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Route 29 Boulevard Feasibility Assessment Report

City of Trenton, Mercer County, New Jersey

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TABLE OF CONTENTS

List of Figures

List of Tables

List of Photographs

List of Appendices

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This Feasibility Assessment (FA) Report was prepared by Dewberry-Goodkind, Inc. (Dewberry) as part of the Route 29 Boulevard Study. The project is located in the City of Trenton, Mercer County, New Jersey. The portion of Route 29 that has been studied as part of this FA includes the southern section of Route 29, between the Richey Place/Calhoun Street interchange and the Cass Street intersection. This section is 1.8 miles in length and is bounded on the west by the Delaware River and some wooded lands; and on the east by West State Street and South Warren Street.

The Route 29 Boulevard Study is part of a shared vision to revitalize downtown Trenton and reconnect the city to its waterfront. Several local, state and federal agencies are working together with the shared goal of unifying Trenton's diverse downtown areas into a cohesive mix of recreational and mixed uses.

As part of this redevelopment effort, the New Jersey Department of Transportation (NJDOT) is responsible for the FA portion of the Route 29 Boulevard Study and is evaluating the potential replacement of the existing Route 29 freeway with an urban boulevard that would be more consistent with the context of a redeveloped major downtown. The purpose of this project is to stimulate economic development, improve traffic safety and connections to the downtown street network, reduce flooding, provide increased open space and improve access to the Delaware River by replacing the existing Route 29 freeway with an urban boulevard.

After consultation with key stakeholders, the Route 29 Inland Alternative was selected as the Preferred Alternative (PA). The PA involves relocating the existing Route 29 alignment, from approximately north of Route 1 to the Calhoun Street Interchange. The horizontal alignment of the proposed Route 29 Boulevard turns northeast from its current alignment just north of the Trenton Makes Bridge and traverses within the existing State-owned surface parking lots. It then crosses over the Assunpink Creek on a curve and meets the existing Route 29 alignment near the entrance to the State House garage. The proposed Route 29 vertical alignment is generally above the 100-year flood elevation between the Trent House and the Assunpink Creek and over the 25-year flood elevation south of the Assunpink Creek and the State House garage.

Numerous engineering, environmental and urban design studies were conducted in order to examine the PA. During the FA process, the Route 29 project team coordinated with various public and private projects within the Route 29 Boulevard study area and carried out an extensive public outreach program. As part of this ongoing program, meetings and workshops were held with stakeholder groups in order to solicit their feedback on the project.

The FA studies, along with the coordination of key stakeholders, resulted in major project findings that will help shape the future efforts on the Route 29 Boulevard. These include:

- The concept of identifying a Master Developer was formed. This developer will need to ensure that the embankment required for the future streets and buildings is balanced by the removal of the existing Route 29 freeway fill, as required by the New Jersey Department of Environmental Protection regulations for zero net fill in the Flood Hazard Area north of Route 1.
- The total project cost is now estimated at approximately $140 million for the proposed roadway network, and it is anticipated that the Master Developer would be responsible for these costs. Therefore, a high-density type development will be needed to generate the revenue needed for the investment.
- The City and the Capital City Redevelopment Corporation (CCRC) are undertaking a financial/marketing analysis to evaluate the proposed development. This analysis will be the basis for attracting a Master Developer for the downtown area redevelopment.
- A Memorandum of Understanding was signed by the key project stakeholders to show their commitment for the economic and revitalization of downtown Trenton.
- At the conclusion of the FA process, the Route 29 Boulevard project will transition to a Joint Coordination Committee, comprised of 12 key agencies, chaired by the City and CCRC, who will advance this project.
- A list of potential break-out projects was prepared that could be implemented in advance of Route 29 project.

CHAPTER 1: INTRODUCTION

Photograph 1-1: Existing Downtown Trenton

1.0 INTRODUCTION

This Feasibility Assessment (FA) Report was prepared by Dewberry-Goodkind, Inc. (Dewberry) as part of the Route 29 Boulevard Study. The project is located in the City of Trenton, Mercer County, New Jersey. The Route 29 Boulevard Study is part of a shared vision to revitalize downtown Trenton and reconnect the city to its waterfront (*see Photograph 1-1*). Several local, state and federal entities are working together with the shared goal of unifying Trenton's diverse downtown areas into a cohesive mix of recreational and mixed uses.

As part of this redevelopment effort, the New Jersey Department of Transportation (NJDOT) is managing the Route 29 Boulevard Study in order to evaluate the potential replacement of the existing Route 29 freeway with an urban boulevard that would be more consistent with the context of a redeveloped major downtown. This new urban boulevard would support a network of downtown streets, provide open space along the Delaware River to increase pedestrian and bicycle access to the river, increase social and economic activity in Trenton and provide development and redevelopment opportunities.

CHAPTER 2: PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

The Route 29 Boulevard Study involves the conversion of Route 29 from a limited access, high-speed urban freeway to an urban boulevard with a lower speed limit and improved intersections. It also involves opening additional street access to the downtown area and providing for crosswalks and improved pedestrian/bicycle circulation to the waterfront and downtown area.

2.1 Project Fact Sheet

A project Fact Sheet was prepared in August 21, 2007 which was distributed to the Scoping Team members in advance of the September 7, 2007 Scope Team meeting.

2.2 Project Location

The project is located in the City of Trenton, Mercer County, New Jersey. Route 29 runs in a north-south direction along the eastern bank of the Delaware River and virtually cuts off access to the riverfront from the downtown in this area *(see Figure 2-1)*. Prior to construction of Route 29, this area was the southern and western extension of Stacy Park. Remnants of this park still remain beneath the overgrown vegetation between the shoreline of the Delaware River and Route 29.

Between the Cass Street and Sullivan Way signalized intersections, Route 29 exists as a four-lane Limited Access Urban Freeway with ramps to Market Street, the State Office Complex, Warren Street, Calhoun Street and Parkside Avenue. This section of Route 29 is straight and flat, without any signals (except at South Warren Street and Cass Street). Please see Appendix H for project photographs.

2.3 Project Limits

The portion of Route 29 that has been studied as part of the current FA includes the southern section of Route 29, between the Richey Place/Calhoun Street interchange and the Cass Street intersection. This section is 1.8 miles in length and is bounded on the west by the Delaware River and some wooded lands; and on the east by West State Street and South Warren Street. Please see Appendix A for the Route 29 Straight Line Diagram.

2.4 Project Background

Like many cities, Trenton has experienced a rich and diverse history. It was

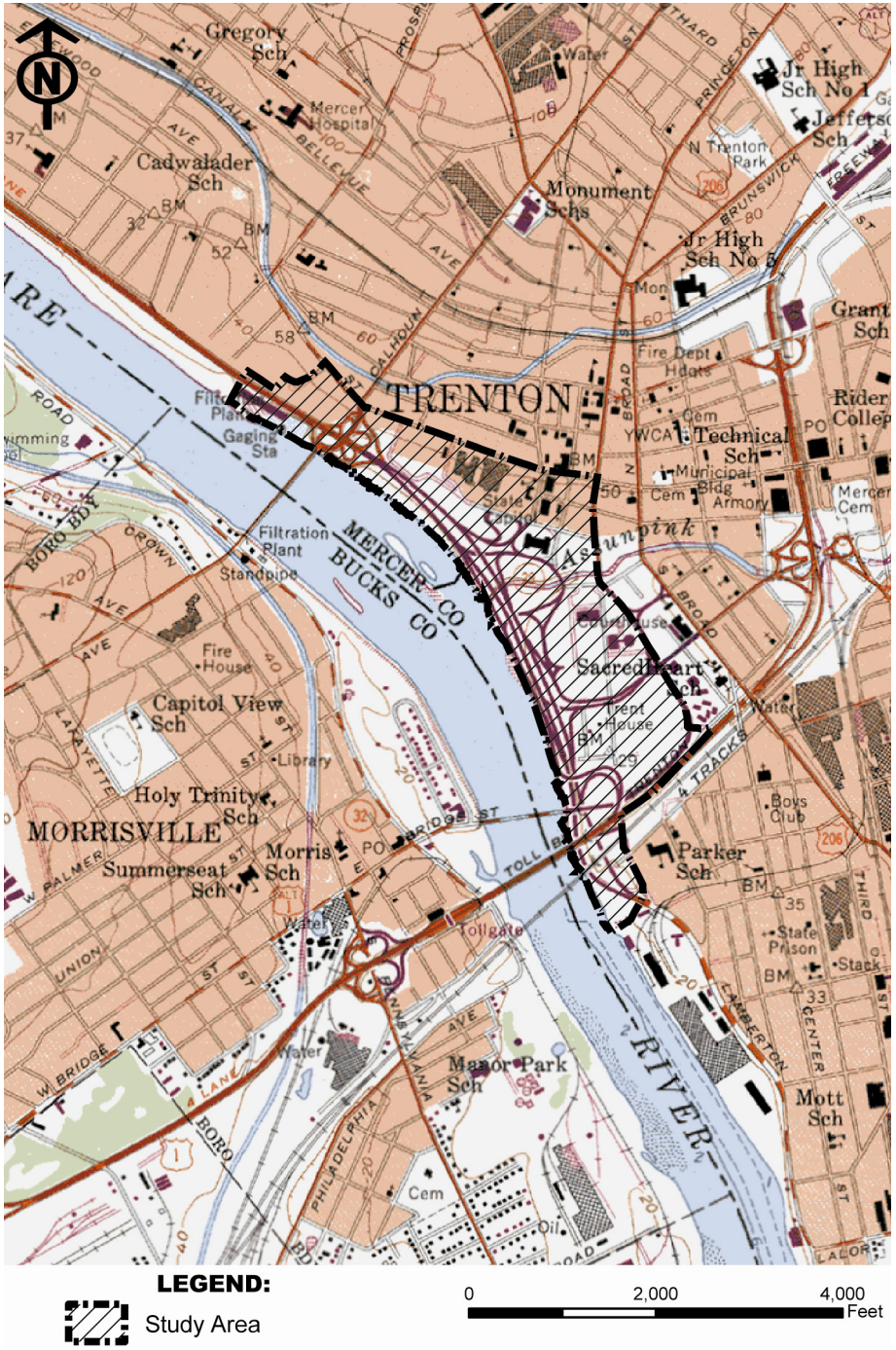

Figure 2-1: Project Location

Photograph 2- 1: 1893 Morrisville Delaware River Improvement Company Illustration of Downtown Trenton

an important center of life and trade during the Colonial period and was the site of some of the most significant battles of the Revolutionary War.

Photograph 2-2: Trenton Manufacturing in Early 1900s

Trenton became the state capital in 1790 and became a major manufacturing center during the late 1880s and early 1900s *(see Photographs 2-1 and 2-2).* The city's neighborhoods began to decline in the 1950s as middle-class residents left the city and migrated to the surrounding suburbs. By the 1970s many neighborhoods had become crime-ridden and blighted.

In 1987 the Capital City Redevelopment Corporation (CCRC) was created by an act of the New Jersey State Legislature and charged with revitalizing Trenton's Capital District for the benefit of all citizens of the State. As required by the legislation, the CCRC adopted a 20-year Capital City Renaissance Plan in 1989 to guide "the use of lands within the district in a manner which promotes the economic vitality of the district and enhances the quality of the public environment" (*see Figure 2-2).* This plan contained recommendations for improving and simplifying traffic flow on the local streets and major highways (including Route 29) that access the Capital District, as well as providing improved pedestrian access between downtown Trenton and the Delaware River waterfront. As part of the redevelopment effort, the CCRC and the City of Trenton adopted a redevelopment plan for the downtown that called for the conversion of Route 29 from a freeway to an urban boulevard *(see Figure 2-3)*.

Figure 2-2: CCRC Renaissance Plan

Figure 2-3: CCRC Redevelopment Plan

In January 2008, the New Jersey Department of Environmental Protection (NJDEP) adopted a master plan to establish a Capital Park which would reconnect the City of Trenton to the Delaware River. The plan identified the

Figure 2-4: Trenton Master Plan Concept of Capital Park

Route 29 Boulevard Project as a key project to be coordinated with the park's development due to the overlap of the two projects' footprints, their shared goals of flood control, walkability and waterfront access, *(see Figure 2-4)*. and the fact that Route 29 currently blocks access to the river

In May 2008, the City of Trenton released a Downtown Capital District Master Plan. The conversion of Route 29 into an urban boulevard was included in the vision of this master plan, which, similar to the other plans and studies completed to date, also sought to promote economic development and improve access to the Delaware River.

The NJDOT, primarily concerned with the operations and maintenance of Route 29, was aware of the redevelopment potential for the Capital District. The NJDOT understood that the conversion of Route 29 to a boulevard would best fit the context of the downtown area and that it would bring tremendous benefits to the city by encouraging redevelopment in this area. Conversion of Route 29 would allow for improved access to the downtown area and waterfront and also would greatly improve street network connectivity. The NJDOT was also concerned about the high accident rates, traffic congestion and flooding that occurs along this segment of Route 29.

The NJDOT carried out and completed the Concept Development (CD) process for Route 29 from Cass Street to Sullivan Way. This process is summarized in a *Route 29 Boulevard Study—Phase 1 Conceptual Development Memorandum* issued in June 2005. This memorandum detailed a collaborative planning process which included significant input from NJDOT officials, local and state leaders, technical consultants, various stakeholders and local residents. Please see Appendix B for plans of the alternatives considered during the CD process.

Upon completion of the CD process, it was recommended that Route 29 be realigned further inland. As part of the FA, this alternative was advanced and further analyzed as project constraints were identified and more information became available.

2.5 Feasibility Assessment Process Goals

When the project advanced from CD to FA, the NJDOT strived to work collectively with the CCRC, the City of Trenton, Mercer County and other stakeholders in evaluating and developing a design alternative for Route 29 that would best achieve the wide variety of goals and objectives of its many stakeholders. The idea was to plan a smarter transportation network and land use direction that would achieve the following desired outcomes:

- Maximize safe physical and visual connections between the community and the Delaware Riverfront.
- Strengthen established neighborhoods and the capital district.
- Facilitate redevelopment of underutilized land within the capital district.
- Create a context sensitive network of streets and open spaces.
- Provide safe and convenient modal choices to encourage the use of transit, cycling and walking.
- Accommodate motorists in a safe manner at reduced speeds.

2.6 Justification for Feasibility Assessment Process

The establishment of the Office of Economic Growth under Executive Order 50 highlighted the importance of this project in promoting sustainable economic growth in the state's capital. The NJDOT, primarily concerned with the operations and maintenance of Route 29, is aware of the redevelopment potential for the Capital District and understands the request for conversion of Route 29 to a boulevard and the benefits that this

will bring to the City of Trenton. In his open letter on the *Future in Transportation*, NJDOT Commissioner Kris Kolluri states that future NJDOT projects require the "Integration of Land Use and Transportation Planning." This project seeks to address the existing lack of integration between land use and transportation in New Jersey's Capital City.

The CCRC, the City of Trenton, the New Jersey Economic Development Authority and the State Treasury Department have reinforced the broad support that exists for the project and the need to complete the FA process.

Safety is a big concern for both the NJDOT and the City of Trenton. Route 29, between Richey Place/Calhoun Street and Cass Street is situated between a residential community on the east and Stacy Park, a waterfront park, to the west. This section of Route 29 has experienced numerous crashes involving both vehicles and pedestrians—some involving fatalities—due to high vehicular speeds, lack of pedestrian capacity and out of direction vehicle miles required to navigate from Route 29 to downtown Trenton.

This section of Route 29 is high speed, having a combination of grade-separated interchanges and a signalized intersection at South Warren Street. Motorists travel extremely fast in this area which could be a major contributing factor in most collisions. Converting Route 29 to an urban boulevard, through a new alignment and context sensitive cross-section, installing traffic signals, connecting the side streets and installing pedestrian crosswalks, in conjunction with a matching, slower speed limit *(see Table 2-1)* will in effect self-enforce slower speed through design and thus substantially increase safety. This will help accomplish several goals—increase safety, connect the community to the waterfront and help establish the framework for the needed land use changes, such as the downtown development of parks and mixed-use buildings**.**

When Route 29 is transformed to a boulevard to reclaim the waterfront for recreation and to stimulate economic development and redevelopment, it is expected that pedestrian traffic in this area will increase.

2.7 Traffic Data

2025 ADT	62,100 (Route 29—two-way)
T (truck %)	4%
D (directional distribution)	66%
V(posted)	Proposed 25 mph
V(design)	Route 29—35 mph

Table 2-1: Traffic Data

2.8 Design Standard

The design standard for this FA process is the NJDOT Design Manual.

2.9 Highway Section

The existing Route 29 is a four-lane Limited Access Urban Freeway.

2.10 Structures

There are 26 existing bridge structures and one culvert structure located within the study area. These structures are described in *Table 2-2*.

2.11 Collision Analysis

Based on the CD findings overall, collision occurrence along Route 29 exceeds the statewide average for roadways of this type. A total of 306 collisions occurred over a three-year period as compared to the statewide average of 252 collisions from milepost 2.94 to milepost 6.18. From 2001 through 2003, the location of the highest collision incidence was the Calhoun Street interchange where 99 collisions occurred—73 of these were rear-end collisions.

As part of the FA, the NJDOT's Bureau of Safety Programs provided collision data along Route 29 for the section of roadway between milepost 2.94 and milepost 4.59. The time period covered was from January 1, 2004 to December 31, 2006. Two separate cross sections exist within the study area. From milepost 2.94 to milepost 4.07 the cross section is four lanes with shoulder and a barrier median. The actual crash rate for this location is 3.29 which is above the statewide average of 1.97 for 2006. From milepost 4.07 to milepost 4.59 the cross section is four lanes with shoulder and a grass median. The actual crash rate for this location is 5.41 which is above the statewide average of 1.81 for 2006.

Culvert between Warren Street and Broad Street Bridges	This existing concrete culvert over the Assunpink Creek is in very poor condition and has recently partially collapsed. It is possible that this culvert will be removed as part of the proposed project. The ownership of the culvert is currently undetermined.
Bridge Number 110-0001	This existing pre-stressed concrete box beam or girder bridge carries Warren Street over the Assunpink Creek. This bridge will remain under the proposed project. This bridge is owned and maintained by Mercer County.
Bridge Number 110-0002	This existing masonry arch bridge carries Broad Street over the Assunpink Creek. This bridge will remain under the proposed project. This bridge is owned and maintained by the NJDOT. This bridge is scheduled for strengthening/rehabilitation by the NJDOT.
Bridge Number 110-6150	This existing concrete frame bridge carries Calhoun Street over Route 29. This bridge will remain under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 110-6155	This existing steel stringer/multi-beam or girder bridge carries Route 29 northbound over Willow Street Ramp C1. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1151	This existing steel stringer/multi-beam or girder bridge carries Route 29 northbound over Market Street Ramp F. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1152	This existing steel stringer/multi-beam or girder bridge carries Route 29 over Ramp D. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1153	This existing steel stringer/multi-beam or girder bridge carries a Route 29 service road over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1154	This existing steel stringer/multi-beam or girder bridge carries Route 29 Ramp B over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1155	This existing steel stringer/multi-beam or girder bridge carries Route 29 northbound over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1156	This existing steel stringer/multi-beam or girder bridge carries Route 29 southbound over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1157	This existing steel stringer/multi-beam or girder bridge carries Route 29 Ramp A over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 113-1158	This existing concrete-frame bridge carries Memorial Drive over the Assunpink Creek. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the NJDOT.
Bridge Number 330-0021	This existing pre-stressed concrete stringer/multi-beam or girder bridge carries Route 1 over Route 29 northbound. This bridge is to remain under the proposed project. This bridge is owned and maintained by the Delaware River Joint Toll Bridge Commission (DRJTBC).
Bridge Number 330-0022	Bridge Number 330-0022: This existing steel stringer/multi-beam or girder bridge carries Route 1 over Exit Ramp N to Warren Street. This bridge is to remain under the proposed project. This bridge is owned and maintained by the DRJTBC.
Bridge Number 330-0023	This existing steel stringer/multi-beam or girder bridge carries Route 29 Ramps Y and I over Bridge Street. This bridge will be demolished under the proposed project. This bridge is owned and operated by the DRJTBC.
Bridge Number 330-0024	This existing steel stringer/multi-beam or girder bridge carries Route 29 Ramp Y over Route 29. This bridge is to be demolished under the proposed project. This bridge is owned and maintained by the DRJTBC.
Bridge Number 330-0025	This existing steel stringer/multi-beam or girder bridge carries Route 1 over Bridge Street. This bridge is to remain under the proposed project. This bridge is owned and maintained by the DRJTBC.
Bridge Number 330-0030	This existing steel pre-stressed concrete stringer/multi-beam or girder bridge carries Route 1 Ramp N over Bridge Street. This bridge is to remain under the proposed project. This bridge is owned and maintained by the DRJTBC.
Bridge Number Unknown	This existing bridge carries an access road (formerly Jackson Street) across the Assunpink Creek. This bridge is to remain under the proposed project. The ownership of this bridge is unknown at this time.
Trenton Lower Free Bridge	This existing through steel truss bridge carries South Warren Street over the Delaware River. This bridge is to remain under the proposed. This bridge is owned and operated by the DRJTBC.
Route 1 Bridge over the Delaware River	This existing bridge carries Route 1 over Route 29 southbound and the Delaware River. This bridge is to remain under the proposed project. This bridge is owned and operated by the DRJTBC.
Amtrak Railroad Bridges	These four existing railroad bridges cross Bridge Street, South Warren Street, Route 29 and the Delaware River. These bridges are to remain under the proposed project. These bridges are owned and operated by Amtrak.
Proposed Structures	At least two structures are proposed to carry the Route 29 Boulevard over the Assunpink Creek near the existing Memorial Drive Bridge. These bridges would also connect the proposed Market Street to the extended Barrack Street (a.k.a. Memorial Drive) in front of the Trenton and Mercer County War Memorial. Another proposed bridge would carry the Route 1 southbound ramp (Ramp I) over South Warren Street.

Table 2-2: Bridge Structures within the Study Area

For the years 2004 to 2006, various collision types were overrepresented within the project vicinity when compared to 2004 through 2006 statewide During the three-year period, there were 289 total collisions within the project location. Of these collisions, 153 were same-direction rear-end collisions. This represents approximately 53% of the collisions throughout the project area. The combination of a number of weave movements, reduced sight distances due to the generally rolling terrain and queuing in the vicinity of on and off ramps along with excessive approach speeds may have led to the high number of same-direction rear-end collisions. Please see Appendix E for collision diagrams.

Route 29 and Cass Street

At the signalized intersection of Route 29 and Cass Street *(see Photograph 2-3)*, a number of collision types are overrepresented. During the three-year period, 20 same-direction rear-end collisions occurred. This represents 46.5% of the collisions at the intersection which is above the statewide average of 37.7%. The majority of the collisions occurred on the northbound approach. The signal at the intersection is the first traffic signal approaching the corridor for vehicles traveling northbound from I-295 and I-195. This, combined with excessive approach speeds, may have contributed to the high number of same-direction rear-end collisions.

A total of ten same-direction sideswipe collisions occurred during the same time period. These represent 23.3% of the collisions at the intersection which is above the statewide average of 10%. The majority of the collisions occurred on the southbound approach. At the intersection, the southbound approach has one dedicated left-turn lane, two through lanes and one dedicated right-turn lane. Inadequate or inappropriate signing for the left and right-turn auxiliary lanes may contribute to the high number of same-direction sideswipe collisions at the intersection.

Route 29 and South Warren Street

At the signalized intersection of Route 29 and South Warren Street, a number of collision types are overrepresented. During the three-year period, 32 same-direction rear-end collisions occurred. This represents 53.3% of the collisions at the intersection which is above the statewide average of 37.7%. Many of the same-direction rear-end collisions that occurred on the northbound approach occurred after the intersection and involved vehicles merging onto Route 29 northbound from South Warren

averages. To develop statewide averages for the three-year period, the weighted average for 2004, 2005 and 2006 were calculated. Street. Excessive speeds on Route 29 and an inadequate acceleration lane for the merging traffic may contribute to the high number of same-direction rear-end collisions. A lack of sight distance associated with the horizontal curve north of the intersection, in conjunction with excessive speeds, may have contributed to the high number of same-direction rear-end collisions on the southbound approach.

Photograph 2-3: Traffic at Route 29 and Cass Street

A total of 14 same-direction sideswipe collisions occurred during the same time period. These represent 23.3% of the collisions at the intersection which is above the statewide average of 10%. The majority of the collisions occurred on the southbound approach. The southbound approach has three through lanes at the intersection. Immediately following the intersection, a lane drop occurs. Many of the same-direction sideswipe collisions occur at the lane drop. Inadequate or inappropriate signing for the lane drop may contribute to the high number of same-direction sideswipe collisions.

Five fixed-object collisions occurred during the three-year period. These represent 8.3% of the collisions at the intersection which is above the statewide average of 4.6%. Excessive speeds on Route 29 may contribute to the high number of fixed-object collisions at the intersection.

Calhoun Street Interchange

During the three-year period, a total of 72 same-direction rear-end collisions and 23 same-direction sideswipe collisions occurred in the vicinity of the Calhoun Street interchange *(see Photograph 2-4)*. These represent 62.1% and 19.8% of the collisions within the area of the interchange, respectively, which are above the statewide averages of 49.6% and 17.5%. Excessive speeds on Route 29 combined with weave movements and peak-hour traffic queues on the ramps leading to Bridge Street may have contributed to the high number of same-direction rear-end and sideswipe collisions within the vicinity of the interchange.

Photograph 2-4: Traffic at Calhoun Street Bridge Looking West

CHAPTER 3: PURPOSE AND NEED

Photograph 3-1: Existing Route 29 Corridor

3.0 PURPOSE AND NEED

3.1 Purpose

The purpose of this project is to stimulate economic development, improve traffic safety and connections to the downtown street network, reduce flooding, provide increased open space and improve access to the Delaware River by replacing the existing Route 29 freeway with an urban boulevard.

3.2 Need

The individual needs of the project are summarized below:

3.2.1 Improve Safety and Connections to the Downtown Street Network

Route 29, between Richey Place/Calhoun Street and Cass Street is situated between a residential community on the east and Stacy Park, a waterfront park, to the west and there is a significant accident history along this section of Route 29 *(see Photograph 3-1)*. Many of these accidents involve vehicles traveling at high rates of speed and some accidents involve pedestrians. The existing roadway has limited signalized crossings that can be considered contributing factors to the high number of accidents. As discussed in greater detail in Chapter 2, the NJDOT crash data for the period between 2004 and 2006 indicates that 289 crashes within the project limits exceeded the state-wide average for a similar facility. This section of Route 29 is high speed, having a combination of grade-separated interchanges and a signalized intersection at South Warren Street. Motorists travel in excess of the posted speed limit in this area (40 mph from Cass Street to Market Street and 50 mph to the north of Market) which could be a major contributing factor in most collisions.

The existing street network in the areas north, south and east of Trenton's downtown core generally follow a grid pattern of roads that are parallel and perpendicular to the river. In the downtown core, the adjacent street grid has been interrupted by the Route 29 freeway—essentially providing very limited access points to the downtown area. As a result, this roadway is burdened with carrying a majority of the traffic moving in and out of the downtown area. When faced with congestion at rush hour (or after a minor-league baseball game), drivers do not have much choice but to wait out the congestion.

Photograph 3-2: Flooding Along Route 29

3.2.2 Flooding

Within the project limits, Route 29 serves as the edge of the Delaware River floodway. The 100-year flood plain extends further inland between the Calhoun Street Bridge and Cass Street and also along the Assunpink Creek. Many of the parking areas for government workers are located within the floodplain limits. Recent flooding that has occurred within downtown Trenton has caused the closure of Route 29 and various state buildings for extended periods *(see Photograph 3-2)*. The storms of 2005 and 2006 closed government offices for several days and were approximately equivalent to a 50-year flood. Should the New Jersey regulatory flood (which is equivalent to the 100 year flood plus 25%) ever be realized, road and building closures, as well as clean up costs, would be significantly higher than those experienced in 2005 and 2006.

Photograph 3-3: Aerial View of Route 29

3.2.3 Access to the Delaware River Waterfront

In the early 20th century, Stacy Park was developed along the Delaware River. The park extended from the mouth of the Assunpink Creek and continued to the Trenton Water Power Canal at the base of the State House. In the early 1950s this open space was transformed when Route 29 was constructed along the river, thus destroying the open space and riverfront access provided by Stacy Park. Over the years, access to the waterfront has become fragmented and underused, cut off from the rest of the city and given over to roadways and parking lots.

Route 29 in its current configuration acts as a barrier between the downtown and the Delaware River—essentially restricting access to the river and limiting open spaces available to the public *(see Photograph 3-3)*. Within the project area there is limited open space along the river and there are no parking areas located adjacent to the open space along the river. In addition, there are very few safe pedestrian and bicycle crossings on Route 29 that provide access to the waterfront.

3.2.4 Economic Development

Predominant land uses along the Route 29 corridor within the project limits include institutional uses (government facilities and historic sites) and surface parking areas. Economic growth is limited in this area as the expansive areas of surface parking limit the available land for development. As discussed above, flooding as well as the poor connection to the downtown street grid network also limit the redevelopment opportunities on street blocks located within the study area.

3.3 Goals and Objectives

A set of project goals and objectives has been developed based on the project's purpose and need described earlier, findings from previous studies and goals developed during stakeholder workshops, Public Information Centers and meetings with the Senior Leadership Group. The goals and objectives are a compendium of statements made by the NJDOT, agencies and other stakeholders in the project. As such, the goals and objectives are wide-ranging and represent different levels of priority for each stakeholder.

While the project may not be able to satisfy all goals and objectives listed herein, it seeks to address as many as possible. The project's goals and objectives are as follows:

- Enhance the quality of life for the local Trenton community by providing economic growth opportunities.

- Reconfigure parking areas as part of the new development that would replace lost surface parking.

- Enhance bicycle and pedestrian opportunities throughout the project corridor.
- Provide opportunities for intermodal use within the project area.
- Provide enhanced view corridors to important historic sites, such as the Trent House and War Memorial.
- Reclaim the Delaware River waterfront and provide access to the shore and parks along the Delaware River.
- Stimulate major economic growth in the downtown area that would spread to other parts of the city.
- Provide urban redevelopment opportunities to Trenton by creating new blocks that will be available as developable parcels of land for a mix of residential and commercial high-density buildings *(see Figure 3-1)*.
- Improve traffic safety and connections to the downtown street network.
- Reduce roadway flooding.
- Create the open space for the NJDEP Capital Park initiative.
- Avoid, minimize, or mitigate environmental impacts.

Figure 3-1: Proposed Development Illustration in Downtown Trenton

CHAPTER 4: ALTERNATIVES CONSIDERED

4.0 ALTERNATIVES CONSIDERED

As part of the CD process, two concepts for the Route 29 Boulevard and three interchange options for the Calhoun Street Interchange were developed. Alternative 1 proposed to maintain Route 29 within its current right-of-way (*see Figure 4-1*), while Alternative 2 proposed to realign Route 29 further inland (*see Figure 4-2*).

Figure 4-1: Alternative 1 (Maintain Existing Right-of-Way)

In both variations, the reconfigured Route 29 was shown as a five-lane, at-grade street having two northbound and two southbound lanes and a left turn lane (where appropriate) together with parallel on-street parking. In the downtown area, the Route 29 Boulevard would serve as a spine for the new network of streets and would create the framework for a waterfront promenade. The proposed network of streets would serve as the foundation for the redevelopment of prime, underutilized, urban, waterfront land. Both variations were expected to recapture approximately 18 acres of land from under the ramps and surface parking lots. The shape of the redevelopment was primarily dependant on the NJDEP Flood Hazard Area (FHA) and the requirement to provide a "zero net fill" for the project.

4.1 Alternative 1 (Maintain Existing Right-of-Way)

It was anticipated that Alternative 1 would require less coordination among state agencies as the right-of-way is entirely owned by the NJDOT. In addition, it was anticipated that there may be construction cost savings through the re-use of existing bridges over the Assunpink River. Drawbacks associated with Alternative 1 included the fact that the character of redevelopment along the boulevard would be less versatile than that of the boulevard away from the water. The construction of a boulevard on the same alignment as the existing freeway would also be very difficult and costly due to construction staging, due to the major grade differences between existing and proposed roadways.

Figure 4-2: Alternative 2 (Inland Option)

4.2 Alternative 2 (Inland Option)

Alternative 2 would reestablish a waterfront park and would help frame view corridors toward the proposed Capital Park as well as the Trenton and Mercer County War Memorial. The relocation of Route 29 inland would result in development parcels separated from the river only by low-volume streets and parkland, thus promoting mixed land-use development and leveraged land values which could be utilized to provide funding for the

proposed project. The downtown section of the boulevard would support active ground floor uses, with the potential for office or residential uses on upper floors. Additionally, the smaller and more pedestrian-friendly street along the waterfront could also support many destination-type developments.

Alternative 2 was expected to result in significant construction cost savings and time savings. In addition, it was expected that under Alternative 2, partnerships could be established with developers vying for the ability to build upon surface parking lot areas and the old right-of-way owned by the NJDOT. As the land would be available sooner for development if private funds were utilized rather than state funding, it was anticipated that this could be an incentive to encourage developers to share the cost of the boulevard construction.

Meetings and workshops were held with the City of Trenton, the CCRC, state agencies, the NJDEP Capital Park Team, the NJDOT Scope Team and other stakeholders at the onset of the FA phase to discuss their visions for the proposed Route 29 Boulevard. Through these interactions, it became evident that the Alternative 2 was strongly favored by the stakeholders since it created a relatively large waterfront space for a future park and development.

Alternative 2 was also favored since a majority of the proposed Route 29 Boulevard which would have significant grade differences compared with the current alignment would be constructed off-line, offering a far less complex and costly construction staging.

4.3 Calhoun Street Interchange

During the CD process, several options were also proposed to address the connection of Route 29 to the Calhoun Street Bridge. One proposed option maintained the ramps serving the dominant on and off movements to and from Route 29 while eliminating the other, less-used ramps. A second option maintained the ramps leading to the bridge from Route 29 while a third option completely disconnected Route 29 from the bridge. In addition, a fourth hybrid option was also considered. All of these proposed options relied on the existing street network to accommodate any movements that would have been eliminated.

After the start of the FA process a further option was proposed which utilized a new single two-way ramp interchange that would connect Route 29 and Calhoun Street in the southeast quadrant. A new connection from this ramp directly to West State Street and a new connection from Route 29 to Rutgers Place were also proposed. A combination of roundabouts and traffic signals were proposed to reconnect the city block network in this area and distribute the traffic over a greater street network system.

4.4 Route 1 Interchange

At the Route 1 Interchange, concepts developed during CD involved the removal of the existing loop ramps from Route 29 and the existing northbound Route 1 ramp from the South Warren Street area and replacing them with new southbound and northbound slip ramps from Trent Place to Route 1 southbound and northbound, respectively. During the FA process, these concepts were examined and after reviewing the traffic analysis and projection results, it was decided with the stakeholders not to remove the existing northbound ramp from South Warren Street to Route 1 due to the high costs of such modification with only a relatively small traffic operation benefit.

CHAPTER 5: THE PREFERRED ALTERNATIVE

Figure 5-1: Downtown Trenton Illustrative Master Plan

5.0 THE PREFERRED ALTERNATIVE

As mentioned previously, the Route 29 Inland Alternative was selected as the Preferred Alternative (PA) after consultation with key stakeholders. Alternative 2 (the inland alternative) that was presented during the CD phase was advanced to the FA phase using 100-scale mapping. The PA alignment was refined during the course of the FA phase as more information became available regarding project constraints (such as flooding, traffic operations, urban block spacing, transit needs, Capital Park needs, etc.). A 200-scale plan and 60-scale plans showing the PA is included in Appendix C.

5.1 URBAN DESIGN GUIDELINES

The primary objective of the infrastructure investments planned for Trenton's downtown is to encourage and shape future development and land use patterns into a vibrant urban core. The civic, employment, retail, residential and recreational uses were all designed to be components of this

vibrant center. Designed with pedestrian-oriented streets, welcoming store fronts, integrated open spaces and waterfront views, the future downtown will foster gracious lifestyles where work, play, services and entertainment will all be within walking distances (*see Figure 5-1*). Once reclaimed from its current condition, the area will also become a distinct place for citizens to celebrate their community's rich history.

The purpose for developing urban design guidelines and reviewing the intent of the various components of the plan is to achieve a better downtown by ensuring attention is consistently paid to simple city-building design principles.

5.1.1 INTENT OF THE DOWNTOWN STREET NETWORK

The most feasible strategy to transform downtown Trenton into a walkable place was to establish an interconnected network of streets that will create a fine-grain series of urban blocks that will connect the built portions of the City to the riverfront (*see Figure 5-2*).

