute per pump, through a 16" diameter manifold, discharging over a terrace-level 375' long stainless steel weir, including $1M for lighting.	3,500,000	$3,500,000		
Terrace Fountain electrical cost (north)	365	day	Energy consumption cost estimate for 16 hours per day, at 15-cent Kw-hour, for a 750 long fountain.	430	$156,950		
Turf sod	22,000	sf		1	$22,000		
Topsoil	3,500	cy	36" depth	20	$70,000		
soil prep	22,000	sf	amendments	0.5	$11,000		
Garden	6,700	sf		100	$670,000		
Topsoil	750	cy	36" depth	20	$15,000		
Planting soil	100	cy	36" depth	30	$3,000		
soil prep/mulch	6,700	sf	amendments and mulch	0.5	$3,350		
Tree							
Trees (Terraces D + E)	64	ea	5-1/2" - 6" caliper shade tree	3,200	$204,800		
Tree grates	42	ea	6' dia round	2,500	$105,000		
Tree well strip drains	64	ea	perforated drain pipe	125	$8,000		
Tree pit planting soil	2,450	cy	expanded tree growing zone, 3' depth, continuous from tree to tree, in most cases beneath paving, for 64 trees.	30	$73,500		
Irrigation	33,000	sf	popup sprayhead	2	$66,000		
Irrigation - Trees	2,500	lf	bubbler/popup	15	$37,500		
Landscape maintenance (1 year)	144,750	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$108,563		

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Package 7 continued

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Furniture							
River Terrace Fountain	1	ls	375' linear fountain, mounted on the lower lip of the River Terrace superstructure, with a stainless steel weir. (3) 60hp submersible pumps mounted on the vertical piles (easternmost row) convey river water to to the weir for drop back to the river.	3,550,000	$3,550,000		
Trash receptacles	6	ea		1,000	$6,000		
Recycling receptacles	6	ea		1,000	$6,000		
SS handrails	75	lf		300	$22,500		
SS perimeter guardrail	2,500	lf		400	$1,000,000		
Helpphone	2	ea		2,000	$4,000		
Bike rack	3	ea		1,000	$3,000		
Seatwalls	3,100	lf	18"h x36"w concrete seatwall	200	$620,000		
Lighting (all metal halide or LED)							
high mast lights	2	ea	single pole standard with multiple (6) aim-able fixtures	25,000	$50,000		
16' high pedestrian light fixtures	85	ea		2,500	$212,500		
Surfaces							
Promenade, upper	15,260	sf	Concrete unit pavers	30	$457,800		
Promenade, lower	12,100	sf	Concrete unit pavers	35	$423,500		
Bridge, pedestrian surface	12,000	sf	Ipe wood decking, 1"x6" pre-grooved w/ SS clips, http://www.advantagelumber.com/decking2.htm	28	$336,000		
Decomposed granite	10,000	sf	compacted, permeable walking surface, as by Stabilizer Solutions: http://www.stabilizersolutions.com/crush_stone1.html	1.65	$16,500		
East walk	11,340	sf	Concrete unit pavers	22	$249,480		
Secondary walks	4,000	sf	Concrete unit pavers	22	$88,000		
Fieldturf	26,100	sf	Proprietary artificial grass surface/synthetic cross section: http://www.fieldturf.com/product/designConstruction.cfm ($8/sf in 2004 dollars)	10	$261,000		
Utilities							
Water	500	lf	4" and 8" line	22.5	$11,250		
valves and cocks	4	ea		1,000	$4,000		
Fire	700	lf	6" line	22.5	$15,750		
hydrants	2	ea	Spaced 500'/ea	2,000	$4,000		
Sewer	500	lf	4", 6", and 8" line	500	$25,000		
manholes	1	ea		3,000	$3,000		
SUBTOTAL					**$35,693,943**		
			Mobilization	10%	$3,569,394		
			Profit and Overhead	10%	$3,569,394		
			Master Plan Contingencies	25%	$8,923,486		
TOTAL						**$51,756,217**	**$62,107,460**

PACKAGE 8: OLD STATE CAPITOL GROUNDS
Total Area: 151,165 SQ.FT (3.0 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Restoration of OSC grounds	1	ls	rough estimate of an unknown design, including custom fabrication of (3) cast iron gates for the south elevation.	4,000,000	$4,000,000		
Landscape maintenance (1 year)	152,000	sf	Annual maintenance costs, including personnel salary, fuel, irrigation and turf maintenance, power washing.	0.75	$114,000		
SUBTOTAL					**$4,114,000**		
			Mobilization	10%	$411,400		
			Profit and Overhead	10%	$411,400		
			Master Plan Contingencies	25%	$1,028,500		
TOTAL						**$5,965,300**	**$7,158,360**

PACKAGE 9: BRICKYARD PEDESTRIAN BRIDGE
Total Area: 1,356,360 (31 ACRES)

item	quantity	unit	description	unit cost	estimate	2006 dollars	2010 dollars
Pedestrian bridge	1	ls	Connecting the Brickyard to the Municipal Dock	3,800,000	$3,800,000		
SUBTOTAL					**$3,800,000**		
			Mobilization	10%	$380,000		
			Profit and Overhead	10%	$380,000		
			Master Plan Contingencies	25%	$950,000		
TOTAL						**$5,510,000**	**$6,612,000**