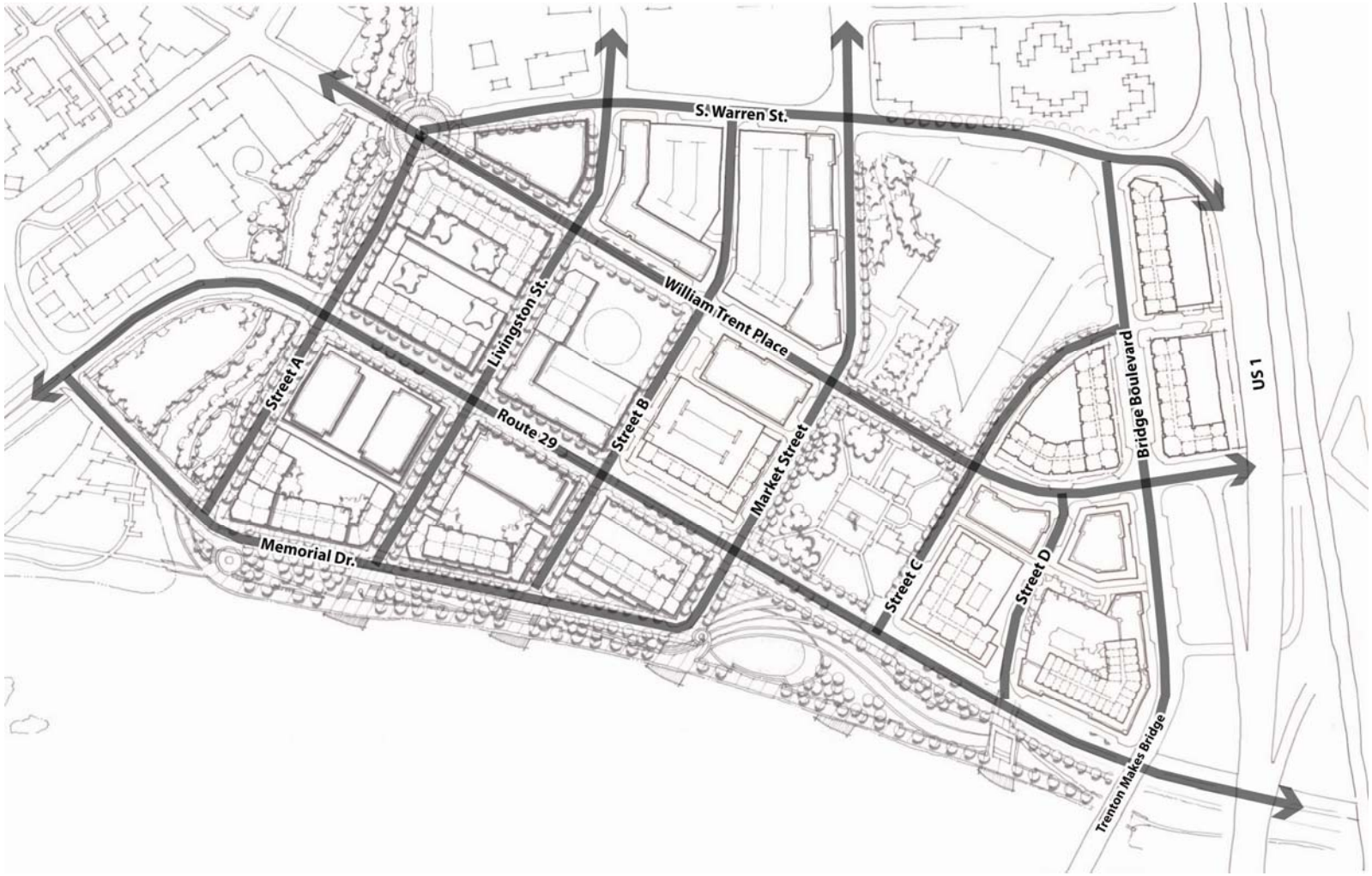

Figure 5-2: Trenton's Proposed Downtown Street Network

This structure will also support the most appropriate form, intensity and character of the new development (i.e., at a human scale). The system of connected streets was developed to spread the traffic loads while providing pleasant accommodation of pedestrians and bicyclists. The network provides multiple travel routes which, when implemented, will be more resilient to incidents and maintenance needs, while increasing the safety for all transportation modes and allowing more efficient transit routing. In order to be most effective, this connectivity was also extended into neighboring areas to link the new parts of the downtown with the existing downtown and the adjacent neighborhoods. The most important element of the plan was the structure and organization of the streets and blocks (*see Figures 5-3 through 5-7*). The design of the streets will play a critical role in the character of development and the behavior of traffic.

Figure 5-3: Proposed Right-of-Way Configuration

Once the network was established, the next scale of design was also important; the inclusiveness and quality of the street design coupled with the building design to foster maximum social and economic exchange—i.e., a wonderful pedestrian-friendly environment.

5.1.2 Intent of Street Sections and Speeds

The street network has and will be the largest and most commonly used public space in the City of Trenton. The streets will provide access to all the necessary activities and uses in the downtown such as the places to work, shop, live and recreate. The streets were designed to accommodate motor vehicles but also to accommodate people by bus, on foot, by bicycle and potentially on light rail transit. The streets were purposely designed to be inclusive by designing them to help "self-enforce" appropriate design speeds for an urban context. The posted speed limit on the Route 29 Boulevard will be compatible with a pedestrian-oriented downtown environment and will be 25 mph for the Route 29 Boulevard and other streets.

A major difference between urban streets in Trenton's downtown and other streets in the regional network will be the quality of the pedestrian environment. The proposed streets were designed to support and encourage social interaction and enhance the pedestrian experience between the buildings and along the streets. The design speeds match the built environment and are respectful of the increased level of pedestrian activity associated with the downtown land uses and transit. The speed of traffic will be managed through various traffic calming measures including lane widths, medians, bulbouts, on-street parking, street trees and pedestrian-scaled lighting.

The design of the sidewalks was also an important design component of the streets. Sidewalks were provided on both sides of every street, with pedestrian-scaled street lights, benches, trees and other landscaping to make the pedestrian experience safe and enjoyable. The on-street parking, which will be on both sides of every street, will provide a further buffer between pedestrians and moving traffic while supporting local retail and other land uses.

Bicycle accommodation was also provided along every street. For roads with low traffic speeds, the normal right-hand travel lane will be shared. On higher speed streets, bicycle lanes, a wider right lane and/or a parallel trail were provided. For example, the Route 29 Boulevard has bike lanes outside of the downtown, wider right lanes within the downtown and a parallel trail outside and within the downtown.

Figure 5-4: Memorial Drive, Livingston Street and Streets A, B and C (70-foot Right-of-Way)

Figure 5-5: William Trent Place, South Warren Street, Market Street and Bridge Boulevard (80-foot Right-of-Way)

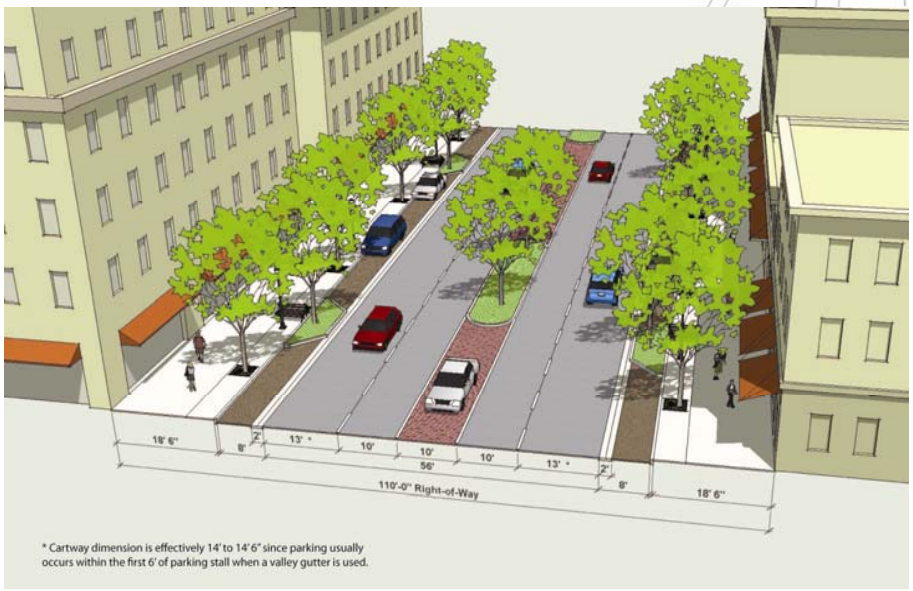

Figure 5-6: Route 29 Boulevard South of Market Street (110-foot Right-of-Way)

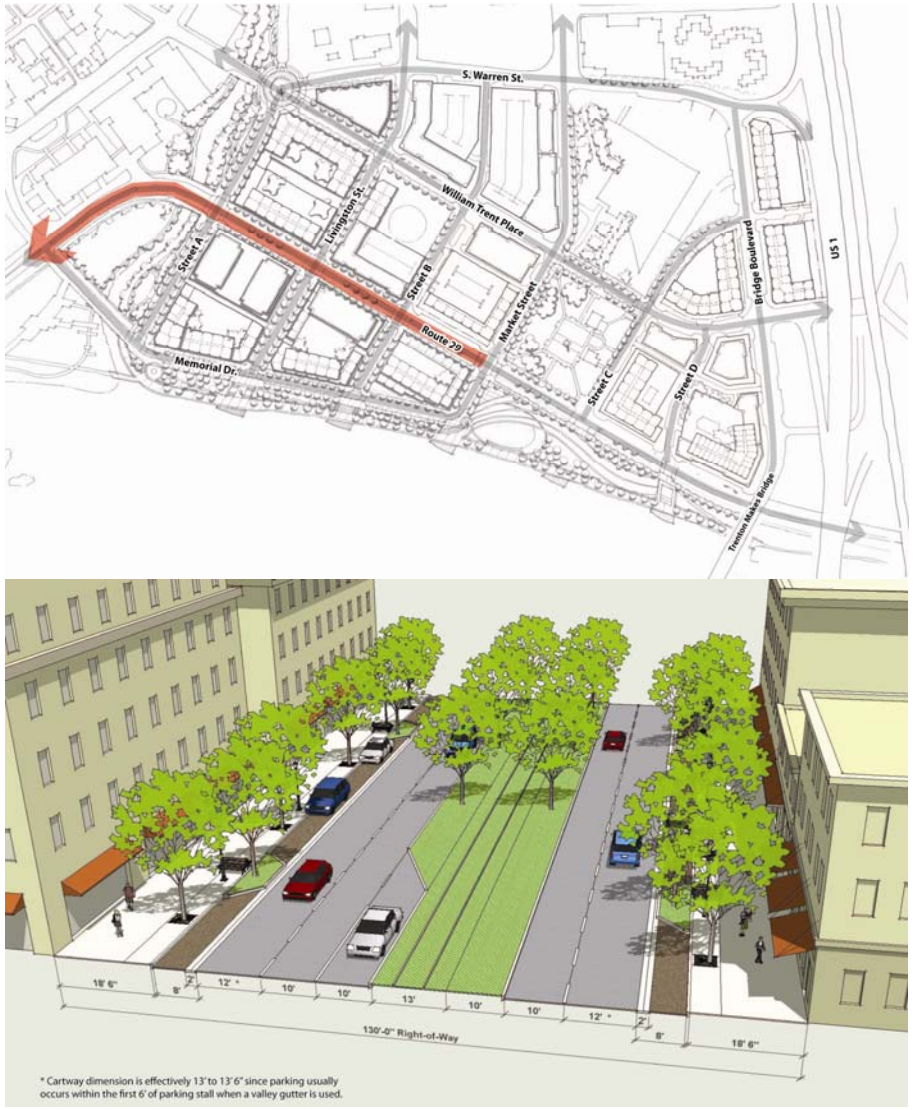

Figure 5-7: Route 29 Boulevard, North of Market Street (130-foot Right-of-Way) with Landscaped Median Sized to Provide Space for a Future Light Rail Transit Line

The proposed street cross-section for a reconfigured Route 29 suggests two at-grade conditions. One condition (south of Market Street) includes four through lanes, a center turn lane and parallel parking along both sides of the street. The outer lanes are 13 feet wide in order to better accommodate cyclists. All other travel lanes and the center turn lane will be ten-feet wide. Pedestrian refuge islands are also suggested for this condition. This condition includes an 18-foot, six-inch wide sidewalk on both sides with regularly-spaced street trees and street furniture.

A second condition (north of Market Street) includes four through lanes, a turn lane, a landscaped median and parallel parking along both sides of the street. The 23-foot median north of Market Street is being provided as a planning provision for future implementation of light rail transit along the Route 29 Boulevard. The outer lanes are 12 feet wide in order to better accommodate cyclists. All other travel lanes and turn lanes will be ten-feet wide. The cross-section includes an 18-foot, six-inch wide sidewalk on both sides with regularly spaced street trees and street furniture including bike racks, benches, trash cans and pedestrian-scaled lighting. These elements encourage shops and cafes to open onto the street, creating a place that is walkable, vibrant and full of activity. The proposed cross-section for Route 29 in both conditions is consistent with the 25 mph posted speed.

5.1.3 A Streets, Pedestrian Priority Streets and B Streets

Building design guidelines were developed to regulate form, based on human proportions and the quality of the pedestrian experience at the street level. The building guidelines were also tied into a street hierarchy related to pedestrian activity. The three types of streets in the downtown include A Streets, pedestrian priority streets and B Streets.

Streets, including *Route 29*, *Memorial Drive*, *Street C* and a segment of *Market Street* (west of William Trent Place) are designated as A Streets. These streets will be the most pedestrian-friendly streets. These streets require buildings to completely occupy the lot frontage and have active ground floor uses. Curb cuts and driveways are prohibited on A Streets. Landscape treatments, including street trees, pedestrian amenities and on-street parking are mandatory. A Streets will be continuously lined with buildings, fronting the streets with zero setbacks. Ground floor building facades will have no less than 60% of their area as windows at street level, starting no higher than 36 inches from the sidewalk and ending no less than 84 inches from the sidewalk. The buildings on the A Streets will be accessed by doors that are open to the public continuously during regular business hours. Parking structures may extend to the street on A Streets above, but not including the second floor of the building.

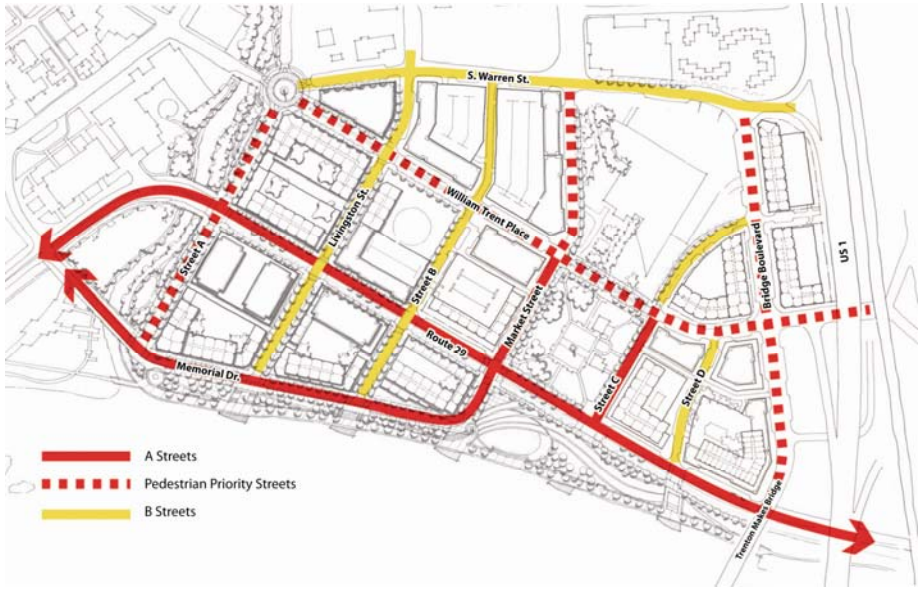

Figure 5-8: A and B Street Designations

Streets such as *William Trent Place*, *Bridge Boulevard*, *Street A* and a segment of *Market Street* (east of William Trent Place) are designated as pedestrian priority streets. These streets have identical requirements as A Streets, with two exceptions: 1) on Street A and Bridge Boulevard, alley/driveway access is permitted at the center of the blocks, where shown; and, 2) in the absence of urban buildings to hold the edge of the street, the block faces of the Justice Center, the chilled water tank and the Trent House will require additional streets, spaced at 25-foot intervals behind the sidewalk.

Streets, such as *South Warren Street*, *Livingston Street*, *Street C* (east of William Trent Place) and *Street D* are designated B Streets. Buildings on B Streets have zero setbacks and similar door requirements as A Streets, but they do not have to occupy the entire street frontage, have active ground floor uses, or have the same glazing requirements. The street itself will be designed the same as an A Street, but B Streets may have driveways at the locations shown to provide access to parking, loading, dumpsters and utility functions of buildings. B Streets may have structured parking beside the buildings, provided: 1) access to and from the garage is via the permitted driveway locations; and, 2) the garage is architecturally designed to resemble compatible buildings. Surface parking lots are required to be behind buildings.

Figure 5-9: Designated Access Points

The designated access points into the blocks by driveways or alleys are shown in *Figure 5-9*. These driveways or alleys lead to off-street parking, loading, utilities, dumpsters and other service needs.

Proposed A Streets, Pedestrian Priority Streets and B Streets suggest specific block frontages. The red lines in *Figure 5-10* represent the suggested main frontages along development block faces. Frontage requirements should encourage continuous and enhanced urban-type development and pedestrian environment.

5.1.4 Driveways and Alley Design

Motor vehicles crossing sidewalks has been limited to the designated locations. A bulbout will be used to accentuate the driveway/alley and help prevent drivers from parking too close to the driveway/alley, in order to help with visibility of pedestrians (*see Figure 5-11*).

Figure 5-10: Suggested Main Frontages

To maximize pedestrian comfort, the sidewalk material, pattern and level will remain consistent across the driveway/alley. A concrete apron will be employed between the sidewalk and the travel lane. Any change in elevation between the sidewalk and travel lane will be facilitated by the slope of the apron, such that the sidewalk elevation is not disturbed.

5.1.5 Parking

On-street parking is required on both sides of every street to provide convenient access and provide a buffer between pedestrians and moving traffic. The only exception is on the Route 29 southbound approach to Street A where parking will not be allowed for required sight distance at the intersection. Parking rows will be protected at both ends by bulbouts. On long runs of on-street parking, bulbouts will be placed periodically in the parking lane. Each bulbout will have at least one street tree.

Off-street parking is provided within every redevelopment block except the north-eastern most block (see Block 0, *Figure 5-16*), due to its small size and triangular shape. The intent is to spread the off-street parking supply throughout the downtown (*see Figure 5-12*).

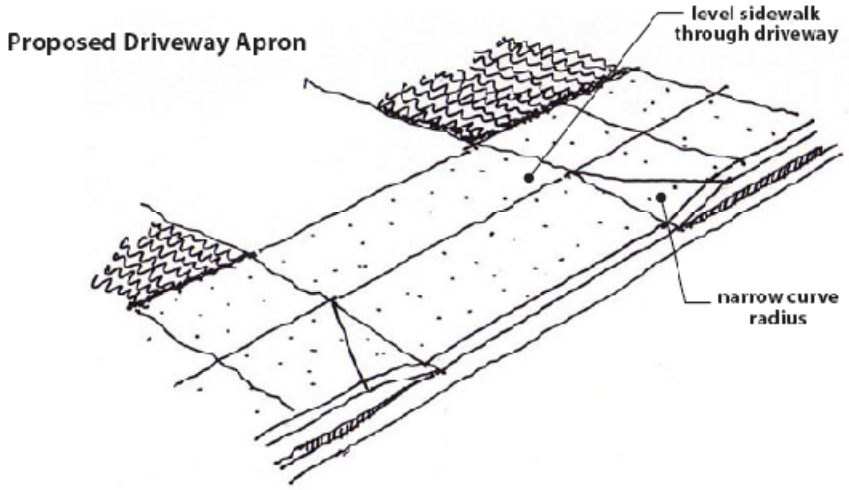

Figure 5-11: Recommended Driveway/Alley Treatment

With regard to parking requirements, it is recommended that the City and other jurisdictions establish parking maximums in the downtown to recognize and support the higher land-use densities, mix of uses and multi-modal travel.

The parking facilities designed to serve the uses within the proposed plan were developed under the assumptions shown in *Table 5-1*.

The proposed plan provides for on-street parallel parking along every street. Off-street parking is located at the interior of blocks and is provided in parking garages. Uses within proposed mixed-use blocks should be encouraged to develop a shared parking strategy for visitor/customer parking. Parking requirements are suggested to be further reduced if block tenants agree upon negotiations to share 15% to 30% of parking provided.

Figure 5-12: Proposed Off-Street Parking

Use	Assumed Base Parking Ratio	ULI Shared Parking Estimates
Residential (per unit)	1 / Unit	0.75 space/unit-- rental
		0.85 space/unit-- owned
Hotel (per room)	1 / Room	
Office (per 1,000 SF)*	2 / 1000 SF	General urban office 2.4/1,000 SF
Retail (per 1,000 SF)	4 / 1000 SF	3.7/1000 SF

Table 5-1: Parking Assumptions (Off-Street)

5.1.6 Transit

Transit is dependent on a successful pedestrian environment. Walking is the most important mode of transportation in the downtown and is the basic building block of developing a multi-modal transportation system. Studies have shown that while seven out of ten people will walk 500 feet and four out of ten people will walk a quarter-mile (about 1,300 feet), only one person out of ten people will walk a half-mile. However, if the quality of the walking environment were improved in the downtown, more people will be willing to walk longer distances. Retailers have known this for years. In a typical mall, the farthest parking spaces are rarely more than 500 feet from a mall entrance. However, the length of most malls is approximately a quarter-mile. Retailers and mall owners understand that pedestrians are willing to walk up to a half-mile if they are walking through an environment that is animated and keeps their interest. Walking is the mode of transportation that begins each trip, links different modes of transportation and completes each trip. The walking distance and the quality of the walking environment en route to and from transit service will influence the success of the transit system in the downtown.

The street network was purposely designed to be pedestrian and transit-friendly with exclusively two-way streets, narrow crossings, tight curb returns (turn radii) and slow motor vehicle speeds. Bus stops will be placed on elongated bulbouts and employ a shelter, benches, trash cans and landscaping. Buses will stop in the right lane to pick up and drop off passengers. Bus pull outs are prohibited in the downtown. Timed stops, where buses wait if they are ahead of schedule, are also prohibited in the downtown.

5.1.7 Proposed Land Uses

The land uses in Trenton have historically developed to respect the city's connected network of streets and blocks. The historic street network follows what were the marshy edges of the Assunpink Creek and the Delaware River. The area of the river that was filled in to construct Stacy Park and the state office buildings lacked a discernable street network. Today, that same area is covered by vast surface parking lots and the Route 29 freeway, which has blocked off the river and devalued the city.

Figure 5-13: Cross-Section of Memorial Drive with Transformed River's Edge

The plan for Trenton's downtown introduces a street network into the filled-in area, connecting and expanding the downtown to the river, transforming the river's edge into a public amenity and creating new development opportunities within the downtown (*see Figure 5-13*). The planned blocks are able to accommodate a mix of land uses at the desired densities while creating a permeable and pedestrian-friendly street network (*see Figures 5-15 through 5-28 and Tables 5-2 through 5-14*).

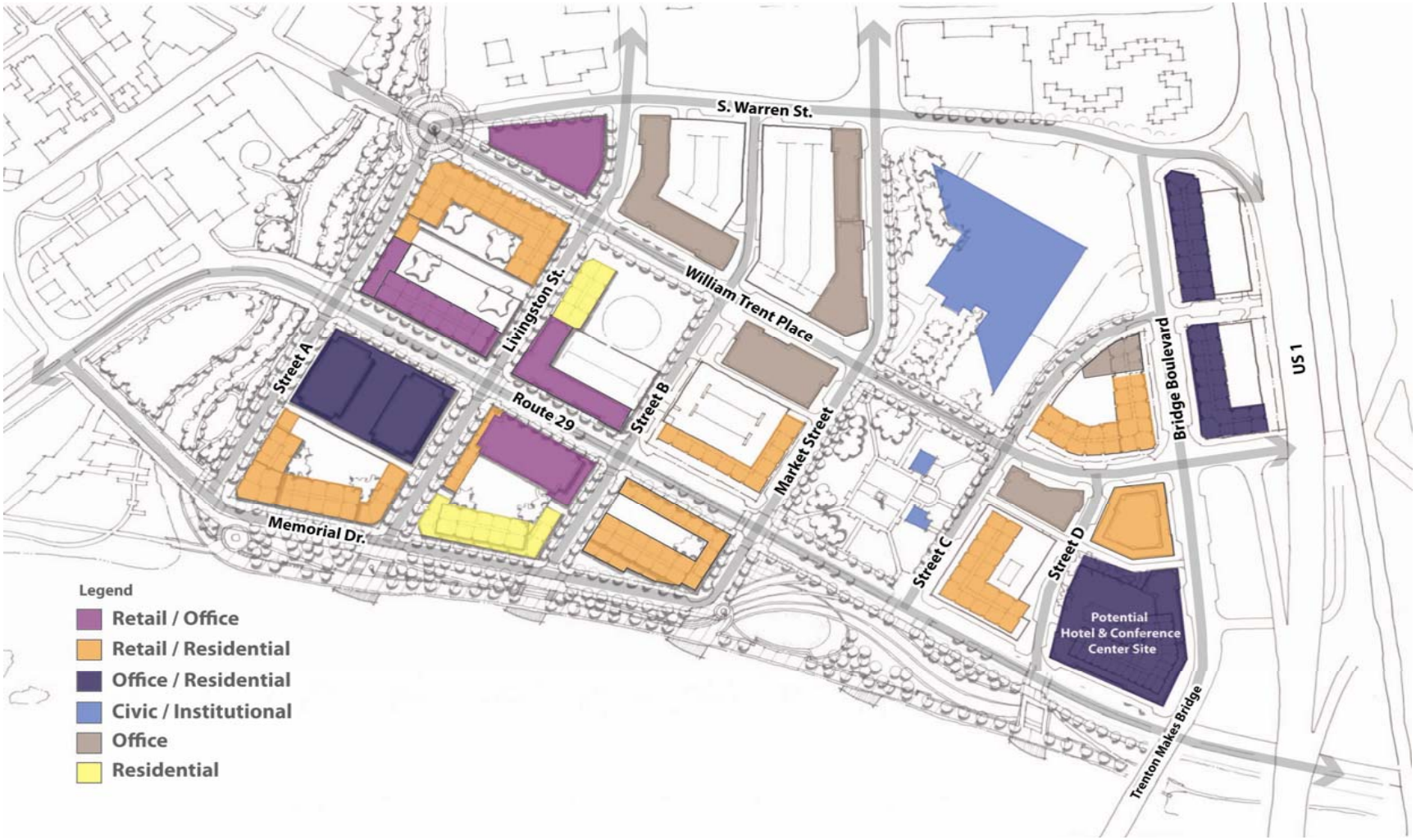

Figure 5-14: Proposed Land Uses

Figure 5-14 shows the location of the proposed land uses within the redevelopment area. The downtown will have both a horizontal and vertical mix of land uses. The proposed plan for Trenton's riverfront suggests a higher intensity of residential uses in the immediate blocks in front of the river and around Trent Park, which are considered focal points and the most significant public amenities within the project area. Retail uses are provided throughout the plan mostly at ground-floor level along designated A Streets. Office uses are, for the most part, mixed in with residential uses. Some single-use office buildings are proposed in close proximity to the Justice Center and abutting Warren Street. A medical institution was considered at one point as a potential use for Block 7. The traffic analysis developed as part of this study references the location of a hospital use on Block 7 as an alternative.

Figure 5-15: Birds' Eye View of Proposed Redevelopment Along Trenton's Riverfront (Assunpink Creek in the Foreground)

A mix of uses creates vibrancy due to the variety of activities that will occur throughout the day and week. These uses will offer a range of living, shopping, working and recreational opportunities within a compact, walkable area. The land use mix and densities allow the downtown population, workers and visitors to benefit from shorter distances between the basic needs of daily life. Office, medical, institutional, educational and high-density residential uses provide the highest potential for walking, cycling and transit ridership. To maximize this potential, the city should review its downtown land use plans in order to preclude automobile-dependant land uses such as large-format retail, industrial and low-density residential uses.

5.1.8 Proposed Development Blocks

Figure 5-16: Development Blocks by Number

Long Term Development Program

Assumptions

- Offices for Departments of Labor, Health and Agriculture are relocated
- Equal or slightly higher development numbers compared to what was provided by Westrum
- Residential parking requirement is 1 space per unit
- Hotel parking requirement is 1 space per room
- Office parking requirement is 2 spaces per 1,000 square feet of office space
- Retail parking requirement is 4 spaces per 1,000 square feet of retail space

Block #	Retail (SF)	Office (SF)	Residential (Units)	Parking Required	Parking Provided	Potential Visitor/Overflow Parking	Parking for Gov't Use and Other Blocks	Use that Will Be Served by Excess Parking
Block 0*	7,000	168,000	-	364	-	(364)	(364)	
Block 1	69,226	469,000	572	1,787	2,230	443	443	War Memorial
Block 2	28,000	324,000	209	969	1,020	51		
Block 3	27,000	9,500	226	345	560	215		
Block 4	18,000	210,000	148	640	1,052	412		Trent House
Block 5	25,000	247,000	108	702	760	58		
Block 6	40,000	478,000	223	1,339	1,375	36		
Block 7	-	555,000	-	1,110	2,625	1,515	1,515	Justice Center and Block 0
Block 8	26,000	108,000	145	465	505	40		
Block 9	-	39,000	407	485	510	25		
Block 10	22,500	69,000	668	907	945	38		
Block 11**	24,000	180,000	170	626	640	14		
TOTAL	**286,726**	**2,856,500**	**2,876**	**9,739**	**12,222**	**2,483**	**1594**	

*Table 5-2: Long Term development program;*Block 0 will park in Block 7, **Block 11 has different short and long term development options.*

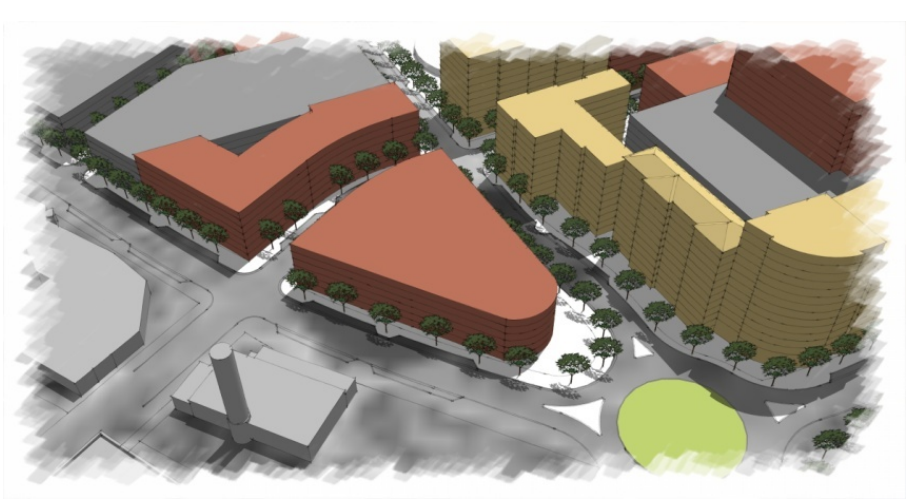

Figure 5-17: Recommended Development for Block 0

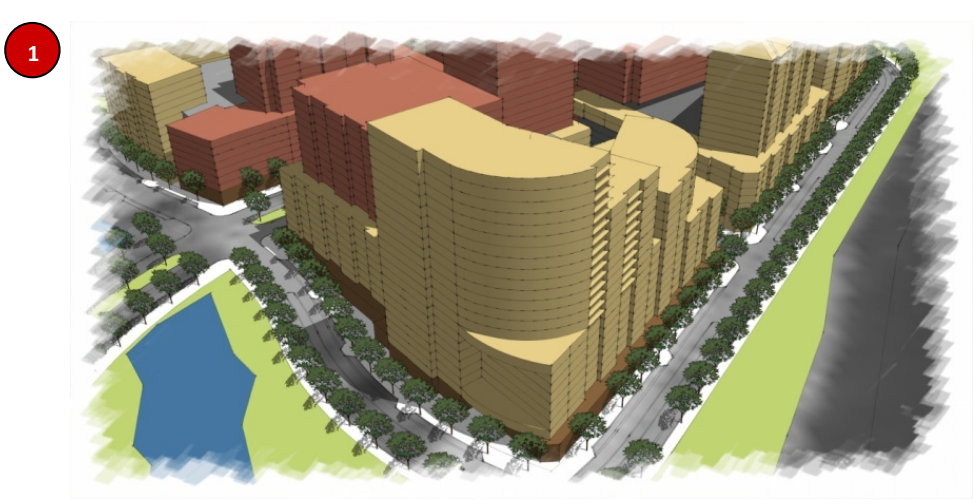

Figure 5-18: Recommended Development for Block 1

Block 0 Summary	Building 1	Building 2	Block Totals	
Land Area (acres)			**1.1**	
Residential Density (du/acre)			**-**	
Building Foot Print (SF)	38,700			
Podium Height (stories)				
Tower (stories)	6			
Total Height	6			
Retail (SF)	7,000	-	**7,000**	
Office (SF)	168,000		**168,000**	
Residential (Units)	-	-	**-**	
Parking required (spaces)	364	-	**364**	
Parking provided (spaces)	-	-	**-**	Use Parking in Block 7
Potential Visitor/Overflow Parking				
Site Coverage			**83%**	

Table 5-3: Block 0 Development Summary

Block 1 Summary	Building 1	Building 2	Block Totals	
Land Area (acres)			**3.9**	
Residential Density (du/acre)			**146**	
Building Foot Print (SF)	160,085			
Podium Height (stories)	10	10		
Tower (stories)	15	13		
Total Height	25	23		
Retail (SF)	69,226	-	**69,226**	
Office (SF)	-	469,000	**469,000**	
Residential (Units)	392	180	**572**	
Parking required (spaces)	669	1118	**1,787**	
Parking provided (spaces)	2,230	-	**2,230**	
Potential Visitor/Overflow Parking			**443**	Use for War Memorial

Table 5-4: Block 1 Development Summary

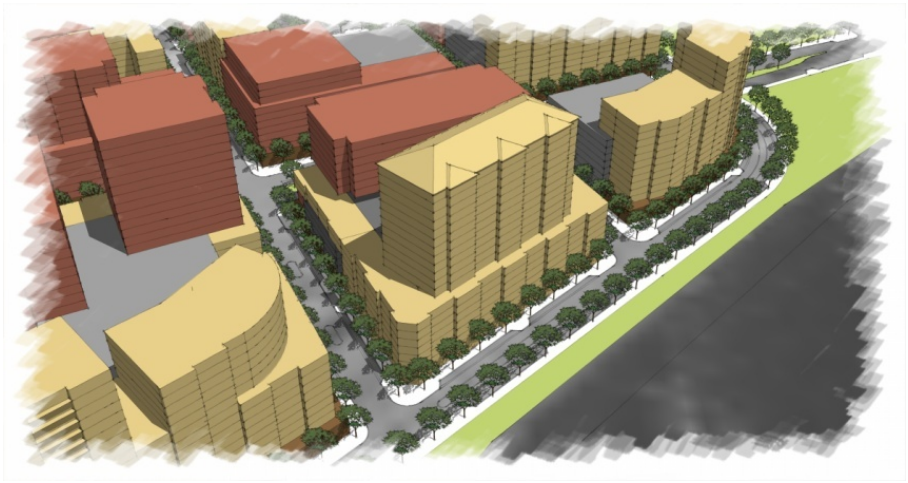

Figure 5-19: Recommended Development for Block 2

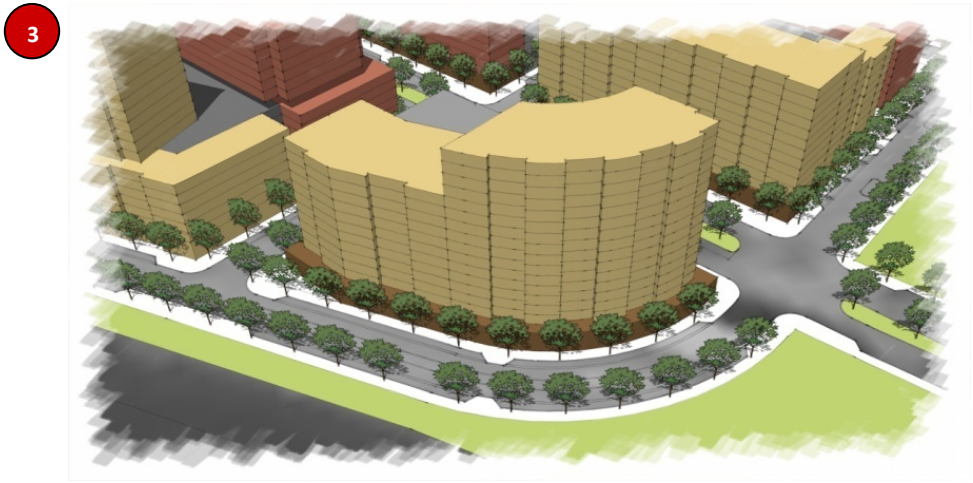

Figure 5-20: Recommended Development for Block 3

Block 2 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**2.1**
Residential Density (du/acre)			**99**
Building Foot Print (SF)	89,517	-	
Podium Height (stories)	8	8	
Tower (stories)	11	7	
Total Height	19	15	
Retail (SF)	-	28,000	**28,000**
Office (SF)	-	324,000	**324,000**
Residential (Units)	201	8	**209**
Parking required (spaces)	201	768	**969**
Parking provided (spaces)	1,020	-	**1,020**
Potential Visitor/Overflow Parking			**51**

Table 5-5: Block 2 Development Summary

Block 3 Summary	Building 1	Building 2	Block Totals	
Land Area (acres)			**1.2**	
Residential Density (du/acre)			**188**	
Building Foot Print (SF)	51,540			
Podium Height (stories)	9			
Tower (stories)	9			
Total Height	18			
Retail (SF)	27,000	-	**27,000**	
Office (SF)	9,500	-	**9,500**	
Residential (Units)	226	-	**226**	
Parking required (spaces)	345	-	**345**	
Parking provided (spaces)	560	-	**560**	
Potential Visitor/Overflow Parking			**215**	For Trent House Visitors

Table 5-6: Block 3 Development Summary

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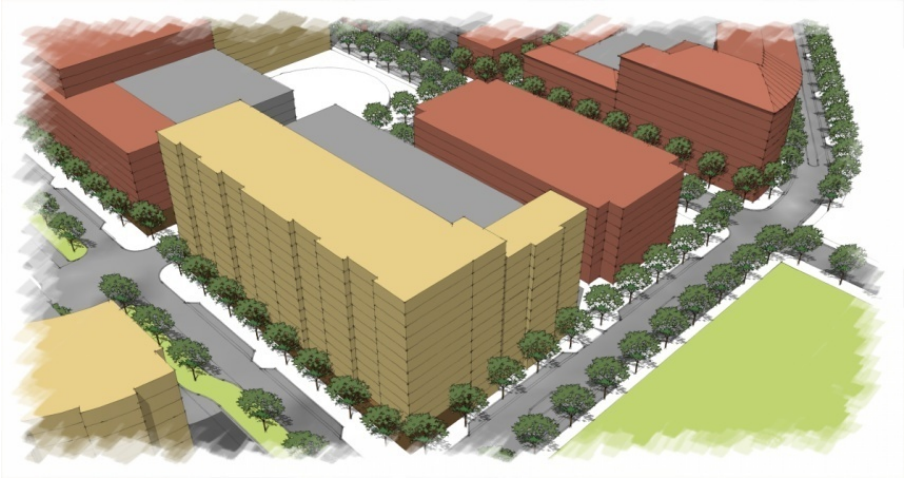

Figure 5-21: Recommended Development for Block 4

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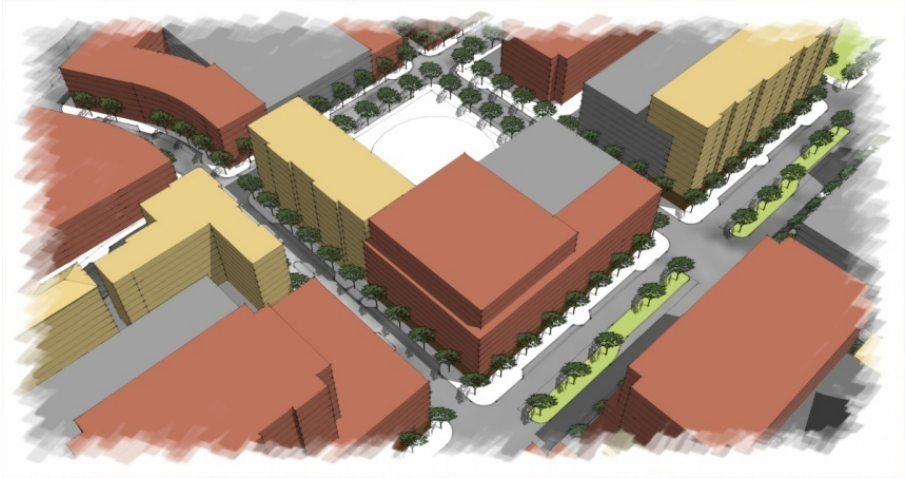

Figure 5-22: Recommended Development for Block 5

Block 4 Summary	Building 1	Building 2	Block Totals	
Land Area (acres)			**2.7**	
Residential Density (du/acre)			**55**	
Building Foot Print (SF)	54,240	30,000		
Podium Height (stories)	10			
Tower (stories)	4	8		
Total Height	14			
Retail (SF)	18,000	-	**18,000**	
Office (SF)	-	210,000	**210,000**	
Residential (Units)	148	-	**148**	
Parking required (spaces)	220	420	**640**	
Parking provided (spaces)	1,052	-	**1,052**	
Potential Visitor/Overflow Parking			**412**	For Trent House Visitors

Table 5-7: Block 4 Development Summary

Block 5 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**2.7**
Residential Density (du/acre)			**40**
Building Foot Print (SF)	68,839		
Podium Height (stories)	10		
Tower (stories)	2		
Total Height	12		
Retail (SF)	25,000	-	**25,000**
Office (SF)	247,000	-	**247,000**
Residential (Units)	108	-	**108**
Parking required (spaces)	702	-	**702**
Parking provided (spaces)	760	-	**760**
Potential Visitor/Overflow Parking			**58**

Table 5-8: Block 5 Development Summary

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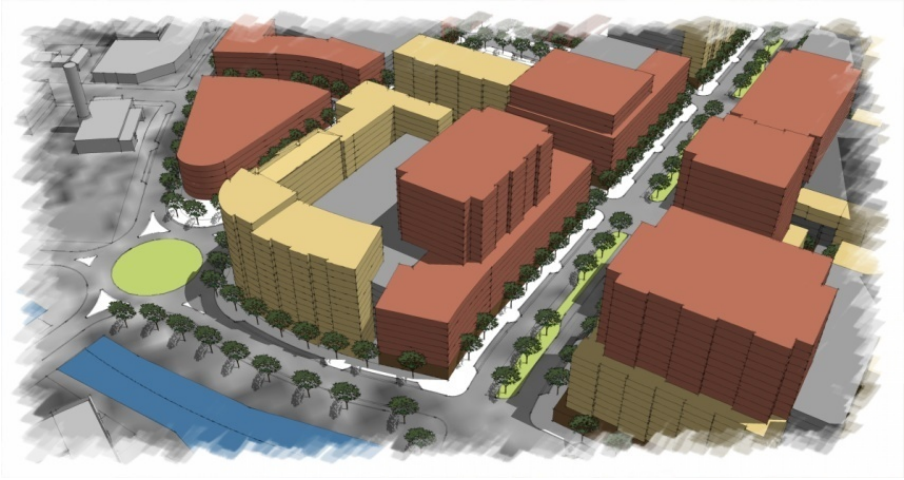

Figure 5-23: Recommended Development for Block 6

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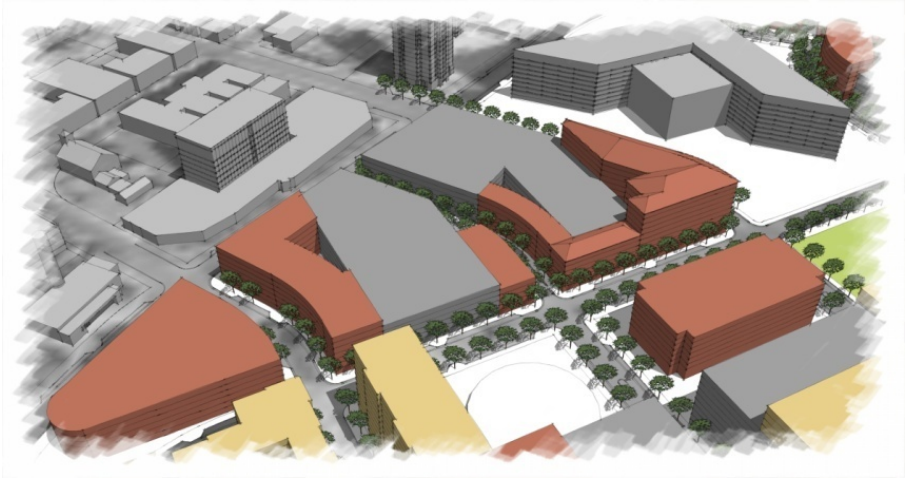

Figure 5-24: Recommended Development for Block 7

Block 6 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**3.5**
Residential Density (du/acre)			**63**
Building Foot Print (SF)	138,623	-	
Podium Height (stories)	10		
Tower (stories)	7		
Total Height	17		
Retail (SF)	40,000	-	**40,000**
Office (SF)	478,000	-	**478,000**
Residential (Units)	223	-	**223**
Parking required (spaces)	1,339	-	**1,339**
Parking provided (spaces)	1,375	-	**1,375**
Potential Visitor/Overflow Parking			**36**

Table 5-9: Block 6 Development Summary

Block 7 Summary	Building 1	Building 2	Block Totals	Parking Needed	
Land Area (acres)			**5.0**	-	Ag/Health/Labor
Residential Density (du/acre)			**-**	364	Block 0
Building Foot Print (SF)	113,301	92,702		1066	Justice Center
Podium Height (stories)	7	7			
Tower (stories)	3	-			
Total Height	10	7			
Retail (SF)	-	-	**-**		
Office (SF)	328,000	227,000	**555,000**		
Residential (Units)	-	-	**-**		
Parking required (spaces)	656	454	**1,110**		
Parking provided (spaces)	1,505	1,120	**2,625**		
Potential Visitor/Overflow Parking	849	666	**1,515**		

Table 5-10: Block 7 Development Summary

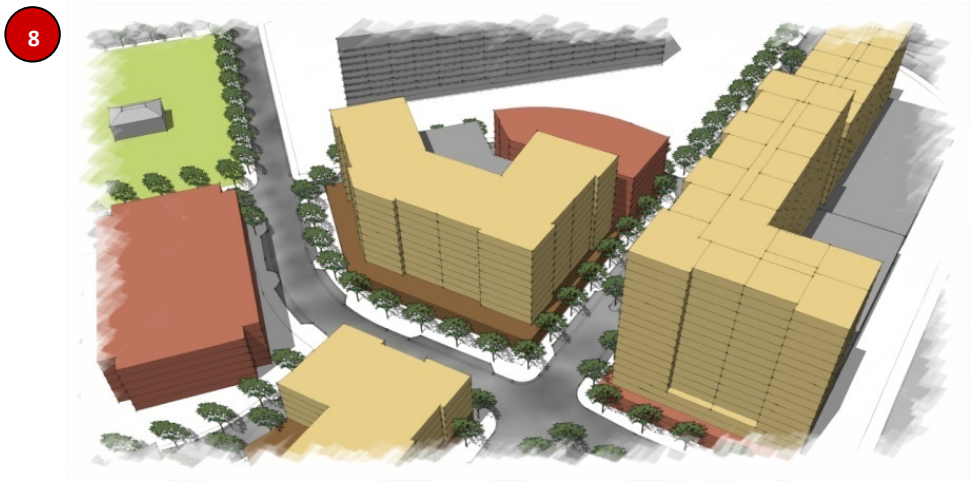

Figure 5-25: Recommended Development for Block 8

Figure 5-26: Recommended Development for Block 9

Block 8 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**1.7**
Residential Density (du/acre)			**87**
Building Foot Print (SF)	50,609	13,862	
Podium Height (stories)	7	-	
Tower (stories)	5	8	
Total Height	12	8	
Retail (SF)	26,000	-	**26,000**
Office (SF)	-	108,000	**108,000**
Residential (Units)	145	-	**145**
Parking required (spaces)	249	216	**465**
Parking provided (spaces)	505	-	**505**
Potential Visitor/Overflow Parking			**40**

Table 5-11: Block 8 Development Summary

Block 9 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**3.3**
Residential Density (du/acre)			**122**
Building Foot Print (SF)	55,769	44,518	
Podium Height (stories)	4	2	
Tower (stories)	10	7	
Total Height	15	11	
Retail (SF)	-	-	**-**
Office (SF)	25,000	14,000	**39,000**
Residential (Units)	275	132	**407**
Parking required (spaces)	325	160	**485**
Parking provided (spaces)	340	170	**510**
Potential Visitor/Overflow Parking			**25**

Table 5-12: Block 9 Development Summary

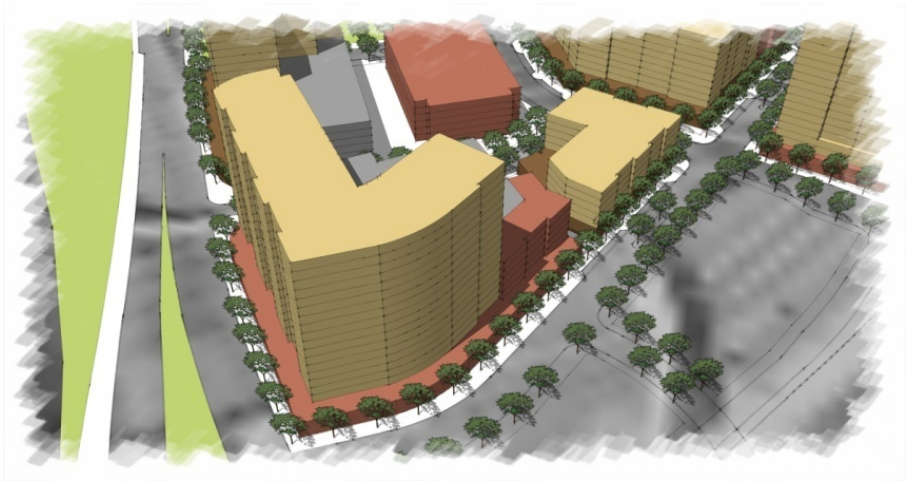

Figure 5-27: Recommended Development for Block 10

Figure 5-28: Recommended Development for Block 11

Block 10 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**2.7**
Residential Density (du/acre)			**245**
Building Foot Print (SF)	87,159	22,403	
Podium Height (stories)	7	2	
Tower (stories)	12	5	
Total Height	19	7	
Retail (SF)	-	22,500	**22,500**
Office (SF)	69,000	-	**69,000**
Residential (Units)	624	44	**668**
Parking required (spaces)	762	145	**907**
Parking provided (spaces)	945	-	**945**
Potential Visitor/Overflow Parking			**38**

Table 5-13: Block 10 Development Summary

Block 11 Summary	Building 1	Building 2	Block Totals
Land Area (acres)			**2.5**
Residential Density (du/acre)			**68**
Building Foot Print (SF)	30,600	52,363	
Podium Height (stories)	-	8	
Tower (stories)	6	10	
Total Height	6	18	
Retail (SF)	-	24,000	**24,000**
Office (SF)	180,000	-	**180,000**
Residential (Units)	-	170	**170**
Parking required (spaces)	360	266	**626**
Parking provided (spaces)	-	640	**640**
Potential Visitor/Overflow Parking			**14**

Table 5-14: Block 11 Development Summary

5.1.9 Scale and Massing

The scale and massing of new buildings will transition to and from existing development in downtown Trenton. The large open spaces crested by the creek, river, and Trent House property, allow for taller buildings to be built without overwhelming the pedestrian. The building will then transition down to the neighboring land uses.

Building design at street level will incorporate elements that are respectful of a human scale. The ground floor and second floor shall incorporate higher quality building materials in their facades than floors three and above. A transition line shall be provided at the top of the second story. Also, taller buildings are suggested to step back 20 feet between the sixth and seventh floor.

5.1.10 Building Entrances

The primary building entrances should be visible and directly accessible from the public street. Building massing or architectural features such should be used to emphasize the location of the building's entrance.

5.1.11 Façade Variations

On A-streets and pedestrian-oriented streets, the facades will change every 40 feet or less along the street, up to at least the sixth floor, to provide the appearance of distinct and independently built buildings next to one another. Distinctions can be made through building surface variations; the placement, shape, and style of windows and entries; slight planar changes (where the building surface recedes or projects a small amount); color changes; awning changes; and material changes.

5.1.12 Building Heights

Building heights are determined by the number of floors or stories. The maximum number of floors based on the proposed plan is shown in *Figure 5-29*. The minimum floor height by right should be of a minimum of three floors. The ground floor shall be no less than 12 feet in height from finished floor to finished ceiling and it shall not exceed 20 feet in height from finished floor to finished floor. Floors above the ground floor shall be no less than nine feet and no more than 14 feet from finished floor to finished ceiling and such floors shall not exceed 18 feet in height from finished floor to finished floor. Mezzanines count as an additional story. In the case of ground floor residential uses, the ground floor should be raised above sidewalk grade by a minimum of 24 inches. Each parking garage level at the frontage line should equal one floor for the purposes of measuring building height. Any parking garage levels that are fully concealed by habitable floors for a minimum depth of 20 feet from the frontage line are not restricted in the number of levels, provided that the overall height of the garage does not exceed the overall height of the habitable floors at the frontage line.

Figure 5-29: Recommended Heights

Photograph 5-1: Mosaic View of Downtown Trenton

5.1.13 Green Buildings

In addition to environmental benefits, "green" buildings can cost less, improve worker productivity, enhance marketing efforts and help to create a district identity. Buildings should be efficient in water and energy use, be constructed of sustainable materials and create a healthy environment for the occupants. *The Leadership in Energy and Environmental Design (LEED) Reference Guide for New Construction and Major Renovation*, Version 2.2 is a valuable resource for guidance on green building techniques, practices and standards.

5.1.14 Lighting

Building and site lighting will be designed in such a way as to eliminate light trespass and minimize light pollution. The lighting schemes will generally lower lighting levels, maximize uniformity and eliminate glare. Lighting for pedestrians is important and will be designed to maximize visibility and comfort, especially along the riverfront. *The Illuminating Engineering Society of North American (IESNA) Recommended Practice Manual: Lighting for Exterior Environments (IESNA RP-33-99)* is a valuable resource for guidance on best lighting practices.

5.1.15 Signs and Awnings

The location, scale and design of signs should relate to the pedestrian; and they should be compatible with the architectural design of the building, including colors and materials. Signs on awnings, in windows and on the face of buildings should be encouraged. No stand-alone commercial signs shall be allowed. Attached or building signs should be kept within the first floor of the building and be pedestrian-oriented.

Awnings are required above ground-floor windows and are optional along the remaining frontage. Awnings shall be sympathetic to the buildings' architecture and designed as an integral component of the overall signage package. All ground-floor awnings shall project a minimum of six feet from the building façade, be sloped at 30 degrees from horizontal and shall have an eight-inch vertical valance along the front of the awning with concealed weight to prevent excessive movement in high winds. Internally illuminated or vinyl awnings should be prohibited.

5.1.16 Landscaping

Street trees are required along all streets and in medians in the downtown to provide shade for pedestrians and to generally improve the aesthetic environment of the area. The street trees will provide a sense of enclosure which will promote slower vehicle speeds. Attention should be given to the selection of appropriate tree species and should, at minimum: be of a similar species, form and habit; provide shade; be hearty for local conditions; and, require minimum maintenance after an establishment period *(see Photograph 5-1).*

5.1.17 Parks and Trails

The proposed parks and trails are key to the future downtown. Linking the riverfront park and trails to the downtown streets is necessary to achieve a true connection. Access to the riverfront and across the Assunpink Creek will integrate the downtown and strengthen the city's core. Pedestrian-friendly crossings will be provided at the south end of every north-south street into the park and trail system *(see Figure 5-30).*

5.2 ENGINEERING

5.2.1 Written Description of the Preferred Alternative (PA)

The PA involves relocating the existing Route 29 alignment from approximately north of the Route 1/Amtrak/Trenton Makes Bridges to the Calhoun Street Interchange. The horizontal alignment of the proposed Route 29 Boulevard turns northeast from its current alignment just north of the Trenton Makes Bridge and traverses within the existing parking lots just west of the Trent House and the Department of Labor Building. It then crosses over the Assunpink Creek and curves at the southwest side of the Trenton and Mercer County War Memorial and meets the existing Route 29 alignment near the entrance to the State House garage *(see Figure 5-31).*

The proposed Route 29 vertical alignment is generally above the 100-year flood elevation between the Trent House and the Assunpink Creek and over the 25-year flood elevation south of the Assunpink Creek and the State House garage. Route 29 retains its current vertical alignment south of the Trent House and north of the State House garage due to existing physical constraints in these areas.

The proposed Route 29 Boulevard retains its current cross-section south of the Trenton Makes Bridge. However, north of this location, the Route 29 Boulevard cross-section originally was developed with two 11-foot through lanes in each direction, separated by a median. Based on discussions with the NJDOT Bike Pedestrian Unit, this was subsequently increased to a ten-foot wide inner lane and a 13-foot outer lane. The median will be 12-feet wide south of Market Street and 23-feet wide north of Market Street to accommodate future light rail transit operations. The proposed outside shoulders on Route 29 will be eight-feet wide and will be used for parallel parking. Shoulder bulbouts will be used to accommodate pedestrian crossings and bus drop-off areas and will help in traffic calming. Please *see Figure 5-1* for Route 29 cross sections.

Figure 5-30: Aerial View of Capital Park Concept

The existing street-grid system will also be improved by extending Market Street, Livingston Street, John Fitch Way and Barrack Street to the waterfront. New streets will be created between Assunpink Creek and Route 1 to allow for future development in these areas. The new streets will generally have a cross-section consisting of one lane in each direction, separated by a median and on-street parallel parking. Traffic signals will be provided at most intersections where the Route 29 Boulevard crosses side streets. Traffic signals or stop signs will be provided at the intersection of local streets and a proposed roundabout is proposed at the intersection of William Trent Place and the South Warren Street intersection. Left turn bays will be provided (where required) in the center medians approaching the proposed intersection to facilitate traffic movements. Sidewalks and crosswalks will be provided throughout the project area for safe pedestrian movements.

A proposed single ramp at the southeast quadrant of the interchange connecting Route 29 to Calhoun Street was selected as the preferred alternative at this location. Roundabout intersections will be provided at the intersection of Calhoun Street with the Route 29 Ramp with West State Street. Proposed parallel connections between Route 29 and West State Street at Rutgers place and a road adjacent to the State Museum building will also distribute the traffic load away from congestion on Calhoun Street and will improve traffic flow. The proposed Calhoun Street interchange will

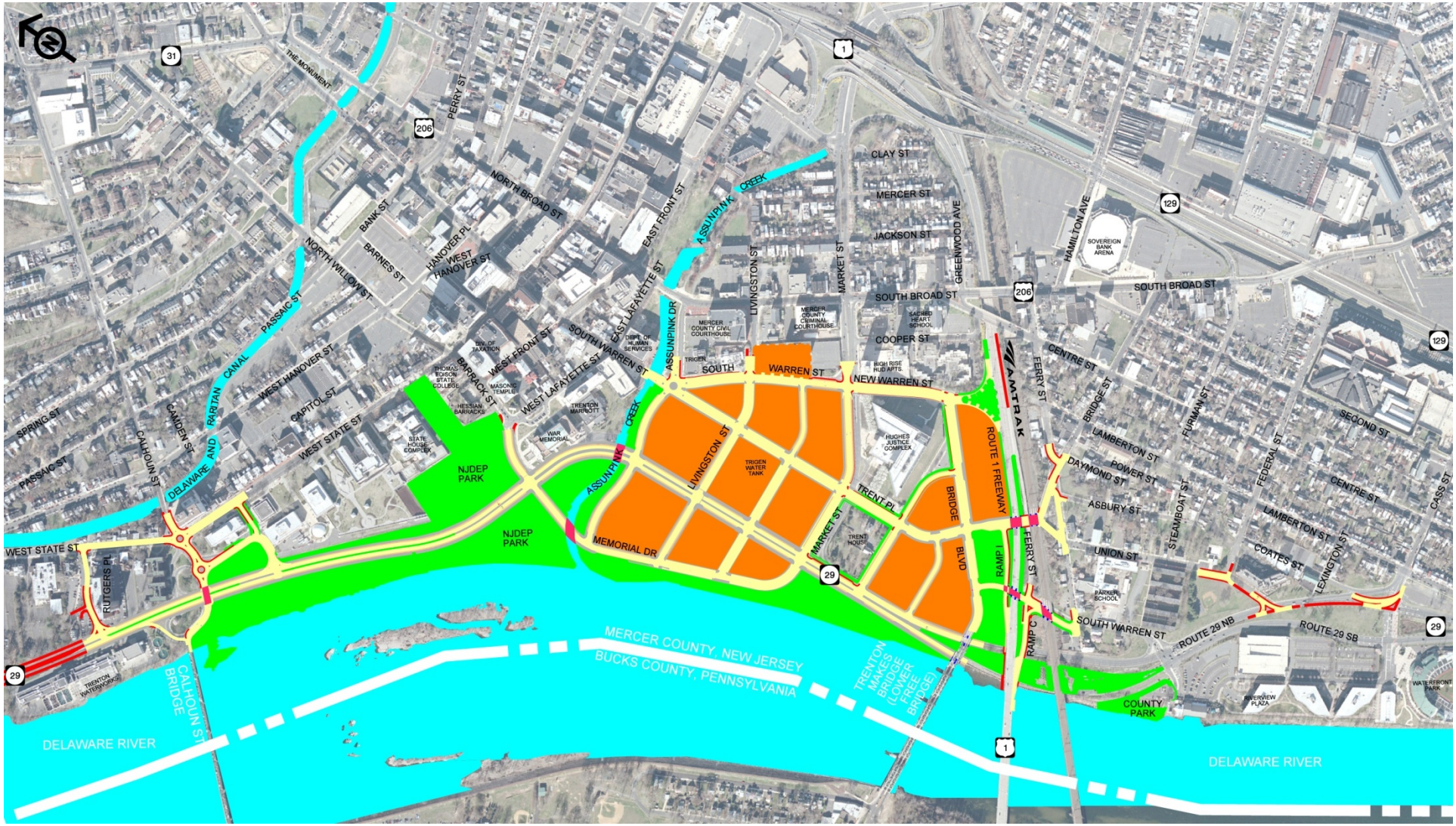

Figure 5-31: The Preferred Alternative

allow for removal of several existing ramps and expansion of the proposed Capital Park in the waterfront area. It will also provide improved pedestrian flow between the downtown and the proposed waterfront park.

At the Interchange of Route 29 with Route 1, existing loop ramps will be replaced by proposed slip ramps connected to the much improved street grid system, allowing additional space for future development.

5.2.2 Geometrics

Horizontal

The existing Route 29 roadway is a four-lane limited access urban freeway/expressway with a speed limit of 50 mph. The proposed Route 29 Boulevard horizontal alignment of the PA was developed using a 35 mph design speed. The radius ranges from a minimum 450-foot radius just north of the Street A intersection to a maximum 7,500-foot radius north of the Rutgers Place interchange. As a low

speed urban road, no superelevation is proposed or required along the Route 29 Boulevard. A minimum stopping sight distance of 250-feet is provided based on Table 4-1 of the NJDOT Design Manual. The horizontal alignment has been developed so that the required stopping sight distance is fully contained within the cartway of Route 29.

In addition to the revision to the Route 29 alignment, changes to two Route 29 interchanges—the Calhoun Street interchange and Route 1 interchange—are proposed as well. Four existing loop ramps and three finger ramps of the Calhoun Street interchange will be eliminated. Access between Calhoun Street and the Route 29 Boulevard will be via a single ramp at the southeast quadrant of the interchange, with a roundabout intersection at the Calhoun Street signalized intersection just south of the interchange on Route 29. Access from Route 29 Boulevard southbound to Calhoun Street westbound (PA) is by means of the existing Route 29 southbound finger ramp to Calhoun Street westbound which is the lone existing ramp to remain.

Changes at the Route 1 interchange include elimination of two Route 1 southbound loop ramps from Route 29. All access from Route 29 to Route 1 southbound will be via proposed Street C or Street D by means of a proposed slip ramp. Route 29 southbound traffic will utilize the signalized intersection with Street C; Route 29 northbound traffic will utilize the un-signalized intersection with Street D. Both routes will utilize William Trent Place to Ramp I to Route 1 southbound. The proposed PA alignment at the Route 1 interchange is shown meeting the proposed improvements of the DRJTBC's Route 1 Widening Project which is currently under construction.

Proposed improvements are also shown at the Route 1 southbound/New Warren Street interchange. The two existing ramps will be realigned and New Warren Street west of the interchange will be eliminated and replaced with a new road, Bridge Boulevard. It should be noted that the proposed geometry of this interchange, including Bridge Boulevard, was designed by the NJDOT and was originally intended to be constructed in an advance contract. However, this advance contract will not be constructed.

Vertical

The proposed vertical alignment of Route 29 Boulevard provides a minimum stopping sight distance of 250-feet required for 35 mph design speed with K sag values ranging from 65 to 179 (required K=49 minimum) and K crest values ranging from 81 to 133 (required K=29 minimum). The final vertical profile was developed based on several key considerations. The proposed profile is generally above the FHA Design Flood elevation, as required by the NJDEP. However, in the area just north of Assunpink Creek where the Route 29 Boulevard is within the proposed Capital Park, the profile drops to just above the 25-year flood elevation. The profile was lowered through this area to: 1) keep the elevation of the roadway through the park consistent with the proposed park elevations without creating a visual or physical barrier in the park; and, 2) assure the view of the nearby Trenton and Mercer County War Memorial will not be obstructed. This profile arrangement will result in meeting the NJDEP zero net fill requirements within the FHA of the project limits. Concurrence has been received from the NJDEP that such a design is acceptable.

Other proposed geometric improvements under the PA include:

- Minor realignment at the intersection of Ferry and Bridge Streets will be made to accommodate traffic flow between these streets and the future William Trent Place/Route 1 southbound ramp.
- To improve the street grid system in this area, South Warren Street will be connected to the proposed Bridge Boulevard under the Route 1 and Amtrak bridges, allowing traffic movement beneath these bridges in both directions.
- New connections between West State Street and Route 29 will be provided at Rutgers Place (north of the interchange) and between the State Museum Auditorium and former Secretary of State Building to improve traffic flow in this area.

5.2.3 Design Exceptions

The Route 29 Boulevard has been designed in accordance with the NJDOT Design Manual—Roadway dated November 17, 2008 and the local roads have been designed in accordance with the 2004 AASHTO A Policy on Geometric Design of Highways and Streets. A design exception may be required for the following controlling substandard design elements (CSDE) within the project limits:

- Vertical Clearance over Route 29 Boulevard at the Calhoun Street Bridge is 14 feet, 5 inches *(see Photograph 5-2)*. Under the current freeway/expressway classification of Route 29 or if the classification is changed in the future to arterial, the minimum required vertical clearance is or would be 16 feet, 6 inches and a design exception would be required.
- Vertical Clearance over Route 29 Boulevard at the Trenton Makes Bridge is 14 feet, 10 5/8 inches *(see Photograph 5-3)*. Under the current freeway/expressway classification of Route 29 or if the classification is changed in the future to arterial, the minimum required vertical clearance is or would be 16 feet, 6 inches and a design exception would be required.
- There is no shoulder provided at bulbout locations. These are located at intersections and interspersed between intersections.
- The ten-foot-wide thru lanes of the Route 29 Boulevard are below the NJDOT Design Manual minimum lane width of 11 feet for land service highways.

It should be noted that although the Route 1 Bridge over Route 29 and the Amtrak Bridge over Route 29 are within the overall limits of the project, they are beyond the limit of roadway reconstruction. In addition, the design exception analysis does not include the proposed ramps at the New Warren Street/Route 1 southbound interchange which were being designed by the NJDOT.

5.2.4 Right-of-Way and Access Impacts

All proposed work under the PA is within existing state, DRJTBC, county or city right-of-way except for a small taking required at Rutgers Place through an existing parking lot. There are no proposed driveways along Route 29 Boulevard so no driveway issues related to the New Jersey State Highway Access Management Code exist. All access to Route 29 Boulevard will be provided by public streets from signalized or unsignalized intersections which will require an access permit for street intersections.

Photograph 5-2: Route 29 at Calhoun Street Overpass

5.2.5 Traffic Engineering

The traffic studies completed as part of the FA were intended to develop year 2025 travel forecasts for the revitalized waterfront area, evaluate traffic flow conditions and recommend improvements that would provide acceptable traffic operations. The impacts of the forecast volumes on the highway network were evaluated for both No Build and Build conditions. Highway design improvements and traffic control measures were identified

and recommended for intersections within the study area in order to ensure that traffic operations during the 2025 Build year would be acceptable.

Photograph 5-3: Route 29 at Trenton Makes Bridge and Amtrak Overpass

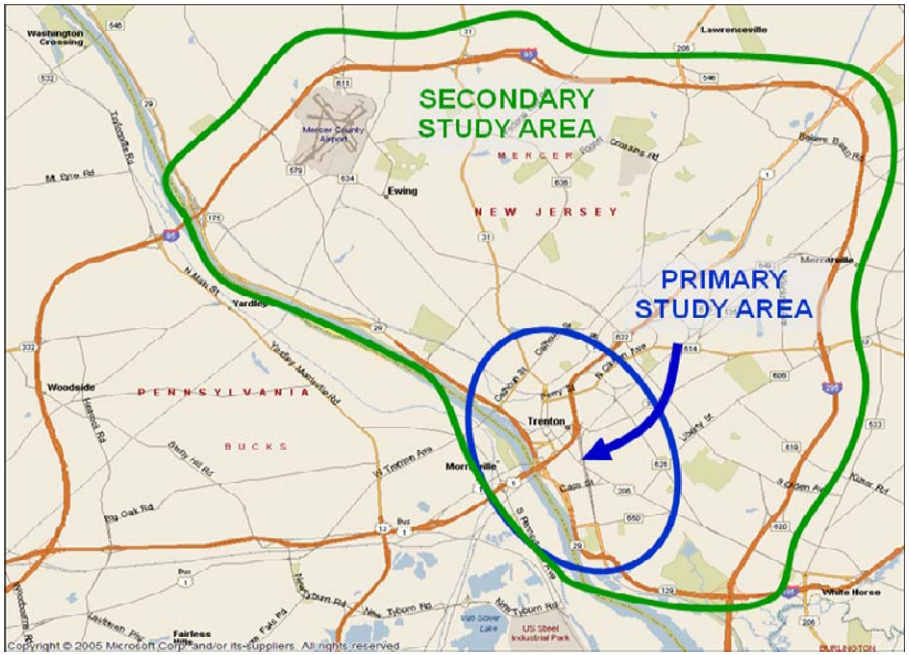

Figure 5-32: Traffic Study Area

Travel Forecasts

Travel forecasts for the study area in Trenton were prepared using the latest Delaware Valley Regional Planning Commission (DVRPC) highway networks, demographic data and projections. Considerable detail was added to the DVRPC highway network within the project study area in order to better reflect capacity limitations imposed by individual ramps and intersections in this area. Specifically, network detail was added to the downtown area and the outer belt roadways of Trenton (e.g., I-95 and I-295). The areas that were covered in more detail for this project are shown on *Figure 5-32*.

A schematic diagram of the activities involved to prepare the project-specific travel demand model and generate No Build and Build travel forecasts are shown in *Figure 5-33.*

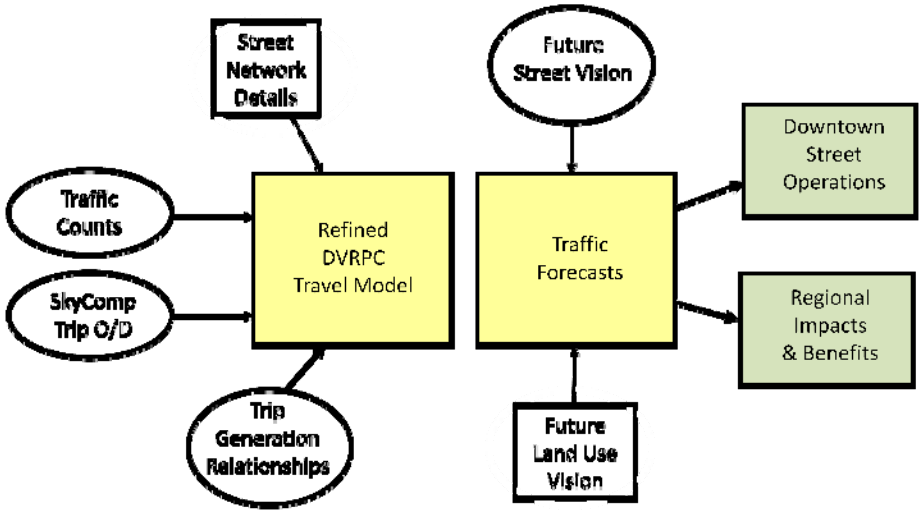

Figure 5-33: Travel Demand Model Methodology

Additionally, traffic analysis zones in the study area were subdivided from their larger DVRPC units to better represent trip generation and travel behavior for this project. Current traffic volume data were compiled from available sources and new traffic counts and used in calibrating the travel demand model. The assumed land use for the future redevelopment plan in the downtown area between the proposed Bridge Boulevard and the Memorial Drive connector comprised a mix of residential dwelling units,

office space, retail space, hotel rooms and institutional facilities, as discussed in Section 5.1.7.

In order to reflect the change in land use from existing conditions, the trips to and from the zones within the study area were recomputed based on the additional trips that would be generated in the future. The resulting trip exchanges (i.e., internal trips) among the various land uses during the PM peak hour are shown on *Figure 5-34*, along with the trip exchanges with zones that are external to the study area. The volumes shown reflect reductions from the base trip generation values to account for trips that are made via transit or by walking or biking. The 12% reduction assumed for transit's share of the total trips are consistent with data from cities in the northeast United States with land use and transportation characteristics similar to Trenton.

The project travel demand model was validated for the 2006 base year by comparing its trip origins-destinations (O-D) in the downtown area against data collected by SkyComp from actual O-D field surveys. Particular attention was given to trips that travel on Route 29 to and from the area north of Calhoun Street and south of Cass Street.

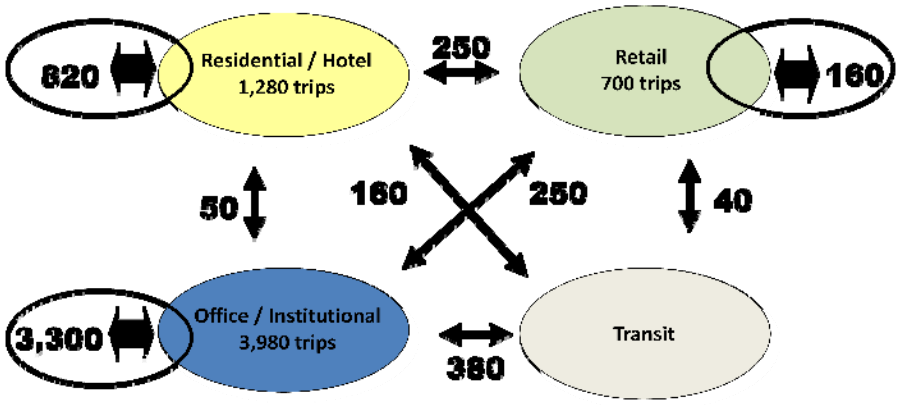

Figure 5-34: Traffic Volumes Entering and Exiting the Study Area

SkyComp uses high resolution digital photography to track routing of vehicles entering and departing the survey zone, as well as their routing through the study area.

The 2025 No Build traffic volumes were derived from the project's travel demand model, based on the assumed land use, population and employment forecasts that were adopted by the DVRPC for its long-range regional plan. Traffic flow conditions during the AM and PM peak hours at signalized intersections in the study area were analyzed for both 2006 and 2025 No Build conditions. As may be reasonable to expect, year 2025 No Build traffic conditions are generally worse than 2006 conditions because of relatively higher traffic volumes due to normal growth in the surrounding region.

The 2025 Build traffic volumes were also derived from the project's travel demand model using land use, population and employment datasets that are being proposed under this project for the waterfront area.

In light of the different land use and highway circumstances between the No Build and Build conditions, comparing traffic flow conditions between them is not a typical one-to-one comparison since intersections—i.e., their layout, alignment, locations and traffic control schemes—for the respective scenarios are very different from one to the other. Traffic loads on the network are also very different between scenarios because the land uses assumed under No Build are vastly different from those assumed under the Build scenario. Nonetheless, *Figures 5-35 and 5-36* provide AM peak hour and PM peak hour comparisons of traffic volumes on the regional roadway network between the No Build and the Build scenarios. A general description of these changes and their comparative scale and impacts, is described in more detail in the *Route 29 Boulevard Study: Traffic Report* (Dewberry-Goodkind, Inc. and Urbitran Associates, Inc., January 2009), included in Appendix G.

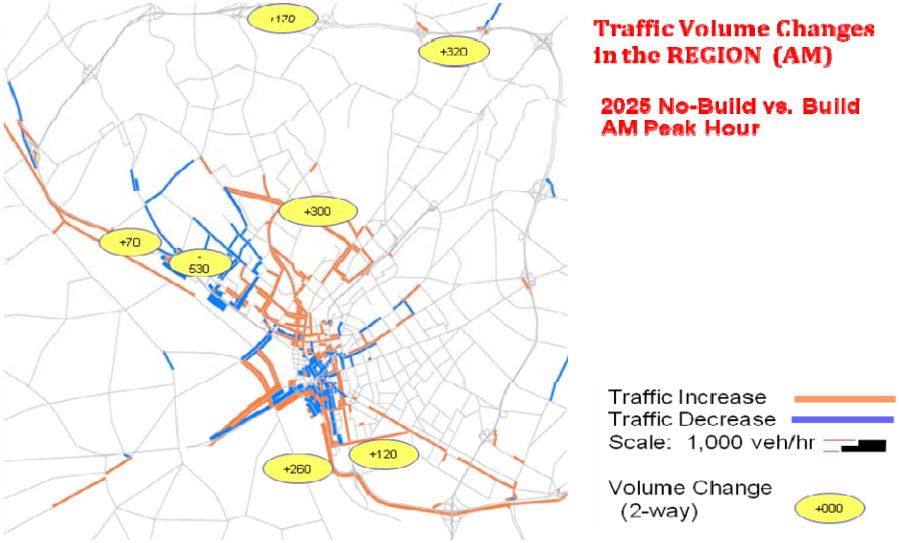

Figure 5-35: Traffic Volume Changes in the Region (AM)

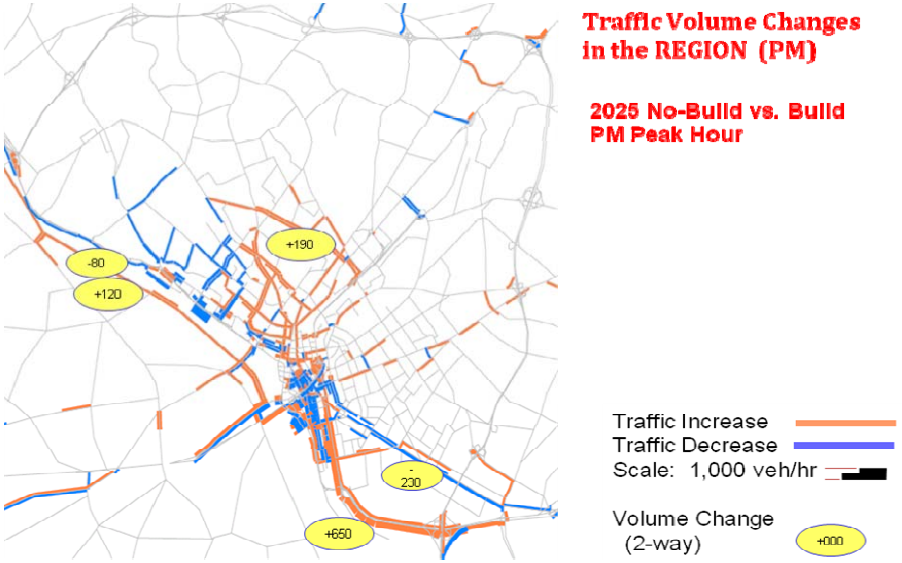

Figure 5-36: Traffic Volume Change in the Region (PM)

Intersection Analysis

Turning movement volumes at study intersections were extracted from the project's travel demand model and used in Trafficware's Synchro/SimTraffic program (Synchro 6, Build 614) for the operational analyses (*see Figure 5-37*). After the study network was constructed in Synchro with its base input parameters, traffic volumes corresponding to the AM and PM peak hours of the year 2025 No Build and Build scenarios were entered. The basic input parameters used include traffic volumes, speeds, signal phasing and signal timings, highway and intersection lane configurations and number of lanes.

While the level of service (LOS) and delay calculations from Synchro are reported based on methodologies of the Highway Capacity Manual, the SimTraffic component of the Synchro program was used to observe the interaction between adjacent intersections in the study network. If the SimTraffic observations called for adjusting traffic signal operations, traffic control device application, need for turn lanes and/or minor reassignment of traffic demand on travel routes in order to improve traffic performance on an intersection or on a network-wide basis, these adjustments were made and the resulting operations are reported accordingly.

Analysis of Conditions With and Without Memorial Drive

During the evaluation of traffic performance for the Build scenario, the NJDEP Division of Parks and Forestry requested that the proposed section of Memorial Drive between Route 29 and Street A over Assunpink Creek not be constructed because it was not consistent with their designs for park improvements adjacent to the Assunpink Creek. This condition was analyzed for its traffic implications using a special run of the project's travel demand model. Removing the subject section of Memorial Drive from the street network had the effect of increasing through traffic on Route 29 by approximately 300 vehicles/hour in each direction between Market Street and Memorial Drive. With the additional through traffic, the Route 29 intersections between Market Street and Memorial Drive operated more poorly compared to the scenario where the subject road was provided. In light of these results, the NJDOT decided to keep the Memorial Drive section between Route 29 and Street A as part of the proposed roadway network.

Analysis of Retaining or Eliminating Route 29 Left Turns

Separately, the NJDOT Office of Traffic Signals and Safety Engineering (TSSE) requested an evaluation of a scenario where left turns off of the Route 29

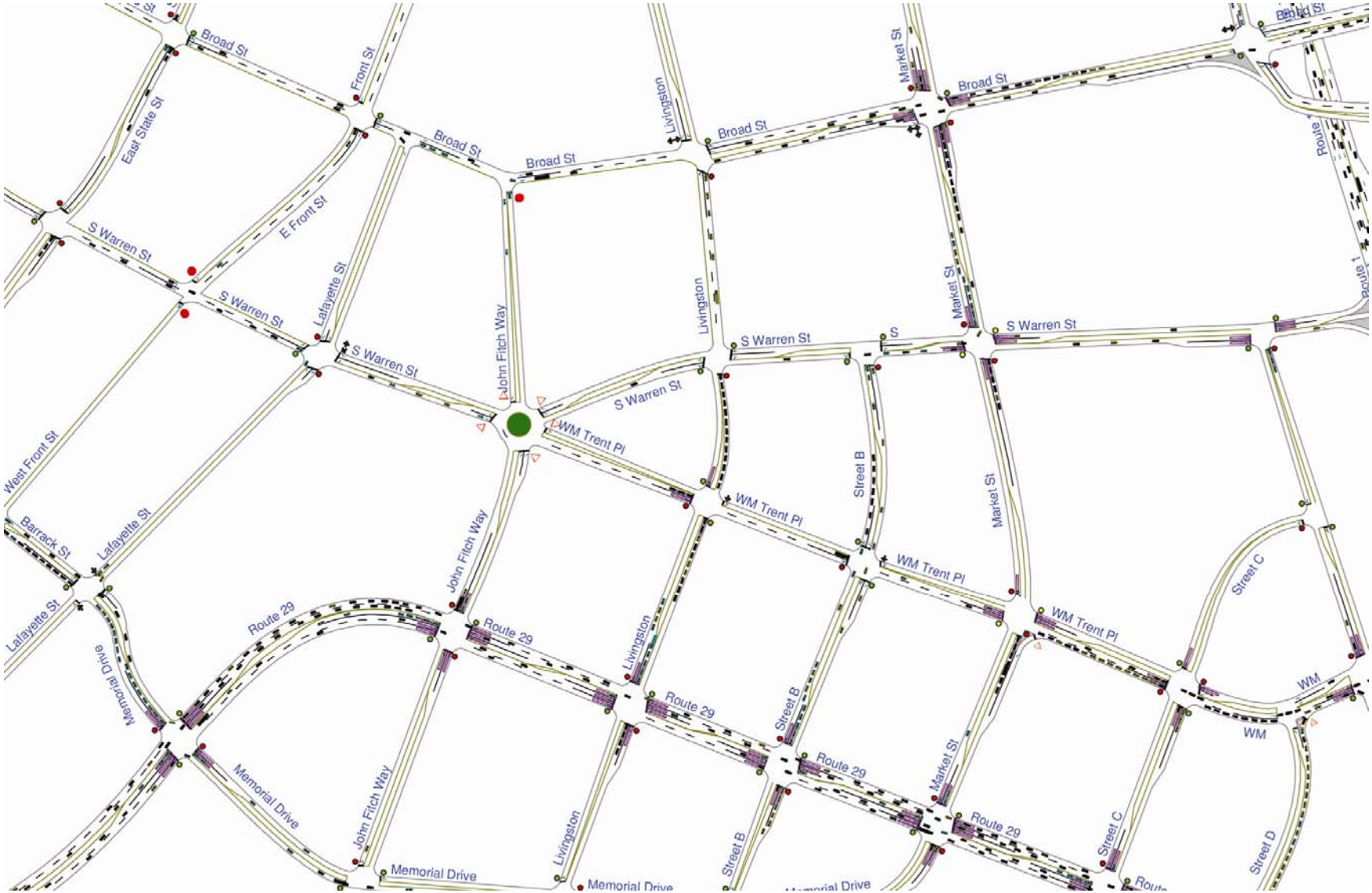

Figure 5-37: Sample Synchro Simulation 2025 PM Build Scenarios

intersections were prohibited between and including, Market Street and Memorial Drive. Having reviewed the traffic conditions and data (AM and PM peak hours) for the scenario where left turns were allowed, the NJDOT inquired if prohibiting left turns could improve individual intersections as well as overall system traffic operations. The traffic distribution for the "No Left Turn" scenario was developed manually. Vehicles that formerly made left turns at an intersection were assumed to reach their destinations by making either a forward jug handle maneuver at an upstream intersection, or a reverse jug handle maneuver at a downstream intersection. A greater percentage of the respective left turning volumes were assumed to make

the forward jug handle maneuver, rather than the reverse jug handle maneuver. The Synchro and SimTraffic evaluation of this scenario—where left turns on Route 29 were prohibited—indicated that more intersections would experience poorer LOS and longer delays during the AM and PM peak hours than the scenario where left turns on Route 29 were allowed. Consequently, the NJDOT decided that left turns off of Route 29 should be allowed and be part of the recommended plan for this project.

Adjustments to PA

The analysis of the Build conditions prompted the following changes to some of the original project recommendations for roadway and/or intersection geometries:

- At the Route 29/Calhoun Street interchange, the existing Route 29 southbound ramp connection with Calhoun Street westbound was originally proposed to be eliminated, along with the elimination of all other existing ramps. This particular ramp was recommended to remain in order to help the replacement Calhoun Street roundabout configuration to function as desired and intended.
- At the Route 129/Hamilton Avenue intersection, future conditions require the addition of a separate right turn lane on the eastbound approach (to Route 129 southbound) due to anticipated high volumes for the eastbound to southbound movement. Without this additional lane, severe queuing is expected on the eastbound approach all the way upstream to the Broad Street intersection and beyond.
- The existing Route 1 northbound on-ramp from South Warren Street, which was proposed to be reconfigured to include a new intersection with Bridge Street just west of Union Street, will remain as it exists today. As a result, there will be no new intersection with Bridge Street. This recommendation, developed after the analysis, showed that northbound to southbound traffic flow along Bridge Street under the year 2025 Build would operate at a very poor LOS and would experience very long queues that would affect multiple intersections upstream of this junction in all directions.

Traffic Summary

Overall, traffic conditions for the Build road network will be slightly better than those for the No Build scenario. The better traffic conditions result from the Build scenario's expanded grid network which will give drivers more options to reach (or come from) such major routes as Route 1, Route 29 and the other regional arterials, than under the No Build network.

In light of the more intensive land use assumptions used for the Build scenario, the project roadway network as proposed will suffice in delivering a reasonable level of traffic flow—i.e., for an urban area—during the peak periods of the day in year 2025. A sample view of a Synchro simulation is shown on *Figure 5-40* for the 2025 Build scenario.

5.2.6 Traffic Staging

The proposed PA can be constructed in four main stages. The general concept is to maintain the existing Route 29 freeway during the initial construction of the Route 29 Boulevard and then shift the northbound Route 29 traffic onto the southbound side to continue construction of the Route 29 Boulevard. The conceptual staging plans are in Appendix F.

Prior to the start of construction (before Pre-Stage 1), various other projects in the vicinity will be progressed. They include the extension of Barrack Street in front of the Trenton and Mercer County War Memorial, construction of a Union Street right turn lane onto Route 29 northbound and Cass Street improvements.
After construction of the above items, the Route 29 PA can be constructed as follows:

Pre-Stage 1

Phase A

- Construct William Trent Place.

Phase B

- Construct Bridge Boulevard from New Warren Street to Trent Place and temporary connection to New Warren Street.
- Construct ramp at New Warren Street/Route 1 southbound interchange.

- Demolish New Warren Street from newly constructed Bridge Boulevard to Trent Place.

Phase C

- Construct temporary ramps to realign the existing Route 29 southbound to Route 1 southbound ramp and Route 29 northbound to Route 1 southbound ramp.
- Construct Ramp I.
- Close ramps from Route 29 to Route 1 southbound and detour traffic to temporary ramps, Trent Place and Ramp I.

Phase D

- Construct South Warren Street and Ramp C.
- Construct Union Street right in from Route 29 northbound.

Stage 1

Phase A

- Construct Bridge Boulevard from William Trent Place to Trenton Makes Bridge and construct connector to South Warren Street.
- Detour traffic bound for Route 1 northbound to Trent Place, Ferry Street, South Warren Street and Street E.
- Complete construction at Route 1 southbound/New Warren Street interchange.

Phase B

- Construct portions of Livingston Street, Street B and Route 29 Boulevard.
- Complete construction of Trent Place.

Phase C

- Construct temporary ramps to connect Street B to Route 29 northbound and southbound. These roadways may be constructed during later stages if required.

Stage 2

- Construct temporary pavement in the Route 29 median as required to accommodate crossover of traffic.
- Taper Route 29 northbound traffic from three lanes to two lanes and crossover traffic onto Route 29 southbound side in the vicinity of Trenton Makes Bridge. Two lanes in the northbound and southbound traffic to be maintained.
- Return Route 29 northbound traffic onto the northbound side just prior to the Calhoun Street interchange.
- Close the temporary ramp from Street B to Route 29 northbound, Route 29 northbound ramp to Memorial Drive, Route 29 southbound ramp to Memorial Drive, Route 29 southbound ramp to Market Street and Route 29 northbound ramp to Market Street.
- Construct Market Street between the Route 29 Boulevard and William Trent Place.
- Construct Portions of Route 29 Boulevard, West State Street connector.
- Construct Street A.

Stage 3

Phase A

- Shift Route 29 northbound traffic onto the new Route 29 Boulevard. Southbound traffic to remain on the old alignment.
- Construct Market Street between William Trent Place and New Warren Street.
- Construct portions of the Route 29 Boulevard and Calhoun Street interchange.
- During the Calhoun Street ramp construction, install a temporary traffic signal on West State Street.

Phase B

- Shift Route 29 southbound traffic onto Route 29 Boulevard.
- Complete the Route 29 Boulevard and Calhoun Street interchange construction.

Stage 4

- Construct Memorial Drive and Street D.
- Complete construction on Street A, Livingston Street and Street B.
-

5.2.7 Utilities

The NJDOT Utility Letter No. 1 (see Appendix L) was sent to the following utility companies regarding facilities within the project limits:

- City of Trenton Sewer Utility (Sanitary Sewer and Storm Sewer)
- Comcast Cable
- PSE&G (Gas)
- PSE&G (Electric)
- Trenton Water Works (Water)
- Trigen (Electric, Gas, Heat)
- Verizon (Telephone)

The following responses were received from utility companies:

- City of Trenton Sewer Utility (Sanitary Sewer and Storm Sewer)
  - Confirmed having facilities throughout the project area.
  - Detailed set of eight plan sheets showing sanitary/storm sewer lines and manholes within project limits was provided.
- PSE&G (Gas)
  - Confirmed having numerous gas lines throughout the project area.
  - Will not supply a detailed plan of the existing until they receive a signed executed agreement from the NJDOT.
- PSE&G (Electric)
  - Confirmed having numerous electric facilities throughout the project area including underground and overhead 13kV lines.
- Trenton Water Works (Water)
  - Confirmed having water facilities throughout the project area.
  - Two detailed plan sheets of the water grid within the projects limits were provided showing water mains, valves and meters and hydrants within the project area.
- Trigen (Electric, gas, heat)
  - Confirmed having facilities throughout the project area.
  - Trigen is a Veolia Energy company providing electric, gas and heat to the state-owned facilities in downtown Trenton.
  - Trigen plant is located on South Warren Street *(see Photograph 5-4)*
  - Electronic copy of Trigen facilities were received and transferred onto the project base map.

Photograph 5-4: Trigen Facility in Downtown Trenton

A stakeholder interview was held with Trigen due to the extensive facilities that exist. Trigen pipes cross Assunpink Creek at several locations. Their main facility is a large steel chilling tank under the heliport that is 25 feet high (13 feet below ground and 12 feet above ground) and 127 feet in diameter (2.8 MG capacity). Water from this tank is used in providing air conditioning to the customers. Built in 1988, it is very strong and designed to withstand the crash of a helicopter. A residential/commercial building could be built

over the water tank, provided the tank is protected and access similar to what exists today is maintained.

Trigen thermal and chilling capacities are close to capacity and will need expansion with any major additional demands. $3.2 million was needed to relocate pipes under county facilities at South Warren/Market Streets. These are high temperature ten-inch pipes (400 degrees F).

5.2.8 Drainage/Flooding

The majority of the project area lies within a regulated floodplain that is shared by both the Delaware River and one its tributaries, Assunpink Creek. As such, the project must comply with the NJDEP FHA Control Act Rules (N.J.A.C. 7:13), which govern development within a regulated floodplain. In order to demonstrate compliance with these rules, a hydraulic model of Assunpink Creek was developed using the US Army Corps of Engineers (USACE) HEC-RAS 3.1.3 computer program. The study reach includes the portion of the creek lying between the downstream end of the Stockton Street culvert and the confluence with the Delaware River.

The hydraulic model includes floodplain geometry for both existing and approximate proposed (post-construction) conditions. Existing main channel geometry was measured in 50 locations throughout the study reach. The dimensions of the ten bridges and culverts lying within the study reach were also determined via field survey. Existing floodplain geometry was measured using one-foot contour intervals generated from the 2006 aerial base mapping for the project.

A conceptual grading plan of the project area was developed in order to establish floodplain geometry for the post-construction condition. The main channel geometry will match the existing configuration with the following exceptions:

- The concrete retaining walls between the municipal parking lot bridge and the confluence with the Delaware River will be removed and replaced with sloping stream banks that match upstream conditions.
- The existing Route 29 bridges, municipal parking lot bridge and Memorial Drive Bridge will be removed and replaced with the new Barracks Street Bridge and the new Route 29 Boulevard Bridge.

In order to demonstrate thorough compliance with the FHA rules, the 2, 5, 10, 25, 50 and 100-year floods were modeled along with the NJDEP Flood Hazard Area Design Flood (FHADF). Peak discharges for the 10-year, 50-year, 100-year and FHADF events were obtained from the NJDEP-adopted Flood Insurance Study for Mercer County. The remaining discharges were determined by interpolation.

The following three types of downstream boundary conditions were examined in order to determine the worse-case scenario for flooding of the project area:

1. Concurrent flooding of both the Delaware River and Assunpink Creek (computations started with Delaware River FHADF water surface elevations).
2. Flooding of the Assunpink Creek only (computations started with normal depth).
3. Flooding of the Delaware River only (computations started with Delaware River FHADF water surface elevations).

It was found that, for scenario 2, flooding is contained within the main channel of the Assunpink Creek. Scenarios 1 and 3, however, both yield significant backwater effects and overtopping of the main channel up to the Broad Street Bridge over the creek. These two scenarios produce water surface elevations that closely simulate the NJDEP-adopted floodplain mapping. Therefore, scenario 1 was used to construct the final model of the creek. Since the creek is relatively steep in some locations, the model was analyzed using the mixed flow regime option. Starting water surface elevations at the upstream limit of the model were calculated using normal depth.

The results of the study indicate that the conceptual grading plan developed for this study will comply with the FHA rules, which prohibits any net fill within both the FHADF and 10-year floodplains. *Table 5-15* summarizes the existing and proposed storage volumes for these two storm events.

Storm	Existing Storage Volume, ac-ft	Proposed Storage Volume, ac-ft	Percent Increase
FHADF	385	390	1.3
10-Year	32	41	28.1

Table 5-15: Existing and Proposed Storage Volumes

The portion of Route 29 proposed for realignment will be graded just above the 25-year flood elevation of 19.5 feet NAVD 1988. *Figure 5-38* shows the flooding condition during the flood of 2006 (the 50-year flood). *Figures 5-39 through 5-44* depict the locations of the existing and proposed floodplains for the 10-year flood, the 25-year flood, and the FHADF. The NJDEP prefers that new roadways be constructed above the FHADF elevation. However, during preliminary meetings with the NJDEP, it was demonstrated that the lower elevation is needed in order to maintain a smooth grade between the proposed Capital Park to the northeast of the Route 29 Boulevard and the restored Stacy Park to the southwest of the Route 29 Boulevard. NJDEP personnel indicated that such a design should be acceptable.

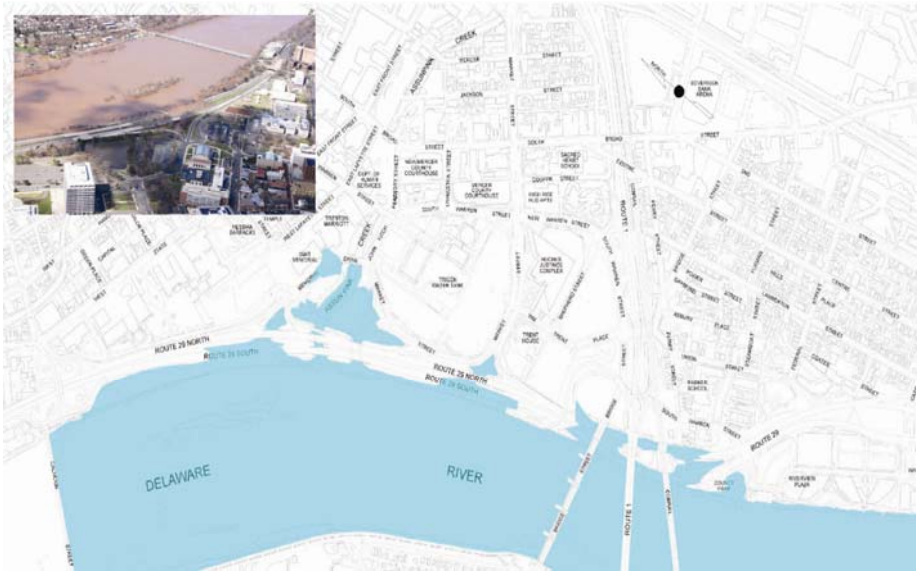

Figure 5-38: Flooding Condition During the Flood of 2006 (50-Year Flood)

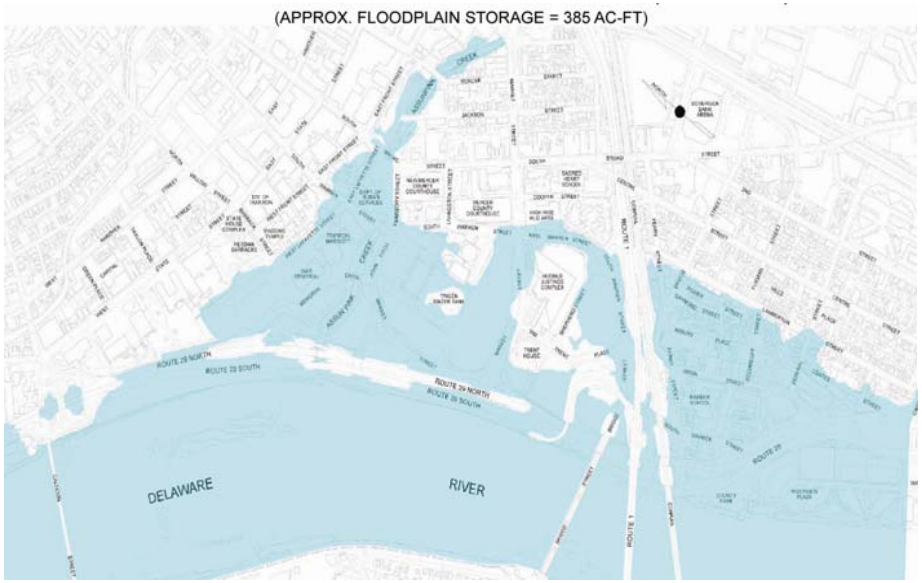

Figure 5-39: Existing NJ Flood Hazard Area Design Floodplain (100-YR+25%)

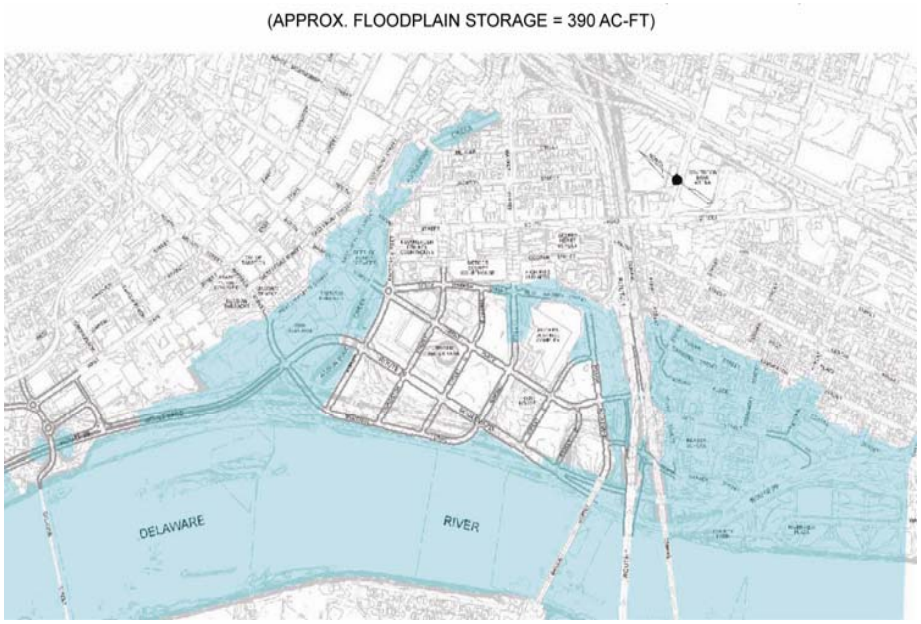

Figure 5-40:Proposed NJ Flood Hazard Area Design Floodplain (100-YR+25%)

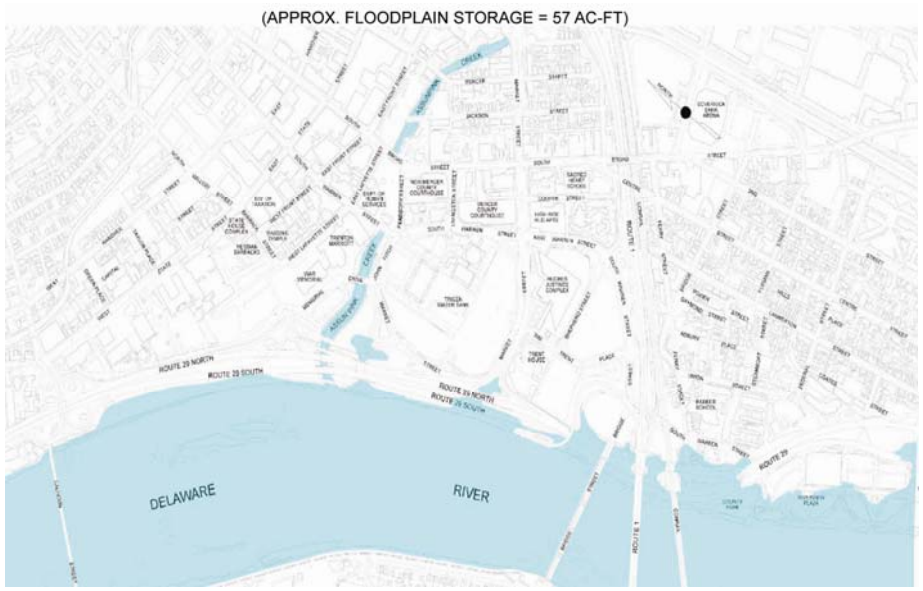

Figure 5-41: Existing 25-YR Floodplain

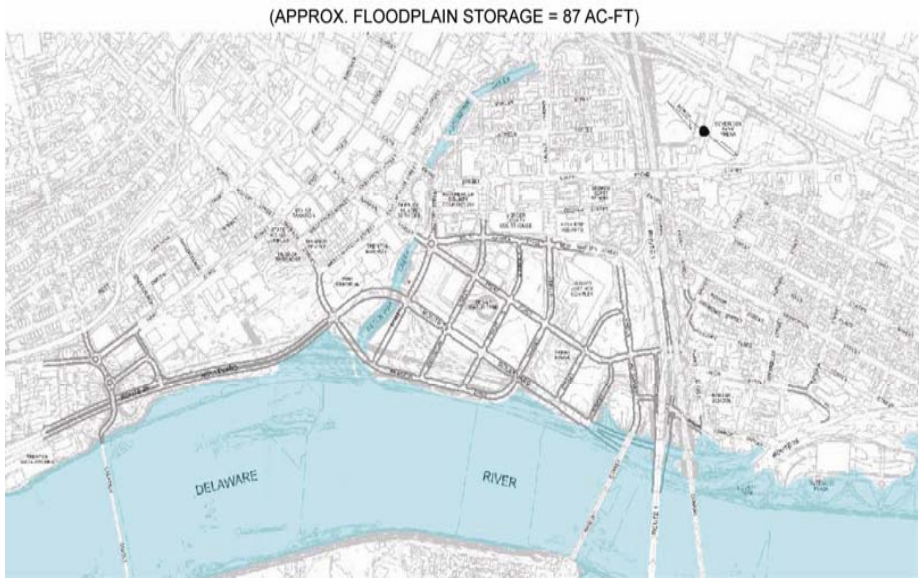

Figure 5-42: Proposed 25-YR Floodplain

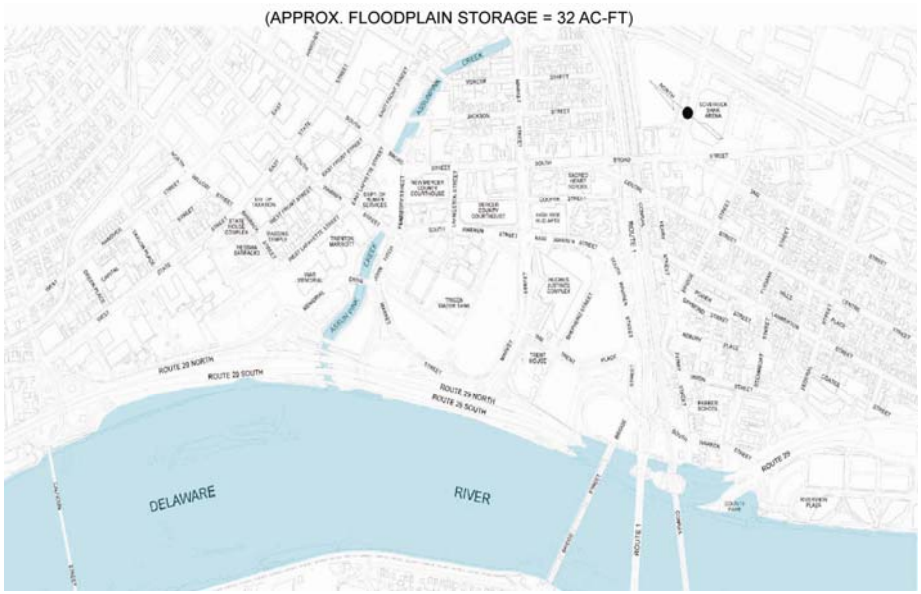

Figure 5-43: Existing 10-YR Floodplain

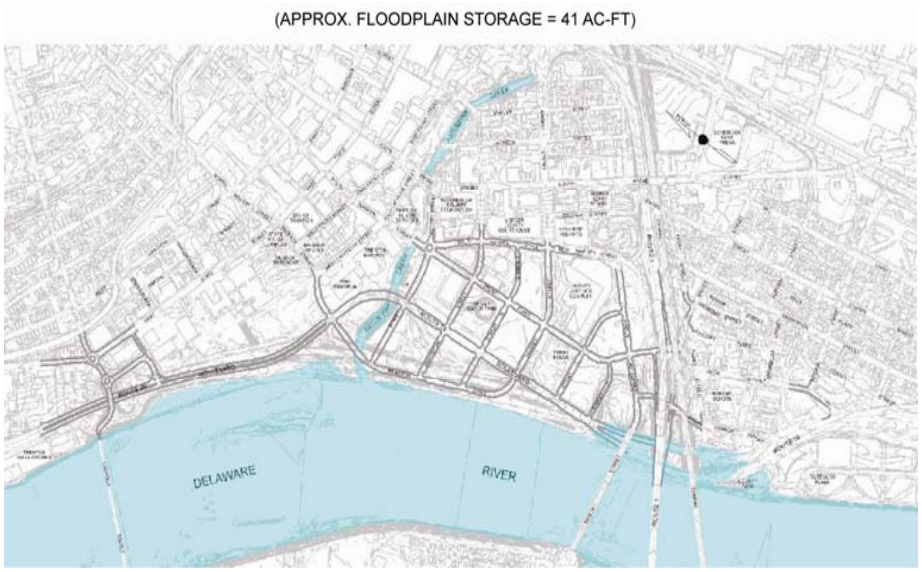

Figure 5-44: Proposed 10-YR Floodplain

A stormwater management evaluation was conducted for the Route 29 Boulevard project. It was determined that the conceptual improvements will result in a net decrease in impervious area. Therefore, compliance with NJDEP water quality rules will not be required. The project will result in over an acre of disturbance. However, since the project area is located entirely within the 100-year floodplain of the Delaware River, the use of a detention basin to attenuate runoff from the project area would not be prudent.

5.2.9 Structures/Geotechnical Engineering

Geotechnical engineering was not performed as part of this FA. However, use of piles is anticipated for bridges and buildings due to the historic fill that exists within the footprint of the proposed Route 29 Boulevard.

The conceptual improvements presently envisioned for the Route 29 Boulevard project require the construction of three new bridges and the demolition of 11 existing bridges. A summary of the bridges that will be demolished is provided in Chapter 2, *Table 2-2*. The new bridges include:

- Memorial Drive over Assunpink Creek;
- Route 29 over Assunpink Creek; and
- Ramp I over South Warren Street.

The new Memorial Drive Bridge will be a single-span structure approximately 105-feet long by 75-feet wide. The proposed roadway alignment positions this bridge partially within a horizontal curve, having a radius of 400 feet, and partially on a tangent. The new Route 29 Bridge will be a single-span structure approximately 65-feet long by 130-feet wide. The entire structure is located on a horizontal curve having a radius of 600 feet. The bridge carrying Ramp I over South Warren Street will be a single-span structure, approximately 85-feet long by 30-feet wide, constructed entirely on a tangent alignment. For each of these new bridges, an evaluation of the site-specific constructability issues and viable alternative structure types will be performed in the subsequent design phase.

5.2.10 Value Engineering/Solutions

The NJDOT's Smart Solutions Unit participated in the Scope Team and Core Group meetings and provided input to the design. As a result of these meetings, the PA was modified to incorporate some of their recommendations.

One of the suggestions made by the Smart Solutions Unit that was not incorporated in the PA was to retain the existing Route 29 southbound ramp to Calhoun Street and eliminate the left turn lane. (For additional details regarding this recommendation, please refer to the September 16, 2009 meeting minutes in Appendix I, "Stakeholder Coordination.")

Value Engineering also participated and recommended that the existing Route 1 northbound ramp from South Warren Street (located between Route 1 and the Amtrak railroad tracks) be replaced as it had been envisioned in the CD phase. However, this recommendation was not incorporated as the traffic analysis indicated that modifications to this ramp would not result in significant traffic improvements to the street grid system. This revision resulted in a savings of approximately $2 million.

5.2.11 Survey Base/Plans

The existing 1"=100' scale base mapping for this FA was provided by GEOD using color vertical aerial photography. Horizontal coordinates were calculated, checked and adjusted into the New Jersey State Plane Coordinate System of the North American Datum of 1983/96. The vertical control was adjusted to elevations in the North American Vertical Datum 1988. Within accuracy requirements, two-foot contours were generated to represent true elevation above mean sea level and the exact shape of the ground. Property line information was created based on tax maps from the City of Trenton and was shown on the base mapping.

Information added to the base plans by Dewberry includes street names, business and landmark names, property lines, property block and lot numbers and utilities. Utility companies were contacted to provide information on the location and features of their utilities that fell within the project limits. This included marking locations on base maps and providing any as-built information that was available.

Aerial base mapping provided by GEOD was supplemented by a limited field survey performed by ACT Engineers. Supplemental survey included stream cross sections of Assunpink Creek, dimensions of ten bridges and culverts lying within the hydraulic study area, wetlands flags and miscellaneous items obscured on photogrammetric base mapping.

5.2.12 Pedestrian and Bicycle Compatibility

Proposed sidewalks and crosswalks have been provided throughout the project limits. Additionally, bicycle paths and sidewalks will be provided throughout the proposed waterfront park that will parallel the Route 29 Boulevard. The proposed street cross sections along Route 29 were initially striped such that 11-foot lanes and eight-foot shoulders would be provided in each direction. It was envisioned that the low speed of the proposed Route 29 Boulevard and the two-foot buffer between the right lane and parked cars would be sufficient for bicycle use. However, after consultation with the NJDOT Bike-Pedestrian Unit, it was decided to revise the lane striping such that the inner lane will be ten-feet wide, while the outside lane will be striped 13-feet wide (as shown in section 5.1.2). This arrangement will allow for additional bike space without the need to increase pavement widths. It was agreed that widening of the proposed pavement is not desired since it will promote higher speeds. It was agreed that a ten-foot wide lane (which will need a Design Exception) would be acceptable to the Smart Solution Unit since this project is in a downtown setting with low traffic speeds and minimal truck traffic.

5.2.13 Construction Cost Estimate

A construction cost estimate was developed for the proposed Route 29 street grid system (not including the development lots and buildings). Please refer to Appendix D.

5.3 ENVIRONMENTAL

In order to provide a description of existing environmental conditions as well as potential impacts that could result from the proposed project, summary reports were prepared for the following environmental disciplines:

- Noise
- Air Quality
- Socioeconomics, Land Use and Environmental Justice
- Natural Ecosystems
- Cultural Resources
- Hazardous Waste

The following sections summarize the findings of these reports. For more detailed information regarding existing conditions, refer to the individual reports prepared for each discipline. A complete listing of these reports is included in Appendix K.

5.3.1 Noise

A noise analysis was conducted for sensitive properties within the study area—e.g., residences, historic properties, recreational areas, schools, places of worship, etc. The study quantified 2008 existing, 2025 No-Build and 2025 Build noise levels. Noise calculations were performed utilizing the approved Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5, which is capable of predicting noise levels in the vicinity of roadways.

Based on FHWA 23 CFR 772, receptors are considered impacted if noise levels approach or exceed the Noise Abatement Criteria (NAC) or substantially increase (10 dBA L_{eq} or more) projected Build noise levels over existing conditions. FHWA has established noise guidelines for several land-use activities.

Under 2008 existing conditions, computer modeling documented a total of 36 residential (single, dual and multi-family) properties, approximately 0.6 acres of a future residential development (Westrum Homes) and portions of four parks (totaling 2.6 acres) which currently possess noise levels that approach or exceed the NAC. One school and two places of worship currently possess interior noise levels that approach or exceed the respective criteria since these buildings are not air-conditioned. There are three commercial/industrial establishments that currently approach or exceed the NAC criteria. Assuming normal traffic growth, 2025 No-Build noise levels were predicted and included similar noise analysis results as under 2008 existing conditions. No additional sensitive receptor sites are predicted to approach or exceed their respective noise criteria under future 2025 No-Build conditions.

To accommodate the proposed downtown redevelopment, buildings associated with the Department of Labor and Health may need to be acquired or relocated. Of the existing properties within the study area, 35 residential buildings (single, dual and multi-family) and a future residential development (Westrum Homes) are predicted to possess future 2025 Build noise levels that approach or exceed the NAC. Portions of three existing parks will possess noise levels that approach or exceed the NAC, including the area outside the William Trent House Museum grounds. Due to the

redistribution of traffic, some areas of proposed riverfront parkland will possess noise levels above the FHWA noise criteria. One school and two places of worship are predicted to possess interior noise levels above the criteria and three commercial/industrial establishments are predicted to incur noise levels that approach or exceed the NAC criteria. Within the redevelopment area, mitigation measures will be necessary to create suitable areas for residential land-use.

5.3.2 Air Quality

To assess potential air quality impacts, a microscale carbon monoxide (CO) analysis was performed at one critical intersection within project limits. Receptors representing pedestrian locations were located on sidewalks along each approach leg of the critical intersection. Appropriate modeling techniques were utilized to predict one-hour and eight-hour concentrations. Ambient background CO concentrations were added to the modeled results and compared to the National Ambient Air Quality Standards (NAAQS).

Peak 2025 Build CO concentrations were predicted at sidewalk receptor sites adjacent to the Route 29 Boulevard and Street C intersection. A peak one-hour concentration of 7.8 parts per million (ppm) and peak eight-hour concentration of 5.5 ppm, were predicted. All CO concentrations modeled under the 2025 Build condition were below the one- (35 ppm), and eight-hour (9 ppm) NAAQS set forth for CO.

Under current policies, the air quality analysis performed for the proposed project as well as the project listing within an approved Statewide Transportation Improvement Program provides validation of State Implementation Plan (SIP) conformity. As stated in Part D, Section 176 (limitation on certain federal assistance) of the Clean Air Act Amendments of 1990, a specific project cannot "cause or contribute any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standard in any area, or delay the timely attainment of any standard or any required interim emission reduction or other milestone in any area." However, due to the regulatory changes and emerging science developments of $PM_{2.5}$ and MSATs expected within the near future, interagency consultation will be extremely important to determine further modeling requirements to ensure conformity with the Clean Air Act Amendments of 1990.

To demonstrate CO compliance, microscale CO modeling should be performed at the three worst-operating intersections within the study area. In addition, parking needs should be reviewed and interagency consultation will be necessary to determine CO modeling needs for surface parking lots and/or parking garages.

5.3.3 Socioeconomics, Land Use and Environmental Justice

The City of Trenton is an urban city that includes large populations of minority and low-income residents. According to the 2000 U.S. Census, 415 people lived in the study area. Land uses in the study area are dominated by roadways and parking for the surrounding government offices *(see Figure 5-45)*. Interspersed among the parking lots are state office complexes and historical sites, including the Old Barracks, the Trent House and the Trenton and Mercer County War Memorial. Commercial and residential uses are limited within the study area and are found at the western edge near Rutgers Place and between Lafayette Street and West State Street. Also at the western edge of the study area, near the Trenton Filtration Plant, are the remnants of the City of Trenton's Stacy Park. Based on the available census data, the population living within the study area meets the EJ criteria for both minority population and low income.

It is anticipated that the proposed project will improve land uses by reclaiming areas currently used for transportation and parking The proposed waterfront park will add new amenities and will improve access to the Delaware River. The proposed relocation of the roadway inland, away from the river, will create new blocks that will be available as developable parcels of land for a mix of residential and commercial high-density buildings. This alignment allows for the construction of a street grid that provides access to the waterfront and will greatly improve the aesthetics, mobility, pedestrian and vehicle safety. It will also provide for reduced traffic congestion to area residents, including disadvantaged populations. It is not expected that the proposed project would displace any existing residential units, community facilities or commercial businesses and overall, it is not expected to result in any adverse impacts.

This analysis found that disadvantaged populations live in the study area. While it is anticipated that the proposed redevelopment will benefit the City of Trenton as a whole, potential impacts to the area's disadvantaged residents should be considered. The final sources of funding will determine

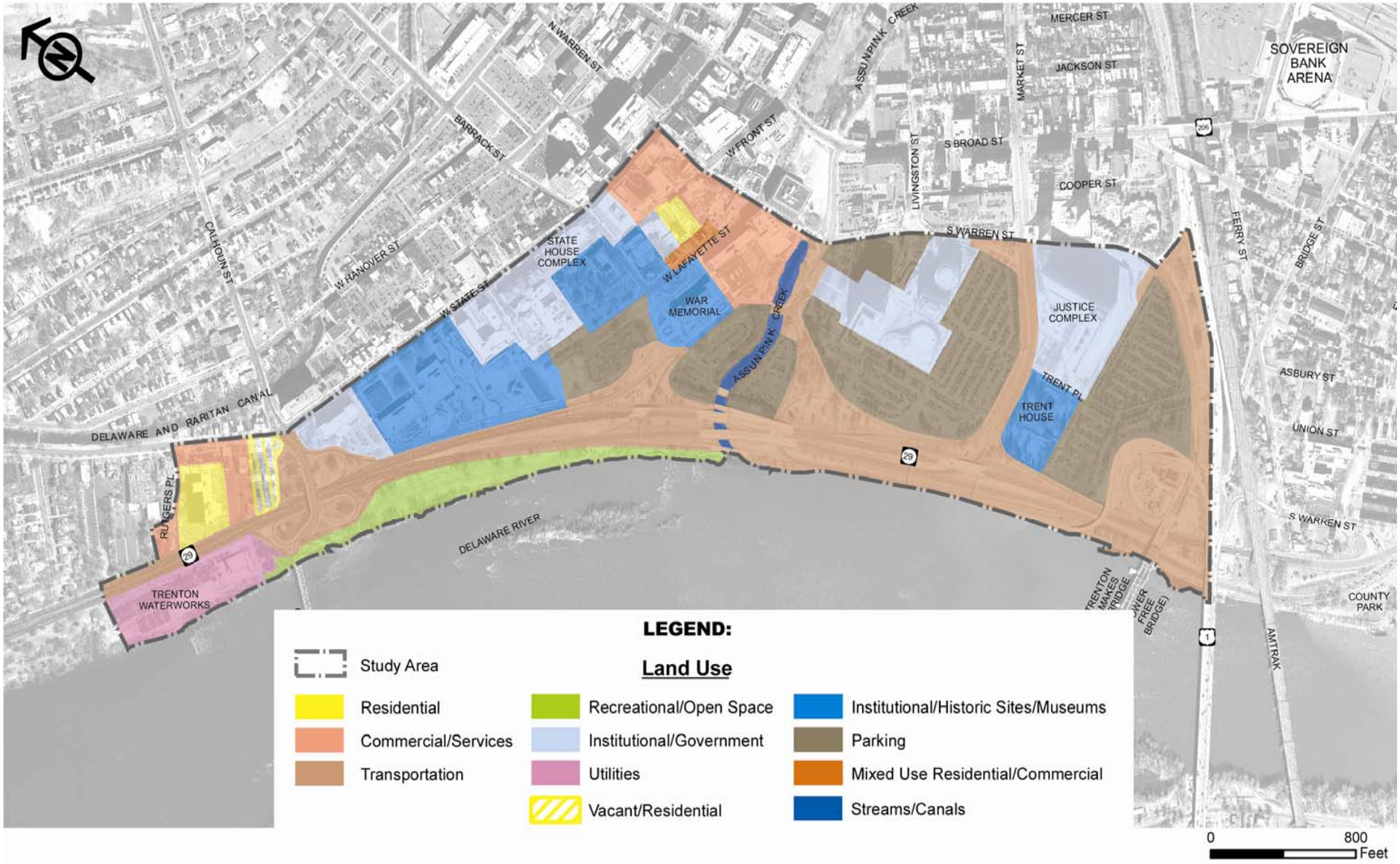

Figure 5-45: Land Use

whether the proposed project will be required to fulfill the requirements of Executive Order (EO) 12898. However, despite the sources of funding, there are goals and actions the master developer and the City of Trenton could include in the final development plan that would fulfill the spirit of EO 12898 as well as generating community support for the development portion of the project. These programs and actions should be refined during the project's public involvement activities and could include

- job opportunities for area residents at the appropriate skill level during construction and post construction;

- job training for area residents; and
- the inclusion of affordable housing in the new development that would help the city meet its requirement of 724 housing units by 2018.

Funding and Housing Considerations

The Department of Housing and Urban Development (HUD) has several programs that could be used to develop the proposed residential units. These include the Community Development Block Grants, as well as the HOME program. Should federal funding be used to construct the housing units, HUD regulations would require the recipient to follow National Environmental Policy Act (NEPA) regulations and an environmental document would be required. As part of that document, the proposed project would need to comply with the EO 12898 requirements on Environmental Justice and potential impacts to disadvantaged communities would need to be fully evaluated. In addition, a public involvement program that incorporates the comments and concerns of these communities would need to be developed.

Despite the source of funding, the City of Trenton must fulfill the New Jersey Department of Community Affairs Council on Affordable Housing (COAH) requirement to build affordable housing units either on or off-site. These regulations have recently been revised. On December 17, 2007, COAH voted to propose its revised third round regulations resulting from the Appellate Division Decision on January 25, 2007. The rules were published in the January 22, 2008 New Jersey Register. On May 6, 2008, COAH voted to adopt the rules, with minor clarifications, as N.J.A.C. 5:96 (Procedural Rules) and N.J.A.C. 5:97 (Substantive Rules). The adopted rules were published in the NJ Register on June 2, 2008. On May 6, 2008, the Council also proposed amendments to the recently adopted revised third round rules (N.J.A.C. 5:96 and N.J.A.C. 5:97) and the procedural rules for municipalities certified before January 25, 2007 (N.J.A.C. 5:95). The proposed rules were published in the NJ Register on June 16, 2008. However the NJ League of Municipalities has brought a lawsuit against NJDCA challenging the revised regulations. This lawsuit is still pending.

The changes to the revised rules include the requirement to build one affordable housing unit for every four market-rate units built and one affordable unit for every 16 jobs created by the construction of commercial development. To promote development in smart growth and redevelopment areas, municipalities that include affordable housing units in smart growth areas near transit facilities, or those that include affordable housing units in redevelopment areas, will receive a one-third bonus for every affordable unit approved. COAH has established presumptive densities and affordable housing set-asides for inclusionary developments based on the State Development and Redevelopment Plan. In addition, developers can add one additional market-rate unit for every affordable unit that is built on-site.

5.3.4 Natural Ecosystems

The majority of the Route 29 study area is heavily developed and soils are mapped entirely as Urban Land. The study area is located in the Piedmont physiographic province of New Jersey and within the New Jersey Coastal Plain Aquifer System, which has been designated a sole source aquifer. A search for available information that could be used to determine the Seasonal High Water Table (SHWT) was conducted; however, this search did not yield adequate groundwater information to evaluate a depth to the SHWT.

The study area is comprised of portions of two Watershed Management Areas—the Central Delaware (WMA 11) and the Assiscunk, Crosswicks and Doctors (WMA 20). The study area drains to portions of the Delaware River and the Assunpink Creek (*see Figure 5-46)*, the confluence of which is located within the study area. Initial investigations into the location of the head-of-tide found conflicting information. However, the USACE Philadelphia District has agreed to recognize the location as depicted in the NJDEP Geographic Information System mapping. An official determination from the USACE is anticipated, pending their review of a Geographic Jurisdictional Determination request submitted to the Philadelphia District in November 2008.

Both the Delaware River and Assunpink Creek are identified by the NJDEP as Finfish Migratory Pathways and the proposed project will need to be designed and scheduled in such a way that it will not cause adverse impacts to the water quality or create barriers to these pathways. Additionally, threatened and endangered species are known to exist in the Delaware River. No in-water work is proposed in the Delaware River; however, due to the possible need for federal permits, consultation pursuant to Section 7 of the Endangered Species Act may be required. Further coordination with the

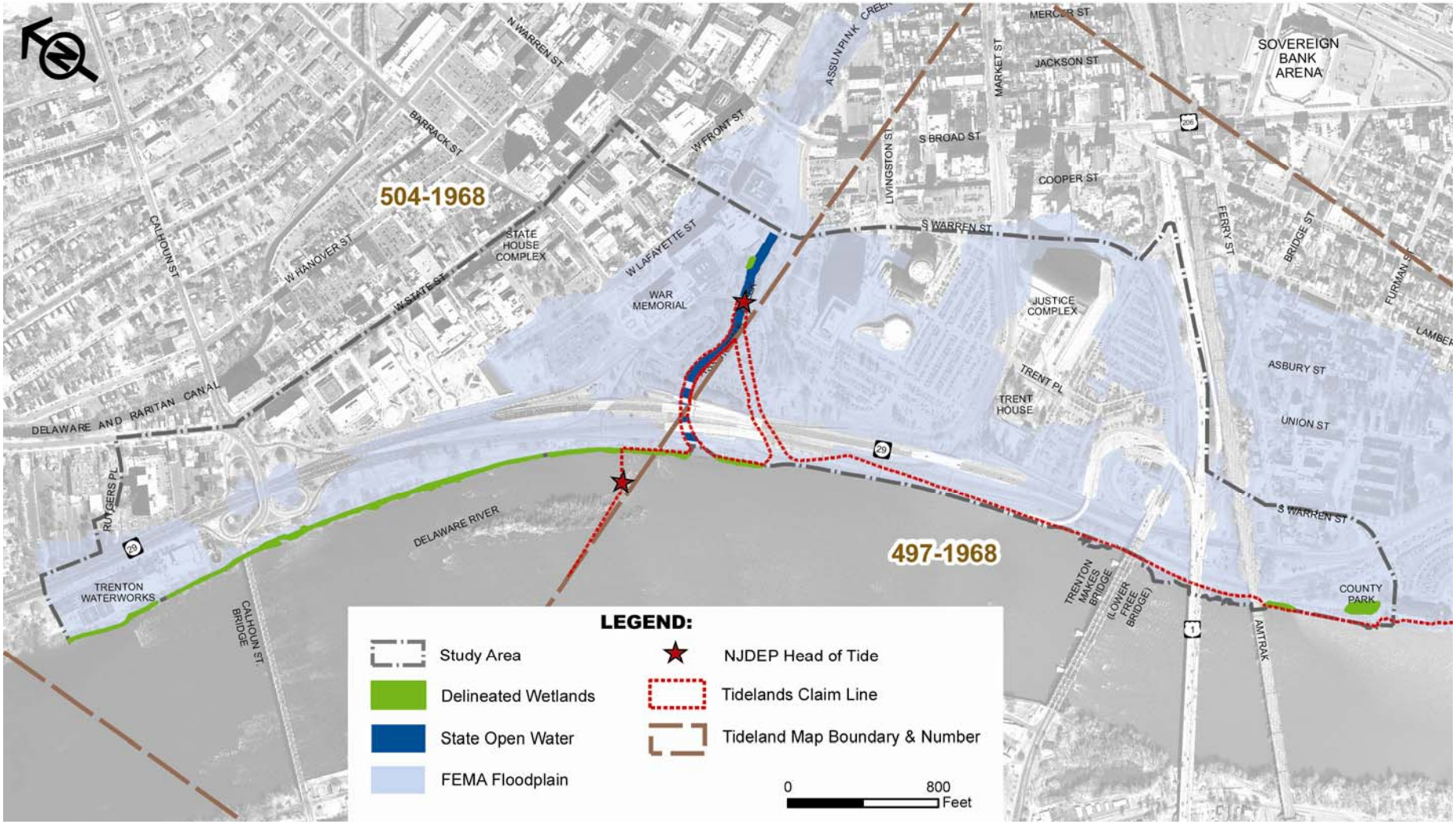

Figure 5-46: Natural Ecosystems Constraints within the Study Area

USFWS, the National Marine Fisheries Service and the NJDEP will be necessary during final design and permitting. The study area is located in both the Federal Emergency Management Agency (FEMA) 100-year floodplain, as well as within the NJDEP regulatory FHA of the Delaware River and Assunpink Creek. Most of the 0.764-acre of field-delineated wetlands are not depicted on either the National Wetlands Inventory or NJDEP wetlands maps, but consist of narrow "fringe" wetlands located along the Delaware River bulkhead (*see Photograph 5-5)* and along the Assunpink Creek. Impacts to waters, wetlands and/or transition areas would need to be permitted through the NJDEP and USACE.

Under the PA, the four bridges over the Assunpink Creek associated with the current roadways and ramps of Route 29 and the bridge connecting the two parking lots that straddle the creek, would be removed. Barrack Street would be extended and a new bridge would be constructed in the vicinity of the Route 29 bridges. The War Memorial Drive Bridge over Assunpink Creek would also be removed and the new alignment of Route 29 would be

constructed south of it. The construction of the two proposed bridge crossings, coupled with the removal of the existing bridges, would result in a net decrease in bridge crossings and their associated abutments/piers over Assunpink Creek. These improvements would provide a benefit to the aquatic ecology of Assunpink Creek in the form of decreased encroachment upon and "bridge shadow" over the creek. It should be noted, however, that the NJDEP Division of Parks and Forestry has expressed interest in possibly converting some of these bridges for pedestrian use as part of their Capital Park project.

Photograph 5-5: Looking upstream along Delaware River bulkhead, near the head of tide, at fringe wetland area adjacent to Stacy Park

The USACE is currently in the process of initiating an environmental restoration project for the lower Assunpink Creek, a part of which intends to "day-light" the Broad Street Culvert section of the Assunpink Creek. It is recommended that any proposed improvements to Route 29 and downtown Trenton be designed and constructed with these restoration activities in mind.

The NJDEP Surface Water Quality Standards (SWQS) classifies surface waters based on designated uses and dictates water quality criteria to protect those uses. New Jersey has both fresh and saline waters. Freshwaters are classified as FW1 (not subject to any man-made wastewater discharges) and FW2 waters (all other freshwaters). The designated uses for FW2 waters are as follows:

- maintenance, migration and propagation of the natural and established biota;
- primary and secondary contact recreation;
- industrial and agricultural water supply;
- public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
- any other reasonable uses.

These FW2 waters are further classified based on trout status: trout production (FW2-TP), trout maintenance (FW2-TM) and non-trout (FW2-NT). Assunpink Creek is classified as FW2-NT; these waters are not considered suitable for trout, but may be suitable for many other fish species.

The Delaware River is managed by the Delaware River Basin Commission (DRBC), which was created by an intergovernmental compact with New York State (including New York City), New Jersey, Pennsylvania, Delaware and the federal government for planning, conservation, utilization, development, management and control of the water resources of the Delaware River Basin. The Surface Water Quality Classifications for the Delaware River, while listed in the NJDEP's SWQS, are defined in the DRBC's "Administrative Manual – Part III Water Quality Regulations." This manual divides the

Delaware into numerous zones, each of which has specific use protections. Two zones are found within the study area, the dividing line of which is listed in the regulations as the "Trenton-Morrisville Bridge" (Route 1 Bridge).

Each zone is also assigned specific water quality objectives and effluent requirements which are outlined in the DRBC Manual. Since no drainage design has been developed for the proposed project to date, water quality criteria, as set forth in the NJDEP SWQS, DRBC Manual and DRBC Special Protection Waters regulations, will need to be consulted during final design. Additionally, a portion of the study area is located in the Delaware and Raritan Canal Commission review zone and the proposed project will need to be reviewed for impacts to Delaware and Raritan Canal State Park resources.

Photograph 5-6: Existing stormwater outfall along Delaware River bulkhead, adjacent to Stacy Park

In 1992, the DRBC adopted Special Protection Waters (SPW) regulations in order to protect water quality in certain areas of the Delaware River Basin "considered to have exceptionally high scenic, recreational, ecological and/or water supply values." The SPW regulations were adopted to control municipal and industrial wastewater and stormwater discharges *(see Photograph 5-6)*. This classification initially applied to only a 121-mile section of the Delaware River from Hancock, New York downstream to the Delaware Water Gap, including its drainage area. In 2005, based on water quality data, the classification was temporarily expanded downstream to the head-of-tide at Trenton. This temporary classification was recently made permanent by the DRBC in July 2008. As previously mentioned, no drainage design has been developed to date and, as such, the DRBC SPW regulations will need to be taken into consideration during final design and permitting.

No unusually large "specimen trees" were found within the study area during the field activities. However, some large (24- to 30-inch diameter at breast height) sized American sycamore (*Platanus occidentalis*) trees along the Delaware River bulkhead were observed. These trees, while not unusually large, appear to have been preserved/avoided when Route 29 was constructed on its current alignment.

Permits and Approvals

Depending upon the project funding source(s) and the extent of impacts to regulated resources, various permits and approvals may be required in order to construct the proposed Route 29 Boulevard. The following discussion identifies the permits and approvals that may be required given possible scenarios.

- *USACE Section 10 of the Rivers and Harbors Act of 1899:* The MHW line defines the landward jurisdictional extent of Section 10 of the Rivers and Harbors Act of 1899 in tidal waters. The USACE has jurisdiction to the Ordinary High Water line in non-tidal waters. Impacts to wetlands or waters seaward of these lines would require permitting pursuant to Section 10. Section 10 permitting is submitted concurrently with Section 404 applications.

- *NJDEP Transition Area Waiver:* This NJDEP approval will be required for disturbances to Transition Areas of NJDEP regulated wetlands pursuant to the New Jersey Freshwater Wetlands Protection Act. Transition Area Waivers are covered by both NJDEP Individual and General Freshwater Wetlands Permits.

- *USACE Section 404 of the Clean Water Act (Individual or Nationwide):* Construction of the PA would entail demolition/construction of bridges over the Assunpink Creek. If NEPA compliance is required due to federal involvement, any impacts to Waters of the US, including wetlands, would trigger the need for an Individual Permit pursuant to Section 404 of the Clean Water Act. If there will be no federal involvement, impacts to tidal waters and wetlands, including those wetlands within 1,000 feet laterally of the Mean High Water (MHW) line, would still require USACE permitting pursuant to Section 404. USACE Nationwide Permits can be used if the acreage of impacts to wetlands and waters can be kept below the threshold defined by that specific permit. If impacts exceed that threshold, an Individual Permit will be required. In addition, wetland impacts authorized by an Individual Permit must be replaced by newly constructed wetlands, or offset by a purchase of credits from a mitigation bank.

- *NJDEP Waterfront Development Permit:* A Waterfront Development permit is required for regulated activities that take place in the vicinity of tidally influenced bodies of water. Within the study area, the NJDEP has defined the upstream jurisdictional limit of the Waterfront Development Law as the Route 1 Bridge on the Delaware River. The proposed project will require a Waterfront Development Permit for regulated impacts due to improvements south of the Route 1 Bridge pursuant to New Jersey's Waterfront Development Law.

- *Tidelands Conveyance Instrument:* All tidal waters of the State of New Jersey are owned by the state unless previously transferred to another public or private entity via a Tidelands Conveyance Instrument. The proposed improvements within the mapped NJDEP Tidelands of the Delaware River and Assunpink Creek must be authorized by the NJDEP Bureau of Tidelands and the proper instrument acquired, prior to construction.

- *NJDEP Freshwater Wetlands Permit (Individual or General):* Any proposed improvements involving the disturbance of state open waters and/or freshwater wetlands will require a NJDEP Freshwater Wetlands Permit pursuant to the New Jersey Freshwater Wetlands Protection Act. Impacts to Freshwater Wetland Transition Areas are also authorized by this permit. If the combined impacts to state open waters, freshwater wetlands and transition areas associated with the bridge demolition/construction over the Assunpink Creek are limited to less than 0.25 acre, construction activities can be authorized via General Permit # 10b. Should impacts exceed the allowable limit, or should an activity not be authorized under any of the General Permits, an Individual Permit must be obtained from the NJDEP. An Individual Permit application must include detailed descriptions of the purpose and need for the project, as well as an alternatives analysis demonstrating that no other feasible design will result in less wetland impacts. Similar to the USACE Individual Permit, wetland impacts authorized by a NJDEP Individual Permit must be replaced by newly constructed wetlands, offset by a purchase of credits from a mitigation bank, or compensated for by means of a monetary or land contribution. It may be possible to use a combination of General Permits in conjunction with a Transition Area Waiver (see Section 9.4 below) to avoid the need for an Individual Permit.

- *NJDEP FHA Control Permit:* The New Jersey FHA Control Act Rules regulate activities within the FHA of NJDEP regulated watercourses/floodplains. Since the proposed project entails improvements within the FHA, a permit pursuant to the Flood Hazard Rules would be required. The Rules require that activities within the FHA result in a zero net *loss* of floodplain storage volume. Hydraulic modeling has determined that the work proposed under the PA would create a net *gain* in floodplain storage volume. The Rules also establish a Riparian Zone within which disturbances to vegetated surfaces must be limited or mitigated if certain disturbance thresholds are exceeded. It is anticipated that this Riparian Zone will be 150 feet in width, as measured from the tops-of-bank of the Delaware River and Assunpink Creek. This width is based upon the presence of threatened and endangered species in the Delaware River.

- *Delaware and Raritan Canal Commission Review:* Proposed project improvements within 1,000 feet of the centerline of the Delaware and Raritan Canal are subject to review by the Canal Commission to ensure that they conform as nearly as possible to the Canal Commission's Master Plan. The review takes into account potential impacts to stormwater drainage, water quality, stream corridors, traffic and the visual and natural quality of the Delaware and Raritan Canal State Park.

- *Threatened and Endangered Species Coordination:* Further coordination with the NJDEP, USFWS and NMFS regarding the proposed project's potential impacts to threatened and endangered species and their habitats will be required. Similar to the USACE permits, federal Involvement will trigger the need for a Section 7 Consultation with the USFWS, pursuant to the Endangered Species Act. It should be noted that information concerning the presence of threatened or endangered species and their habitats can change over time and, as such, requests for information to the aforementioned agencies should be solicited at future project design stages.

5.3.5 Cultural Resources

As the City of Trenton has experienced a rich history, consideration of impacts to cultural resources (including historic architectural and archaeological resources) is an important aspect of any planning associated with the proposed project. It is expected that the proposed project will require approvals through the NJDEP's Land Use Regulation Program and, as a result, would be subject to review by the New Jersey Historic Preservation Office (NJHPO). If the proposed project ultimately requires any permits from the USACE or receives any federal funding, the project would also be subject to federal-level review by NJHPO pursuant to Section 106 of the National Historic Preservation Act.

As a result, early and ongoing consultation with the NJHPO will be required in order to avoid, minimize or mitigate any potential impacts to historic properties. The specific requirements of any project permits or other approvals regarding the treatment of historic properties and the level of NJHPO involvement will also need to be considered.

Historic Architectural Resources

Background research and field survey identified five historic districts and five individual properties located in the Area of Potential Effect (APE) that are included in or are eligible for inclusion in the New Jersey and National Registers of Historic Places. Two of the individual properties are also National Historic Landmarks. Additionally, three resources are considered not individually eligible but are considered to be contributing elements of eligible historic districts. These properties are shown on *Figure 5-47*.

The proposed project may potentially affect historic properties located within the APE due to their proximity to construction activities. However, careful design and planning that considers these properties could avoid or minimize potential adverse effects. As mentioned above, early consultation with the NJHPO is recommended in order to minimize the potential for impacts.

Further assessment of effects will be possible as a master developer advances the project and determinations have been made as to which parcels south of the Assunpink will be developed and in what manner. Factors such as building massing, height and landscaping will be important when evaluating the proposed project's potential impact on nearby historic properties. Views of and to the Trenton and Mercer County War Memorial and the William Trent House, located respectively adjacent to and within the proposed street grid, will be particularly susceptible to the design of project elements such as site planning and landscaping. Based on the proposed creation of new open spaces and a new street network, it is anticipated that the proposed project will ultimately enhance these properties' view corridors.

Since National Historic Landmarks are afforded a higher standard of care under the National Historic Preservation Act, it is recommended that consultation with the NJHPO with respect to the two National Historic Landmarks—the Old Barracks and the William Trent House—occur early and frequently in an attempt to avoid adversely affecting either property. Adverse effects to either property would, under 36 CFR 800.10, require the involvement of the Advisory Council on Historic Preservation and the Secretary of the Interior.

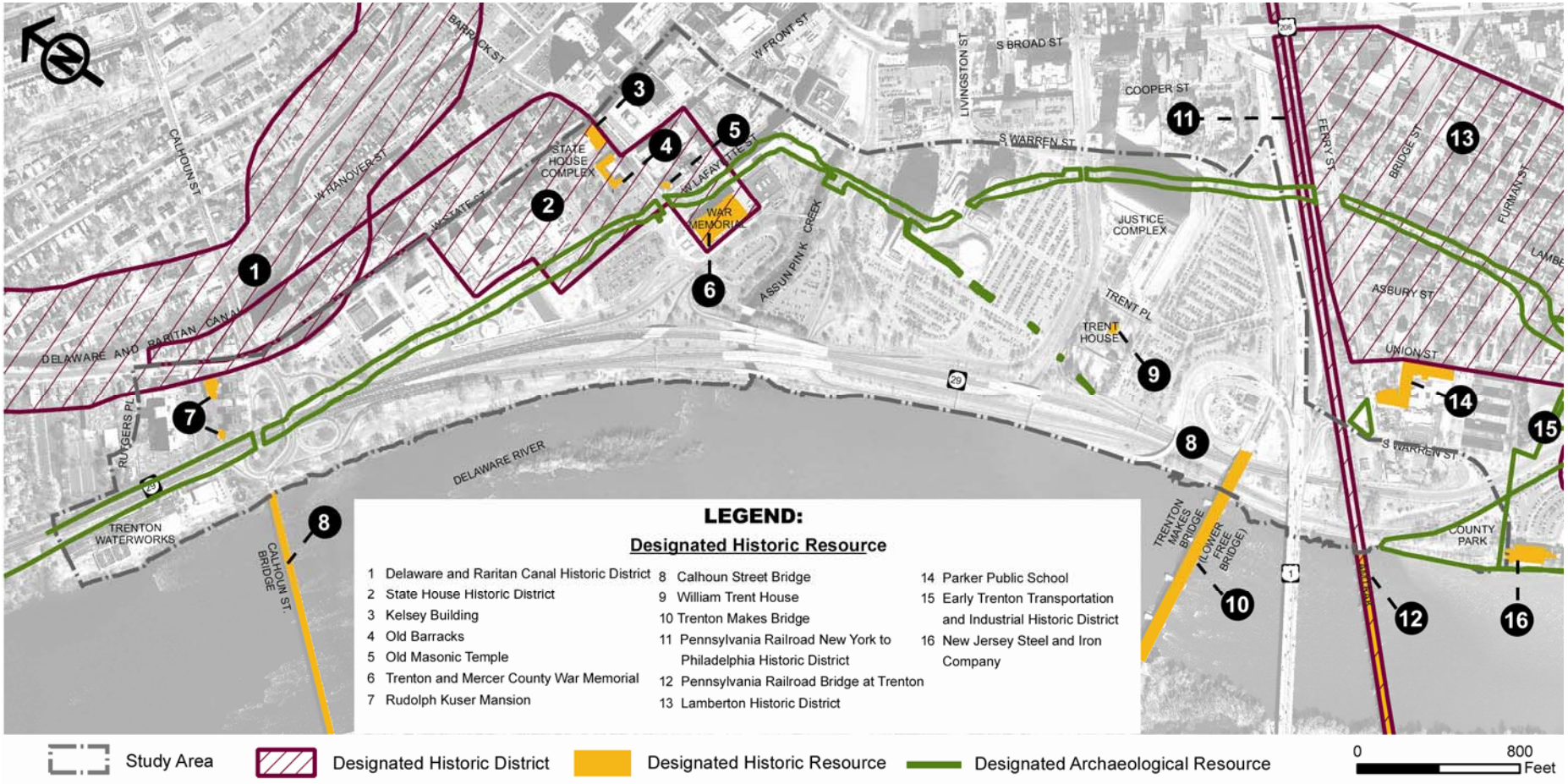

Figure 5-47: Historic Properties within the Study Area

The New Jersey Cultural Center was evaluated as part of an intensive-level architectural survey conducted as part of the FA. Although the architectural survey found the Cultural Center to be an important architectural resource, 50 years have not passed since the complex was built and it does not meet the "exceptional importance" test required for younger resources to meet the National Register Criteria. It was recommended that the Cultural Center be considered eligible for inclusion in the New Jersey Register when it meets the 50-year criterion in 2015. With this in mind, future planning for the proposed project may need to consider potential impacts to this resource.

Archaeological Resources

As project design and proposed construction activities advance, ongoing coordination with the NJHPO regarding the treatment of archaeological resources is recommended. A provisional strategy for addressing archaeological resources has been recommended and involves consideration of the following factors: historic map information; historical research data; the environmental characteristics of the pre-urban landscape; the distribution and depth of late 19th- and 20th-century fill deposits; the project's proposed grading; proposed deposition of additional fill; and, the depth of proposed utility and drainage features. Depending on the depth of fill and depth of proposed utility and drainage features, it is possible that proposed roadway construction activities may be able to avoid

impacting many potential archaeologically sensitive areas. In potential archaeologically sensitive areas where proposed construction activities will require ground disturbance below the levels of proposed fill, additional coordination with NJHPO will be required in order to develop protocols for targeted Phase IB and II archaeological survey and/or archaeological monitoring during construction.

In some instances, archaeologically sensitive areas that may be affected by project construction activities may be subjected to limited combined Phase IB and II-level testing. Consultation with the NJHPO will be required in order to determine whether this level of study would be required. Provisionally, this approach would likely be adopted within portions of the APE where project actions may affect areas of high prehistoric archaeological sensitivity (i.e., in the vicinity of the William Trent House) and locations where known or suspected key potential historical and industrial archaeological resources are located. In these locations, it is recommended that more detailed site-specific background research be undertaken to establish whether mid- and late 20th-century construction projects have already compromised the archaeological resources in question. Photographic documentation and as-built plans from these construction projects may be able to demonstrate a loss of archaeological integrity, or at least inform decisions as to whether archaeological monitoring, as opposed to Phase IB and II-level survey, is an appropriate approach to further archaeological evaluation.

It is anticipated that archaeological monitoring during construction would be a reasonable approach for the treatment of archaeological resources. Undertaking Phase IB and II archaeological survey for all potentially significant archaeological resources is unlikely to be feasible from both a practical and a cost standpoint, when so many of the resources in question lie deeply buried beneath paved surfaces and modern structures, and their subsurface condition and information potential are unknown. A carefully crafted archaeological monitoring program during construction, with adequate provision for detailed background research, on-site evaluation and documentation, would be a legitimate and realistic way to handle such resources, although this approach tends to presuppose that archaeological resources deserving of “preservation in place” would not be found.

Although several known archaeological resources have been identified within the APE, it is anticipated that most of these resources would not be affected by the proposed project. Prehistoric, historical and industrial archaeological remains are located along the south side of West State Street, in front of the New Jersey State House, along Petty’s Run between West State Street and the Trenton Water Power and within the Old Barracks property. These resources lie beyond the reach of any conceivable Route 29 roadway improvements, realignments and related infrastructure changes and should remain intact.

However, it is anticipated that the Trenton Water Power and its Branch Raceway would be affected by the proposed project at multiple locations. However, the Trenton Water Power is a linear resource that has already been severely impacted in the past within the APE. North of the Assunpink Creek, for example, the Route 29/Calhoun Street intersection, the Planetarium and the recently constructed Legislative Services Building all sit directly over the Trenton Water Power alignment and have probably removed much of its physical fabric, while its channel has also been used as a conduit for utilities within the Capital Complex. South of the Assunpink, construction of the Labor and Industry, Health and Agriculture and Justice Complex buildings likewise probably resulted in the removal of segments of the Water Power.

Within the APE, the Trenton Water Power does not survive as a dominant surface linear feature of the cultural landscape and has limited integrity below ground. Its archaeological potential for yielding significant new historical information is thus relatively limited. In the context of the proposed project, targeted Phase IB and II-level subsurface testing of the Trenton Water Power may only be appropriate in a very few key spots, such as the aqueduct over the Assunpink and the locations of bridges and mill head race intakes. Most project effects on the Trenton Water Power could probably be satisfactorily addressed through monitoring during construction and the documenting of cross-sections and construction details.

Prehistoric and early historic archaeological resources are known to exist in the immediate vicinity of the William Trent House, a National Historic Landmark and a major focus of heritage tourism within the city. Depending on the proximity of the proposed roadway and the depth of fill and ground disturbance, the archaeology of the Trent House property may be affected by the proposed project and Phase IB and II archaeological survey and/or monitoring may be necessary for evaluation purposes.

5.3.6 Hazardous Waste

A screening analysis was conducted in order to determine the potential for any of the properties within the study area to contain hazardous materials. Two businesses identified within the study area have a Standard Industrial Classification (SIC) or North American Industry Classification (NAIC) code for which ISRA regulations are applicable. A total of 17 sites have removed or abandoned-in-place Underground Storage Tanks (USTs), six have active USTs and six sites are on the Known Contaminated Site List (KCSL). Aerial photographs and Sanborn Maps indicate that the project area has been developed as the New Jersey state capital since at least 1890. The project area has contained residential and general commercial buildings including

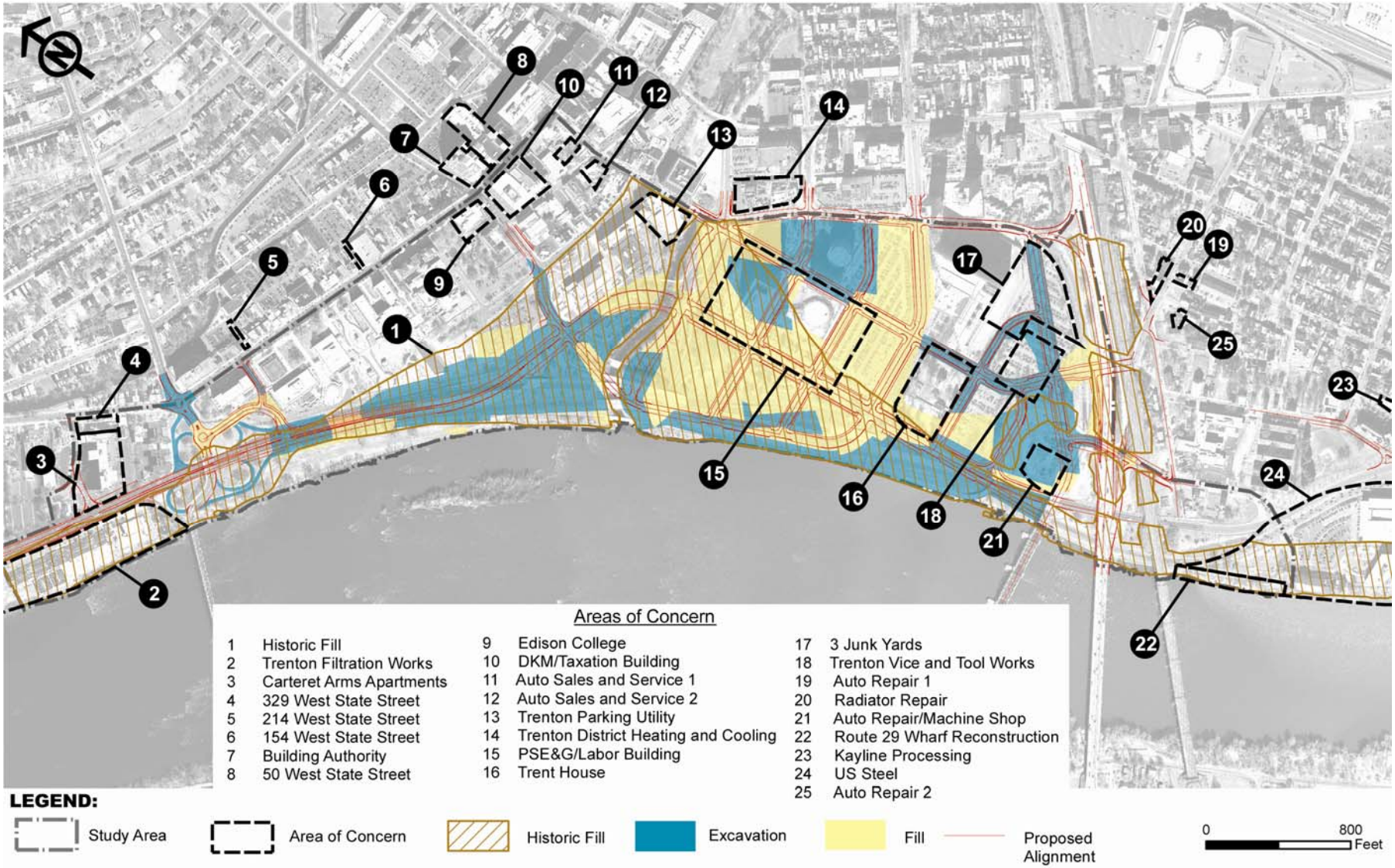

Figure 5-48: Areas of Concern

auto repair and machine shops. The present-day Water Treatment Plant has been the site of water treatment plants since at least 1890.

A total of 25 Areas of Concern (AOCs) were identified in the study area see *Figure 5-48*. The AOCs were identified based on the potential impacts from the proposed realignment activities. Eight of these sites are likely to be impacted by the proposed construction activities:

- AOC No. 1: Historic Fill
- AOC No. 3: Carteret Arms Apartments
- AOC No. 15: PSE&G/Labor Building
- AOC No. 16: Trent House
- AOC No. 17: 3 Junk Yards
- AOC No. 18: Trenton Vice and Tool Works
- AOC No. 20: Radiator Repair
- AOC No. 21: Auto Repair/Machine Shop

It is expected that subsurface contamination will be encountered during the construction of this project. Contaminated site investigation and remediation must be managed in accordance with the requirements of the NJDEP Department Oversight of the Remediation of Contaminated Sites NJAC 7:26C, Remediation Standards NJAC 7:26D and Technical Requirements for Site Remediation (TRSR), NJAC 7:26E. Based upon the redevelopment nature of the project, it is anticipated that the project would be under the oversight of the NJDEP Brownfield Remediation and Reuse Element.

Remedial Investigation(s) must be performed with sample locations biased toward the areas of excavation, based on the engineering design, if necessary, based on Site Investigation data. Close coordination with the NJDEP and PSE&G will be necessary in order to ensure that the redevelopment activities do not conflict with the remedial actions proposed by PSE&G. It is anticipated that a study area-wide Remedial Action Work Plan (RAWP) may be acceptable to the NJDEP to document the remedial options proposed. Potential mitigation would include institutional and engineering controls. Appropriate reuse material generated during construction activities will be reused onsite and placed under engineering control.

Deed Notices will document reused contaminated soil and the use of engineering controls, such as capping with impervious material, roadways, or seeded topsoil. Contaminated soils left in place may also require institutional control in the form of a Deed Notice. As the eventual ownership may reside with several owners, multiple Deed Notices may be required.

Potentially contaminated soils requiring excavation must be temporarily stockpiled pending waste characterization results. Excavation and staging must be performed using methods that minimize the disturbance of the soil. At a minimum, all potentially contaminated soils will be staged on an impervious surface and covered with plastic sheeting. Localized areas of contamination may necessitate removal and disposal at a licensed facility.

Should groundwater contamination be identified at these properties, it may present a health risk to workers if encountered during construction. Groundwater must be handled in an NJDEP-approved manner in accordance with a groundwater management plan developed for the construction activities. Drainage controls including dewatering may be instituted to keep groundwater levels from rising in the project area.

A Remedial Action Report (RAR) is required to document soil excavation activities and the management of contaminated soil and groundwater during construction. Additionally, the RAR would document the extent of contamination left in place or reused within the project limits and the remedial activities completed to obtain case closure from the NJDEP.

In addition to subsurface investigation, further studies are recommended to verify the presence and quantities of asbestos-containing material (ACM) and lead-based paint (LBP) on any structures affected by the project and to develop an approach to address these issues during construction. Health and safety precautions would be instituted for the protection of the public and construction personnel.

Funding Considerations

Project funding will prescribe the documentation and government oversight required. In order to obtain funding from any public funding source, all requirements stipulated by the individual fund or grant must be met. There are many potential sources of public financing through both the federal and state government that may be available for project activities.

Redevelopment may be financed through a combination of these sources, including:

- The Environmental Claims Administration administers the Spill Compensation Fund and the Hazardous Discharge Site Remediation Fund.
- The Petroleum Underground Storage Tank Remediation Upgrade and Closure Fund provides loans and grants to eligible owners and operators of regulated and non-regulated petroleum underground storage tanks to help finance project costs for the upgrade and closure of State regulated underground storage tanks and remediation of discharges from regulated and non-regulated underground storage tanks.
- Technical Assistance Grants (TAG), provide money for activities that help communities participate in decision making at eligible Superfund sites.
- The EPA offers several brownfields assistance grants, including: EPA Brownfields Assessment Grants, EPA Brownfields Revolving Loan Fund (RLF), EPA Brownfield Cleanup Grants
- The New Jersey Economic Development Authority has several programs for funding including: Smart Growth Predevelopment Funding, Brownfields Redevelopment Loan Program, Bond Financing
- The New Jersey Redevelopment Authority offers programs including: Urban Site Acquisition Program, New Jersey Predevelopment Fund, Bond Program

CHAPTER 6: COORDINATION WITH OTHER PROJECTS

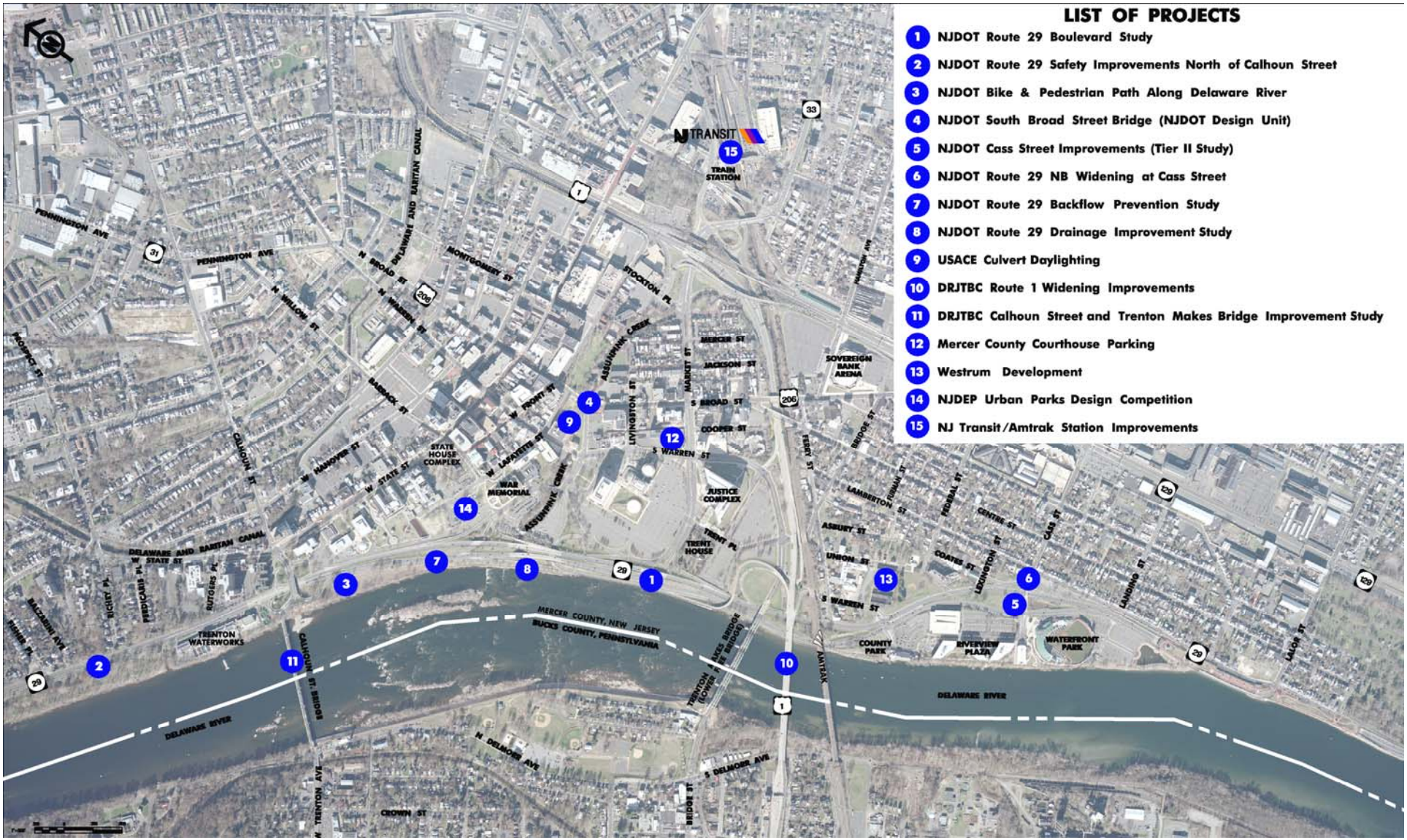

Figure 6-1: Other Projects in the Study Area

6.0 COORDINATION WITH OTHER PROJECTS

During the FA process, the Route 29 project team coordinated various projects within the Route 29 Boulevard project area *(see Figure 6-1).* These projects were either initiated by the NJDOT, NJDEP, DRJTBC, Mercer County, City Of Trenton and other agencies as listed below:

Figure 6-2: NJDEP Capital Park Project Concept Illustration

NJDOT Bike and Pedestrian along the Delaware River

- The NJDOT has been coordinating efforts with the NJDEP to provide bicycle and pedestrian facilities along the Delaware River. During the FA process it was agreed that the Route 29 Boulevard, with a continuous waterfront park, will provide such facilities and should satisfy bicycle and pedestrian access needs along the Delaware River.

NJDOT Bridge Boulevard Improvements (NJDOT Design Unit)

- The Route 29 Boulevard team coordinated their design with this NJDOT Design Unit project during the FA to make sure the future street grid system would be compatible with the Bridge Boulevard alignment. Final Design was completed but the project was eliminated before the start of construction.

NJDOT South Broad Street Bridge (NJDOT Design Unit)

- This NJDOT Design Unit project is in the Final Design Phase.

NJDOT Cass Street/Union Street Improvements (Tier II Study)

- Dewberry conducted a Tier II level investigation to connect Union Street with Route 29 (one-way exit only from Union Street to Route 29 northbound at this stage) and to open Union Street north of Federal Street. Work on the Union Street section is currently on hold due to potential Green Acres impacts. Mitigation related to Green Acres impacts is currently underway by the City. This study also included the addition of a northbound acceleration lane from South Warren Street to Route 29. This work is now included with another NJDOT project, Route 29 Northbound Widening, which is listed below.

NJDOT Route 29 Northbound Widening (NJDOT Design Unit)

- The NJDOT Design Unit is currently developing design plans to add a third northbound Route 29 lane at the intersection with Cass Street. Included with this study is a South Warren Street acceleration lane to Route 29 northbound.

NJDOT Route 29 Backflow Prevention Study

- A drainage project/investigation is underway by the NJDOT.

NJDOT Route 29 Drainage Improvement Study

- A drainage project/investigation is underway by the NJDOT.

NJDEP Capital Park Project *(see Figure 6-2)*

- The Master Plan for this NJDEP initiative to develop a Capital Park in Trenton was approved and Phases 1A (State House Common) and 1B (Petty's Run) of the project are under design and construction. Extensive coordination between the Route 29 Boulevard project and the NJDEP Capital Park project has taken place, since much of the park facilities are planned along the Delaware River and greatly depend on the proposed Route 29 Boulevard alignment.

USACE Assunpink Creek Culvert day lighting project *(see Figure 6-3)*

- The project area encompasses a 500-foot section of the lower Assunpink Creek in downtown Trenton where the creek is contained within a buried box culvert known as the Broad Street Culvert. The proposed day lighting of the stream would occur through removal of the culvert roof structure, allowing the stream to be exposed to natural sunlight. The final feasibility report has been approved.

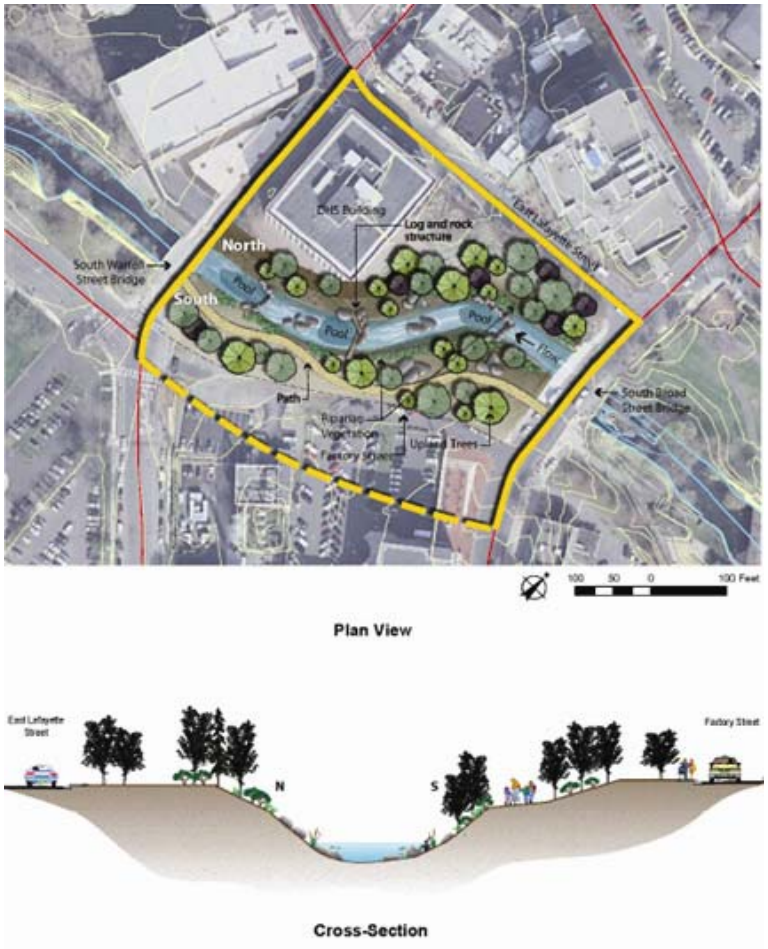

Figure 6-3: USACE Assunpink Creek Culvert Day Lighting Project Concept

DRJTBC Route 1 Widening Improvements *(see Photograph 6-1)*

- This $100 million project is currently under construction by the DRJTBC. It will widen and reconstruct over one mile of Route 1 in New Jersey and Pennsylvania. The New Jersey portion includes: reconstructing the northbound off-ramp to Route 29 to align with a new auxiliary lane; modifying and widening the Warren Street southbound on-ramp; reconstructing Route 1 pavement; and rehabilitating, cleaning and repainting of structural steel components of the Route 1 approach bridges.

Photograph 6-1: Route 1 Bridge Rehabilitation

DRJTBC Calhoun Street and Trenton Makes Bridge Traffic Study

- This project studied traffic circulation on the Calhoun Street Bridge and investigated traffic circulation options along this bridge as well as the Trenton Makes Bridge and the surrounding roadway system in New Jersey and Pennsylvania.

Mercer County Courthouse Improvements

- This project undertaken by the Mercer County Improvement Authority involves construction of an addition to the County Court House. As part of this project, a parking garage and a seven-story detention facility will be demolished.

Westrum Developments, South and North of Route 1

- These projects included proposed developments along the proposed Bridge Boulevard, within the existing parking lot south of the Justice Complex. This project advanced to planning stage but is currently on hold.

- Coopers Crossing, a residential development, is currently under construction south of Route 1, between Union Street and South Warren Street.

NJ Transit/Amtrak Station Improvements

- This project includes the expansion of the building footprint and the addition of a mezzanine level to provide additional office space; exterior and interior architectural improvements; upgrades of heating, air conditioning, elevators, escalators and lighting; landscaping and circulation improvements to the existing parking areas; and miscellaneous improvements including closed circuit television and passenger information displays. Nexus is planning for a new development (Station Plaza) at the Trenton train station with 200-300K $ft.^2$ of office space with parking underneath. This will be a 20-story building which would be connected to the train station.

CHAPTER 7: CONSULTATION AND COORDINATION

An extensive public outreach program was carried out during the entire FA process. As part of this ongoing program, meetings and workshops were held with stakeholder groups in order to solicit their feedback on the project. Stakeholders included representatives from the NJDOT, local governments and other key agencies. In addition, a Senior Leadership Team was formed at the beginning of the FA process in order to provide consultation and guidance to the project team.

The following key stakeholders participated in the FA process as part of the Senior Leadership Team:

- City of Trenton
- Capital City Redevelopment Corporation
- New Jersey Department of Transportation
- New Jersey Department of Environmental Protection
- Mercer County
- Delaware River Joint Toll Bridge Commission
- New Jersey Department of the Treasury
- New Jersey Housing and Mortgage Finance Agency
- New Jersey Economic Development Authority
- Delaware Valley Regional Planning Commission
- NJ Transit
- Federal Highway Administration

Other stakeholders that participated in the FA process include:

- NJ State Police
- State Joint Commission
- Private Developers, including Westrum
- Trigen (a major utility)
- Trenton Civic Associate
- Trenton Concerned Pastors Association
- Trenton Chamber of Commerce

The Route 29 project team participated in more than 86 meetings and local events in order to discuss the Route 29 Boulevard project and to solicit input from stakeholders and the general public. A Public Involvement Action Plan (PIAP) was developed as part of the project and is included in Appendix J. A summary of meetings conducted as part of the Route 29 Boulevard project is provided in *Table 7-1*. (See Appendix I for meeting minutes.)

Meeting Date	Topic/Location
May 4, 2006	<u>Traffic Coordination Meeting - NJDOT Offices, Trenton</u> Met with City, County and DRJTBC to discuss various traffic studies initiated by each agency. It was agreed that the traffic study for Route 29 Boulevard would include the proposed developments planned for Downtown Trenton. The DVRPC model will be used for Route 29, supplemented with additional traffic counts and SkyComp O-D information for the downtown area. A list of various projects undertaken by each agency was discussed and it was agreed that traffic information developed for these projects would be shared with the Dewberry team for development of the Route 29 travel demand model. Projects with a traffic study component include: • Route 29 Boulevard from Cass street to Calhoun Street Interchange (NJDOT) • Route 29 from Calhoun to Sullivan Way (NJDOT) - Vollmer is the consultant to NJDOT DPD group on this project. - The project is in the Feasibility Assessment Phase. - Existing traffic data from the 2004 counts are being used for this project. • Calhoun Street Bridge Traffic Study (DRJTBC) - Pennoni is the consultant on this project. - The limit of study on the New Jersey side extends to South Warren Street and the Route 1 SB off ramp. • Route 1 Toll Bridge Widening (DRJTBC) - Louis Berger Group is the consultant on this project. - No formal traffic study was prepared for this project; however, a traffic report was prepared for the Pennsylvania DOT. - Traffic modeling of the toll plaza was performed. - A corridor study involving four river crossings was prepared by Louis Berger in 2002 to examine and evaluate regional travel.

Meeting Date	Topic/Location
	• County Parking Garage (Mercer County) - Maser is the traffic consultant on this project, which entails the development of a 14-story parking garage. - A draft traffic study, by Maser, is being done at this time. The County is waiting to see if information from other projects may be useful before completing their reports. Andrew Carten said the City investigated narrowing the width of and changing striping on Market Street, from South Warren Street to the west in front of the Justice complex, as a traffic calming measure. Preliminary and Final design plans for this project were put on hold since Route 29 Boulevard will address this improvement. Therefore, funds earmarked for the Market Street improvements are available to be used. NJDOT suggested that, as the Feasibility Assessment for Route 29 Boulevard moves forward, a breakout contract for Market Street improvements could be advanced and moved into construction using the available construction funds.
October 10, 2006	Traffic Coordination Meeting - NJDOT Offices, Trenton Met with City, County and DRJTBC to update the status of the various traffic studies initiated by each agency and discussed at May 4, 2006 meeting.
December 6, 2006	Traffic Coordination Meeting - NJDOT Offices, Trenton Met with City, County and DRJTBC to update the status of the various traffic studies initiated by each agency and discussed at previous meetings.
March 21, 2007	NJDEP Urban Parks WRT Presentation - Thomas Edison State College, Trenton Attended the NJDEP Parks presentation of the park design concepts to the Steering Committee.
July 19, 2007	Kick-off Meeting with the Mayor Palmer - City Hall, Trenton A meeting was held to kick-off the FA process with the City, gather input for any new information or direction since completion of CD and present the project schedule to the City. • Sasa Montano was introduced as Trenton's Acting Director of Housing and Economic Development. She will be involved with this project, representing Trenton's interest in the downtown re-development planning process. • The Mayor stated that there are very early discussions regarding relocating the St. Francis Hospital facilities to the downtown area near Market Street. • The Market Study/Developer Team Selection process is scheduled to begin in August and will continue in parallel with the FA process. • Sasa Montano requested the consideration of "Green Design" in the planning and design guidelines. • At the request of the State Treasury, Westrum has submitted a site concept to develop the parking lot area between Trent House and Route 1 ramps. • After a quick review, it was determined that there were some serious concerns about the design and layout provided by Westrum, since several features of the plan could pose a major stumbling block to the future master plan.
July 19, 2007	Kick-Off Meeting with NJ Economic Development Authority – EDA Offices, Trenton • The Dewberry Team presented the overall project FA schedule and overall approach. • The Market Study/Developer Team Selection is scheduled to begin in August and continue in parallel with the FA process. • The State supports a proposed boulevard and proposed development of the downtown area. • Westrum has been asked by the State to produce a development plan that could be implemented in the near future to show real progress in developing the surface parking lots. • It was agreed that any interim development plan within the project area should be compatible with the ultimate master plan and as such, the design team will review Westrum's site plan, offer proposed modifications to it and/or propose another State owned surface parking lot location. • The State has been holding monthly meetings with the City to discuss major redevelopment projects in Trenton, including Route 29 and they are all in support of the project.
July 19, 2007	Kick-Off Meeting with CCRC - NJDOT offices, Trenton • The Dewberry Team presented the overall project FA schedule and overall approach. • The CCRC is in agreement with the Route 29 Boulevard concept, including the proposed block structure. • The CCRC is concerned that developers will come forward only if the City and State are in support of the project. • The Route 29 Team was informed that recent meetings with State and City indicate strong support for the project.
August 6, 2007	Westrum Development / Trent House - City Hall, Trenton A brief meeting was held with the City to discuss proposed development along Bridge Boulevard, adjacent to Trent House. Options were discussed to make the

Meeting Date	Topic/Location
	Westrum plan compatible with the proposed Route 29 Boulevard master plan.
August 13, 2007	Westrum Development / Trent House - Phone Conference Phone conference with the City and developer (Westrum) to discuss a proposed development along Bridge Boulevard, adjacent to Trent House. Discussed density and orientation of the proposed building, so they are compatible with Route 29 Boulevard.
August 15, 2007	NJDEP Urban Parks WRT Presentation - Thomas Edison State College, Trenton Attended the NJDEP Parks presentation of the Urban Park design concepts to the Steering Committee. NJDOT stated that the extension of Barrack Street over Assunpink Creek is necessary; because without it, local traffic will be forced to use Route 29, potentially creating traffic jams. The Traffic study planned for Route 29 will examine this issue.
August 16, 2007	PIC Mailing limits - NJDOT Offices, Trenton A meeting was held with the NJDOT to agree on the limits of the PIC Mailing. It was agreed to expand mailing limits far beyond a typical project, to ensure maximum public outreach.
September 6, 2007	Senior Leadership Meeting - NJDOT Offices, Trenton A PowerPoint presentation was given regarding the initiation of the FA process. • After introductions Tom Saylor gave an overview of the project and explained that the goals of the project included improving safety, promoting economic re-development in downtown Trenton and providing access to the waterfront. He stated that the NJDOT will need input from all participants on finding ways to fund the construction of Route 29 Boulevard. • Mayor Douglas Palmer outlined the problems, both perceived and real, that the City of Trenton is facing and how important the Route 29 Boulevard Project is in enabling the City to address many of these problems. He further stated that there are developers that are ready to invest in the re-development of Downtown Trenton once the Route 29 Boulevard project is implemented. • The status of the redevelopment projects was presented by Sasa Montano, which included the area around the Trenton Station, East State Street to Clinton Avenue and the Route 29 Boulevard Project Area. She stated that the City was in talks with Saint Francis Medical Center regarding the construction of a new Medical/Hospital Facility within the Route 29 Project Area (at the site of the exiting Department of Health and Senior Services buildings). She stated that the City of Trenton and Westrum continue to work closely together to facilitate the construction of Phase I of the proposed residential development adjacent to Trent House. The construction of Bridge Boulevard in 2008 by the NJDOT will facilitate the construction of Phase 2 of this same project. • Monique King-Viehland extended the Governor's thanks. The Governor continues to be committed to the re-development of Trenton, both overall and particularly in the downtown area. • Deputy Commissioner John Watson outlined the progress on the NJDEP Urban Parks Initiative. He stated that funding is available for Phase I of the project. • NJDOT Assistant Commissioner Mark Stout outlined the role of the NJDOT in the Route 29 Boulevard Project. NJDOT is changing the way it carries out its role and the unique nature of the Route 29 Boulevard project is reflective of these trends. Mr. Stout stated that the NJDOT has funded the FA phase and is fully committed to the process; however, the construction phase is not funded. • NJDOT DPD Director Lynn Rich stated that the FA for Route 29 Boulevard Project north of Calhoun Street is completed; however, NJDOT will not consider advancing this project to Final Design until the downtown portion of Route 29 is advanced, since these projects are closely related. • Following an introduction by Yosry Bekhiet, the Route 29 Project Team presented the goals, scope and schedule of the Feasibility Assessment. • At the end of the presentation, all members of the Leadership Committee were asked to prepare and empower their staff to ensure effective exchange of information. Yosry Bekhiet hosted a discussion on how the overall project funding might be established. It was agreed to form a Funding Task Force to investigate available options.
September 7, 2007	Scope Team meeting - NJDOT Offices, Trenton • Mark Stout provided welcoming comments and stated that a Senior Leadership Meeting was held for this project the day before, which included senior staff from various agencies involved with this project. He stated that senior leaders expressed support for this project and it is understood that a great deal of corporation and partnership is required for a successful project. He further stated that the Route 29 Boulevard project is environmentally friendly and will improve the quality of life in Trenton. He indicated that the project will offer an improved transportation network by connecting the streets and creating a grid system, taking some of the traffic load off Route 29. NJDOT has funding for the Feasibility Assessment (FA) Phase, but ultimate construction funding is not in place. NJDOT will need to work with the City, State and other stakeholders to find an alternative funding source. He went on to say that a Funding Task Force

Meeting Date	Topic/Location
	has been formed from the Senior Leadership meeting that will investigate this critical issue and provide recommendations. • The Project Team gave a PowerPoint presentation that outlined project overview, project history, project background, State level support, project needs, the CD and FA process, FA schedule, FA studies and project examples. • At the conclusion of the formal presentation the meeting was opened to general comments and questions.
September 7, 2007	Civic Association Meeting - NJDOT Offices, Trenton After the Scope Team meeting, a meeting was held with Barry Wilcox of the Trenton Civic Association who stated that the Association is in favor of the project. It was agreed that Route 29 project be put on the agenda for the November 2007 Civic Association monthly meeting, where the NJDOT team can present the project.
October 22, 2007	Stakeholder Interviews (All Day) - Various Trenton Locations The Dewberry team conducted interviews with the stakeholders to discuss their visions and ideas for the future developments in downtown Trenton and obtain any new relevant information they wished to share with the Route 29 Boulevard study team. During these interviews, stakeholders were provided the following materials: • Proposed alternatives prepared during the Concept Development (CD) phase; • Feasibility Assessment (FA) schedule; and • A 100-scale topographic map of the existing downtown Trenton and vicinity, which was used in an interactive manner to mark-up relevant information and draw-up any concepts stakeholders wished to share with the design team. *October 22, 2007 9:00 AM Meeting with Area Developers* (Representatives from Matrix, Capital Realty Group and Beazer Homes attended) • The developers indicated that high density development would be the most desirable option for the proposed downtown development. They explained that there is no market for medium density, "mediocre-type" development in downtown. • The developers suggested that parking should be funded through the public sector. This will make it more attractive for developers to pay for roads and associated infrastructure. • Parking should be shared between daytime users, who work or shop in the area and night time users (e.g. residents, entertainment patrons, etc.). • The developers stated that a private/public partnership is one way to raise money, similar to a development at Interchange 27 of the Pennsylvania Turnpike where $17.5M was raised by this method. • The historic fill that exists beneath surface parking lots will drive up the construction costs of the development, since shallow spread footings may not work and piles have to be used for the building foundations. • The developers stated that predictability of the issues (e.g. site conditions, environmental constraints, regulatory permitting concerns, utilities, etc.) will be a very important factor in attracting potential developers. A development master plan that has worked out these issues will go a long way to attract these developers. *October 22, 2007 9:00 AM Meeting with NJHPO and DVRPC* NJHPO: • The Shaky Bridge near the water treatment plant is important resource (Roebling design) and there is no access to the bridge in its current location. • There is a engineering concern over water flow at Petty's Run, as it may act as a storm drain. • There are flooding problems with state house parking garage, yet water is not coming from river; the backup comes from somewhere else. • Views between the Trenton and Mercer County War Memorial and the park create an important axis • Views to the State House dome from the river/park are important. • The proposed park design is a meld between "green" state house park design—it is more naturalistic and is not a typical civic design. • The project needs to consider the floodplain. • SHPO would like to have paths and pedestrian links to the D&R Canal. • There is a missing link connecting the D&R Canal and canal path to Bordentown. • The Battle Monument—one of tallest structures in area—should be considered. • A link to the Delaware and Raritan Canal could be considered.

Meeting Date	Topic/Location
	• The Trent House historically had a southern entrance with an allee of trees—maybe this could be enhanced with open vistas. • The wharf area has a lot of archaeological potential. • The bluff along the Delaware River is important for prehistoric resources—Native American burials were found between two houses near Thomas Edison College. <u>DVRPC:</u> • The DVRPC is in favor of creating street networks. • The DVRPC wants to calm traffic on Route 29 to improve safety; however, they also realize that Route 29 is a major route and this could impede traffic from 295. • Regarding the street network, the DVRPC doesn't wish to isolate travelers coming through (and to) Trenton. • It was suggested to look at NJ Transit's River Line as an economic development tool. • The DVRPC generally views pedestrian bridges as a waste of money. • Need to create major destinations in Trenton to attract visitors. *October 22, 2007 10AM Meeting with NJ Transit* • NJ Transit stated that the River Line Light Rail extension to the downtown area via West Trenton Street was studied, but later shelved due to high cost ($70M). The NJDEP commented during the study phase that the light rail extension was not a good improvement investment, but rather suggested improving bus access to this area. Existing ridership for the River Line is 8,000/day, with estimated 50% destined to the North East Corridor rail line and 50% to Trenton. • NJ Transit has a Capital Connection bus line that runs between the train station and downtown. • Bus Rapid Transit (BRT) on Route 1 was not studied for downtown Trenton. NJ Transit stated that the extension of BRT to downtown should be investigated in conjunction with the proposed Route 29 development. *October 22, 2007 1 PM meeting with developers (Nexus)* • Nexus is planning for a new development (Station Plaza) near the Trenton train station with 200-300K ft.^{2} of office space with parking underneath. This will be a 20 story building which would be connected to train station. They made the following comments on the Route 29 Boulevard project: o Do not bring in retail stores to the new development; o Bring in corporate/private businesses; o Include food stores, cafes, etc.; o The Old State buildings need to be removed from the area; and o A high density development should be planned. *October 22, 2007 12:30 PM Meeting with the State and NJDOT Office of Smart Growth* • The Route 29 project is good planning for downtown Trenton and it is in line with the Smart Growth principles. • Parking is a big issue on this project, but shared parking is one way to deal with that. • Surface parking has value to the State and should be used to fund the project. • All agreed that high density development is appropriate for downtown. • A mix of residential and commercial development is needed with parking provisions. • Governor Corzine has nine Urban Center redevelopment initiatives including Trenton. Route 29 Boulevard is in line with this initiative. • A source of funding could be the Casino Regional Development Investment Authority. *October 22, 2007 3PM Interview with Wachovia* • John Oldakowski stated that Wachovia is in the downtown area and their employees seem to be happy with the location. Access to downtown and slowing traffic on Route 29 is a concern because many of their employees use Route 29 to get in and out of town.
October 23, 2007	<u>Stakeholder Interviews (All Day) - Various Trenton Locations</u>

Meeting Date	Topic/Location
	October 23, 2007 phone interview with Army Corp of Engineers at 10 AM • The USACE stated that a Section 404/10 Permit is required. • Brian Mulvaney, who is the USACE's project manager for the Assunpink Creek day lighting project, will be interested in the Route 29 project. • Medina project is performing Route 29 flood mitigation study in downtown Trenton. • Willie Colquitt of NJDOT is the coordinator for the NJDOT's flood mitigation study for Route 29 from the tunnel to Upper Ferry Road. *October 23, 2007 10 AM Interview with NJDEP Parks* • There was a general discussion on the need to coordinate the NJDEP Capital Park with the development of the downtown area due to the NJDEP zero net fill requirements. <u>October 23, 2007 1:00 PM Interview with Mercer County Planning Division</u> • Mercer County owns the Katmandu building, parking lots, park and detention basin which is Green Acres encumbered. • The concept of a future street grid system between Amtrak and the tunnel was discussed. The County is interested in discussing such a concept and they have investigated a similar idea in the past, which they will share with the NJDOT. • The retail development including housing & a parking garage across from the Sovereign Bank Arena is moving forward. • There are plans for a new County court house at the northeast corner of Market Street and South Warren Street (currently the County jail).
October 24, 2007	<u>Stakeholder Interviews (All Day) - Various Trenton Locations</u> *October 24, 2007 10:00 AM Interview with FHWA* • FHWA suggested close coordination with the NJDEP for acceptance of the flood mitigation measures. • The redevelopment concept south of Route 1 was also mentioned to FHWA. • FHWA asked that traffic impacts on I-295/Route 1 interchange be investigated, as this interchange is already congested. *October 24, 2007 1:00 AM interview with City of Trenton* • Andrew Carten mentioned that the concept of St. Francis Hospital's move to the current site of the Department of Health is being discussed, which could potentially happen in 3 to 5 years. He stated that there is strong demand in Bucks County, PA for such a facility. • Westrum has now recognized that the future developments at Bridge Boulevard need to be of a high density type and as such, they joined the Cogswell Realty Group (from NYC) who is experienced in high density developments. • Westrum has joined with the Ryan Homes for the redevelopment site at Union Street south of Route 1. Homes at this site will be low cost, ranging from $169,000 to $229,000 per unit. • Trenton is working with the NJDOT to open Union Street in front of the public swimming pool. A property next to the swimming pool may become a suitable mitigation site for the Green Acres impact for the opening of Union Street. • There are plans by Hovnanian to build homes at Layler Street next to the tunnel. • Performa is the name of an entertainment development proposed to be built at the site of an existing parking lot, north of Sovereign Bank Arena. • The Entertainment Redevelopment District boundaries are large and run on both sides of Route 129, near Sovereign Bank Arena. Mercer County is responsible for these redevelopments. • The Trigen facilities extend all around the Route 29 project area in downtown Trenton. • Several developers have development plans near the train station. They include Matrix, Nexus and Capital (Vista Group). • A Market Feasibility Study is being conducted by the City of Trenton for the developments near train station. • Route 29 Boulevard build-out concept will need to be accepted by all and, as such, the planned Route 29 Market Study is key. This study will be led by Trenton. *October 24, 2007 3-4 PM Interview with NJDOT Rick Jaffe and Rick Crum* • In converting the existing Route 29 freeway to a boulevard type facility, it is important to consider the preservation of the state roadway network. • Route 29 traffic congestion south of the signalized intersection of Cass Street is a big issue. NJDOT in-house design is working on adding an extra Route 29 lane

Meeting Date	Topic/Location
	in the northbound direction to help reduce congestion. • Rick Jaffe stated that he was in support of the goals of the project and economic revitalization of downtown Trenton, but questioned why a functioning freeway should be removed to achieve these goals. He requested other options be looked at, aimed at preserving as much of the network as possible. Ian Lockwood explained that the success of future redevelopment in downtown will greatly depend on providing a street grid system and access to the waterfront; the existing freeway currently acts as a major barrier in achieving these goals and will need to be removed.

October 25, 2007	Stakeholder Interviews (All Day) - Various Trenton Locations
	
	October 25, 2007 8:30 AM Interview with the Delaware River Joint Toll Bridge Commission
	
	• A consultant has started work on the Calhoun Street Bridge study. This study is being undertaken to see what could be done with the existing aging bridge.
	• The traffic light on the Pennsylvania side of the Calhoun Street Bridge is a major problem. This signal is manually operated by the Authority.
	• DRJTBC Indenture does not allow release of the Authority's ROW that will adversely impact their ability to collect tolls; therefore, a traffic study may be needed to show the impacts to the Route 1 ramps which are planned to be reconfigured by the Route 29 project.
	
	October 25, 2007 9:45 AM Interview with Joint Management Commission
	
	• The Joint Management Commission is responsible for use, maintenance and security of the State buildings between Barrack Street and the Annexed State Library (not including the War Memorial building).
	• The NJDEP Capital Park initiative will be within an area under the Commission's jurisdiction.
	• A World War II Memorial will soon be built on West State Street.
	• The Legislators' parking garage is normally 50% full. Surface parking impacted by the NJDEP Park initiative will be mitigated by this garage.
	• The Commission is supportive of the Route 29 Boulevard project; however, it does not have funds to help in financing the project. A suggestion was made to approach the CCRC for the funding since they may budget for this.
	• The Department of Health building is 60 years old and the State is investigating moving functions located in the building to other locations.
	
	October 25, 2007 10:45 AM Interview with State Economic Development Authority
	
	• Options to fund future redevelopment in downtown Trenton include:
	  o Revenue Allocation District - only one such funding mechanism has been approved in NJ (Millville).
	  o Redevelopment Area Bond (RAB) - 24 RABs have been approved in NJ.
	• It is critical to plan for the lost surface parking as part of any development in the downtown area.
	• The Economic Development Authority (EDA) is creating a new position (Real Estate Solutions) that, once created, will participate in future EDA coordination with the NJDOT on this project.
	
	October 25, 2007 3-4 PM Interview with NJDEP Division of Land Use Regulation
	
	• The NJDEP approves of the concept of one master developer for the future waterfront development in downtown Trenton and vertical high density development is encouraged.
	• Three sets of the NJDEP regulations will apply to this project:
	  o Flood Hazard Area - regulates all development within floodplain and riparian limits;
	  o Freshwater Wetlands - regulates State open waters and disturbance impacts; and
	  o Waterfront Development - regulates impacts within coastal limits.
	• The day lighting of Assunpink Creek is a very positive step and supported by the NJDEP.
	• The Flood Hazard Area regulations apply north of Route 1, where the Delaware River is not tidal. Zero net fill will need to be provided within the floodplain.
	• Waterfront Development regulations apply south of Route 1, where the Delaware River is tidal. Zero net fill is not required at this location.
	
	October 25, 2007 2:15-3 PM Interview with Trenton's business leaders
	
	• The business community is supportive of this project.

Meeting Date	Topic/Location
	• The group discussed that, in light of creating a large area of parks as part of Route 29 project, a fresh look at the Green Acre encumbered lots be made to see if some of those sites, which are scattered throughout Trenton, could be used for future business developments. • It was suggested to provide satellite parking locations at the outer ring of the downtown core with shuttle bus service to downtown locations. *October 25, 2007 3-4 PM Interview with NJDOT Rick Hammer and Mark Rollo* • Rick Hammer stated that he is in agreement with the goals of the project, as easy access to waterfront and green space will be a big boost to Trenton. He also pointed out that the congestion on Route 29, south of Cass Street, is a big concern and asked improvements to this traffic issue be studied. • Funding NJDOT projects is a big issue and outside funding sources will be needed for this project.
October 25, 2007	Public Information Center - Mott Elementary School, Trenton A Public Information Center was held at the Mott Elementary School. Presentation materials included display boards showing Concepts developed in CD, Environmental Constraints maps and examples of other locations with waterfront improvements.
October 26, 2007	Stakeholder Interviews (1/2 Day) - Various Trenton Locations *October 26, 2007 9:45 AM Interview with Trigen* • Trigen provides electric, gas and heat to the state owned facilities in downtown Trenton form their plant on South Warren Street. • There is large steel chilling tank under the heliport that is 25' high (13' below ground, 12' above ground) and 127' in diameter (2.8 MG capacity). Water from this tank is used in providing air conditioning to costumers. The tank, built in 1988, is very strong and designed to withstand the crash of a helicopter. • A residential/commercial building could be built over the water tank, provided tank is protected and access to it is provided similar to what exists today. • $3.2M was needed to relocate pipes under Country facilities at South Warren/Market Streets. *October 26, 2007 10:30 AM Interview with Mercer County Engineering* • The County is in support of the Route 29 Boulevard project. • The concept of a grid street system south of Route 1 to open up existing streets to the waterfront was discussed. The County agrees with the concept and suggested moving Route 29 away from the waterfront, to open waterfront space, if possible. • The wharf, located south of Katmandu, is still an open issue and no one has taken responsibility for correcting the structural problems at this location. • The County is still planning to build a new courthouse at the site of County jail at the corner of South Warren/Market Streets. • Providing Park & Ride facilities along the NJ Transit light rail, south of the current I-295/I-95, may help in reducing traffic at this congested location. • The master developer idea is favored by the County. This developer should be experienced in the design and construction of waterfront developments and able to market to people who are willing to travel via bus or train and are not car dependent.
November 8, 2007	Route 29 Traffic Modeling - NJDOT offices, Trenton Dewberry team member, Urbitran, presented their progress in developing a travel demand model and their future effort for forecasting Route 29 Boulevard.
November 28, 2007	Proposed Route 29 Boulevard - NJDOT Offices, Trenton A meeting was held with the Mercer County Traffic Engineer and Planning Director regarding the Route 1 ramps, Route 129 Connection with Bridge Boulevard and the proposed street grid system south of Route 1. • The County is in support of the proposed design south and north of Route1, including the planning level sketches presented for a street grid system south of Route 1. • The County is not certain if a connection to Route 129 will be acceptable due to impacts to the arena parking lot.
October 28, 2007	Infrastructure Presentation Session - NJDOT Office of Mark Stout, Trenton A meeting was held with key stakeholders from the City, County, CCRC, State and NJDEP to present them with the proposed preliminary street grid system, building density and future waterfront park. The presentation was generally well received, but the following concerns were expressed: • The future Waterfront Park design and proposed Route 29 grading south of Assunpink Creek will need to be coordinated with the NJDEP Capital Park. • Future land use will be examined by the City's Market Study consultant. • The NJDEP Regulatory Unit should be involved in the design process.

Meeting Date	Topic/Location
	• Light rail transit should be considered in the median.
December 18, 2007	Field Meeting for Route 129 Connection to Bridge Street - Trenton A field Visit was made by the NJDOT and Dewberry staff to investigate a potential connection from Bridge Street to Route 129 through the Arena's parking lot. After this meeting, NJDOT directed Dewberry not to pursue this connection, due to impacts to the Arena's parking lot, grading issues and the County's opposition to this connection.
January 24, 2008	NJHPO Coordination Meeting - NJDOT Offices, Trenton A meeting was held with the SHPO to discuss the proposed project, the approach in cultural resource studies and set the APE. • With guidance from Dan Saunders, the group identified the specific buildings that would be the subject of an intensive level survey. • Mr. Saunders advised that as the Trent House is a National Historic Landmark—the highest designation assigned to historic properties. • Dan recommended that the APE memo include a strategy for treating archaeological resources. The group agreed that the strategy for archaeological resources may include testing for significant features, with monitoring for the majority of other features.
February 6, 2008	Grading/Drainage/Flooding Meeting NJDOT Offices, Trenton A Meeting with the NJDOT was held to present the proposed grading and flooding studies performed to date.
March 3, 2008	USACE Coordination Meeting - NJDOT Offices, Trenton A meeting was held with NJDOT and USACE in order to discuss the USACE's involvement in the proposed project as well as potential permitting issues. • Michael Hayduk explained that the US Coast Guard would have jurisdiction (under Section 9) over the bridges that cross the Assunpink Creek, although he thought it unlikely that they would exercise that right. • Since portions of the Delaware River, as well as the Assunpink Creek, are tidal within the proposed project area, the project would be subject to USACE review. However, Michael Hayduk explained that as long as there are no impacts to open waters or wetlands, a Section 404 review will not be required. He suggested that if any planned bridges could "span" the Creek, with no impacts to open waters or wetlands, then review by the USACOE would not be necessary. He further indicated that if impacts were unavoidable, the impacts should be limited to 0.5 acre or less, such that a Nationwide permit (NW#14) may be applicable. This permit would, however, require an alternatives analysis. • Mr. Hayduk indicated that if a NW#14 is applicable, the USACOE would likely try to limit the Section 106 review (historic resources) to only the areas of impact, i.e. bridge area footprint, rather than the entire project area. • Mr. Hayduk stated that the USACOE would review the plans only if there is fill proposed in wetlands or open waters. Mr. Hayduk recommended designing the project such that a Section 404 Individual Permit (IP) would not be required. If an IP is required based on the impacts, it will typically trigger a review of other project issues including, but not limited to, historical resources and Environmental Justice within the entire project area. • Based on subsequent telephone discussion with Mr. Hayduk (and his in-house discussions with Bill Jenkins, USACOE Section Supervisor), Mr. Hayduk stated that the removal of the existing bridge supports along the Assunpink Creek would not require USACOE review/approval unless temporary fill material, such as sheet piling with an equipment work area, is necessary to perform the removal activities. If temporary fill is necessary, it could be permitted via a NW#33, for temporary discharge of fill material into open waters. If temporary fill is not necessary, the USACOE would not have jurisdiction, but the activities would be subject to Coast Guard jurisdiction, should that agency exercise that right. In addition, it is likely that these activities, regardless of the need for temporary fill, would be subject to NJDEP review and approval. • Mr. Hayduk then reiterated that the USACOE would not require a floodplain review if there are no other aspects of the project that trigger a review (i.e., open water or wetland impacts).
March 4, 2008	Bikeway Commitment Discussion - NJDOT Offices, Trenton 9:30 AM- 12:00 PM A Meeting was held with the NJDEP, County and City in attendance. Following an introduction to the Route 29 project by Ian Lockwood, the County provided their understanding regarding various portions of the Bikeway and Old Wharf. • As part of the Waterfront Stadium construction, the County built the walkway behind the office buildings between Katmandu and the stadium. The County owns the walkway but not the office buildings. • The Mercer County Improvement Authority (MCIA) owns Katmandu and its parking area. There is a public easement between Katmandu and the waterfront. • The County stated that they do not own the Old Trenton Wharf, while the County stated that the Old Trenton Wharf is owned by NJDOT and was previously leased to the NJDEP. The MCIA did carry out some cosmetic improvements to the Wharf and installed a protective fence just prior to the collapse. • The proposed mitigation for the Route 29 Tunnel project was the park that was built above the tunnel.

Meeting Date	Topic/Location

	• The tunnel was constructed under a Design-Build contract. NJDOT agreed to provide additional mitigation in the form of a cantilever bikeway along the side of the Route 29 tunnel; however, this idea was abandoned due to risk of Delaware River ice damage. The alternative mitigation is to provide a bikeway along the Delaware River. Plans prepared by Vollmer (now Stantec) showed a concept from north of Calhoun Street to south of Route 1, but the NJDOT noted their commitment was only from north of Calhoun Street to Assunpink Creek.
	• The Trenton Waterworks did not allow access behind their plant; therefore, the bikeway will need to be on the Route 29 side of this facility.
	• DRJTBC, who is concerned about security, finally allowed access under the Calhoun Street Bridge.
	• The width of the bikeway is not specified in the NJDEP commitment. A 30-foot width is shown on Vollmer plans, which was later revised based on the NJDOT Value Engineering comments. It was noted that that with the new NJDEP FHA Regulations, there are serious permitting implications regarding the Vollmer and NJDOT bikeway plans and the NJDEP may not permit construction as currently designed.
	
	Following the above discussions, the group discussed how to move forward:
	
	• The proposed NJDEP Capital Park and Route 29 Boulevard did not exist when the commitment was made to the NJDEP. Since these projects significantly impact the future bikeway, they should be considered in any future discussions with the NJDEP.
	• It was decided that it is important to reopen discussions with the NJDEP to agree on a way forward. It was suggested that this meeting include John Watson to ensure that these issues are elevated to the appropriate level within the NJDEP.
	• The NJDOT will prepare a plan summarizing the outstanding permit issues and commitments. The County will research and provide copies of the outstanding permits.
	
	In addition to the above discussions, the following points were discussed:
	
	• Any interim solution that is proposed should consider the NJDEP Capital Park and Route 29 Boulevard and should be designed in such a way that any wasted construction is minimized.
	• Andrew Carten stated that the team should make sure that any interim solution not to be perceived as the final solution and not to impede advancing the larger Route 29 project.
	• There is an ongoing dispute as to who is responsible for repairs to the Old Trenton Wharf and the costs are significant.
	• There is no identified funding for the bikeway between the Trenton Waterworks and the Old Trenton Wharf.
	• The plans prepared by Vollmer (now Stantec) may no longer be suitable for permitting under new NJDEP regulations.
	
	Action Items:
	
	• The County will obtain copies of the outstanding permits.
	• The NJDOT and County will prepare a plan or document outlining the details of the outstanding permits, commitments, etc.
	• The NJDOT and County will meet with the NJDEP at a high level to discuss the outstanding permits and how these might be resolved in light of the Route 29 Boulevard project. Both long-term and short-term staging approaches will be discussed at these meetings. Before the meeting the following will need to be clearly identified:
	  o What has changed since 2002?
	  o Design and permitting challenges, including physical constraints, staging, funding, new NJDEP regulations, etc.
	• Dewberry will add the Bikeway design/construction to the list of potential break-out projects.
	
	<u>NJDEP Capital Park Initiative Coordination with State House Garage - NJDOT Offices, Trenton 1:30PM -3:00PM</u>
	
	The following was discussed regarding the design of the State House Garage access:
	• The State House garage has room for 1000 vehicles. This space will be shared with the future park initiative.
	• When checking vehicles into the garage, the State Police requires the ability to queue approximately 20 cars.
	• The driveway width should be 24 feet. This driveway will act as a frontage road, parallel to Route 29 Boulevard and connected at one end to Barrack Street and the the other end will be connected to the new Calhoun Street Ramp. Cars will enter from the Barrack Street side, though the check point, but could leave the

Meeting Date	Topic/Location
	garage by either entrance to speed up exiting during a park event. • The proposed Barrack Street extension and garage access road should be designed to facilitate the proposed future grading of Route 29. • It was suggested that landscaping be planted around the check point, but the driveway should not be divided, since the road will be blocked if a car breaks down. • Access to the loading docks for the State House and Museum must be maintained. Utilization of the loading docks are generally infrequent (1-2 vehicles per day) and are utilized by a range of vehicles including tractor trailers. • The proposed access road should closely follow the existing access road and be compatible with the future alignment of Route 29. • The access road should continue along the front of the garage to the loading docks so as to provide alternative routing during events. This section would generally remain closed. • Access to the loading docks should be from the north and the proposed Calhoun Street intersection improvement plan should be revised to show this access. • Sally Lane cautioned about the presence of museum artifacts stored under the proposed connection from the Calhoun Street Ramp to State Street. It was noted that currently a driveway exists at this location used by all vehicles entering the parking lot. Low traffic volumes are anticipated for the future configuration, but this will be double checked as the design progresses. The proposed Route 29 grading along the project limits and in particular, that portion adjacent to the NJDEP Capital Park was discussed: • Mike Sears presented an overview of the proposed grading and approach to address flooding for the entire project with particular emphasis on the area of the proposed NJDEP Capital Park. In this area, it is proposed that Route 29 will be significantly lowered to provide a fairly continuous slope from the NJDEP Capital Park next to the State House, to the Delaware River. • Sally Lane provided an update on the NJDEP Parks Initiative and stated that the first Phase is due to be start this June. Action items: • Dewberry will identify the scope of a breakout for the restoration of Barrack Street in front of the War Memorial, the access road and a roundabout connecting the existing ramps. • The Project Team will continue to coordinate the design of Route 29 in this area in a way that is compatible with the NJDEP Parks initiative. • When WRT are under contract with the NJDEP, the Project Team will meet to coordinate the grading in the area of the proposed park and the layout of the garage access road. • An interim contract will be pursued in conjunction with the first phase of the NJDEP parks initiative to construct the extension to Barracks Street and other local improvements. <u>Assunpink Creek Restoration & Route 29 Boulevard Permitting - NJDOT Offices, Trenton 3:00 PM to 4:00 PM</u> A meeting was held with the USACE and NJDEP in attendance to discuss the Assunpink Creek Restoration project and the Route 29 Boulevard permitting. • Brian Mulvenna provided an update on the Assunpink Creek Restoration. Project is currently in design. The USACE and Trenton will need to work out how the project's construction will be funded. • The NJDEP LURP will not only consider fill in the flood plain as a final condition but also during construction staging. The use of a master plan and developer is generally supported by the NJDEP, as it will reduce the risk of the project causing an increase in fill to the Flood Hazard Area during construction staging and potential delays. • The NJDEP LURP is unable to approve a project in concept and will review the project at the time of application pursuant to the regulations that exist at that time. • The NJDEP LURP is generally supportive of the concept that roadway construction staging may lead to temporary fill in the floodplain, as much of the cut will not be realized until the Route 29 embankments are removed. The NJDEP will consider the proposed staging in detail at the time of an application and will generally favor fill to the floodplain necessitated by traffic staging requirements over fill required for development. This leads to the conclusion that the roadways will generally need to be constructed prior to the development of property parcels. • The NJDEP LURP would generally like to see roadways constructed at the Flood Hazard Elevation plus one foot, if possible; however, they understand that the roadway needs to balance the needs of the proposed NJDEP Park. It will be important that any application to the NJDEP LURP contain supporting arguments for maintaining Route 29 at an elevation that is lower than the Flood Hazard Elevation in the vicinity of the State House.

Meeting Date	Topic/Location
	• The NJDEP LURP is generally supportive of the fact that the proposed Route 29 Boulevard project will enhance the existing Delaware River and Assunpink Creek's riparian buffers. • A Flood Hazard Area permit has a 5-year limit; however, but the applicant can apply for an extension, if needed.
March 5, 2008	<u>Proposed Route 29 Interchanges at Route 1 and Calhoun Street - NJDOT Offices Trenton 9:30AM - 12:00PM</u> • An overview of the project and its progress was provided, including latest changes to the existing Route 1 access and the likely traffic impacts. • Chris Harney of DRJTBC appeared supportive of the general concept but raised concerns that some of the vertical geometry may require design exceptions. Specifically, the proposed 7.2% upgrade to Route 1 NB was discussed. It was stated that a majority of ramp users are Justice Complex employees, not trucks and as such, this may be acceptable. • Chris Harney stated that they would review the proposed geometry in reference to Pennsylvania DOT standards and that they would follow the Pennsylvania DOT process for design exceptions. • The staging of proposed work was discussed. Dewberry stated that the majority of the proposed southbound ramp will be build off-line, without impacts to the traffic. There may be periods that traffic will need to be shifted during off peak hours, to accomplish some of the grading and paving work. The DRJTBC will be very concerned about any impacts to their toll collecting abilities and this will need to be considered as the design progresses. • While discussing the temporary closure of the Route 1 NB on ramp, the DRJTBC expressed concern that the Route 1 ramp and existing intersection to the east of the project site at Route 129, could carry the extra traffic. • Following the above discussion, the proposed grading for the Calhoun Street intersection was presented. A main concern was that traffic be maintained throughout the construction of the proposed Calhoun Street intersection. • Chris Harney requested that if the traffic on the Morrisville, PA side of the bridge is modeled in the Synchro traffic analysis, that we share the information with the DRJTBC. • Andrew Carten mentioned that contaminated sites from the former PSE&G Coal Gas Liquification Plant are located beneath the State parking lots. Action Items: • The Project Team will prepare a memo detailing the required design exceptions with reference to PennDot standards. • Provide Synchro traffic information to DRJTBC for the Morrisville signal if this signal this modeled. • The design team is to investigate the potential of a break-out project that will reconstruct some of the Route 1 ramp with intent of improving traffic operations at the congested intersections of South Warren Street and Route 29. <u>St. Francis Medical Center Coordination Meeting - NJDOT Offices, Trenton 1:00-3:30 PM</u> • At this meeting the hospital's design professionals summarized their design for the new hospital campus. They recognized that they have prepared a concept design with a less urban feel than is anticipated in the Route 29 plan and they were willing to reconsider the design to hold the urban edges of the blocks; however, they felt that it was unlikely to be possible to split the campus onto the two separate blocks identified in the Route 29 Boulevard plan. • Andrew Carten stated that a PSE&G site remediation operation that extends beneath the parking lots, as well as under the proposed hospital grounds. • Sasa Montana stated that the Bridge Boulevard project is underway and construction will start soon. Trenton, in conjunction with NJDOT and CCRC, is in the process of hiring a consultant to study and evaluate the financial aspect of the downtown development. • It was emphasized that the proposed buildings will need to be high density to make it financially feasible for the developers to invest in the redevelopment effort. • A brain storming session was held to discuss proposed concepts that were compatible with proposed downtown development. • A preferred site layout was favorably discussed that involved placing the main hospital building and tower on the parcel located between Street B and Market Street and the parking garage will be placed on the parcel between Street B and Livingston Street. Action Items: • The hospital will reconsider their design to more fully reflect the proposed urban center and building density anticipated in the Route 29 Boulevard Project. • The Project Team will continue to provide coordination with the hospital. • The Project Team will review the proposed County Court plans and make suggestions regarding the orientation of the Court with respect to the likely utility

Meeting Date	Topic/Location
	uses of the hospital fronting Warren Street.

March 6, 2008	Marketing RFP Process NJDOT Offices, Trenton 11:00AM - 12:00 PM
	
	• The RFP process is critical to forming consensus at the end of the FA process and ensuring the viability of the process.
	• Andrew Carten stated that the project fits with the overall Trenton Master Plan, which is soon to be published.
	• The CCRC is on board with the project and eager to move forward.
	• Sasa Montana stated that the Draft RFP is written and waiting for funding. Once the selection process is completed and the funding is finalized, the consultant will have six months to prepare the study.
	
	It was stated that it is important that the selected marketing consultant understands the following:
	
	• The study should incorporate and reflect the information produced in the CD and FA studies thus far and should not attempt to "reinvent the wheel".
	• The study should be forward looking and should go beyond projecting existing conditions.
	
	Action Items:
	
	• The City of Trenton will continue to work with the NJDOT to obtain funding for the RFP.
	• Following the selection of the RFP, the design team will coordinate with the successful consultant to ensure that they understand the information obtained in the CD and FA process.
	
	Senior Leadership meeting - NJDOT Offices, Trenton 1:30-3:30 PM
	
	Following an introduction by the NJDOT, members of the Project Team and representatives from the City of Trenton, NJDEP Division of Parks and Forestry, DRJTBC and NJDOT Design Services made presentations to the Senior Leadership Team. Some of the comments and questions raised include:
	
	• The NJDOT stated that they are only responsible for the study of the bikeway between the Trenton Waterworks and Katmandu which has been completed and a $2 million contribution made to its construction.
	• The NJDOT stated that they have are not responsible for the Old Trenton Wharf and it is their understanding that the County has jurisdiction over this property.
	• John Watson stated that the NJDEP Capital Park project in Trenton is still moving forward, since it is very important to the State to continue with their effort to build urban parks.
	• Sasa Montano stated that this project is one of many ongoing redevelopment projects in the city including the Charvelle site with Hovnanian, Train Station Area Redevelopment and Trenton Master Plan.
	• Andrew Carten stated that the City is seeking to implement aspects of the new parking study.
	• The NJDOT stated that the Broad Street project is due to start in the spring of 2010. This project has been reviewed by the SHPO.
	• The NJDOT presented the following list of potential break-out project that may be advanced depending on the available funds:
	  o Barrack Street Extension (as part of the NJDEP Capital Park);
	  o Route 1 Ramps;
	  o Streetscape at Market Street;
	  o South Warren Street/Assunpink Drive roundabout; and
	  o Bikeway Commitment.
	
	Action Items:
	
	• The Project Team will continue to work with the NJDEP Division of Parks and Forestry and their consultants to ensure coordination between the design and environmental permitting of the two projects.
	• The Project Team will continue to work with the NJDEP LURP to ensure that the permitting requirements for the design are accurately identified.

May 3, 2008	Trenton Spirit Walk - Caldwalader Park ,Trenton, • Attended this civic event to present the project to the public, gather input and encourage them to attend future public meetings.

Meeting Date	Topic/Location
May 15, 2008	Public Involvement Action Plan, Purpose and Need - NJDOT Offices, Trenton • Held a meeting with the NJDOT to discuss the draft Public Involvement Action Plan and Purpose and Need Statement. • Received comments during this meeting which were incorporated in the draft documents.
May 23, 2008	Route 29 proposed grading, Barrack Street extension – NJDEP Offices, Trenton • Held a meeting with the NJDEP and their consultant, WRT, to discuss the proposed Route 29 grading and extension of Barrack Street over Assunpink Creek. • The proposed Route 29 Boulevard grading was presented. It was explained that Route 29 profile along the proposed NJDEP Capital Park has been lowered so that the proposed roadway elevations are compatible with the proposed Capital Park grades. The proposed park grading is not available at this time, but the Route 29 Project Team assumed that the proposed park would be graded gradually from the current ground elevations near State House towards Delaware River. This would be possible by removing existing Route 29 Freeway embankment which blocks view and access to the waterfront. • The proposed Route 29 Boulevard profile will be above 25-year flood stage as directed by the NJDOT. • Proposed Route 29 Boulevard between Market Street and Assunpink Creek will be set above 100-year flood stage to allow future development in this area. • WRT stated that the NJDOT consultant has done a very good job of investigating existing flooding conditions in downtown Trenton and the proposed Route 29 Boulevard grading is compatible with the future park grading. • The NJDOT stated that the Route 29 traffic study is coming to its final stages and results of this study will be available soon to examine the need for extending Barrack Street over Assunpink Creek.
June 7, 2008	Heritage day - NJ State Complex, Trenton The Dewberry Project Team participated in the 23rd annual Heritage Days Festival to present the Route 29 Boulevard project to the general public and gather public input to the proposed development. Observations made during the June 7, 2008 outreach effort include the following: • Individuals take pride in their city and recognize the potential of the project to raise the profile of Trenton as a Capital City. • Residents have a "sense of place" – they understand the topographical changes that have occurred over time and what those changes have meant historically to their community. • Residents did not emphasize one quality of life area over another – most individuals offering comments wanted to see a variety of residential, commercial and recreational centers. • Residents are enthusiastic about future opportunities to comment on the project.
June 9, 2008	Meeting with the Mayor to discuss break-out projects - Mayor's Conference Room, Trenton Meeting at the Mayor's office to update the City on the project's progress, schedule and list of potential break-out projects. • It was emphasized that the NJDOT is committed to complete the FA phase by the end of February 2009 and that there is a need to have Trenton more involved in the funding process and take initiative to continue the project beyond FA. • The issue of project funding beyond FA was discussed. Trenton will take an active role to look for funds for this project. • A list of break-out projects was discussed, including approximate cost and available funds under Federal earmark. The city will review this list and get back to the NJDOT, with their recommendations.
June 13, 2008	Puerto Rican Parade - Sovereign Bank Arena parking lot, Trenton The Dewberry Project Team participated in the 31st annual Puerto Rican Day Parade of Trenton, located at the Sovereign Bank Arena parking lot on Cass Street, to present the Route 29 Boulevard project to the general public and gather public input on the proposed development. This outreach effort was focused on reaching a specific ethnic minority. Observations made during the June 13, 2008 outreach effort include the following: • Individuals from the Puerto Rican Day Parade activities expressed interest in learning more about the project and were concerned that information about the project had not been provided prior to the event. • Residents were concerned about creating a clean and safe community. • Residents are enthusiastic about future opportunities to comment on the project. • Residents are concerned about the project's impact on creating and displacing jobs.
July 17, 2008	Meeting with NJDOT's Traffic Signal and Safety Engineering (TSSE)-Traffic Synchro Analysis - NJDOT Offices, Trenton Met with Chris Barretts of TSSE to present results of the traffic Synchro Analysis. Mr. Barrets expressed some concerns about network traffic performance, specifically regarding the impacts of Route 29 left turns on mainline traffic. He asked Dewberry to investigate prohibiting said Route 29 left turns at 5 intersections

Meeting Date	Topic/Location
	in the Development Area during the peak periods to see if this approach could help improve the traffic flow.
July 18, 2008	Meeting with NJDEP Division of Parks and Forestry to discuss Traffic, WRT Memo dated 6/9/08 and the South Broad St. Project – NJDOT Offices, Trenton • Met with NJDEP Parks and WRT to discus preliminary results of the traffic study. A Synchro simulation was presented that showed PM peak traffic for the full build out scenario. It was emphasized that Barrack Street is needed due to heavy traffic on Route 29, especially southbound left turns from Route 29 onto downtown streets. • The group discussed adding advancing the Barrack Street Extension in front of the War Memorial as part of Phase I of the Park Construction. NJDEP agreed with this idea, but questioned the funding source, since there are no NJDEP funds available for this work. • A 30-foot section is envisioned for the proposed road, with bikes sharing lanes with cars. • The concept of a MOU, to be signed by key stakeholders, was discussed so there is continuity in the waterfront developments, as individuals in each agency may change. • NJDEP Parks will coordinate with the State Police regarding access to the State Garage. • The NJDOT stated that Calhoun Street cannot intersect with Route 29 at an at-grade intersection due to high traffic volumes on both roadways. • The proposed South Broad Street Bridge rehabilitation is still an issue that needs to be discussed further.
July 28, 2008	Meeting with TSSE-Traffic Synchro Analysis - NJDOT Offices, Trenton • Dewberry met with Chris Barretts to brief him on modified Synchro files to evaluate no left turns on Route 29 at the 5 intersections in the Development Area during the peak periods. These were done for the scenarios with and without the Barrack Street connector and the results were summarized. Traffic performance was reported using Highway Capacity Software (HCS) values of LOS and average vehicle delay. It was also reported using values of LOS and average vehicle delay that were derived from Synchro/SimTraffic simulations (HCS procedures report traffic performance as though intersections are isolated, whereas SimTraffic simulation results account for queue spillover effects on intersection performance by downstream intersection conditions). • After a review of various Synchro scenarios, it was agreed that the best performing combination of conditions was the one that included the Barrack Street connector and allowed left turns from Route 29. It was mentioned that, should conditions in the future require left turns to be prohibited, the City and State could agree to institute such left turn prohibition during peak hours using standard signs.
July 31, 2008	MOU Meeting/Trenton, NJDOT Offices • The need for signing a MOU was discussed. It was pointed out that the full implementation of Route 29 Boulevard and other waterfront projects are long term initiatives and as such it, would be important to have a document signed by the key stakeholders to memorialize goals of the project and approach to achieve these goals. • It was agreed to meet every two weeks to develop an MOU that will be acceptable to key stakeholders. • The MOU should be signed by heads of agencies to show support from high levels of each organization. • The MOU should include items that all can agree on.
July 31, 2008	Traffic Simulation presentation to City of Trenton & DRJTBC - NJDOT Offices, Trenton After the MOU meeting, the Route 29 Project team met with the County, City and DRJTBC to present them with the traffic Synchro simulation for the full build out scenario. • Donna Lewis cautioned on any widening on Hamilton Avenue (at Route 129). One side has a historic building and the other side is the arena entrance. She suggested meeting with the Mercer County Improvement Authority on this. • Eric Jackson suggested that if required by our study, the FA report should document the need for upgrading of all the existing signals within the project limits, so funding can be requested from the City. • Parking access should be clearly shown on the FA documents to inform developers of such restrictions. • It was suggested that a joint traffic meeting be scheduled soon with the City (Eric Jackson), Mercer County and DRJTBC to go over traffic analysis.
August 5, 2008	Traffic Simulation presentation to City of Trenton, County, & DRJTBC - NJDOT Offices, Trenton • The Route 29 Project Team met with the County, City and DRJTBC to present them with the traffic Synchro simulation for the full build out scenario. • Discussed changes to the proposed Route 1 Interchange (elimination of proposed northbound ramp to Route 1), Calhoun Street Interchange (retaining existing Route 29 southbound ramp to Calhoun Street westbound) and Hamilton Avenue (need to widen). • Miguel Gavino presented PM peak traffic scenarios (with/without left turn lanes on Route 29 and with/without Barrack Street extension over Assunpink Creek).

Meeting Date	Topic/Location
	• Miguel stated that the best traffic operating condition is with Memorial Drive (Barrack Street extension) and allowing left turn movements on Route 29. • George Fallat, Mercer County Traffic Engineer and Eric Jackson, Director of Trenton's Public Works stated that left turns should be allowed on Route 29. • The future Hamilton Avenue widening was discussed, since this road is one of a few connections to Route 129 in the downtown area and the traffic increase from normal traffic growth, coupled with the full downtown area build out, may require it. It was mentioned that the need for such action is not immediate, since traffic projections assumes the full build-out is not to occur for at least the next 10-15 years.
August 12, 2008	<u>Core Group Meeting for Traffic and Bicycle/Pedestrian - NJDOT Offices, Trenton</u> Dewberry made a presentation to the Core Group regarding project goals, concepts studies, Preferred Alternative, new NJDEP FHA regulations' zero net fill requirements, high density development planned for the area, NJDEP Capital Park coordination, schedule, coordination with stakeholders, traffic study results, flooding investigations and environmental studies. Ali Vaezi made a presentation to the Core Group covering the following main points: • Mr. Vaezi pointed out some of the Route 29 design changes made from earlier versions of the design, to improve traffic operations: o Route 29 SB ramp to Calhoun Street WB will be maintained as similar to existing condition. o Existing Route 1 NB ramp at South Warren Street will be maintained and not be altered, except for the intersection at South Warren Street. This will significantly reduce project costs. Below is a summary of some of the comments/issues that were discussed at the meeting: Q: How will the drainage be handled, will it continue to drain to the river? A: It is anticipated that the drainage will still flow to the river. Q: Is there a significant increase in impervious area? A: We do not anticipate an increase in impervious area as we will be gaining credits for removal of significant impervious area both in the Route 29 Boulevard project and the NJDEP Capital Park contract. Q: Will the functional classification and speed limit for Route 29 be changed? A: Yes the functional classification and speed limit will be changed for Route 29 Boulevard. At this time the proposed cross section for Route 29 Boulevard was presented and discussed; the following concerns were raised: • Value Engineering stated that no tree or planting with a cross-sectional area greater than 4 $in.^2$ is allowed in the planted median. • Value Engineering stated that the proposed street trees would have a high maintenance cost associated with them which NJDOT maintenance department would not be willing to shoulder. There was some discussion that it might be possible to have the building owners and/or the city take on this cost and responsibility. • The Bicycle/Pedestrian group raised concerns that there was not a separate bike lane within the proposed cross section. Ali Vaezi stated that a multiuse path along the Delaware was anticipated for use by cyclists and that more experienced riders would ride with traffic as in most urban areas. The main concern is that if the cross-section is widened to accommodate a separate bicycle lane, vehicle speeds would increase which in turn will put cyclists at greater risk. The Bicycle/Pedestrian group stated that the multiuse path was not an NJDOT requirement and that it had come about in the design stages due to public input. It was decided that the Bicycle/Pedestrian group should meet with Glatting Jackson to discuss their concerns with the cross-section. • The Smart Solutions Group raised the following concerns regarding the geometry for Route 29 Boulevard. o The group was concerned with the visibility on the southbound approach to the proposed intersection between Route 29 Boulevard and Memorial Drive. o The group was concerned about visibility on the southbound approach to the proposed intersection of Route 29 Boulevard with the Calhoun Street Connector. It was noted that the minimum stopping sight distance for the traffic signal was located south of the bridge. o The group presented a hand written list of concerns regarding the geometry. o The group suggested documenting design revisions made to the Route 1 NB ramp (new design requires no changes to this ramp), as a cost saving solution idea that was implemented in the design process. It was agreed that Dewberry would review the list and respond to the Core Group regarding their concerns and that the Core Group would meet again to discuss the concerns raised in this meeting.

Meeting Date	Topic/Location
	After the main portion of the meeting, interim improvements at the Calhoun Street interchange were discussed with Chris Barretts. Mr. Barretts stated that due to the restrictive signal on the PA side, traffic back-ups during the PM peak will continue blocking NJ side intersections and as such, interim traffic solutions will just not be effective and may even worsen the existing situation. He suggested no changes until full Route 29 improvements are implemented.
August 15, 2008	MOU Meeting - NJDOT Offices, Trenton • Met with the stakeholders to discuss comments/concerns regarding the draft MOU. • 12 major stakeholders will sign the MOU document. • The draft MOU will be presented at the September Senior Leadership meeting. • The group reviewed the draft MOU and provided comments. • Each agency will discuss the revised draft MOU with their internal leadership to get buy in.
September 3, 2008 AM	MOU Meeting - NJDOT Offices, Trenton • Met with the stakeholders to discuss comments/concerns regarding the draft MOU.
September 3, 2008 PM	Value Solutions Workshop - NJDOT Offices, Trenton • Met with Value Solutions Unit to discuss a list of questions that were given to the design team and review options presented by the Value Solutions Unit. • The plans and profiles were presented to the Value Solutions Unit and discussed the proposed Route 29 Boulevard profile and horizontal alignment. It was explained that profile of Route 29 has greatly been influenced by the NJDEP rules and flooding conditions in this area. After this presentation, the group appreciated that building Route 29 Boulevard off-line makes a lot of sense and stated that they did not realize the relative difference between existing and proposed Route 29 elevations. • Dewberry verbally discussed a general approach to construction staging concepts. This approach appeared to be acceptable to the group. • It was decided that the Core Group should meet again prior to the Senior Leadership meeting to review the revised geometry, discuss the proposed cross-section, review the traffic and review the construction staging.
September 5, 2008 PM	Meeting with CCRC - NJDOT Offices, Trenton Met with Monique King-Viehland to discuss the following: • Monique informed the meeting attendees that Mr. Jerry Harris is now representing the City. He assumed this role starting today. He has extensive government experience and Monique stated that he will be an asset to the project. Ms. King-Viehland will also try to ask him to attend a meeting on 9/17/08 in the morning to meet the team while the Glatting Jackson team is in Trenton. • Ms. King-Viehland stated that there is no problem using Glatting Jackson's slides for the land use portion. The City/CCRC would like Glatting Jackson to work with their marketing consultant to discuss land use assumptions, etc. The selected consultant has not been officially approved, but expected to be done very shortly. • Ali Vaezi mentioned the issue of the PSEG contaminated site under the parking lots and the need for the City/CCRC to push PSEG to move up their 2014 schedule. Ms. King-Viehland stated that she will help in any way possible. She requested to be kept in the loop and would attend meetings with PSEG representatives, if needed. She asked for the name of the PSEG contact and stated that she would reach out to the City & PSEG leaders to bring the issue to their attention, as needed. • Break-out projects: Dewberry mentioned that there is no interim traffic solution at Calhoun Street due to back-up from PA side that spills over to NJ during the PM peak hour. Ms. King-Viehland stated that was fine, but NJDOT needs to prepare a memo explaining the situation and why it could not be done. Tom Saylor stated that Dewberry is working on the memo and after their review, it will be sent to the Mayor. It was agreed to revise the breakout project table order as follows: 1. Memorial Drive Extension 2. Union Street Opening 3. Improved Signage 4. Market Street Streetscape 5. US Route 1 (Add a note to 5 a. to show this project will only be possible if interim Bridge Boulevard from New Warren St. to Trent Place is constructed)
September 9, 2008	MOU Meeting - NJDOT Offices, Trenton • Met with the stakeholders to discuss comments/concerns regarding the latest draft of the MOU.

Meeting Date	Topic/Location
	• Most key agencies are on board for singing. Others are discussing concerns with their leadership; therefore, MOU could be signed by all agencies.
September 16, 2008	Value Solutions Workshop - NJDOT Offices, Trenton Following a brief introduction by Evans Marcellus, Ian Lockwood reviewed the design philosophy behind the proposed cross section. In particular Ian stressed the need to consider the correlation between the cross section and the speed of the vehicles. An increase in cross section would result in higher speeds which would not be consistent with the urban nature of the project. Mr. Lockwood also emphasized the need for street planting to visually narrow the roadway and decrease speeds. Following Mr. Lockwood's presentation, Ali Vaezi and Nigel Newton reviewed the changes to the Route 29 geometry made in response to the meeting with Value Solutions on September 3, 2008. The following points were discussed: • The radius of the curve between the War Memorial and Street A was increased to provide a minimum stopping sight distance which was fully within the cartway of Route 29 Boulevard. This was acceptable to Value Solutions as long as parking was restricted on the southbound approach to the Street A intersection. • The reverse curves between the State House Garage and the War Memorial were realigned to provide a tangent between the two curves. This new alignment was acceptable to Value Solutions. • The radius on the ramp from Route 29 Boulevard to Calhoun Street was increased. Value Solutions welcomed the change to this alignment; however, they are still concerned with the proposed layout at this interchange. Ali Vaezi and Miguel Gavino briefly reviewed the different concepts that had been considered at this interchange and the concerns of the various stakeholders. It was stated that the proposed interchange layout has been found to meet the project goals, address the major concerns of stakeholders and operate at an acceptable level of service. • Value Solutions reiterated its concern regarding Stopping Sight Distance through the sag curve under the Calhoun Street Bridge. It was agreed that this concern would be noted and addressed during later design stages. • Value Solutions reiterated its concern over Stopping Sight Distance on Ramp C from Northbound Route 1 to Warren Street. This concern will be forwarded to DRJTBC during later design stages. • It was noted that the lane assignments shown on South Warren Street under the Amtrak Bridge may not be feasible due to the location of additional supports not visible on 200 scale mapping. It was agreed that this would be checked. • Although Construction Staging was prepared, Value Solutions did not review it at this time as they understood and were agreeable to the general approach that we had outlined in our previous meeting. • Following a review of the 60 scale plans, Miguel Gavino gave a brief presentation on the traffic modeling and analysis for the project including a display of the Synchro analysis. • Bucky Misner was concerned about the regional impact shown in one slide being ignored. Mr. Gavino and Mr. Saylor explained that the increases shown were very minor when considered as a percentage of the traffic at the locations shown and that they did not meet the need for off-site improvements.
September 17, 2008	Senior Leadership Meeting – City Hall, Trenton • Following an introduction, Thomas Saylor spoke regarding NJDOT's role in the Route 29 Boulevard and reiterated NJDOT's support. Mr. Saylor noted that at the end of the FA study, NJDOT will transition the lead role to the Joint Coordination Committee (JCC) consisting of key stakeholders, led by the City and CCRC, who will move the project forward. NJDOT will stay on-board in a support role. • George Alexendridis, representing the Delaware River Joint Toll Bridge Committee (DRJTBC), lent his support to the project and updated the committee on the status of the ongoing Route 1 Widening project. • Alan Payne, representing NJDEP Parks, provided an update of the Capital Park project. The demolition of the parking lot behind the State House is underway. Phase 1A will start in June of 2009, involving the construction of the park area behind the State House. • Ingrid Reed reviewed the history of the project to date and urged all members of the committee to work together as the project moves ahead. • Mayor Doug Palmer the City of Trenton, as the chair for the JCC, will work with the stakeholders represented in this meeting to move the project ahead. The Mayor reviewed the next steps for the Project; the City will shortly approve the selection of a consultant for the Marketing Study for the project and the Mayor is actively seeking funding at the State and Federal Level. • A slide presentation followed that included outcomes of the FA, including requirement for a high density development and involvement by a Master Developer to carry out the grading portion of the project. • Traffic Demand Modeling and Traffic simulations for the Project were reviewed including a brief review of the Synchro model. It was stated that although the full build-out scenario will result in some congestion during the peak hours, it will be a level of congestion appropriate to a busy city center and therefore acceptable.

Meeting Date	Topic/Location
	• The flooding issues were addressed during FA. The area slated for development resides mostly within the NJDEP Flood Hazard Area and due to new NJDEP regulations, it will be necessary to lift the developable parcels out of the Flood Hazard Area. The cut associated with removing the existing Route 29 freeway section will allow for the fill required to construct the new developable parcels at an elevation greater than the FHA elevation. It was concluded that the Project is feasible from an NJDEP Flood Hazard Area standpoint as long as the grading is carried out within a reasonable timeframe. • Pamela Garrett provided an overview of the environmental process to date and emphasized that a high level of coordination has taken place with the regulatory agencies to gather input and concurrence on various regulatory issues. • Al Collins of the Mercer County Improvement Authority (MCIA) provided an update on the Mercer County Court House Project which is currently underway. Next Steps: • Ali Vaezi briefly reviewed the breakout projects and Federal Earmark allocation available to fund them. The City of Trenton and the NJDOT have agreed to fund the reopening of Memorial Drive in front of the War Memorial and a hierarchy of improvements will be agreed upon over the next few weeks. • It was pointed out that the Memorandum of Understanding (MOU) process is currently being formulated and Carol Beske reviewed the proposed agencies for signing the MOU, the makeup of the proposed Joint Coordination Committee and the public event signing proposed for early in 2009. Ms. Beske encouraged all stakeholders to become signatories to the MOU which will memorialize the decisions and commitments made regarding this project as it moves forward.
October 15, 2008	<u>Agency Coordination Meting - NJDOT Offices, Trenton</u> Ileana Ivanciu introduced and described the project. After completion of the Feasibility Assessment (FA), the project will be handed over to the City of Trenton who will seek a master developer for design and construction. Evans Marcellus discussed the project purpose and general objectives, as well as current city initiatives; he confirmed that the project will be turned over to the city who will hire a master developer. Ali Vaezi reviewed the project location/boundaries/existing large parking lots and roadways along the river, the purpose and need, proposed Street Layout/Park-Green Areas, proposed residential and retail space and other projects in the area. • Ileana Ivanciu reviewed the Memorandum of Understanding (MOU). • Andrea Burk reviewed the Area of Potential Effects (APE) and listed architectural and archaeological studies done to date, as would be required by Section 106. • Mike Hayduk stated that the technical studies should be done, but don't conduct the "Effects Studies or Report" until the project is further along. • Andrea Burk continued and reviewed areas of potential historic sensitivity. Kate Marcopal and Dan Saunders indicated that we will need to narrow down the APE/areas of sensitivity and to lay out an approach. Mike Hayduk stated that resources and issues should be identified first, then determine the Federal Agencies involved. • Ileana Ivanciu discussed the possibility of including a section in the studies entitled "Regulatory Framework" with potential Federal Agency involvement. Then the DOT or Master Developer can approach the SHPO and other agencies for regulatory guidance at the appropriate time. • Mike Hayduk suggested use of a Programmatic Agreement, then stop and reassess if new resources are identified during construction. • Kate Marcopal stated that SHPO would want some "up-front" archaeological studies to identify potential resources. Ileana Ivanciu asked if that means not conducting a Phase IB, i.e. no field testing. Dan Saunders confirmed that was correct. • Mike Hayduk stated that consultation with Federal Agencies will be required to identify resources to be impacted and other resources may be identified during project design and construction. Pam Garrett stated that NEPA compliance may be necessary; that is still to be determined. Dan Saunders recommended doing a Phase IA and then make recommendations. He explained that an assessment of effects should not be conducted at this point in time (i.e., as part of the Phase IA). • Pam Garrett noted that the Petty's Run project is starting which will be a tourist destination. Mike Hayduk recommended that a detailed review/understanding of the resources be prepared, then let the project developer proceed with it. There needs to be an "official" notification/starting point for the Section 106 process. • Charlie Welch stated that the Jurisdictional Determination (JD) process could be used to identify NJDEP permits needed, as well as USACE involvement. • Matt Schlitzer reviewed the items studied in the Natural Ecosystems report and stated that there was conflicting information concerning the head of tide location. The NJDEP GIS data showed it to be upstream of the location described by the NJDEP Surface Water Quality Regulations. He went on to describe the implications of the head of tide location and that its location would need to be resolved in order to determine NJDEP/USACE jurisdiction and what permits would be needed where and from whom. • Charlie Welch stated that in the case of Waterfront Development vs. Flood Hazard Area, the NJDEP uses the Route 1 Bridge as the Jurisdictional boundary:

Meeting Date	Topic/Location
	- Downstream of Route 1 – requires a Waterfront Development Permit - Upstream of Route 1 – requires a Flood Hazard Area Permit Concerning Tidelands, Mr. Welch stated that if an area is flowed by the Mean High Tide, a Tidelands "instrument" (e.g. lease, license, or grant) is needed. A Freshwater Wetland Permit would be needed for impacts to the delineated wetlands. If no wetlands are present below the mapped 1970 Coastal Wetlands Line, no Coastal Wetlands Permit would be needed. A Coastal Zone Management (CZM) statement would be required for activities at or below the Route 1 Bridge/Mean High Water Line and 500 feet inland. • Mike Hayduk stated that the Mean High Water (MHW) line defines the jurisdictional extent of Section 10 of the Rivers and Harbors Act of 1899 in tidal waters, while its jurisdiction is to the Ordinary High Water line in non-tidal waters. Section 404 of the Clean Water Act regulates any wetlands associated with Jurisdictional Waters. • Pete DeMeo commented that the Freshwater Wetlands Act will cover the area above the Route 1 Bridge. South of the Route 1 Bridge will need Waterfront Development and Coastal Zone Management (CZM) approvals. Flood Hazard Area Control Act will have jurisdiction above the Route 1 Bridge, as well as below the Route 1 Bridge in regard to floodplain and riparian buffers. • Mike Sears stated that, if the MHW Line extends into the Assunpink, there will be no CZM for this area, based on the NJDEP's jurisdictional boundaries. Mike Sears asked Mike Hayduk whether this would be acceptable to the USACE. Mike Hayduk replied that it would be. • Charlie Welch requested a copy of the PowerPoint presentation as well as a JD request to NJDEP to identify permits. • Jim Heeren began his portion of the presentation on Contaminated Site Issues, which covered the PSE&G MGP site that was in operation in the early 1900s and Historic Fill Areas. He also reviewed the various contaminated sites, soil/groundwater impacts and discussed the cut/fill areas. Regarding the Remedial Action Workplan that will be needed for the overall project area: 1. Would need Deed Notices 2. Seek reuse approval for soil 3. Historic fill – many areas to remain undisturbed, without the need for a DN Jim Heeren went on to say that PSE&G is conducting a groundwater investigation program and we assume that they would continue to be the responsible party, not the future Master Developer. However, timing of the clean-up could be an issue, since PSE&G is not scheduled to start clean-up operations until 2014 and to attract a Master Developer to start work sooner will need an expedited clean-up process. • Steve Mayberry stated that the Licensed Site Professional (LSP) program is in progress, which may be changing the NJDEP Case Manager assignment procedure. Brownfields Development's Ken Kloo would likely oversee this project. There may still be a Case Manager, but only to review certain aspects of it, with remainder handled by a LSP. Mr. Mayberry indicated that historic fill can typically be moved to other historic fill areas without a Deed Notice. • Riche Outlaw stated that a Remedial Workplan should be put together and then work done in accordance with the Grace Period Rules. Ileana Ivanciu stated that development may take place over many years. Steve Mayberry stated that we could probably put together a long-term schedule and address contaminated areas over time. Ileana Ivanciu stated that the Master Developer would need to coordinate with the Site Remediation Program. Mr. Mayberry stated that they would likely assign a Brownfields Case Manager for the project. • Mike Sears began his portion of the presentation pertaining to Flood issues, which covered the June 2006 flood (~ 50-Year Flood) and a Review of the Flood Hazard Area (FHA) Design Flood. There would need to be at least as much floodplain storage (Acre-feet) after the project is constructed, which the project meets. Under the Preferred Alternative, the park will flood when the river floods, but there would be no storage/detention in the park. Route 29 will be raised above the 25-Year Flood. The concrete walls of Assunpink Creek will be removed and streambanks will be restored. • Pete DeMeo stated that the demolition of the existing bridges must be permitted, as will construction of new bridges - both via FHA permit and likely a Freshwater Wetlands permit. Mr. DeMeo suggested that we look at Net Fill along Assunpink Creek and make sure the 10-Year Flood stays within its banks. • Dan Saunders stated that we need to identify and resolve all issues with NJDEP Parks representatives, since they are talking about smaller park development and this is a much larger project. Mike Sears stated that Parks wants to use the steel beams from existing bridges to build a pedestrian bridge across the Assunpink Creek. • Pam Garrett said we need a Joint Committee of the involved agencies to work together and continue with this project until construction. Charlie Welch stated that NJDEP will set up "teams" to look at T&E, stormwater, wetlands, etc., but we are not there yet, since the project is still in the Conceptual stage. He suggested that we look at the attractions that will draw people and how they will get around (e.g. train stops, etc.) He also commented that this is a Water-Oriented project, not a Water-Dependent Activity. Ileana Ivanciu stated that the Land Use Study covers some of these issues and a market study will be done later to address more of these. • Carol Beske stated that Glatting-Jackson is conducting a study, with some consideration given to establishing a boat to Philadelphia, among other attractions. Charlie Welch asked what other cities are doing. We need to look at overall attractions to draw tourists: water taxis, fishing piers, boat ramps, restaurants,

Meeting Date	Topic/Location
	shopping. Ileana Ivanciu stated that we should continue meeting with Parks and other NJDEP groups to discuss the project.
October 29, 2008	Public Information Center - Thomas Edison College, Trenton The Public Information Center (PIC) for the Route 29 Boulevard project was designed to encourage public participation and comments to advance efforts toward project goals outlined in the Dewberry Public Involvement Action Plan. • The Public Involvement team conducted a presentation at the centrally located Thomas Edison College in Trenton, NJ. Sixty-six unique signatures were provided on the sign-in sheet by PIC attendees with a total estimated attendance number closer to 80 individuals. • The PIC was publicized and promoted across stakeholder groups as an "open house," offering participants an opportunity to review prominently displayed project information, watch a video on continuous loop, ask questions and discuss issues with representatives at their leisure. • Meeting flyers were circulated through various community groups, distributed by participating houses of worship and posted on community websites and bulletins. Further, a direct mailing with detailed project information strengthened the reach and effectiveness of the PIC by informing the community at-large with significant information resulting in an attendance level that would suggest meaningful project engagement. During the PIC, project funding was the most frequently cited concern. Additionally, questions and comments about aesthetic, cultural, commercial and spatial enhancements reflected an overall interest in the Rt. 29 Boulevard Project. General sentiments expressed from PIC attendees included: 1. Is this a real project, will the proposals I am looking at ever become a reality? I have been hearing about something being done to re-doing up the Route 29 area since the late 60's? 2. What kinds of dollars are being allocated to this project? Our city needs a lot of things, they are trying to close the libraries. 3. Will the ramps between Rt. 29 be eliminated? 4. The Board that lists the Project needs to be corrected. Project #18 is another project and should come off. Instead, Kearny Homes should be listed. Project #12 should be the Mercer County Court House. The title of the project should exclude parking. 5. The board listing projects, should clearly distinguish economic development studies from actual redevelopment projects. Also, distinguish the City of Trenton's projects from CCRC [Capital City Redevelopment Corporation] projects. 6. This is great. I especially like the park although traffic issues are major. I want to see something happen. 7. My concern is with flooding, are you going to build a flood plain. 8. I want to see something exciting in the area of retailers, so homeowners will have access to retail; something like waterfront developments that attract people into a city. 9. Will this project be an attraction for Trenton to draw people here? We need a magnet to attract people for retail, culture and family activities. 10. Wow, this is a huge re-development project! Exactly how long and how much time will it take? How much is it going to ask of us; will our taxes go up? 11. Who is going to pay for this road? Which project is first; the north of route 29 or the park project? 12. Is the design for the park what DEP [Department of Environmental Protection] is supporting? 13. Several people requested that the project chart on display the other night indicate the status of dates and timeframes for the projects listed. 14. How often are we going to get an update on the project, its funding and reactions from the community? 15. Do we have support in the State House? Are state dollars going to fund this project? 16. What is the city's position? How are they supporting a project like this when the city has money problems? Will our taxes go up in order for this to happen? 17. Will this project have a website so the community will be aware of the progress we are making? We need a way to keep informed about the project and its status.
November 6, 2008	Bike-Pedestrian Meeting - NJDOT Offices, Trenton A brief meeting was held to discuss Bike/Ped comment regarding providing a bike lane on proposed Route 29. The following were discussed: • Ali Vaezi presented typical sections showing Route 29 lane arrangements with and without transit considerations. Two 11-foot lanes along with an eight-foot parking area (right shoulder) are proposed. He stated that the speed limit will be low (30 MPH) in the downtown area and the idea is that bikes could share the right lane with vehicles. In reality, there is room between parked cars which are expected to occupy a six-foot area next to the curb, leaving two feet of space between them and cars in the right lane. Ali explained that a bike path is being provided along the proposed waterfront park that continues from south of Route 1 crossing to Calhoun Street for those riders that do not feel comfortable riding on Route 29. At this point, a bike path will need to be adjacent to Route 29, due to the unwillingness of Water Treatment Company to allow access to the waterfront due to the security issues. • Ali vaezi stated that widening Route 29 further to provide additional bike path space will encourage speeding and as such, is will not be suggested. He

Meeting Date	Topic/Location
	presented alternative striping concepts that would allow more bike path space, without additional widening. In this arrangement, the inner lane will be 10 feet wide while the outside lane will be striped 13 feet wide. This arrangement will allow for additional bike space, without any additional pavement. A 10-foot wide lane is acceptable in a downtown setting due to lower speeds and the fact that trucks are not generally present in the area. However, a 10-foot lane needs to be discussed with Buck Misner, since a Design Exception is required. Debbie Kingsland said she like the alternative striping scheme and she offered to speak to Bucky Misner's group and thought they will be agreeable to this, given project context. Hard copies of sections were given to Debbie and Evens.
November 12, 2008	MOU Meeting - NJDOT Offices, Trenton • Met with stakeholders to discuss the latest version of the MOU. • Additional Comments were provided for the MOU. • It appears that all major stakeholders that are party to the MOU will be able to sign this document. • It was agreed that the Joint Coordination Committee (JCC) will transition to take the lead in advancing the project after February 2009. • City of Trenton and CCRC will lead JCC. • Public signing looks likely at Trenton City Hall. • Discussed advance Memorial Drive FA, to be constructed as part of the NJDEP Capital Park. NJDOT will lead FA, CED and Design for this roadway. Consultation with SHPO will be needed.
January 28, 2009	MOU Meeting - NJDOT Offices, Trenton • Met with stakeholders to discuss the latest version of the MOU. • The group discussed planning for the MOU signing, scheduled to take place at Trenton City Hall on February 9, 2009.
February 9, 2009	MOU Signing - City Hall, Trenton

Table 7-1: Meeting Dates and Topics of Discussion

CHAPTER 8: NEXT STEPS

8.0 NEXT STEPS

The FA process formally began in July 2007 and closely followed a course that was originally envisioned by the NJDOT. The schedule shown in *Figure 8-1* shows FA milestones and major activities that took place by the NJDOT and major stakeholders.

At the conclusion of the FA process in February 2009, it is expected that future planning efforts for the construction of the Route 29 Boulevard will transfer to a Joint Coordination Committee, established under a Memorandum of Understanding (MOU). As stipulated in the MOU, the City of Trenton and the CCRC will act as the lead agencies in carrying out the shared vision for the redevelopment of Trenton's waterfront and downtown areas.

NOTE: INCLUDE COPY OF SIGNED MOU IN FINAL FA REPORT

As planning efforts continue, the feasibility of engaging a Master Developer to construct the proposed Route 29 Boulevard and adjacent parcels will be determined. It is anticipated that a Master Developer would be responsible for obtaining the necessary funding, permits and approvals in order to construct the Route 29 Boulevard. As part of this effort, the City of Trenton and the CCRC are working with a financial/marketing consultant in order to investigate the economic feasibility of the proposed land uses developed during the FA process. It is expected that a financial/marketing report will be prepared that will help in the selection of a Master Developer.

The NJDOT has also prepared a list of potential breakout projects that could be implemented in advance of the Route 29 Boulevard project (*see Table 8-1*). This list was initially prepared in May 2008 and was shared with the City and the CCRC. This list has been refined and modified as more technical and costing information has become available to help in evaluating each option.

The available federal earmark at this time is approximately $4.1 million. The current list of priority projects that could be implemented using available federal earmark funding includes the following:

- Memorial Drive: This project would extend the existing Barrack Street from its current terminus at West Lafayette Street to the existing Route 29 ramps, in front of the Trenton and Mercer County War Memorial, and within the current Phase 1 limits of NJDEP's Capital Park project. This extension would re-establish a former street that existed in this location approximately ten years ago. The NJDOT is responsible for the FA, permitting, design and construction. Close coordination with the Capital Park project will be required.

- Union Street opening to Northbound Route 29: The NJDOT conducted a Tier II investigation that included the opening of Union Street to Route 29 (currently a cul-de-sac) and reconnecting it to the portion of this street that terminates north of Federal Street. At this location, removal of a Green Acres park that was built on the site of the former Union Street right-of-way will need to be mitigated if Union Street is to be opened to traffic. The Union Street opening to Route 29 is on hold until the City resolves mitigation to the Green Acres property.

- Market Street Streetscape: This project, originally envisioned by the City and the CCRC, involves narrowing Market Street and its intersections with South Warren Street and Trent Place for a more pedestrian-friendly facility.

- Route 129 and Route 29 Signage Improvements: This project involves improved signage between Route 129 and Route 29, south of Route 1, in order to better guide drivers to center-city destinations.

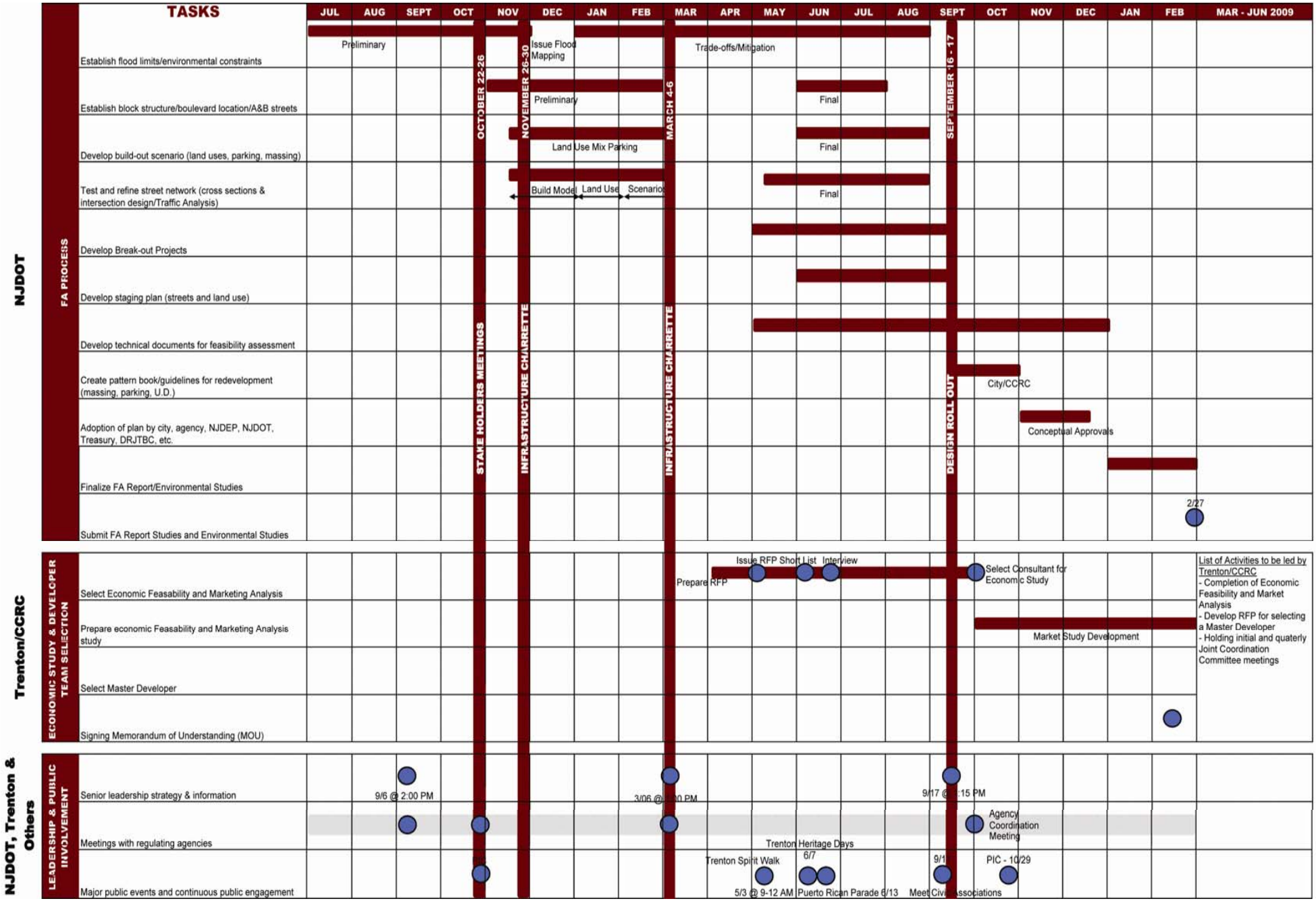

Figure 8-1: FA Milestones

Potential Breakout Item	Order of Magnitude Cost Estimate	Remarks	Benefits
1. Memorial Drive			
a. Traffic Signal	$1.0 Million	Required for NJDEP Park Phase 1A	Reconnects a historic East West Connection in the vicinity of the War Memorial.
b. Roundabout	N/A	Impractical due to Geometry	N/A
2. Union Street Opening	$0.7 Million	Already in Tier II Review. Requires Side Road Intersection permit from City and Green Acres Process.	Reconnects Route 29 and the Trenton Neighborhood areas
3. Improved Signing and minor roadway improvements at the intersection of Ferry Street and Bridge Street	$0.4 Million	Provide signing to City Center from Routes 129 and 29	Low Cost Project.
4. Streetscaping at Market Street	$1.7 Million	Narrow to 5 Lane Section	Improves Pedestrian Facilities in East West Direction
5. US Route 1 Connections			
a. Northbound and Southbound	$8.7 Million	Remove Existing Ramp System Requires the construction of Bridge Boulevard from New Warren Street to Trent Place.	Provides Street Network and Developable Land compatible with Future Build Scenario.
b. South Warren Street / Ramp C / Ramp N intersection	$1.0 Million	Remove missing Warren Street Connection	Low Cost Project restoring a North South Connection across Route 1 and the Amtrak Lines
6. Hamilton Avenue at Route 129 Intersection Improvements	$1.2 Million	Improve Capacity, no option prepared at this time.	Remove possible future bottleneck.
7. Calhoun Street Intersection	N/A	Numerous Options considered however no feasible option identified due to capacity and/or safety issues.	N/A
8. S Warren Street / Assunpink Drive Roundabout	N/A	Not recommended as a breakout project.	N/A
9. Delaware River Bikeway	$12 Million	Current design may not meet new NJDEP rules.	May be required to avoid NJDEP Enforcement
10. Old Trenton Wharf Restoration	$21 Million	Project on Hold	Provide Waterfront Facility for City

Table 8-1: Potential Breakout Projects

CHAPTER 9: REFERENCES

9.0 REFERENCES

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